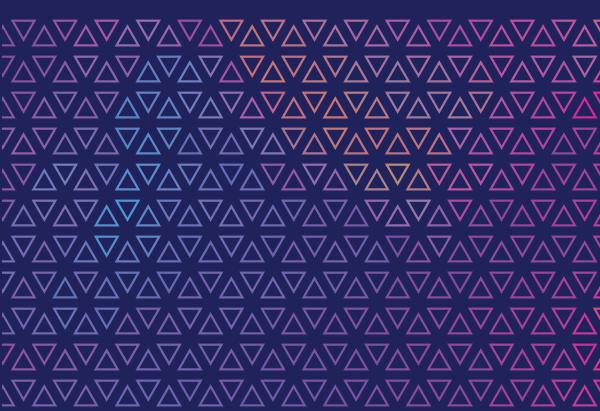
Volume 16 · Issue 2 July 2025



IIMS JOURNAL OF MANAGEMENT SCIENCE



ISSN: 0976-030X e-ISSN: 0976-173X

IIMS Journal of Management Science is published biannually in January and July by Indian Institute of Management Shillong.

IIMS Journal of Management Science is hosted on our web-based online submission and peer review system. Please read the manuscript submission guidelines on the journal website, and then visit https://peerreview.sagepub.com/ims to login and submit your article online. Manuscripts should be prepared in accordance with the 7th edition of the Publication Manual of the American Psychological Association.

Copyright © 2025 Indian Institute of Management Shillong. All rights reserved. The views expressed in the articles and other material published in *IIMS Journal of Management Science* do not reflect the opinions of the Institute.

Annual Subscription: Individual rate (print only) ₹1,580; institutional rate (print only) ₹2,760. For orders from Pakistan, Bangladesh, Sri Lanka and Maldives, SAARC rates apply: individuals \$35; institutional rate \$50. Prices include postage. Print subscriptions are available for institutions at a discounted rate. For subscriptions, please write to: customerservicejournals@ sagepub.in

Change of Address: Four weeks' advance notice must be given when notifying change of address. Please send the old address label to ensure proper identification. Please specify the name of the journal and send change of address notification to customerservicejournals@sagepub.in

Printed and published by Chief Administrative Officer, IIM Shillong, on behalf of Indian Institute of Management Shillong at Indian Institute of Management Shillong, Umsawli, Shillong – 793018, East Khasi Hills District, Meghalaya, India. Printed at Sai Printo Pack Pvt Ltd, A 102/4 Phase II, Okhla Industrial Area, New Delhi, Delhi 110020.

Editor-in-Chief: Neelam Rani



About the Journal

IIMS Journal of Management Science is the scholarly open access journal of the Indian Institute of Management Shillong that publishes research contributions in all areas of management and its allied discipline since 2010. It follows a double anonymised peer-review process and publishes two issues a year. While submissions from all management domains and their allied disciplines are welcome, the journal encourages articles with cross-functional managerial implications.

The journal looks for original and insightful research articles that create differential research traditions to shed new evidence on contemporary challenges faced by management practitioners, policymakers, academicians, and others. The journal envisages publishing rigorous research output backed by qualitative or quantitative methods. The articles that establish the intuition, argument, and implications using clear and concise English and improve our understanding of the management theory and practice knowledge are preferred. All contributions should be well written in English and supported by either original/empirical data or a well-justified theoretical or mathematical model.



Aims and Scope

IIMS Journal of Management Science is an open-access journal that publishes original research and review articles from all functional areas of business management. It follows a double anonymised peer review policy.

The articles from all domains of business management, including (but not limited to): accounting, analytics, banking, communications, economics, finance, industrial relations, information systems, marketing, operations and supply chain management, organisational behaviour, organisational development, human resources management, strategy, sustainability & liberal studies, innovation, entrepreneurship, public policy, international business and corporate social responsibility are welcome.

Contributions with a rigorous analysis of economic, social, political, sustainability, and other factors relevant to management theory, practice, or policy are well received. The journal encourages authors to submit articles with cross-functional implications that provide new insights on contemporary issues faced by management practitioners, firms, societies, policymakers, academicians, and others.

Editor-in-Chief

Neelam Rani IIM Shillong, India

Editorial Board Members Accounting, Finance and Economics

Agyenim Boateng
De Montfort University, UK
Douglas Cumming
Florida Atlantic University, USA
Gabriel Hawawini
INSEAD, France
Marc Goergen
IE Business School, Spain
Riikka Sarala
UNC Greensboro, USA
Tracy (Kun) Wang
Australian National University, Australia

Human Resource Management and Organizational Behavior

Henrik B. Sørensen Aarhus University, Denmark Jon Billsberry University of Wollongong, Australia Rohit Dwivedi IIM Shillong, India

Information System and Analytics

Basav Roychoudhury IIM Shillong, India Parijat Upadhyay IIM Shillong, India Saeed Jahanyan University of Isfahan, Iran

International Business and Strategic Management

Alan Eisner School of Management, Worcester, USA
Raymond Paquin Corcordia University, Canada
Vikas Kumar University of Sydney, Australia
Zafar Husain Al-Ain University of Science and Technology, UAE

Marketing Management

Amitava Chattopadhyay INSEAD, France Jana Prodanova Macedonian Academy of Sciences and Arts, Macedonia Prasanta Kumar Chopdar IIM Shillong, India

Operations and Supply Chain Management

Jose Arturo Garza-Reyes

University of Derby, UK

Matthew Pepper

University of Wollongong, Australia

Rohit Joshi

IIM Shillong, India

Editorial Advisory Board

Anil Mishra Angappa Gunasekaran Nalini Prava Tripathy Harjeet S. Bhabra latin Pancholi Justin Zhang Madhu Kalimipalli Mahesh Joshi Mohan Thite Nripendra P. Rana Paul Shrivastava Phani Tej Adidam Prashant Mishra Rakesh Sah Richard Ponarul Robert Clift S. Viswanathan Satyendra Singh Sorin Tuluca Suprateek Sarker W. Jean Kwon

Western Sydney University, Australia California State University, USA IIM Shillong, India Concordia University, Canada Southampton Business School, UK University of North Florida, USA Wilfrid Laurier University, Canada RMIT University, Australia Griffith Business School, Australia Qatar University, Qatar Pennsylvania State University, USA University for Nebraska, USA IIM Calcutta, India Montana State University, USA California State University, USA University of Pittsburgh, USA Nanyang Business School, Singapore University of Winnipeg, Canada Fairleigh Dickinson University, USA University of Virginia, USA St. John's University, USA

Contents

Editorial

Rethinking Institutions, Markets, and Behaviors in a Complex World Neelam Rani	143
Original Articles	
Exploring Consumer Intentions towards Cloud Kitchen in India: A Mediation Model Framework Saurabh Verma, Sunil Kumar Yadav and Swarmista Paul	146
A Grounded Theory of Peer Mechanism in a Self-help Group Nishi Malhotra	171
A Study on the Influence of Foodporn Imagery in Social Media Marketing and Consumer Behavior Sunita Boro and Saurabh Kumar Dixit	198
Indo-Mauritian Investment Trends Post-amendment of the Double Taxation Avoidance Agreement (DTAA) Satabdee Banerjee and Verena Tandrayen-Ragoobur	213
A More Durable Relationship—The Case of Canadian Funding of Indian Infrastructure Kumar V Pratap	234
Book Review	
Vinayshil Gautam, You Are Not Alone (Organization Management: Selected Essays), Rohit Dwivedi	243



Rethinking Institutions, Markets, and Behaviors in a Complex World

IIMS Journal of Management Science 16(2) 143–145, 2025 © The Author(s) 2025 DOI: 10.1177/0976030X251345205 journal.iimshillong.ac.in



The IIMS Journal of Management Science continues to uphold its commitment to publishing research that connects academic insights with pressing real-world challenges. Each issue of the journal seeks to illuminate emerging paradigms in management and policy, while contributing meaningfully to both theoretical development and applied practice. This current issue presents a diverse yet interconnected collection of articles exploring contemporary shifts in consumer behavior, fiscal governance, entrepreneurial ecosystems, financial inclusion, sustainability, and global investment flows. Together, these contributions offer a rich mosaic of perspectives that invite deeper reflection on how organizations, markets, and communities are being redefined in an increasingly complex world.

"A Study on the Influence of Foodporn Imagery in Social Media Marketing and Consumer Behavior" by Sunita Boro and Saurabh Kumar Dixit, is an interdisciplinary investigation into the psychological, emotional, and behavioral effects of highly stylized food imagery shared on social media platforms. Drawing on the Technology Acceptance Model (TAM) and Uses and Gratifications Theory (UGT), the study finds that such "foodporn" content significantly enhances consumer engagement and emotional connection, leading to changes in dining frequency and food preferences. These findings are echoed in recent literature suggesting that digital sensory experiences—particularly visual aesthetics—can drive consumer choices even more powerfully than pricing or peer reviews (Petit, Velasco, & Spence, 2019; Schmitt, 2012). The study offers valuable guidance for marketers and hospitality businesses aiming to optimize digital strategies by investing in high-quality visual content and user-generated media.

The article, "Exploring Consumer Intentions Towards Cloud Kitchens in India: A Mediation Model Framework" by Verma et al., investigates the factors influencing consumer buying intentions towards cloud kitchens in India, with a focus on perceived innovativeness, food variety, price, food safety, and social influence. The authors propose a mediation model where trust acts as a critical link between consumer attitudes and their behavioural intentions. Using PLS-SEM on data collected via social media, the study finds that all five factors positively affect consumer attitudes, which in turn influence trust and ultimately purchase intentions. The emphasis on trust aligns with broader research in digital commerce, where trust is often a pivotal determinant in shaping consumer behavior and mitigating perceived risks (Gefen, Karahanna & Straub, 2003).

Banerjee and Ragoobur, in their article, "Indo-Mauritian Investment Trends Post-amendment of the Double Taxation Avoidance Agreement (DTAA)," examine the evolving investment relationship between India and Mauritius following the 2016 amendment to their Double Taxation Avoidance Agreement. Using a

qualitative case study approach, the authors trace how Mauritius's status as a tax haven influenced FDI flows, often through round-tripping mechanisms. The study finds that while legal reforms were aimed at curbing fiscal evasion, factors such as tax morale, FATF grey-listing, and rising Chinese influence also significantly impacted investment patterns. This echoes larger debates in global finance on treaty shopping, base erosion, and the ethical dimensions of tax governance (Cobham & Janský, 2018).

"A More Durable Relationship—The Case of Canadian Funding of Indian Infrastructure" by Pratap analyzes the strategic and long-term role of Canadian pension funds in financing Indian infrastructure. With over US\$75 billion invested, funds like CPPIB, CDPQ, OTPP, and PSP are helping bridge India's infrastructure gap through brownfield investments and InvITs. The study argues that these investments are mutually beneficial: India gains stable capital for growth, while Canadian funds secure long-term, low-risk, inflation-hedged returns. As global research has pointed out, pension funds are increasingly positioned as patient capital for emerging market infrastructure projects, balancing financial returns with systemic stability (Inderst, 2013).

The study titled, "A Grounded Theory of Peer Mechanism in a Self-help Group" by Nishi Malhotra explores how peer mechanisms function within Indian self-help groups (SHGs) to enhance financial inclusion and sustainability. Using 25 semi-structured interviews and the grounded theory method, the study identifies peer selection, monitoring, and enforcement as core mechanisms that enable members to access credit without collateral. The analysis reveals five emergent categories—social exchange, social control, social cohesion, sustainability, and social welfare—that together form a comprehensive model of how SHGs operate effectively. This research aligns with global findings that underscore the efficacy of social capital and peer accountability in achieving high repayment rates and promoting financial empowerment in resource-scarce contexts (Giné & Karlan, 2014).

Rohit Dwivedi reviews the book, "You Are Not Alone," and offers a critical reflection on the book, a compilation of scholarly writings by Dr. Vinayshil Gautam. The review suggests that the book draws from decades of expertise in management, offering theoretically grounded yet practical insights into organizational behavior, economics, communication, operations, and leadership. Structured across 12 chapters, it serves as both a reflective retreat and an academic resource. While its formal tone may challenge casual readers, Dwivedi appreciates the book's analytical depth and conceptual rigor, positioning it as a valuable contribution to Indian management thought and scholarship.

This issue of the IIMS Journal of Management Science brings together research that is both reflective and forward-looking, blending innovation with institutional insight. Whether focused on digital consumer trends, sustainable infrastructure, or collaborative finance, these contributions collectively offer pathways to rethinking management in an age of complexity and transformation. We invite scholars, industry leaders, and policymakers to engage with these findings and translate them into meaningful practice.

Editorial 145

References

Cobham, A., & Janský, P. (2018). Global distribution of revenue loss from tax avoidance. UNU-WIDER Working Paper 2018/55.

- Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: An integrated model. MIS Quarterly, 27(1), 51–90.
- Giné, X., & Karlan, D. (2014). Group versus individual liability: Short and long term evidence from Philippine microcredit lending groups. Journal of Development Economics, 107, 65–83.
- Inderst, G. (2013). Private infrastructure finance and investment in Europe. European Investment Bank Working Papers.
- Petit, O., Velasco, C., & Spence, C. (2019). Digital sensory marketing: Integrating new technologies into multisensory online experience. Journal of Interactive Marketing, 45, 42–61.
- Schmitt, B. (2012). The consumer psychology of brands. Journal of Consumer Psychology, 22(1), 7–17.

Neelam Rani

IIM Shillong, Meghalaya, India E-mail: neelam@iimshillong.ac.in

Exploring Consumer Intentions towards Cloud Kitchen in India: A Mediation Model Framework

IIMS Journal of Management Science 16(2) 146-170, 2025 © The Author(s) 2025 DOI: 10.1177/0976030X241306828 journal.iimshillong.ac.in



Saurabh Verma D. Sunil Kumar Yadav 20 and Swarmista Paul

Abstract

Purpose: The present study aims to determine the consumer buying intentions regarding cloud kitchens, including how attitudes will change in response to perceived innovativeness (PI), food variety, price, food safety and social influence. Also, the study examined the mediating role of consumer trust between attitude and buying intentions.

Design/Methodology/Approach: The study undertakes a convenience sample approach to examine what influences consumer buying intentions towards cloud kitchens in India. Various social media platforms such as Facebook, LinkedIn, Instagram, etc. were used to collect the responses. Furthermore, PLS Structural Equation Modelling and mediation framework was applied to analyse the data.

Findings: The study revealed that consumer attitudes are positively impacted by perceived innovativeness, food variety, price, food safety and social influence. Consumer attitudes and behavioural intentions are significantly influenced by a mediating variable, that is Trust.

Research Limitations/Implications: The research is confined to the customers' preferences towards cloud kitchen in India. Although the findings proposed a model for the operators by considering a few variables, further research can be carried out by considering other variables.

Corresponding Author:

Saurabh Verma, Department of Management Studies, National Institute of Technology, Silchar, Assam 788010, India.

E-mail: saurabhverma@mba.nits.ac.in



cc) (1) (S) Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License (http://www.

creativecommons.org/licenses/by-nc/4.0/) which permits non-Commercial use, reproduction and distribution of the work without further permission provided the original work is attributed.

Department of Management Studies, National Institute of Technology, Silchar, Assam, India

² Jaypee Business School, Noida, Uttar Pradesh, India

Practical implications: The outcome of this research provides recommendations to the operators of cloud kitchens by proposing a research model which underlines the significant factors that govern trust among customers towards cloud kitchens.

Originality/value: The study emphasises how crucial it is to comprehend consumer behaviour when choosing a cloud kitchen, particularly in emerging countries like India, where the COVID-19 epidemic has majorly affected the food industry. The study may advance our understanding of customer behaviour and help cloud kitchen businesses with their marketing and operational strategies.

Keywords

Cloud kitchen, consumer attitude, food industry, COVID-19

JEL Classification: M31, L81, C78

Received 12 May 2024; Revised 3 November 2024; Accepted 3 November 2024

Introduction

The food industry has seen a significant change in recent years due to the emergence of various user-friendly online food delivery apps. Due to this (the) concept of cloud kitchens, sometimes called virtual kitchens, ghost kitchens, or dark kitchens, has gained popularity among consumers. A cloud kitchen is a virtual restaurant with only an online presence and no physical location that clients may visit. Instead, it depends on internet orders made through various meal delivery applications. According to tech sci research 'Indian cloud kitchen market was valued at USD 1.13 billion in 2024 and is expected to grow at a CAGR of 16.6% till 2030'. This pattern has further intensified with the onset of the COVID-19 epidemic, which restricted the outgoing habits of people due to the lockdown, and later, they developed a fear of infection in public places. It has intensified the demand for online food delivery solutions maintaining socialdistancing norms. Due to this, the restaurant business has been rocked in neverbefore-seen ways, forcing owners to temporarily close their doors or immediately adopt a takeaway and delivery strategy (Chotigo & Kadono, 2021). With the help of a case study method Tualeka (2024) highlights the business model of a company and discusses how COVID 19 outbreak had given a boost to the cloud kitchens in Indonesia. While investigating the prospects of cloud kitchens in Dhaka, Khan et al. (2023) suggests that the cloud kitchen model has a good potential, and anyone who wants to open a cloud kitchen must come up with a robust business model. Further, it was suggested that restaurants should use social media platforms to build a positive brand image. While discussing on the rise and future of cloud kitchens in India, Chhabra and Rana (2021) tried to differentiate between a traditional kitchen and a cloud kitchen. They further conclude that ratings and reviews are more important in the case of a cloud

kitchen. There has been substantial research on the variables that affect the choice of a restaurant or hotel, but little is known about the factors influencing the selection of a cloud kitchen. Therefore, it is equally important to analyse the factors affecting consumers' intentions regarding the use of cloud kitchen services.

The success of the food industry relies heavily on building and sustaining consumer trust. Consumers are more likely to purchase from brands they trust, while they may hesitate to make a purchase or become repeat customers, if they do not trust a brand. Several studies have highlighted that concerns about food safety and quality are the major issues with cloud kitchens. Since customers cannot see how the food is prepared or stored in a physical storefront, trust is essential in affecting consumer's choices regarding cloud kitchen services (Cai et al., 2022). By building trust through transparent and compliant food safety procedures, cloud kitchen operators can improve their chances of success in the highly competitive food industry. Similarly, cloud kitchens may work to develop and sustain consumer trust, which can eventually affect purchasing decisions and propel business success. This can happen by prioritising transparency, dependability, brand reputation and continuous customer feedback.

The existing literature on cloud kitchen services reveals that consumers' attitude towards cloud kitchens greatly affects their intentions to adopt these services. These attitudes, which can be either positive, negative or neutral, might affect how customers perceive a product or a service in terms of value, excellence and pleasure. Optimistic consumers may think more highly of a product or service than negative consumers regarding its value and quality. Besides that, convenience, food quality and variety can all impact how well consumers adapt to cloud kitchens (Chandrasekhar et al., 2019)

Further, the success and viability of cloud kitchens depend on the possibilities of future purchases. A study by Mathur and Mathur (2023) suggests that access and convenience to cloud kitchen services significantly affect consumer buying intentions. Further, it was found that the social influences, hedonic value, convenience of use, technological attitude, brand reputation, price, satisfaction with food quality and delivery service are the significant factors affecting a consumer's buying intentions towards availing of cloud kitchen services (Saberian et al., 2020).

The COVID-19 pandemic's impact on consumer behaviour has made consumers more worried about eating out. Also, eateries are finding it difficult to pay their fixed expenses. In the midst of this, cloud kitchens may be a wise choice. Therefore, it has become crucial to understand clients' behaviour towards online food ordering businesses. By analysing consumer culture and the consequent behaviour, we may learn more about what consumers like and dislike (Silva et al., 2023), including food preferences, prices and delivery alternatives that they find acceptable. Operators of cloud kitchens can use this to customise their offers to match the requirements and desires of their customers. It is crucial to carry out an empirical study on the variables influencing consumers' selection of cloud kitchens. This study aims to examine the success factors of cloud kitchens and tries to assess their impact on consumers' behavioural intentions.

The study seeks to investigate the following research questions:

1. What are the elements influencing customers' attitudes while placing an online food order with a cloud kitchen?

- 2. What effect does a consumer's attitude have on their behavioural intentions?
- 3. How does trust affect the link between customer attitudes and behaviour intentions?

The main aim of the present study is to gain a better understanding of the factors influencing customer' behavioural intentions regarding cloud kitchens. Therefore, a study was conducted to fulfil three objectives, namely: to evaluate the factors affecting consumers' attitude while ordering food online with reference to cloud kitchens; to analyse the relationship between consumer attitude and consumer behavioural intention towards cloud kitchens and to identify whether trust mediates the relationship between attitude and behavioural intention towards cloud kitchens. The study has ramifications for the cloud kitchen industry present in India and may aid enterprises in this field with their marketing and operational plans. The study can contribute to the pool of knowledge of consumer behaviour and shed light on the variables that affect the adoption of novel services in developing markets.

Besides this introduction section, the study is divided in the following manner: the second section reviews the conceptual and empirical literature and hypothesis formulation. The third section discusses research methods followed in conducting the study. The fourth section comprises the result and analysis part of the study and the findings of the study are discussed in the fifth section. Further, the seventh and eighth sections highlight the theoretical and practical implications of the study and, finally, the eighth section talks about the limitations and scope of future research.

Literature Review and Hypotheses Development

Perceived Innovativeness and Consumer Attitude

Perceived innovativeness refers to a consumer's perception of a product, service or idea as being new, exceptional and modern. It has grown to be a vital region of studies for marketers, as it can impact consumers' attitudes, trust and behaviour. Epistemic value is the perceived utility that generates curiosity and novelty to assure consumer knowledge (Sheth et al., 1991). Agarwal and Prasad (1997) discovered that a consumer's intention to use a product is highly influenced by perceived innovativeness. The study also showed that a significant factor in determining perceived innovativeness is the perceived relative benefit of a new product. Similarly, Chen and Tan (2004) studied that the consumer attitude and purchase intentions are highly governed by his perceived innovativeness. Also, it was found that the convenience of digital payment option increases the value to consumers. (Oentoro, 2021). Candan et al. (2013) in their study, analysed that effective epistemic value can help to build innovativeness. Consumer brand attitude and purchase intention increase when epistemic value is considered a

part of premium reward. Innovative products and services have an impact on a company's reputation and can improve the trust of the consumer (Chang, 2013). To address customer concern for the environment in their purchase decisions, the epistemic value and the functional value quality should be highlighted (Suki, 2016). A Positive brand attitude can also be fostered by perceived innovativeness (Teng, 2019). So, in this contemporary study, ordering from a cloud kitchen, which is a very new experience, can provide Epistemic value. Retailers' innovation in food stores influences the prestige, trust and fidelity of stores (Konuk, 2019). Consumers regard cloud kitchens as innovative because of their distinct business strategy, which delivers a different dining experience than conventional restaurants, according to a study by Kulshreshtha and Sharma (2022); Mathur and Mathur (2023). The study also found that the convenience of ordering food online and the ability to access a variety of cuisines in one place were other factors contributing to the perceived innovativeness of cloud kitchens. Hence, the following hypothesis is proposed:

 H_1 : Perceived innovativeness influences consumer attitude towards cloud kitchens.

Price and Consumer Attitude

It has been noted that the association between price and attitude is complex and impacted by several variables. Monroe and Petroshius (1981) found that when the product is of excellent quality, the store has a positive reputation, the brand name is well-known and the buyer is price-conscious, the association between price and attitude is greater. It is true that those with limited resources, particularly young individuals, tend to be more analytical and research-oriented in their search for the best answers. In essence, analyse the trade-off by determining the utility or value the buyer receives for the price the buyer is willing to pay (Monroe & Petroshius 1981; Naderi & Paswan, 2016). Choudhary (2019) in his study tried to find out the reasons for the rising popularity of cloud kitchens in India. The study concludes that consumer preferences are changing as there is a crunch of time among youth. Besides that, cost is one of the important components of acceptability of cloud kitchens in India. It is believed that consumers frequently form an idea of a reference price or a price range in their minds. They personally believe that a cloud kitchen reduces wastages in terms of cost incurred in rent for physical space. They also believe that price is one of the factors which is behind the success of any food delivery system (Chatterjee et al., 2022). According to Simonson and Tversky (1992), this reference pricing is derived from their prior experiences, product knowledge and market circumstances. An attitude towards the product is influenced by the pricing. The consumers perceive product as value for money when the price offered is lower than the reference price and vice a versa. Two main factors that drive consumers to spend more for food are better flavour and/or a more enjoyable eating experience (Pine & Gilmore, 1998), Hence, comparing the commodities based on price to other variables is relatively straightforward (Brucks et al., 2000). While comparing the purchase decision among Gen X,

Gen Y and Gen Z to measure the post pandemic consumer behaviour towards cloud kitchen, Sarbhai and Khare (2023) concludes that price is one of the important factors among all generations. In general, price acts as a criterion to evaluate a product's quality; a higher price signifies a better product (Volckner & Hofmann, 2007). The essential components which are influencing the consumer's buying intentions are associated with its functional values, such as the cost or price they pay to avail the services, the effectiveness of the product, its utility and possibility of substitution and, finally, the number of items (Perrea et al., 2015). According to Wu et al. (2017) among all, price is the most important element of functional values. When choosing what to buy, price is the determining element (Hu et al., 2006; Tang, 2019). Trust is favourably influenced by the functional value (Watanabe et al., 2020), hence, the following hypothesis is proposed:

 H_3 : Price has a significant effect on consumer attitude towards cloud kitchens.

Food Variety and Consumer Attitude

According to Perrea et al. (2015), the taste, flavour, richness, quality and variety of dishes may enhance their functional value. The significant characteristics of a product or service determine its functional value (Sheth et al., 1991). Functional value has previously been investigated with regards to intentions towards food variety and food tourism. Ultimately, food variety plays a significant role in developing a pleasant attitude, which in turn affects consumer attitude and buying intention (Choe & Kim, 2018). The range of meals and beverages offered at restaurants can also be utilised to gauge functional value (Levyda, 2017). Trust in the digital food delivery system is significantly influenced by the quality of the delivered food (Farah et al., 2022). While evaluating app usage, functional values affected trust in a good way (Choi et al., 2019). Food types, including cuisine and restaurant image, are viewed as functional value factors, given that there is a clear association between functional value and customer trust (Konuk, 2019). Food diversity has become crucial to the success of these enterprises with the emergence of cloud kitchens, which create meals only for delivery or takeaway. In the food service sector, food diversity is a crucial element that can impact consumers' satisfaction and loyalty (Lee et al., 2016). Food diversity was shown to be directly correlated with consumers' satisfaction and readiness to suggest a cloud kitchen to others in a research by Chan et al. (2020). Food diversity was shown to be one of the most significant elements influencing consumers' purchasing behaviour in cloud kitchens (Fan et al., 2021). Thus, it is hypothesised that:

 H_3 : Food variety has a significant effect on consumer attitude towards cloud kitchens.

Food Safety and Consumer Attitude

The presence of unintended or unanticipated pathogens in food is unsafe, and it is an important component in developing consumer attitudes (Nardi et al., 2020). Not

only this, food safety has a strong correlation with issues associated with employee cleanliness, temperature management, other associated contamination which may occur during its preparation and transportation. The food and beverage sector are always concerned about food safety (Fatimah et al., 2011; Worsfold, D., 2006). It was found that consumers evaluate the service environment's hygienic standards as one of the major criteria to form a favourable attitude (Luo et al., 2021). Food safety has a critical role in influencing consumer food purchasing decisions (Frewer et al., 2009). It is observed that trust building is a chain process for food industry. Consumers first experience the services. Based on their first experience they develop their opinion on whether to continue availing the service or switch. This was easy for dine in restaurants but the process becomes complicated with cloud kitchens. The COVID outbreak made the process more complex (Jiang et al., 2024). Also, it has been observed that during the pandemic/COVID-19, the concerns were with personal hygiene and health, as consumers were afraid of contracting any virus or disease (Nardi et al., 2020). Several varieties of risks affecting consumption habits have been discovered in earlier food service research (Hwang et al., 2019; Olya & Al-ansi, 2018). Youn and Kim (2018) investigated the hazards and risks associated with the quality and safety of food at ethnic restaurants. In this regard, the study conducted by Othman et al. (2021) revealed that food quality, perceived control and convenience are the prime factors in influencing consumer's behaviour regarding consumption from cloud kitchens. Prior research on food safety has looked into the relationship between institutional trust, attitude and knowledge towards food incidents, as well as customers' willingness to pay more for fresh food that lowers their chance of contracting a foodborne disease (Ha et al., 2020; Ma et al., 2019). Trust is a crucial factor when buying food through an online restaurant (Chen, 2008). When it comes to online ordering of food, trust is characterised by the assurance provided by the service provider that it will fulfil the expectations of its customers (Cheung & To, 2017). This guarantees that the food is actually safe for consumption. Hence, the following hypothesis is proposed:

 H_4 : Food safety has a significant effect on consumer attitudes towards cloud kitchens.

Social Influence and Consumer Attitude

Social influence is the process through which people form their beliefs, principles, or behavioural patterns because of their interaction with others during social gatherings (Gass & Seiter, 2022). It demonstrates how strongly a person believes what is important for others and how he must behave and respond (Dwivedi et al., 2019). Social influence strongly impacts the understanding that people feel about ordering meals online (Elango et al., 2018; Talwar et al., 2023). It was found that social media marketing and e-word-of-mouth (e-WOM) has a strong favourable impact on brand awareness (Sanny et al., 2022). Because of COVID-19, the impact of social influence on user's behaviour patterns further intensified. Now a days people are relying more on reviews and endorsements given on social

networks by unknown people (Lim et al., 2022; Nigro et al., 2023). It is also seen that consumers not only look into the quality of the food but also into the other aspects of food, such as process of delivery, experiential aspects and what other people are saying (Kulshreshtha & Sharma, 2022). Fishbein and Ajzen (1977) broadly defined this act as 'subjective norms', which means how the behaviour of the consumer is impacted by the impression received from social gatherings. According to Venkatesh et al. (2003), collectively subjective norms, sociocultural factors and consumer image can be clubbed as social influence. Besides that, consumer attitudes get influenced by colleagues, which is termed 'peer pressure' (Barkhi & Wallace, 2007). Hence, it can be hypothesised that:

*H*₅: Social influence has a significant effect on consumer attitude towards cloud kitchens.

Attitude Influences Trust and Behavioural Intention

When faced with danger and uncertainty, trust is a complicated phenomenon that influences a person's decision-making. It can facilitate decision-making and encourage food consumption, particularly novel foods (Roosen et al., 2015). Park and Kim (2013), expressed attitude as one's choice while utilising a specific technology or equipment. However, even if customers have not availed the services, such as cloud kitchen, they may still develop their opinions based on what others say or what they have heard about it (Oliver et al., 1997). According to Cheung and To (2017), trust has been shown to have a favourable impact on attitude. Moreover, Troise et al. (2021) discovered that trust affects attitude favourable while utilising online food delivery services (OFDS). Brand trust perceptions influence online behaviour and could be instrumental in boosting online sales. When it comes to brand trust, beliefs in products and services have a greater impact on online intents than beliefs in vendors (Becerra & Korgaonka, 2011). Subjective norms (SN), attitude (ATT) and trust considerably and favourably impact behavioural intention (Hamid & Sujood, 2023). Past studies have demonstrated that intended usage is directly impacted by trust (Chiu et al., 2009). Building trust is crucial for having a positive attitude about online purchasing (Zhu et al., 2011). While determining the strongest factors contributing to the purchase decision of consumers towards cloud kitchens, Idris et al. (2023) concludes that trust in product assurance is one of the important factors which drive consumer's intentions. It was also seen that when customers perceive higher personal and social benefits, they formulate higher trust, which will ultimately result in purchase intentions towards cloud kitchens (Cai et al., 2022). A person's attitude is defined as their level of positive or negative sentiments towards the product or service in discussion (Dwivedi et al., 2019). Further, highlighting on technological aspects, Koththagoda and Herath (2018) claim that individual's intentions towards the adoption of technology may be influenced by the utility and simplicity of its user interface. There is a direct impact of attitude on buying

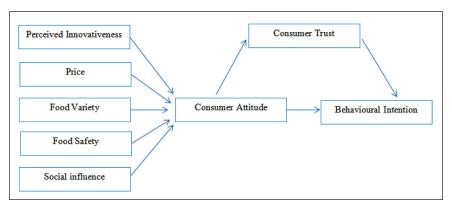


Figure 1. Proposed Structural Mediation Model.

intention (Davis, 1989; Dwivedi et al., 2019; Rana & Paul, 2017; Ter Ji-Xi et al., 2021). Accordingly, the last hypotheses are proposed:

 H_6 : Consumer trust significantly mediates the effect of consumer attitude on consumer buying intentions regarding cloud kitchens.

While going through the literature, it was found that several studies have been conducted on analysing consumer behaviour towards cloud kitchens. Also, it was found that the majority of studies were conducted in China, Taiwan and other European countries. In India, the concept of cloud kitchen is somewhat new, and it has gained pace after COVID. Therefore, there is a dearth of studies focusing on India as a country. Further, it was observed that little has been done to understanding the interaction between consumer trust, attitude and buying intentions regarding cloud kitchen services in India. Keeping the gaps in mind, the study aimed to determine the major factors influencing consumer behaviour and to investigate how these factors impact customers' intentions to utilise cloud kitchens in India. The proposed structural mediation model is being shown in Figure 1.

Research Methods

Research Design

The research carried out in this study is descriptive in nature. The study was carried out using the convenience sample approach to examine what influences consumer behaviour regarding cloud kitchen services in India. An online survey was conducted to test the assumptions regarding online restaurant ordering services. The popular social media including Facebook, Instagram, LinkedIn and Twitter were used to collect the required data. The respondents were students, working professionals, self-employed, businessmen and housewives. The survey made sure that only

qualified individuals were accepted into the study by implementing a screening question that questioned participants if they had ever ordered meals from a cloud kitchen. As a result, it was easier to choose survey respondents who had the ability and experience with, and understanding of, cloud kitchens, potentially improving the reliability and precision of the research findings.

Sample Size

The minimum sample size was calculated via G*Power (v3.1.9.4) with the level of significance at 0.05; medium effect size (f2: 0.15); power: 0.95 (see Figure 2). According to G-Power Software, the sample size was 243.

Survey Design

The present study investigates the impact of perceived innovativeness, price, social influence, food variety and food safety on consumer attitude, trust and buying intentions regarding cloud kitchen services in India. Two sections comprised the survey questionnaire. Five-point Likert scale items from 'strongly disagreeing' to 'strongly agreeing' were included as part of the initial segment.

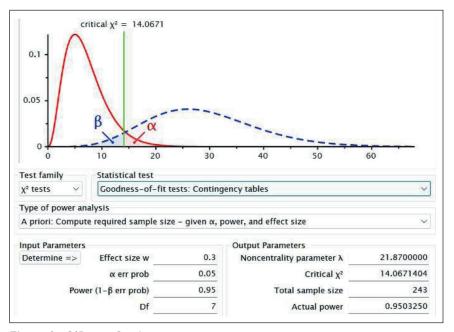


Figure 2. G*Power Graph.

Scales	Source	Cronbach's Alpha
Perceived innovativeness	Hwang et al., 2019	0.810
Price	Cho et al., 2019	0.875
Social influence	Ajzen, 1991	0.906
Food safety	Tonsor et al., 2009	0.886
Food variety	Cho et al., 2019	0.874
Attitude	MacKenzie et al., 1986	0.930
Behavioural intention	Venkatesh et al., 2003	0.898
Trust	Pavlou, 2003	0.906

Table I. Operationalisation of Constructs and Reliability Analysis.

The respondents' demographic data was gathered in the second portion. To get the participants' opinions prior to requesting any personally identifiable information, the researchers purposefully put the demographic profile of the respondents near the bottom of the survey. This tactic can support keeping participants interested and involved across the questionnaire (Hair et al., 2016).

Reliability Analysis

The value of Cronbach's alpha is considered to test the reliability of the scale. Table 1 indicates the reliability scores. As we can see, the value is well above the acceptable range, that is 0.70, therefore the scale is reliable.

Procedural and Statistical Techniques

The current study used an exploratory methodology to look at the variables affecting customers' intentions of using cloud kitchens. The partial least squares structural equation modelling (PLS-SEM) approach was chosen for data analysis because of the subject matter of the research question. Peng and Lai (2012) state that a minimum required sample size of 10 times the indicator count in the construction with the greatest amount of data is proposed for PLS-SEM.

Analysis and Results

Sample Profile

The study included more male participants than female, with 54.3% of the respondents identifying as male. Almost half of the participants (46.9%) were between the ages of 18–25. Furthermore, the majority of the respondents were single (77.4%) and working professionals (48.1%). Demographic characteristics are shown in Table 2.

Table 2. Demographic Characteristics of the Respondents (n = 243).

	Frequency	(%)
Gender		
Male	111	45.7%
Female	132	54.3%
Age		
18–25	114	46.9%
26 -4 0	112	46.1%
41–55	13	5.3%
Above 55 years	4	1.6%
Occupation		
Student	105	43.2%
Working Professional	117	48.1%
Homemaker	12	4.9%
Unemployed	9	3.7%
Marital Status		
Single	188	77.4%
Married	55	22.6%

Measurement Model

The construct validity of the measurement model is tested before establishing the structural relationship. Here, Average Variance Extracted (AVE) was computed to validate the constructs' convergence validity. Also, it can be seen in Table 3 that the constructs' AVE values are above 0.5 as per Hair et al. (2016), demonstrating significant convergent validity. Therefore, the reliability and validity of the construct can be established.

The consistency of the elements in every construct is analysed through rho A and Composite Reliability. A value of 0.7 or greater is regarded as acceptable, demonstrating that the construct's elements are assessing the same fundamental concept. All constructs in this research had values that are significantly higher than this cutoff, ranging from 0.809 to 0.955. This shows that all the items introduced to analyse each construct are accurate and reliable.

The convergent validity of the construct, or how effectively the construct's components reflect the same fundamental idea, is assessed using the AVE. A value of 0.5 or greater is regarded as acceptable, demonstrating that the construct's elements are assessing the same fundamental concept. All constructs in this investigation had values that are much higher than this cutoff, ranging from 0.724 to 0.877. This shows that each construct's components are consistently measuring the same underlying concept. According to the Fornell-Larcker Criterion, discriminant validity is being carried out. The existence of multicollinearity is typically thought to be indicated by a VIF value of 5 or above. None of the variables have a VIF value of 5 or above, as shown by the given VIF table. As a result, we can conclude that the framework does not include any substantial multicollinearity.

Table 3. Construct Validity.

Attitude Attitude AT1: Ordering from cloud kitchen is a pleasant idea. AT2: Ordering from cloud kitchen is an appealing idea. AT3: Ordering from cloud kitchen is a positive idea. Behavioural intention BI1: I would buy from a cloud kitchen in the near future. BI2: I am excited to taste the food for new experience. BI3: I intend to buy the food of my choice from a cloud kitchen. Food safety FS1: I take hygiene standards into consideration while ordering from a cloud kitchen. FS2: Working conditions of cloud kitchen workers matters to me. FS3: Food sourcing of cloud kitchens is an important factor. Food variety FV1: The cloud kitchens offer a variety of food choices. FV2: The cloud kitchens offer a variety of restaurant choices. FV3: I can order food with a wide range of prices through the cloud kitchens. Perceived innovativeness Perceived innovativeness PI3: Ordering foods from cloud kitchen seems creative. Price P1: When I order food through cloud kitchens, the food is a good value for the price. P2: When I order food through cloud kitchens, the
AT1: Ordering from cloud kitchen is a pleasant idea. AT2: Ordering from cloud kitchen is an appealing idea. AT3: Ordering from cloud kitchen is a positive idea. Behavioural intention Bl1: I would buy from a cloud kitchen in the near future. Bl2: I am excited to taste the food for new experience. Bl3: I intend to buy the food of my choice from a cloud kitchen. Food safety FS1: I take hygiene standards into consideration while ordering from a cloud kitchen. FS2: Working conditions of cloud kitchen workers matters to me. FS3: Food sourcing of cloud kitchens is an important factor. Food variety FV1: The cloud kitchens offer a variety of food choices. FV2: The cloud kitchens offer a variety of restaurant choices. FV3: I can order food with a wide range of prices through the cloud kitchens. Perceived innovativeness Pl1: Ordering foods from cloud kitchen seem unique. Pl2: Cloud kitchens provide new offerings. Pl3: Ordering food from a cloud kitchen seems creative. Price O.923 O.800 Pl: When I order food through cloud kitchens, the food is a good value for the price.
AT2: Ordering from cloud kitchen is an appealing idea. AT3: Ordering from cloud kitchen is a positive idea. Behavioural intention Behavioural intention Bl1: I would buy from a cloud kitchen in the near future. Bl2: I am excited to taste the food for new experience. Bl3: I intend to buy the food of my choice from a cloud kitchen. Food safety FS1: I take hygiene standards into consideration while ordering from a cloud kitchen. FS2: Working conditions of cloud kitchen workers matters to me. FS3: Food sourcing of cloud kitchens is an important factor. Food variety FVI: The cloud kitchens offer a variety of food choices. FV2: The cloud kitchens offer a variety of restaurant choices. FV3: I can order food with a wide range of prices through the cloud kitchens. Perceived innovativeness PR1: Ordering foods from cloud kitchens seem unique. PI2: Cloud kitchens provide new offerings. PI3: Ordering food from a cloud kitchen seems creative. Price 0.923 0.800 PI: When I order food through cloud kitchens, the food is a good value for the price.
AT3: Ordering from cloud kitchen is a positive idea. Behavioural intention BII: I would buy from a cloud kitchen in the near future. BI2: I am excited to taste the food for new experience. BI3: I intend to buy the food of my choice from a cloud kitchen. Food safety FSI: I take hygiene standards into consideration while ordering from a cloud kitchen. FS2: Working conditions of cloud kitchen workers matters to me. FS3: Food sourcing of cloud kitchens is an important factor. Food variety FVI: The cloud kitchens offer a variety of food choices. FV2: The cloud kitchens offer a variety of restaurant choices. FV3: I can order food with a wide range of prices through the cloud kitchens. Perceived innovativeness PI1: Ordering foods from cloud kitchens seem unique. PI2: Cloud kitchens provide new offerings. PI3: Ordering food from a cloud kitchen seems creative. Price O.923 O.800 PI: When I order food through cloud kitchens, the food is a good value for the price.
Behavioural intention 0.936 0.831 BII: I would buy from a cloud kitchen in the near future. BI2: I am excited to taste the food for new experience. BI3: I intend to buy the food of my choice from a cloud kitchen. Food safety 0.929 0.814 FSI: I take hygiene standards into consideration while ordering from a cloud kitchen. FS2: Working conditions of cloud kitchen workers matters to me. FS3: Food sourcing of cloud kitchens is an important factor. Food variety 0.887 0.798 FVI: The cloud kitchens offer a variety of food choices. FV2: The cloud kitchens offer a variety of restaurant choices. FV3: I can order food with a wide range of prices through the cloud kitchens. Perceived innovativeness 0.887 0.724 PII: Ordering foods from cloud kitchen seem unique. PI2: Cloud kitchens provide new offerings. PI3: Ordering food from a cloud kitchen seems creative. Price 0.923 0.800 PI: When I order food through cloud kitchens, the food is a good value for the price.
BI1: I would buy from a cloud kitchen in the near future. BI2: I am excited to taste the food for new experience. BI3: I intend to buy the food of my choice from a cloud kitchen. Food safety Fool safety FS1: I take hygiene standards into consideration while ordering from a cloud kitchen. FS2: Working conditions of cloud kitchen workers matters to me. FS3: Food sourcing of cloud kitchens is an important factor. Food variety FV1: The cloud kitchens offer a variety of food choices. FV2: The cloud kitchens offer a variety of restaurant choices. FV3: I can order food with a wide range of prices through the cloud kitchens. Perceived innovativeness PI1: Ordering foods from cloud kitchen seem unique. PI2: Cloud kitchens provide new offerings. PI3: Ordering food from a cloud kitchen seems creative. Price Price 0.923 0.880 PI: When I order food through cloud kitchens, the food is a good value for the price.
BI2: I am excited to taste the food for new experience. BI3: I intend to buy the food of my choice from a cloud kitchen. Food safety FSI: I take hygiene standards into consideration while ordering from a cloud kitchen. FS2: Working conditions of cloud kitchen workers matters to me. FS3: Food sourcing of cloud kitchens is an important factor. Food variety FV1: The cloud kitchens offer a variety of food choices. FV2: The cloud kitchens offer a variety of restaurant choices. FV3: I can order food with a wide range of prices through the cloud kitchens. Perceived innovativeness PI1: Ordering foods from cloud kitchen seem unique. PI2: Cloud kitchens provide new offerings. Price Price O.923 O.800 PI: When I order food through cloud kitchens, the food is a good value for the price.
Bl3: I intend to buy the food of my choice from a cloud kitchen. Food safety FS1: I take hygiene standards into consideration while ordering from a cloud kitchen. FS2: Working conditions of cloud kitchen workers matters to me. FS3: Food sourcing of cloud kitchens is an important factor. Food variety FV1: The cloud kitchens offer a variety of food choices. FV2: The cloud kitchens offer a variety of restaurant choices. FV3: I can order food with a wide range of prices through the cloud kitchens. Perceived innovativeness Perceived innovativeness Pl1: Ordering foods from cloud kitchens seem unique. Pl2: Cloud kitchens provide new offerings. Pl3: Ordering food from a cloud kitchen seems creative. Price O.923 O.800 Pl: When I order food through cloud kitchens, the food is a good value for the price.
cloud kitchen. Food safety Fol: I take hygiene standards into consideration while ordering from a cloud kitchen. FS2: Working conditions of cloud kitchen workers matters to me. FS3: Food sourcing of cloud kitchens is an important factor. Food variety FVI: The cloud kitchens offer a variety of food choices. FV2: The cloud kitchens offer a variety of restaurant choices. FV3: I can order food with a wide range of prices through the cloud kitchens. Perceived innovativeness PII: Ordering foods from cloud kitchen seem unique. PI2: Cloud kitchens provide new offerings. PI3: Ordering food from a cloud kitchen seems creative. Price Price O.923 O.800 PI: When I order food through cloud kitchens, the food is a good value for the price.
FS1: I take hygiene standards into consideration while ordering from a cloud kitchen. FS2: Working conditions of cloud kitchen workers matters to me. FS3: Food sourcing of cloud kitchens is an important factor. Food variety FVI: The cloud kitchens offer a variety of food choices. FV2: The cloud kitchens offer a variety of restaurant choices. FV3: I can order food with a wide range of prices through the cloud kitchens. Perceived innovativeness Perceived innovativeness PII: Ordering foods from cloud kitchens seem unique. PI2: Cloud kitchens provide new offerings. PI3: Ordering food from a cloud kitchen seems creative. Price O.923 O.800 PI: When I order food through cloud kitchens, the food is a good value for the price.
ordering from a cloud kitchen. FS2: Working conditions of cloud kitchen workers matters to me. FS3: Food sourcing of cloud kitchens is an important factor. Food variety FV1: The cloud kitchens offer a variety of food choices. FV2: The cloud kitchens offer a variety of restaurant choices. FV3: I can order food with a wide range of prices through the cloud kitchens. Perceived innovativeness Perceived innovativeness P1: Ordering foods from cloud kitchens seem unique. P12: Cloud kitchens provide new offerings. P13: Ordering food from a cloud kitchen seems creative. Price O.923 O.800 P1: When I order food through cloud kitchens, the food is a good value for the price.
FS2: Working conditions of cloud kitchen workers matters to me. FS3: Food sourcing of cloud kitchens is an important factor. Food variety FV1: The cloud kitchens offer a variety of food choices. FV2: The cloud kitchens offer a variety of restaurant choices. FV3: I can order food with a wide range of prices through the cloud kitchens. Perceived innovativeness Perceived innovativeness Perceived innovativeness Podering foods from cloud kitchens seem unique. Pl2: Cloud kitchens provide new offerings. Pl3: Ordering food from a cloud kitchen seems creative. Price O.923 O.800 Pl: When I order food through cloud kitchens, the food is a good value for the price.
matters to me. FS3: Food sourcing of cloud kitchens is an important factor. Food variety 0.887 0.798 FV1: The cloud kitchens offer a variety of food choices. 2.343 FV2: The cloud kitchens offer a variety of restaurant choices. FV3: I can order food with a wide range of prices through the cloud kitchens. Perceived innovativeness 0.887 0.724 PI1: Ordering foods from cloud kitchens seem unique. PI2: Cloud kitchens provide new offerings. 1.654 PI3: Ordering food from a cloud kitchen seems 2.000 creative. Price 0.923 0.800 P1: When I order food through cloud kitchens, the food is a good value for the price. 2.246
FS3: Food sourcing of cloud kitchens is an important factor. Food variety 0.887 0.798 FV1: The cloud kitchens offer a variety of food choices. 2.343 FV2: The cloud kitchens offer a variety of restaurant choices. FV3: I can order food with a wide range of prices through the cloud kitchens. Perceived innovativeness 0.887 0.724 PI1: Ordering foods from cloud kitchens seem unique. PI2: Cloud kitchens provide new offerings. 1.654 PI3: Ordering food from a cloud kitchen seems 2.000 creative. Price 0.923 0.800 P1: When I order food through cloud kitchens, the food is a good value for the price. 2.246
factor. Food variety Fool variety FVI: The cloud kitchens offer a variety of food choices. FV2: The cloud kitchens offer a variety of restaurant choices. FV3: I can order food with a wide range of prices through the cloud kitchens. Perceived innovativeness PII: Ordering foods from cloud kitchens seem unique. PI2: Cloud kitchens provide new offerings. PI3: Ordering food from a cloud kitchen seems creative. Price O.923 O.800 PI: When I order food through cloud kitchens, the food is a good value for the price.
Food variety FV1: The cloud kitchens offer a variety of food choices. FV2: The cloud kitchens offer a variety of restaurant choices. FV3: I can order food with a wide range of prices through the cloud kitchens. Perceived innovativeness PI1: Ordering foods from cloud kitchens seem unique. PI2: Cloud kitchens provide new offerings. PI3: Ordering food from a cloud kitchen seems creative. Price O.923 O.800 P1: When I order food through cloud kitchens, the food is a good value for the price.
FV1: The cloud kitchens offer a variety of food choices. 2.343 FV2: The cloud kitchens offer a variety of restaurant choices. FV3: I can order food with a wide range of prices through the cloud kitchens. Perceived innovativeness 0.887 0.724 PI1: Ordering foods from cloud kitchens seem unique. PI2: Cloud kitchens provide new offerings. 1.654 PI3: Ordering food from a cloud kitchen seems 2.000 creative. Price 0.923 0.800 P1: When I order food through cloud kitchens, the food is a good value for the price. 2.246
choices. 2.343 FV2: The cloud kitchens offer a variety of restaurant choices. FV3: I can order food with a wide range of prices through the cloud kitchens. Perceived innovativeness 0.887 0.724 PI1: Ordering foods from cloud kitchens seem unique. PI2: Cloud kitchens provide new offerings. 1.654 PI3: Ordering food from a cloud kitchen seems 2.000 creative. Price 0.923 0.800 P1: When I order food through cloud kitchens, the food is a good value for the price. 2.331
FV2: The cloud kitchens offer a variety of restaurant choices. FV3: I can order food with a wide range of prices through the cloud kitchens. Perceived innovativeness 0.887 0.724 PI1: Ordering foods from cloud kitchens seem unique. PI2: Cloud kitchens provide new offerings. 1.654 PI3: Ordering food from a cloud kitchen seems 2.000 creative. Price 0.923 0.800 P1: When I order food through cloud kitchens, the food is a good value for the price. 2.246
choices. FV3: I can order food with a wide range of prices through the cloud kitchens. Perceived innovativeness 0.887 0.724 PII: Ordering foods from cloud kitchens seem unique. PI2: Cloud kitchens provide new offerings. 1.654 PI3: Ordering food from a cloud kitchen seems 2.000 creative. Price 0.923 0.800 PI: When I order food through cloud kitchens, the food is a good value for the price. 2.246
through the cloud kitchens. Perceived innovativeness 0.887 0.724 PII: Ordering foods from cloud kitchens seem unique. PI2: Cloud kitchens provide new offerings. 1.654 PI3: Ordering food from a cloud kitchen seems 2.000 creative. Price 0.923 0.800 PI: When I order food through cloud kitchens, the food is a good value for the price. 2.246
through the cloud kitchens. Perceived innovativeness 0.887 0.724 PII: Ordering foods from cloud kitchens seem unique. PI2: Cloud kitchens provide new offerings. 1.654 PI3: Ordering food from a cloud kitchen seems 2.000 creative. Price 0.923 0.800 PI: When I order food through cloud kitchens, the food is a good value for the price. 2.246
PII: Ordering foods from cloud kitchens seem unique. PI2: Cloud kitchens provide new offerings. PI3: Ordering food from a cloud kitchen seems creative. Price 0.923 0.800 PI: When I order food through cloud kitchens, the food is a good value for the price. 2.331 2.246
PI2: Cloud kitchens provide new offerings. PI3: Ordering food from a cloud kitchen seems creative. Price 0.923 0.800 PI: When I order food through cloud kitchens, the food is a good value for the price. 2.331
PI3: Ordering food from a cloud kitchen seems creative. Price 0.923 0.800 PI: When I order food through cloud kitchens, the food is a good value for the price. 2.331
creative. Price 0.923 0.800 PI: When I order food through cloud kitchens, the food is a good value for the price. 2.331
Price 0.923 0.800 PI: When I order food through cloud kitchens, the food is a good value for the price. 2.331
PI: When I order food through cloud kitchens, the food is a good value for the price. 2.331
food is a good value for the price. 2.246
food is reasonably priced.
P3: When I order food through cloud kitchens, the 2.615
food is economical.
Social influence 0.941 0.842
SII: People who influence my behaviour think that I 2.936
should order from cloud kitchens. 3.087
SI2: My friends want me to order food from cloud
kitchens. 2.838
SI3: People who are important to me think that I
should order from cloud kitchens.
Trust 0.941 0.842
T1: I feel secure in ordering food from cloud kitchens. T2: The information provided by cloud kitchens seems 3.168
reliable. 3.167
T3: Cloud kitchens keep promises and commitments.

Note: AT=Attitude, BI=Behavioural intention, FS=Food safety, PI=Perceived intention, P=Price, SI=Social influence, T=Trust.

Table 4 reveals that all the constructs are positively correlated with each other, and the correlations are moderate to high. Attitude, Behavioural intention and Trust have the highest correlations with other constructs, ranging from 0.757 to 0.936. Perceived innovativeness and price also have moderate correlations with other constructs, ranging from 0.588 to 0.851. Food safety and Food variety have lower correlations with other constructs, ranging from 0.526 to 0.902. This suggests that these constructs are less related to other constructs but are still important in understanding the overall phenomenon.

The values under 0.85 in the HTMT Model's assessment of the strength of correlation between various variables are regarded as acceptable. Table 5 shows that there are a number of significant positive connections, including those between Behavioural intention and Attitude (0.827), Trust and Price (0.822) and Attitude and Trust (0.756). Moreover, there are some weakly positive associations, such as those between Perceived innovation and Attitude (0.729), Perceived food safety and Attitude (0.666) and Trust and Desire to act (0.717). There are also a few weakly positive connections, including those between Food variety and Attitude (0.663), Perceived innovation and Food variety (0.607) and Price and Social influence (0.689).

Table 4. Fornell-Larcker Criterion, Discriminant Validity.

	AT	ВІ	FS	FV	PI	Р	SI	Т
AT	0.936							
BI	0.757	0.911						
FS	0.607	0.594	0.902					
FV	0.602	0.539	0.526	0.893				
Pl	0.633	0.607	0.516	0.588	0.851			
Р	0.636	0.569	0.484	0.537	0.633	0.895		
SI	0.636	0.512	0.448	0.510	0.546	0.616	0.918	
Т	0.755	0.648	0.531	0.544	0.597	0.676	0.670	0.918

Note: AT=Attitude, BI=Behavioural intention, FS=Food safety, PI=Perceived intention, P=Price, SI=Social influence, T=Trust.

Table 5. Heterotrait-Monotrait Ratio (HTMT), Discriminant Validity.

	AT	BI	FS	FV	PI	Р	SI	Т
AT								
BI	0.827							
FS	0.666	0.664						
FV	0.663	0.604	0.593					
PI	0.729	0.712	0.607	0.696				
Р	0.701	0.640	0.550	0.615	0.753			
SI	0.693	0.565	0.499	0.573	0.637	0.689		
Т	0.822	0.717	0.592	0.609	0.697	0.756	0.740	

Note: AT=Attitude, BI=Behavioural intention, FS=Food safety, PI=Perceived intention, P=Price, SI=Social influence, T=Trust.

		β Coefficient	Standard Deviation	T-Statistics	P Values	
Η,	Perceived innovativeness → Attitude	0.172	0.074	2.338	.020*	Accepted
Η,	Price o Attitude	0.174	0.067	2.594	.010*	Accepted
H ₃	Food variety $ ightarrow$ Attitude	0.153	0.065	2.352	.019*	Accepted
$H_{_4}$	Food safety $ ightarrow$ Attitude	0.242	0.055	4.363	.000*	Accepted
H_{5}	Social influence \rightarrow Attitude	0.249	0.053	4.717	*000	Accepted

Table 6. Structural Relationships Testing.

Note: *Significant at t-statistics more than 1.96 and P < .05.

The study tested the hypotheses to examine the significance of the relationship in Table 6. The first hypothesis (H_1) evaluates the relationship between perceived innovativeness and consumer attitude regarding cloud kitchens. The results revealed that there is a significant relationship between perceived innovativeness and consumer attitude regarding cloud kitchens ($\beta = 0.172$, t = 2.338 and P = .020). Hence H_1 is accepted. Further, there is significant relationship between price and consumer attitude regarding cloud kitchens ($\beta = 0.174$, t = 2.594 and P = .010) and hence H_2 is accepted. H_3 evaluates the relationship between food variety and consumer attitude regarding cloud kitchens and which is also found to be significant ($\beta = 0.153$, t = 2.352 and P = .019). Therefore, H_3 is accepted.

Also, there is significant relationship between food safety and consumer attitude regarding cloud kitchens ($\beta = 0.242$, t = 4.363 and P = .000). Hence H_4 is accepted. Further, there exists a significant relationship between social influence and consumer attitude regarding cloud kitchens ($\beta = 0.249$, t = 4.717 and P = .000), therefore, H_5 is also accepted.

Structural Model

The structural model (Figure 3) reflects the hypothesised path of the research framework. The study used R², Q² and path significance to assess the structural model. The study used a bootstrapping algorithm with 500 samples to examine the path coefficients' significance. For attitude, behavioural intention and trust, the R Square values are 0.617, 0.586 and 0.570, respectively. This means that the model accounts for 61.7%, 58.6% and 57.0%, respectively, of the variation in attitude, behavioural intention and trust. The cross-validated predictive significance of the model is represented by Q Square. It evaluates how well the model can anticipate the dependent variable or variables using the independent variable as a foundation(s). The values for attitude, behavioural intention and

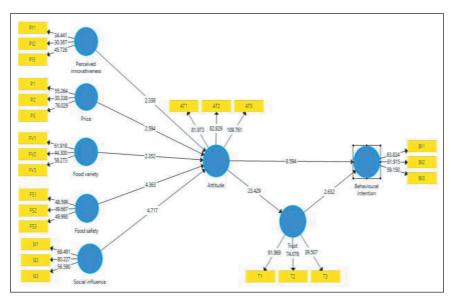


Figure 3. Structural Model.

Table 7. Predictive Relevance and Coefficient of Determination.

	R Square	Q Square
Attitude	0.617	0.524
Behavioural intention	0.586	0.478
Trust	0.570	0.474

Table 8. Model Fitness.

	Saturated Model	Estimated Model
SRMR	0.044	0.070

Note: SRMR=Standardised root mean square residual.

trust in Table 7 are 0.524, 0.478 and 0.474, respectively. Although a Q Square value greater than 0.25 is often seen as acceptable, these results show that the model has moderate to strong explanatory accuracy for these constructs.

The difference between the sample covariance matrix and the indicated covariance matrix in the model is measured by the Standardised Root Mean Square Residual (SRMR). SRMR must be lower than 0.080. Lower values of SRMR indicate a better fit. In this case, the SRMR is 0.044 for the saturated model and 0.070 for the estimated model. Therefore, the saturated model has a better fit than the estimated model (Table 8).

Total Effect				Direct Effe	ect		
Hypotheses	Coefficient	T-Statistics	P Value	Hypotheses	Coefficient	Statistics	P Value
$\overline{\text{Attitude}} \rightarrow$	0.757	18.716	.000	Attitude \rightarrow	0.622	8.926	.000
Behavioural				Behavioural			
intention				intention			

Table 9. Total Effect and Direct Effect.

Table 10. Specific Indirect Effect.

Hypotheses	Coefficient	T-Statistics	P Value	
$\overline{Attitude \to Trust \to Behavioural \; intention}$	0.135	2.588	.010	

Mediation Analysis

The study conducted mediation analysis to evaluate the mediating role of consumer trust on the relationship between consumer attitude and consumer behavioural intentions regarding cloud kitchens. The results of total effect and direct effect are illustrated in Table 9. The results revealed (Table 9) that the total effect of consumer attitude on consumer behavioural intentions was significant (β = 0.757, t = 18.716 and P = .000). After the inclusion of trust as a mediating variable, the impact of consumer attitude on consumer behavioural intentions is still significant (β = 0.622, t = 8.926 and P = .000).

The results of the indirect effect are being listed in Table 10, which shows that the indirect effect of consumer attitude on consumer behavioural intentions was found significant ($\beta = 0.135$, t = 2.588 and P = .000). These results show that consumer trust partially mediates the relationship between consumer attitude and consumer behavioural intentions regarding cloud kitchens. Therefore, H_6 is accepted.

Discussions

The current study used an exploratory methodology to look at the variables affecting customers' intentions of using cloud kitchens. The partial least squares structural equation modelling (PLS-SEM) approach was chosen for hypotheses testing, where all six hypotheses were found to be supported. The results revealed that consumer attitudes are positively impacted by perceived innovativeness, food variety, price, food safety and social influence. Further, consumer attitudes and behavioural intentions are significantly influenced by the mediating variable, trust, which has emphasised the need for building and sustaining consumer trust through transparency and secure privacy policies.

The findings of the present study are consistent with the existing studies where it is found that a product's perceived innovativeness (PI) can influence how much

consumers trust it (Candan et al., 2013). This is because customers are more willing to accept innovative items since they are believed to have higher epistemic worth. This result is in line with other studies such as the one by Chang (2013), which discovered that innovativeness can impact a product's reputation and consumers' perceptions of its reliability. It has shown that customers may be more inclined to trust and order from cloud kitchens if they perceive them to be innovative in the context of cloud kitchens. In the current study it was found that attitude has a strong positive effect on trust, which influences behavioural intention. Also, it is found that food safety is a key factor that influences consumer attitudes. Food safety, according to Ngo et al. (2023), is a highly important predictor of consumers' attitude towards cloud kitchens. In the context of innovative services, Cheung and To (2017) discovered a positive correlation between attitude and trust. This implies that consumers form their views about a novel type of service, like cloud kitchens, based on the information they get and the perceptions they make. This result is in line with the findings of the present research, which discovered a positive correlation between trust and attitude with respect to cloud kitchens. Also, perceived innovativeness and price were found to have a strong link with consumer attitude. The finding is backed by previous studies, which show that customers are more inclined to view cloud kitchens positively if they believe them to be creative and that price has a significant impact on how consumers feel about a variety of goods and services (Choe & Kim, 2018). The study claims that the findings are in line with prior research conducted by Chotigo and Kadono (2021), Elango et al. (2018) and Muangmee et al. (2021). This supports the theory that social influence (SI) significantly affects how consumers perceive and plan to utilise cloud kitchen services. The study therefore highlights the critical function of social influence in influencing consumers' purchasing decisions, which can be strengthened by successful advertising efforts and encouraging word-of-mouth referrals from satisfied customers (Belanche et al., 2020).

The present study is the first to pinpoint the mediating effects that trust plays. The results revealed evidence of a mediating effect, suggesting that trust may serve as a critical mediator between customers' opinions and their behavioural intentions regarding cloud kitchens. Thus, trust has a significant impact on how customers feel about cloud kitchens, which in turn affects how likely they are to actually utilise the service.

Theoretical Implications

The present study offers a theoretical framework on cloud kitchen services in light of the growing rivalry within the food industry and the growing difficulties for businesses to reach their consumers. Moreover, by identifying the variables that has a significant effect on customer behavioural intention, the outcome of this research strengthened the foundation of knowledge already available on cloud kitchens. Further, the hypotheses explained consumer attitudes regarding cloud

kitchens, which are significantly influenced by how creative they are with regard to consumers. Also, price has a substantial impact on consumers' attitude towards cloud kitchens; economic theories such as the consumer choice theory and the price sensitivity theory may be applicable in attempting to understand customer behaviour in this situation. According to the idea of consumer choice, decisions are rationally made by customers after considering costs and benefits. According to the price sensitivity theory, customers are more likely to be price sensitive when they are less involved in the purchasing process or when there is less perceived product differentiation. Overall, there are multiple theories which can be used to elaborate consumer behaviour in the context of cloud kitchens, including variety-seeking behaviour theory, risk perception theory, social influence theory and the theory of planned behaviour.

Practical Implications

The outcome of this research has significant ramifications and provides cloud kitchen operators recommendations. First, the research model underlined the significance of trust in cloud kitchens. Operators of cloud kitchens must inform customers and foster trust in their business, especially given that the kitchen is concealed from the general public. It has been claimed that cloud kitchens provide customer features such as menu visualisation, price and nutritional data that may have an impact on trust. Social media may be used by cloud kitchen operators to interact with and establish trust of their customer base. In using food applications, social media has been proven to affect consumers' intentions to repurchase (Yeo et al., 2017). The effect of PI, price and food variety on consumer attitude towards cloud kitchen was another significant discovery. Considering their significance, cloud kitchen operators should be offering a frictionless and engaging online user experience for customers. Customers can tune into a live video stream from the cloud kitchen to get an 'inside peek' at how things are done. A unique dining experience may be created by cloud kitchen operators employing 'artificial intelligence' and 'machine learning' techniques so that it can offer menu selections to customers based on their prior purchasing habits. Operators should implement techniques that make potential customers feel secure buying from them, as food safety risk plays a significant factor in influencing attitude concerning cloud kitchens. For instance, online publication of inspection results from the local health department may alleviate customer concerns about probable food safety risks. Building and sustaining consumer trust is one of the greatest strategies to boost consumer behavioural intention towards cloud kitchen. In order to positively affect attitudes and behaviours around cloud kitchen services, trust is essential. Since a transparent privacy policy may foster confidence, cloud kitchen service providers need to make a commitment to safeguarding client privacy (e.g., personal information). To foster confidence and lower risk, service providers should publish a transparent privacy policy online. Operators of cloud kitchens should invest in developing a suitable 'persona' for their business.

Limitations and Directions for Future Research

The current study has certain limitations. First, the study was conducted through social networking sites such as Facebook, Instagram and LinkedIn where online survey was conducted to record the opinion of users of cloud kitchen. However, we may not precisely conclude upon the findings of the study due to individual's social desirability bias. Second, the study was conducted in India, therefore the results are not generalisable to the rest of the world. Third, the study is an outcome of the online survey which was conducted at a point of time with a set of respondents which were available on these social networking sites during the survey period. This gives a possibility of missing out of few important responses. The findings of the study will pave the way for future researches. To give more insights, a cross-cultural study can be conducted within India to compare the impact of multiple cultures on the behavioural intention towards cloud kitchen. The study can be further extended across the border to compare the attitude and intentions between two countries or continents. Further, to validate the findings of the study a mixed method approach can be adopted.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Funding

The authors received no financial support for the research, authorship and/or publication of this article.

ORCID iDs

Saurabh Verma https://orcid.org/0000-0002-9816-1552 Sunil Kumar Yadav https://orcid.org/0000-0003-4671-6357

References

- Agarwal, R., & Prasad, J. (1997). The role of innovation characteristics and perceived voluntariness in the acceptance of information technologies. *Decision Sciences*, 28(3), 557–582.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and Human Decision Processes*, 50(2), 179–211.
- Barkhi, R., & Wallace, L. (2007). The impact of personality type on purchasing decisions in virtual stores. *Information Technology and Management*, *8*, 313–330.
- Becerra, E. P., & Korgaonkar, P. K. (2011). Effects of trust beliefs on consumers' online intentions. *European Journal of Marketing*, 45(6), 936–962.
- Belanche, D., Flavian, M., & Perez-Rueda, A. (2020). Mobile apps use and WOM in the food delivery sector: The role of planned behavior, perceived security and customer lifestyle compatibility. *Sustainability*, *12*(10), 4275.

- Brucks, M., Zeithaml, V. A., & Naylor, G. (2000). Price and brand name as indicators of quality dimensions for consumer durables. *Journal of the Academy of Marketing Science*, 28, 359–374.
- Cai, R., Leung, X. Y., & Chi, C. G. Q. (2022). Ghost kitchens on the rise: Effects of knowledge and perceived benefit-risk on customers' behavioral intentions. *International Journal* of Hospitality Management, 101, 103110.
- Candan, B., Ünal, S., & Erciş, A. (2013). Analysing the relationship between consumption values and brand loyalty of young people: A study on personal care products. *Management*, 29, 46.
- Chan, K. H., Lee, P. W., Chan, C. Y., Lam, K. B. H., & Ho, P. L. (2020). Monitoring respiratory infections in COVID-19 epidemics. *BMJ*, 369, 1–8.
- Chandrasekhar, N., Gupta, S., & Nanda, N. (2019). Food delivery services and customer preference: A comparative analysis. *Journal of Foodservice Business Research*, 22(4), 375–386.
- Chang, K. C. (2013). How reputation creates loyalty in the restaurant sector. *International Journal of Contemporary Hospitality Management*, 25(4), 536–557.
- Chatterjee, R., Singh, A., & Singh, V. (2022). Ethical and sustainable perceptions on cloud kitchen business: A study of consumers and stakeholders during the COVID-19 pandemic. *International Journal of Hospitality and Tourism Systems*, 15(COVID-19 Issue), 76.
- Chen, L. D., & Tan, J. (2004). Technology adaptation in e-commerce: Key determinants of virtual stores acceptance. *European Management Journal*, 22(1), 74–86.
- Chen, M. F. (2008). Consumer trust in food safety: A multidisciplinary approach and empirical evidence from Taiwan. *Risk Analysis: An International Journal*, 28(6), 1553–1569.
- Cheung, M. F., & To, W. M. (2017). The influence of the propensity to trust on mobile users' attitudes toward in-app advertisements: An extension of the theory of planned behavior. *Computers in Human Behavior*, 76, 102–111.
- Chhabra, N., & Rana, A. (2021). Rise and the future of cloud kitchens in India: A consumer study. *International Journal of Research in Engineering, Science and Management*, 4(7), 158–165.
- Chiu, C. M., Chang, C. C., Cheng, H. L., & Fang, Y. H. (2009). Determinants of customer repurchase intention in online shopping. *Online Information Review*, *33*(4), 761–784.
- Cho, M., Bonn, M. A., & Li, J. J. (2019). Differences in perceptions about food delivery apps between single-person and multi-person households. *International Journal of Hospitality Management*, 77, 108–116.
- Choe, J. Y. J., & Kim, S. S. (2018). Effects of tourists' local food consumption value on attitude, food destination image, and behavioral intention. *International Journal of Hospitality Management*, 71, 1–10.
- Choi, K., Wang, Y., & Sparks, B. (2019). Travel app users' continued use intentions: It's a matter of value and trust. *Journal of Travel & Tourism Marketing*, 36(1), 131–143.
- Chotigo, J., & Kadono, Y. (2021). Comparative analysis of key factors encouraging food delivery app adoption before and during the COVID-19 pandemic in Thailand. *Sustainability*, *13*(8), 4088.
- Choudhary, N. (2019). Strategic analysis of cloud kitchen: A case study. *Management Today*, 9(3), 184–190.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.

- Dwivedi, Y. K., Rana, N. P., Jeyaraj, A., Clement, M., & Williams, M. D., (2019). Re-examining the unified theory of acceptance and use of technology (UTAUT): Towards a revised theoretical model. *Information Systems Frontiers*, 21, 719–734.
- Elango, D., Dowpiset, K., & Chantawaranurak, J. (2018, August 24). A study on factors impacting consumers' intention to use on-demand food delivery applications in Bangkok, Thailand. 1–19. http://dx.doi.org/10.2139/ssrn.3321587
- Farah, M. F., Ramadan, Z., & Kanso, J. (2022). Satisfying the online food crave: The case of online food aggregators. *International Journal of Consumer Studies*, 46(4), 1413–1427.
- Fishbein, M., & Ajzen, I. (1977). Belief, attitude, intention, and behavior: An introduction to theory and research.
- Frewer, L., de Jonge, J., & van Kleef, E. (2009). Consumer perceptions of food safety. *Medical Science*, 2, 243.
- Gass, R. H., & Seiter, J. S. (2022). *Persuasion: Social influence and compliance gaining* (7th ed.). Routledge.
- Ha, T. M., Shakur, S., & Do, K. H. P. (2020). Linkages among food safety risk perception, trust and information: Evidence from Hanoi consumers. Food Control, 110, 06965.
- Hair, Jr, J. F., Sarstedt, M., Matthews, L. M., & Ringle, C. M. (2016). Identifying and treating unobserved heterogeneity with FIMIX-PLS: Part I-method. *European Business Review*, 28(1), 63–76.
- Hamid, S., & Azhar, M. (2023). Behavioral intention to order food and beverage items using e-commerce during COVID-19: An integration of theory of planned behavior (TPB) with trust. *British Food Journal*, 125(1), 112–131.
- Hwang, J., Lee, J.S., & Kim, H. (2019). Perceived innovativeness of drone food delivery services and its impacts on attitude and behavioral intentions: The moderating role of gender and age. *International Journal of Hospitality Management*, 81, 94–103.
- Idris, N. S., Zulkifly, M. A., Safuan, M., & Latip, A. (2023). New trends of cloud kitchen technology and consumers' purchase decisions: A conceptual study. *Voice of Academia*, 19(2), 114–126.
- Jiang, Y., Balaji, M. S., & Lyu, C. (2024). Cultivating initial trust in ghost kitchens: A mixed-methods investigation of antecedents and consequences. *International Journal* of Hospitality Management, 119, 103727.
- Khan, T. A., Khan, S. A., Haque, S., & Ayub, M. F. B. (2023). A study on the prospect of the cloud kitchen model in Dhaka. *International Journal of Business and Management*, 18(1), 46–59.
- Konuk, F. A. (2019). The impact of retailer innovativeness and food healthiness on store prestige, store trust and store loyalty. *Food Research International*, *116*, 724–730.
- Koththagoda, K. C., & Herath, H. M. R. P. (2018). Factors influencing online purchasing intention: The mediation role of consumer attitude. *Journal of Marketing and Consumer Research*, 42(2003), 66–74.
- Kulshreshtha, K., & Sharma, G. (2022). From restaurant to cloud kitchen: Survival of the fittest during COVID-19 an empirical examination. *Technological Forecasting and Social Change*, 179, 121629.

- Levyda, L. (2017). What values are perceived by hotel guests? *International Journal of Services, Economics and Management*, 8(1–2), 73–89.
- Lim, K. B., Yeo, S. F., Tan, C. L., & Wen, W. W. (2022). Impact of social media on consumer purchase behaviour during COVID-19 pandemic. *International Journal of Entrepreneurship, Business and Creative Economy*, 2(1), 23–36.
- Luo, L., Ni, J., Zhou, M., Wang, C., Wen, W., Jiang, J., Cheng, Y., Zhang, X., Wang, M., & Wang, W. (2021). Food safety knowledge, attitudes, and self-reported practices among medical staff in China before, during and after the COVID-19 pandemic. *Risk Management and Healthcare Policy*, 14(1), 5027–5038.
- Ma, L., Chen, H., Yan, H., Wu, L., & Zhang, W. (2019). Food safety knowledge, attitudes, and behavior of street food vendors and consumers in Handan, a third-tier city in China. BMC Public Health, 19(1), 1–13.
- MacKenzie, S. B., Lutz, R. J., & Belch, G. E. (1986). The role of attitude toward the ad as a mediator of advertising effectiveness: A test of competing explanations. *Journal of marketing research*, 23(2), 130–143.
- Mathur, P., & Mathur, V. K. (2023). Consumer purchase intention and behavior toward cloud kitchen (pandemic opportunity) with reference to India: An empirical examination. *Jindal Journal of Business Research*, 12(2), 194–208.
- Monroe, K. B., & Petroshius, S. M. (1981). Buyers' perceptions of price: An update of the evidence. *Perspectives in Consumer Behavior*, 3(23), 43–55.
- Muangmee, C., Kot, S., Meekaewkunchorn, N., Kassakorn, N., & Khalid, B. (2021). Factors determining the behavioral intention of using food delivery apps during COVID-19 pandemics. *Journal of Theoretical and Applied Electronic Commerce Research*, 16(5), 1297–1310.
- Naderi, I., & Paswan, A. K. (2016). Narcissistic consumers in retail settings. *Journal of Consumer Marketing*, 33(5), 376–386.
- Nardi, V. A. M., Teixeira, R., Ladeira, W. J., & de Oliveira Santini, F. (2020). A meta-analytic review of food safety risk perception. *Food Control*, 112, 107089.
- Ngo, H. M., Liu, R., Moritaka, M., & Fukuda, S. (2023). Determinants of consumer intention to purchase food with safety certifications in emerging markets: Evidence from Vietnam. *Journal of Agribusiness in Developing and Emerging Economies*, 13(2), 243–259.
- Nigro, C., Iannuzzi, E., di Santo, N., & Sisto, R. (2023). Food delivery, ghost kitchens and virtual restaurants: Temporary or long-lasting game changers? *British Food Journal*, 125(6), 2217–2233.
- Oentoro, W. (2021). Mobile payment adoption process: A serial of multiple mediation and moderation analysis. *The Bottom Line*, *34*(3/4), 225–244.
- Oliver, R. L., Rust, R. T., & Varki, S. (1997). Customer delight: Foundations, findings, and managerial insight. *Journal of Retailing*, 73(3), 311–336.
- Olya, H. G., & Al-Ansi, A. (2018). Risk assessment of halal products and services: Implication for tourism industry. *Tourism Management*, 65, 279–291.
- Othman, M. S., Nor, N. M., & Rosdi, W. N. W. (2021). Impact of ghost kitchen towards consumer behavioral intention during movement control order. *Journal of Islamic, Social, Economics and Development*, 6(36), 30–37.

Park, E., & Kim, K. J. (2013). User acceptance of long-term evolution (LTE) services: An application of extended technology acceptance model. *Program*, 47(2), 188–205.

- Pavlou, P. A. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce*, 7(3), 101–134.
- Peng, D. X., & Lai, F. (2012). Using partial least squares in operations management research: A practical guideline and summary of past research. *Journal of operations* management, 30(6), 467–480.
- Perrea, T., Grunert, K. G., & Krystallis, A. (2015). Consumer value perceptions of food products from emerging processing technologies: A cross-cultural exploration. *Food Quality and Preference*, *39*, 95–108.
- Pine, B. J., & Gilmore, J. H. (1998). Welcome to the experience economy. *Harvard Business Review*, 76(4), 97–105.
- Rana, J., & Paul, J. (2017). Consumer behavior and purchase intention for organic food: A review and research agenda. *Journal of Retailing and Consumer Services*, 38, 157–165.
- Roosen, J., Bieberstein, A., Blanchemanche, S., Goddard, E., Marette, S., & Vandermoere, F. (2015). Trust and willingness to pay for nanotechnology food. *Food Policy*, *52*, 75–83.
- Saberian, F., Amirshahi, M., Ebrahimi, M., & Nazemi, A. (2020). Linking digital platforms' service dimensions to customers' purchase. *The Bottom Line*, *33*(4), 315–335.
- Sanny, L., Hamada, A., Prameswari, A., & Setiawan, A. (2022, September). Effects of social media marketing in cloud kitchen towards online platform in Indonesia. In 2022 International Seminar on Application for Technology of Information and Communication (iSemantic) (pp. 367–371). IEEE.
- Sarbhai, A., & Khare, V. (2023). Post pandemic shift of consumer behavior & cloud kitchen. *International Journal for Research in Applied Science & Engineering Technology*, 11(7), 1992–2002.
- Sheth, J. N., Newman, B. I., & Gross, B. L. (1991). Why we buy what we buy: A theory of consumption values. *Journal of business research*, 22(2), 159–170.
- Silva, M. J. D. B., Farias, S. A. D., & Silva, C. J. (2023). Endorsement on Instagram and cultural dimensions: An analysis of digital influencers. *The Bottom Line*, *36*(1), 1–28.
- Simonson, I., & Tversky, A. (1992). Choice in context: Tradeoff contrast and extremeness aversion. *Journal of Marketing Research*, 29(3), 281–295.
- Suki, N. M. (2016). Consumer environmental concern and green product purchase in Malaysia: Structural effects of consumption values. *Journal of Cleaner Production*, 132, 204–214.
- Talwar, S., Kaur, P., Ahmed, U., Bilgihan, A., & Dhir, A. (2023). The dark side of convenience: How to reduce food waste induced by food delivery apps. *British Food Journal*, 125(1), 205–225.
- Teng, W. (2019). Utilitarian, hedonic, collecting, epistemic, and high values as determinants of the attractiveness of premium promotions. *Journal of Marketing Communications*, 25(6), 626–644.
- Ter Ji-Xi, J., Salamzadeh, Y., & Teoh, A. P. (2021). Behavioral intention to use cryptocurrency in Malaysia: An empirical study. *The Bottom Line*, *34*(2), 170–197.

- Tonsor, G. T., Schroeder, T. C., & Pennings, J. M. (2009). Factors impacting food safety risk perceptions. *Journal of Agricultural Economics*, 60(3), 625–644.
- Troise, C., O'Driscoll, A., Tani, M., & Prisco, A. (2021). Online food delivery services and behavioural intention: A test of an integrated TAM and TPB framework. *British Food Journal*, 123(2), 664–683.
- Tualeka, S. H. (2024). Multi-brand virtual restaurant: Cloud kitchen business model (case study of PT. Sagala). Management Studies and Entrepreneurship Journal (MSEJ), 5(2), 4921–4931.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. MIS Quarterly, 27(3), 425–478.
- Völckner, F., & Hofmann, J. (2007). The price-perceived quality relationship: A metaanalytic review and assessment of its determinants. *Marketing Letters*, 18, 181–196.
- Watanabe, E. A. D. M., Alfinito, S., Curvelo, I. C. G., & Hamza, K. M. (2020). Perceived value, trust and purchase intention of organic food: A study with Brazilian consumers. *British Food Journal*, 122(4), 1070–1184.
- Wu, C., Tao, Y. H., & Lin, Y. M. (2017). Repurchase decision for music products in Taiwan: Physical versus online media. *Digital Policy, Regulation and Governance*, 19(4), 302–316.
- Yeo, V. C. S., Goh, S. K., & Rezaei, S. (2017). Consumer experiences, attitude and behavioral intention toward online food delivery (OFD) services. *Journal of Retailing* and Consumer services, 35, 150–162.
- Youn, H., & Kim, J. H. (2018). Is unfamiliarity a double-edged sword for ethnic restaurants? *International Journal of Hospitality Management*, 68, pp. 23–31.
- Zhu, D. S., Chih, Z., O'Neal, G. S., & Chen, Y. H. (2011). Mr. Risk! Please trust me: Trust antecedents that increase online consumer purchase intention. *Journal of Internet Banking and Commerce*, 16(3), 1.

A Grounded Theory of Peer Mechanism in a Self-help Group

IIMS Journal of Management Science 16(2) 171–197, 2025 © The Author(s) 2025 DOI: 10.1177/0976030X251318856 journal.iimshillong.ac.in



Nishi Malhotra

Abstract

The poor and unorganized women artisans lack the physical collateral, and banks are wary to lend to them due to informational asymmetry regarding their creditworthiness. Social capital in a joint liability group enables the members to borrow from the banks. Due to the joint liability and dynamic incentive of higher credit limits, the members peer monitors each other to ensure access to finance. The research study aims to discuss the role of peer mechanisms in ensuring the success of lending to the poor and marginalized through self-help groups (SHGs) or joint liability groups. Since there is no study that discusses the impact of peer mechanisms on lending through SHGs, this study, for the first time, provides a conceptual framework for peer mechanism and their role in ensuring the sustainability of joint liability groups. This study uses the social constructivist paradigm and the grounded theory method to explain how the peer mechanism that comprises peer selection, peer monitoring and peer enforcement helps to improve the repayment rates under the SHGs linkage program. The data for the study are collected using 25 semi-structured interviews with the members of the SHGs and the heads of the self-help-promoting institutions. The analysis of data highlights that in a group social exchange, social control, social cohesion, sustainability, and social welfare, which emerged as categories after the open coding, are the main sources of peer mechanism. Further focused coding highlighted that mainly network relations, trust, and norms enable sustainability in the SHGs.

Keywords

Microfinance, self-help groups, peer mechanism

Corresponding Author:

Nishi Malhotra, Indian Institute of Management Sambalpur, Basantpur, Odisha 768025, India. E-mail: nishim13fpm@iimk.ac.in



Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License (http://www.

creativecommons.org/licenses/by-nc/4.0/) which permits non-Commercial use, reproduction and distribution of the work without further permission provided the original work is attributed.

¹ Indian Institute of Management Sambalpur, Basantpur, Odisha, India

JEL Classification: G21, G23

Received 17 March 2023; accepted 17 January 2025

Introduction

Muhammed Yunus, the person who revolutionized microfinance with the Grameen Bank model, once said, "I founded Grameen Bank to provide loans to those considered traditionally unbankable. Grameen Bank works with the poorest and often illiterate, providing uncollateralized micro-loans for tiny business enterprises by which they can lift themselves and their families out of poverty."

A total of 1.7 billion people lack collateral and are financially excluded globally (Demirguc-Kunt et al., 2017; Ray, 1997). Due to information asymmetry, institutional financial institutions are hesitant to lend to the marginalized poor since it leads to high monitoring and screening expenses and deteriorating asset quality. Thus, credit market failure leads to the financial exclusion of the poor and promotes moneylenders (Stiglitz, 1990). Formal institutions do not lend to the poor; therefore, only low-quality lenders survive in the market (Akerlof, 1970; Ledgerwood, 1997; Weber & Ahmad, 2014). Microfinancing will affect society and the environment (Brundtland, 1987). Self-help groups (SHGs) lend to micro borrowers without collateral or creditworthiness by replacing social collateral with physical collateral and lowering transaction costs. Group lending and peer monitoring ensure financial inclusion of the unbanked people through access to local information. Information asymmetry can cause adverse selection—choosing the wrong person for credit distribution—according to a study (Jensen & Meckling, 1976).

Due to the joint liability, knowing that if a single member defaults, all the other members will have to pay on his behalf, the members monitor each other. Peer mechanism refers to the phenomenon through which members with limited liability select each other on the basis of association and knowledge using criteria such as profession, monitor each other, and enforce norms to ensure financial discipline in a joint liability group (Conning, 2005; Harriss & Renzio, 1997; Stiglitz, 1990). Groups help in mitigating the problem of adverse selection by member peer selection. Social contracts make members group agents and jointly liable. Group members share joint and limited liability. This social contract uses peer pressure and sanctions to increase debt collection, savings, and cost reduction (Angelucci et al., 2015; Basu & Srivastava, 2005). Social collateral substitutes physical collateral for financial inclusion (Pitt & Khandekar, 1998). Previous research shows what financial outcomes a group mechanism promotes: saving (Gugerty, 2007), higher credit (Deininger & Liu, 2009), income, asset ownership, recovery performance, and lower transaction costs (Puhazhendi & Badatya, 2002). Given the lack of physical collateral and knowledge asymmetry among needy Joint Liability Group members, there is no study on how the group mechanism promotes financial discipline and sustainability (Bastelaer, 1999; BIRD, 2019).

Literature Review

The agency theory, proposed by Jensen and Meckling (1976), investigates the relationship between borrowers and lenders within formal financial institutions. When applied to SHGs, the theory views the lender as the principal and the borrower as the agent. It emphasizes the information advantage that agents, or borrowers, may have over principals, such as banks, regarding creditworthiness and economic activities within the group. Agents can potentially exploit this information asymmetry for their own benefit, leading to issues like moral hazard in loan repayment and project riskiness. Microfinance, as argued by Baruah (2012), has the potential to drive social change and alleviate poverty. However, mission drift has made the subsidized banking model unsustainable for large commercial banks due to a lack of information on clients' creditworthiness (Bhaduri, 2006). Pischke (1996) stresses the importance of financial literacy training for impoverished rural populations. Social capital and peer pressure, as highlighted by Sanae (2003) and Quidt et al. (2016), play a crucial role in ensuring the sustainability of group lending models like SHGs (Armendariz & Morduch, 2007). Joint liability groups, like SHGs, act as social contracts between marginalized borrowers and unknowledgeable lenders. In case of default, due to the joint liability, the entire group may face consequences, fostering a peer monitoring mechanism for better repayment rates (Stiglitz, 1990). Peer selection, monitoring, and enforcement have evolved as key aspects within group lending models, as discussed by Banerjee et al. (1994) and Besley and Coate (1995). Issues of adverse selection are addressed through risk matching and collective oversight. The presence of risky borrowers can lead to banks focusing on profits rather than social impact, a concept known as mission drift. Guttman (2008) challenges assumptions about borrower assortative matching, suggesting that dynamic incentives may alter behaviors within group lending models. Despite the evolution of these concepts, there remains a gap in understanding how joint liability groups facilitate financial inclusion for marginalized groups through peer monitoring. This study aims to develop a grounded theory of peer mechanisms within SHGs in India, exploring how peer monitoring functions in the context of the linkage program by integrating the principles of agency theory.

Problem Statement

Good...members seem to be getting new loans even if someone with the same group defaults. Why, then, do they bother to exert Peer pressure on defaulters? That is because otherwise, there would be a huge problem for all members at the center.

Existing studies highlight what the financial outcomes of a group mechanism are in promoting saving (Gugerty, 2007), increased credit (Deininger & Liu, 2009), income, and asset ownership, recovery performance, and reduced transaction costs (Puhazhendi & Badatya, 2002). But there is a shortage of research on how the group mechanism promotes financial discipline and sustainability in the

context of the SHG linkage program. This study will most likely be the first to examine how asymmetric information and agency affect joint liability group efficiency and effectiveness.

- **RQ1.** The broad research question is, how does the peer mechanism work in the context of the SHG bank linkage program?
 - 1) How does the peer mechanism work in the context of the SHG bank linkage program?
 - 2) How does the process of the peer mechanism affect the financial outcomes of the members of the SHG linkage?

Research Methodology

This section describes how the data were collected and analyzed and how codes, concepts, and patterns evolved. It depicts the conceptual development process related to a theory's development.

The first step in grounded theory is the development of the research questions, as shown in Figure 1. The data collection and analysis to develop grounded theory are repeated iteratively. This is done to make the development of patterns, themes, and multidimensional correlations easier so that the collected data may be

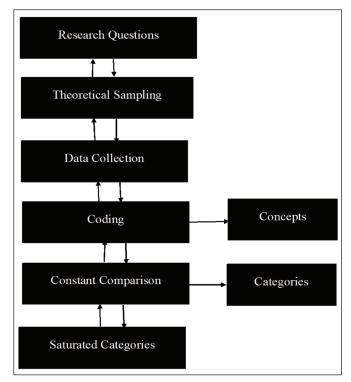


Figure 1. Research Methodology.

compared, categorized, abstracted, and conceptualized more easily. Theoretical sampling and coding are used to collect and analyze data until theoretical saturation is reached and a dense theory emerges. The abductive theory-building method was used to understand the phenomenon of peer monitoring in a group lending scenario. The data were collected and analyzed simultaneously to understand the group's real-life problems. The abduction illustrates the process of making creative inferences and verifying them with more information to ensure the authenticity of data. It helps to mitigate Hume's problem of induction and Kant's problem of naïve empiricism. This study is based on the grounded theory method (Glaser & Strauss, 1967). The data coding stages in this study are open—focused on the development of categories as suggested by Charmaz (2006). In this method, the problem is allowed to emerge from the data. The semi-structured interviews were conducted to generate the data. Data from the interviews and observations are used to discover emerging concepts and relationships.

Philosophical Stance for the Research Study

Because this study is exploratory, the various research strategies recommended by Saunders have been used to conduct grounded theory research. The researcher's philosophical stance or worldview assumptions regarding the nature of reality impact the methodology adopted for research and the interpretation of results (Creswell, 2012). This comprises a set of beliefs that guide action, which have been referred to as research paradigms (Lincoln, & Guba, 2000). The research paradigm is referred to as ontologies and epistemologies (Crotty, 1998). Despite using the Glaserian and Charmaz data coding method, the study builds theoretical sensitivity by referring to literature in the second stage. The emerging codes were continuously analyzed to determine how they fit the theory. Social constructivism as an epistemology is an interpretive approach focusing on how people make sense of the world, primarily through sharing their experiences with others (Easterby-Smith et al., 2002; Saunders et al., 2009); the sample size is determined initially through purposive sampling. And as the codes emerged, sampling was done using theoretical sampling. The codes were generated based on the constant comparison till theoretical saturation was achieved. It was done to take care of the theoretical sensitivity.

Data Collection

In this study, broad, open-ended questions, narrative semi-structured interviews, and the historical document appraisal approach have been used to collect the data and understand the events. A constructivist approach was adopted to collect data. For example, the first question is, tell something about the group formation. While conducting the exploratory interviews, due consideration was given to the principled sensitivity to the rights of others. Before collecting the data, the access was negotiated, and consent taken was informed consent to avoid deception and provide protection to the privacy of the members. Memoing was done

simultaneously with data collection through observation. Despite assertions by Saunders et al. (2009) that interviews can be structured or semi-structured, in this study, the semi-structured interview and open-ended interview approach have been adopted. In addition to interviews, archival records, internal reports, and news articles were used to obtain data. The publicly available data includes the secondary reports such as the handbook on SHG linkage (DAY NRLM, 2017; World Bank, 2020) and videos, documentaries and clippings created by various agencies such as world bank, commercial bank (DAY NRLM, 2014) and other references available online and mentioned in the study. In this study for data triangulation, the SHG bank linkage handbook was referred to identify the process of financial inclusion. This process was further authenticated through the semistructured interview with the villagers and micro-borrowers. Data triangulation involves collecting the data from multiple sources, such as interviews and secondary reports and publications, to increase the credibility and validity of findings (Campbell & Fiske, 1959). After data collection, negative case analysis and member checks were performed to increase the validity and reliability of data.

Data Analysis

The constructivist grounded theory drives the study (Charmaz, 2006). The problem is explored using the constructivist grounded theory three-stage method comprising of open coding, focused coding, and theoretical coding. As a result of the grounded theory methodology, the purpose of this study was to collect information on how the peer mechanism functions within the context of self-help group bank linkage programs in India to assure the achievement of the group's revenue enhancement and social welfare objectives.

Within-case Analysis

Interviews and publicly available data are used for analysis (Eisenhardt, 1989). The codes are derived from the data using intensive abductive grounded theory coding. The interviews were transcribed, triangulated, and then supplemented with secondary data. Coding revealed various themes and constructs. The primary focus was on how the groups obtained formal credit without physical collateral or creditworthiness (Eisenhardt, 1989). Within the case, analysis familiarized researchers with data and paved the way for cross-case research.

Cross-case Analysis

The cross-case analysis was performed after the first two rounds of data collection. This ensures case replication reliability (Eisenhardt, 1989). A cross-case analysis is done using pairwise case comparisons. The stakeholders and groups were selected based on the within-case analysis. The SHGs are compared and contrasted based on linkages, that is, (a) those that have taken loans through the SHG bank and those that rely solely on internal loans or loans from other formal or informal sources, (b) groups formed and mediated by SHPIs or NGOs, and (c) clustered groups. This method helped to identify patterns across SHGs funded by formal sources like banks and internal sources like savings. The findings suggest that

more successful women entrepreneurs who form collectives use group mechanisms more extensively than those who do not.

Coding

Coding is an interactive process (Charmaz, 2006). In this study, coding has been used to delimit the research, as suggested by Charmaz (2006). This study collected and analyzed data simultaneously. Despite the literature review, a mix of inductive and deductive coding or abduction has been used to develop the codes. These codes go through a second coding cycle for higher categories or themes. After generating the significant categories, the existing literature is used to create the theory. The data were arranged before analyzing it. Memos are prepared for each interview and interaction to summarize the main points. The data's theoretical sensitivity was considered when interviewing SHG members; the researcher can use existing theoretical knowledge to interpret the observed phenomenon. Theoretical sensitivity is the ability to see with analytical depth. This study is based on memoing, line-to-line data analysis, and recording thoughts and feelings during the data collection. Further, the existing literature has been used to build theoretical sensitivity, but with caution. During the preliminary studies, some 200 codes were generated that were filtered into 60 focused codes. Six key themes ultimately emerged from the data.

Open Coding

The data for the study were collected using the exploratory interview approach. In the first phase, the data were analyzed using the open coding technique. Coding was done in two cycles. In the first cycle of open coding, codes were small words that captured the essence or attribute of verbal data. The second coding cycle through memoing provided a conceptual framework for the codes. The data are coded and analyzed sentence by sentence, asking the following questions:

- (1) What is happening in the data, and what is this observation sentence a study of?
- (2) What is the primary concern in the data?
- (3) What is the category that is emerging from the data?
- (4) What actions are people taking for granted in the data?
- (5) What are the common problems that people face?

The emerging data were analyzed using gerund coding (focusing on human interactions) to generate the open codes; these open codes represent the incident, idea, or process and are the foundation of all theory building. The first step in the open coding was transcribing the interview and then using *line-by-line coding*. These initial open codes help the data to be transformed into *categories*. The open codes were prepared from the data summary of the data. From the first interview onwards, the process was repeated iteratively until theoretical saturation or sufficiency was achieved. The data was collected and analyzed simultaneously using the memos. The scholarly literature is not consulted in the initial stages.

But the categories started emerging after the open coding of the first 10 to 15 interviews. Initial codes were created, and substantive codes were derived as categories. At this stage, the scholarly literature was consulted & coded to generate theoretical sensitivity. Theoretical sampling was used to generate the concepts, maximize the variations in the concepts, and densify the categories.

Focused Coding

Focused coding was done based on Meaning, Action, Challenge, and Results (MACR) approach. The constant comparison was done to analyze the hidden patterns in the data. To build the theoretical sensitivity in the data, focused coding was done in order to delimit the emerging patterns in the data

Codes to Categories

Identifying in vivo codes led to more descriptive codes and higher abstraction of analytical codes through open coding. These codes form the foundation for theory development. After the initial stages, we began collecting data to develop categories and properties using theoretical sampling. Theoretical literature was referred to at this stage multiple times to facilitate memoing and coding. The data were rigorously coded line by line to facilitate theoretical linkages.

Patterns and Concept Governance

During data analysis, the concepts grew, and a series of open and tentative coding emerged. The categories are identified to provide conceptual information. Table 1 highlights the main categories that have emerged through various phases of data analysis.

Results

Narratives from the Ground Realities

Microfinance is much more than simply an income generation tool. Directly empowering poor people, particularly women, has become one of the key driving mechanisms toward meeting the Millennium Development Goals.....

Mark Malloch Brown, Chef de Cabinet, Office of the Secretary-General to the United Nations

There are existing studies that address the question of why poor people are not able to access financial services. But there is a lack of studies on how social innovation, or the SHG, enables the members to access financial services.

Identification of Categories

The categories were identified using the questioning technique: who, where, when, how? The theory has two parts: categories and properties. A category is a theoretical element. The property is the dimension of the conceptual element of the theory. For example, five categories for microfinancing are social exchange, social control and contingency planning, social cohesion, sustainability, and social welfare. It also

Coding
Open (

Table 1. Open Coding.				
Social Exchange	Social Control	Social Cohesion	Sustainability	Social W
Grouping with other members to access credit	Selecting a team leader from Assuming joint liability the group	Assuming joint liability	Institutionalizing group Promotin norms	Promotin

Seeking group financial access Noticing other members of the group Selecting members from the

Sharing common cultural beliefs Institutionalizing common goals

Generating social capital in the

Promoting higher repayment

ing financial inclusion

Velfare

enforcing joint liability Peer Monitoring and Saving regularly sanctioning Discussing the problem with other members of the group Paying on behalf of other members of the group Reporting the financial behavior of the other

Promoting equity in the group Financially including women Seeking women upliftment Promoting credit creation Exploring ways to reduce Seeking access to financial Promoting social welfare Eliminating moneylender Seeking empowerment Reducing inequalities Seeking autonomy Saving regularly poverty Seeking profitability in the Adhering to group norms sustainability in the group Soliciting intermediation Regular record keeping Paying loans regularly **Jndertaking financial** Striving for financial Conducting regular Group norming iteracy training by SHPI meeting services group Social contracting with members Working together to seek higher Exhibiting solidarity in the group Seeking cooperation through Seeking motivation through adherence to group norms Bonding and bridging with repayment of loans

of the group

Exercising peer pressures to

Rationalizing the selection

of same-risk members

Bonding with members

already known

ensure repayment

behavior of other members

Sanctioning the bad credit other members of groups

Seeking intermediation from

Peer-selecting members of

Grouping with members from

a common background

Grouping with members with

the same profession

Collaborating with members

with the same skills

Avoiding grouping with

unknown members

the group

members

group

Assuming joint liability with

members of the group

Carving economic and social

Seeking access to financial

services

Seeking less risk and high

⁻ewards

Wanting to work together

for mutual benefit

Seeking like-mindedness in

same village

other members

social ties

Enforcing sanctions to ensure

contract performance

Leveraging business correlations Peer monitoring to seek higher Record keeping to control the Leveraging cultural affinities to to seek cooperation repayment of loans seek cooperation financial behavior of a group Conducting regular meeting Selecting leaders who can control financial behavior

Working together in a known

environment

involved questions about spatial and temporal context. These categories are defined in the context of an agency relationship. The borrowers are the *agents*, and the lenders are the *principal*. The interview excerpts and verbatim highlight the process of identification of the categories. The details of the categories are given below:

Emerging Categories

We now have five categories:

- (1) Social exchange
- (2) Social control
- (3) Social cohesion
- (4) Sustainability
- (5) Social welfare

Categories and Properties

(1) Social Exchange: Social exchange highlights how the group members leverage the group affinity and social capital to derive financial benefits in terms of access to loans greater than the individual capability to raise loans. The exchange of social capital for access to loans leads to the social contract to leverage internal savings and access external loans. Members endorse a social contract with joint liability that leads to generalized reciprocity. Besides that, strategic communication through the enforcement of group norms leads to the development of the targeted mission to achieve the group's purpose of financial inclusion.

Every group has a particular purpose; they exist for a goal that must be communicated and fulfilled. Trust also leads to group identity, social capital, adherence to norms, and repayment of loans. Thus, the collaborative and collective power ensures access to credit and financial sustainability through regular repayments. Within this category, information asymmetry refers to the lack of information about the group members' creditworthiness to formal financial institutions. It concludes that information sharing occurs in closed networks or bonding among members. This category highlights how the group generates and shares information about its members, facilitating finance access. This category explains how the banks, through groups, get the right to access information about the creditworthiness of the group members, who individually lack physical collateral. The social structure of groups facilitates institutional discourse that has its credibility.

The data analysis revealed that the group members engage in frequent social interactions. Groups are formed based on homogeneity, which means that members share a common ground that leads to collective power, group affinity, and trust, which leads to generalized relationships. They share a profession and ethnicity, making them a source of information. In a group, the exchange of information about financial goals through socialization depends on information flow capability. Information flow capability depends on community connectedness, homogeneity of groups,

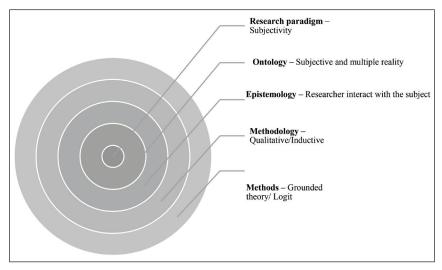


Figure 2. Research Design for the Study.

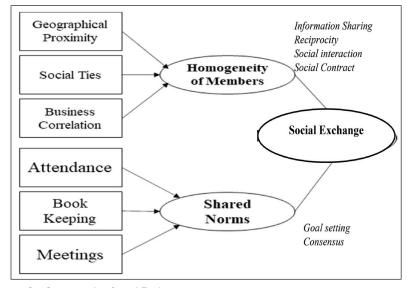


Figure 3. Category I—Social Exchange.

and relational networks. In a group, the information flow capability is very high. Sharing information and intermediation lead to consensus and reciprocity. This communication facilitates social contracts and social exchanges. Once in the social contract, the members develop an *economic goal*. Knowing that in case of a single member default, the bank will not extend the loan to the group, the members cooperate. This human behavior is rationalized due to the incentive compatibility constraint by banks in the form of progressive loans to groups that pay all their loans in time and

penalize the defaulting group. The fundamental basis of social exchange is the commitment of the members to perform their group duties, repay loans, and exchange information. Communication impacts relational governance development depending on the network's information flow capability and represents the category of social exchange.

(2) Social/Control:

It is the social process of group life that creates and upholds the rules, not the rules that create and uphold group life

This category shows how a group with homogeneous members uses peer influence and sanctions to monitor and control. In a group, members are bound by a social contract, and the social control is operationalized through reinforcement. The dynamic incentive of the progressive loan in case of loan repayment and sanction in case of default by even one group member works as a stimulus. This contract provides joint liability for the group and limited liability for the individual. In case of default by one member, all other members have to repay the loan. Influence and control are rooted in the *cognitive* and *cultural norms* of the *social contract. Social Norms* facilitate the enforcement of the social contract. The cultural component refers to social norms and sanctions. And the cognitive elements of the social contract, that is, refer to the group norms such as maintaining minutes of meetings and books of account. A transcribed interview from a master craftsman in a SHG is mentioned in Transcript 1.

Transcript for Interview 1

Interviewer: What occupations do the members of your group engage in?

Respondent: The women in our group have traditionally been involved in crafting leather handicrafts, a vocation passed down through generations. Many artisans in local markets continue the legacy of producing these handicrafts.

Interviewer: How do you address defaulting members within the group?

Respondent: In cases where members are unable to repay their loans, all group members come together and visit the defaulter's home as a collective effort to address the issue.

Clearly in this interview, as per the respondent, the group has pursued the art of making the leather products, and as per the master artisan craftsmen, the artisans use peer pressure to ensure timely repayment of loans. The *cognitive* norms in a group become operational through the social contract and bank sanctions. Peer monitoring by the joint liability of the group and limited individual liability also leads to social control in a group. In a group, *social norms* facilitate the enforcement of the social contract. In a group, *the community's norms to save and repay loans* facilitate control through *reinforcement*. Social contracts and joint liability play an essential role in social control.

Transcript for Interview 2

Interviewer: What is the primary occupation of the members in your group?

Respondent: Our main vocation involves crafting pots from mud and firing them to create terracotta.

Interviewer: In what ways does the group provide assistance to its members?

Respondent: When a member faces challenges, such as being unable to craft a seat for a Ganesh Murti, the other members come together to offer support and help them overcome the obstacle.

As per Transcript 2, the group members cited that the group is involved in making terracotta pottery. Regarding the group mechanism, the respondent highlighted that if a member is making a Ganesh Murti and they cannot make the seat for the lord, then the other members help them. Thus, the cooperation in the group improves the solidarity of the group.

Figure 4 highlights the category of social control. The social norms in the form of noticing, discussing, reporting, social contracts, and bank sanctions lead to open code social control.

(3) Social Cohesion: Solidarity in a group promotes cohesion and camaraderie. It helps them build relationships, trust, and cohesion, which drives financial sustainability. Geographic proximity, puritan values, and shared vocation unite a group and create a common bond in the form of social capital. Task dependencies and business correlation, and cultural affiliations lead to like-mindedness. Social ties, cultural affiliations, and task dependencies lead to cooperation. Cooperation and like-mindedness lead to solidarity. Solidarity leads to motivation for peer learning and adherence to norms. Adherence to group norms leads to higher loan repayments.

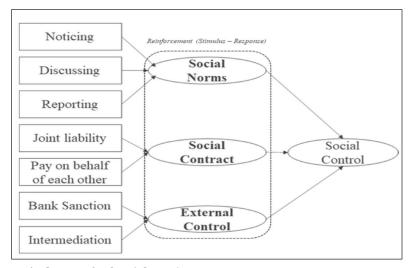


Figure 4. Category 2—Social Control.

Transcript for Interview 3

Interviewer: What is the primary vocation of the group?

Respondent: The self-help group consists of Dhokra artists residing on the autolists of the will are in Odisha

the outskirts of the village in Odisha.

Interviewer: What do the members manufacture?

Respondent: The artisans specialize in the Dhokra art, employing metal casting techniques to create a diverse range of artifacts, including divas, pots, and animal figurines.

Interviewer: Do all the members engage in the same art form?

Respondent: Yes, all members are dedicated to preserving this traditional art form that has been passed down through generations.

Interviewer: How does the group support its members?

Respondent: The shared professional homogeneity fosters a strong sense of camaraderie and connectedness among the group members

As per Transcript 3, another example of solidarity and cohesion is the Dhokra Art group that resides in Orissa, India. Dhokra art is pre-Mohenjo-Daro and Harappan art from Bastar, Chhattisgarh, India, and depicts Eastern Indian heritage. In an SHG formed by Dhokra artists, the master craftsmen emphasized that the artisans reside at the outskirts of the city. According to the master craftsmen, the group has been preserving this ancestral art form for ages. These skilled artisans use metal casting to create a wide array of artifacts, including diyas, pots and animal figurines. The SHG leader cited *professional homogeneity* as a source of solidarity. This story shows how ethnicity and heritage unite a community. Repayment of loans is determined by trust. The member said the group may not eat but will repay the loan. Honesty promotes group cohesion.

Transcript for Interview 4

Interviewer: What is the composition of your group?

Respondent: The group consists of 12 to 13 women and 7 to 8 men who specialize in crafting silver jewelry from their homes, offering expertise and training to new members.

Interviewer: What is the source of funds for the group?

Respondent: The source of funds includes shared savings and profits distributed among members based on goods sold.

Interviewer: What is the control mechanism for the defaulting members?

Respondent: In case a member is unable to repay a loan, the group collectively covers the repayment. Financial discipline is maintained through counselling of defaulters and accountability measures by designated leaders. The group focuses on creating unique Adivasi designs like khatwah, bhongiri, and phechwa, which are highly valued within the Sonar community. They are hopeful for opportunities through the new brand Ajiva.

As per Transcripts 4 and 5, in an interview with the sculpture-making group, the master artisan highlighted the group's focus on crafting the Green Ganeshji. According to the respondent, the group engages in creating Ganeshji sculptures from March to September. They collect mud during this period, which is sourced from the mountains and brought to the riverbank for their artistic endeavors. The artisan mentioned that the Pach art form holds a significant place as the ancestral tradition of the group. Furthermore, he mentioned that the unity of goals within the SHG serves as a catalyst for fostering unity among its members, drawing them together in a shared purpose and vision. This shows how cultural repertoire can encourage unity. Group solidarity is also attributed to government programs like Ajeevika or DAY National Rural Livelihoods Mission (NRLM). Norms promote unity. It shows how members of a SHG leverage existing social relationships (cognition and cultural affiliations) to create new network relations (bonding and bridging), leading to economic resources. Moreover, the shared norms regarding bookkeeping lead to higher repayment of loans in a group.

To sum up, two kinds of norms, that is, cognitive norms and social norms in a group, lead to solidarity. In a group, members institutionalize the common goal through a social contract. Members use shared bookkeeping norms to embed *cognition*. They also use shared *cultural beliefs* to build community. Group membership forms horizontal bonds. Common culture and heritage lead to group solidarity and cohesion. Lower borrowing costs and reliance on informal networks have increased group solidarity. According to a member of a silver jewelry SHG, *SHG helps reduce reliance on informal moneylenders or Mahajan*. Culture influences group solidarity. Table 1 represents the category of social cohesion.

Transcript for Interview 5

Interviewer: What is the vocation of the members of the group?

Respondent: We make green Ganesh Ji. From March to September, we'll make and sell mud-made Ganpati when mud comes from the mountains to the banks. Pach is our ancestral art form

Interviewer: How does the group help you?

Respondent: When community groups face the same financial goals and lender sanctions, it promotes unity

In another interview, the respondent emphasized the role of SHGs in reducing reliance on informal moneylenders, known as Mahajans, and highlighted the impact of group culture on fostering solidarity. The member explained that within the group, if a member is unable to repay a loan on time, all members come together to support the defaulting member in repaying the loan. Furthermore, the respondent stressed the importance of trust in loan repayment, emphasizing that social ties and trust are built through work-related, bilateral, and task dependencies. The master

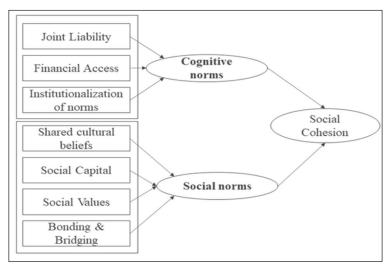


Figure 5. Category 3—Synergy Perspective to Integrate Networks for Generation of Social Cohesion in Groups.

craftsman pointed out that cohesion within the group is influenced by leadership, despite the fact that some members may be illiterate. In the group, leaders, known as Adhyaksh or Koshadhyaksh, are selected to assist members in preparing financial records, documenting meeting minutes, and conducting group meetings.

Thus, there are two sources of solidarity, that is, cognitive and affective embeddedness of norms. Figure 5 represents the category of social cohesion.

(4) Sustainability: The future productivity of existing systems is called sustainability. The central issue in finance is whether the existing financial processes and structures are sustainable. The process of sustainability was defined initially as structure process stability. This concept now includes financial and institutional sustainability. Sustainability is the system's future production ability to repeat the performance. The financial viability of a SHG depends on access to savings, thrifts, loans, credit rotation, and loan repayment.

Transcript for Interview 6

Interviewer: How does the self-help group help you?

Respondent: SHG helps reduce reliance on informal moneylenders or Mahajan. If a member can't pay, we all do and the repayment of loans involves trust and mutual dependence. The trust in a group and social ties and trust result from work-related, bilateral, and task dependencies

Interviewer: What is the importance of leadership in the group?

Respondent: Leadership affects group cohesion. The group members are not that literate, and the group selects Adhyaksh and Kosha Adhyaksh for the group. These leaders guide the group members in preparing books of accounts, minutes of meetings, and conducting the meetings. This also promotes solidarity among members

In one interview, a respondent emphasized that the sustainability of the group is ensured through literacy and capacity building. Thus, intermediation leads to adherence to group norms. And adherence to group norms leads to the institutional sustainability of groups. The respondent emphasized the group's weekly meetings, highlighting the close monitoring and support system among members. The respondent mentioned that members utilize social media platforms such as WhatsApp to stay connected and reach out to each other. Additionally, the respondent highlighted the peer monitoring system within the group aims to promote sustainability by encouraging members to support and hold each other accountable. The respondent also mentioned that the group leader has the authority to remove a member from the group and can request the banking committee to investigate any defaults. According to the respondent, the peer mechanism plays a crucial role in promoting sustainability within the group, fostering a sense of responsibility and accountability among its members.

Transcript for Interview 7

Interviewer: How do the members in group collaborate?

Respondent: We meet weekly and closely monitor the group. We use

WhatsApp to reach our members

Interviewer: What are the benefits of the group formation?

Respondent: In a group, peer sanction and monitoring promote financial sustainability. The Adhyaksh is in charge of records, and a defaulter is expelled from the group. We ask the state banking committee and SHPI to investigate the defaulters. The members exercise peer sanctions to ensure the financial sustainability of groups

As per the Transcript 7 in another interview, members emphasized that upon joining the group, leaders instruct them on the significance of maintaining proper financial records. Furthermore, the group leader mentioned that the involvement of the bank and the NRLM in monitoring the group's finances plays a crucial role in ensuring effective financial management. In yet another interview, we discovered that the group's sustainability is impacted by the financial literacy of the members.

Transcript 8

Interviewer: How does the group support its members?

Respondent: Upon joining, we emphasize the significance of bookkeeping. Training provided by the self-help group, along with oversight from the bank and NRLM, plays a crucial role in effectively managing the group's finances, contributing to its sustainability.

Figure 6 highlights the category of sustainability. Intermediation leads to better savings and credit. Peer monitoring and sanctions improve the

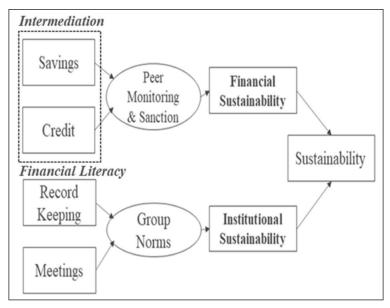


Figure 6. Category 4—Sustainability.

financial performance of the groups and lead to financial sustainability. Moreover, the financial literacy of members leads to better record-keeping and meetings. Through accepted group norms, the group can achieve institutional sustainability. Thus, financial and institutional sustainability leads to sustainability in the group.

(5) Social Welfare: The study confirms that the SHG members benefit significantly from the SHGs. According to the procedural utility theory, these groups are instrumental in promoting the group's welfare. These groups lead to the instant gratification of the individual's needs. The members achieve positive well-being through microcredit, including positive affect (better financial well-being, financial achievement, better community standing, social welfare, and better family relations). Individuals' welfare can be further classified as (a) cognitive evaluative, which refers to the benefits of community membership: better finances, community, and health. The groups also provide hedonic experiences. The hedonic experiences include (a) autonomy, (b) relatedness, (c) competence, and (d) self-actualization. The feeling of self-actualization and better life experiences due to better living standards and achievement in life, family, and community are included in the cognitive evaluation. Debt can cause (a) depression and (b) worry. The procedural utility is defined as (a) autonomy, (b) connectedness, (c) trust, and (d) competitiveness. Thus, joint liability groups through microcredit provide procedural utility, leading to women's empowerment and self-determination. In one interview, the member said, the government is helping the women members gain confidence, self-efficacy, and trust.

In a group, regular savings and credit lead to financial inclusion, and social upliftment leads to women empowerment. Further, joint liability groups generate livelihood and eliminate the money lenders, reducing poverty. In an interview, the respondent highlighted. According to the respondent, the group members create small diyas, big diyas, and mud lamps, which are then baked in a terracotta fire. The respondent noted that this diversified product range has significantly enhanced the group's effectiveness.

RQ2: What is the impact of peer mechanism on the financial sustainability of the SHGs?

And the focused codes for the study are mentioned in Table 2.

Focused Coding

RQ1. How does peer mechanism work in the context of the SHG bank linkage program?

Focused coding was done based on MACR approach. The constant comparison was done to analyze the hidden patterns in the data. To build the theoretical sensitivity in the data, focused coding was done in order to delimit the emerging patterns in the data. The major objective at this stage was to verify how the categories relate to the concept. The core category of a unique social dynamics known as peer mechanism started emerging at this stage. At this stage, the categories were further refined to extract four concepts, namely, network relations, shared norms, trust, and motivation. The category of social exchange hinges on network relations and trust types. There are significant differences between the categories and subcategories. In a horizontal structure, the group members communicate informally and frequently and socialize. In a linking relationship with the bank, the members share information formally through the state-level banking committees, MIS dashboards, and bank Sakhis. In a federation, the groups interact through the leaders and meetings. Social control is informal and personal in the case of a group member and highly formal in linking relationships with banks. Group members exhibit the high level of solidarity in a bonding relationship that is not exhibited in relationships with clusters and federations. Influence and social control depend on norms and network relations. From the initial code analysis, three concepts—social exchange, social control, and social cohesionlead to sustainability and social welfare, which is classified as social capital. What affects the group? Who, what, and how does the peer mechanism work? How does the social process work? From the data analysis, it is discovered that group works through the social capital and norms. Social capital is operationalized through enforcement, trust, and motivation, which leads to social welfare and sustainability. These concepts of social exchange, social control, and social cohesion institutionalize relationships and content into norms. Social capital is structural, relational, and cognitive. The structure includes network, ties, configurations, and appropriable organization. The cognitive dimension includes shared codes, rules,

Codes.
Focused
Table 2.

Cognitive Social Capital		Affective Social Capital			
Content	Structure				
Shared Norms	Network Relations	Trust	Sustainability	Social Welfare	Motivation
Record keeping	Group formation	Homogenous groups	Lack of financial literacy	Financial security	Competence
Meetings	Institutional structures	Account keeping by Kosh Adhyaksh	Progressive lending	Better living standards	Competence
Attendance registers	Homogeneity of	Collective benefits—	Bridging through	Sense achievement	Competence
	groups	Increased income,	federation		
		family development and mobility			
Peer monitoring	Delegated monitoring	Social collateral	Misutilization of loans	Community recognition	Relatedness
Peer sanction	Monitoring by NRLM	Social ties	Social intermediation	Family welfare	Autonomy
Leadership	Bonding	Generalized reciprocity	Monitoring by SHPI	Worries	Competence (Negative reinforcement)
- - - - - - -	199	D.li.f.			(
Joint Hability	Linking	Dellers	social interimediation	Depression	Competence (Negative reinforcement)
Peer learning	Bridging	Business correlations	Handholding by SHPI	Respect	Relatedness
Savings	Closure	Cohesiveness	Regular saving	Care	Relatedness
Repayment of loan	Establishing information networks	Shared feelings	Thrift	Inclusiveness	Relatedness
Social contract	Information asymmetry	Culture	Profit making on	Acknowledgment of	Relatedness
			group activities	needs	
Progressive lending	Heterogenous groups	Business correlation	Training on credit norms Rewards	Rewards	Competence
Terms of intralending	Communication	Collective efficacy	Moral hazard	Sanctions	Competence (Negative reinforcement)
Terms for distribution	Banking channels	Generalized trust	Adverse selection	Joint liability	Relatedness
of profits					
Noticing, discussing	The agency relationship of borrowers with banks	Social cohesion	Financial inclusion of women	Threat deadlines	Competence (Negative reinforcement)

Autonomy				
Women empowerment				
Regular savings	Working together Cooperative working of	Financial training for	wonnen Bank Saathi channel for the collection of data	
Interpersonal relations	Collective action Cooperation	Working together	Emotionally supporting the women	Social exchange Drawing on socio- cultural institutions Supporting defaulting members Motivating payments
Embedded power relations	Market relations Hierarchal relations	Incubation by SHPI	Market relations	Nearness to banks
Knowledge sharing	Tacit knowledge Financial planning	Reporting	Size of group	Instituting obligations Exerting pressure on women Collective approval of the loan Leveling through norms Social contracting Financial training Saving today for tomorrow Discussing financial matters with the family members Social sanctions Certifying women on digital literacy Imposing fines Instituting obligations

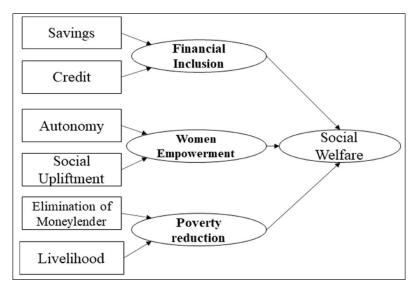


Figure 7. Category 5—Social Welfare.

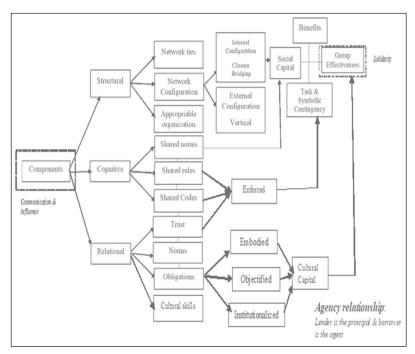


Figure 8. Focused Coding.

and narratives. These two dimensions of social capital interact, that is, structure and norms. Social capital varies depending on the external and internal network configuration. And relational components refer to trust norms and obligations. The phenomenon under investigation is peer mechanism and financial access

through the peer mechanism. The members in an SHG communicate and influence each other. The members share their experiences and financial decisions and influence each other to exercise prudence in managing money and finances. The group members in a group communicate, influence, control, and collaborate. Structural social capital refers to the network relations, configurations, and organization forms. The network relation comprises of (a) closure, (b) bonding, and (c) linking. Closure refers to the relationships that originate from the social background. And the linking relationship refers to the relationship with the banks. These relationships are further classified as the internal and external configurations. Internal relations refer to the bonding, and bridging relationships are the relationships in the group context. Cognitive relationships refer to the enforceable and acceptable norms as part of the social contract. And the relational social capital refers to the expectations and the shared perceptions among the group members. The enforceable norms are communicated as the group norms. This refers to the cognitive component of the social capital, that is, codes, rules, and the norms. Then there are relational networks in the group due to the social ties among the members, business correlations among the members, and the cultural beliefs that are institutionalized in the groups. This is the cultural capital. Social capital, cultural capital, and cognitive norms lead to solidarity, reciprocity, and task contingency. The emerging pattern became more apparent during this stage, and the core category of peer mechanism started emerging.

Discussion and Analysis

The Emergent Theory

The analysis of data and codes reveals that at the heart of microfinance is the issue of financial exclusion of the poor and marginalized, particularly women (DAY NRLM, 2017). The analysis of interviews highlighted that in the village community, the women and marginalized poor do not have access to the physical collateral, and banks are unwilling to lend them money due to lack of collateral. And the social welfare maximization through SHGs is the panacea to the problem of mission drift and lack of financial sustainability (Armendáriz & Morduch, 2010). Data highlight that the self-help group is the apparatus to achieve this objective of financial inclusion and sustainability through social capital. Open code of homogeneity of group members highlights that in a group, the members who know each other or are homogenous in terms of profession come together to form a group through a social contract with joint liability and limited individual liability, which helps to reduce the adverse selection. Various respondents during the interview emphasized that the members knowing that default even by one member will lead to denial of a loan to the entire group monitor each other and exert social pressure. The leader in the group enforces group norms such as regular meeting, preparation of books of accounts to facilitate regular repayment of loans. Thus, it was concluded that the apparatus of SHGs works through the peer mechanism and social control facilitated through norms, which helps in achieving social exchange and social cohesion (Stiglitz, 1990). This empowers poor and marginalized women to shatter the glass ceiling of banking, allowing them to access services without

relying on social collateral and to challenge the financial biases of commercial banks that favor the wealthy and privileged (Chen et al., 2016). Therefore, considering and interpreting the data from the focused codes, the theoretical model that emerged was that the *peer mechanism* reduces the instances of bank loan default and improves the repayment rates, leading to social welfare (Conning, 2005; Stiglitz, 1990). Figures 1–6 demonstrate how categories of social control, social cohesion, social norms, social welfare, and sustainability assimilate the dynamics of peer mechanism in a group in the form of peer mechanism through peer selection, peer monitoring, and peer enforcement and lead to group effectiveness through transformation.

Future Research

This article will add to the existing research in the domain of peer monitoring in the context of the SHGs. And the study will corroborate the current financial intermediation and microfinance literature in the domain of group lending.

Limitations

The limitation of the study is that it does not take into account the size of the groups and the impact of digitization on the financial inclusion of the SHGs. Thus, more research can be conducted in the domain of the impact of size and digitization on the financial sustainability of the groups in India.

Conclusion

The study provides a theoretical framework for evaluating the impact of SHGs on the financial inclusion of the poor. SHGs have emerged as an important mechanism for providing microfinance to the people at the bottom of the pyramid. Within the social contract of SHGs, the peer mechanism plays an important role in ensuring access to the financial services for the micro-poor. This study provides a conceptual framework of various dynamics that help to resolve the issue of information asymmetry in a group. In a group social exchange, social control, social influence, sustainability, and social welfare play an important role in promoting the financial inclusion of all the poor people at the bottom of the pyramid. A joint liability group helps in reducing the information asymmetry in the form of adverse selection and moral hazard in a group. The homogenous set of people with common professional backgrounds and geographical proximity come together to access finance. Due to the presence of joint liability, the members' peers monitor each other to ensure the financial and institutional sustainability of the groups and social welfare. The study provides a theoretical framework for evaluating peer mechanisms' impact on the financial outcome of the SHG. This study will add to the current research on peer monitoring in the context of SHGs in India. This study will theoretically corroborate the current financial intermediation and microfinance literature in the domain of group lending.

Theoretical Implication and Practical Relevance

The research study has a lot of practical relevance for the policymakers, academicians, and bankers. Since independence, priority lending has been a major issue for the policymakers and the Government of India. But mission drift or the tradeoff between the financial sustainability and social objectives faced by the banks has been a major obstacle in achieving the goal of financial inclusion for the poor people at the bottom of the pyramid. This grounded theory will provide insights to the policymakers on the design of the policies for the financial inclusion of the people at the bottom of the pyramid. Moreover, the study immensely adds to the existing literature in the field of financial inclusion through microfinance.

Declaration of Conflicting Interests

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Nishi Malhotra https://orcid.org/0000-0003-0000-3749

References

- Akerlof, A. G. (1970). The market for "lemons": Quality uncertainty and the market mechanism. *The Quarterly Journal of Economics*, 84(3), 488–500. https://doi.org/10.2307/1879431
- Angelucci, M., Karlan, D., & Zinman, J. (2015). Microcredit impacts: Evidence from a randomized microcredit program placement experiment by Compartamos Banco. *American Economic Journal*, 7(1), 151–182.
- Armendariz, B., & Morduch, J. (2007). The economics of microfinance (2nd ed.). MIT
- Banerjee, A. V., Besley, T., & Guinnane, T. W. (1994). Thy neighbour's keeper: The design of a credit cooperative with theory and a test. *Quarterly Journal of Economics*, 109, 491–515.
- Baruah, P. B. (2012). Impact of microfinance on poverty: A study on twenty SHGs in Nalbari district, Assam. *Journal of Rural Development*, 31(2), 223–234.
- Basu, P., & Srivastava, P. (2005). *Scaling-up microfinance for India's rural poor* [World Bank Policy Research Working Paper No. 3646]. World Bank.
- Besley, T., & Coate, S. (1995). Group lending, repayment incentives and social collateral. *Journal of Development Economics*, 46(1), 1–18.
- Bhaduri, A. (2006). Provision of rural financial services. In *Employment and development: Essays from an unorthodox perspective*. Oxford University Press.
- BIRD. (2019). *Trend report on financial inclusion in India 2020–2021*. Centre for Research on Financial Inclusion and Microfinance.

- Brundtland, G. (1987). Report of the world commission on environment and development:

 Our common future. United Nations General Assembly document (Report No. A/42/427). World Commission on Environment and Development.
- Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 56(2), 81–105. https://doi.org/10.1037/h0046016
- Charmaz, K. (2006). Constructing grounded theory: A practical guide through qualitative analysis. Sage Publications.
- Chen, X., Zhou, L., & Wan, D. (2016). Group social capital and lending outcomes in the financial credit market: An empirical study of online peer-to-peer lending. *Electronic Commerce Research and Applications*, 15, 1–13. https://doi.org/10.1016/j.elerap. 2015.11.003
- Conning, J. (2005). *Monitoring by peers or by delegates? Joint liability loans and moral hazard* [Economics Working Paper Archive at Hunter College 407]. Hunter College Department of Economics. https://econ.hunter.cuny.edu/wp-content/uploads/sites/6/RePEc/papers/HunterEconWP407.pdf
- Creswell, J. W. (2012). Grounded theory designs. In J. W. Creswell (Ed.), *Planning, conducting, and evaluating quantitative and qualitative research* (Chapter 13, pp. 422–500). Pearson.
- Crotty, M. (1998). The foundations of social research: Meaning and perspective in the research process. Sage Publications.
- DAY NRLM. (2014). English demo on Aajeevika SHG Bank linkage portal FINAL with voice. https://www.youtube.com/watch?v=ANu5McIAYIY
- DAY NRLM. (2017). A handbook on self help group bank linkage programme. Ministry of Rural Development, Government of India.
- de Quidt, J., & Haushofer, J. (2016). *Depression for economists* [NBER Working Papers No. 22973]. National Bureau of Economic Research, Inc.
- Deininger, K., & Liu, Y. (2009). Longer-term economic impacts of self-help groups in India [Policy Research Working Paper Series No. 4886]. World Bank.
- Demirguc-Kunt, A., Klapper, A., Singer, D., Ansar, S., & Hess, J. (2018). *The global findex database 2017: Measuring financial inclusion and the fintech revolution*. World Bank. https://openknowledge.worldbank.org/handle/10986/29510
- Easterby-Smith, M., Thorpe, R., & Lowe, A. (2002). *Management research: An introduction*. Sage Publications.
- Eisenhardt, K. M. (1989). Building theories from case study research. *The Academy of Management Review*, 14(4), 532–550. https://doi.org/10.2307/258557
- Glaser, B. G., & Strauss, A. L. (1967). The discovery of grounded theory. Strategies for qualitative research. Aldine.
- Gugerty, M. K. (2007). You can't save alone: Commitment in rotating savings and credit associations in Kenya. Economic Development and Cultural Change, 55(2), 251–282.
- Harriss, J., & Renzio, P. (1997). Policy arena: Missing link or 'analytically missing'? The concept of social capital. An introductory bibliographic essay. *Journal of International Development*, 9(7), 919–937.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics* 3(4), 305–360.
- Ledgerwood, J. (1997). *Microfinance handbook: An institutional and financial perspective*. World Bank. https://openknowledge.worldbank.org/handle/10986/12383

Lincoln, Y. S., & Guba, E. G. (2000). Paradigmatic controversies, contradictions, and emerging confluences. In Y. S. Lincoln & E. G. Guba (Eds.), *Handbook of qualitative* research (pp. 163–188). Sage Publications.

- Pitt, M., & Khandekar, S. (1998). The impact of group-based credit programs on poor households in Bangladesh: Does the gender of participants matter? *Journal of Political Economy*, 106(5), 958–996. https://doi.org/10.1086/250037
- Puhazhendi, V., & Badatya, K. C. (2002). SHG-bank linkage programme for rural poor— An impact assessment [Paper presentation]. SHG-Bank Linkage Programme Seminar. National Bank for Agriculture and Rural. https://www.findevg
- Ray, D. (1998). Development economics. Oxford University Press.
- Sanae, I. (2003). Microfinance and social capital: Does social capital help create good practice? Development in Practice, 13(4), 322–332. https://doi.org/10.1080/0961452032000112383
- Saunders, M., Lewis, P., & Thornhill, A. (2009). Research methods for business students. Pearson.
- Stiglitz, J. E. (1990). Peer monitoring and credit markets. *The World Economic Bank Review*, 4(3), 351–366. http://www.jstor.org/stable/3989881
- Von Pischke, J. D. (1996) Measuring the trade-off between outreach and sustainability of microenterprise lenders. *Journal of International Development*, 8, 225–239. https://doi. org/10.1002/(SICI)1099-1328(199603)8:2<225::AID-JID370>3.0.CO;2-6
- Weber, O., & Ahmad, A. (2014). Empowerment through microfinance: The relation between loan cycle and level of empowerment. *World Development*, 62, 75–87. https://doi.org/10.1016/j.worlddev.2014.05.01
- World Bank. (2020). Self help group linkage: A success story. World Bank.

A Study on the Influence of Foodporn Imagery in Social Media Marketing and Consumer Behavior

IIMS Journal of Management Science 16(2) 198–212, 2025 © The Author(s) 2025 DOI: 10.1177/0976030X241292121 journal.imshillong.ac.in



Sunita Boro on and Saurabh Kumar Dixit

Abstract

The visual phenomenon known as "foodporn" has become well-known at a time when social media's ubiquitous reach and the digital environment have had a significant effect. It embodies an alluring fusion of culinary talent and aesthetic splendor. This abstract presents an investigation of the complex dynamics that underlie the deep interaction between the complex web of modern consumer behavior and the foodporn imagery that is shared on social media platforms. This research explores the psychological, social, and marketing facets of this phenomena via an interdisciplinary perspective. It provides a distinctive perspective for understanding how foodporn imagery has evolved into a potent force for influence that shapes consumer preferences and the fundamentals of decision-making processes. By means of a methodical comparison of factual data and theoretical frameworks, this study not only clarifies the compelling appeal of foodporn but also reveals its crucial function in molding the features of the contemporary market.

Keywords

Psychological, sociological, marketing dimensions, consumer behavior, foodporn, social media marketing

JEL Classification: L83

Received 16 May 2024; accepted 1 October 2024

Corresponding Author:

Sunita Boro, Department of Tourism & Hotel Management, North Eastern Hill University, Shillong, Meghalaya 793022, India.

E-mail: boro_sunita@rediffmail.com



Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License (http://www.

creativecommons.org/licenses/by-nc/4.0/) which permits non-Commercial use, reproduction and distribution of the work without further permission provided the original work is attributed.

¹ Department of Tourism & Hotel Management, North Eastern Hill University, Shillong, Meghalaya, India

Boro and Dixit 199

Introduction

The fusion of food and visual art in the internet era has resulted in the fascinating phenomena known as "foodporn." This intriguing neologism encapsulates a strong force that penetrates contemporary culture and commerce (Bhukya & Paul, 2023). Foodporn meets the urge for visual pleasure in the context of eating by tantalizing the senses with its bright visuals. It appears as well-shot, highresolution photos of mouthwatering foods and culinary creations that overtake social media enthusiasts' constantly scrolling feeds (Argo & Dahl, 2020). The emergence of foodporn culture denotes a fundamental change in how people engage with, discuss, and evaluate food experiences. Food is becoming a creative outlet as well as a means of sustenance on the internet, where it is turning into an art form. The phenomena of "foodporn" has attracted a lot of attention lately as social networking sites like Instagram and TikHub have become visual centers for displaying visually attractive food photographs. High-resolution, visually appealing images of food define foodporn, which has changed consumer online interaction with food. The cultural shift toward sharing food imagery goes beyond mere consumption and has become a form of social expression and identity.

Though foodporn imagery is becoming more and more common in social media marketing, little is known about how this visual material affects customer behavior. There are specific gaps in the research on the emotional and psychological triggers that are triggered by this kind of picture and how they affect consumers' ability to make decisions. This study aims to fill these gaps by investigating how foodporn imagery affects consumer engagement, emotional responses, and purchase behavior within social media environments.

Our investigation focuses on the seductive interaction between aesthetics, hedonism, and societal dynamics in this fascinating environment. The frontiers of culinary aesthetics are reached inside the bounds of social media platforms (He & Qu, 2018). With smartphones serving as their palette and Instagram as their painting, visual storytellers turn eating into a theatrical performance, fostering a culture of gustatory voyeurism in which viewers partake vicariously (Alalwan et al., 2017). This multidisciplinary investigation sets out on an intellectual journey, tracing the many pathways via which foodporn imagery influences modern marketing tactics and consumer behavior. Based on the principles of psychology, sociology, and marketing theory, this research aims to decipher the mysterious appeal of foodporn and uncover its lasting influence on the decisions, goals, and dreams of a social media-savvy public.

The ethereal realm of foodporn challenges conventional paradigms of consumer engagement and brand interaction (Jibril et al., 2019). It beckons us to explore the visceral realm of sensory engagement, where the aesthetics of culinary presentation rival the gustatory experience itself. This article, therefore, undertakes a multifaceted exploration that spans the neural mechanisms triggered by visual food stimuli, the sociocultural forces underpinning the sharing of foodporn, and the strategic deployment of these visual narratives by businesses in their quest for consumer engagement (Drew et al., 2022). As we journey through this gastronomic tapestry, we shall endeavor to decode the cryptic language of pixels and pixels, unravel the emotional tapestry woven by delectable images, and unveil the secrets that empower marketing endeavors to harness the captivating force of foodporn. Our quest is to

unearth the nuances and intricacies that define the contemporary landscape of food marketing in an age where the visual conquest of palates reigns supreme.

In the annals of modernity, the allure of foodporn stands as a testament to the ever-evolving intersection of technology, culture, and consumption (Lim et al., 2017). The feast for the eyes, transmitted through the digital conduits of social media, is but the first course in a sumptuous banquet of inquiry, where the ingredients of visual aesthetics, neurobiology, and sociocultural dynamics converge to redefine the very essence of culinary desire (Haur et al., 2017). In this investigation, we set out on a sensory trip as well as an intellectual quest to understand the visual enchantment of foodporn. Let's now investigate the intriguing world of culinary photographs, where every click captures a moment in the digital era's culinary inventiveness and every pixel tells a story.

Research Question: The central research question guiding this study is:

How does foodporn imagery in social media marketing influence consumer engagement and decision-making processes?

Objectives

- To analyze the psychological and emotional responses of consumers to foodporn imagery.
- To examine how foodporn content impacts consumer engagement and purchasing decisions.
- To explore how businesses can strategically leverage foodporn imagery for digital marketing.

Contributions

This research contributes to the scholarly literature in numerous ways, as well as offers practical marketing strategies. It provides information on the impact of visual aesthetics on consumer behavior in the context of foodporn, building upon previous theories such as the Uses and Gratifications Theory (UGT) and the Technology Acceptance Model (TAM). This research offers marketers practical recommendations for enhancing consumer engagement on social media platforms through the utilization of visual content. The research aims to broaden understanding of the intricate relationship between visual indicators and consumer behavior by pursuing these objectives, with a particular focus on the recently developed field of foodporn images in digital marketing.

Literature Review

Marketing Through Social Media and Consumer Behavior

In particular, the manner in which businesses interact with their clientele, particularly in terms of visual content, has been significantly transformed by social

Boro and Dixit 201

media. Alalwan et al. (2017) and McClure and Seock (2020) have conducted studies that demonstrate the increasing influence of social media platforms like Pinterest and Instagram on consumer behavior and opinions. Specifically, it has been shown that the use of visual content—such as pictures of food—engages customers emotionally and influences them to perform certain activities, such as making purchases or going to particular restaurants. In their 2020 study, Argo and Dahl examined the social effect of visual content in retail settings, highlighting the substantial influence that product aesthetics may have on purchasing decisions. Their results are in line with the theory of "foodporn," which is the phenomenon where visually appealing photos of food elicit strong feelings in viewers, which typically results in greater engagement and altered behavior, such as going out to eat more frequently or trying new foods.

The Use of Foodporn Images in Social Media Marketing

"Foodporn," or elaborately staged and visually appealing food images, has gained popularity and is now a powerful tool in social media marketing. Food-related material generates powerful emotional and sensory responses, according to Pandey et al. (2018), which makes it one of the most shared content categories on social media platforms. Foodporn photography is a major driver of consumer engagement since it enhances visual aesthetics and piques viewers' interest about the food it depicts.

After examining the function of Instagram food influencers, Drew et al. (2022) came to the conclusion that customers are emotionally pleased just by looking at foodporn photographs, which promotes a feeling of vicarious consumption. This idea is consistent with the body of research on social media marketing, which highlights the value of producing visually appealing material to grab users' attention and influence their behavior.

The TAM or TAM

Since its creation by Davis (1989), the TAM has been extensively used in research on how people use and adapt technology. Perceived utility and perceived ease of use are the two main criteria, according to TAM, that influence a person's propensity to interact with a certain technology or platform. Lin and Kim (2016) used TAM to investigate how people engage with food-related material on social media in the setting of foodporn pictures. They discovered that people are more likely to interact with visually attractive food photos because they are seen as both helpful and simple to interact with. This research applies TAM to the particular setting of foodporn pictures, building on their results. Foodporn imagery's perceived utility stems from its capacity to educate customers about novel eating experiences, and its usability is attributed to its availability on social media platforms like Instagram and TikTok. Given that customers are making more and more decisions based on visual material, TAM provides an insightful framework for comprehending the use of foodporn pictures in digital marketing campaigns.

Theoretical Framework of Applications and Rewards

The UGT investigates how individuals actively seek out and use media to gratify certain needs or desires, according to Katz et al. (1973). UGT has been used extensively in research looking at the motivations behind people's use of social media, particularly their intake of content on food. As to the findings of Lim et al. (2017), foodporn imagery on social media attracts customers due to its ability to fulfill two needs: it offers visual enjoyment and enables users to express their preferences and tastes in their social circles.

This notion is especially pertinent to comprehending consumer motives for interacting with images of food. Bhukya and Paul (2023) discovered that viewers of foodporn material use it to strengthen their sense of social identity by associating with certain culinary trends and cultures, in addition to their need for visual stimulation. This is consistent with the study's results, which showed that a large number of individuals used foodporn to share their interests and preferences with others.

Hypothesis Development

Based on the review of the literature and the application of these theoretical frameworks, the following hypotheses were developed for this study:

- H_1 : Consumer interaction on social media platforms is greatly increased when exposed to foodporn photos.
- H₂: Images of food cause intense emotions (such as happiness or desire), which in turn affect how consumers behave, such as when they go out to eat or try out new recipes.
- H_3 : If consumers believe that foodporn imagery strengthens their sense of social identity, they are more inclined to interact with and spread it.

Methodology

The current research employs a systematic and thorough methodology designed to investigate the complex interaction between food-related pictures on social media and their influence on consumer behavior. The two fundamental components of our research approach are data collection and data analysis.

Data Collecting

In order to understand the core of the foodporn phenomena, we set out on a thorough data-gathering expedition. In the beginning, we laboriously searched popular social media sites like Pinterest, Instagram, and TikTok in order to compile a wide range of pictures featuring food. These images showcased an assortment of gourmet treats that were thoughtfully chosen to encompass a broad range of culinary customs and aesthetics. The inclusion criteria prioritized vivid, visually arresting photographs that accurately embodied the essence of food porn. Simultaneously, we assembled a

Boro and Dixit 203

substantial cohort of participants for our study, representing diverse demographic backgrounds. We collected extensive data on their perspectives, emotional responses, and ensuing behaviors after seeing foodporn images on social media using surveys and questionnaires. This empirical foundation, including both the visual and experiential dimensions, is the cornerstone of our study.

The data-gathering procedure occurred over a six-month duration, from January to June 2024. Data was collected from social media users who often interact with food-related content on prominent sites such as Instagram, TikTok, and Pinterest. Participants were chosen by a mix of random and snowball sampling techniques, aiming for a varied population to enable a thorough grasp of the phenomena across various ages, genders, and cultural backgrounds.

Five hundred individuals were recruited, and data gathering included both quantitative questionnaires and qualitative interviews. The poll aimed to assess participants' emotional responses to foodporn photos, their involvement with this material, and any resultant changes in their purchase behavior. Concurrently, qualitative interviews were performed with 50 individuals to get a more profound understanding of the psychological triggers and personal reasons influencing their engagement with foodporn pictures.

Participants were contacted through social media advertisements and email invitations. To ensure the credibility of responses, each participant was required to engage with food-related content for a specified period during the study. This dual-method approach provides a robust data set for analyzing both statistical trends and personal experiences.

Data Analysis

Using both quantitative and qualitative methods, we set out on a comprehensive data analysis trip after carefully compiling our data arsenal. A methodical breakdown of visual aspects, ranging from color palettes and plating methods to theme tendencies, was part of our content study of the carefully selected foodporn photographs. We aimed to identify visual cues, themes, and patterns that regularly enthrall the online audience via this technique.

The acquired data was analyzed using qualitative and quantitative methodologies. Thematic analysis was conducted on the qualitative data to discern reoccurring themes and patterns in participant replies. Key themes related to emotional triggers, such as joy, anticipation, and desire, were identified using NVivo, a qualitative data analysis software. This tool allowed for the systematic coding of interview transcripts and facilitated the recognition of common themes across different participants.

Quantitative data from the surveys was analyzed using SPSS (Statistical Package for the Social Sciences). Descriptive statistics, such as frequency distributions and mean comparisons, were used to summarize the overall responses. Additionally, inferential statistical methods, including regression analysis, were employed to examine the relationship between foodporn imagery exposure and changes in consumer behavior, such as increased dining out frequency and altered food preferences.

This dual approach allowed the study to capture both broad trends in consumer behavior and the nuanced psychological effects of foodporn imagery. By combining qualitative and quantitative methods, the study provides a holistic view of how foodporn imagery influences consumer engagement and decision-making processes in the context of social media marketing.

We simultaneously performed a thorough statistical analysis on the survey answers using both descriptive and inferential statistical methods. Through data analysis, our goal was to clarify the subtle differences in how customers react to images of food. We may get important insights into the variables influencing customer involvement, preferences, and ultimately decisions by using this analytical method. Moreover, by combining both qualitative and quantitative data streams, we can create a comprehensive story that explains how foodporn images and consumer behavior work together. This strategy, which is supported by scientific rigor, puts our research in a position to significantly advance the conversation on the role that visual material plays in modern marketing and consumer decision-making.

Results

An examination of the information gathered from interviews and surveys provided important new information on the ways in which foodporn imagery influences customer engagement, emotional reactions, and purchase behavior. The main conclusions are presented in this part, which is organized in accordance with the themes that were found and the outcomes of the quantitative and qualitative analyses.

Identification of the Theme: Emotional and Behavioral Effects

The qualitative information from the interviews was categorized and examined using NVivo in order to find recurrent themes on the psychological and behavioral effects of foodporn images. The investigation revealed three main themes: social media engagement, influence on eating habits, and emotional triggers (see also Table 1 and Figure 1).

- Emotional triggers: Participants consistently reported feeling emotions such as joy, anticipation, and desire when exposed to foodporn imagery. The NVivo analysis revealed that 85% of participants mentioned these emotions as primary motivators for engaging with food-related content. Interview quotes emphasized how aesthetically pleasing food imagery produces a sensory experience that might arouse cravings and memories associated with eating.
- Impact on eating habits: The impact of food-related visuals on the eating habits of the participants was another important subject. Thematic coding indicated that 68% of participants had altered their dining behavior as a result of viewing foodporn images. Many reported an increased frequency in dining out, with several mentioning that they seek out restaurants serving the visually appealing dishes they had seen on social media.

Boro and Dixit 205

	Table I.	Emotional	Responses to	Foodporn	Imagery.
--	----------	-----------	--------------	----------	----------

Emotion Percentage of Respond	
Joy	54%
Anticipation	32%
Desire	23%
Awe	12%
Curiosity	9%

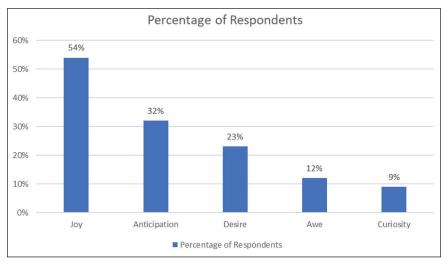


Figure 1. A Word Cloud Representing Consumer Emotions Induced by Foodporn Imagery.

Social media engagement: The third theme identified was the role of social
media engagement. Many participants expressed that sharing and interacting
with foodporn imagery on platforms like Instagram and TikTok influenced
their food choices and dining experiences. NVivo analysis showed that 75% of
participants actively share food images on their profiles, and 45% stated that
they select restaurants based on food content shared by influencers or friends.

Influence on Consumer Behavior

Foodporn imagery does not merely captivate; it significantly influences consumer behavior:

- Increased Dining Out Frequency: An intriguing finding was the increase in
 dining out frequency due to foodporn exposure. Our survey data indicated
 that 63% of respondents reported dining out more often after seeing
 enticing foodporn images. This shift can be attributed to the desire to
 experience the visual and sensory pleasures depicted in the imagery.
- Shift in Food Preferences: There was a noticeable change in food choices as a result of foodporn pictures. Of those surveyed, 41% said that they had

changed their diets in response to foods that seemed good on social media. This demonstrates how foodporn may influence customers' choices for what to eat as well as where they dine.

The quantitative survey data was analyzed using SPSS to determine the broader trends in consumer behavior influenced by foodporn imagery. Several significant patterns emerged from the analysis (see also Table 2 and Figure 2):

- Increased Dining Out Frequency: Survey results indicated that 62% of participants reported dining out more frequently after being exposed to foodporn imagery on social media. This was especially common among younger populations (ages 18–35) when the impact of food content that is aesthetically pleasing was more noticeable.
- Change in Food habits: According to the statistics, 48% of participants said that they had altered their dietary habits as a result of seeing images of food. These participants indicated a preference for trying new or exotic foods that they had not considered before.
- Emotional Response: Survey results supported the qualitative findings, with 87% of respondents reporting strong emotional reactions, such as happiness and desire, when viewing foodporn imagery. These emotional triggers played a significant role in their subsequent food-related decisions, including dining out or attempting new recipes at home.

Table 2. Changes in Dining Habits due to Foodporn Exposure.

Behavior	Percentage of Respondents		
Increased dining out	63%		
Altered food preferences	41%		
Experimentation with cooking	28%		
Seeking instagrammable dishes	19%		

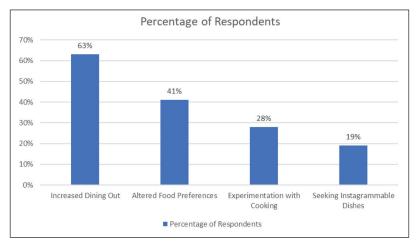


Figure 2. Dining Out Frequency Before and After Exposure to Foodporn.

Boro and Dixit 207

Marketing Implications

It's critical for marketers to comprehend the impact of foodporn pictures in order to develop successful strategies, as evident from Table 3 and Figure 3:

The importance of aesthetics: Food producers and establishments have to
give careful consideration to the visual presentation of their goods. Our
analysis indicates that visually attractive items have a significant advantage
in attracting consumers. For instance, 78% of respondents said that they
would pay more to eat at a restaurant with aesthetically pleasing food.

 Making the Most of User-Generated Content (UGC): Successful marketing strategies typically use UGC. By encouraging consumers to use a particular hashtag while sharing their eating experiences on social media, businesses may improve brand awareness. An example of this is the #FoodieAdventures campaign at XYZ Restaurant, which increased foot traffic and customer contact by 25% and 40%, respectively.

Patterns of Engagement

The information also revealed clear trends in how people interacted with images of food. Consumers who interacted with food-related information more often

Table 3. Impact of Aesthetics on Restaurant Selection.

Criteria	Percentage of Respondents
Visually appealing food	78%
Price	15%
Location	6%
Online reviews and ratings	1%

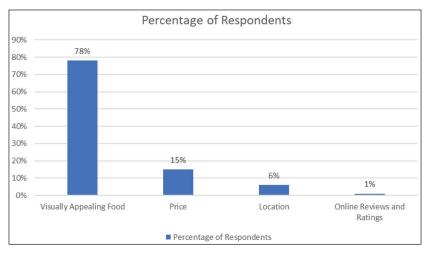


Figure 3. Success of the #FoodieAdventures Campaign.

(daily, e.g.) were more likely to visit certain restaurants or change their purchase habits. Forty percent of the participants said that they were inspired to attempt cooking new foods they had seen online, and 55% said that foodporn photos had affected their choice of restaurant.

Software and Tools Used

NVivo was used to analyze the qualitative data, making it easier to find reoccurring themes and emotional cues in the transcripts of the interviews. Using descriptive and inferential statistics, SPSS was used to examine the quantitative survey data and investigate any connections between shifts in consumer behavior and foodporn images.

Discussion

This research provides novel insights into the influence of foodporn images in social media marketing on customer behavior, specifically on emotional responses, engagement, and purchase choices. This study not only corroborates previous hypotheses but also expands current understanding of the impact of visual aesthetics in digital marketing. This section examines the alignment or contradiction of the results with prior research and explores the wider implications for both scholars and practitioners.

Academic Contributions

This research significantly contributes by applying the TAM and UGT to the realm of foodporn pictures. This study expands upon prior research, which mostly examined generic social media advertising and consumer engagement, by particularly investigating the impact of highly visual food-related material. The results indicate that foodporn imagery serves as a potent psychological stimulus that amplifies customer engagement and influences purchase behavior via emotional reactions. The emotional reactions revealed in this research, including delight, anticipation, and want, correspond with the current literature about the influence of visual stimuli on consumer decision-making. Research conducted by Lim et al. (2017) and Drew et al. (2022) has emphasized the significance of aesthetics in shaping customer attitudes and actions. This study expands on previous results by showing how foodporn imagery elicits more intense emotional responses than other types of social media material. The study's use of NVivo to discern repeating themes offers an innovative method for comprehending the qualitative effects of foodporn on consumer psychology. The identification of themes such as Emotional Triggers, Influence on Dining Habits, and Social Media Engagement provides a more profound knowledge of the mechanisms by which food imagery affects consumer cognition. This addition enhances the current literature by offering a more thorough understanding of consumers' emotional and behavioral responses to visual marketing cues.

Boro and Dixit 209

Practical Implications for Marketers

This study's findings provide significant insights for marketers and organizations seeking to use foodporn pictures in their digital marketing efforts. The intense emotional reactions elicited by foodporn imagery indicate that marketers may successfully use visually captivating material to enhance engagement and influence customer behavior. Enterprises, especially in the culinary and hospitality industries, must to prioritize the production of superior, visually striking food photography to entice and maintain clientele. The research underscores the substantial influence of UGC on the promotion of foodporn pictures. Motivating customers to share their culinary experiences, alongside collaborations with influencers, may assist companies in cultivating genuine interaction with their audience. The success of initiatives such as #FoodieAdventures illustrates that user-generated foodporn material may enhance brand exposure and foster customer loyalty.

Moreover, the results indicate that visual aesthetics may serve as a crucial distinction in a very competitive industry. Seventy-eight percent of participants would choose a restaurant based on the aesthetic attractiveness of the meal, even at a higher cost, highlighting the need of prioritizing food presentation and photography in marketing campaigns.

Validation and Expansion of Preexisting Research

This research corroborates prior results about the impact of social media marketing while especially concentrating on foodporn photos. This research's emotional and behavioral reactions to foodporn align with findings by Sabate et al. (2014) and McClure and Seock (2020), highlighting the influence of social media content on consumer behavior. This research enhances the field by demonstrating that food-related imagery provokes stronger emotional reactions, subsequently leading to more substantial alterations in consumer behavior, including increased eating out and changes in food preferences. Furthermore, the research posits that foodporn might engender a need for social identity. Numerous individuals said that posting or interacting with foodporn on social media facilitated the communication of their likes and preferences to their social networks. This notion corresponds with ideas of social identity and conspicuous consumerism, whereby customers use things and experiences to exhibit their position and uniqueness. Subsequent study may investigate the convergence of food pornography, social identity, and consumer behavior.

Constraints and Prospective Investigations

This research offers significant insights, however, it has limits. A significant disadvantage is the dependence on self-reported data, which may be prone to response bias. Participants may not consistently provide reliable recollections or accounts of their emotional responses or behavioral modifications. The sample was biased toward younger, social media-literate people, limiting the applicability

of the results to other populations. Subsequent studies need to investigate the influence of foodporn photos on a wider demographic, including older age cohorts and those with restricted social media use. This study concentrated on Instagram, TikTok, and Pinterest; however, subsequent research could explore the impact of foodporn across a broader spectrum of platforms, including emerging technologies like virtual reality (VR) and augmented reality (AR), which may further augment the sensory experience of foodporn. Finally, further research should investigate the ethical ramifications of influencing customer behavior via visually compelling material. As foodporn increasingly influences consumer tastes and behaviors, it is essential to investigate its possible impacts on dietary habits, mental well-being, and body image.

Conclusion

This research offers an in-depth examination of the impact of foodporn pictures in social media marketing on customer behavior. This study demonstrates the significant influence of visually attractive food-related information on customer engagement, emotional reactions, and purchase choices via the application of the TAM and UGT. The results indicate that foodporn imagery substantially influences consumer behavior by provoking intense emotional responses, including pleasure and desire, which result in increased frequency of eating out, modified food choices, and enhanced involvement on social media.

This research enhances the current literature by providing fresh insights into the role of visual aesthetics as an effective marketing strategy in the digital era. The use of NVivo for qualitative analysis facilitated the identification of major themes concerning emotional and behavioral reactions, hence enhancing comprehension of the psychological processes behind consumer engagement with foodporn images.

The report provides pragmatic ideas for enterprises and marketers. It indicates that enterprises in the food and hospitality industries may gain advantages by investing in superior food imagery to entice and keep clientele. Moreover, the smart use of UGC and influencer marketing may augment brand exposure and customer engagement. The significance of producing visually appealing material is clear, as most participants expressed a readiness to patronize restaurants that provide "Instagram-worthy" food, even at an elevated price.

This research has limitations. The dependence on self-reported data and a sample biased toward younger, socially media-engaged persons may restrict the generalizability of the results. Subsequent studies need to broaden their focus to include a more varied audience and investigate the influence of foodporn photos across other social media platforms, in addition to new technologies such as VR and AR.

This research highlights the essential significance of visual material in contemporary marketing, especially with foodporn images. As digital platforms advance, the significance of aesthetically pleasing content will increase, presenting both possibilities and problems for marketers and enterprises. Future studies need to concentrate on the ethical implications of influencing customer behavior via visually stimulating material and the enduring impacts of foodporn images on consumer health and wellness.

Boro and Dixit 211

Future Research Directions

This study lays the foundation for future research in several areas:

 Exploring the ethical considerations of manipulating consumer behavior through foodporn imagery.

- Analyzing the long-term effects of foodporn exposure on eating habits and health.
- Investigating the role of AR and VR in enhancing foodporn experiences.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

ORCID iDs

Sunita Boro https://orcid.org/0009-0000-6800-8226 Saurabh Kumar Dixit https://orcid.org/0000-0002-9478-084X

References

- Alalwan, A. A., Rana, N. P., Dwivedi, Y. K., & Algharabat, R. (2017). Social media in marketing: A review and analysis of the existing literature. *Telematics and Informatics*, 34(7), 1177–1190. https://doi.org/10.1016/j.tele.2017.05.008
- Argo, J. J., & Dahl, D. W. (2020). Social influence in the retail context: A contemporary review of the literature. *Journal of Retailing*, 96(1), 25–39. https://doi.org/10.1016/j.jretai.2019.12.005
- Bhukya, R., & Paul, J. (2023). Social influence research in consumer behavior: What we learned and what we need to learn? A hybrid systematic literature review. *Journal of Business Research*, *162*, 113870. https://doi.org/10.1016/j.jbusres.2023.113870
- Drew, Z., Fulton, J., & McIntyre, P. (2022). #foodporn: Examining Instagram food influencers through the systems model of creativity. *Communication Research and Practice*, 8(4), 308–326. https://doi.org/10.1080/22041451.2022.2137248
- Haur, F. C., Khatibi, A., & Azam, S. M. F. (2017). Antecedents of consumers' perception towards online advertising in Malaysia: The structure equation modeling approach. *European Journal of Management*. Published online September 26, 2017. https://doi. org/10.46827/ejmms.v0i0.205
- He, Q., & Qu, H. (2018). The impact of advertising appeals on purchase intention in social media environment—Analysis of intermediary effect based on brand attitude. *Journal of Business Administration Research*, 7(2), 17. https://doi.org/10.5430/jbar.v7n2p17

- Jibril, A. B., Kwarteng, M. A., Chovancova, M., & Pilik, M. (2019). The impact of social media on consumer-brand loyalty: A mediating role of online based-brand community. *Cogent Business & Management*, 6(1). https://doi.org/10.1080/23311975.2019.1673640
- Katz, E., Blumler, J. G., & Gurevitch, M. (1973). Uses and gratifications research. *Public Opinion Quarterly*, 37(4), 509–523. https://doi.org/10.1086/268109
- Lim, X. J., Radzol, A. M., Cheah, J., & Wong, M. W. (2017). The impact of social media influencers on purchase intention and the mediation effect of customer attitude. *Asian Journal of Business Research*, 7(2), 19–36. https://doi.org/10.14707/ajbr.170035
- Lin, C. A., & Kim, T. (2016). Predicting user response to sponsored advertising on social media via the technology acceptance model. *Computers in Human Behavior*, 64, 710–718. https://doi.org/10.1016/j.chb.2016.07.027
- McClure, C., & Seock, Y. K. (2020). The role of involvement: Investigating the effect of brand's social media pages on consumer purchase intention. *Journal of Retailing and Consumer Services*, 53, 101975. https://doi.org/10.1016/j.jretconser.2019.101975
- Pandey, A., Sahu, R., & Dash, M. K. (2018). Social media marketing impact on the purchase intention of millennials. *International Journal of Business Information Systems*, 28(2), 147–162. https://doi.org/10.1504/IJBIS.2018.091861
- Sabate, F., Berbegal-Mirabent, J., Cañabate, A., & Lebherz, P. R. (2014). Factors influencing popularity of branded content in Facebook fan pages. *European Management Journal*, 32(6), 1001–1011. https://doi.org/10.1016/j.emj.2014.05.001

Indo-Mauritian Investment Trends Post-amendment of the Double Taxation Avoidance Agreement (DTAA)

IIMS Journal of Management Science 16(2) 213–233, 2025 © The Author(s) 2025 DOI: 10.1177/0976030X251321685 journal.iimshillong.ac.in



Satabdee Banerjee Dand Verena Tandrayen-Ragoobur Dandrayen-Ragoobur

Abstract

India and Mauritius have important historical and cultural ties, and trade, investment and strategic exchanges between them. India is the sixth-largest investor in Mauritius, while Mauritius is the third-largest investor in India. However, because of the Double Taxation Avoidance Agreement (DTAA) with India and the concurrent lack of a capital gains tax in Mauritius, a sizeable amount of the capital flows from India to Mauritius were essentially round-tripping or fiscal evasion of taxes on Indian money. The majority of Indian businesses that do business in Mauritius do not have any manufacturing or trading facilities. In light of this, the current work makes an effort to conduct a qualitative case study utilising primary and secondary data to follow the development of the strategic investment ties between India and Mauritius through money migration, after the DTAA was amended in 2016. After 2018, China has surpassed India in terms of volume of capital investment into Mauritius, with Singapore emerging as the largest provider of foreign direct investment (FDI) inflows into India. The study observes that this shift in trend is not the result of only the treaty being amended but also the tax morale of the respective countries as well as the invasive economic policy of China. Whatever legal changes are made, if human avarice is not restrained, dishonest people will always find clever ways to circumvent the law to further their agendas.

Corresponding Author:

Satabdee Banerjee, Department of Commerce, Netaji Nagar Day College, 170/436, NSC Bose Road, Regent Estate, Kolkata, West Bengal 700092, India.

E-mail: satabdeebanerjee@nndc.ac.in



Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License (http://www.

creativecommons.org/licenses/by-nc/4.0/) which permits non-Commercial use, reproduction and distribution of the work without further permission provided the original work is attributed.

¹ Department of Commerce, Netaji Nagar Day College, Kolkata, West Bengal, India

² Department of Economics & Statistics, University of Mauritius, Reduit, Mauritius

Keywords

Double Taxation Avoidance Agreement (DTAA), fiscal evasion of taxes, foreign direct investment (FDI), India–Mauritius investment ties, qualitative case study

JEL Classification: F21, H26, H32, K34, K42

Received 24 November 2024; accepted 01 February 2025

Introduction

The concepts of sovereignty and its equality form the foundation of the contemporary state structures. Keeping in alignment with the global governance requirements, every state is free to enact laws and establish its own regulations including those pertaining to taxes, in favour of their domestic interests (Genschel & Schwarz, 2011; McCaffery, 2005; Nerré, 2001). The citizens and corporations have an obligation to pay taxes to their government; nonetheless, there is a propensity to evade and avoid taxes among them. Tax mitigation is both legal and ethical, tax avoidance through prudent tax planning is within the boundaries of law though not desirable, while fiscal evasion is completely illegal and punishable (Molero & Pujol, 2011; Pickhardt & Prinz, 2014). In this context, tax havens, or countries offering significantly low or zero tax rates to the foreign investors, are not a new phenomenon. The basic premise of the development of such jurisdictions lies in the tax-resistant attitude that can be traced back to the second-century BC civilisations in the eastern Mediterranean (Raposo & Mourão, 2013). A modern analogy can be drawn from the eighteenth-century legend of the Cayman Islands, the residents of which do not need to pay any taxes even today (Oakley, 2017). Presently, close to 75 countries are earmarked as tax havens of the world, including the USA, the Netherlands, Germany and Switzerland for their effectiveness of concealing financial information and identity of the investors from foreign authorities (List of the World's Most Notorious Tax Havens, 2024). Large multinational corporations (MNCs) with intensive research and development activities are found to leverage the tax havens to siphon off their earnings from high-tax jurisdictions to ensure higher growth as compared to their non-tax haven competitors (Desai et al., 2005). They incessantly restructure and reorganise their operations and investments to 'shop' tax and investment treaties across the globe. Almost 30% of the global foreign direct investment (FDI) is found to be indirect, or stated otherwise, it is merely 'the flow of domestic funds channelled through offshore centres back to the local economy in the form of direct investment, also known as foreign direct investment round tripping' (Aykut et al., 2017).

In the case of indirect FDI, MNCs invest in a host country through one or more intermediate companies in a third country. In this form of FDI, the nationality of the direct investor, which in most of the cases is a financial company, does not match with the carefully concealed final beneficiary. Hence, many times the funds are actually domestic, which has been routed through an intermediate financial entity in a country with low rates of tax, lenient tax rules, flexible corporate governance and indulgent FDI norms. The deliberate blurring of the identity of the

true investor jeopardises policy formulation, financial performance and status assessment of the host economy. Such investments do not constitute any real industrial activity, instead increases volatility of investment due to the lack of their long-term business direction. They behave more like a foreign portfolio investment (FPI), instead of an FDI. This obviously leads to losses in both tax revenue as well as welfare in the home country, and as a consequence, the perceived developmental benefits of FDI in terms of capital injection, employment generation and technology diffusion fail to percolate through the host country.

In 1998, the Organisation for Economic Cooperation and Development (OECD) issued guidelines for combating the menace of the round-tripping of FDI and to prevent treaty shopping, fraudulent activities and financial crimes across the world (Jackson, 2010; OECD, 1998). Additionally, in 2002, OECD published the Model Agreement on Exchange of Information on Tax Matters (TIEA model) and its Commentary to specify the provisions pertaining to exchange of financial information between the partnering nations. These initiatives later culminated into the current version of the Double Taxation Avoidance Agreement (DTAA), which refers to an agreement under which taxpayers residing in one country and earning their income from another country do not require to pay tax on the same income in both the countries (Nalsar University of Law Editorial Team, 2023; Sabnavis & Sawarkar, 2016). To bridge the legal loopholes, the General Anti-Avoidance Rules (GAAR) and the Limitation of Benefits (LoB) clause were subsequently introduced in 2017 to prevent Base Erosion and Profit Shifting (BEPS). However, in spite of so many initiatives, the prevention of fiscal evasion could not be guaranteed (Shukla, 2021).

A substantial corpus of literatures discuss on the concept of tax havens, causes behind their creation, how they are poaching off the tax bases of non-haven economies leading to fiscal shortfalls and posing as a challenge to the international tax regime and what could be done to combat them, including the implications of the Mauritian route of investing into India (Aykut et al., 2017; Chernova, 2022; Desai et al., 2006; Genschel & Schwarz, 2011; Gunputh et al., 2017; Jalan & Vaidyanathan, 2017; Pitkänen & Ronnerstam, 2021; Raposo & Mourão, 2013; Rosenzweig, 2010; Shaxson, 2011; Yadav, 2018). Nonetheless, not many researches has been conducted on the evolution of Indo–Mauritian investment relationship and its current status post-amendment of the DTAA between India and Mauritius during 2016–2017.

Trade, investment and strategic exchanges between India and Mauritius are of significant value. The countries have significant historical and cultural connections as well. Mauritius receives substantial investment from India in the form of equity, debt, lines of credits and guarantees issued. India is the sixth-largest investor in Mauritius (Bank of Mauritius, 2023). From July 2007 to June 2023, Mauritius received FDI inflows worth USD 72,783.86 million which is 15% of the total outward FDI from India. The small island state Mauritius, on the other hand, was the biggest source of FDI inflows into the Indian subcontinent till 2017. It accounted for 29.07% of the total FDI inflows into India during 2000–2022 (Reserve Bank of India, 2023). It is apprehended that a large portion of the capital flows from India to Mauritius are actually round-tripping or fiscal evasion of taxes on Indian money (Ali et al., 2022; Gunputh et al., 2017; Jalan & Vaidyanathan, 2017; Thukral, 2022) due to the existing DTAA signed between India and Mauritius on 24 August 1982 and the simultaneous absence of capital gains tax in Mauritius.

In this context, the objective of the present study is to undertake a qualitative case study to trace the evolution of the Indo–Mauritian strategic exchange through migration of funds, especially post-amendment of the DTAA in 2016–2017. The study endeavours to bridge the current research gap by not only examining the success or failure of the fiscal corrections, but also attempts to trace the regional geo-political influences and the behavioural aspects behind the flow of FDI between the nations.

This case study is structured in the segments as follows: the first section discusses the relevant literatures about globalisation, FDI and fiscal evasion. The second section outlines the research methodology. The third section discusses the findings in three sub-parts, namely, the journey of Mauritius towards becoming a tax haven, the procedural aspects of round-tripping of Indian investment through the Mauritian route and the status of Indo–Mauritian investment post-amendment of the DTAA and the reasons thereof; and the last section of the article concludes.

Literature Review

Globalisation and Tax Havens

Globalisation has three dimensions: the economic aspect, the political aspect and the cultural aspect. The history of the development of tax havens is connected with the expansion of economic globalisation, first, with the spread of capitalism during the nineteenth century and second, post-World War II, with the manifold increase of the cross-border flows of goods, services, labour and capital and the formation of the eurodollar market led through deregulation and liberalisation of the economies (Pitkänen & Ronnerstam, 2021). In the opinion of Todaro and Smith (2020), the efficiency and effectiveness of the tax collection mechanism of a host economy depends a lot on the political will of the government. When few corporations succeed to cunningly reduce or manipulate their compulsory tax payments, the rival firms tend to lose on competition which forces them to take the same approach to stay in competition (Pitkänen & Ronnerstam, 2021).

There are a number of literatures on how the wealthiest people, corporations and countries reached their status through tax evasion and money laundering. Nicholas Shaxson (2011) in his famous book 'Treasure Islands: Tax havens and the men who stole the world' commented that 'tax havens are the ultimate escape routes for our wealthiest citizens and corporations from a menagerie of laws, rules, financial regulations and democratic accountability. Offshore is globalization's rotten core'. According to him, 'colonialism left through the front door, and came back in through a side window' in the name of globalisation. Revelation of the Panama Papers (2016), Paradise Papers (2017), Pandora Papers (2021) and many such financial leaks by the International Consortium of Investigative Journalists (ICIJ) brought to the fore the unaccounted-for financial information of a significant number of corporate giants, global leaders, politicians, public officials, High Net worth Individuals (HNIs), sport stars and celebrities (BBC News, 2021). They used the different tax havens for money laundering and channelising their illicit funds.

Today, the tax havens and offshore financial centres (OFCs) are both the recipients as well as the originators of almost 30% of the world's share of FDI.

The Bank for Financial Settlements finds that almost 50% of the cross-border flow of funds from increasingly varied sources gets routed through tax havens (Raposo & Mourão, 2013). Pitkänen and Ronnerstam (2021) find a significant positive impact of economic globalisation on the prosperity of the tax havens. According to Manish and Soni (2020), because laws are enforced at the national level, the freedom that comes with globalisation is largely misused.

Foreign Investment and Tax Havens

The taxation rules have a significant bearing on the quantity and quality of international flow of funds into the host economy. In case of international business, due to the involvement of more than one country, the resident of a certain country may have earnings generated in some other country. Today's highly sophisticated and complex global value chains and ownership structures of the MNCs with numerous cross holdings and affiliates make it challenging to categorise and monitor them by their home and host country status. Channelling funds through low-tax jurisdictions instead of the home countries does not necessarily imply an illegal act. Treaty shopping might result in a considerable 6% point average reduction in tax burdens of the MNCs without the indirect routing of the repatriated income. The coefficients of the treaty shopping indicators are found to be statistically robust and significant, exerting economic influence on bilateral FDI stocks (Van't Riet & Lejour, 2018).

Low- or zero-rate tax havens are not significant conduit nations. There is a possibility that under-developed nations where resources and wealth are distributed unequally can maximise welfare in a world with low tax rates (Rosenzweig, 2010). Notably, majority of the tax havens are small island developing states (SIDS) having paucity of natural wealth and financial resources, and thus, are largely dependent on foreign trade, investments, grants and aids (Manish & Soni, 2020). They make capital allocation more effective and foster international tax competition. This pushes for more economic discipline and better fiscal policies throughout the rest of the world (Mitchell, 2006). The founder of the first offshore company in the new Mauritius Offshore Business Activities Authority regime in 1993 believes that instead of resenting the loss of tax revenue on capital gains in India, celebrations should be made for the increased gains in other direct taxes such as corporate, dividend and employment taxes, and indirect taxes due to increased economic activity brought about by FDI facilitated by the India-Mauritius treaty (Desai & Sanghavi, 2008). However, corporate misreporting or under-reporting or concealment of material facts and information with an ulterior motive of tax evasion is an illegal act, and a matter of greater concern.

Fiscal Evasion of Taxes

Jones and Temouri (2015) adapted a 'firm-specific advantage—country-specific advantage framework' and identified that the home-country corporate tax rate had the least impact on an MNCs decision towards setting up of a tax haven subsidiary; instead, the nature of capitalism and intensity of technology existing in a home-country location appeared to be a much stronger determinant. On the contrary,

Maffini (2009), Dyreng and Lindsey (2009) and Jaafar and Thornton (2015) found that the marginal effective tax rates of MNCs having tax haven subsidiaries have been found to be notably lower as compared to their rivals with only non-tax haven subsidiaries making tax haven subsidiaries a popular and convenient alternative. Additionally, tax haven operations were found to positively influence the neighbouring non-tax haven activities (Desai et al., 2005).

Tax evasion may be encouraged or prevented by behavioural dynamics (Pickhardt & Prinz, 2014). The tax morale of a nation plays a decisive role in tackling tax evasion problem by MNCs. Countries with low tax morale are found to take resort to round-tripping of domestic funds through tax havens for tax evasion (Kemme et al., 2019). The level of tax morale, however, depends on individual as well as governance factors. The degree of trust and satisfaction with the government and its quality of public services influence the tax morale of the residents (Daude et al., 2013). The MNCs interact with the home-country tax laws depending on the effectiveness of tax evasion prevention measures, the practices of the rivals and the strength of its own social welfare logic (Nebus, 2019).

In the Indian context, it was expected that after the amendment of the stated DTAA in 2016, the quantity and quality of trade as well as capital flows between India and Mauritius shall witness a transformation. Kotha (2018) evaluated the roles of the executive, legislative, judicial and quasi-judicial authorities, the tax authorities and the revenue officers of India in the movement of Indian entities to Mauritius between 1983 and 2017. Mathur et al. (2015) observes that FDI from tax havens like Singapore and Mauritius may be impacted by the tax treaties with India like the DTAA, regulations like the GAAR, and the LoB clause. If India keeps up the DTAA with these tax havens, it will lose out on tax revenue; however, if it implements GAAR, it will lose out on FDI flows from these nations. In the given context, the present study attempts to make a fact check about the reality of FDI inflows into India from the Mauritius post-amendment of the DTAA in 2016.

Methodology

The study is a qualitative case study exploring both primary and secondary data. The secondary data on FDI flows were collected from the websites of the Reserve Bank of India (RBI) and the Bank of Mauritius for the period of July 2007 to June 2023. Other pertinent information was assimilated from the company websites, annual reports and other online materials including journals, book chapters, reports and blogs.

For procuring primary data required for the analysis an attempt was made to conduct personal interviews with the authorised personnel of the companies mentioned in Table 1. However, it was found that a majority of these Indian companies do not have any manufacturing, services or trading set up in Mauritius; instead they operate as Global Business Companies (GBCs) (Table 2) which are formed as tax residents in Mauritius administered by a licensed Mauritian management services company either as a collective investment scheme (CIS), close-ended fund, fund manager, investment advisor, protected cell company or as an investment holding company. Such GBCs are committed to maintain secrecy of

 Table I. Top Ten Indian Companies Investing in Mauritius From July 2007 to June 2023.

Financial Commitment (USD in millions)

ne of the Indian 3/ ance Industries					Guarantee	Total (USD	
	Name of the JV/WOS	Major Activity	Equity	Loan	Issued	in millions)	Status
	Reliance Oil & Gas Mauritius Limited	Manufacturing	157	0	7825	8540	Defunct
Ltd Rel	Reliance Exploration & Production		558	0	0		
Bharti Airtel Limited Ne	Network I2i Ltd	Transport, Storage	1346	604	4158	7143	Live
Bh	Bharti Airtel International (Mauritius)	and Communication	298	267	0		
Ltd		Services					
Vedanta Limited TH	THL Zinc Ventures Ltd	Financial, Insurance and	2360	0	173	2533	Live
		Dusilless sel vices					
	Essar Steel Offshore Limited	Manufacturing	32	0	2384	2416	Live
RHC Holding Private RH	RHC Financial Services (Mauritius)	FIBS	9/	1376	298	1749	Live
Limited							
GMR Infrastructure GM	GMR Infrastructure (Mauritius) Ltd	Financial, Insurance and	88	64	1589	1740	Live
Ltd		Business Services					
Suzlon Energy Ltd Suz	Suzlon Energy Limited	Manufacturing	1324	79	260	1664	Live
	Aapca (Mauritius) Ltd	Community, Social and	1338	0	0	1338	Live
Communication		Personal Services					
Associates Pvt Ltd							
Godrej Consumer Go	Godrej Mauritius Africa Holdings	Financial, Insurance and	84	82	1148	1316	Live
Products Ltd Lin	Limited	Business Services					
United Phosphorous Bio	Bio Win Corporation	Manufacturing	240	629	342	1241	Live
Ltd							
Total			8370	3133	18176	29680	
Percentage			78%	% 	%19	%00 I	

Table 2. Key Features of Global Business Companies (GBCs).

Key Features	Global Business Companies (GBCs)
Principal corporate legislation	The Companies Act 2001
	Financial Services Act 2007
	Financial Act 2018
Regulator	Mauritius Financial Services Commission
Definition	Companies formed as tax residents in Mauritius administered by a licensed Mauritian Management Company. The management and control as well as the principal bank account have to be in Mauritius, but it would conduct business outside Mauritius. It may be a locally incorporated company by way of a wholly owned subsidiary (WOS) or a branch of a foreign company. A local person or company cannot be shareholder of a GBC.
Activities	Can be set up as a collective investment scheme (CIS), close-ended fund, fund manager, investment advisor, protected cell company or an investment holding company.
Registered office	At the address of a licensed management company in Mauritius
Residential status	Resident and taxed in Mauritius
Corporate taxation	Domestic corporate tax rate is 15%. However, subject to a GBC satisfying the relevant conditions relating to the substance of its activities, it may apply an 80% exemption on its foreign dividend income, interest income and profits from foreign permanent establishments. The 80% exemption is not mandatory: the company may apply the credit system if it so desires
Capital gains tax	Not applicable
Withholding tax	Not applicable
Access to double taxation treaty	Yes
Directors	Minimum two resident directors who are natural persons
Shareholders	Minimum one
Company secretary (CS)	A qualified and resident CS, normally the management company acts as company secretary
Requirements related to	Has to prepare, audit and file annual accounts, but
accounts	those are not available to public scrutiny
Filing of annual tax returns	Mandatory
Minimum annual tax/licence fees	USD 1950
Annual tax return filing charges	USD 220
Minimum paid-up share capital	USD I
Time to establish new company Beneficial ownership	3–4 weeks To be disclosed to the authorities, but not to the
Cl : 1 : :	public
Change in domicile	Permitted
Trading of shares	License required for undertaking businesses of banking, insurance, financial services or to collect funds from public

Source: OCRA Worldwide Mauritius (2020) and Arch Global Consult (2020).

Respondents	Profile
RI	Mauritian tax practitioner
R2	Mauritian corporate lawyer
R3	Executive chairman and founder of a Mauritian management services company
R4	Chief operating officer (COO) of a Mauritian management services company
R5	Manager of the global business branch of an Indian public sector bank
R6	Joint general manager of finance and accounts of an Indian MNC operating in Mauritius

Table 3. Profile of the Respondents.

their clients and their operations lack transparency. Hence, availability of data as well as respondents became a critical challenge. Nonetheless, few professionals unrelated to these companies assented to be interviewed anonymously (Table 3). The interviews, in person and over the telephone, were conducted using non-directive unstructured questionnaire. Their responses were analysed using inductive thematic analysis method propounded by Braun and Clarke (2006).

Findings and Discussion

Mauritius: Journey Towards Becoming a Tax Haven

Mauritius is a very small tropical and volcanic island on the Indian Ocean with a population close to 1.28 million. It is a natural-resource-deficient country and therefore, largely dependent on foreign trade, investment and grants. The main pillars of the economy are tourism, textile and financial services. As located at the heart of the Indian Ocean, Mauritius enjoys strong trade and investment ties with Africa, south and South-East Asia and Australia. Being a European colony till its independence in 1968, it has strategic affinity to the European countries as well (Bowman, 2023).

Prior to her independence from British rule, Mauritius was primarily a sugarcane-based monoculture and an unindustrialised economy with prolonged balance of payments (BoP) deficits. Sugar constituted 35% of the aggregate domestic production and 98% of the total exports under the Commonwealth Sugar Agreement (CSA). High exposure to trade shocks, inequality in distribution of income, unemployment induced by population explosion, political unrest and social protests led the Nobel Laureate economist James Meade to consider Mauritius getting engulfed into the 'Malthusian trap' of over-population (Meade, 1967). However, post 1970s, the government took initiatives to diversify the economy by promoting manufactured exports through the setting up of the export processing zones (EPZs), which were largely fed by the FDI inflows. It also started stimulating the travel and tourism sector besides the predominant agricultural sector. This resulted in spillover effects through enhanced productivity,

heightened domestic investment and augmented exports. Complementary public-private partnerships through setting up of institutions such as Mauritius Investment Development Authority (MIDA), Export Processing Zones Development Authority (EPZDA) and Small and Medium Industries Development Authority (SMIDA) catalysed the popularity of Mauritius as an investment destination. These together moved Mauritius up the global value chain which won the country the accolade of 'Economic Miracle' given by the World Bank in 2002 (UNIDO, 2021).

In the second phase of industrialisation after 2000, the telecommunications sector and the financial services sector were popularised in Mauritius. Several bilateral investment treaties (BITs), legislative changes and membership in regional associations like the South African Development Community (SADC), Common Market for Eastern and Southern Africa (COMESA), Indian Ocean Commission (IOC) and Indian Ocean Rim Association for Regional Cooperation (IOR-ARC) helped Mauritius regain its economic growth in this phase as well (Sooreea-Bheemul & Sooreea, 2012).

According to the World Happiness Report 2023, Mauritius is the happiest country in the African subcontinent and the 59th happiest country out of the 149 countries across the world with a happiness score of 5.9 (World Happiness Report, 2023). The Legatum Prosperity Index places Mauritius as the 47th prosperous nation of the world (out of 167 nations) (Mauritius: Legatum Prosperity Index 2023, n.d.). Mauritius stands at a Global Rank of 13 and is the best performer in sub-Saharan Africa in terms of the Ease of Doing Business Index 2020 with a remarkable score of 81.5 (The World Bank, 2020). However, according to the Sustainable Development Report 2023, Mauritius has a corporate tax haven score of 81 against a standard 40 which signifies that the country poaches off tax bases of other nations based on its laws, rules and recorded administrative practices (Mauritius: Sub-Saharan Africa, 2023). Out of the four categories of tax havens, namely Western colonies, sovereign nations, nations as part of cartels and emerging economies, Mauritius comes under the fourth category, as the tax haven status leaves the SIDS with quality education, employment generation, strong governance, development of the financial sector and growth in public revenues (Raposo & Mourão, 2013). Mauritius is used as a tax-efficient vehicle by global investors to minimise the withholding tax of dividends, interests and royalties and also as a platform to invest in Africa. To attract foreign investments, Mauritius offers several incentives to foreign investors, which in turn has marked Mauritius as a tax haven country. Mauritius has signed 44 DTAAs, 45 Investment Promotion and Protection Agreements (IPPAs) and 49 Memorandum of Understanding (MoUs) with different countries across the globe (Economic Development Board Mauritius, 2021). Companies formed to access the Mauritian network of DTAAs as tax residents in Mauritius, ensured that it is correctly structured and the seat of management and control is in Mauritius and administered by a licensed Mauritian Management Company. Foreign companies are permitted to operate from Mauritius as Mauritius authorised companies (ACs) and GBCs. It is to note that previously GBCs were taxed at 15% with a rebate of 80% making the effective tax rate to be a mere 3%. Presently, the flat tax rate for all Mauritian tax-resident

companies has become 15%. However, a partial exemption of 80% is still received on certain incomes. In the opinion of R3,

Mauritius has uniquely placed herself as the only investment grade international financial centre (IFC) in sub-Saharan Africa to drive trade and investment in mainland Africa, and to develop solutions in partnership with mainland Africa for shared economic growth. Through her signing of Comprehensive Economic Cooperation and Partnership Agreement (CECPA) with India and Free Trade Agreement (FTA) with China, Mauritius has a central role to play in facilitating trade and investment between Asia and Africa, and within Africa.

Modus Operandi: How It All Happens

According to R6,

The economic sustainability of the tax havens hedges on maintaining unobtrusive Know-Your-Customer (KYC) norms. The sovereign governments consider them as a threat to their fiscal gains, while the MNCs and High Net worth Individuals (HNIs) take their aid to shred off their tax burdens.

India has a total of 94 (PwC, 2024) and Mauritius 44 DTAAs (EDB Mauritius, 2022) with different countries of the world. In absence of such treaties, investors may not consider investing in host economies due to the apprehension of the same income being taxed twice in two different countries (Pitkänen & Ronnerstam, 2021). Mauritius is a well-documented round-tripping corridor for India, operating through OFCs. OFCs or GBCs or special purpose enterprises (SPEs) have the capability to opaque the real source and true nature of FDI. India and Mauritius had an operational DTAA prior to the Mauritian independence in 1968. A new comprehensive DTAA came into force between India and Mauritius on 1 April 1983.

According to R4, 'Mauritius acted as a platform for India to enter the vastly unexplored African market. It was part of a few regional African trade blocks, and had preferential trade agreements and DTAAs with many African countries which India had not'. Moreover, capital gains were taxed solely at the country of residence (Desai & Sanghavi, 2008). Hence, a paradigm shift took place when India liberalised in 1991 and simultaneously, in 1992, Mauritius entered into the second stage of industrialisation by aiming to become a non-banking offshore investment jurisdiction. The prospective foreign investors identified the enormous possibility of tax arbitrage while investing in India through Mauritius. Mauritius became the most preferred route for entering into the Indian economy, one of the most lucrative investment destinations of that time, in the form of both FDI and FPI inflows. The 'Mauritius Tax Residency Certificate' issued by the Mauritius Tax Office was accepted as a valid evidence of tax residency of such companies and ignored the beneficial ownership of the entities (Kotha, 2018). Moreover, the corporate tax rate was substantially higher in India vis-à-vis the Mauritian corporate tax rate applicable to offshore companies (currently, the corporate tax rate of India ranges from 25% to 30%, excluding surcharge), and there was no

exchange control on the exchange rate of Mauritian currency leading to transactions of unlimited value.

R1 commented that

The biggest imperative to invest in India through Mauritius was that an OFC resident at Mauritius need not pay any capital gains tax on divestment of its securities, while direct investment and its subsequent disposal attracted 30% capital gains tax in India.

In the opinion of R5,

As a consequence,

- Foreign investments to India started getting routed through Mauritius for the sake of better tax management
- Indian companies started setting up 'shell companies' using complex MNC structures to avoid tax.
- c. The entities ended up with non-payment of taxes in either of the countries, leading to double non-taxation.

On record, 713 Mauritian companies received FDI inflows from India during July 2007 to June 2023. Out of them 580 (81%) companies are wholly owned subsidiaries (WOS) of Indian companies. The rest 133 (19%) companies have entered into joint venture (JV) agreements with their Indian counterparts; 13 Mauritian companies have received FDI inflows worth more than USD 1 billion from India during the stated period: 52% of the total financial commitment from India came in the form of guarantees issued, 32% as equity and the rest 16% as loan (Reserve Bank of India, 2023).

The revision of the treaty with India has been under serious consideration since 2006 due to the apprehensions and complaints received against the 'Mauritian route of round-tripping' of Indian money through shell companies formed in Mauritius to avoid domestic taxes in India and to route illicit funds.

The amended DTAA between India and Mauritius was signed between the then Indian Finance Minister Arun Jaitley and Minister of Finance and Economic Development of Mauritius Pravind Kumar Jugnauth after prolonged deliberations at the Double Taxation Avoidance Convention (DTAC) held at Port Louis on 10 May 2016. In the first two years starting from 1 April 2017, the capital gains on shares were taxed at 15%, that is, 50% of prevailing capital gains tax rate of 30% in India under the revised treaty. Full rate was made applicable from 1 April 2019 onwards (Press Trust of India, 2016b). The amendment required the companies to have substantial business operations along with employees under their payroll. They should be listed on a registered stock exchange in any of the contracting nations. Moreover, they needed to prove that a total expenditure of INR 2.7 million was made during the immediately preceding 12 months in Mauritius (Kotha, 2018; Press Trust of India, 2016a). R2 observed that 'interestingly, there was no mention of the other kinds of securities implying that even after 2019, no capital gains tax would be required to be paid for alienation of interest from debt instruments, convertible securities, derivatives and similar financial instruments'.

713

In 2017, the 'anti-treaty shopping' or LoB clause was attributed to trace back the true economic beneficiary of the corporate transactions 'to confine source-country treaty benefits to entities that are true residents of the treaty partner and are fully taxable in that country' (Postlewaite & Makarski, 1999; Shukla, 2021). India also implemented the GAAR on 1 April 2017 to trace the dubious transactions by 'lifting the corporate veil' and establishing the 'substance over form' (PwC, 2017).

Indo-Mauritian capital exchanges post-amendment of the DTAA

A scrutiny of the Indian investments from July 2007 to June 2023 reveals that out of the nine industrial sectors, the finance, insurance, real estate and business services sector of Mauritius attracted 30% of the Indian investment (not in value terms) followed by the manufacturing sector (15%), as presented in Table 4. However, in reality, not many manufacturing activities are done by the Indian companies in Mauritius. Instead, most of these companies are actually GBCs.

From the Indian perspective, Singapore outpaced Mauritius as the biggest source of foreign capital from 2018 onwards, and later from 2020, USA took the second lead sending Mauritius to the third rank which coincided with the grandfathering of the Indo–Mauritian DTAA (Figure 1). Notably, Singapore also used to extend the same tax benefits as Mauritius prior to the revision of the DTAA with India, and a similar revised DTAA had been signed between India and Singapore with effect from April 2017 itself.

In response to the query as to what according to him is the biggest reason behind this downward slip of Mauritius, R5 commented that

It is not because of the amendment of the DTAA between India and Mauritius that Singapore and the USA has climbed up the ladder as the biggest foreign investors of India. Rather it is because of the grey-listing of Mauritius by the *Financial Action Task*

Number of S. No. Sectors Companies Т Finance, insurance, real estate and business services 261 2 Manufacturing 130 3 92 Wholesale, retail trade, restaurants and hotels 4 Community, social and personal services sector 65 5 Agriculture, mining, hunting, forestry and fishing sector 56 6 Construction 52 7 37 Transport, storage and communication services 8 12 Miscellaneous 9 8 Electricity, gas and water

 Table 4. Sectoral Distribution of FDI Inflows from India to Mauritius (July 2007-June 2023).

Source: Authors' compilation from Reserve Bank of India (2023).

Total

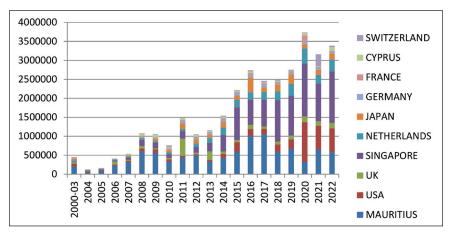


Figure 1. Country-wise and Year-wise FDI Inflows into India.

Source: Authors' calculation from Reserve Bank of India (2023).

Force (FATF) and other such organisations that has pulled Mauritius down in the list of the investing countries in India.

To prevent and monitor global money laundering, proliferation of nuclear, chemical and biological weapons, and terrorism financing the FATF became operational in 1989. Mauritius was grey-listed by the FATF in February 2020 as a non-compliant jurisdiction having strategic deficiencies in countering global money laundering and terrorism financing (Financial Action Task Force, 2023). Subsequently, Mauritius was also EU-Blacklisted as a High-Risk Third Country and entered the UK List of High-Risk Third Countries.

However, Mauritius complied with the FATF demands, and in October 2021 it managed to get out of that list. In January 2022, it was removed from the EU-Blacklist. They were satisfied that there were no longer any strategic deficiencies in the anti-money laundering and combating the financing of terrorism (AML/CFT) framework (Bowman_Admin, 2022). Presently, Mauritius is only in the 'Corporate Tax Havens' list of Oxfam, a non-govt. organisation from Oxford, England, which is a coalition of many humanitarian and development institutions that prioritise poverty alleviation and development assistance (List of the World's Most Notorious Tax Havens, 2024). Meanwhile, China emerged as a major economic partner of Mauritius by strengthening the trade ties, investing in infrastructural projects and extending grants, and India started receiving more investments from Singapore, its closest ally from South-East Asia, and another tax haven.

Post-amendment of the DTAA, the Mauritian government approached India to extend line of credit (LoC) and additional investments into their country to boost their economy as well as for the generation of employment, as presented in Table 5 (Press Trust of India, 2016b). Immediately after such an approach, a total amount of credit of USD 465 million was extended by the Government of India to Mauritius on 27 May 2017.

Table 5. Line of Credits (LoC) by India to Mauritius Post-amendment of the DTAA.

Year of Approval	Date of Signing LoC	Name of the Borrower	Projects Covered	Project Value (USD in millions)
2020–2021	19-02-2021	Government of Mauritius	For procurement of defence items from India	100.00
2021–2022	27-05-2017	SBM (Mauritius) Infrastructure	Metro Express (Phase I, II and III)	340.00
		Development	Social Housing - Contract I	25.00
		Co. Ltd	Construction of 8MW Solar Power Plant at Henrietta	7.52
			Acquisition of Incinerator Equipment	2.26
			Acquisition of Trailer Mounted Flood Pumps	0.47
			Acquisition of 20 firefighting vehicles	6.43
			Construction of Mauritius Police Academy	42.50
			Construction of Forensic Science Laboratory	13.50
			Construction of National Archives and National Library project	13.00
			Equity participation for financing various infrastructure projects	14.32
2022–2023	17-10-2022	SBM (Mauritius) Infrastructure Development Co. Ltd	For implementation of Mauritius Metro Express Project Phase-IV from Reduit to St. Pierre and Cote d'Or Region	300.00

Source: India EXIM Bank (2023).

It is worth noting that as of now India has contributed maximum LoC to Mauritius among the entire African region (India EXIM Bank, 2023). Instead of influx of capital in the form of equity, the nature of the mobile capital shifted to the form of loans from the Indian Government itself. State-owned and privately owned Indian companies like RITES, NBCC, HSCC and Larsen and Toubro (L&T) have significant role in building the Mauritian infrastructure. In March 2024, the Prime Minister of India virtually inaugurated an airstrip and a jetty built with support from India at the Agalega Islands in Mauritius, to closely observe and counter-balance China's expanding influence in the Indian Ocean region (IOR) (Chaudhury, 2024).

Conclusion

International tax havens have always been considered to be a threat to the coveted tax neutrality among the countries contesting for foreign capital investments, and inevitably tax reduction is the most popular way through which the sovereign governments compete for mobile capital (Genschel & Schwarz, 2011). Tax arbitrages strictly depend on cross-border legal regulations and tax rate differentials, leading to increased intensity of tax cooperation among the nations. The capital neutrality principle postulates that lower tax barriers between economies help to determine the location of investments on the basis of economic factors rather than on taxation. However, in reality, due to the paradox of capital neutrality, a country's desire for neutrality can actually increase the incentives for tax competition for other nations, resulting in an even less efficient use of resources, ceteris paribus. Whatever be the degree of cooperation between the two nations, they have no power to curb down the tax competition existing between them, the Indo–Mauritian case being no different (Chernova, 2022).

Mauritius is one of India's closest allies due to strong historical links, cultural proximity as well as economic interdependence between them. The Mauritian arguments contend that the variables that contribute to the importance of the Mauritian route were not those stipulated in the treaty but rather those provided by Mauritius itself, including higher labour standards, a workforce, closeness to India, shared history and culture, political stability, protection against expropriation through the law and freedom from restrictions on foreign exchange (Bodell, 1996; Desai & Sanghavi, 2008; Kotha, 2018).

However, of late, there is growing influence of China, India's major economic contender, in Mauritius. On the one hand, China is becoming the biggest source of trade and investment inflows into Mauritius; on the other hand, replacing Mauritius, Singapore and the USA are becoming the major sources of FDI inflows into India post-amendment of the DTAA in 2016. Apparently, it may seem that such decline in mobility of capital between India and Mauritius is due to the revision of the tax treaties, but the study instead observes that first, the FATF grey-listing of Mauritius, and second, the Chinese economic invasion policy are the real reasons behind such decline in flow of capital between the countries. However, the major limitation of the study is the bias present in the selection of the respondents due to limited responses available for confidentiality reasons.

Tax competition is not only a matter of law, but of ethics and morality as well. No amount of international collaboration can impede tax competition. There are differences in opinion as to whether tax havens are a boon or a bane, a friend or a foe, heavens or hells (Raposo & Mourão, 2013; Stasiunaityte, 2014). However, the intentions of both the investors and the service providers are what matters the most. SIDS and poorer countries tend to cooperate with richer nations in order to maintain capital neutrality which leads to 'offshorisation of economies' (Chernova, 2022); surprisingly, high-income economies like the USA, the Netherlands, the UK and Switzerland are also well-recognised tax havens. Tax morale and the inability to customise tax laws to best serve the interests of the country increases the already atrocious expenses of poor governance (Manish & Soni, 2020). Unless human greed is checked, whatever legal modifications are made, the unscrupulous human mind

would engineer cunning loopholes out of the legal systems to satisfy its ulterior motives. Grave and worthy punishment might suppress the propensity to evade tax, but that also demands good governance and uncorrupted national systems.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest regarding the research, authorship and/or publication of this article.

Funding

The authors received no financial support for the research, authorship and/or publication of this article.

ORCID iDs

Satabdee Banerjee Dhttps://orcid.org/0000-0002-3736-0953 Verena Tandrayen-Ragoobur Dhttps://orcid.org/0000-0002-8977-754X

References

- Ali, A., Agarwal, A., & Dixit, A. K. (2022). Abuse of double taxation avoidance agreement between India and Mauritius. *International Journal of Health Sciences (IJHS)*, 2783–2790. https://doi.org/10.53730/ijhs.v6ns5.9245
- Arch Global Consult. (2020, February 19). *Authorised Company Arch Global Consult*. Arch Global Consult Global Business in Mauritius. https://www.archglobalconsult.com/global-business/authorised-company/
- Aykut, D., Sanghi, A., & Kosmidou, G. (2017). What to do when foreign direct investment is not direct or foreign: FDI round tripping. *World Bank, Washington, DC eBooks*. https://doi.org/10.1596/1813-9450-8046
- Bank of Mauritius. (2023). *Direct investment flows*. https://www.bom.mu/publications-and-statistics/statistics/external-sector-statistics/direct-investment-flows
- BBC News. (2021, October 3). Pandora Papers: Your guide to nine years of finance leaks. *BBC*. https://www.bbc.com/news/business-41877932
- Bodell, U. B. (1996). Mauritius offers access to India. *International Tax Review*, 7(3). https://www.proquest.com/openview/7d3ec11eb70ffe7b68538d3c7f4d0ead/1?pq-origsite=gscholar&cbl=30282
- Bowman, L. W. (2023, August 18). *Mauritius | Facts, Geography, & History*. Encyclopedia Britannica. https://www.britannica.com/place/Mauritius
- Bowman_Admin. (2022, March 4). *Mauritius de-listed—The way forward Bowmans*. Bowmans Corporate and Commercial Law Firm | Corporate Lawyers | Attorneys. https://bowmanslaw.com/insights/corporate-services/mauritius-de-listed-the-way-forward/#:~:text=The%20repercussions%20of%20Mauritius%20being,which%20 adversely%20affected%20the%20economy
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa
- Chaudhury, D. R. (2024, February 29). India, Mauritius inaugurate airstrip & jetty in Agalega. *The Economic Times*. https://economictimes.indiatimes.com/news/india/indiamauritius-inaugurate-airstrip-jetty-in-agalega/articleshow/108117455.cms?from=mdr

- Chernova, A. Y. (2022). The paradox of capital neutrality as a reason for the offshorization of economies. *Courier of Kutafin Moscow State Law University (MSAL)*, 8, 148–155. https://doi.org/10.17803/2311-5998.2022.96.8.148-155
- Daude, C., Gutierrez, H., & Melguizo, A. (2013). What drives tax morale? A focus on emerging economies. *Revista Hacienda Pública Española*, 207(4), 9–40. https://doi.org/10.7866/hpe-rpe.13.4.1
- Desai, M. A., Foley, C. F., & Hines Jr., J. R. (2005). *Do tax havens divert economic activity?* Michigan Ross School of Business. http://ssrn.com/abstract=704221
- Desai, M. A., Foley, C. F., & Hines, J. R. (2006). The demand for tax haven operations. *Journal of Public Economics*, 90(3), 513–531. https://doi.org/10.1016/j.jpubeco.2005.04.004
- Desai, N., & Sanghavi, D. (2008). The travails of the India Mauritius Tax Treaty & the road ahead. Nishith Desai Associates, 1. https://scholar.google.com/citations?view_op=view_citat ion&hl=en&user=iD9nymwAAAAJ&citation_for_view=iD9nymwAAAAJ:8k81kl-MbHgC
- Dyreng, S. D., & Lindsey, B. P. (2009). Using financial accounting data to examine the effect of foreign operations located in tax havens and other countries on U.S. multinational firms' tax rates. *Journal of Accounting Research*, 47(5), 1283–1316. https://doi.org/10.1111/j.1475-679x.2009.00346.x
- Economic Development Board Mauritius. (2021). *Bilateral agreements*. https://edbmauritius.org/bilateral-agreements
- EDB Mauritius. (2022). *Bilateral agreements DTAA*. https://edbmauritius.org/wp-content/uploads/2022/10/DTAA.pdf
- Financial Action Task Force. (2023). "Black and grey" lists. Financial Action Task Force (FATF). https://www.fatf-gafi.org/en/countries/black-and-grey-lists.html
- Genschel, P., & Schwarz, P. (2011). Tax competition: A literature review. *Socio-Economic Review*, 9(2), 339–370. https://doi.org/10.1093/ser/mwr004
- Gunputh, R. P., Jha, A., & Pudaruth, S. (2017). Round tripping and treaty shopping: Controversies in bilateral agreements & remedies forward—The double taxation avoidance agreement (DTAA) between Mauritius and India and the dilemma forward. *Kathmandu School of Law Review*, 29–41. https://doi.org/10.46985/jms.v5i2.985
- India EXIM Bank. (2023). Financial products: Line of credit. https://www.eximbankindia. in/lines-of-credit#
- Jaafar, A., & Thornton, J. (2015). Tax havens and effective tax rates: An analysis of private versus public European firms. *The International Journal of Accounting*, 50(4), 435–457. https://doi.org/10.1016/j.intacc.2015.10.005
- Jackson, J. K. (2010). The OECD initiative on tax havens. Congressional Research Service. https://info.publicintelligence.net/R40114.pdf
- Jalan, A., & Vaidyanathan, R. (2017). Tax havens: Conduits for corporate tax malfeasance. Journal of Financial Regulation and Compliance, 25(1), 86–104. https://doi.org/ 10.1108/jfrc-04-2016-0039
- Jones, C., & Temouri, Y. (2015). The determinants of tax haven FDI. *Journal of World Business*, 51(2), 237–250. https://doi.org/10.1016/j.jwb.2015.09.001
- Kemme, D. M., Parikh, B., & Steigner, T. (2019). Tax morale and international tax evasion. *Journal of World Business*, 55(3), 101052. https://doi.org/10.1016/j.jwb.2019.101052
- Kotha, A. P. (2018). The Mauritius route: The Indian response. *Saint Louis University Journal*, 62(1). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3113160

- List of the World's Most Notorious Tax Havens. (2024, January). *Worlddata.info*. https://www.worlddata.info/tax-havens.php#:~:text=Here%20the%20most%20common%20international,according%20to%20the%20aforementioned%20lists.
- Maffini, G. (2009). *Tax haven activities and the tax liabilities of multinational groups* [Working Papers 0925]. Oxford University Centre for Business Taxation. https://ideas.repec.org/p/btx/wpaper/0925.html
- Manish, S., & Soni, A. (2020). *Tax havens and money laundering in India*. Gujarat National Law University. http://www.igidr.ac.in/conf/money/mfc-11/Manish Shashank.pdf
- Mathur, S., Singhanchi, A., Sam, S. S., & Sharma, A. (2015). India, Singapore and Mauritius: Tax treaty shopping and FDI flows. *Asian Journal of Research in Banking and Finance*, 5(6), 277. https://doi.org/10.5958/2249-7323.2015.00089.9
- Mauritius (Ranked 47th):: Legatum Prosperity Index 2023. (n.d.). *Legatum Prosperity Index 2023*. https://www.prosperity.com/globe/mauritius
- Mauritius: Sub-Saharan Africa. (2023). Sustainable development report. https://dashboards.sdgindex.org/profiles/mauritius/indicators
- McCaffery, E. J. (2005). A new understanding of tax. *Law & Economics and Legal Studies Research Paper Series*. University of Southern California Law School. https://heinonline.org/HOL/LandingPage?handle=hein.journals/mlr103&div=28&id=&page=
- Meade, J. E. (1967). Population explosion, the standard of living and social conflict. *The Economic Journal*, 77(306), 233. https://doi.org/10.2307/2229302
- Mitchell, D. J. B. (2006). *The moral case for tax havens*. The Liberal Institute of the Friedrich Naumann Foundation. http://edoc.vifapol.de/opus/volltexte/2010/2392/pdf/24_OP pdf.pdf
- Molero, J. C., & Pujol, F. (2011). Walking inside the potential tax evader's mind: Tax morale does matter. *Journal of Business Ethics*, 105(2), 151–162. https://doi.org/10.1007/s10551-011-0955-1
- Nalsar University of Law Editorial Team. (2023, October 6). *Third world approaches to international taxation I: Understanding the history of double taxation avoidance agreements—Centre for tax laws.* Nalsar University of Law. https://ctl.nalsar.ac.in/2023/10/06/third-world-approaches-to-international-taxation-i-understanding-the-history-of-double-taxation-avoidance-agreements/
- Nebus, J. (2019). Will tax reforms alone solve the tax avoidance and tax haven problems? Journal of International Business Policy, 2(3), 258–271. https://doi.org/10.1057/s42214-019-00027-8
- Nerré, B. (Ed.). (2001). The concept of tax culture. Annual conference on taxation and minutes of the annual meeting of the National Tax Association (Vol. 94). https://www.jstor.org/stable/41954732
- Oakley, S. (2017). The wreck of the ten sail: A true story from Cayman's past. Polperro Heritage Press.
- OCRA Worldwide Mauritius. (2020, August 14). *Mauritius*. https://www.ocra-mauritius. com/jurisdictions/mauritius/
- OECD. (1998). Harmful tax competition. *OECD eBooks*. https://doi.org/10.1787/9789264162945-en
- Pickhardt, M., & Prinz, A. (2014). Behavioral dynamics of tax evasion—A survey. *Journal of Economic Psychology*, 40, 1–19. https://www.sciencedirect.com/science/article/abs/pii/S0167487013001062

- Pitkänen, H., & Ronnerstam, L. (2021). Globalization and tax haven countries: A study on the relationship between globalization and the use of tax havens. In Rafael Barros De Rezende, *Jönköping International Business School*. https://www.diva-portal.org/smash/get/diva2:1630195/FULLTEXT01.pdf
- Postlewaite, P. F., & Makarski, D. S. (1999). The A.L.I. tax treaty study—A critique and a modest proposal. *Tax Law*, *52*, 731–869. https://www.scholars.northwestern.edu/en/publications/the-ali-tax-treaty-study-a-critique-and-a-modest-proposal
- Press Trust of India. (2016a, August 13). Government notifies revised tax treaty with Mauritius. *The Economic Times*. https://economictimes.indiatimes.com/news/economy/policy/government-notifies-revised-tax-treaty-with-mauritius/articleshow/53687153. cms?from=mdr
- Press Trust of India. (2016b, September 16). Mauritius seeks India's help, post tax treaty revision. *The Economic Times*. https://economictimes.indiatimes.com/news/economy/foreign-trade/mauritius-seeks-indias-help-post-tax-treaty-revision/articleshow/54365526.cms
- PwC. (2017). GAAR decoded. *PwC*. https://www.pwc.in/assets/pdfs/publications/2017/gaar-decoded.pdf
- PwC. (2024). *India-Individual-Foreign tax relief and tax treaties*. https://taxsummaries.pwc.com/india/individual/foreign-tax-relief-and-tax-treaties
- Raposo, A. L. C. R., & Mourão, P. R. (2013). Tax havens or tax hells? A discussion of the historical roots and present consequences of tax havens. *Financial Theory and Practice*, *37*(3), 311–360. https://doi.org/10.3326/fintp.37.3.4
- Reserve Bank of India. (2023). *Data on overseas investment*. https://rbi.org.in/Scripts/Data_Overseas_Investment.aspx
- Rosenzweig, A. H. (2010). Why are there tax havens? *William & Mary Law Review*, *52*(3), 923–996. https://link.gale.com/apps/doc/A247030766/AONE?u=anon~5eb4547b&sid=googleScholar&xid=adead9b8
- Sabnavis, M., & Sawarkar, A. (2016, May 27). Double taxation avoidance agreement (DTAA): Mauritius. Care ratings. https://www.careratings.com/upload/NewsFiles/GlobalUpdates/Double%20Taxation%20Avoidance%20Agreement%20-%20Mauritius.pdf
- Shaxson, N. (2011). Treasure islands: Tax havens and the men who stole the world. Random House.
- Shukla, G. (2021). Limitation of benefit—The route to curtail tax avoidance or a disguise: An Indian perspective. *The Lawyer Quarterly*, 11(1), 50–69. https://tlq.ilaw.cas.cz/index.php/tlq/article/view/443
- Sooreea-Bheemul, B., & Sooreea, R. (2012). Mauritius as a success story for FDI: What strategy and policy lessons can emerging markets learn? *Journal of International Business Research*, 11(2), 119. https://scholar.dominican.edu/barowsky-school-of-business-faculty-scholarship/10/
- Stasiunaityte, O. (2014). Tax havens—Friends or foes? In P. Raimondos-Møller (Ed.), Copenhagen business school master of science advanced economics and finance (p. 78). https://research-api.cbs.dk/ws/portalfiles/portal/58412100/ona_stasiunaityte.pdf
- The World Bank. (2020). *Doing business 2020: Mauritius*. The World Bank. doingbusiness. org. https://www.doingbusiness.org/content/dam/doingBusiness/country/m/mauritius/MUS.pdf

- Thukral, M. (2022). Treaty shopping: Abuse of double taxation avoidance agreement (DTAA): Special focus on the case study of India's DTAA with Mauritius and the MLI framework. *Dharmashastra National Law University Student Law Journal*. https://dnluslj.in/article-treaty-shopping-abuse-of-double-taxation-avoidance-agreement-dtaa-special-focus-on-the-case-study-of-indias-dtaa-with-mauritius-and-the-m-li-framework/
- Todaro, & Smith, S. (2020). Economic development (13th ed.). Pearson Education.
- UNIDO. (2021, February 12). *Industrial free zones boost Mauritius' export-led manufacturing*. United Nations Industrial Development Organization. https://www.unido.org/stories/industrial-free-zones-boost-mauritius-export-led-manufacturing
- Van't Riet, M., & Lejour, A. (2018). Optimal tax routing: Network analysis of FDI diversion. *International Tax and Public Finance*, 25(5), 1321–1371. https://doi.org/10.1007/s10797-018-9491-6
- World Happiness, Trust and Social Connections in Times of Crisis | The World Happiness Report. (2023, March 20). https://worldhappiness.report/ed/2023/world-happiness-trust-and-social-connections-in-times-of-crisis/#ranking-of-happiness-2020-2022
- Yadav, S. K. (2018). Abuse of double taxation avoidance agreement by treaty shopping in India. *IOSR Journal of Humanities and Social Science*, 23(10), 68–73. https://kbng.in/uploaded_files/resources/DTAA_ActJXXO.pdf

A More Durable Relationship—The Case of Canadian Funding of Indian Infrastructure

IIMS Journal of Management Science 16(2) 234–242, 2025 © The Author(s) 2025 DOI: 10.1177/0976030X251334429 journal.iimshillong.ac.in



Kumar V Pratap¹

Abstract

India needs to spend 7%–8% of her GDP on infrastructure, while the actual expenditures are much less. As a result, there is a large infrastructure financing gap. Canadian pension funds are helping to bridge this gap and are very active in the Indian infrastructure market. It has been estimated that the cumulative investment of Canadian pension funds into India is over US\$75 billion. India courts pension fund investments into infrastructure, like the rest of the world, as they do not suffer from asset-liability mismatch associated with bank financing of infrastructure. Investment in Indian infrastructure also produces handsome returns for these investors. This mutual utility of Canadian pension fund investment into Indian infrastructure makes such investments durable and long term with little chance of change in strategy based on short-term events, like the recent diplomatic spat between the two countries.

Keywords

India, Indian infrastructure, institutional investment into infrastructure, pension fund investment in infrastructure, Canadian Pension Plan Investment Board (CPPIB), Caisse de dépôt et placement du Québec (CDPQ), Ontario Teachers' Pension Plan (OTPP), Public Sector Pension (PSP) Investment Board

JEL Classification: 016, 018

Received I March 2025; accepted 27 March 2025

Corresponding author:

Kumar V Pratap, School of Management, Bennett University, Greater Noida, Uttar Pradesh 201310, India. E-mail: kvpratap042@gmail.com

Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License (http://www.creativecommons.org/licenses/by-nc/4.0/) which permits non-Commercial use, reproduction and distribution of the work without further permission provided the original work is attributed.

¹ School of Management, Bennett University, Greater Noida, Uttar Pradesh, India

Pratap et al. 235

Introduction

India is the fastest-growing large economy in the world, with the growth rate of the Indian economy estimated at 8.2% in 2023–2024 (MoSPI, 2025). This creates increased demand for infrastructure to make this growth sustainable and inclusive. This also implies a near-endless appetite for infrastructure investments.

In this context, despite the recent Indo-Canadian diplomatic row, there is one facet of engagement that is welcomed in India, and it has produced handsome returns for Canadian firms. The reference is to infrastructure investment in India by Canadian pension funds (Canadian Pension Plan Investment Board (CPPIB); Caisse de dépôt et placement du Québec (CDPQ); Ontario Teachers' Pension Plan (OTPP); and Public Sector Pension (PSP) Investment Board). It is estimated that the cumulative investment of Canadian pension funds into India is over US\$75 billion. These pension funds are long-term investors and are unlikely to change strategies based on short-term events, like the recent India—Canada diplomatic row.

Literature Review

There is voluminous literature on infrastructure and its financing given their importance for economic growth and development. Much of this literature is referred to in subsequent sections as I discuss Canadian funding of Indian infrastructure. Some other strands of literature are discussed below.

Jordan Schwartz (2024) says that for many emerging and developing economies, balancing economic growth with poverty alleviation and climate objectives is the central challenge. He emphasizes financial innovation (among them, *green bonds*) to be able to bring about sustainable development.

Ravenhorst and Brounen (2022) study the *motives of institutional investors to spend on infrastructure*. They find that portfolio diversification, downside risk protection, and stable income yields are all valid reasons for investing in infrastructure. However, they also report that evidence on infrastructure's inflation-hedging capabilities is less compelling.

McKinsey & Company (2016) emphasizes the close connection between environmental, social and governance (ESG) norms and institutional investment when it says that major institutional investors have pledged to decarbonize their investment portfolio and to assess the carbon footprint of their assets as part of the portfolio decarbonization coalition. McKinsey also emphasizes that domestic capital markets will be pivotal to financing infrastructure investment, particularly the banks, pensions, and insurance companies that are growing fast and hold more than 80% of institutional assets under management (AUM) in middle-income countries like India.

I analyze and incorporate, as appropriate, all these suggestions in the following sections.

Logic of Moving from Bank Financing to Institutional Financing of Infrastructure

The main sources of debt financing of greenfield infrastructure in India, in common with the rest of the world, are banks and Non-Banking Finance Companies (NBFCs), such as Power Finance Corporation, Rural Electrification Corporation, Indian Railway Finance Corporation, etc. It is estimated that cumulatively, till August 2024, about ₹13.06 trillion (lakh crore) has flown into infrastructure from banks (Table 1) and about ₹15 trillion from NBFCs.

The pace of bank credit deployment to infrastructure in India has slowed down considerably in recent years. Table 1 shows that incremental bank credit growth to infrastructure slowed down to 0.2% (or ₹21.06 billion in absolute terms) in the current financial year (FY) (till August 2024), compared to 3% in the previous FY. This demonstrates the increasingly marginal role being played by bank credit to infrastructure, as the total Indian infrastructure spend (from central government, state governments, and the private sector) in 2022–2023 was about ₹12.5 trillion (CRISIL, 2023), with bank credit to infrastructure contributing only ₹51.88 billion to this number. This implies that other sources of infrastructure finance, including institutional investment into infrastructure, are becoming more important.

In addition, bank finance to infrastructure suffers from asset-liability mismatch (ALM) as bank liabilities are short-term (their deposits, including fixed deposits, are generally for a maximum term of 5 years), while infrastructure assets are long-term (the concession period in a majority of infrastructure projects is 30 years or more). Long-term contracts are essential in infrastructure because of the need for amortizing the large capital costs associated with these assets over a long period of time for keeping the user charges reasonable. Financing of long-term assets with short-term liabilities results in ALM and subjects the projects to refinancing and other related risks. Therefore, there is an ongoing effort, the world over, to move from bank financing of infrastructure to institutional financing (from pension, insurance, and sovereign wealth funds) of infrastructure.

Institutional financing of infrastructure does not suffer from ALM, as the liabilities of institutional investors (e.g., the pension liabilities of pension funds like CPPIB) are also long term and match up with the tenure of infrastructure assets. As populations age and the longevity of the people increases, the pension funds in the developed world (being subjected to higher dependency ratios and long lives of people post-retirement) are looking for assets that can provide long-term steady returns with low correlation with business cycles. For example, the OTPP administers pension payments of over \$6 billion annually. In 1990, there were four teachers for every pensioner with an average pension (post-retirement) life of 25 years. However, by 2018, the ratio was down to 1.3 active teachers for every pensioner and a pension life of 32 years. As a result of these demographic trends, OTPP is looking for low-risk, long-term, and inflation-hedged investments, which explains their increased interest in infrastructure assets (Pratap, 2024).

able I. Sectoral Deployment of Bank Credit to Infrastructure (Rupees in Billion).

	Variation (Financial Year)
ink Credit to Infrastructure (Rupees in Billion).	
ile I. Sectoral Deployment of Ba	

	,
	:
	į
	`
	<i>'</i>
lion).	
n Bill	
ees i	
(Kup	
ture	
struc	
Intra	
t t	
Cred	
ank	
0 to 1	
/ment	
eployı	
ral De	
ector	
Š	

structure (Rupees in Billion).	
1. Sectoral Deployment of Bank Credit to Infra	

August 23, 2024/ March 22, 2024

August 25, 2023/ March 24, 2023

August 23, 2024

March 22, 2024

August 25, 2023

March 24, 2023

Industry

%

0.2

-L.I 24.3 4.9

1,323.05

6,440.42 1,381.92 3,180.72

1,082.62 3,002.10 95.93 79.83

Telecommunications

Airports

Ports

Roads

6,202.31

3,040.96

12,598.43 6,134.03 1,345.91 3,14,8.54

2,231.05

Infrastructure

Power

72.80

78.12 78.46 118.49

3,280.01

6,386.39 3,062.02

3.0

%

3.1 |3.5 |-5.1 |-8.2

-18.6

-1.716.5

63.40 82.61

119.88

130.62 18.99

101.75

Railways (other than

Indian Railways)

2.2

7.

1,806.69

1,767.67

1,694.89

1,666.52

Source: Reserve Bank of India (2024).

Other infrastructure

These institutional investors are also passive investors and do not want to be subjected to risks associated with greenfield infrastructure (like land acquisition and environmental and forest clearance risks).

Given the boundaries of attractive investment avenues for institutional investors, brownfield infrastructure investment in developing countries like India matches up nicely. Since these are brownfield and operational assets, they have been de-risked, given that they are past the risks posed by contested land acquisition or protracted environment and forest clearance processes. India also has a large stock of brownfield infrastructure assets (\$15 trillion, as estimated by the World Economic Forum (2017)). Owing to these reasons, Canadian pension funds are very active in the Indian infrastructure market.

What Makes Indian Infrastructure an Attractive Proposition for Passive Investors

For many of these passive institutional investors, it is important to gain comfort on the fundamentals before focusing on a specific investment opportunity. As we have seen, India is the fastest-growing large economy in the world, with the FY 2023–2024 growth rate being 8.2% (MoSPI, 2025). Multilateral institutions like the World Bank and IMF recognize India as the bright spot with sustained growth in an increasingly uncertain world—India is likely to become the third-largest economy in the world by 2027 (Blackrock, 2024). Government debt (including foreign debt) is at a manageable level. The Indian population is young, and the associated demographic dividend is likely to support the high growth rate of the economy. India is the world's largest democracy, with orderly elections and processes, mitigating political risks. All this gives an investment-grade rating to the country and is a source of comfort to passive investors like institutional investors.

India has a near unending appetite for infrastructure investments. World Bank (2008, p. 35) has estimated that, for high and sustained growth, investment in infrastructure needs to be in the range of 7%-8% of GDP. As per the National Infrastructure Pipeline launched in 2020 (Ministry of Finance, Government of India, 2020), India needs to nearly double the annual infrastructure investment to about \$250 billion (which is in the range of 7%–8% of the Indian GDP). India has prioritized infrastructure investment with an FY 2024-2025 capital investment budgeted at ₹11.1 trillion by the Central Government (Ministry of Finance, Government of India, 2024). India has the second-largest infrastructure deficit in the world, which will ensure continued demand for infrastructure investments. As per the World Economic Forum (2017), India has a large stock of brownfield assets (\$15 trillion, enabling capital deployment of a reasonable scale) that are de-risked (because they are past land acquisition and environment and forest clearance stages) and, therefore attractive to passive institutional investors. Roads and power transmission (and renewable energy among emerging sectors) are attractive for deploying capital, given that they have regulated inflation-indexed tariffs, assuring predictable, monitorable, and transparent cash flows. There are many high-quality potential local partners (like L&T and National Highways

Pratap et al. 239

Authority of India (NHAI)) who mitigate risk at the country level and thus provide comfort to these investors.

Forms and Extent of Participation of Canadian Pension Funds in Indian Infrastructure

Canadian pension funds have the world's highest asset allocation to infrastructure, at over 5% of assets. Canada has a robust system of national/sub-national cooperation for implementing public—private partnerships; project procurement processes prioritize stability of long-term financing over shorter-term cost savings, a large defined benefit pension system that needs long-term inflation-linked investment assets to match their liabilities, generating steady demand for project bonds, and little competition from banks for longer-term financing due to the latter's conservative lending approach and preference for shorter maturities.

For these reasons, Canadian investment in Indian infrastructure has come in many forms, including direct investment in infrastructure (e.g., Bangalore Airport and ReNew Power) or participation in Infrastructure Investment Trusts (InvITs). Some major Canadian investments in the Indian infrastructure space are discussed below.

Fairfax Corporation (owned by Canadian billionaire Prem Watsa) is the majority owner of Bangalore International Airport Limited (BIAL) with a stake of 64% in the airport. BIAL, under a concession agreement with the Government of India until the year 2068, has the exclusive rights to carry out the development, design, financing, construction, commissioning, maintenance, operation, and management of the Kempegowda International Airport, Bengaluru (KIAB) through a public–private partnership. KIAB is the first greenfield airport in India built through a public–private partnership (BIAL, 2024).

CPPIB is a major investor in renewable power, investing a combined US\$1.3 billion for an approximately 20% stake in ReNew Power Ventures Pvt. Ltd., one of India's leading clean energy companies with about 10.3 GW of capacity diversified across wind, utility-scale solar, and rooftop solar power-producing assets.

Canadian pension funds have also invested in InvITs. InvITs are like mutual funds, but instead of owning financial securities, they own real infrastructure assets. InvITs are Securities and Exchange Board of India (SEBI)-regulated investment vehicles, with InvIT regulations coming into effect in 2014. InvITs are being used extensively by both public sector and private sector companies to reduce debt, attract capital from institutional investors like pension and insurance funds, and lower the cost of capital.

CPPIB has participated in at least two InvITs. In May 2018, L&T Infrastructure Development Projects Limited (IDPL) launched the first private infrastructure investment trust in India—IndInfravit Trust—with an initial portfolio of five operating toll roads, which has grown over time. CPPIB now has a stake of 58% in L&T IDPL.

In addition, CPPIB has acquired 25% of the units in National Highways Infra Trust, an infrastructure investment trust sponsored by the NHAI, for ₹15.03 billion

(C\$257 million). The trust acquires brownfield toll roads from NHAI, the government agency responsible for developing, maintaining, and managing national highways in India (Canada–India Business Council, 2022). In 2024, CPPIB and OTPP have invested another \$438 million (₹36.40 billion) in the NHAI InvIT. The InvIT will use this money to acquire seven more road concessions. Once these assets are acquired, the InvIT would own, operate, and maintain a portfolio of 15 toll roads across 9 states, spanning a total length of 1,525 km with a concession period ranging from 20 to 30 years (Malik, 2024).

CPPIB holds a stake in 139 Indian companies, including Reliance Industries, Infosys, Zomato, and Tata Consultancy Services (though most are not strictly in the infrastructure space). It is estimated that CPPIB has invested more than US\$20 billion in Indian infrastructure.

Other Canadian pension funds like CDPQ and OTPP are also active in the Indian infrastructure market. For example, NHAI has raised ₹6,267 crore from monetization of the Eastern Peripheral Expressway, half of the new ring road around the National Capital Region. Indian Highway Concession Trust, a JV of Maple Highways, a private company incorporated in Singapore, and CDPQ, a Canadian pension fund, bagged the project under the Toll–Operate–Transfer model in November 2022.

Similarly, Mahindra Group sold 30% stake in its renewable energy unit Mahindra Susten to Canadian pension fund OTPP for ₹2,317 crore in September 2022. KKR, a leading global investment firm, and OTPP signed an agreement in April 2022 under which Ontario Teachers' will invest up to US\$175 million (CAD220 million) in KKR's road platform in India, which includes Highway Concessions One.

More than half of institutional investors plan to increase their long-term stake in infrastructure. Since 2011, allocations among the top 10 global public pension funds with infrastructure investments have more than quadrupled. These trends are likely to continue as pension funds plan to raise future allocations to infrastructure.

What Does the Future Hold for Canadian Investment in Indian Infrastructure

There are forces on both the supply side and demand side that make for an attractive India—Canada infrastructure partnership for years to come. As we have seen, India has a large stock of brownfield assets (World Economic Forum, 2017). The pension funds also want to increase their investment into infrastructure, given their future liabilities and risk—return preferences. While Indian infrastructure accounts for a small percentage of the allocations of Canadian pension funds currently, the total AUM of these pension funds points toward the growth potential of these investments in the future (CPPIB AUM \$497 billion; CDPQ \$420 billion; OTPP \$242 billion; PSP investments \$206 billion) (Infrastructure Investor, 2021 June).

One suggestion for India to increase pension fund investment into its infrastructure is to frame infrastructure investment as an ESG investment (ranging from metro rail to renewable energy) to capitalize on the desire of these funds to Pratap et al. 241

move trillions into assets that produce benign ESG outcomes. As the World Economic Forum (2021) says, this (framing infrastructure investment as ESG investment) not only has the potential to make infrastructure more resilient but would also attract the capital needed to fill the infrastructure investment gap.

Conclusion and Policy Implications

India needs more avenues of infrastructure investment, given its high growth rate. Pension funds in general, and Canadian pension funds in particular, are increasing their allocations to infrastructure as an asset class. This synergy of interests implies a mutually beneficial partnership for years to come.

In an increasingly uncertain world, investment flows across countries could possibly provide a stabilizing force, which could provide a more robust foundation to international relations. In this way, the risk premium associated with uncertainty could come down, making investment more lucrative. This could become another reason for countries seeking cross-border investment flows.

But these are early days. This article throws light on an important empirical observation related to cross-border investment flows. A lot more work needs to be done (cross-country studies, time-series analysis, etc.) to validate the above policy implications.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Funding

The authors received no financial support for the research, authorship and/or publication of this article.

ORCID iD

Kumar V Pratap https://orcid.org/0000-0001-5381-6837

References

Bangalore International Airport Limited (BIAL, 2024). About Us | Bangalore International Airport. Retrieved, January 5 2025, from https://www.bengaluruairport.com/corporate/ about-bial

Blackrock. (2024). *Insight on India, the world's fastest-growing major economy*. https://www.blackrock.com/us/financial-professionals/insights/exploring-india-economy

Canada–India Business Council. (2022). Why India? Unlocking Canada's opportunity in the Indo-Pacific. https://canada-indiabusiness.com/why-india

CRISIL. (2023). CRISIL infrastructure yearbook 2023. Credit Rating Information Services of India Limited.

Infrastructure Investor. (2021, June). https://www.infrastructureinvestor.com

- Malik, A. (2024). Canadian pension funds CPPIB, OTPP invest \$438 mn more in India roads portfolio. VC Circle. https://www.vccircle.com/canadianpension-funds-cppib-otppinvest-438-mn-more-in-india-roads-portfolio
- McKinsey & Company. (2016). Financing change: How to mobilize private sector financing for sustainable infrastructure. https://newclimateeconomy.net/Downloaded_ Pdf/Infrastructure_Pdf/2016/Financing_change_How_to_mobilize_private-sector_ financing for sustainable- infrastructure.pdf
- Ministry of Finance, Government of India. (2020). *National infrastructure pipeline*. https://dea.gov.in/sites/default/files/Report%20of%20the%20Task%20Force%20 National%20Infrastructure%20Pipeline%20%28NIP%29%20-%20volume-i 1.pdf
- Ministry of Finance, Government of India. (2024). *Budget speech of the finance minister*. https://www.indiabudget.gov.in/doc/bspeech/bs2024 25.pdf
- Ministry of Statistics and Programme Implementation, Government of India (MoSPI). (2025). First advance estimates of gross domestic product, 2024-25. https://pib.gov.in/PressReleasePage.aspx?PRID=2090875#:~:text=The%20growth%20rate%20in%20Real,a%20growth%20rate%20of%209.7%25
- Pratap, K. V. & Gupta, M. (2024). *Infrastructure financing in India—Trends, challenges and way forward*. Oxford University Press.
- Ravenhorst, I., & Brounen, D. (2022, April 7). Why infrastructure? SLUB. https://doi.org/10.2139/ssrn.4078051
- Reserve Bank of India. (2024, September). Sectoral deployment of bank credit. *Reserve Bank of India—Press Releases*. https://www.rbi.org.in/scripts/BS_PressReleaseDisplay. aspx?prid=60072
- Schwartz, J. (2024). Where financial innovation meets sustainable development. Project Syndicate. https://www.project-syndicate.org/commentary/innovative-green-financeinstruments-must-be-standardized-used-in-economic-policymaking-by-jordanschwartz-2024-10
- World Bank. (2008). The growth report: Strategies for sustained growth and inclusive development (p. 35). World Bank Group. https://openknowledge.worldbank.org/ entities/publication/dd088843-1252-5d20-b388-360d59a24f97
- World Economic Forum. (2017). Recycling our infrastructure for future generations. WEF_Recycling_our_Infrastructure_for_Future_Generations_report_2017.pdf (weforum.org)
- World Economic Forum. (2021). 4 big infrastructure trends to build a sustainable world. World Economic Forum. https://www.weforum.org/stories/2021/01/four-big-infrastructure-trends-for-2021/

Book Review

IIMS Journal of Management Science 16(2) 243–245, 2025 © The Author(s) 2025 DOI: 10.1177/0976030X251342880 journal.iimshillong.ac.in



Vinayshil Gautam, You Are Not Alone (Organization Management: Selected Essays), Concept Publishing Company (P) Ltd., 2024, pp. 374, ISBN: 93-5594-717-8 (Paperback).

Reviewed by: Rohit Dwivedi, Indian Institute of Management Shillong, Shillong, Meghalaya, India

Vinayshil Gautam is a prolific academic and management thought leader whose writing spans decades of scholarship in organizational behavior, strategic management, and leadership development. His previous works, such as *Enterprise* and Society: A Study of Some Aspects of Entrepreneurship and Management in India (1979), Management for Engineering Action (1993), and Organization Development Systems (2011), provide a strong basis to evaluate his writing style critically.

His latest book—You Are Not Alone (Organization Management: Selected Essays)—gives a compilation of writings which he has authored over the decade or so. Essays which were published at different sources are compiled to provide a reflective retreat for the reader. Gautam's writing blends theoretical depth with practical insights. His works are rooted in rigorous academic discourse, often drawing from established management theories, yet they do not shy away from engaging with real-world applications. He frequently bridges the gap between conceptual frameworks and their utility in corporate, governmental, and institutional settings.

Gautam's writing is distinguished by its formal, authoritative tone. On the back cover of the book, Gautam reflects on his intent of writing by clarifying his position

I continued to write because I believe like many thinking persons, I have reactions to what I see, experience, and learn in life.

It is a must read but before dwelling in the book to understand the pretext where he provides a reason for the title of the book, There are times when one loses perspective, because one's experiences are severe, or one simply considers one's experience as unique. This may be only, partly, true. Similarly, one's choice appear very special, (as indeed they are). Yet similar choices may have been exercised by others. Hence the thought that one is not alone...This book is different by the experiences within it create a connection.

His vocabulary is rich, and he often employs terminology that reflects his deep academic background. While this lends credibility to his works, it can occasionally make his texts inaccessible to general readers or early-career professionals unfamiliar with management jargon. His sentence structures are often complex, reflective of his extensive engagement with high-level academic discourse. At times, this makes his writing more suited for a specialized readership rather than mass-market business books that favor brevity and simplicity.

One critique of Gautam's style is that it often leans towards an impersonal, academic tone rather than a distinct personal voice. While this enhances objectivity, it can sometimes make his writing less engaging for readers looking for a more direct and opinionated authorial presence. However, the formal and erudite tone, combined with a preference for conceptual depth over narrative engagement, makes his books more suited for academic and professional audiences rather than casual readers of business literature.

The book is written as a compilation of reflection notes structured over 12 chapters. Chapter 1 contains 18 writings on organizational behavior. Starting with "The Cornerstone of all Relationships" where he highlights how "trustworthiness" as the foundation of all relationships either at work or family; brings in aspects of why contemporary national politics need to go "Beyond the Divisive, Identity Politics" till a critical note on "Higher Education—When Comes the High Tide?" raising a strong observation on employment outcome.

Chapter 2 on economics contains 16 commentaries on economics around religious festivals, post coronavirus disease 2019 (COVID-19) global economic disruptions. Chapter 3 is on communication where he ranges into an anecdote from Abhigyan Shakuntalam to describe the nuances of meaning and emotions, integrity of thoughts and action, and finally the essential connect between emotions and relationships. Chapter 4 comprises extensive notes on some of the most pertinent around quantitative techniques questioning scientific thinking. Chapter 5 raises questions around the logic and basis of organizational design for public policy and development. While Chapter 6 brings us to a great reflective stance on operations management and how metaphorically the synch between the mind and the body is an exemplar of operational excellence. Chapter 7 focuses on finance and accounting providing a critical account of the author's take on the robustness of the national financial system. Subsequent chapters are on international business, information technology, human resource management, managerial skills, and finally, on business policy.

For those seeking a rigorous, well-researched, and analytically structured exploration of management thought, Gautam's recent work is invaluable. However, readers looking for a more accessible, anecdotal, or personally infused

Book Review 245

writing style might find his approach somewhat dense. His book, *You Are Not Alone: Organisation Management—Selected Essays*, is expected to continue in this tradition, further reinforcing his standing as an authoritative, if somewhat traditional, voice in management scholarship.

ORCID iD

Rohit Dwivedi https://orcid.org/0000-0002-6188-7034

Manuscript submission

- The preferred format for your manuscript is MS Word.
- The journal does not consider a paper that has been published elsewhere or that is under submission to another publisher. Authors must attest to this at the time of submission. It is also author's responsibility to disclose any potential conflict of interests regarding their submitted papers.
- Authors will be provided with a copyright form once the contribution is accepted for publication. The submission will be considered as final only after the filled-in and signed copyright form is received.

Basic formatting of the manuscripts

The journal publishes the following article types:

- Research Articles
- Book Reviews
- Case Studies
- Commentaries
- Perspectives

Recommended length of articles is 6000-8000 words, inclusive of tables, figures and references. All regular/research articles must be accompanied by an abstract of up to 200 words and 4-6 keywords.

Please refer to the Submission Guidelines on the journal website for details on formatting.

Spelling and numerical usages

- Consistent use of either British or American spelling is advised, but not both at the same time.
- Spell out numbers from one to nine, 10 and above to remain in figures. However, for exact
 measurements use only figures (e.g. 3 km, 9%). Please use 'thirteenth' instead of '13th
 century'; use '1960s' instead of 'nineteen sixties'.

Quotations, notes, tables and figures

- British English uses single quotation marks to indicate quotations or dialogue, double
 quotation marks for quotation inside quotation (nested quotation). American English flips
 that method and uses double quotation marks to indicate quotations or dialogue, and
 single quotation marks for nested quotations. Either British or American punctuation
 patterns should be used and it should not be a mix.
- Notes should be numbered serially and presented at the end of the article. Notes must contain more than a mere reference.
- Tables and figures must be cited in the text, and indicated by number separately (Table 1), not by placement (see Table below). Source details for figures and tables should be mentioned irrespective of whether or not they require permissions.
- All photographs and scanned images should have a resolution of minimum 300 dpi and 1500 pixels, and their format should be TIFF or JPEG. Due permissions should be taken for copyright-protected photographs/images.

References and their text citations

- References and their citations should be given in accordance with APA 7th edition.
- Please ensure that all references mentioned in the reference list are cited in the text and vice versa.

For detailed style guidelines, please visit https://journal.iimshillong.ac.in





