



# Innovation and Sustainable Business Development

A Multidisciplinary Perspective



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Hardeep Chahal  
Isha Sharma

*Co-Editors*

Damanjit Kour  
Anamika Sharma

BLOOMSBURY

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## Preface

The Sustainable Development Goals established by United Nations has provided a global agenda to the nations to develop roadmap for achieving inclusive development across globe, with sustainability as a central narrative. The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. Achieving sustainability across different developmental indicators, calls for creation of localized innovative solutions to the issues that economies are dealing and coping with. Addressing those compelling issues the preceding section provides the detailed elaboration over the connect that innovation and sustainability has, so that readers can see innovation and sustainability as two interlinked processes rather than isolated islands of development.

Innovation and sustainability are two pillars that organisations across globe are recognizing and advocating. The need for innovative solutions to solve organizational, community, societal and environmental problems have necessitated economists, corporate, environmentalists and community champions to rethink the embeddedness of sustainability into their respective domains of expertise and interest. Implementing balance between innovation and sustainability is of prime importance in the current dynamic business environment. Rising business competition and the ever-growing need for innovative products and services by customers, demand the implementation of innovative business practices for sustainability in businesses. Businesses in all sectors face a situation where technology is changing the landscape around them, transitioning from the back room of an organization into the hands of customers, employees, and society. Innovation and sustainability are vital indicators of societal and professional life, yet their advances are typically considered in isolation. Therefore, organizations need to harness their resources and redefine obsolete models to implement new technologies in business processes, such as customer- focused applications, cloud-accounting tools, sustainable infrastructures, logistics, and blockchain technologies. Sustainability and Innovation for Business Development: A Multi-disciplinary Perspective addresses contemporary issues an challenges in business and industry and provides novel solutions in a creative manner.

This book comprises of 14 chapters, contributed by the experts at the International Conference on Innovation and Sustainability in Business Development organized by the department of International Centre for Cross Cultural Research and Human Resource Management, University of

Jammu, in collaboration with the School of Business and Management, The University of the South Pacific, Fiji. Additionally, it attempts to propagate a research-centric culture in various domains of business, management as well as interdisciplinary connect among allied fields of management specifically in international context. This book attempts to propagate a research-centric culture in various domains of business management as well as interdisciplinary and allied fields in an international context on thematic ideas viz., 'Innovation for Business Development', 'Sustainable Business Practices', 'Reinventing Business Management', 'Changing Global Business Management', and 'Role of Management Education in Innovation and Sustainability'. The papers cover a broad range of topics, including sustainability, innovation, governance and ethics, AI and HRM, management education, consumer behaviour, and sustainable financial investments. This book allows researchers, academicians, and industrialists to network and form business and research associations with international partners.

We also acknowledge the individuals who assisted in the publication of the book entitled "Innovation and Sustainable Business Development: A Multidisciplinary Perspective". This book is an outcome of the research-driven vision of the Department of the International Centre for Cross-Cultural Research and Human Resource Management, University of Jammu. In particular we want to express our gratitude to Professor Umesh Rai, Vice Chancellor, and University of Jammu for his constant support and guidance in advancing research. The publication of this book would have never been possible without the contribution of the authors, reviewers and publishers. We are also indebted to our reviewers who have thoroughly studied all the research papers and provided valuable feedback. We are grateful to the faculty members and research scholars of the department of ICCC & HRM for their editorial assistance in the form of structuring papers in book form. We would like to appreciate the efforts of the publication partner IIP Publishers for association with us and bringing this piece of academic work to potential researchers and readers.

# Contributors

- **A.K. TYAGI**, Professor, Acharya Vishnu Gupt Subharti College of Management and Commerce, Meerut
- **ACHUT P. PEDNEKAR**, Associate Professor, Dnyanprassarak Mandal's College and Research Centre, Assagao-Bardez-Goa
- **ADITI CHOPRA**, Research Scholar, The Business School, University of Jammu
- **ADITI SHARMA**, Research Scholar, Himachal Pradesh University Business School, HPU, Summer Hill, Shimla
- **AKANKSHA PARMAR**, Research Scholar, Dept. of Library & Information Science, School of Mathematics, Computers & Information Science, Central University of Himachal Pradesh (CUHP)
- **AMANDEEP KAUR**, Research Scholar, School of Management Studies, Punjabi University, Patiala
- **ARVIND KUMAR JAIN**, University of Petroleum and Energy Studies, P.O Bidholi via-Prem Nagar, Dehradun, India
- **DEEKSHA SETHI**, Research Scholar, School of Management Studies, Indira Gandhi National Open University, New Delhi
- **DEEPALI CHAUDHARY**, Research Scholar, Acharya Vishnu Gupt Subharti College of Management and Commerce, Meerut
- **GURPREET RANDHAWA**, Professor, School of Management Studies, Indira Gandhi National Open University, New Delhi
- **GURU DAAMAN SHRIVASTAVA**, Research Scholar, Department of Commerce, Dr. Harisingh Gour Vishwavidyalaya, Sagar, Madhya Pradesh
- **HARDEEP CHAHAL**, Director, International Centre for Cross Cultural Research and Human Resource Management, University of Jammu, India
- **ISHA SHARMA**, Assistant Professor, International Centre for Cross Cultural Research and Human Resource Management, University of Jammu, India
- **NIDHI JAIN**, Assistant Professor, Prestige Institute of Management & Research Gwalior, Madhya Pradesh
- **PARUL MAHAJAN**, Lecturer, International Centre for Cross Cultural Research & Human Resource management, University of Jammu, Jammu
- **PAWAN GARGA**, Professor, Himachal Pradesh University Business School, HPU, Summer Hill, Shimla

- **POOJA CHAUDHARY**, Research Scholar, University Business School, Panjab University, Chandigarh.
- **R.C. DANGWAL**, Professor, Department of Commerce, Hemvati Nandan Bahuguna Garhwal, University, Srinagar, Uttarakhand
- **RAJENDRA MISHRA**, Professor, The Business School, University of Jammu
- **RESHAM GOYAL**, Research Scholar, Department of Commerce, Hemvati Nandan Bahuguna Garhwal, University, Srinagar, Uttarakhand
- **RITIKA SHARMA**, Research Scholar, School of Management Studies, Punjabi University, Patiala
- **ROHIT KUMAR DUBEY**, Research Scholar, School of Management Studies, Punjabi University, Patiala
- **SANTANU PUROHIT**, University of Petroleum and Energy Studies, P.O Bidholi via-Prem Nagar, Dehradun, India
- **SATINDER KUMAR**, Faculty, School of Management Studies, Punjabi University, Patiala
- **SHALINI CHOITHRANI**, Assistant Professor, Department of Commerce, Dr. Harisingh Gour Vishwavidyalaya, Sagar, Madhya Pradesh
- **SHIVARAMA RAO K**, Associate Professor, Dept. of Library & Information Science, School of Mathematics, Computers & Information Science, Central University of Himachal Pradesh (CUHP)
- **SUJOITA PUROHIT**, University of Petroleum and Energy Studies, P.O Bidholi via-Prem Nagar, Dehradun, India.
- **TANUJ SHARMA**, Research Scholar, Himachal Pradesh University Business School, HPU, Summer Hill, Shimla.
- **TARIKA SINGH SIKARWAR**, Professor, Prestige Institute of Management & Research Gwalior, Madhya Pradesh
- **YOGESHWAR R. BHOSLE**, Assistant Professor, Dnyanprassarak Mandal's College and Research Centre, Assagao-Bardez-Goa

# **Sustainability and Innovation: How Multidisciplinary Perspectives Amalgamate into Sustainable Solutions**

**ISHA SHARMA & HARDEEP CHAHAL**

The quest for sustainability is creating urgency on the part of organizations across globe to re-engineer their products, services and business models at large. Amongst the waves of global reorganization of international business and trade, economies in general have realized the importance of the innovation as the backbone of their growth engine. Innovation in businesses at large is being recognized globally by the corporations as the guarantor of economic success and profitability. But looking at the diverse economic capacities of nations, it is quite observable that, different nations present different innovation contexts and henceforth what makes innovation more inclusive and equity oriented is sustainability. By treating sustainability as a goal today, early mover nations are developing competencies that rivals will be hard-pressed to match. The sustainable innovation as an organizational vision is being embedded at large and henceforth the phenomenon is all pervasive.

As two contrasting interventions, majorly, innovation and sustainability are often perceived as competing strategies across companies. Research indicates that many corporations view them as either-or alternatives, often sidelining innovation in favor of sustainability. The underlying truth, however, is just the opposite. Innovation is being linearly connected with the realization of economic objectives of the organization, but at the same time it is being seen as enabler of solving corporate problems with the consciousness of resource constraints and environment stability (Nidumolu. R. et.al., 2009).

Over the years, production and consumption trends have changed significantly, leading to transformations in society and in the environment, and creating demands and constraints for companies, so that competitiveness is increasingly related to the adoption of innovation management that includes sustainability. In this direction corporations are becoming conscious about their deliverables, and the resultant impact of those deliverables on communities in specific and societies at large. This also brings to the table the corporate role reversals, wherein the organizational orientation towards profit

maximization has been overshadowed by their significant role in creating sustainable products, services and solutions that are critical in building balanced societies. Therefore, we can deduce that sustainable innovation is the creation of something new that improves performance in the three dimensions of sustainable development: social, environmental and economic (Forbes, 2024).

The preceding section clearly conceives the argument that sustainable innovations are the outcome of behavioral affirmation on the part of corporate. This is further supported by the fact that increasingly we see that sustainable innovation practices are deeply engraved into the company's strategic goals regarding economic, social and environmental aspects, and not only to isolated actions, such as the development of new environmentally responsible processes and products. The literary evidence also suggests that the adoption of sustainable innovation practices affects business performance. Several studies, such as those by Gunday, Ulusoy, Kilic and Alpkhan (2011), Lopez-Valeiras, Gomez-Condec and Naranjo-Gil (2015) and Wagner (2010), have linked the results of investments in sustainable innovation to business performance. As per Lopez-Valeiras et al. (2015), an increasing domain of research at the academic level is the, relationship between sustainable innovation and business performance. Although the literature suggests that the management of sustainable innovation can be an important source of benefits for companies, empirical results are still not conclusive. Thus, in view of the importance of sustainable innovation for the competitiveness of companies and its potential relationship with business performance, the present book attempts to consolidate the multidisciplinary perspectives on innovation and sustainability through the different lenses of investigation and exploration so that conclusive evidence can be tabled and shall pave the way for future research.

Advocating sustainability and innovation connect, it has been well documented that sustainable innovation practices contribute to organizations' competitive advantage and help them to create a niche among the others. Significantly, the organizations are recognizing that the concepts, technologies, products and services, as well as the adoption of new processes and social systems that are ecologically sustainable, need to be critically thought upon. This is further supported by the fact that sustainability-oriented innovation is a wider concept than as it contains the social dimension and is a multilevel construct that requires three major support systems for its application and promotability: at the macro level: government policies/state support and actions that overcome the immense risks involved in radical innovations; at organizational level : the creation of new business models; and at the individual level: reengineered individual cognitive maps, attitudes and behaviors.

Corporations globally need to rethink their corporate agenda and align same with three imperatives of sustainable development that is social, environmental and economic and bringing change interventions in processes, operational practices, business models, thinking and business systems that support sustainability. As a practitioner's perspective, this calls for implementing incremental or radical sustainable innovations, but the literary evidence suggests that (Boons, 2009), sustainable innovations need to go beyond incremental levels, as sustainable development requires the change of production and consumption systems which are macro-organizational variables.

Thus, sustainable innovation has to transcend the business environment and be valued by society that organizations can invest in building innovation infrastructure that is sustainable.

Addressing this need, the book brings different disciplinary practices adopted by organizations to tame sustainability into their business models and practices. The detailed description of the contributions is laid down in the preceding chapters:

Chapter 2 presents sustainable trends accentuated by the rise of alternative energy, emerging models in mobility, and heightened customer expectations converging around Convenience and personalization. The study aims to find how digital technology could affect customers' perspectives on customer experience and how adopting IoT, AI, and ML-based technology in CGD business can help enhance customer experience and satisfaction and improve operational efficiency.

Chapter 3 provides numerous marketing disciplines, particularly those dealing with consumer behaviour, and explores the influence of religiosity. The chapter provides that the one sort of buying behaviour that customers commonly engage in in the modern era is impulse buying, which has long been recognized. An increasing body of research on impulsive buying has emphasized three perspectives: personal or individual characteristics, product aspects, and situational factors. However, there is scarce understanding in marketing studies that examines the impact of religion on impulsive buying behavior. The goal of the research is to examine the connection between the religiosity aspect of religion and impulsive conduct in order to acquire perspective on impulsive purchase and religious studies

Chapter 4 presents HR analytics as a sustainable intervention that makes it possible to measure, assess, and regulate human behaviour- all of which are essential for enhancing workforce productivity (Momin & Mishra, 2016). Throughout the recruitment and selection process, HR analytics can assist in identifying the range of possible actions that could raise candidates' environmental awareness. It is also possible to evaluate their potential

future impact on organizational performance (e.g., return on investment). Organizations can take environmental concerns into account when assessing training needs in sustainable training programs. During their employment, staff members may participate in environmental awareness training. Offering compensation to staff members who embrace environmentally friendly practices at work is another crucial practice.

Chapter 5 reveals that the primary factors that influence the consumer behaviour of children are parents, siblings, media and peer groups. The analysis revealed that the major influencing factors to buy premium game consoles are games offered to play and designs and graphics. Also, the findings showed that the majority of the children know about the prices of these game consoles and understand that the range is expensive.

Chapter 6 provides the CSR Final Index construct and proposes an overall corporate governance index using the essence of old indices and new regulatory regime, in order to capture the corporate governance practices of Indian corporate sector in an inclusive and consolidated manner.

Chapter 7 further explores the intricate web of influence that social media platforms create and examines the ripple effect they have on consumer behaviour, especially in the context of organic foods. The impact of social media on consumer decisions, especially when it comes to organic consumption, is growing as it remains a dynamic force shaping modern lifestyles. This study delves into the complex relationship that exists between the dynamics of social media and the burgeoning demand for organic food products. The “ripple effect” is a metaphor used to highlight the far-reaching effects and interconnectedness of social media’s influence on shaping perceptions, spreading knowledge, building trust and eventually increasing demand for organic alternatives. The goal of the study is to present a thorough understanding of how social media influences consumer decisions in the domain of organic food items by examining the different facets of this ripple effect. This review sought to understand how social media affects food choices by evaluating existing research.

Chapter 8 critically explains that society and financial markets have suffered during the COVID-19 pandemic, and countries took part in a historic global economic, social, and psychological experiment known as the lockdown (Shang et al., 2021). The study is done with the objective to find retail Investor’s sustainable investing behavior post-COVID-19. The study concluded with six factors determining the Sustainable investing behavior of individuals, namely: Environmental-Friendly Behaviour, Long Term Sustainable Returns, Long Term Trustable Investment with Diversification, Investment Awareness, Balanced Risk, and Future Return Expectation.

Chapter 9 reveals that most of the respondents prefer Amazon as their first choice of online shopping website, followed by Flipkart. In addition, the majority of the respondents are moderated users of online shopping websites. Even after the promotion and feasibility of cashless payments, the majority of the respondents chose cash on delivery as their preferred mode of payment while carrying out online shopping, followed by UPI as the second most preferred option for payment. It was found that mobile phones are highly preferred by consumers for shopping for products online, and that, too, by a very large proportion. A moderate number of respondents prefer to shop online during festive season sales. The attractive offers and discounts provided by online shopping websites during the festive sales were identified as the major reason that attracts consumers and convinces them to make purchase decisions.

Chapter 10 contributes to the knowledge of the determinants influencing homeowners' intentions to adopt Reverse Mortgage Loans in the state of Goa, utilizing the Theory of Planned Behaviour (TPB). The study highlights the significant roles played by attitudes, subjective norms, and perceived behavioural control in shaping intentions to purchase RML. Moreover, the moderating influence of SES provides valuable insights into the decision-making process among distinct socioeconomic groups. It highlights the broader economic and social impact of reverse mortgages and underscores their role in long-term older adult financial planning. As such, this research not only aids in the development of a more consumer-friendly and sustainable reverse mortgage market but also enriches the understanding of the intricate dynamics that underlie the financial well-being of older adults.

Chapter 11 explores how emerging economies can create and implement innovative ideas and products, and the specific opportunities and challenges they face. It draws on successful cases from these economies, contextualized within the COVID-19 lockdown scenario, to highlight the establishment of welfare states by governments across the spectrum.

This paper focuses on the importance of innovation for the survival and sustainability of emerging economies, particularly India. It analyzes the determinants and pace of innovation in India, and the role it plays in economic growth and technological upgradation across all sectors. The primary source of study is a comprehensive database that helps identify key determinants of innovation in India.

Chapter 12 study delves into the profound influence of health information on the comprehensive well-being of individuals within higher education settings. Through an investigative lens, it examines the pivotal role played by access to health-related data, resources, and information dissemination in fostering holistic wellness among students and faculty. The analysis evaluates

the interconnectedness between information accessibility, knowledge acquisition, and the cultivation of a wellness-oriented environment within higher education institutions. Insights gleaned from this research aim to illuminate the significance of health information in promoting a balanced, thriving academic community.

Chapter 13 aims at finding the financial support and findings available to food processing industries through unitholders' judgement regarding the availability of incentives. For exploring the incentives and subsidies sponsored by state government agencies in Jammu, the primary data is gathered from unit holders. Similarly, the secondary information regarding the incentives sponsored is gathered from official and non-official journals, magazines, e-books, etc. In order to maintain the objectivity of the study, the data is collected from the two estates having a maximum number of food processing units, i.e., Bari-Brahmana Industrial Estate and Gangyal Industrial Estate.

Chapter 14 explicitly states the Bank employees have a high emotional intelligence score, indicating that they are able to identify and express emotions in a way that is appropriate for the workplace given the circumstances. On the implications side, present day banks are highly volatile, dynamic and demand higher productivity. In this regard, it is anticipated that every employee should possess emotional intelligence in order to boost the organization's productivity. Although being specific to the Union Territory of J&K, the future research shall expand the scope in terms of intra state banks and assessing emotional intelligence of bank employees with reference to the geography (context).

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# Leveraging IoT and AI towards Sustainable Development and Customer Satisfaction in CGD Business in India

**SANTANU PUROHIT, ARVIND KUMAR JAIN & SUJOITA PUROHIT**

## INTRODUCTION

India, a nation that ranks highly in terms of energy consumption, has increased its attention to the retail petrochemical industry. In India, fuels like gasoline and diesel are typically sold at stations owned and operated by Oil Marketing Companies (OMC) through their dealers and distributors. Prior to and in the early years after independence, fuel was made available in India as a commodity. The government and state-run oil companies fixed the industry's fuel price (PSUs) with very little competition. With the government's gradual deregulation of prices and the introduction of private companies into the petroleum retail market, competition has grown significantly. Over time, as a result of exposure to cutting-edge technology, the industry has evolved into a service-based industry, which has changed consumer purchasing patterns (Purohit & Jain, 2020). Over the past few decades, there have been significant technological developments from analog to digital and from digital to AI, IoT, and bigdata.

This is causing a shift in the way industries throughout the globe operate, from manufacturing to services (Purohit & Jain, 2020), and it has also resulted in more sophisticated modern consumers who have different purchasing patterns. Customer expectations and experiences have generally changed and still do. The use and advancement of technology have resulted in a notable shift in customer behaviour within the retail sector. In both retail and petro retail, there is consumer overlap. The way that customers behave with oil shopping is also changing. The upstream sector is clearly adopting technologies like AI, ML, Bigdata, Cloud, mobile technology, etc. Adoption of technology on the downstream side is not important in the Indian context, nevertheless, especially when it comes to identifying and recognising customers and satisfying their expectations regarding the mix of products and services. Petro retail has not yet caught up to general retail, which has quickly progressed

in technology adoption and improved consumer experience (Purohit & Jain, 2020).

IT has a demonstrated good correlation with business benefits, particularly in the areas of close customer relationships and product leadership, as well as operational excellence and strategic intelligence through the use of the enterprise architectural management process (Sari et al., 2021). The industry benefits from strategic alignment and well-managed ICT in several ways, including lower costs, improved customer satisfaction and process efficiency, and structural and governance concerns (Farah et al., 2020). The previous few decades have seen a rise in the standardisation of customer services and productivity thanks to information technology (IT). In operational environments with many input and changeable outcome, it is seen a strategic choice to foster success (Santos & Silva, 2021).

## **REVIEW OF LITERATURE**

Over the past few decades, the production of intangible services has replaced tangible goods as the primary source of market structure changes in industrialised economies. The growth of the service sector around the world is evidence of this. Global deregulation in key manufacturing and service industries, including banking, energy, transportation, and communication, has increased competition within these markets (Kotler, 2004). Creating a unique offer and delivery with cutting-edge features has been the company's strategy for combating price rivalry. This has allowed the business to stand out from the competition and improve its brand image (Kotler et al., 1996). By continuously providing better service quality than its rivals in the market, a service company can stand out from the competition.

Many businesses have discovered that exceptional service quality may lead to leadership in sales and profit, giving them a strong competitive advantage. Some businesses concentrate more on gaining client loyalty by providing rivals with higher-quality services (Purohit, 2022).

## **Retail in the Global Context**

In the past few decades, technological advancements have substantially changed customer expectations, behaviours, and shopping globally. As a result, there have also been significant changes in customer service. The way that consumers make decisions has also been greatly changed by technology and the digital sphere (Purohit & Jain, 2020). Consumers are becoming more sophisticated and have higher expectations for technology-driven digital solutions (Purohit & Jain, 2021). Additionally, social media is playing an essential role in marketing. Companies use social media to strengthen their brand and create more sustainable customer relationships (Moran et al., 2014).

Businesses make considerable use of social media to establish more direct and personal connections with their clientele.

### **Petro Retail Globally**

Petro retail has experienced a significant global shift. Certain factors—like cost, quality, etc. remain important historically, but others have emerged due to rising competition or technological advances. Petro retail has seen a notable shift in the worldwide market from commodity-based to service-based, particularly relevant in the Indian context (Purohit & Jain, 2021). Apart from the promotional offer and fuel quality, the customer's accessibility to the fuel station is crucial in their decision-making process when buying petrol (Petra et al., 2017). Consumer perceptions of convenience and the geographic distribution of fuel retail outlets are important factors in purchasing decisions (Marc et al., 2012). From a customer perspective, forecourt efficiency at fuel stations is also important. In the Nigerian context, common factors contributing to inadequate service delivery include insufficient staffing, inefficient gasoline pumps, and long lines at gas stations (Ajayi, 2017). But in the American and European context, gas station retail has had a significant technology breakthrough that has improved forecourt productivity and resulted in happier customers and a better overall experience. The introduction of completely automated service stations, which eliminate the need for cashiers, has lowered costs and benefited consumers in European countries. Similarly, in the American context, the advent of self-service pumps significantly decreased the need for attendants at gas stations by assigning more labour to the client. This has made it easier to achieve upward productivity growth and differentiate the client buying experience (Emek et al., 2017).

### **Retail and Petro Retail in the Asian Context**

The retail markets of major Asian countries have witnessed tremendous technical advancements and implementation shifts in light of the enormous economic and technological evolution that has occurred in these countries over the past few decades. Customers want unique experiences from brands, and businesses that can differentiate themselves from the competition are winning over them (Tivasuradej & Nam Pham, 2019). In Malaysia, consumer loyalty is influenced by factors such as brand image, trust, and satisfaction. It is advised that meeting and exceeding consumer expectations is a key component in keeping and growing client loyalty (Azizan & Yus, 2019).

The retail gasoline industry has also greatly embraced new technology. The use of technology, payment options and facilities, and the presence of integrated convenience stores at gas stations, in addition to the mandatory requirement for gasoline purchases, have all contributed to the growth of hybrid vehicle sales (Sari et al. 2017).

## **Retail and Petro Retail in the Indian Context**

As new forms replace established shops, the Indian retail industry is currently undergoing a significant overhaul. With a combination of merchandise, entertainment, and services under one roof, these contemporary retail concepts give customers a wide selection and the best shopping experience. Organised retail is popular in India due to its ease and variety, its exposure to the global market, product availability, and brand communication. The Internet revolution, urbanisation, double income, and demographics all contribute to India's retail boom (Sahney, 2016). According to Sangvikar and Katole (2012), the organised retail sector in India is expanding quickly, and there is a concurrent shift in consumers' purchasing behaviours. This illustrates how the Indian economy has changed over time. While still being budget-conscious, Indian consumers have grown more discriminating. For an essential and more significant segment of Customers in India, the modern lifestyle has significantly impacted modern retailing despite its cost-effectiveness. Hence, identification of different lifestyles and socioeconomic strata of the customers & shopping patterns are required for understanding customer buying behaviour as the customer continues to expect a better shopping experience, recreation, friendly interactions and a wide choice of products and services (Menaka & Chandramana, 2014).

Indian public sector enterprises have historically controlled the market when it comes to fuel retailing in India. Improved customer service facilities are now available to end users, which has altered the dynamic due to the advent of private players. Public marketing companies face pressure from private oil marketing companies to shift their focus from selling fuel to providing customer satisfaction through marketing and promotional initiatives. According to Yadav et al. (2012), there is a discrepancy between OMCs' product and service marketing strategies and the preferences of their retail mix of clients. In order to attract clients and meet their expectations regarding fuel consumption, petroleum firms have become more competitive by implementing a range of schemes. The government also relaxed regulations pertaining to private petroleum companies to establish their outlets during the same period (Srinivasan, 2015).

According to the report, there are three main elements that have a substantial impact on retail petrol consumption in India: fuel pricing, fuel station management, and technology usage in services. According to Purohit and Jain (2021), there is a strong correlation between consumer preference and factors like fuel station image, service quality, product assortment, and extra benefits. Customers' purchasing decisions are influenced by their use of technology. According to Purohit and Jain (2021), service providers must

allocate greater resources towards creating technology-driven infrastructure and services to meet the evolving requirements and tastes of Indian retail fuel customers. In oil retailing, IoT and AI have enhanced operational effectiveness and the customer experience (Purohit et al., 2021).

Additionally, IoTs have greatly impacted profit maximisation and service quality (Purohit & Jain, 2021). Additionally, a chasm is seen in the Indian context regarding the oil retailing industry's embrace of digital payment technologies. On the other hand, the general retail sector accepts it generally (Purohit & Purohit, 2021).

According to a study on the service quality gap in the Indian gasoline retail industry, there is a service gap, and overall service quality received is lower than expected. The maximum gap found is for the tangibles dimension, while the lowest is responsiveness (Badlani & Singhal, 2017). However, studies so far indicate the customer's perspective where a gap exists in identifying the service quality dimension from the provider's perspective (Purohit & Jain, 2022). It has also been reported that service providers have evolved their service delivery protocols over time by enhancing technology adoption in their service design & delivery (Purohit & Jain, 2021).

The CGD (City Gas Distribution) is an emerging business under the Petro retail in India. The CGD business provides availability and service to commercial & private vehicles, industrial and commercial establishments and households. All three segments are different in nature with respect to the requirements for service, customer expectations, and customer satisfaction parameters. Hence, it is necessary to bring technology to establish the process to meet the customer requirements, thus enhancing their experience and satisfaction.

Retail gasoline consumption in India is heavily influenced by fuel station management, fuel prices, and the uptake of technology in services. Purohit and Jain (2021) have established a close relationship between consumer preference and additional benefits, product assortment, gasoline station image, and service quality. Consumer purchasing behaviour is impacted by the adoption of technology. Additionally, in order to satisfy the changing needs and behaviours of Indian retail petroleum customers, service providers must focus more on creating technology-based infrastructure and services (Purohit & Jain, 2022). In the current technological era, the Internet of Things (IoT) can help businesses play a significant role in the next generation by enabling and promoting interactive and dynamic services (Khaleed, 2021). Additionally, it has been noted that thanks to recent advancements in acceptance, IoTs are being used in different industries (Purohit & Purohit, 2021). The use of IoT, ML, and AI in petroleum retail has affected operational efficiency and consumer experience (Purohit et al., 2021). Purohit and Jain (2021) have noted

that the utilisation of IoTs has had a noteworthy effect on the organisation's overall service quality and profit maximisation.

In their CGD section, OMCs do not currently have any automation. In parallel, they have installed an automation system at their fuel stations (for both gasoline and diesel) that offers several features, and MIS reports to manage the fuel station's operations and facilities equipment, including dealerships and franchisees, to oversee business operations and client satisfaction. However, there is hardly any automation and technology adoption in the field of CGD business, which can help in customer identification, enhancing customer experience & satisfaction, and improving operational efficiency.

## **RESEARCH PROBLEM**

Technology implementation in Petro retail has happened equally and virtually nil for CGD business. Technologies like IoT, automation, ML & AI are tried without a centralised landscape of the entire value chain. Petro retail is yet to see such technology adoption in an extensive range. So far, technology adoption has been observed primarily towards operational efficiency and asset utilisation. At the same time, there is a minuscule adoption of technology towards customer identification, enhancement of satisfaction, and buying behaviour. Subsequently, implementing a central monitoring system in other industries exhibited that real-time KPI monitoring, AI-based prediction & proactive analytics, and alerts on exceptions over Standard Operation Processes (SOP) helped in the improvement of operational excellence and building trust in the customer's mind. The study shows how IoT and AI can be leveraged towards customer satisfaction and sustainable development in India's Petro Retail CNG Business.

## **Objective of the Study**

Many far-reaching trends emphasised the advancement of mobility models, alternative energy sources, and enhanced customer expectations linking convenience and personalisation, disrupting fuel retail markets worldwide. Digital is becoming the norm in the new situation. With the enhancement of technology, customer buying behaviour is also evolving, and drivers of customer experience have also evolved. The study aims to find how digital technology could affect customers' perspectives on customer experience and how adopting IoT, AI & ML-based technology in CGD business can help enhance customer experience & satisfaction and improve operational efficiency.

## **RESEARCH METHODOLOGY**

Service delivery is currently monitored and ensured primarily through manual systems, with periodic human intervention needed in India's retailing of CGD

sector. In the areas of operations and customer service delivery, the CGD firm has used technology with limited automation. Currently, fuel outlets do manual tasks for some essential customer service delivery functions, such as client identification, maintaining service standards at a fuel station, verifying safety procedures, and directing the customer to the empty island. Although OMCs have added little automation to their gasoline and diesel stations, it is hardly noticeable at their CNG stations.

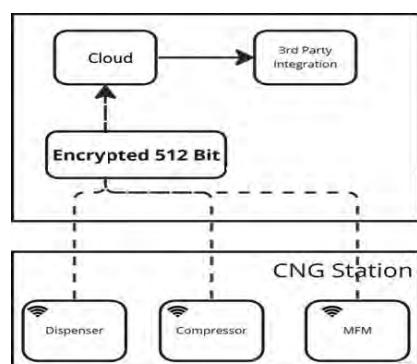
Utilising computer vision, image processing, artificial intelligence, machine learning, and other technological advances, it is possible to create a system that gathers transaction data, customer information, etc., at CNG stations and uses it to extract insights. This will benefit service provider companies by allowing them to improve (i) customer identification for personalisation and asset utilisation, (ii) customer experience at the fuel station, and the benefits of (a) manpower availability, (b) service standard improvement, (c) traffic management, and (d) fuel station operations & safety.

The study was conducted from August – to October 2023 at CNG fuel stations in Maharashtra. Sales volume data was gathered from company officials. The sample scope selected for the study was 400 samples. Convenience sampling was the approach used for the sampling. The pretested standard survey questionnaires asked about the customer's experience and satisfaction levels before and after the identification system was implemented. They also contained demographic information. The survey data was statistically analysed to determine the system's effectiveness inside the Indian Petro retail CGD business environment.

The primary source of data was gathered via a quantitative field investigation, and the statistical tools used are: 1. Simple Percentage Analysis, and 2. Regression analysis.

## Solution Architecture

The solution architecture is represented in **Figure 1**. Every piece of equipment, viz. dispenser, compressor, flow meters, etc., is integrated with IoT device equipment with GSM connectivity. All IoT devices have independent M2M SIM and are interconnected. If any SIM is down, the IoT device connects through the other available devices. The IoT device has a unique ID mapped to the Station. The data packets contain this info, and the cloud services



**Figure 1:** Solution Architecture

bifurcate the data once available on the cloud. The equipment data, status and information captured by IoT devices are sent to the centralised cloud server. This provides a centralised view of the information, and the cloud environment helps to use AI and ML algorithms to derive inferences from the data received,

The key objectives of the proposed solution are listed as: Real-time sales data from CNG Outlets Improvement in supply chain efficiency , Reduction in dry outs at CNG Outlets, Reduction in downtime of the equipment, Better safety in the CGD Network, Trust and Convenience to the end customers – enhancement of customer experience and satisfaction.

## DATA ANALYTICS AND INTERPRETATION

Since earlier works were based on secondary work, this is the first instance of primary work of its kind. Learning and evaluation were conducted using the data gathered from the experiment. This initial work with the technology-based solution was witnessed and experienced for three months. A comparison of the objectives and real-time data is presented in Table 1, which shows the observed performance. The solution produced 100% of the results regarding traffic volume and guaranteeing safety standards.

**Table 1:** Objectives and their Performance

S. No.	Objectives	Performance Against Expectation
1	Real-time sales data from CNG Outlets	100%
2	Real-time sales data from CNG Outlets	100%
3	Reduction in dry outs at CNG Outlets	92%
4	Reduction in downtime of the equipment	67%
5	Better safety in the CGD Network	100%
6	Trust and Convenience to the end customers	73%

The data collected over a period of three months was analysed for the following purposes: (i) segmenting customers at the fuel station based on the type of vehicle they drive, such as a four-wheel drive vehicle or light commercial vehicle; (ii) tracking customer footfall, or how often they visit the fuel station; (iii) enrolling regular customers in loyalty programs based on their visitation frequency and fuel consumption pattern; (iv) making regular customers visibility; (v) improving the customer experience by providing them with real-time information about their presence at a fuel station. Additional observation analysis has focused on the consumers who visited the gasoline stations during the observation period and their impact on the fuel station's revenue.

Four hundred thirty sample customers who visited the gas station participated in the study. 86% were found to be male and between the ages of 25 and 50. The 3 and 4-wheeler segments at the CNG fuel station generate the majority of the revenue, according to an analysis of source data. Tables 2 and 3 provide an examination of consumer feedback and demographic data from a survey. According to customer feedback, 73% of consumers had a satisfactory experience (Table 4), demonstrating how the solution benefits customers' pleasure and experience.

**Table 2:** Vehicle Type and their Contribution to Revenue

	<i>Classification</i>	<i>No. of Respondents</i>	<i>%</i>	<i>% Contribution of Revenue</i>
Vehicle Type	3 wheeler	116	27%	28%
	4 wheeler	141	33%	36%
	LCV	126	29%	23%
	Others	47	11%	13%

**Table 3:** Demographic Analysis of Customers

	<i>Classification</i>	<i>No. of Respondents</i>	<i>%</i>
Age	< 30 yrs	156	36%
	30-50 yrs	177	41%
	> 50 yrs	97	23%
Gender	Male	368	86%
	Female	62	14%

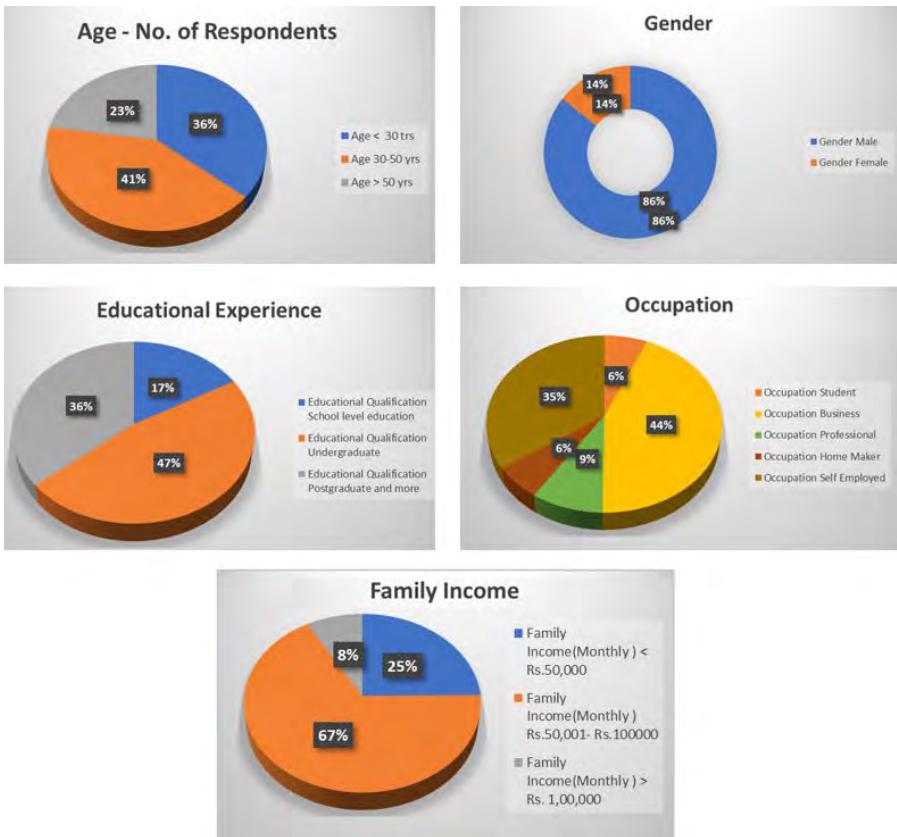
**Table 4:** Customer Feedback

	<i>Experience</i>	<i>No. of Respondents</i>	<i>%</i>
Customer Feedback	Happy	312	73%
	Disappointed	90	21%
	Neutral	28	7%

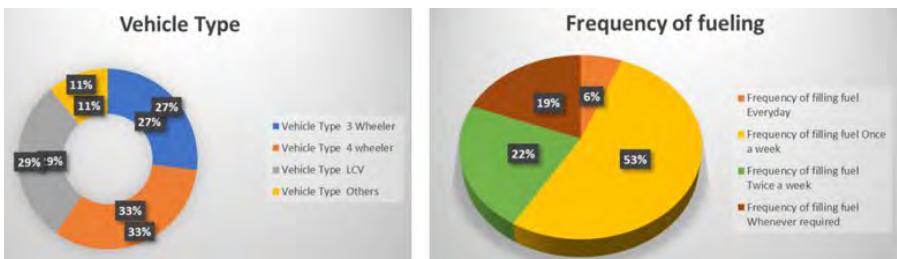
Figures 2 and 3 show the results of the analysis of the respondents' age, gender, educational background, occupation, kind of fuel purchased, and frequency of fueling. It demonstrated that replies from likely client segments are covered, and respondents are dispersed equitably across all criteria.

Data on sales volume obtained from corporate officials over a three-month observation period was analysed and revealed a consistent monthly increase in the volume. Within three months, there has been an 11.8% increase.

Additionally, 73% of the respondents reported an increase in customer satisfaction. Increased pleasure resulted from the features' greater experience, assurance, and validation of the fuel quantity (Figure 4).



**Figure 2:** Demographic, Education, Occupation and Income Detail of Respondents



**Figure 3:** Vehicle Type and Frequency of Fueling of the Respondents

Fuel stations' infrastructure and technology-based solutions are essential to providing their consumers with a seamless experience. Using IoT with AI-ML-based solutions is a first step toward offering customers a more seamless and positive gasoline station purchasing experience. All parties involved, including fuel stations, consumers, service providers, or businesses, benefit from it at the same time.



**Figure 4:** Customer Satisfaction Survey

## FINDING AND CONCLUSION

Technological developments profoundly affect consumers, businesses, and people's lives and behaviours. While the Internet transformed human-machine interaction, the Internet of Things (IoT) is also predicted to transform machine-machine interaction. Innovations have been observed in retail settings, impacting customers' purchasing decisions through increased customer happiness and involvement. IoT, AI, and predictive analytics tools greatly aided the development of customer-facing projects and the creation of service protocols for improved purchasing experiences.

IoT is mostly utilised in the upstream segment of the oil and gas industry for remote monitoring, arranging and carrying out predictive and preventative maintenance, guaranteeing safety standards, etc. IoT adoption has been observed in the mid-stream sector to ensure network integrity, environmental monitoring and regulatory compliance. Little study has been done on the application of IoT in the downstream industry, which mostly consists of refineries and storage and handling facilities. Very little study has been done worldwide on the application of IoT to safety and customer service in Petro-retail. Despite being essential for improving service and optimising profits, IoT penetration in Indian Petro-retail is minimal, particularly when considering customer care. The growing significance of technology in consumer lives necessitates the implementation of IoT to boost customer services and service quality, which can lead to improved safety and security and revenue maximisation.

Automation, IoT, and AI/ML-based technical solutions are being adopted in a dispersed manner in the retail petroleum industry, especially

in CNG stations, with a lack of a centralised perspective of the complete value chain. The main goal of such technology adoption is to increase asset utilisation and operational efficiency. Few applications, such as identification and satisfaction, have been attempted to improve client purchasing behaviour. Implementing central monitoring systems across many industries demonstrated that providing real-time KPI monitoring, AI&ML-powered analytics, and notifications regarding deviations from normal operating procedures led to achieving operational excellence and establishing customer trust. Technological development has brought a shift in consumer habits, lifestyles, and tastes, which is still ongoing. While typical retail is investigating VR technologies for its patrons, petro-retail is yet to catch up. There appears to be a disconnect between consumer expectations in the context of oil retail and general retail. IoT is transforming the digital age, impacting customer expectations and experience management in India's petroleum retail industry from the viewpoints of both service providers and customers.

IoT-based solutions improve customer experience in the following ways: (i) increase operation efficiency by cutting down on fueling cycle time, managing traffic, and upholding safety procedures; (ii) improve customer experience by providing personalised programs and communication. Improved brand development includes attracting and keeping new customers and (v) increasing income for the service provider. IoT and AI-based solutions are among the digital technologies that are being adopted more frequently as a result of the rapid improvements in technology and growing exposure to digitalisation. Fuel stations rely on the infrastructure of their outlets and the technical solution features offered there to provide customers with a flawless experience.

Implementing an IoT-based solution is one step toward offering a more seamless and improved purchasing experience at the gas station. Customers have an improved experience thanks to the solution. It also benefits every stakeholder, including gasoline stations, clients, service providers, or OMCs. According to the study, customer satisfaction levels at CNG stations have increased when IoT and AI are applied to customer care. This study is unique in its field of the retail petroleum industry.

## **PRACTICAL AND SOCIAL IMPLICATION**

Future society will rely heavily on IoT technology. The service sector, which includes retail petroleum, will be greatly impacted by IoT. An eco-friendly and sustainable development is facilitated by increased digitisation. For this reason, academics and managers in the oil and gas sector will find the analysis of the digital technology adoption gap useful in reviewing, analysing, and putting into practice improved service protocols.

## LIMITATIONS AND FUTURE RESEARCH

The study is conducted with available secondary and primary data collected through a survey. The survey result is subject to all the limitations of primary data. This article articulated how IoT-based solutions and AI-based technology can contribute to the CNG business from both customer and provider perspectives. The research that has been done is restricted to a small number of gas stations in a small area. Businesses can implement and expand the same to improve their customers' purchasing experience and happiness. In order to improve service quality and provide databases for strategic decision-making in the retail petroleum sector, IoT, AI, and ML technologies must be compared with the findings presented here.

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# The Role of E-Religiosity on Sustainability with Special Reference to Impulse Buying

**SATINDER KUMAR, RITIKA SHARMA,  
ROHIT KUMAR DUBEY & AMANDEEP KAUR**

## INTRODUCTION

The focus of advertisers has forever been on the consumer. Advertisers work to fathom customers' sentiments, contemplations, and choices with respect to the different choices accessible to them, including the item and brand, as well as how and how much buyers are affected by their companion gatherings, families, salesmen, and so forth. Consumer conduct depicts the moves individuals make while choosing, getting, using, assessing, and disposing of labor and products to meet their needs and inclinations.

The idea of culture is seen as being of most extreme significance in the space of customer conduct. Different examinations directed on the convergence of culture and utilization have recognized culture and sub-culture as the essential issue in buyer conduct or purchasing conduct (Shaw and Clarke, 1998). The literature focuses around what culture means for various features of consumer conduct. Nonetheless, the focus of the ongoing review has regularly been on the sub-social classifications of identity, nationality, and values as marks of shopper conduct. Despite the fact that culture in general is believed to be the essential indicator of human way of behaving and needs, the strict gatherings that make up a fundamental piece of culture are really the key variables (Alam et al., 2011). It is notable that religion might assist with peopling in various ways to direct their desires and wants. Religion helps individuals by offering rules for carrying on with their lives (Vitell et al., 2009).

As per De Run, Butt, Fam, and Jong (2010), legalism is how much one is strict. Individuals can be either extraneously or characteristically strict (Allport & Ross, 1967)

The inspirations driving one's strict responsibility might hold the way to making sense of this confusing situation. In this review, we start with religion and examine its intrinsic and extrinsic components to decide how they vary in their consequences for impulse purchasing conduct. We start with a common segment on the review's hypothetical establishments. The improvement of

their reasonable model and hidden presuppositions shapes the premise of the exploration structure. The parts on strategy, results, and discourse are introduced next. The finishes of each study are trailed by a consolidated general survey, a rundown of its deficiencies, and ideas for future examination.

## **THEORETICAL BACKGROUND**

### **Religiosity**

Religiosity can be characterized as the “confidence in God accompanied by a guarantee to follow standards set out by God (McDaniel and Burnett, 1990)”. Legalism is “An arrangement of convictions about the heavenly and profound world, about God, and about how people, as God’s animals should act on this planet” (Sheth& Mittal 2004). Extrinsic and intrinsic religiosity are two classifications of religious inspiration. (Allport, 1950). It depends on the intrinsic and extrinsic inspiration towards one’s religion and is generally referred as person’s methodology towards one’s religion. It generally portrays the justification behind ones religiosity as being interior or outer. Intrinsically motivated people have a more prominent inclination to completely coordinate their religion into their regular routines than extrinsically inspired people, who will generally specifically take on strict standards to suit their aspirations, for example, overcoming loss of a friend or family member, conquering sickness, or working on one’s status among peers.

### **Impulse Buying Behavior**

The sudden desire of the customer to make an impulsive buy in the wake of seeing the item is known as impulsive buying behavior. A personality trait is stranger, incorporates acting without a lot of thought, and includes making snap decisions. Impulsivity is the part of individual qualification that is associated with the natural groundworks of personality. It is the state wherein there is no particular mental activation and no directive component of alertness (Anderson and Revelle 1994). The retailer and administrative interests were the primary focus point of all past impulsive purchasing investigations. Impulsive purchasing is the unexpected longing to make a buy. In contrast with other dynamic strategies, impulsive buying is receptive and emotive (Rook 1987). Kacen& Lee (2002) highlighted the absence of research without much forethought purchasing conduct in non-western setting. The authors in their investigation discovered that regional level factors (individualism and collectivism) as well as differences in self-concepts (dependent and interdependent) influence the impulsive buying behavior. In terms of the role of religiosity towards impulse buying behavior (Mokhlis, 2009) found that highly religious consumers tend to avoid to be an impulsive buyer (Musadik, 2017).

This shows that religion might offer a more comprehensive account of consumer behavior, particularly for actions motivated by unfavorable feelings or affect. Despite the fact that religion is linked to a number of consumer behaviors, there is little research on how it affects impulsive buying. The current work attempts to close this research gap.

Hence, we hypothesize that:

- H1: Religiosity has constructive impact on Intrinsic Religiosity
- H2: Religiosity has constructive impact on Extrinsic Religiosity
- H3: Religiosity has constructive impact on Impulse Buying Behavior

Customer conduct is impacted in various ways by the two kinds of religious inspirations. Contingent upon the religious inspirations of buyers, religion might uncommonly affect their conduct in any event, when they distinguish as religion. Religion and otherworldliness assume significant parts in areas of strength for elevating control to check impulsive buys (Maryati, 2021). The current review's goal is to more readily comprehend impulse buying by estimating purchaser religiosity utilizing a comparative system. Hence, we hypothesize that:

- H1: Intrinsic Religiosity has constructive impact on Impulse Buying Behavior.
- H2: Extrinsic Religiosity has constructive impact on Impulse Buying Behavior.

## **METHODOLOGY**

The study's goal was to investigate the link between impulsive buying behavior and religiosity. The model is also made to examine the effects of intrinsic and extrinsic religious people on unrestrained behavior, such as impulsive purchasing. 419 respondents are being surveyed to gather the data. A five-point Likert scale with responses ranging from "Strongly Disagree" to "Strongly Agree" was used to measure the constructs. We evaluated the study's stated hypothesis while evaluating the validity and reliability of the model's construct using SPSS AMOS 21.0. In the beginning, we were interested in determining how religion affected impulsive purchasing. Second, we'll examine how mediators' inherent and extrinsic religion affect on impulsive buying behavior.

## **DATA ANALYSIS**

### **Confirmatory Factor Analysis**

We put the research model to the test using confirmatory factor analysis. We first utilized the SPSS 24.0 software to examine the reliability and validity of the questionnaires before evaluating the structural model. We utilize Amos

to perform confirmatory factor analysis since it makes it easier to measure many variables and unobserved variables. Also, using Amos makes it simpler to analyze the mediation effect of a three-part research model's model fit.

Table 1 presents the findings of the composite reliability of four measurement models: religion, intrinsic religiosity, extrinsic religiosity, and impulsive purchasing. The critical ratio (CR) was suggested as the indication by Fornell and Larcker in 1981. The four measurement models' individual CRs are 0.963, 0.950, 0.941, and 0.954, respectively, all of which are greater than the reliability limit of 0.7, as shown in Table I. Their respective AVEs are 0.724, 0.635, 0.642, and 0.806, all of which are greater than 0.5. These four constructions are extremely reliable.

The SE findings demonstrate that there is no collinearity between the four models' observed variables. The model's inherent quality is also ensured by the standardized factor loading and squared multiple correlations. The internal consistency was established using Cronbach Alpha as it is greater than 0.80. Each observed variable across all constructions has a factor load that exceeds the cutoff of 0.5, satisfying the requirements of the load analysis for measured variables.

**Table 1:** Reliability Analysis Results

Constructs	Items	Factor Loading	CR	AVE	Cronbach Alpha
Religiosity	R1	.876	0.963	0.724	0.969
	R2	.874			
	R3	.868			
	R4	.863			
	R5	.861			
	R6	.851			
	R7	.846			
	R8	.842			
	R9	.823			
	R10	.818			
Extrinsic Religiosity	ER1	.878	0.950	0.635	0.949
	ER2	.856			
	ER3	.854			
	ER4	.822			
	ER5	.820			
	ER6	.813			
	ER7	.799			
	ER8	.782			
	ER9	.772			
	ER10	.760			
	ER11	.722			

Constructs	Items	Factor Loading	CR	AVE	Cronbach Alpha
Intrinsic Religiosity	IR 1	.852	0.941	0.642	0.943
	IR 2	.845			
	IR 3	.829			
	IR 4	.815			
	IR 5	.798			
	IR 6	.789			
	IR 7	.757			
	IR 8	.748			
	IR 9	.716			
Impulsive Buying	IB1	.892	0.954	0.806	0.952
	IB2	.882			
	IB3	.868			
	IB4	.857			
	IB5	.778			

### Structural Model

The association between religion and impulsive purchasing is displayed in Table 2. We can conclude that “religiosity” significantly influences both inner and extrinsic religiosity as well as impulsive purchasing. “Irresponsible buying behavior,” which has little to do with the latter, just acknowledges the relationship between internal and extrinsic religiosity. A substantial correlation exists between the latent variables and the corresponding observable variables if the p value is less than 0.005.

**Table 2:** Structural Model Summary

Effect of the Variables	Estimates	SE	CR (t-value)	p value
Religiosity – Extrinsic Religiosity	.198	.055	3.888	***
Religiosity – Intrinsic Religiosity	.451	.051	8.665	***
Religiosity – Impulse Buying	.296	.050	5.648	***
Intrinsic Religiosity – Impulse Buying	.310	.051	5.895	***
Extrinsic Religiosity – Impulse Buying	.083	.039	1.849	***

The study focuses on the relationship of impulse buying behavior via intrinsic & extrinsic religiosity. Direct relationship was observed between religiosity and impulse buying behavior with the effect size of 0.28 and with p value less than 0.05. Although a clear correlation between the variables was found, this article further looked into the indirect impact of intrinsic and extrinsic religiosity on the link between the variables. With an effect size of 0.45 between allowable confidence interval levels, a positive and significant link between intrinsic religiosity and religiosity as a whole was found. Moreover, a

favorable and significant link between innate religion and compulsive shopping was found. It is clear from the presence of the influencing variable that the mediating variable has a major impact on the relationship, maintaining the direct association between the variables. Increasing innate religiosity partially modulates the connection between religiosity and impulse purchase behavior. The association between extrinsic religiosity and religiosity was also found to be positive and significant, with an effect size of 0.22 and a p value less than 0.05. Further, positive and significant relationship was observed between extrinsic religiosity and impulse buying behavior at 0.07.

Considering that the model encompasses two mediating variables, this relationship depicts that impulsive buying behavior can be influenced by more than one mediating variable and it is a case of parallel mediation. All the assumptions of parallel mediation like significant relationship among the variables including the mediating variables has been proven and the direct relationship also sustains.

Table 3 depicts the statistical results among the independent, mediating and dependent variables on the basis non-parametric bootstrapping process. This table also depicts that indirect relationship by the variables intrinsic and extrinsic religiosity influences the impulsive buying behavior since all the values fall between permissible confidence levels.

**Table 3:** Statistical Results among the Independent, Mediating and Dependent Variables

Relation	Impact	Bias-corrected 95% CI		Percentile 95% CI	
		Lower Bound	Upper Bound	Lower Bound	Upper Bound
Religiosity – Extrinsic Religiosity	Total Effect	.093	.299	.094	.300
	Direct Effect	.093	.299	.094	.300
	Indirect Effect	.000	.000	.000	.000
Religiosity – Intrinsic Religiosity	Total Effect	.355	.542	.356	.543
	Direct Effect	.355	.542	.356	.543
	Indirect Effect	.000	.000	.000	.000
Religiosity – Impulse Buying	Total Effect	.359	.555	.354	.550
	Direct Effect	.188	.415	.182	.409
	Indirect Effect	.102	.222	.100	.217
Intrinsic Religiosity – Impulse Buying	Total Effect	.207	.414	.204	.412
	Direct Effect	.207	.414	.204	.412
	Indirect Effect	.000	.000	.000	.000
Extrinsic Religiosity – Impulse Buying	Total Effect	.020	.171	.016	.178
	Direct Effect	.020	.171	.016	.178
	Indirect Effect	.000	.000	.000	.000

## **CONCLUSION AND DISCUSSION**

Most religions promote a modest lifestyle and the idea that accumulating material wealth is the source of all evil (Arli et al., 2016). The findings of this paper build on past studies that demonstrated the impact of religion on consumers' impulsive purchasing behavior (Sohaib& Kang, 2014). The two have a good friendship with one another. The study's findings also showed that intrinsic and extrinsic religiosity had a role in moderating the association between religiosity and impulsive purchasing.

The study's findings also showed that intrinsic and extrinsic religiosity had a role in moderating the association between religiosity and impulsive purchasing.

A considerable correlation between religion, materialism, risk aversion, and life pleasure were supported by empirical evidence. Additionally, it was discovered that beliefs lead to impulsive purchasing tendencies. Religiosity and impulsive purchasing inclinations were found to be significantly mediated by materialism, risk aversion, and life satisfaction (Habib, M. D. & Bekun, 2021).

It makes sense that those who are essentially religious would be better able to manage their conduct as they spend their life in accordance with their faith (Allport, 1966). Extrinsically religious people can't be expected to obey the laws of their religion, which makes them more prone to impulsive conduct (Allport& Ross, 1967). They use religion to achieve their own objectives. From the standpoint of religious motivation, the impact of religion on behavior can be better understood. Despite being well-established in the literature, less research has examined its mediation role in the association between extrinsic religiosity and reckless expenditure. Those who identify as extrinsically religious were shown to be more likely to adhere to societal norms, which made them more likely to act in an unrestrained manner. It is crucial to investigate whether a consumer's level of religiosity affects their propensity for impulsive purchases and whether these purchases are made by less religious followers. In addition, it is essential to teach customers to practice moderation in their spending and consuming habits (Musadik, 2017).

This study offers a unique illustration of how religion affects impulse buying behaviors' differently. Higher levels of spirituality and religion help people develop strong self-control and resist impulse purchases Maryati (2021). The results corroborate the consumer behavior framework's inclusion of religion as a significant determinant. The influence of religion has largely been ignored in studies on impulsive purchase, which have instead concentrated on personal, demographic, situational, and product-related aspects. As a result, there hasn't been much recognition of religion as a cause of irrational purchasing. The current study adds to our understanding of consumer behavior by providing

the empirical support for the claim that religion has an impact on impulsive buying.

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# HR Analytics for Sustainable Business

DEEKSHA SETHI & GURPREET RANDHAWA

## INTRODUCTION

With the changing business landscape across the globe, to endure and advance sustainable business, every department in the organisation must strive hard to effectively make use of the available datasets for the upliftment of the organisation and society at large. The era of data-driven decision-making has changed the dynamics of human resource management. An investigation of this evolution shows that administrative personnel management moved from a phase where information processing and ensuring good employee performance where the primary goals to one where human resource are strategically important to the success of businesses (Guest, 1997). Technology's incorporation into HR practices and procedures enables evidence-based decision-making for optimal utilization of resources. An increasing number of people are working under contracts other than employment, performing tasks for organisations. Recognizing that HRM is associated with managing people other than employees such as subcontractors, consultants, and individuals on non-employment contracts as well as potentially managing other organisations involved in the production of goods and services (such as telecommunications organisations) broadens the scope of HRM. By identifying larger goals for HRM, acknowledging the complexity of workplace dynamics, and clearly recognizing the need to prevent harmful effects of HRM practices, sustainable HRM represents a new paradigm in people management (Kramar, 2014).

## HR ANALYTICS

HR analytics, sometimes referred to as people analytics, is the process of gathering and using talent data to enhance important business and talent outcomes. HR leaders can create data-driven insights to guide talent decisions, enhance workforce procedures, and foster a positive employee experience with the help of HR analytics leaders. Organizational effectiveness can be increased by using HR analytics to assist in making strategic business choices. Adjustments in HRM practices and procedures that can improve operational effectiveness can be determined through analytical insights. According to

Carlson and Kavanagh (2012), HR managers must first determine which processes can achieve organisational goals at the highest levels of detail, and then they must figure out how to maximise the effectiveness and efficiency of putting those processes into place inside the organisation.

## **SUSTAINABLE BUSINESS**

Any company that engages in green or environmentally friendly operations to make sure that all manufacturing, product, and process activities appropriately address contemporary environmental concerns while turning a profit is considered sustainable. In the business world, sustainability refers to a company's approach to lessening the adverse environmental effects that arise from its operations in a specific market. Sustainability practices within an organisation are usually evaluated using environmental, social, and governance (ESG) metrics.

To comprehend and advance sustainable business practices, human resource analytics, or HRA, is essential. According to research, HRA can assist businesses in evaluating their environmental effect, monitoring employee behaviour to guide sustainability projects, and improving corporate social responsibility procedures. Businesses can maintain their competitiveness in a fast-paced business environment by using HRA to improve talent attraction, reduce employee turnover, and make sure their practices reflect their moral principles (Álvarez, Francisco et al., 2022). To achieve social and economic goals, a systematic review from the perspective of sustainable HRM also highlights how crucial it is to incorporate HRA with sustainable HRM practices. Consequently, HRA can be an effective tool for businesses to promote sustainable development and make data-driven decisions that are advantageous to the company and the environment. Thus, ensuring a sustainable business environment through pursuance of business without negatively impacting the environment, community, or society as a whole. It is based on the observations that people and natural resources are often scarce resources that businesses need to exist (Müller-Christ & Remer, 1999; Wilkinson et al., 2001) that people in organisations are “consumed” rather than “reproduced”; and that sustainable human resource management could provide a competitive advantage in tight labour markets. Businesses will surely have a competitive edge if they adopt sustainable business practices more quickly and successfully than competitors in their sector. Reducing waste boosts profitability, and companies must adapt to a world where meeting emission regulations is a requirement for doing business. We need the vast majority of large firms to include sustainability in their corporate strategy to achieve societal sustainability (Watson et al., 2008). According to Jackson (2009) investment in assets, employment, and infrastructure becomes evident

as a crucial element of a new ecological macroeconomics, as well as a crucial part of the economic recovery.

## LITERATURE REVIEW

HR is in a unique position to influence the behavior of employees, who are instrumental in driving sustainability initiatives. Therefore, HR has the ability to ingrain sustainability into an organization's core values. HR can measure and report on the sustainability performance of the company by gathering and analyzing data on the environmental impact of the business using people analytics. Companies can identify areas for improvement, create talent management and employee engagement programs that are specifically targeted, track and analyze employee behavior and sentiment toward green initiatives, and evaluate the sustainability initiatives' long-term effects. (Kareer, J., 2023).

HR analytics can be used to track and analyze employee behavior, track progress, and evaluate the efficacy of HR sustainability initiatives, among other methods, to help analyse the impact of sustainability initiatives. The following are some of the main advantages of measuring sustainability initiatives with HR analytics:

Monitoring and measuring indicators: To evaluate the results of their sustainability initiatives, organizations can monitor and measure metrics like energy use, waste reduction, and carbon emissions (Gupta, 2023). Creating focused talent management and employee engagement initiatives: Organizations can pinpoint areas for development and create focused programs to improve employee engagement and promote sustainability by monitoring and evaluating employee behaviors and attitudes toward green initiatives (Kareer, 2023).

Assessing metrics related to diversity, equity, and inclusion (DE&I): An essential component of HR sustainability is encouraging diversity and inclusion. HR analytics can be used to monitor diversity metrics, including the workforce's age, gender, and ethnic diversity (Gupta, 2023). Evaluating employee engagement: Organizations can determine areas for improvement and learn more about whether their efforts are appreciated by tracking employee involvement in the company's sustainability initiatives (Panayides, 2023).

Barrena-Martínez et al. (2017) have given eight categories that are connected to the HRA metrics in use and are essential for any business that wants to be socially conscious:

1. **Recruitment and retention** (e.g., "carries out specific procedures for the adaptation and integration of new candidates"), due to societal pressures and the quest of excellence, recruitment and selection procedures have

been pushed to take a proactive approach, recognizing the importance of drawing in and keeping the best individuals. Therefore, as a first step in the process of attraction and retention, the recruitment and selection policies should be founded on the principles of adequate training and the potential for growth and promotion of the new candidates to integrate socially responsible management in this policy.

2. **Training and ongoing development** (e.g., “regularly detects training needs of staff”), work settings that promote employee learning facilitate the attainment of quality professional growth, innovation, and leadership among employees. Organisations can take environmental concerns into account when assessing training needs in sustainable training programs. During their employment, staff members may participate in environmental awareness training.
3. **Employment relations management** (e.g., “aims to create a comfortable work environment”) the employer’s view of the employment relationship is a process meant to align employees’ expectations with the incentives that a firm offers,
4. **Communication, transparency, and social dialogue** (e.g., “facilitates social dialogue”) giving employees access to information about the company’s ethical, social, and environmental practices in addition to its financial performance is a crucial component that should be enhanced by incorporating a social responsibility orientation into the communication strategy for human resources.
5. **Diversity and equal opportunities** (e.g., “creates diverse teams”) Functional and demographic diversity can foster greater employee collaboration and lower barriers to creativity, which can lead to improved organisational performance (van Knippenberg, De Dreu, & Homan, 2004).
6. **Equitable compensation and social benefits** (e.g., “ensures the principles of justice and fairness”) Employee commitment to the company should gradually rise if they perceive fairness and equality in the way the assessments are conducted by the company (Farndale, Hope-Hailey, & Kelliher, 2011).
7. **Prevention, health, and security at work** (e.g., “minimizes physical and emotional risks”) From a socially conscious perspective, it is imperative to uphold health and safety regulations while also going above and beyond to encourage prevention and the development of these measures among staff members (Cooke & He, 2010).
8. **Work-family balance** (e.g., “facilitates modification of working conditions”) Studies reveal that workers who have flexible schedules catered to their families need to perform better (Fagan & Press, 2008).

Apart from minimising the impact of global problems, sustainability can promote corporate success too. Environmental, social, and governance (ESG) measures are being used by many investors to assess the sustainability and ethical impact of a company. Investors pay attention to things including a company's water use, board diversity, community development initiatives, and carbon footprint (Spiliakos, 2018).

ESG (Environmental, Social, and Governance) objectives are important from an HR standpoint for several reasons.

1. **Employee Engagement:** HR is essential to understanding and addressing the needs of employees and the talent pipeline. ESG topics are important to employees because they represent their human capital and HR leaders ought to be seated at the ESG table (Graves, 2022).
2. **Talent Attraction and Retention:** In order to draw in and keep top talent, ESG performance is becoming more and more crucial. Research indicates that there is a positive correlation between employer ESG and employee satisfaction, with top employers having ESG scores 14% higher than the global average (Graves, 2022).
3. **Company Culture:** HR is in charge of making sure that the values and culture of the organization are in line with ESG principles (Mandir, 2023).
4. **Diversity & Inclusion:** Diversity, Equity, and Inclusion (DE&I) is a critical component of ESG, and HR is crucial in fostering DE&I within the company.
5. **Work-Life Balance:** HR is in charge of putting policies into place that support family leave, work-life balance, and other benefits that enhance employee happiness and well-being, all of which support ESG objectives.
6. **Employee Development:** HR can set up courses to teach staff members about environmental, social, and governance (ESG) concerns, motivating them to act as conscientious citizens of the world both within and outside of the office (Mandir, 2023).
7. **Performance Management:** HR can set performance goals and measure progress related to ESG, ensuring that companies are held accountable for their ESG commitments (Mandir, 2023).
8. **Performance Management:** HR may establish objectives and track ESG-related accomplishments to make sure businesses are held responsible for their ESG pledges (Mandir, 2023).
9. **Reporting and Transparency:** HR works with other departments to collect data and information regarding ESG measures, which is essential for the business's ESG reporting and gives stakeholders insight into the ESG performance of the company (Mandir, 2023).
10. **Aligning HR Policies with ESG Objectives:** HR can examine and modify current HR policies, including those pertaining to pay, benefits, and

employee performance reviews, in order to bring them into compliance with the ESG goals. For instance, tying executive pay to ESG performance measures can encourage socially conscious and sustainable actions.

HR plays a critical role in accomplishing and advancing ESG goals within the company by giving priority to these areas. Here are a few instances of businesses' effective use of HR analytics for sustainability:

1. **Google:** Google has completely redesigned HR inside the company by leveraging HR analytics to make more accurate judgments about people management, which has increased success across the board for the business (Learn, 2020).
2. **Microsoft:** To support sustainability and other HR objectives, Microsoft has adopted data-driven HR as a best practice and created statistical models utilizing HR analytics (Learn, 2020).
3. **Deloitte Research:** Studies by Deloitte have shown that businesses that prioritize corporate sustainability have better success attracting and retaining talent, which is a result of HR analytics' beneficial effects on sustainability programs (Panayides, 2023).

Businesses that have implemented HR analytics for sustainability have encountered a number of difficulties. Here are a few of these difficulties and how they were resolved:

1. **Curating data:** For HR analytics to be implemented successfully, data from diverse organizational functions and departments must be gathered and arranged. Businesses can overcome this obstacle by making investments in data management procedures and tools to guarantee the availability and quality of their data (Palani, 2023).
2. **Privacy and compliance:** When employing HR analytics, ensuring data security and privacy is a major problem. Businesses can overcome this obstacle by putting in place strong data protection procedures and making sure that pertinent data privacy laws are followed (Palani, 2023).
3. **Inadequate IT resources:** When deploying HR analytics for sustainability, businesses may encounter issues with IT resources. Organizations can overcome this obstacle by giving technology investments top priority and allocating funds to support their sustainability initiatives (Palani, 2023).
4. **Employee opposition:** The application of HR analytics for sustainability may encounter opposition from certain employees. Organizations can address this problem by emphasizing the advantages of sustainability initiatives, stressing how these initiatives are consistent with the company's values, and involving staff members in the decision-making process (Palani, 2023).

## OBJECTIVES

This paper aims to contribute to the existing literature on sustainable HRA. The main objectives of the paper are as follows:

1. To determine the strategic integration of sustainable business practices with HRA-based decision-making.
2. To determine the challenges to the strategic integration of sustainable business practices with HRA-based decision-making.

## RESEARCH METHODOLOGY

The present paper is conceptual in nature. This paper highlights human resource analytics' contribution to sustainable business practices by conducting a systematic review of several reliable and accessible sources of literature. Finding, evaluating, analysing, and synthesising the data from previous studies is the main aim. The study examines the relationship between HR analytics and sustainable business practices, defines it, and evaluates it in various contexts using data from various submissions. In order to help organisations create practical and successful strategic plans that support long-term business, the role of HR analytics is crucial.

## DISCUSSION

HR analytics makes it possible to measure, assess, and regulate human behavior – all of which are essential for enhancing workforce productivity (Momin & Mishra, 2016; Nienaber & Sewdass, 2016). Throughout the recruitment and selection process, HR analytics can assist in identifying the range of possible actions that could raise candidates' environmental awareness. It is also possible to evaluate their potential future impact on organizational performance (e.g., return on investment).

Organisations can take environmental concerns into account when assessing training needs in sustainable training programs. During their employment, staff members may participate in environmental awareness training. Offering compensation to staff members who embrace environmentally friendly practices at work is another crucial practice. Environmental, social, and governance (ESG) sustainability goals are measured using human resource analysis (HRA), which requires a number of important steps and considerations. The following are some strategies and factors that the search results highlight:

1. **Using a Structured Framework:** Organizations can use internationally recognized frameworks, such as the UN Sustainable Development Goals (SDGs), to evaluate sustainability, find gaps in the data, and create an ESG personnel strategy that is in line with impact analyses and SDGs.

2. **Information Gathering from several Departments:** To identify current metrics relevant to sustainability goals and address any substantial gaps, information from several departments, including human resources, must be gathered. It's also critical to classify various measurement kinds according to how pertinent they are to sustainability objectives (Analytics, 2023).
3. **Encouragement of ESG Principles and Sustainability:** HR managers bear the responsibility of advancing a culture that fully integrates sustainability and ESG principles. This entails articulating these values, luring and keeping talent, establishing corporate culture, and integrating ESG metrics into performance reviews for staff members (Management Consulting & Selection., 2023).
4. **Importance of ESG for HR:** Environmental, social, and governance, or ESG, standards are crucial indicators for human resources. HR departments monitor data on pay equity, employee and management diversity, training and development initiatives, and turnover rates - all of which are critical for gauging the success of ESG initiatives (HR Exchange Network., 2023).
5. **Measuring Sustainable Performance:** Accurate and dependable data is essential for reporting on ESG objectives. Measuring sustainability is useful for monitoring development, assessing the success of initiatives, and creating incentive systems. When assessing sustainable performance, environmental, social, and governance (ESG) objectives should be taken into account (Toikka, 2023).

## **Implications**

Organizations that practice sustainable talent management choose applicants who are knowledgeable about environmental issues to fill open positions through recruitment and selection processes. Additionally, employment postings may specify environmental commitment standards, and the messaging employed may highlight the company's environmental initiatives. During the interview process, questions about the environment may be asked of job candidates (Obeidat & Abdalla, 2022). The HR department can create customized, sustainable training programs for new hires using dashboards based on analytics. The ROI on the training and development of employees can be determined using dashboards. Under sustainable performance management, employees receive feedback from their managers regarding environmental goals and relevant criteria are integrated into the performance appraisal system and accordingly workers who accomplish environmental goals and take innovative environmental initiatives may be compensated financially.

## CONCLUSION

In the current scenario, HRM practices are insufficient in themselves to deliver the holistic changes necessary to achieve a sustainable business environment. The degree of efficacy and efficiency of the implemented sustainable business practices in the HR department can be assessed using HR analytics. Organizations may specifically have policies to raise the proportion of environmentally conscious employees. In this situation, HR analytics can assist in determining the range of possible actions that could raise employees' awareness of environmental issues throughout the recruitment, training, performance appraisals and compensation processes. Their potential effects on organizational performance can also be evaluated. In order to measure and meet sustainability goals, the methods and considerations stress the significance of incorporating ESG goals into HR procedures and employing organised frameworks, obtaining pertinent data, and promoting ESG values. The adoption of big data analytics becomes necessary to strengthen the relationship between HRA and sustainable business performance. Making an informed decision about the kind of sustainable business practices that should be used to accomplish environmental goals is made easier with the use of HR analytics.

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# **Factors Influencing Children Buying Behavior with Reference to Premium Game Console Segment in Delhi**

**DEEPA LI CHAUDHARY & A.K. TYAGI**

## **INTRODUCTION**

Children, in the modern world, have strong and visible positions that are not merely restricted to their families but stretched out to marketplaces. Their apparent say in the family has made them an important segment for the marketers and this has made them include children at different levels of strategies and selling tactics. Nickelodeon (2012), in a study, stated that the role of children in purchase decisions has grown dramatically over time, and family decision-making has become more collaborative. They have compelling opinions over their parents' purchase decisions for them and for themselves. The views of parents and children are entangled while purchasing any goods or services. According to Sharma and Sonwaney (2014), children are into socialization from an early age and can no longer be perceived as passive users but influential customers.

When it comes to young consumers, general marketing cannot be entirely applied as children's basic understandings are in the developmental phase and commensurate with age. They gradually acknowledge what's shown to them, accept different stimuli and learn from their minor experiences. The marketing mix needs to be designed that is decorous with children's mindsets. Children's outlook about a variety of products, especially that they consume, ought to be considered in order to set a non-shaking place in their minds viz-a-viz making it meaningful in the perceptions of the parents for them to buy the products for their children. As it is obvious that even though children persuade their parents to buy what they desire, the price for the product is paid by the parents.

## **CHILDREN CONSUMER BEHAVIOUR**

Consumer behaviour is the study of how people behave while they are looking for, buying, using, assessing, and discarding products and services that they believe will meet their needs. In this field, children's consumer behaviour is a

branch that has grown and has been paid increasing attention to in the recent past years. Children have always been overlooked as an important marketing segment. However, as a result of changing economic, social, and demographic circumstances, the situation has changed. They've been dubbed "three markets in one." They are acknowledged as the current market that likes to spend money on their desires, as well as a future market for most goods and services, and as a market that influences their parents' purchase choices (Mc Neal, 1987). Also, as children have different desires, requirements, beliefs, and attitudes than adults, they cannot be examined through the lenses of adult consumer behaviour (Sramova.B, 2017). Children and adults have different experiences, expectations, desires, emotional levels, understandings, beliefs, etc., that account for their respective consumer behaviours. The basis of perceptions of adults is more shaped than the young consumers who metamorphose through different cognitive stages that shape their thoughts and minds.

A child starts socializing at an early age and the process modifies and complicates as the child grows and meets the people outside of the family premises. Children start learning through interactions with parents, siblings, peers, media and others. Their consumer behaviour is dependent on all of these interactions, predominantly, on interactions with their parents and family. Influences play a vital role in young consumers' consumption behaviour, as through comparisons with peers, seeing a product in children-oriented videos, attractive stores, etc. (Šramová, 2014).

Moreover, the insertion of technology and gadgets in the children's environment has opened a wide window to outstretch better to the target market. Over the years, children have been witnessed to use the internet and other technologies more frequently and aptly than adults or grownups. In accordance with these dynamics, marketing strategies and tactics have been evolved and modified. For instance, various children-oriented web channels place several products in their videos that catch the attention of the children's audience and trigger them to buy that product. Another example in this scenario is the pop-up ads of other online games while playing online on mobiles or other electronics. All over, young consumers' purchasing behaviour and decisions have been unrolled as a result of increasing access to information and increased knowledge.

Today's generation is sharp-witted, internet savvy, alert, and aware of alternatives as well as their parents' financial situation. They cannot be easily deceived. The best thing about this generation is that it is well-informed and not oblivious. This sets them apart from earlier generations. Children value a decent price-quality ratio, are aware of the available possibilities, and, most importantly, are aware that nothing is priced at rock bottom. They occasionally try to take advantage of the situation.

Children's perceptions of products vary as they grow. Some factors that were underplayed at a younger age start gaining importance with age. A child, for example, would be enticed by a toy simply by looking at it, or by a colourful and vivid shop filled with various toys; price and promotion are irrelevant at this age. Cognition, on the other hand, progresses with age, as children go and pass through various developmental stages, along with widened information and knowledge, their perceptions alter. A grown child would not completely disregard pricing and promotion in addition to the product and its location, especially if the product is in the high-end market. This may tailor the children's purchasing process, including their reasoning and persuasion, as well as their final decision to purchase the product.

These changing perceptions and apprehensions are explained in an elaborative manner by Kulkarni & Prasad (2009) who unravel the tangled characteristics of children through various phases calling them the "Development Growth of a Sequence of Children as Consumers".

The **Perpetual stage** constitutes children from 3 years to 7 years. The innocence of this age makes children believe that everything showcased to them is bona fide. They are convinced that the advertisements they see on TV and via other sources are truthful and they emit a positive attitude towards all of those advertisements, without any judgments. This stage is the commencement of understanding and distinguishing different brands and ads. Also, interpretations are done and used relating to products and brands and the symbolic aspects of utilization start to become clear. The decisions about purchases are based on salient attributes of the products, primarily, one most prominent feature. During this phase, as they grow, the value of the product and the price starts penetrating their minds by a tiny bit yet they act stubborn about what they want and where they want it from. And, their negotiation strategies include making direct as well as emotional requests to guardians. With not many experiences, they have limited awareness of information sources. Therefore, this stage can be easily manipulated and requires guidance from elders.

The second stage, the **Analytical stage**, includes children from 7 years to 11 years of age. Under this phase, children begin to construe that all advertisements cannot be trusted and that they are biased. This makes a shift from "all positive" to a judgment-based perception. There is an improved awareness of brands and functionality of the product instead of only the perceptual cues. Understandings about the symbolic aspects increase to an acceptable level. Also, there is a better wiser realization about retail stores. At this stage, the establishment of the theoretical aspect of the "value for money" term gets paved. Therefore, cost-benefit facets are also paid attention to. Arriving at the optimal option of purchase is based on giving weightage to two

or more attributes of the products and on wide information obtained through various media. Bargaining and different persuasion strategies are used by children falling under this bracket, for instance, a commonly used tactic by children is promising to get good grades in exchange for the purchase of a product of their desire by their parents.

The last stage in the development growth of the sequence of children as consumers, that is, the **Reflective stage**, comprises children aged 11 years to 16 years. Here, along with understanding the persuasive intent of the advertisements, ad tactics also become evident. A belief that ads lie holds a pertinent place leading to the development of a skeptical attitude towards them. Notable awareness about the brands and products is tacitly visible. The functionality of the products continues to play a significant role in the decision-making by the children with a level up from symbolic understandings to sophisticated understandings and products are viewed by assessing their multiple features. Plus, there is not very frequent usage of information sources about the products, only limited reliable sources are employed as the product's features and functionality are already well understood. Prices matter but not at concrete levels, just on the basis of their abstract reasoning. Also, enthusiasm relating to the store elevates. Various strategies to bargain with and persuade the elders, to make desired purchases, perpetuate.

## **MARKETING TO CHILDREN**

The American Marketing Association (October 2007) states, "Marketing is the activity, set of institutions, and processes of creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large". In order to achieve the desired outcomes of marketing, marketing mix, that is, specifically, 4P's are employed. Marketers, by considering the peculiarities of the children's environment, use these components of the marketing mix to strike their message. Albeit, the fundamentals of these approaches remain the same but tactics are adjusted specific to the group.

More often than not, children have an influence on purchase related decisions of the family related to various aspects, as per a report by YTV. Annually, children and teenagers account for 200 billion dollars in expenditure. Marketers are well aware of the fact that children have buying power, be it direct or indirect. For this reason, companies spend 17 billion dollars over every year on marketing to them.

For the purpose of encouraging sales, the products are touted as being constructive, fun-filled and more suitable for children. While some items do have these characteristics, many companies are simply leveraging them to generate a market opportunity. In the children's market, a key "pricing

strategy" relies on parents' desire to provide the best for their children. Parents are unlikely to cut back on their children's expenses, so this is a significant win for marketers. Another effective method is to purvey different quantity or quality, to some extent, of the product while maintaining the same pricing. The third facet, that is, the place of the product signifies the physical and virtual interactions with the product, where the actual sales of the product happen. The place should be paid non-skipped attention to, especially while catering to the children segment. Another important point to focus on is how do children see and interpret marketing messages, and to what level these messages impact their decisions. This is one of the most significant questions that should be evaluated at the "promotion" stage of kids' marketing. Therefore, it should come as no surprise that massive budgets have been set aside for appealing commercials, engaging physical store environments for youthful buyers, various promotional offers, and so on.

A multitude of tactics are employed in marketing to capture the attention, interest, and purchase behaviour of the audience. In the case of children's marketing, the same effort is required. Marketing pivoted to children has been around for a long time, however, the scope and sophistication of today's campaigns greatly exceed past examples. While prior attempts centered on traditional advertising and strategies, today's arsenal includes a wide range of new approaches (Stockwell, 2005: 1). As per Gökselet et al. (2013), there are a variety of communication mediums to boost the efficacy of their campaigns, such as TV commercials, online media which includes websites, banner ads, social media, advergaming and viral marketing, sponsorship, point of purchase, product placement, event marketing, grass root marketing, marketing at school, product licensing, packaging, guerilla marketing. It has become easy to reach children via this plethora of media mixes. Apart from strategies focusing on building a loyal customer in adulthood and senior age, Šramová (2014) mentions that 'cradle-to-grave' marketing has become a mainstream strategy by many marketers with a belief that the sooner the child is captured by them, the sooner it would build the future customer base for them.

## **OBJECTIVES**

- To study the influence of age on the buying behaviour of children towards premium game consoles.
- To study the influence of family income on the buying behaviour of children towards premium game consoles.

## **HYPOTHESES**

- $H_0$ : There is no significant influence of age on the buying behaviour of children towards premium game consoles.

- $H_1$ : There is a significant influence of age on the buying behaviour of children towards premium game consoles.
- $H_0$ : There is no significant influence of family income on the buying behaviour of children towards premium game consoles.
- $H_2$ : There is a significant influence of family income on the buying behaviour of children towards premium game consoles.

## RESEARCH METHODOLOGY

- **Research Design:** The research is both exploratory and descriptive.
- **Sample Size:** The study's sample size was taken to be 100 children 9-15 years of age, out of which 87 responded. The significance level considered is 5%.
- **Geographical Area:** The area considered for the research is Delhi.
- **Sampling Technique:** For the study, stratified sampling technique is employed.

## Data Collection

- **Primary Data:** For primary data collection, the questionnaire was filled out by 87 out of 100 respondents (children) aged 9-15 years.
- **Secondary Data:** Secondary data has been employed from various journals, previous pieces of literature, articles, etc.
- **Segment:** For the research, the premium game consoles segment was considered with a price range of Rs. 20,000 to Rs. 50,000.
- **Analysis Technique:** ANOVA was used for data analysis.

## RATIONALE OF THE RESEARCH

Literature and research are abundant on children as consumers, taking into account psychological perspectives, determinants of children's personalities, their role in family purchasing decisions, and other external factors. However, there is a lack of research on children's buying behaviour in the context of India. Children as consumers are gaining priority in the market because they are not just the current customers who influence their family decisions but also the potential customers. Children in India form a segment of 27- 28% of the population, still the studies on them are not satisfactory.

## RESEARCH GAP

There has been some research in relation to eatables, toiletries, toys, etc., but no visible research on children's buying behaviour in the premium game console segment. The factors taken into consideration are children's age and their family income that influence their buying behaviour to the respective segment.

## ANALYSIS AND DISCUSSION

**Table 1:** Number of Responses

<i>Respondent Profile</i>	<i>Number of Respondents</i>
Respondents who own premium game consoles	61
Respondents who don't own premium game consoles	26
Total	87

Table 1 indicates the number of responses received from children for the study. The number of children who own and do not own premium game consoles is 61 and 26, respectively, showing the total number of respondents to be 87 out of the aggregate sample of 100.

**Table 2:** Frequency of Age and Family Income of Children

		<i>Value Label</i>	<i>N</i>
Age of the respondents	1	9-11	23
	2	11-13	18
	3	13-15	20
Family income	1	Below Rs. 15,00,000	22
	2	Rs. 15,00,000-Rs. 30,00,000	19
	3	Above Rs. 30,00,000	20

Table 2 shows the frequency of the respondents (children) who own the premium game consoles with respect to their age and their family income. The number of respondents in the age brackets of 9-11 years, 11-13 years and 13-15 years are 23, 18 and 20, respectively; and with respect to the family income brackets of below Rs. 15,00,000, Rs. 15,00,000- Rs. 30,00,000 and above Rs. 30,00,000 are 22, 19 and 20, respectively, the aggregate number of respondents owning the premium game consoles being 60.

**Table 3:** Buying Behaviour of Children with Reference to Premium Game Consoles as per Age

		<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Friend/Cousin has the premium game console	Between Groups	56.762	2	28.381	41.882	.000
	Within Groups	39.303	58	.678		
	Total	96.066	60			
Saw on a video channel	Between Groups	60.253	2	30.126	36.002	.000
	Within Groups	48.534	58	.837		
	Total	108.787	60			
Games and graphics	Between Groups	.506	2	.253	.902	.411
	Within Groups	16.281	58	.281		
	Total	16.787	60			

		<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Place of buying	Between Groups	.233	2	.117	.879	.421
	Within Groups	7.701	58	.133		
	Total	7.934	60			
Price (expensiveness)	Between Groups	.051	2	.025	.087	.917
	Within Groups	16.965	58	.293		
	Total	17.016	60			
Enjoy playing on premium game consoles	Between Groups	2.964	2	1.482	4.137	.021
	Within Groups	20.774	58	.358		
	Total	23.738	60			
Parents initially agreed to buy premium game consoles	Between Groups	.853	2	.427	.435	.650
	Within Groups	56.917	58	.981		
	Total	57.770	60			
Want to buy more premium game consoles	Between Groups	26.564	2	13.282	27.169	.000
	Within Groups	28.354	58	.489		
	Total	54.918	60			

Table 3 shows the buying behaviour of children with reference to premium game consoles as per their age. Here, age is the independent factor and dependent factors are: cousin/friend has the premium game console, saw on a video channel, games and graphics, place of buying, price (expensiveness), enjoy playing on premium game consoles, parents initially agreed to buy premium game consoles and want to buy more premium game consoles. The analysis suggests that the null hypothesis is accepted at a 5% significance level in the case of games offered and graphics, place of buying, price (expensiveness) and parents initially agreed to buy premium game consoles. However, the null hypothesis is rejected when considering the variables such as friend/cousin has a premium game console, saw a premium game console on video channel, enjoy playing on premium game consoles and want to buy more premium game consoles because the significance value is less than 0.05.

Table 4 shows the buying behaviour of children with reference to premium game consoles as per their family income, with family income being the independent factor and place of buying, price, want to buy more premium game consoles and parents initially agreed on buying premium game consoles as the dependent factors. The analysis suggests that the null hypothesis is accepted at a 5% significance level in the case of place of buying, price (expensiveness) and want to buy more premium game consoles, whereas, the null hypothesis is rejected in the case of parents initially agreed to buy more premium game consoles as the value is less than 0.05.

**Table 4:** Buying Behaviour of Children with Reference to Premium Game Consoles as per Family Income

		<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Place of buying	Between Groups	.037	2	.019	.136	.873
	Within Groups	7.897	58	.136		
	Total	7.934	60			
Price (expensiveness)	Between Groups	2.740	2	1.370	5.567	.006
	Within Groups	14.276	58	.246		
	Total	17.016	60			
Want to buy more premium game consoles	Between Groups	1.333	2	.667	.722	.490
	Within Groups	53.585	58	.924		
	Total	54.918	60			
Parents initially agreed on buying premium game consoles	Between Groups	21.223	2	10.611	16.840	.000
	Within Groups	36.548	58	.630		
	Total	57.770	60			

## FINDINGS

Out of 87 respondents, 61 own premium game console(s). Age significantly impacts the buying behaviour of children with regard to friends/cousins owning premium game consoles, by seeing the premium game console on a video channel, their enjoyment level and preference to buy more premium game consoles. The smaller the age, the more is the impact of others owning the consoles and the more is the influence of video channels or influencers. And, the enjoyment of playing on the consoles as well as the preference to buy more decreases as the age ascends. The games offered and graphics are liked by all age groups.

Price is considered to be expensive by the majority of the respondents falling in different age groups but it does not affect their buying decision. For the purchase of premium game consoles, the majority of the parents did not initially agree with their children. However, it does not have any impact on the buying decision of the consoles indicating that the parents agreed to buy at a later stage. Family income does not impact the place of buying, i.e., online or offline of the premium game consoles. The perception of price changes in different income brackets. Price is considered to be very expensive with children belonging to family income below Rs. 15,00,000 as compared to other income groups.

## **CONCLUSION**

Children as consumers are complex as they don't possess the same traits and comprehensions as those of adult consumers. Their way of thinking, perceptions, ideas and knowledge are different and limited and their decision-making evolves with their cognitive development and growth. However, their ability to influence family decisions on various matters, especially purchases of their choices is remarkable. As the study revealed, parents, even after not equating initially on the purchase of the premium game consoles, finally agreed to buy the product for their children. One of the reasons for fulfilling the children's demands is the collaborative approach followed by the gentry belonging to the metropolitan city in consideration that is Delhi.

When focusing on children's buying behaviour, the decision may change with age and family income on certain aspects, but not on all. Children have become sophisticated in understanding the features, price, etc. of various products; however, their buying decision may not be entirely impacted by all the variables considered. Certain variables that hold importance at an early age do not impact as the child grows, for e.g., the need to have a product because their peers have them diminishes with maturity. However, there are certain facets that are known but are ignored by the children to fulfil their demands, for instance, the price of the product even after comprehending it to be high, are ignored because of the desire to have the premium game console.

## **IMPLICATIONS**

Factors considered for the study are the age and family income of the respondents. Other factors such as gender, dual-income families, number of siblings, etc., could be considered to study the children's buying behaviour. The geographical area considered for collecting the responses is Delhi which is a metro city; therefore, findings could not be applied to other regions. A similar study could be carried out in two-tier cities as well. This study focuses on children who own premium game consoles. Further studies could be done on the children who do not own the premium game consoles to understand their perceptions and their reasons for not buying these products. A study on the parents' perceptions of premium game consoles could also be performed.

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# **A Proposed Framework for Measuring Corporate Governance Practices in India**

**RESHAM GOYAL & R.C. DANGWAL**

## **INTRODUCTION**

A significant portion of earlier research makes clear how important corporate governance is. The corporate governance practices both inside and outside of India have been examined by numerous academicians. Corporate governance is said to have an effect on firm performance (Claessens & Yurtoglu, 2013; Core et al., 2006; Cremers & Nair, n.d.; Ehikioya, 2009; Huang & Tompkins, 2010; Renders et al., 2010; Varshney et al., 2012), market valuation (Balasubramanian et al., 2010; Kohli & Saha, 2008; Varshney et al., 2012), the effectiveness of the financial market(Kohli & Saha, 2008), the creation of favorable investment opportunities(Kohli & Saha, 2008), investor protection(Chavez & Silva, 2006; Kohli & Saha, 2008; Shahid & Abbas, 2019), provides capital at lower cost (Claessens & Yurtoglu, 2013; Zhu, 2014), performance of microfinance institutions (BBVA microfinance foundation, 2011a, 2011b), capital market efficiency (Shahid & Abbas, 2019) and agency problem (Cremers & Nair, n.d.; Huang & Tompkins, 2010; Renders et al., 2010; Zulkafli & Samad, 2007). The stock price are also said to have been positively influenced by increase in governance transparency (Chavez & Silva, 2006). A better-governed company benefits from preferential treatment among shareholders, better cash flows (Zhu, 2014) improved access to financing (Claessens &Yurtoglu, 2013; Shahid & Abbas, 2019), reassurances regarding the legitimacy of accountability procedures and enhanced quality and reliability of financial data (Shahid & Abbas, 2019).

A demand for enhanced governance framework has been raised by the investors after the circulation of news about collapse of several major corporations and global crises, which has in turn created a pressure on the regulators to devise a system that would secure and protect investors' money and boost firm's sustainability (Ehikioya, 2009; Solomon, 2020). A strong governance code not only reassures investors(Qurashi, 2018;Shahid & Abbas, 2019)India and Bangladesh with the CG guide of United Nations (UN; Zulkafli & Samad, 2007; Alnaser et al, 2014; Xiaolu et al. 2016) but also draws

in investment, which supports economic growth. The provisions contained in the corporate governance regulations is said to protect the shareholders' right and enhance quality decision-making (Shahid & Abbas, 2019; Shivani et al., 2017) these decisions are most critical for all the stakeholders. This paper investigates the impact of corporate governance and investor confidence on the corporate investment decisions. Firms listed in Pakistan Stock Exchange and Bombay Stock Exchanges are taken as sample. Time period is 2008–2017. Investor confidence has been measured using Investor Sentiment Index (ISI). A strong corporate governance mechanism contributes towards effective monitoring and efficient control of business through transparency and enhanced disclosures (Arora & Bhandari, 2018).

The liberalization of Indian economy in 1992 compelled the regulators to frame corporate governance regulations and the Securities and Exchange Board of India (SEBI) Act was passed in the same year that enabled the government to develop and regulate Indian security market. In the following years in 1998 Securities and Exchange Board of India (SEBI) was established as statutory body, under the SEBI Act of 1992, which was responsible for regulating the Indian security market (Chakrabarti et al., 2008). Gradually the SEBI was strengthened, various committees were constituted, and their recommendations were enacted by the introduction of Clause 49 of listing agreement (Mishra & Mohanty, 2014; Srivastava et al., 2018, 2019). The clause was revised on multiple occasions following the failures of corporates due to the adoption of unethical practices at top level of management, and a number of governance guidelines have been mandated by the government to further strengthen the governance system (Goel, 2018). In order to further enhance the governance mechanism in Indian, the Listing Obligation and Disclosure Requirement (LODR) were introduced in 2015. The new LODR guidelines incorporates within itself the principles governing corporate governance disclosure which are in line with International Organization of Securities Commissions (IOSCO) principles and is also said to be in line with the provisions of Companies Act, 2013. OECD principles for corporate governance, which are famous worldwide have also been incorporated in these new governance guidelines (ICSI, 2016).

In the history of corporate governance, various bodies have tried to define the concept, but the definition given by Cadbury Committee and Organization for Economic Cooperation and Development(OECD) has been widely used by the academician (Chatterjee, 2011; Goel, 2018; Iqbal et al., 2019; Qurashi, 2018; Raithatha & Bapat, 2012). The Cadbury Committee focuses on the mechanism that directs and controls a business. Whereas OECD focuses on the inter-relationship among company's different

participants. It distributes the rights and responsibilities amongst these participants (i.e., the top management, the board, the shareholders and other stakeholders) and further defines a structure which sets the company's objectives and the means for achieving them. Considering the participants of the governance mechanisms Iqbal et al. (2019) divided corporate governance into two dimensions, the leadership, consisting of the board and the top management and the ownership structure. The interaction among the three major participants of the governance mechanism has also been highlighted by authors like Tricker (1994) and Monks and Minow (1995). The board, the top management and the shareholders are considered as an integral part of the internal governance mechanism of any organization (Licht, 2013). According to Montgomery and Kaufman (2003), the shareholders, the board and the top management constitute the governance structure of any firm and the corporate governance disclosure lies in the interaction among these participants of the governance mechanism. The Kumaramangalam Birla Committee, on whose recommendation the SEBI's corporate governance code was formulated, in their report on corporate governance also identified the shareholders, the board and the top management as important constituents of corporate governance and entrusted them with the responsibility for conducting the business with transparency, accountability and equity (Chatterjee, 2011).

It is essential to examine a company's corporate governance practices given the significance of these mechanisms. A whole lot of previous studies have used index to measure the corporate governance practices of the corporate world, both within and outside India (Almaskati et al., 2020; Arora & Bhandari, n.d.; Chatterjee, 2011; Goel, 2018; Gulati et al., 2020; Kohli & Saha, 2008; Mishra & Mohanty, 2014; Qurashi, 2018; Srivastava et al., 2019; Subramanian & Reddy, 2012). An efficient tool for benchmarking and facilitating sound policy analysis, a composite index of corporate governance condenses the variety of governance indicators—which are defined in various corporate governance dimensions, such as board effectiveness, audit function, etc. into a single numerical score. Additionally, regulators may more easily assess the effectiveness of governance developments as a result of modifications made to the corporate governance index (Gulati et al., 2020). By utilising metrics like the percentage of outside directors on the board, the division of the chairman's and CEO's roles, and other similar indications, a well-crafted corporate governance index can also separate good governance from bad governance practices (Mishra & Mohanty, 2014). Companies following good governance practices can raise funds at lower cost (Agrawal et al., 1996) and remain an attraction for the investors even during recession (Allen, 2005). However, studies analyzing the impact of corporate governance on its various descendants have reported mixed findings, leading to inconclusive results. These contradictory results

can be attributed to the adoption of different corporate governance metrics by different research (Chen et al., 2007; Chidambaran et al., n.d.; Core et al., 2006; Khanchel, 2007; Larcker et al., 2004).

The contribution of this research is in its development of a comprehensive framework for assessing the corporate governance practices of Indian corporations. This framework encapsulates the key components of earlier corporate governance indexes. For identification of previous research work done in the field of constructing corporate governance index, we considered the work of Almaskati et al. (2020). The authors reviewed the current status of corporate governance research in India. They divided their review work into three major categories i.e., studies based on primary data and indices, studies based on secondary data (quantitative data/ scores focusing on financial information) and conceptual studies. The authors conducted systematic literature review following the five step process suggested by Ahmad & Omar (2016). Since the authors employed a number of extremely reliable databases, including Emerald, Since Direct, Springer, Taylor and Francis, Wiley online Library, Sage Journals, Inderscience, and Google Scholar, the use of their research to identify prior indices is acceptable. The governance literature was searched by them from 2000 to 2020. The year 2000 matches with the year of introduction of corporate governance code in India, i.e., Clause 49 of listing agreement, hence covering almost an entire period since the introduction of governance code in the country. Findings from the study included the identification of 22 research publications with corporate governance index. In addition, we discovered three other research studies that developed an index of corporate governance to evaluate the governance practices of Indian corporations. 25 research publications with corporate governance index in all were ultimately taken into consideration for the study. Further, given the scarcity of studies that have sampled after 2015 and corporate governance practices following the revision of the corporate governance code (Almaskati et al., 2020), the proposes framework also captures the major features of new corporate governance regulation, namely LODR, 2015. This study offers an overview of how the interests of the company's management, shareholders, and board are now integrated through corporate governance.

## **CURRENT MEASUREMENT OF CORPORATE GOVERNANCE PRACTICES**

With a few studies focusing on the Companies Act, the OECD Principles, and prior literature, the majority of previously developed corporate governance indices are based on clause 49 of listing agreements, according to an extensive content analysis of the literature review (Table 1). One of the studies (Maheshwari, 2018) nevertheless, created a corporate governance index based

**Table 1:** Previous Indices

S. No.	Studies	Year	Governance Index Based on	Sample	Key Constructs	No. of Items
1	Chatterjee (2011)	2001–02 and 2002–03	Clause 49	30 Indian companies from BSE Sensex	<ul style="list-style-type: none"> <li>• Corporate Governance Index</li> <li>• Statement of company's philosophy on code of governance</li> <li>• Board of directors</li> <li>• Audit committee</li> <li>• Remuneration committee</li> <li>• Shareholders committee</li> <li>• General body meetings</li> <li>• Disclosures</li> <li>• Means of communication</li> <li>• General shareholder information</li> </ul>	50
2	Gulati et al. (2019)	2017	<ul style="list-style-type: none"> <li>• Companies Act, 1956</li> <li>• Reserve Bank of India (India's central bank)</li> <li>• Clause 49</li> </ul>	40 Indian banks	<ul style="list-style-type: none"> <li>• Board Effectiveness</li> <li>• Audit Function</li> <li>• Risk Management</li> <li>• Remuneration</li> <li>• Shareholder Rights and Information</li> <li>• Disclosure and Transparency</li> </ul>	58
3	Kohli & Saha (2008)	2002–06	<ul style="list-style-type: none"> <li>• Clause 49</li> <li>• OECD principals</li> <li>• Recommendations of CII, Institutional Shareholder Services and CLSA questionnaire</li> </ul>	30 companies	<ul style="list-style-type: none"> <li>• Structure, composition and management of the board</li> <li>• Board committees</li> <li>• Compensation</li> <li>• Shareholder rights: SH score</li> <li>• Concentration of ownership</li> <li>• Value Creation and Social awareness</li> </ul>	18

S. No.	Studies	Year	Governance Index Based on	Sample	Key Constructs	No. of Items
4	Mishra & Mohanty (2014)	–	Previous studies	141 companies belonging to the “A” group stocks listed in the Mumbai Stock Exchange of India	<ul style="list-style-type: none"> <li>Legal Indicator</li> <li>Board Indicator</li> <li>Proactive Indicator</li> </ul>	13
5	Qurashi (2018)	NA	CG Voluntary Guidelines issued by Ministry of Corporate Affairs in 2009	NA	<ul style="list-style-type: none"> <li>Ownership Structure and Exercise of Control Rights</li> <li>Financial Transparency</li> <li>Auditing</li> <li>Board and Management Structure and Process</li> <li>Board and Management Structure and Process</li> </ul>	52
6	Almaskati et al. (2020)	2010 to 2017	Institutional Shareholder Services (ISS) Governance Quick Score 3.0	43 countries and 3301 firms	<ul style="list-style-type: none"> <li>Board structure and policies</li> <li>Anti-takeover provisions</li> <li>Compensation and ownership</li> </ul>	36
7	Srivastava et al. (2019)	2001 – 2016	All recent amendments and changes introduced by the regulators, the OECD principles voluntary involvement of firms to improve their corporate governance practices.	Firms listed in BSE 500 index	<ul style="list-style-type: none"> <li>Board composition</li> <li>Board activity</li> <li>Audit committee</li> <li>Shareholder’s grievance committee</li> <li>Nomination and remuneration committee</li> <li>Ownership structure</li> <li>Cross listing</li> </ul>	42

S. No.	Studies	Year	Governance Index Based on	Sample	Key Constructs	No. of Items
8	Iqbal et al. (2019)	2007 - 2011	Previous studies	173 MFIs in 18 Asian countries	<ul style="list-style-type: none"> <li>• Board size</li> <li>• Board diversity: Gender</li> <li>• Board diversity: Financial expertise, Local residency</li> <li>• CEO/Chairman Duality</li> <li>• Female CEO</li> <li>• Ownership Type</li> </ul>	7
9	Jacoby et al. (2019)	Jan 2009 to Dec 2013	January 2009 and December 2013	4,195 monthly observations between January 2009 and December 2013	<ul style="list-style-type: none"> <li>• Executive compensation tied to sustainability performance</li> <li>• Board independence</li> </ul>	3
10	Shahid & Abbas (2019)	2008 - 17	Previous studies	Firms listed in Bombay Stock Exchanges: 123	<ul style="list-style-type: none"> <li>• Board size</li> <li>• Board independence</li> <li>• Audit and nomination (remuneration) committees</li> </ul>	3
11	Goel (2018)	2012 - 13 and 2015 - 16	Clause 49 Company Act, 2013	Top 100 companies ranked on the basis of revenue in the list of The Economic Times 500 (ET500), 2016.	<ul style="list-style-type: none"> <li>• Shareholders</li> <li>• Employees</li> <li>• Suppliers and customers</li> <li>• Community</li> <li>• Environment</li> </ul>	17
12	Kansil& Singh (2018)	NA	Literature, expert opinion and survey	450 respondents	<ul style="list-style-type: none"> <li>• GI 1 Companies internal management structure and the board</li> <li>• GI 2 Judiciary system of the country</li> <li>• GI 3 Regulatory framework including monitoring institutions of the country</li> <li>• GI 4 Ownership structure of the companies</li> </ul>	21

S. No.	Studies	Year	Governance Index Based on	Sample	Key Constructs	No. of Items
					<ul style="list-style-type: none"> <li>• GI 5 Code of best practices of corporate governance</li> <li>• GI 6 Culture and value system of the society</li> <li>• GI 7 The standard of CG in India is comparable to that of Asian countries</li> <li>• GI 8 The existing CG regulations are effectively implemented by most India firms</li> <li>• GI 9 Regulatory monitoring of CG compliance is adequate</li> <li>• GI 10 Most listed companies have already taken measures to strengthen their CG management</li> <li>• GI 11 Lack of integrity and ethics among top management</li> <li>• GI 12 Insider trading</li> <li>• GI 13 Inadequate protection of minority shareholders' rights</li> <li>• GI 14 Conflicts of interest of directors</li> <li>• GI 15 Drain off of funds through associate or subsidiary companies</li> <li>• GI 16 Independent directors do not exercise true independence in decision making</li> </ul>	30
13	Singla & Singh (2018)	31-Mar-15	Clause 49	NSE 500 companies as on 31/03/2015.	NA	
14	Srivastava et al. (2018)	2001–2015	Previous studies	Firms listed in CNX Nifty - 50 well-diversified stocks	<ul style="list-style-type: none"> <li>• Board size</li> <li>• Board independence</li> <li>• Female directors on corporate boards</li> </ul>	5

S. No.	Studies	Year	Governance Index Based on	Sample	Key Constructs	No. of Items
15	Haldar & Raithatha (2017)	31-Mar-12	Previous studies	200 large listed Indian firms	<ul style="list-style-type: none"> <li>The Board of Director Sub Index</li> <li>The Audit Committee Sub Index</li> </ul>	17
16	Arora & Bhandari (2017)	2008-09 to 2012-13	Clause 49 Companies Act 2009.	50 companies listed in the S&P CNX NIFTY Index as on 31 March 2014	<ul style="list-style-type: none"> <li>The Board of Directors Index</li> <li>The Audit Committee Index</li> <li>The Disclosure Index</li> <li>The Legal Compliance Index</li> <li>The Related Party Transaction Index</li> </ul>	64
17	Kang & Nanda (2017)	2003-2012	Previous studies	134 listed companies	<ul style="list-style-type: none"> <li>Governance Structure</li> <li>Ownership Structure</li> </ul>	6
18	Chauhan et al. (2016)	2003-2013	Clause 49	755 firm-year observations for these 84 firms	<ul style="list-style-type: none"> <li>Board Structure Index</li> <li>Audit Committee Index</li> <li>Remuneration Committee Index</li> <li>General Body Meetings Index\</li> <li>Disclosures Index</li> </ul>	34
19	Abraham et al. (2015)	2004 and 2006	Clause 49	BSE-100 index	NA	42
20	Balasubramanian et al. (2008)	Year end 2005	Clause 49 and survey	296 firms	<ul style="list-style-type: none"> <li>Board Structure Index</li> <li>Board independence subindex</li> <li>Board committee subindex</li> <li>Disclosure Index:</li> <li>Disclosure substance subindex</li> <li>Auditor independence (disclosure reliability) subindex</li> <li>Related Party Index: <ul style="list-style-type: none"> <li>RPT volume subindex</li> <li>RPT approval subindex</li> <li>Shareholder Rights Index</li> </ul> </li> </ul>	49

S. No.	Studies	Year	Governance Index Based on	Sample	Key Constructs	No. of Items
21	Raithatha& Bapat - (2012)	Clause 49	30 A group companies	<ul style="list-style-type: none"> <li>Board Procedure Index: <ul style="list-style-type: none"> <li>Overall procedure subindex</li> <li>Audit committee procedure subindex</li> </ul> </li> <li>Corporate Governance Philosophy <ul style="list-style-type: none"> <li>Composition of Board of Directors</li> <li>Number of Board Meetings in a year</li> <li>Code of conduct</li> </ul> </li> <li>Audit Committee <ul style="list-style-type: none"> <li>Shareholder's Grievance Committee</li> <li>Whistle Blower Policy</li> <li>Disclosure</li> </ul> </li> <li>Management Discussion and Analysis Report <ul style="list-style-type: none"> <li>CEO/CFO Certification</li> <li>Compliance Report on Corporate Governance</li> <li>Remuneration Committee</li> <li>Training of the Non Executive Directors</li> <li>Postal Ballot</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Overall procedure subindex</li> <li>Audit committee procedure subindex</li> <li>Corporate Governance Philosophy <ul style="list-style-type: none"> <li>Composition of Board of Directors</li> <li>Number of Board Meetings in a year</li> <li>Code of conduct</li> </ul> </li> <li>Audit Committee <ul style="list-style-type: none"> <li>Shareholder's Grievance Committee</li> <li>Whistle Blower Policy</li> <li>Disclosure</li> </ul> </li> <li>Management Discussion and Analysis Report <ul style="list-style-type: none"> <li>CEO/CFO Certification</li> <li>Compliance Report on Corporate Governance</li> <li>Remuneration Committee</li> <li>Training of the Non Executive Directors</li> <li>Postal Ballot</li> </ul> </li> </ul>	30
22	Subramanian & Reddy (2012)	2003 - 04 and 2004 - 05	S&P's transparency and disclosure instrument	Listed Indian non-financial service firms, whose revenue exceeded 5 billion Indian Rupees during the financial year 2004- 2005: 269	<ul style="list-style-type: none"> <li>Board and management structure and process</li> <li>Ownership structure and investor relations</li> </ul>	67

S. No.	Studies	Year	Governance Index Based on	Sample	Key Constructs	No. of Items
23	Sarkar et al. (2012)	2003 to 2008	Clause 49	500 large listed firms	<ul style="list-style-type: none"> <li>• The Board of Directors</li> <li>• The Ownership Structure</li> <li>• The Audit Committee</li> <li>• The Auditor</li> </ul>	22
24	Maheshwari (2018)	2016 - 17	(Listing Obligations and Disclosure Requirements) Regulations 2015 Companies Act 2013	Three companies of IT Sector, which are included in BSE SENSEX; Infosys Ltd., Tata Consultancy Services Ltd., Wipro Ltd	<ul style="list-style-type: none"> <li>• Philosophy on code of governance;</li> <li>• Composition of board and their meetings;</li> <li>• Chairman and CEO duality;</li> <li>• Director's disclosure;</li> <li>• Independent directors disclosure;</li> <li>• Disclosure on remuneration;</li> <li>• Directorship and committee's membership/ chairmanship held by directors;</li> <li>• Code of conduct;</li> <li>• Post board meeting follow up;</li> <li>• Board committees including audit committee, Nomination and remuneration committee, Shareholder's/ stakeholder's relationship committee, Risk management committee;</li> <li>• Disclosure and transparency;</li> <li>• General body meeting;</li> <li>• General shareholder's information;</li> <li>• Whistleblower policy;</li> <li>• CEO/CFO certification;</li> <li>• Auditor's certificate;</li> <li>• Insider's trading and disclosure of stakeholder's interest</li> </ul>	74

S. No.	Studies	Year	Governance Index Based on	Sample	Key Constructs	No. of Items
25 Bajpai & Mehta (2014)		2012 - 13	Clause 49 A and B	ITC and ONGC	<ul style="list-style-type: none"> <li>• Exclusive section on CG</li> <li>• Chairperson's Details</li> <li>• Office of Chairman and CEO</li> <li>• Independent director(s) to total director</li> <li>• Lead Senior Independent Director</li> <li>• Women Directorship</li> <li>• Disclosure of nomination of ID with criteria</li> <li>• Definition of Independent Director</li> <li>• Tenure of Independent Director</li> <li>• Separate meeting for Independent Director (ID)</li> <li>• Orientation for BOD including ID</li> <li>• Regular communications to non-executive directors</li> <li>• Training and workshops for BOD</li> <li>• Affirmative statement from ID</li> </ul>	14

Source: Authors' Compilation

on the 2015 Listing Obligation and Disclosure Requirement (LODR), which has also undergone numerous revisions since it was first implemented. On the other hand, our methods for building the corporate governance index is different. We consider the most recent version of the LODR document available on the SEBI website, as of April 14, 2023. In addition, we took into account and included items from earlier structured indices, underscoring the significance of good governance practices.

## CONSTRUCTION OF INDEX

To determine the main focal region of those indices, we extracted every item from the earlier study and created a word cloud (Fig. 1) using Nvivo 14. The word cloud showed that the phrases “board of directors” and “committee” were the most frequently studied subjects in the prior research, followed by “company,” “shareholding,” “meets,” “report,” and “disclosed” (Table 2). It is also clear that managers have gotten less attention, indicating that senior management has not been given enough attention. While some scholars, such Kansil & Singh (2018) and Subramanian & Reddy (2012) have acknowledged the significance of senior management in corporate governance mechanisms, yet they have treated board structure and management structure as a single governance mechanism. Since senior management is a key component of the internal corporate governance mechanism, it is imperative that they be given appropriate weightage when developing the governance index (Licht, 2013).



**Figure 1:** Word Cloud

*Source:* Authors'

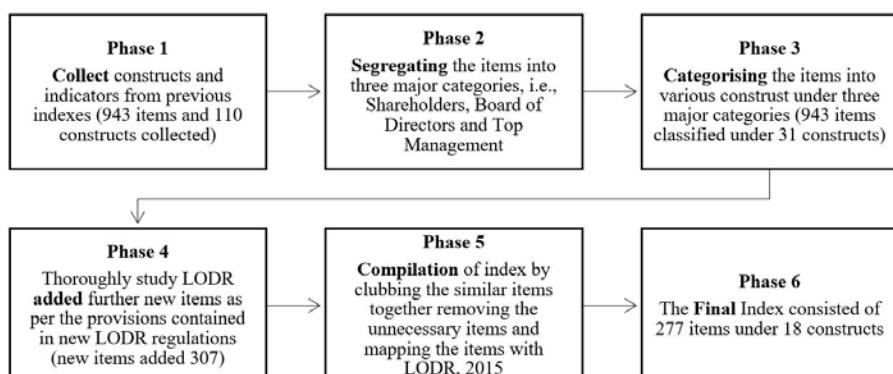
A total of 943 items were collected from the previous indices which were classified under 110 constructs or sub-indices by previous authors. Content analysis was performed on all the items and constructs of previous indices along with new LODR, 2015. It took us 6 phases (Figure 2) to develop a

comprehensive corporate governance framework which not only captures the substance of all the previously used indices but also incorporates the new

**Table 2:** Word Frequency Table

Word	Count	Weighted Percentage (%)	Similar Words
Directors	157	3.13	Director, Directors, Directors'
Board	154	3.07	Board, Boards
Committee	120	2.39	Committee, Committees
Company	118	2.35	Companies, Company
Shareholding	85	1.69	Shareholder, Shareholders, Shareholders', Shareholding
Meets	79	1.57	Meet, Meeting, Meetings, Meets
Report	79	1.57	Report, Reporting, Reports
Disclose	74	1.47	Disclose, Disclosed, Discloses
Audit	62	1.24	Audit, Audited
Disclosure	57	1.14	Disclosure
Members	55	1.10	Member, Members, Members'
Managers	54	1.08	Manage, Management, Manager, Managers, Managers'
Appointment	45	0.90	Appoint, Appointed, Appointment, Appoints
Chairman	43	0.86	Chairman
Independent	42	0.84	Independence, Independent
Policy	42	0.84	Policies, Policy
Executive	41	0.82	Executive, Executives
Auditors	39	0.78	Auditor, Auditors, Auditors'
NED	38	0.76	NED

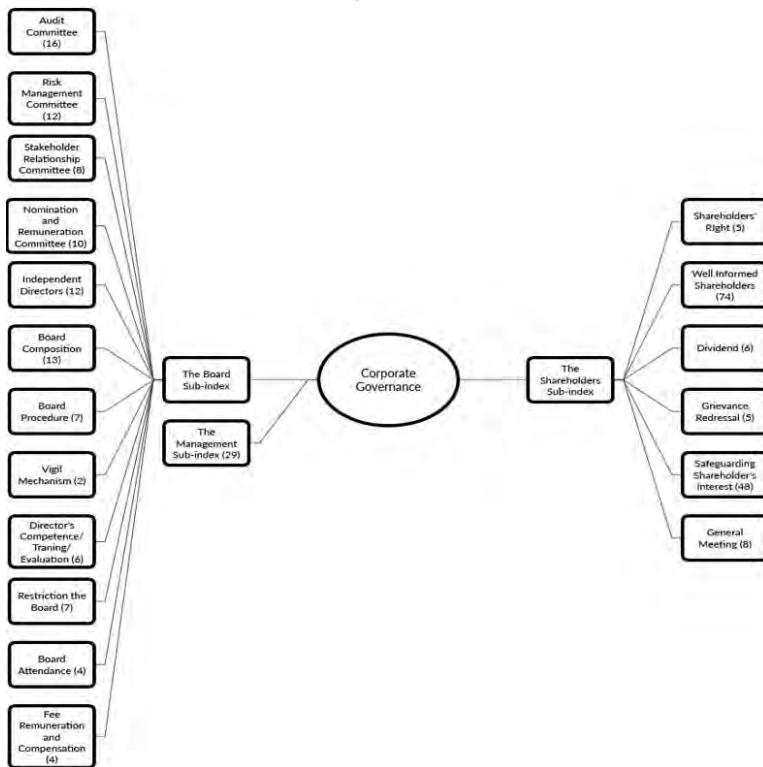
Source: Authors'



**Figure 2:** Phase-wise Construction of Corporate Governance Index.

Source: Authors'

components as per the LODR, 2015. The structure of our proposed corporate governance index is presented in Figure 3.



**Figure 3: Proposed Structure of Corporate Governance Index**

*Source: Authors'*

### **The Board Sub-Index**

The board is charged under the corporate governance code with acting in a transparent manner and upholding confidentiality in order to facilitate improved decision-making. Making business and strategic decisions, keeping an eye on governance procedures, bringing in and out KMPs, succession planning, handling conflicts of interest, adhering to legal requirements, managing the accounting and financial reporting system, and upholding internal control within the company are all under the purview of the board. The board is also in charge of the disclosure process and the board of directors' evaluation system. Any organization's board should be diversified in addition to having an array of knowledge and expertise. In addition to serving as an entity's best advocate, the board of any organisation should give its management strategic direction and efficient oversight. When the board makes decisions about the company, it is their responsibility to treat each

stakeholder fairly and to maintain independence. With a sufficient number of non-executive directors, the board can avoid conflicts of interest and maintain its independence. In addition, the board bears the duty of exercising caution when it comes to the risks that an organisation faces in the course of conducting business. In order for the board to carry out all of these duties, the Indian corporate governance code has established a number of structural and procedural criteria. The governance code defines the board composition, which includes elements like board size, the percentage of NEDs on the board, non-executive chairmanship, the presence of women directors, and the chairman-CEO duality. These elements have also been used in previous indices to evaluate the board's quality. To gauge the caliber of the board composition, we also advise using elements like the policy on diversity of the board and a list of potential candidates who meet the requirements to become directors.

The board procedures consisting of components like number of board meetings, gap between board meetings, responsibility for formulation of risk management plan, laying down code of conduct for senior management and affirmation on compliance with code of conduct have been used previously as well. To evaluate the board process, it is also advised to include elements like the adoption of the policy on the assessment of materiality and the inclusion of the independent director's obligations in the code of conduct. Another crucial component of corporate governance that protects the organization's integrity and motivates staff members and directors to speak out against any suspected wrongdoing is the existence of vigil mechanisms. It is also advised to include direct access and security for those using the vigil mechanism in order to evaluate the board's quality. They must be competent, regularly trained, and evaluated in order for the board to operate effectively. The corporate governance process has historically been evaluated using elements such as the board's qualifications, the training programs directors get, and the standards for evaluating independent directors. We also suggest the inclusion of other elements, such as a matrix or chart that lists the experience and skills of the directors and a real assessment of the qualifications and skills of the independent directors.

The number of directorships a director may hold, as well as their membership in and chairmanship of committees of other organisations, are among the restrictions placed on the board to protect the interests of the shareholders and ensure the board operates efficiently. One such restriction, which prohibits directors from accepting payment for dealing in the listed entity's securities without first receiving approval from the board and the public shareholders, had never been included in an index before, so it is suggested to be included. The commitment of directors to the organization's operations is demonstrated by their attendance at the annual general meeting

and board meetings, as well as by their quorum attendance. Nevertheless, the new corporate governance code has introduced provisions regarding the use of audio-video attendance, which is a novel concept meant to facilitate the smooth operation of the governance mechanism. Previously, this measure was not even employed, but we have included it to gauge the effectiveness of governance. In order to avoid any conflicts of interest that may arise from their employment with the company, the directors are also compensated. While the disclosure of director compensation was utilised in earlier indices, we make the suggestion to measured corporate governance standards using the sitting fee given to directors as well as a separate disclosure on the sitting fee paid to women and independent directors.

Although the idea has evolved over time, it is customary practice to include items pertaining to independent directors in earlier indices. With the help of elements like the percentage of independent directors on the board, programs for their familiarization and training, a separate meeting for them, their tenure, the terms and conditions under which they are appointed, their independence, and their directorship in other organisations, a completely new construct for independent directors can be created. All the same, an independent director must fulfil specific review responsibilities, and the shareholders' consent must be obtained before they can be appointed. It is mandatory to provide D&O insurance to independent directors and to refrain from appointing any alternate directors in their place. All these components are suggested to be incorporate for assessment of independence of the board of directors. Since most committees require directors as members, we only looked at committees that were included in the board index. Committee constructs were measured using various criteria, such as composition, chairman, number of members, secretary, term of reference, meetings, role etc.

### **The Shareholders Sub-Index**

One of the internal corporate governance processes that has received the most attention in industrialized nations—especially the US and the UK—is the ownership structure of a publicly traded company. Emerging economies have also recently seen a surge in research on this topic. While all corporate governance issues stem from a firm's ownership and control structure, the literature on ownership as a governance mechanism focuses on how the ownership structure itself—that is, the ownership of stock by various shareholders—can independently or jointly reduce agency costs in a firm (Bajpai & Mehta, 2014) they need to be professionally run in the best interest of investors. Board of Directors (BoD). The rights of shareholders include the provision of adequate and timely information, the ability to vote on significant choices, the right to submit questions and resolutions, the ability to participate

in critical governance decisions, the handling of grievances, the right to fair treatment, etc. As part of the governance mechanism, academicians have previously used the rights granted by the governance regulations to assess the quality of shareholders, such as approval of the appointment of directors and compliance with regulatory provisions for transfer/transmission of shares. However, shareholder's approval for independent directors and manager's appointment is further suggested to be incorporated.

The company's financial year, the date of book closure, the name of the RTA, the market price of the shares, the listing status, the quarterly financial results, the half-yearly financial performance declaration, the outstanding ADRs/GDRs, the penalty imposed, the non-executive director's shareholding, the company's website details, committee details, director compensation, and other information have all been used in the past by academic community while framing governance indices. To improve the quality of information that the company's shareholders receive, we recommend using elements like providing them with timely notice of the annual general meeting (AGM), a copy of the annual report, any necessary attachments to the report, information on the shareholding pattern, the experience of a recently appointed director, the relationship between directors, the policy on determining materiality, the policy on dealing with related party transactions, the policy on determining a material subsidiary, the annual information memorandum, details on the agreement with the media company, business information on the website, etc.

Another significant form of corporate governance is the dividend, which is paid to shareholders as compensation for their capital contributions and willingness to assume risk. A few other components, such as the specifics of the dividend distribution policy, the steps taken to reduce unclaimed dividends, and the forfeiture of unclaimed dividends, should also be used for evaluating the shareholders' corporate governance mechanism. The previous indices used components like the dividend payment date, dividend distribution policy, and amount of dividend distributed. We suggest the use of grievance redressal construct as another one, using the same items that academicians had previously used, such as the number of complaints received, pending, and not resolved to the satisfaction of shareholders. We also suggest to added two new components, registration in SCORES and disclosure of contact information for grievance redressal, in order to assess the grievance redressal construct.

Safeguarding the interests of shareholders is another crucial concept that has been put forth. Systems such as payment default, risk management, insider trading policy, statutory auditor appointment and scope, internal control system, internal auditor mechanism, compliance with all applicable laws, and policy against insider trading are all employed in previous indices to

assess that an organisation operates properly and smoothly and, consequently, saves the interests of shareholders. To evaluate the corporate governance mechanism of the organisations, it is also recommended to consider a few other factors that were not previously used, such as the audit committee's discussion of the auditors' significant findings, the auditors' independence, the internal and statutory auditors' performance reviews, the disclosure of asset valuation, the appointment and compensation of the chief risk officer, the monitoring of the implementation of risk management policies, the conduct of secretarial audits, the appointment of the CFO, the rectification of instances of non-compliances, the auditor's resignation, forensic audit, the disclosure of directors' debarred status, and the examination of inter-corporate loans and investments.

Another crucial corporate governance vehicle that allows shareholders to communicate with the company's directors is the general meeting. Disclosures about the next annual general meeting, the three previous annual general meetings, the postal ballot facility, the resolutions, and the shareholder's proxy are examples of such items. To improve evaluation of the corporate governance mechanism of the general meeting, it is also recommended that the newly established remote electronic voting facility for shareholders be included in the index.

### **The Top Management Sub-Index**

Within the corporate governance framework, top management has received less attention. To help stakeholders make informed decisions, the corporate governance code mandates that some management-related actions be reported to them. Some of the components of governance related to top management that were used in the previous indices were the code of conduct and its affirmation for senior management, conflicts of interest, appointment of compliance officers, existence of a plan of succession for senior management, vigil mechanism for top management, point-by-point disclosure on management discussion and analysis part of annual report, existence of policy on remuneration of KMP, participation of top management in risk management. To evaluate the top management mechanism of corporate governance, it is recommended to consider additional top management-related factors, such as potential candidates for top management positions, the protection offered by the vigil mechanism, the incapacity of the CEO or MD, changes in the KMP, the role of a compliance officer, the contact information of the KMP authorised to determine materiality, and frauds and defaults committed by the KMP.

In order to evaluate the corporate governance of Indian firms, this study suggests a comprehensive corporate governance performance index that is based on previous indices and recent developments in Indian corporate

governance requirements. Three key actors in internal corporate governance mechanisms are taken into account by the index as individual responsibility centres for the purpose of computing cumulative corporate governance performance. The proposed framework can potentially address the discrepancies in the outcomes that the prior indices had on their descendants, as it encompasses all the items that have been utilised by various indices.

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# **The Social Media Ripple Effect: Exploring its Impact on Consumer Behavior towards Organic Food Products**

**PAWAN GARGA, TANUJ SHARMA & ADITI SHARMA**

## **INTRODUCTION**

The widespread impact of social media on diverse aspects of everyday existence in the modern era is irrefutable. With the emergence of the social media revolution, there are now new ways to look for and learn about a wide range of goods and services that are offered for sale. This revolutionary change has enabled customers to interact and converse about different brands with unparalleled ease and quickness (Voramontri & Klieb, 2019; Todd Powers, 2012). Social networks have developed into venues for individuals to create and distribute content on their own. It is projected that 4.41 billion people will be active users of various social networks by 2025 (Pila & Stanislavská, 2021). In the contemporary landscape, social media has emerged as a phenomenon, showcasing transformative marketing developments that serve as an alternative strategy for fortifying brands and elevating the visibility of the products they offer (Fannani & Sarma, 2020; Kaplan & Haenlein, 2010). Social media holds the power to exert a substantial influence on consumer's purchasing and dietary decisions, playing a pivotal role in shaping the foods they choose to buy and consume (Nelson & Fleming, 2019). It has the power to influence customer behavior, including dietary and buying decisions (Pila & Stanislavská, 2021). One particularly intriguing area of examination is the profound impact that social media platforms wield on consumer behavior, specifically within the realm of organic food consumption. Social media has a beneficial effect on the degree of trust that people attach to messages about organic food (Sobhanifard & Eshtiaghi, Exploratory modelling and ranking of the trust factors of messages about organic foods in social networks, 2021). This is because online platforms are dynamic, which greatly aids in building and maintaining consumer trust.

This research delves into the intricate web of influence created by social media and explores the far-reaching ripple effect it exerts on consumer decisions, particularly in the context of organic food products. The ubiquity

of social media has transformed the landscape of information dissemination and consumer engagement. In the realm of organic food choices, the dynamic force of social media emerges as a significant player, shaping modern lifestyles and influencing the decisions of a discerning consumer base. The “ripple effect” is a metaphor that provides a framework for analyzing the various effects of social media on perceptions, knowledge sharing, trust-building, and the subsequent rise in demand for natural alternatives. This study attempts to provide a thorough understanding of how social media influences customer choices about organic food. Our goal is to investigate several facets of this cascading effect to reveal the complex relationships between social media and the increasing market for organic food items.

## **SIGNIFICANCE OF THE STUDY**

The study investigates how social media has a significant influence on customer behavior, particularly in the area of organic food. The dynamic terrain of contemporary lifestyles has led to the rise of social media as a potent force in molding perceptions, distributing knowledge, and fostering trust. The research utilizes the figurative “ripple effect” to unravel the interdependent dynamics of social media’s influence, highlighting its consequences for the growing need for organic alternatives.

The study looks into how social media dynamics and consumer behavior are changing and offers insights into how preferences and choices are shifting in organic food.

The research employs the metaphor of the “ripple effect” to point out the far-reaching impact of social media on molding attitudes, disseminating information, and fostering confidence, emphasizing the mutual dependence of these elements in enhancing demand for organic food products.

## **OBJECTIVES OF THE STUDY**

- Summarize and analyze existing studies on the interplay between social media and consumer behavior in the organic food industry.
- Investigate the impact of popular social media platforms (e.g., Facebook, Twitter, Instagram) on consumer perceptions and decisions related to organic food products.

## **RESEARCH METHODOLOGY**

In our thorough investigation of the literature, we delved into two pivotal databases: Web of Science and Scopus. Our search strategy involved incorporating phrases like “organic food products” and “social media” in the article title, abstract, keyword. Additionally, we employed “organic foods” and “social media marketing” in the title, abstract, keyword sections

**Table 1**

S. No.	Author Name and Year	Title	Research Methodology	Outcome
1	Kusnoa K. D., 2023	Dominant factors influencing consumer satisfaction with the online purchase decision process through social commerce: A study of organic black rice in Indonesia	Combined convenience and stratified random sampling for end users, deliberate selection for producers, and word-of-mouth marketing for resellers. To find the main elements impacting satisfaction, LISREL 8.80 was used for path analysis and SPSS 25 for EFA.	Examined the decision-making process in online organic black rice purchases; Identified eight key factors; Found a negative correlation between satisfaction and time efficiency. Provided insights for improving online initiatives of organic black rice (OBR) enterprises.
2	Masih & Joshi, 2021	Understanding Health-Foods Consumer Perception Using Big Data Analytics	This study looked at how social media, specifically Twitter, Facebook, blogs, posts, and reviews, affects sales of health foods, particularly organic and gluten-free goods. Using Talk Walker and Google Trends data, sentiment analysis (positive, negative, and neutral) offers deep insights into how the general public views health foods.	Explored consumer perceptions of health foods using big data analysis; Focused on organic and gluten-free products; Analyzed public opinions on social media platforms. Offered crucial insights for health food manufacturers to refine products based on consumer preferences; Highlighted the impact of social media on marketing strategies and innovation.
3	Wu & Takács-György, 2022	Comparison of Consuming Habits on Organic Food—Is It the Same? Hungary Versus China	Time-stamped data, secondary literature, and official surveys are analysed using a comparative methodology in this study. A survey was administered online gathering information about their purchasing habits and willingness. Data analysis was done using SPSS software.	Highlighted the major impact of social media on consumer's desire to purchase organic food in both China and Hungary; Underlined social media's influence on consumer behavior. Emphasized the importance of social media in marketing.

S. No.	Author Name and Year	Title	Research Methodology	Outcome
4	Ladislav, 2018	Customer experience with farmers' markets: what hashtags can reveal	Gephi 0.9.1 was used to perform Social Network Analysis on Instagram data with the hashtag #farmermarket (19,398 contributions). Visual representation was aided by Force Atlas 2, and key metrics were computed.	Provided insights into consumer preferences and the significance of social and emotional values in addition to product attributes; Examined the impact of social media, especially Instagram, on consumer behavior at farmer's markets; Analyzed popular hashtags.
5	Salam, 2022	Eating for the soul: a Netnographic study of the ethical motives for organic food consumption	Analyzed over 1.5 million posts and comments on social media platforms. Using Facebook's Food Matters page as a platform, this study used Netnography to qualitatively investigate the ethical motivations for eating organic food. Using NVivo 12 to analyse 2,243 pertinent posts and comments from October 2019.	Highlighted the influence of social media discussions on perceived benefits and moral obligations; Emphasized the significance of trust in fostering or eroding consumer confidence.
6	Kusnoa & Deliana, 2022	Determinant factors of online purchase decision process via social commerce: An empirical study of organic black rice in Indonesia	Mixed methodologies with FGDs and interviews/qualitative analysis of previous studies. Using both descriptive and inferential statistics, a quantitative survey with 200 end users was examined. Convenience and stratified random sampling were used. Information gathered via Google forms, interviews, and open questionnaires from producers, resellers, and final customers. EFA, descriptive statistics, and textual analysis to analyse data in order to create and validate the model.	Examined satisfaction levels with the online OBR buying process; Advanced consumer behavior theory for organic food purchases via social commerce; Offered insights for improving online OBR enterprises.

S. No.	Author Name and Year	Title	Research Methodology	Outcome
7	Tariq, 2019	Organic food consumerism through social commerce in China	Using an integrated structural model for online impulsive buying, the research investigates China's expanding organic food sector. The survey includes parts on demographics, buying experiences, and views towards organic food. It makes use of known measures for online impulse buying, website quality, and customer attitudes. By using EFA and CFA, the research guarantees discriminant validity, convergent validity, and reliability.	Highlighted the impact of social media forums, ratings, and reviews on Chinese consumer's perceptions of organic food; Emphasized the role of visually appealing and user-friendly webpages. Examined the moderating effect of website characteristics on consumer attitudes.
8	Hilverda, 2018	'The Effect of Online Social Proof Regarding Organic Food: Comments and Likes on Facebook	241 participants in an online experiment were included in the final study. Assessed perceptions, emotions, and behavioral predictions by changing the valence and reinforcement of comments on Facebook using a 2x2 design.	Highlighted the impact of social proof, specifically Facebook likes and comments, on customer perceptions and behavioral intentions regarding organic foods.
9	Sobhaniard & Esfagh, 2021	Exploratory modelling and ranking of the trust factors of messages about organic foods in social network	Used artificial neural networks (ANN) and exploratory factor analysis (EFA). Carried out a four-phase study that included a review of the literature, qualitative interviews with 68 social media users, ANN modelling, and exploratory factor analysis (EFA) of 31 trust components.	Investigated trust-related variables impacting organic food-related messaging on social media. Pinpointed and prioritized 31 variables influencing consumer trust; Identified six important factors positively influencing trust.

S. No.	Author Name and Year	Title	Research Methodology	Outcome
10	Pilar, 2021	Healthy Food on the Twitter Social Network: Vegan, Homemade, and Organic Food	<p>Gathered 666,178 tweets about #healthyfood from January 2019 to December 2020 using the Twitter API.</p> <p>Utilising Gephi, content filtering, lowercase modification, and social network analysis, examined hashtag frequencies and interdependencies in 2019 and 2020.</p>	<p>Examined the impact of Twitter on consumer habits regarding healthy food; Focused on hashtags like #healthyfood.</p> <p>Identified relationships between a healthy diet, lifestyle, and social media influence; Revealed the prevalence of attributes like vegan, homemade, and organic.</p>
11	Chiu, 2019	Antecedents of consumer's citizenship behavior towards organic foods	<p>The study used constructs from prior research, which were then verified by experts and consumers in pretests and pilot tests. The Likert scales and modified items were used in the questionnaire. Significant positive effects were verified by the structural model analysis utilising AMOS software, satisfying the requirements for a well-fitting model.</p>	<p>Highlighted the major beneficial influence of consumer-social venture identification and personal relevance on customer citizenship behavior; Explored the impact of social media on Taiwanese consumer's decisions to purchase organic foods.</p>
12	Anum, 2018	Organic food consumerism through social commerce in China	<p>SEM was used in the study to examine the influence of consumer's attitudes towards organic food and the moderating effects of website quality characteristics on online impulse buying behavior. An online questionnaire was used to gather data from Chinese consumers who have experience purchasing organic food online.</p>	<p>Examined the complex interaction between social media and customer behavior in the context of organic food in China;</p> <p>Highlighted the impact of social learning mechanisms and website quality elements on online impulse buying behavior.</p>
13	Meza & Park, 2016	Organic Products in Mexico and South Korea on Twitter	<p>Used webometric techniques to examine semantic and hyperlink networks of tweets to investigate the diffusion path of social</p>	<p>Examined the interaction between social media and consumer behavior in the organic market, emphasizing the importance of</p>

S. No.	Author Name and Year	Title	Research Methodology	Outcome
				Twitter in influencing attitudes and the spread of organic products.
14	Bernal-Jurado, 2017	Explanatory factors for efficiency in the use of social networking sites- The case of organic food products	Examined the effectiveness of social networking site (SNS) use among organic producers in the Spanish olive oil and wine industries. Used qualitative comparative analysis (QCA) and data envelopment analysis (DEA) to identify characteristics influencing SNS efficiency.	Highlighted the value of social media for the agriculture industry, especially in improving consumer interaction and organic product promotion.
15	Mozas-Moral, 2016	Factors for success in online social networks: An fsQCA approach	Identified essential elements for success in online social networks using fuzzy set qualitative comparative analysis (fsQCA). The study used Twitter statistics and organised telephone surveys to gather information from 55 organic olive oil-producing companies in Andalusia.	Discussed difficulties in marketing organic products and emphasized the role of social media sites as a remedy; Verified that success in online social networks is largely dependent on managerial skill, organizational learning, and strategic social media engagement.
16	FernándezUdés, 2023	Online reputation of agri-food companies and determining factors: an empirical investigation	Using Qualitative Comparative Analysis (fsQCA), the study looked at the online reputation of 466 Andalusian olive oil companies while taking sentiment analysis, Google reviews, and social media followers into account. Descriptive statistics revealed shortcomings in CSR communication and website quality.	Provided tactical advice on utilizing information and communication technologies (ICTs) for businesses in the agri-food sector and advanced understanding of online reputation evaluation.

S. No.	Author Name and Year	Title	Research Methodology	Outcome
17	Hynes & Wilson, 2016	"I do it, but don't tell anyone! Personal Values, Personal and Social Norms: can social media play a role in changing pro-environmental behaviours?"	Descriptive statistics, linear regression, moderated regression, and binary logistic regression were used in a cross-sectional online survey with 107 Strathclyde Business School students to examine the relationships between individual values, social comparison, contextual norms, and preferences for comparing environmentally friendly food behaviours.	Emphasized the difficulty for customers to make decisions about EIFF and the importance of using focused and subtle strategies in social media marketing campaigns.
18	Lu & Miller, 2019	How Social Media Communications Combine with Customer Loyalty Management to Boost Green Retail Sales	This research analyzes a 204-week dataset from a green product retailer's Facebook page, examining 963 posts and sales data from a convenience sample of loyalty program members in three stores. It employs a hierarchical model, descriptive statistics, content analysis, and log-log regression to assess the impact of social media posts on weekly sales while controlling for confounding variables.	Highlighted the importance of managing social media and CRM synergy for influencing consumer behavior, especially for environmentally sensitive retail. Analyzed long-term effects of egoistic and altruistic marketing messages on Facebook brand page with CRM membership.
19	Tao-Sheng Chiu, 2019	Antecedents of consumer's citizenship behaviour towards organic foods	318 Taiwanese consumers of organic food were polled for the study using a 7-point Likert scale and validated constructs. To evaluate hypotheses, the investigation included SEM in AMOS and exploratory factor analysis. Randomized item order and anonymous responses were used to address common method variance.	Examined how social media affects consumer behaviour within the Taiwanese organic food sector. Highlighted the significant impact of identity attractiveness, self-determination, and social media participation on personal relevance and consumer citizenship behaviour.

of both databases. At first, 128 papers from Web of Science and 108 papers from Scopus were found by this search. We used a year filter to improve the thoroughness of our analysis, focusing on publications that were published in both databases between 2013 and 2023. 117 papers from the Web of Science and 87 papers from Scopus were the outcome of this adjustment. The number of papers was further reduced to 22 in Web of Science by using a category filter to concentrate on business and management topics. Applying subject area filters to Scopus produced a total of 43 papers that were found in pertinent categories like business management, accounting, and social science. The resulting collection of 35 papers was further improved by adding more filters for conference papers and review papers in Scopus. Using language filters that only included English, we were able to produce 33 papers while maintaining linguistic consistency in Scopus. After removing 10 duplicate publications, we arrived at a final set of 10 papers from Web of Science and 13 papers from Scopus through a meticulous hand-selection process in line with the goals of the study. After completing these processes, we had a total of 19 papers which were included in our thorough literature study. Our literature review, conducted using databases Scopus and Web of Science, unearthed a wealth of articles published between 2013 and 2023 that explore the intersection of social media and organic food choices. The search phrases, including “social media,” “social media marketing,” “organic foods,” “organic food products,” guided our exploration of academic journals, revealing an intriguing narrative of evolving consumer tastes and dynamic customer engagement.

Table 1 provides a concise overview of research studies investigating consumer behavior and social media interactions in the organic food market, detailing authors, publication years, titles, methodologies, and key outcomes.

## DISCUSSION

Numerous studies on social media engagement and customer behaviour in the organic food industry offer insightful information that can be used to develop marketing plans. According to Kuswarini et al. (2023), there is a negative association between time efficiency and customer satisfaction when it comes to online sales of organic black rice. The big data analysis by Jolly and Joshi (2021) examined consumer's opinions of health foods and provided important information for improving the product. Wu and Takács-György's (2022) comparison of Chinese and Hungarian consumer behaviour highlighted the widespread influence of social media on decisions about organic food. Pilař et al. (2018) and Sobhanifard and Eshtiaghi (2021) investigated the role that trust factors and social media play in the consumption of organic food. The moderating influence of website characteristics on customer attitudes in China was studied by Tariq et al. (2019, 2018), while Hilverda

et al. (2018) investigated how social proof functions on Facebook. Meza and Park (2016), who echoed the findings of Fernández-Uclés et al. (2023) in the agri-food industry, emphasized the influence of Twitter on views about organic products. The difficulties of modifying pro-environmental behaviour with social media incentives were highlighted by Hynes and Wilson (2016). To increase green retail sales, Lu and Miller (2019) investigated the potential for social media and customer loyalty management to work together. This thorough analysis highlights the complex interplay between social media and customer behaviour in the organic food industry, laying the groundwork for tactical marketing techniques.

## **IMPLICATIONS**

This thorough analysis emphasizes social media's diverse influence on consumer behaviour in the organic food sector. One of the main implications is that to improve online initiatives and customer satisfaction, organic food businesses must identify and take advantage of social commerce platforms like Instagram and Twitter. Marketing techniques must adapt to changing consumer preferences, as evidenced by insights into social proof, ethical motivation, and consumer perceptions of healthy foods. Furthermore, the analysis highlights how social media plays a role in influencing perceptions of organic products across a range of regional contexts, underscoring the necessity of customized marketing strategies. The combination of qualitative comparative research, netnography, and big data analytics allows for a more nuanced understanding of the intricate interactions between social media, consumer behaviour, as well as the prosperity of organic food businesses.

## **CONCLUSION**

After reviewing a variety of research papers, numerous important conclusions about how social media and consumer behaviour interact in the organic food industry can be drawn. There are common themes across all methodologies, including netnography, surveys, and qualitative and quantitative analysis. The perceptions, tastes, preferences, and purchase decisions of consumers about organic food products are greatly influenced by social media. Social proof, user-friendly websites, and visually appealing information are all emphasized in the research, which also highlights the influence of online platforms like Facebook, Twitter, and Instagram. Additionally, the research emphasizes how crucial social commerce, ethical issues, and trust are in influencing customer sentiments. These findings offer a thorough comprehension of the dynamic interplay between consumer behaviour and social media in the organic food sector, providing insightful advice for online projects and strategies for marketing giving thoughtful guidance on social media campaigns, marketing tactics, and building consumer trust and satisfaction.

## LIMITATION

Although the review offers insightful information about how social media affects customer behaviour in the organic food industry, it's important to recognize that the scope of previous research is limited. Only a small number of research explicitly look into how social media affects consumer decisions about organic food. A fragmented understanding is caused by the fact that much of the examined literature uses different approaches and concentrates on particular places. The lack of thorough, internationally representative research makes it difficult to reach broad conclusions regarding the complex relationships that exist between social media and consumer behaviour in the organic food sector. Subsequent investigations ought to bridge this knowledge gap by carrying out more thorough and comparable assessments in order to provide a more thorough comprehension of the topic.

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# Post COVID-19: Investor's Sustainable Investing Behavior

**TARIKA SINGH SIKARWAR & NIDHI JAIN**

## INTRODUCTION

“Manageability is a fundamental idea, connecting with the congruity of monetary, social, institutional and ecological parts of human culture”. The Unified Country’s gathering of the Supportable Improvement Plan 2030 in September 2015 expected an earnest part in extending seeing policymakers, specialists, and subject matter experts. The prospect of manageability related components by the monetary patrons, what began in 1990 continues to get energy following the Practical Improvement Plan 2030. Speculatively, one more assemblage of data has emerged for reasonable contributing, which focuses on the venture inclinations, examples, and inclinations towards practical records versus ‘standard documents’ The Sustainable Development Goals Report 2021. (2021).

As indicated by GSIA (2018), both real and relative degrees of sustainable investment have ascended in practically all markets around the world, remembering developing economies for Latin America and Africa (Sharma et al., 2021). Likewise, sustainable investment has seen a considerable increment of 34% starting around 2016 in created locales like Europe, the US, Japan, Canada and New Zealand. ESG incorporation stays the most widely recognized sustainable investment system in a large portion of these areas (GSIA, 2018). The ascent of sustainable investment prepares for a shift towards environmentally friendly power and diminished in general energy utilization (Gabler, 2017).

UNCTAD gauges that supportability committed ventures - speculation things Focusing on maintainable improvement-related subjects or regions - amounted to 3.2 trillion dollars. As per World Speculation Report 2021, these capital market ventures include Basically supportable resources (more than 1.7 trillion dollars), green protections (more than 1 trillion dollars), social protections (212 billion dollars), and mixed maintainability protections (218 billion dollars). The universe of supportability-themed saves incorporates 3,435 normal resources and 552 ETFs, With an AUM of 1.56 trillion dollars

and 174 billion dollars independently. Speculation streams to maintainability-themed holds show a practically identical improvement bearing. From the year 2016 to 2019, net inflows to these resources extended from 33 billion dollars to 159 billion dollars. Despite Monstrous overflows from overall capital business areas in Walk 2020 after the episode of Coronavirus, unquestionably the net inflows to reasonable resources in the key portion of 2020 recovered to 164 billion dollars and UNCTAD measures that whole year net inflows showed up well beyond 300 billion dollars (Jill, 2020).

For sustainability financial investors, COVID-19 offered a catastrophic token of the need to plan for huge scope threats."Over the since a long time ago run, COVID-19 could end up being a significant defining moment for ESG contributing, or procedures that think about an organization's natural, social and administration execution close by customary monetary measurements," said Jean-Xavier Hecker and Hugo Dubourg, Co-Heads of Environmental, Social and Governmental (ESG) and Sustainability. We expect an expanded investor spotlight on ESG contemplations after COVID-19, with a specific interest in more prominent corporate straightforwardness and partner accountability. Awareness of financial advantages and harms should keep investor son ground of climate-related open doors and the low-carbon energy change, e.g., environmentally friendly power, sustainable vehicle, biodiversity, and green securities.

This exploration offers a novel image of the elements of convictions and exchanging during a period of extreme market working together misery, for a significant arrangement of market members. To close the financial backer's way of behaving of money management post Coronavirus, field an enormous scope overview to be familiar with financial backers' convictions about future monetary development and securities exchange returns previously, during, and after the financial exchange crash of Walk 2020, which was set off by the Coronavirus pandemic, then, at that point, depict the advancement of convictions and conflict, as well as the connection among convictions and financial backers' exchanging movement during this period.

The general comprehension of what SI involves is to "integrate certain kinds of non-financial concerns—variously called ethical, social, environmental, or corporate governance criteria—in the otherwise strictly financials-driven investment process" (Sandberg et.al 2011).

This can be accomplished through an emphasis on specific businesses (e.g., restoring capable energy), and similarly their prohibition (e.g., weapons, tobacco, etc.), or by the incorporation of natural, social, and corporate administration rules into investment choices.

Investor's attitude during the COVID-19 lockdown, first, the flare-up of the pandemic is in many respects equivalent to fear broker assaults (Goodell,

2020). Financial investor's conduct in a consequence of psychological militant movement is related to more risk unwilling decisions, like a diminished exchange force and a decreased stream to risky resources (Levy, 2006, Luo et al., 2020).

Burch et al. (2016) show heavy retail financial investor selling in the emergency time frame set off by 9/11 that drives down resource costs. In accordance with these outcomes, however, against the foundation of the episode of COVID-19, Bu et al. (2020) review Chinese understudies in Wuhan and find significantly lower general inclinations for risk.

## **PURPOSE OF THE STUDY**

This pandemic had an impact that was unprecedented in our lifetimes, as well as a rapid decline in economic activity. History teaches us that when pollutants have historically dropped precipitously, as they generally do during recessions, there is frequently a strong rebound that undoes whatever short-term reductions are made. All eyes are on whether there will be a shift to a sustainable path forward as countries start to emerge from lockdowns and businesses are resuming.

Countries have shown that it is possible to cut carbon emissions, and many have recognized the environmental benefits that follow. However, it has also brought attention to problems that are getting worse, like social injustices and public health.

The Sustainable Development Goals (SDGs) are a collection of objectives established by the United Nations to be accomplished by 2030 as a global call to action to eradicate poverty and safeguard the environment. Prior to COVID, it was predicted that a financial deficit of USD 2.5 trillion per year needed to be closed in order to meet the targets by 2030. Before the pandemic, the world's efforts to fulfill the SDGs were already lagging. More than ever, public and private sector investments are required to address societal and environmental problems in the post-COVID era. To better understand overall market outcomes, it is crucial to look into how investors behaved under these exceptional circumstances.

## **INVESTORS' RISK AND RETURN CONCERN IN SUSTAINABLE INVESTMENTS**

Increased ambiguity, press reports, media reports, and expert opinions present a jumbled picture of the direction of the economy and, consequently, of the best investment and portfolio strategies. Globally large financial market reductions and elevated financial market dangers have been brought on by the COVID-19 outbreak (Wang Q et al., 2020). Governments and central banks have introduced hitherto unseen support packages as well as thrown their

policy instruments into the market. Despite these support initiatives, there is still a tremendous lot of uncertainty. As the precise effects on the global economy are yet unclear, several viewpoints are expressed.

The financial literature on how terrorist acts affect investor behavior demonstrates a decreased flow to hazardous assets following terrorist action (e.g., Wang Det al 2021). The pandemic outbreak shares many characteristics with terrorist attacks, including exogenous shock, severe effects on daily life, increased public dread, and significant (economic) uncertainty (2).

Based on current settings and circumstances, a global perception study of the financial market's investors' risk perception and investment behavior was conducted (Ainia & Lutfi, 2019). Decisions made to improve the financial well-being and condition of investors result in a perception of risk. Additionally, the overall risk of tolerance evolves over time. The general risk tolerance can be used to predict a person's propensity to take precautions to reduce risk. For the sake of simplicity, let's assume that each investor's perception of risk is based on their level of risk tolerance (Nguyen et al., 2020). The mindset that is ingrained in the investment system is also reflected in behavioral finance. Many theorists contend that occasionally investors act irrationally, which leads to inefficient markets and assets that are mispriced by omitting to highlight the chances for profit (Asamoah et al., 2021; Su et al., 2020).

This may be somewhat accurate, but every time it would have been more challenging to camouflage these shortcomings. Additionally, most of the time, investors base their selections on unimportant statistics and facts. For instance, investors should buy in stocks that have had a significant decline after continuing to grow in previous years. Because of these transient market variances, financial backers are directed to accept that costs have diminished and offered an opportunity to purchase items at a discount. The truth is that changes in underlying fundamentals frequently cause stocks to drop in value (Chang & Andreoni, 2020).

Numerous research looks into various facets of how investors see SRI. Retail (individual) and institutional investors take differing stances even though investors as a whole prefer SRI. Previous research has shown that investors support companies that engage in sustainability-related activities and add value to society, demonstrating that investors' attitudes toward corporate sustainability are generally favorable.

Studies, in any case, have likewise shown that financial backers probably won't act as per their cases. Especially, SRI financial backer's needs monetary benefit over friendly obligation and manageability as the most significant contemplations.

Late examinations have looked all the more carefully at how financial backers respond to corporate social obligation and have found that they will

generally uphold dependable organizations more than they do unreliable ones. They express more significant responses to the openness of poor natural, moral, and legislative practices than to positive news.

## **DEMOGRAPHIC FACTORS AFFECTING INVESTOR DECISIONS**

**Investors' Intention to Be Interested in Corporate Sustainability Practices: Contributing Factors** SRI, on the other hand, is in accordance with personal investors' preferences for socially and environmentally responsible development. First, how people perceive SRI is significantly influenced by their personality qualities and demographic variables. Younger female investors who have higher incomes and levels of education, for instance, are more likely to think that a company's social and environmental performance is equally essential to its financial performance. People who place a high emphasis on social acceptance tend to invest significantly more of their wealth in socially conscious financial institutions. Focusing on consumer purchasing behavior, Sawicka and Marcinkowska find that customers of all ages, as well as those with higher levels of education, are more interested in CSR initiatives that promote environmental conservation. Second, financial backers center more around friendly, moral, and natural contemplations than on regular monetary measures while going with speculation choices because of related knowledge and consciousness of social obligation and manageability. The consumers most likely to make investments in a socially responsible manner are those who already have responsible consumption and purchase habits.

On the one hand, the behavioral immune system promotes behavioral avoidance of pathogen infection, leading people to become more reclusive and display a decreased inclination for taking risks. People exhibit an aversion to hazy information when a disease threat is present. Since foreigners are perceived as an unreliable force and are prone to disregard regional practices that work as barriers against the spread of disease, they develop xenophobia and show adverse reactions to them. Such a negative reaction can be extended to a wider variety of strange objects that people may come across in their everyday social and physical environments. For instance, consumers favour well-known brands over those from elsewhere. They place a premium on "natural" and "cleanliness," and are willing to pay more for things created in their own country as opposed to far-off exotic locales. People's tolerance for risks and losses lowers when there is a high danger of sickness, and they favour smaller, more certain benefits over larger, probabilistic ones. Disease-avoidance behaviours are more prominent in those who have recently been ill or in people with higher disease susceptibility conditions. However, the behavioral immune system causes disease-relevant emotional and cognitive reactions, which encourages people to focus more on issues related to social

good and sustainable development. In addition to items that really increase the chance of pathogen infection, people are also repulsed by items that present no risk at all but merely stir up negative associations with illness. For instance, it has been discovered that people who are physically challenged or obese instantly engage in disease-relevant emotions and experience intense bias during the pathogen transmission phase. People become repulsed by actions and a thing that go against social norms, which makes them feel disgusted and makes them strongly condemn moral transgressions. According to this line of reasoning, businesses that are concerned with moral, environmental, and social issues can easily develop close relationships and trust with their individual investors and reap the benefits of the value premium. Contrarily, businesses that practice corporate social irresponsibility, or that oppose people's prosocial and responsible needs, would arouse unfavorable disease-related feelings and face stiff pushback. Two opposing views are reviewed and discussed regarding how pandemics may influence investors' preference for sustainability-related investors, indicating that more data should be added to this topic.

## **INDIVIDUAL INVESTOR PERCEPTION**

Nazgwakwe 2020 investigates the effect of the crisis on various ages and gives that new school graduates saw three occasions: 9/11, under which basically every one of them was under the hour of 18; the Exceptional Trench (2008), when several of them were either starting their inspirations for living or going to finish their preparation; and at this moment, the Covid release up. Predictable school graduates are named 'work baggers' who are worth clarification-driven work. Saving has never been high on their strategy, at this point with this pandemic; they will probably move their need to save and strength.

Occasions like the monetary emergency of 2008-09 may impact individual financial backers (Kanheman, 1972 and Jahanzeb 2012), Malmendier and Nagel (2011) believed that events for example, the Economic crisis of the early 20s of the 1930s could have languishing consequences over money-related monetary benefactor appraisal and chance bearing attitude. During money related crisis, a financial ally flood is then again affected and returns become unsure.

Dev and Sengupta (2020) casual specialists with no regular work contracts face work and pay delicacy, and loathe prosperity or annuity benefits; subsequently, they will undoubtedly be conflictingly influenced by crises like the ongoing one. There has been an expansion in joblessness on account of decreased creation. Further, spending saw a gigantic move towards hospitalization, care, and treatment of Coronavirus-19 patients (OECD Length Financial Evaluation, 2 Walk 2020).

## CRISIS AND FINANCIAL MARKETS

The overall protection trades are ending up being more related and crises in a single country would in a little while spread to another. Monetary trade improvements become dynamically related. Events like overpowering ailment episodes can activate pessimistic changes in monetary benefactors' inclination that solidly impacts their hypothesis decisions and, consequently, protections against trade cost. The unforeseen mishap in overall business areas provoked a tremendous plunging design in the Indian money-related market; with new monetary patrons (FPIs) moving to dollar-maintained assets, the Indian protection trade saw a fall. S&P BSE Sensex which stayed at forty-two thousand two hundred and seventy-three spotlights on 20th January 2020 dropped to twenty-nine thousand, eight hundred and ninety-four spotlights on 8th April 2020 (outlook.com). The securities exchange reflected a financial backer (unfamiliar and homegrown) feeling considering the pandemic. These improvements affected associations too. Organizations abridged activities, cutbacks expanded, and representative compensation saw significant cuts during the period. To be sure, explicit areas like neighborliness, the travel industry, and amusement were extensively affected and supplies of organizations in these areas fell by more than 40%.

Ben-Rephael (2017) confirmed the road to liquidity phenomena in times of uncertainty and showed that this theory is most certainly true among professional investors. He zeroed in on proficient financial backers running common subsidies through which they address retail financial backers. Vayanos (2004) explored both the hypothesis of trip to quality and trip to liquidity, as well as how these speculations are connected with each other. In his balance model, he utilizes two factors; resources and how they differ concerning liquidity, and the degree of vulnerability which is estimated as the unpredictability of the award got by different resources.

Silwal P & Bajracharya S., 2021 explained that spread of information about the securities exchange unequivocally influences financial backer brain science and social science. The high media negativity prompts descending strain on market costs as well as the other way around. The financial backer feeling hypothesis likewise affirmed the steady connection between media content and individual financial backer way of behaving with excessively little stocks. Lee et al. (2002) and Brown and Precipice (2004) explained that the past market returns are huge inclination determinants, while monetary sponsor assessment changes essentially connected with the contemporary market return. The positive connection between securities exchanges and opinion affirms that financial backer feeling is an antagonist indicator for resulting market returns.

The positive connection between financial exchanges and feeling affirms that financial backer opinion is an antagonist indicator for ensuing business sector returns. Individuals can successfully be settled on a choice by the kind of partners they keep (Messim and Zapranis, 2014), the presence of crowding is an extra gamble factor for the financial backers. In this way, the unpredictability measure is determinedly impacted by presence of grouping conduct. Financial backers can contribute assets by first doing examination, specifically major investigation and specialized investigation (Trimulato et al., 2021).

Henckes et al. (2020) presented that investor avoids inherently dangerous situations, even though they offer opportunities. Chen et al. (2020) described how the stress levels of people have increased due to COVID-19, which is also increasing the levels of anxiety that is directly or indirectly affecting the investments. Linciano et al. (2012) laid out that financial backers are keen on putting resources into unpredictable business sectors since they stand to acquire a higher benefit. They accept that when there is more serious gamble, they will get a higher benefit. Risk insight is a presumption by a financial backer with respect to the future gamble in light of their own encounters (White C &Zajac 2004). Hamid (2013) portrayed how the discernment conduct of a financial backer might change the reasoning s/he has about the venture. In any case, it doesn't completely impact the speculation choice.

According to Raymond (2011) and Tuysuz (2013), at the hour of money related crisis, the cost of dangerous monetary resources goes down moderately, at the same time as the fall in costs in a solitary market prompts virus in other business areas, and there is bunch lead seen among financial backers which achieves heightening in costs of more secure resources (unequivocally gold diverged from different resources).

Baur and McDermott (2010), Chan et al. (2015), and Miyazaki et al. (2013), equipped obvious verification for gold as a strong speculation during monetary breakdown. While stock records of Japan, the UK, and the US showed a gigantic drop during (install period), gold costs saw a basic augmentation. This may be attributed to financial backers' reaction to more noteworthy monetary market eccentricity and extended revenue for gold across these countries (Choudhry et.al, 2015).

Graham M et al. (2008) saw that as the "9/11" event caused a basic drop in overall stock expenses, yet they quickly recovered. Al Rjoub and Azzam (2012) focused in on the Mexican tequila emergency in 1994, the Asian-Russian monetary emergency from 1997 to 1998, the American "9/11" assault in 2001, the Iraq battle in 2004, the cash related emergency of November 2005, and the general cash related emergency of 2008-09. These makers researched

whether these periods influence the stock compensation direct of the Jordan Stock Exchange.

Anthony D. (2021) tracked down that the European obligation emergency of 2010 changed the risk of significant European business sectors, especially the instability of the German, French, and British business sectors. Wang et al. (2020) investigated the share market response in the biotechnology industry in the Taiwan stock exchange during the SARS and swine flu outbreaks. They observed that there was a critical effect on the Research and development proportion, current ratio proportion, and resources.

Rehan Malik et al. (2018) concentrated on the 43 biggest catastrophes in the protection business starting around 1970 and observed that protection agents got unusual stock profits from the day of the occurrence.

Bai et al. (2019) applied intriguing catastrophes to an overall balance model and observed that the capital resource estimating model (CAPM) considering crises can all the more likely mirror the stock cost.

Lioui et al. (2018) focused on the impact of US tropical storms on stock returns and saw that emergency impacting client advancement will influence the financial exchange.

According to Bai Dough Puncher, Wurgler, and Yuan in 2014 monetary patrons could have a fundamental perspective toward hypothesis possibilities in a given market, selling that market's stocks under versatile sickness episodes.

Alber (2020) evaluated Covid transmission by total cases, new cases, total passings, and new passings. The review thought about six most obviously terrible hit nations (as per the quantity of combined cases) everyday from Walk 1, 2020 to April 10, 2020. Results demonstrated that securities exchange returns gave off an impression of being powerless to the absolute number of Covid cases instead of the quantity of day-to-day passings, and to Covid total markers more than new ones.

In the conditions of the COVID -19 pandemic, investors must be careful in investing because in general, stock exchanges around the world have experienced a decline (Collins A et al., 2020).The securities exchange crash is unavoidable because of Coronavirus Numerous organizations have shut/ failed, joblessness has expanded, destitution has expanded, and dread has cleared numerous financial backers so numerous financial backers sold their portions so that stock costs plunged all around the world stock trades.

#### **Bitcoin portfolio has increased during the period of COVID-19.**

Huber and Kirchler (2021) investigated how the financial investment behavior amongst investors has changed due to COVID-19. In their paper, the creators center explicitly around risk taking way of behaving and utilize two gatherings, one of expert financial backers and the other of nonprofessional financial backers. The creators found that proficient financial backers did as

a matter of fact contribute less during the flare-up of Coronavirus contrasted with previously. They additionally find that nonprofessional financial backers didn't change their way of behaving with regard to risk-taking.

### OBJECTIVE SET OF THE STUDY

- To re-standardize a questionnaire for measuring the sustainable investment behavior of individual post covid 19.
- To explore the determinants of sustainable investment behavior of individual post covid 19.

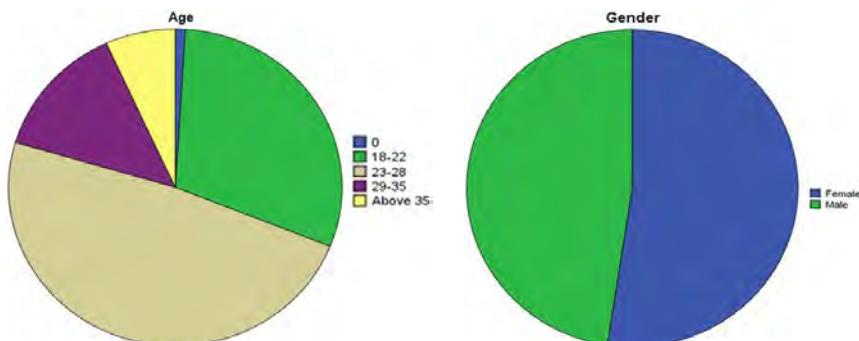
### RESEARCH METHOD ADOPTED

The review was observational in nature and essential information was utilized to finish. The population of the study was consisted of individuals who tend to invest in the market in any form. Individual investors were the sampling element. The questionnaire was circulated amongst three hundred investors. Out of these, only one hundred thirty questionnaires were filled. Further, only one hundred three questionnaires were found usable as they were completely filled. The descriptive summary of the respondents is shown in table 1. Further, a graphical representation of the data can be seen in figure 1, 2 & 3.

**Table 1:** Descriptive Summary

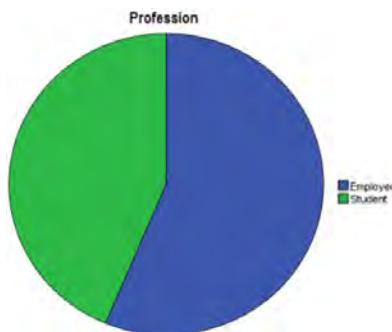
Age	Frequency	Gender	Frequency	Profession	Frequency
0	1	Female	54	Employed	58
18-22	31	Male	49	Student	45
23-28	50	Total	103	Total	103
29-35	14				
Above 35	7				
Total	103				

### Graphical Representation



**Figure 1:** Piechart for age of Respondents

**Figure 2:** Piechart for Gender of Respondents



**Figure 3:** Piechart for profession of Respondents

Figure 1, 2 and 3 respectively represents the age of different age groups of respondents, gender and profession.

## Instrument

The Self Designed Questionnaire was of a Likert-type scale 1 to 5, where 1 represents the least agreement and 5 represents most extreme agreement. The dependability of the survey was laid out however Cronbach Alpha utilized unwavering quality measures in PASW-18. Exploratory Element examination was applied to figure out the fundamental variables for reasonable financial backer conduct post Coronavirus pandemic.

## INTERPRETATIONS AND DISCUSSIONS OF RESULTS

### Sustainable Investing Reliability

Cronbach's Alpha method has been applied to calculate the reliability of all twenty-threeitems in the questionnaire. The results of the reliability test are presented in below table.

### Reliability Measure of Sustainable Investor Behavior

**Table 2**

Variable Name	Cronbach's Alpha	N of Items
Sustainable investor behavior	.920	23

As indicated in the table, the questionnaire's reliability came out to be 0.920 which is more than 0.7 which indicates the questionnaire is reliable for the study.

### Factor Examination

#### *KMO and Bartlett's Test and Factor Analysis for Sustainable Investing*

Refer to the Table 3 which indicates the KMO adequacy test shows the sample is adequate for carrying out factor analysis.

**Table 3**

<i>Number of Factors: Sustainable Investor Behavior</i>	<i>KMO ("Kaiser-Meyer-Olkin Measure of Sampling Adequacy")</i>	<i>Bartlett's Test of Sphericity_ Approx. Chi-Square"</i>	<i>Df (Degree of Freedom)</i>	<i>Significance Value</i>
6	.769	611.329	45	.000

KMO Measure of Sampling Adequacy is .769 which shows that sample is adequate enough for exploration of factors. The Chi-square value of 611.329 is significant which indicates that responses matrix is not an identity matrix.

Standard part factor investigation with varimax pivot and Kaiser Standardization was utilized for factor extraction. The subtleties of elements, the variable name, thing union and eigen esteem are given in the Table 4.

**Table 4: Factor Details**

<i>Factor's Name</i>	<i>"Eigen Value</i>		<i>Variable Converged/ Statement</i>
	<i>Total</i>	<i>% of Variance</i>	
Environmental friendly behaviour	4.924	21.403	Items converged: 3, 5, 6, 7, 10
Long term Sustainable returns	3.549	15.431	Items converged: 2, 15, 16, 18, 22.
Long term trustable investment with diversification	8.552	37.184	Items converged: 1, 14, 17, 19 & 21.
Investment Awareness	3.087	13.416	Items converged: 4, 9, 12, 13 & 23
Balanced Risk	1.034	4.494	Items converged: 8 & 20
Future Return Expectation	.631	2.744	Items converged: 11

### *Factor Description*

- Environmental Friendly Behavior:** It is the most vital factor that comes out of the study which comprised of five variables and illustrates 21.403% of the variance. The total eigenvalue is 4.924.
- Long-Term Sustainable Returns:** It is the second vital factor which is comprised of 5 variables and illustrates 15.431% of the variance. The total eigenvalue is 3.549.
- Long-Term Trustable Investment with Diversification:** The third important factor is “Trusting and diversification” which is comprised of five variables explaining 37.184% of variance. The total eigen value is 8.552.
- Investment Awareness:** The fourth important factor is “Awareness” which is comprised of five variables and explained 13.416% of variance. The total Eigen value is 3.087.

5. **Balanced Risk:** The fifth important factor is “Balanced Risk” which is comprised of two variables and explained 4.494% of variance. The total Eigen value is 1.034.
6. **Future Return Expectation:** The sixth factor is “Return Forecasting” which is comprised of only one variable and explained 2.744% of the variance. The total eigenvalue is .631.

## IMPLICATIONS AND SUGGESTIONS

This study is helpful as it gives valuable contributions to the organization regarding the speculation conduct of the retail financial backers. The review can be gainful to refresh their monetary strategies as indicated by the post-pandemic emergencies. Consequently, the review helps with making arrangements in regard to the settle activities in the monetary market. The review assists the business analyst and monetary market controllers with molding out strategies used to moderate Coronavirus vulnerabilities. Monetary preparation and determining should be possible successfully to make a positive effect on monetary preparation and the market. Financial backers can change individuals' discernments and the way that rising vulnerability can be overseen by making monetary arranging moves.

## CONCLUSION

The effects of Covid-19 pandemic have been wide spread and long lasting. The measures taken by the government to stop the spread have also effected financial aspects of economy and individual at large. The investment pattern is re-thought by the investors and a relook at the investment aspects is done.

The new Coronavirus pandemic emergency presents a chance for the overall population to reconsider the situation with our regular routines and how we might better safeguard our current circumstance. Following the idea of organizations as individual social substances, their activities ought to likewise be socially dependable.

The study is done with an objective to find retail Investor's sustainable investing behavior post covid-19. The study concluded with six factors determining the **sustainable investing** behavior of individuals, namely: Environmental Friendly Behavior, Long Term Sustainable Returns, Long Term Trustable Investment with Diversification, Investment Awareness, Balanced Risk and Future Return Expectation.

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# **A Study on Impulsive Buying Behaviour of Consumers during Festive Season Sales**

**GURU DAAMAN SHRIVASTAVA & SHALINI CHOITHRANI**

## **INTRODUCTION**

India is a country of festivals and brands are well aware of this fact. Many online shopping brands like Flipkart, Amazon, Myntra, etc., use this power of festive values to boost their sales. One aspect of consumer behaviour mind-set that may come into action during such kind of sales is the impulsive buying tendency of consumers that tempts them to buy products without giving much or any forethought or planning. Such unplanned and non-rationalised purchase decisions can be caused due to factors like pleasure seeking tendency, lack of self-control, addictive traits, information overload, etc. The online festive season sales, because of their attractive offers and the overall festive experience may trigger the impulsive buying as consumers in India have a tendency to shop more during festivals. This study thus aims to understand the impact of such online festive sales in the impulsive buying behaviour of the consumers by understanding the likes and preferences of consumers with the help of primary data collected with the help of questionnaires.

## **Impulsive Buying Behaviour**

Impulsive buying behaviour is the tendency of individuals to buy products without considering the consequences of their purchase. Mostly, a consumer indulges in impulsive buying because of the instant gratification he experiences by possessing the commodity. Rook and Fisher (1995) define impulsive buying as “a consumer’s tendency to buy spontaneously, unreflectively immediately, and kinetically”. However, an individual tries to avoid such acts of impulsive buying to avoid projecting an immature image and thus many researchers are of an opinion that the concept of impulsive buying has more dimension to it than it is portrayed in the earlier definitions (Hausman, 2000). Many studies have covered the impact of buying impulses on the consumer buying behaviour. Concepts that are identical to impulsive buying traits like compulsive buying, variety seeking have also been studied adjacent to the concept of impulsive buying behaviour to better conceptualise and interconnect these dimensions of consumer behaviour (Sharma et

al., 2010). Some studies have also associated impulsive buying with other commonly discussed aspects of human behaviour like anxiety and escapism, elaborating the nature of impulsive buying even further (Darrat et al., 2016). The research that is available concerning the impulsive buying behaviour of consumers can be used by brands to tap into the subconscious of consumers and make them buy their products or services impulsively. Brands have been using psychological methods derived from these researches to sell their offerings. An example of brands using the impulses of their consumer can be observed at the supermarket where products are displayed in a manner that even consumers who have not planned to buy them ends up realising the want of products at the display. The aim of this study is to point out the effect of impulsive buying on the buying behaviour of consumer at the time of festive season sales.

### **Analysis of Impulse Buying Behaviour**

Being a psychological concept, measurement of impulsive buying behaviour is a challenging task. However, many studies have developed scaling and measurement techniques to understand the concept of impulsive buying to some extent. Many researches have also tried to associate impulsive buying with many other factors like personality traits, similar buying tendencies, and different types of stimuli that may or may not trigger impulsive buying.

### **Types of Impulse Buying**

Impulse Buying can be of many types based on the stimulus they provide and how the consumer reacts to it. Some of its types are mentioned below:

- **Pure impulse buying** simply can be understood as a sudden urge to buy a commodity without prior planning. During such cases, the buyer breaks his usual buying pattern and end up making purchases decisions that may seem completely out of his realm.
- **Reminded impulse buying** on the other hand is when the consumer realises the need of a certain product when he is reminded of it. This can be done by presenting such products in a way that the buyer can easily locate such product reminding him that he needs has a need for it. It is to be noted that reminded impulse buying happens in the case when the consumer has some knowledge of the product he is reminded to buy.
- **Suggested impulse buying** is when the consumer is presented with a commodity which he has no prior knowledge of, and then the information relating to the product is provided in the form of suggestions creating a desire to purchase the commodity.

- **Planned impulse buying** can be understood as impulsive buying behaviour with some elements of rationality. In case of planned impulse buying behaviour, the buyer gives some forethought before buying a certain goods yet the purchases decision is made impulsively. Planned impulsive buying can be experienced when a consumer waits for discounts and offers for making purchases (the planning part) and ends up buying more products than he actually needed (the impulsive buying part).

### ***Factors that may Influence the Impulsive Buying Behaviour of Buyers***

- **Product quality:** Product quality is one of the aspects that directly affects the buying intentions of a consumer. Every consumer wants value from his purchase no matter how much he is paying for it. Therefore, it can be said that the greater the product quality, the more the consumer will be willing to buy the commodity. If the product is good enough in terms of quality, the consumer may experience an impulse to buy it.
- **Attractive offers:** If a consumer feel he is getting the value for money, then he may end up buying a certain product based on how much monetary benefit he is getting from buying that product. In such cases, attractive discounts and offers may tempt the customer to buy the commodity.
- **Store design/website interface in case of online shopping websites:** A well organised store and website interface can stimulate impulsive buying traits in the consumers. Human mind reacts to different kind of stimulus differently. If an online store is capable of providing a pleasant shopping experience with the help of an attractive website design and user friendly interface, then they might attract potential customers who can later gets converted into buyers.
- **Promotional aspects:** Many business promotes their products with the help of commercials and advertisements not only to spread information regarding the product but also to tempt the customers to purchase the commodity. Pleasant imagery and sounds associated with the product is projected to the consumers as to develop a desire to acquire the commodity. Many companies rely on influencer marketing and expert reviews to boost their brand image which may help trigger the impulsive buying behaviour of customers.
- **Method of payment:** In most of the cases, payment method is the final stage in the online purchase process of a commodity. Here, the consumer has to choose from the available methods of payment whichever suits him the best. During this time, if the shopping experience gets lagged due to the inefficiencies in the payment methods, the consumer might reconsider his purchase. Inefficiencies may be caused due to non-availability of

the desired payment method, asking for too much information, Failed Payments. Such issues can be avoided by smoothening the payment experience of the consumer by providing wide range of payment methods, options like card saving which saves a lot of time, and a properly tested website that ensures that there are no errors during the time of payments.

- **Personality:** Studies have shown that there are people who derive joy from the mere experience of shopping, such people not only shop to acquire a commodity they desire, but they also shop because the act itself works as a source of enjoyment or recreation. On the other hand there are people with conservative mind-sets who shop rationally based on their needs, with due consideration to their pockets. Thus, personality of an individual plays a very important role in the impulsive buying behaviour of an individual.

### **Festive Season Sales in India**

India is a country of many cultures condensed into one nation. With various cultures also comes their festivals and celebrations. Festivals play a very prominent role in India as it allows various cultures to come together and celebrate their integrity as a nation. The disposable income of households in India is forecasted to rise to 3.4 trillion USD in 2023 from 2.76 trillion USD as of 2022 (Statista, 2023). This clearly shows the inclination of Indian consumers towards spending more on consumer goods supported by monetary backing to do the same. This provides an opportunity for brands to take benefit by setting up an environment favorable enough to make consumer purchase their products and services. The nature of Indian festival makes buyers spend more than usual because of the occasion. Brand like Amazon and Flipkart benefits from such occasions by their seasonal festive sales by the name of Great Indian Shopping festival and Big Billion Days Vt (2019). However, it is yet to be tested that whether there is an increase in purchases during such time of sales and that too because of the impulsive buying behavior of consumers. This paper tries to access the impact of impulsive buying behavior on the buying behavior of consumer during the time of such festive season sales. When it comes to marketing strategy, there is no one size fits all approach that can be applied by the brands on every terrain. In today's environment where the customer is well aware and demands more from brand than ever, marketers need to come up with strategies tailored specifically for targeting different markets. In addition, with rising competition due to increase players in almost every market, brands are left with no choice but to stress on convincing customers to purchase their products instead of their competitors'.

## **LITERATURE REVIEW**

Rook and Fisher (1995) studied the effect of normative influences on the impulsive buying behaviour. The study focuses on the idea whether, impulse buying of an individual is influenced by the normative values he possesses. According to the findings, the normative evaluation before making any purchase has a moderating effect on the impulsive buying behaviour of an individual.

Hausman (2000) discussed the motivation behind the impulsive buying behaviour of the consumer. This study claims that impulsive buying behaviour is a very complex concept, which is affected by multiple variables like wants of the consumer and buying habits of the consumer. The paper uses semi-structured interviews and questionnaire to gather data on the buying behaviour of the consumers. The study proposes that impulsive buying should not be viewed negatively and should be considered as an alternative to more time-consuming search behaviours.

In their study, Darrat et al. (2016) attempted to identify a relationship between impulsive buying and compulsive buying. The findings showed that impulsive buying can cause anxiety which might lead to compulsive buying behaviour. The study claims that repetitive instances of impulsive buying may be a sign of decreasing self-control and shopping addiction.

According to the study by Gündüz & DoğanKeskin (2016), which studied hedonic nature of online shopping addiction. With the help of open-ended questionnaires, the study analysed the online shopping habits of the respondents. According to the findings, the respondents experience emotional changes while shopping online, these changes may range from being positive feeling of excitement, relaxation to negative feelings like regret, stress and worry.

This paper by (Octavia, 2016), comprises of all the relevant information required to understand the impulsive buying behaviour of consumers in online and in-store marketplace. This study addresses all the necessary factors that explains what stimulates the buyers to make impulsive decisions during the time of their purchases via online as well as in-store formats. To understand this phenomenon, the study developed the stimulus and response model.

In the paper by (Zhao et al., 2017), the relationship between Online shopping addiction and compulsive buying along with internet addiction is studied. An 18-item scale was used to measure the online shopping addiction. It was found that compulsive buying is closely associated with online shopping addiction whereas internet addiction has only a surface level impact on the online shopping addiction of the respondents.

Ramadass and Antony (2018) in their study analysed the impact of sales promotion techniques on the buying behaviour of consumers of Coimbatore city at the time of festive season sales. Data from 50 respondents was collected to draw inference regarding the same. According to the findings, the promotion by brands has an impact on the purchase intentions of the consumers. This impact can be significant enough to make the consumer skip all the rational decision-making process which takes place during the time of making purchase decision.

Vt (2019) studied the effect of festive season sales on the buying behaviour of consumers. For this, 30 respondents were selected from various regions of south India. According to the findings from the data collected via questionnaires from the respondents, the festive season sales are indeed an effective marketing strategy which yields positive results for the marketers. According to the study, Flipkart and Amazon are the most benefited business during such type of sales. The study recommends marketers to take a holistic approach while carrying out such type of marketing acts.

Tamilselvi and Rajeswari (2018) traces the change in the buying patterns of consumers during regular days and during the festival seasons. The findings of the study claims that there is a change in the buying patterns of the consumers during the time of festive season sales. The consumers are able to derive better deals during such type of sales which promotes purchase. It was also observed that the clothing products are most sought after during the time of festive season sales.

## **OBJECTIVES**

1. To find out whether shoppers indulge in impulsive buying during the time of online festive sales.
2. To study the impulsive habits of consumers while shopping online during festive season sales.
3. To identify the factors that affect the impulsive buying behaviour of consumers during the time of such sales.

## **RESEARCH METHODOLOGY**

This paper is based on primary data concerning the consumer shopping preferences during festive season sales and the associated impulsive buying behaviour. The data is collected from 73 respondents through well-structured questionnaire focusing on assessing the factors affecting impulsive buying behaviour of individuals during festive season sales. Convenience sampling is used for collecting sample of the respondents. Percentage analysis is carried out to analyse the inclination of consumers towards purchases during such sales along with their impulsive behaviour towards various shopping stimulus.

## DATA ANALYSIS AND INTERPRETATION

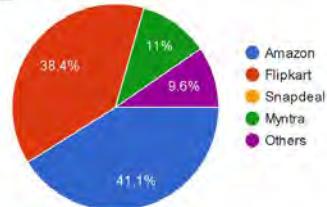
### Demographics and Descriptive Statistics

**Table 1**

<i>Particulars</i>		<i>Frequency</i>	<i>Percentage</i>
Gender	Male	35	47.9
	Female	38	52.1
Educational Qualification	School Level	7	9.6
	Undergraduate	33	45.2
	Postgraduate	28	38.4
	Others	5	6.8
Occupation	Student	50	68.5
	Salaried Employee	6	8.2
	Self-employed	1	1.4
	Others	16	21.9

Source: Primary data by author

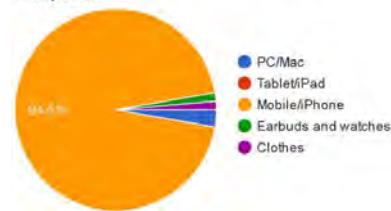
What is your most preferred website for online shopping?  
73 responses



**Figure 1**

Source: Primary data by author

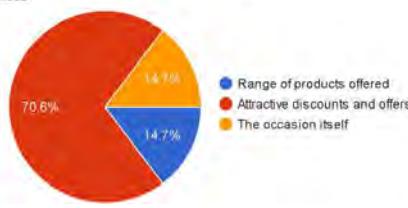
What device do you prefer for shopping online?  
73 responses



**Figure 2**

Source: Primary data by author

If yes, what makes you buy more during such festive season sales?  
68 responses



**Figure 3**

Source: Primary data by author

### Impulsive Buying during Festive Season Sales

**Table 2**

<i>S.No.</i>	<i>Question(s)</i>	<i>Always</i>	<i>Often</i>	<i>Sometimes</i>	<i>Rarely</i>
1.	How often do you purchase products online?	4	16	36	17

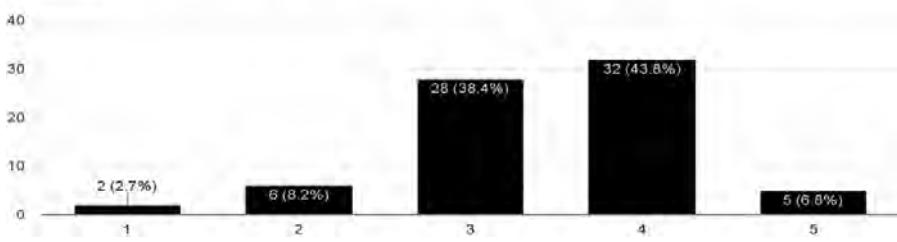
S.No.	Question(s)	Always	Often	Sometimes	Rarely
2.	Do you find yourself shopping more on festive season sales?	5	14	34	20
3.	Does your purchase decision gets influenced by the actions of people around you?	7	12	35	19
4.	Do you feel you get the value for money post-purchase?	13	31	25	4
5.	Do you find yourself buying products that you actually never use afterwards?	2	11	31	29

S.No.	Question(s)	SA	A	N	D	SD
1.	Do you think that you overspend during the time of such sales?	5	16	30	18	5

How would you rate your overall experience that you gain by shopping at the time of festive season sales? (1 being the lowest and 5 being the highest)

73 responses



**Figure 4**

Source: Primary data by author

## Interpretation and Conclusion

- The findings derived from the data collected, reveals that 41.1% respondents prefer Amazon as their first choice of online shopping website followed by Flipkart at 38.4%. It is evident that both Amazon and Flipkart are able to capture a large share of e-commerce market in India.
- In addition, the majority of the respondents are moderated users of online shopping websites, as 49.3% of them prefer online shopping sometimes.
- Even after the promotion and feasibility of cashless payments, majority of the respondents i.e. 52.1% of the respondents chose cash on delivery as their preferred mode of payment while carrying out online shopping followed by UPI as the second most preferred option for payment as the choice of 42.5% respondents.
- It was found that mobile phones are highly preferred by the consumers for shopping products online, and that too, by a very large proportion of 94.5% respondents. Online shopping brands should focus on the development of mobile friendly web interface and applications.

- A moderate number of respondents prefer to shop online during festive season sales. This can be seen, as 46.6% of respondents sometimes prefer shopping online during the time of festive season sales.
- The attractive offers and discounts provided by online shopping websites during the festive sales was identified as the major reason that attracts consumers and convinces them to make purchase decision.
- 42.5% respondents often find that they get value for money on products after making the decision of buying products online. 41% of the respondents surveyed find themselves over spending sometimes during such festive season sales.
- According to 42.5% respondents, sometimes, they have the tendency to purchase products or services that they do not use afterwards. 47.9% of the respondents claim that sometimes people around them influence their purchase decision.
- The overall experience of the consumers was satisfactory as it can be observed in figure 4.
- It is also evident that the Indian consumer is unaffected by the sudden impulse that arises while online shopping during festive seasons. The conservative mind-set of the Indian society might be the reason behind their rational purchase decision making and resistance towards impulsive buying behaviour. However, more studies are required to be carried out to strengthen the validity of the above statement.

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# Factors Influencing Homeowners' Intentions to Adopt Reverse Mortgage Loans in Goa: A Theory of Planned Behaviour Approach

**YOGESHWAR R. BHOSLE & ACHUT P. PEDNEKAR**

## INTRODUCTION

In the dynamic landscape of Goa, where the elderly population is projected to rise from 10.1% in 2021 to 13.1% by 2031(heraldgoa.in), a pressing financial challenge grips the middle and upper-middle class. Despite investing a lifetime's savings in creating homes, many find themselves tethered to fixed pensions or annuities. The Government of India's Reverse Mortgage Loan, introduced in 2007, stands as a potential lifeline. This transformative research seeks to reshape the narrative by delving into the multifaceted factors influencing homeowners' intentions to embrace Reverse Mortgage Loans in Goa. Our methodology integrates diverse approaches, engaging 400 homeowners aged 50 or older through meticulous structured surveys, navigating attitudes, subjective norms, and perceived behavioral control. The reliability of our study is fortified by the gold standard—Cronbach's alpha. Findings reveal a pathway where a positive attitude towards Reverse Mortgage Loans aligns with adoption of RML. Family, friends, and societal norms emerge as formidable influencers, alongside the critical role of perceived behavioral control. These insights herald a seismic shift in the economic and social impact of these financial instruments, presenting a future where Reverse Mortgage Loans become not only a viable option but a cornerstone in empowering our elders to secure dignified and prosperous golden years.

## REVIEW OF LITERATURE

Studies by Ajzen (1991) and Fishbein (1975) have laid the theoretical foundation, elucidating how attitudes, subjective norms, and perceived behavioural control collectively influence individuals' intentions. In examining attitudes towards reverse mortgage loans, studies by Smith and Johnson (2010) and Chen et al. (2015) have scrutinized the perceived benefits and risks, emphasizing their impact on the adoption landscape. Concurrently, research by Wang and Grable (2018) has highlighted the role of subjective

norms, elucidating the influence of family, friends, and societal expectations on homeowners' decisions. Additionally, the works of Dyl and Mutesasira (2017) and Haurin et al. (2006) have explored perceived behavioural control, shedding light on homeowners' confidence and perceived ability to navigate the reverse mortgage adoption process. Socio-economic factors, integral to understanding adoption intentions, are underscored by studies such as those conducted by Bajtelsmit and VanDerhei (1997) and Goodman and Mance (2011). These studies emphasize that the intersection of gender, income, education, occupation, and house value with homeowners' intentions to adopt reverse mortgage loans. Understanding the psychological aspects of reverse mortgage adoption is crucial. The works of Lusardi and Tufano (2009) and Sum et al. (2016) delve into the psychological factors influencing individuals' decisions, examining how perceptions of risk, financial attitudes, and decision-making processes impact homeowners' intentions to adopt reverse mortgage loans. Economic considerations play a pivotal role in reverse mortgage adoption. Research by Shoven and Sialm (2004) and Hanewald et al. (2015) investigates economic factors such as interest rates, property values, and broader economic conditions, offering a comprehensive analysis of how these variables influence homeowners' intentions to adopt reverse mortgages. These studies contribute to the economic dimension of the adoption decision. Cultural and social influences play a significant role in shaping attitudes towards reverse mortgage loans. Studies by Apgar and Duda (2004) and Gurin et al. (2012) delve into the influence of cultural norms, social networks, and community perceptions on adoption intentions. Understanding the cultural and social context is crucial for developing targeted strategies to encourage adoption in specific communities. Comparative studies provide valuable insights into regional variations in reverse mortgage adoption. Research by Haurin et al. (2006) and Yung and Zhu (2019) compare adoption patterns in different regions.

Consumer awareness and education programs are essential for fostering informed decisions regarding reverse mortgages. The works of Lichtenberg (2008) and Lusardi and Mitchell (2007) investigate the level of awareness and understanding among potential adopters and assess the impact of financial education programs on adoption intentions. These studies contribute to strategies aimed at improving consumer knowledge. The role of financial institutions in promoting or hindering reverse mortgage adoption is explored in studies by Dushi and Webb (2006) and Giacomo and Curcio (2018). These works investigate the accessibility and availability of reverse mortgage products, offering insights into how financial institutions can play a proactive role in encouraging adoption. However, a notable gap exists in the literature concerning the adoption of reverse mortgage loans in the specific context

of Goa. To address this, the present review lays the groundwork for a more exploration. By synthesizing and critically assessing existing research, this review underscores the need for empirical studies that integrate Theory of Planned Behaviour within the unique socio-economic milieu offering a more comprehensive understanding of the factors influencing adoption decisions (Ajzen, 1991; Fishbein, 1975; Smith & Johnson, 2010; Chen et al., 2015; Wang & Grable, 2018; Dyl & Mutesasira, 2017; Haurin et al., 2006; Bajtelsmit & VanDerhei, 1997; Goodman & Mance, 2011).

## **REVERSE MORTGAGE IN INDIA**

In India, Reverse Mortgage Loans (RML), initiated by the National Housing Bank (NHB) in 2007, cater to the financial needs of senior citizens aged 60 and above. RML uniquely enables elderly homeowners to convert a portion of their home equity into a steady income or lump sum, ensuring financial stability in retirement without relinquishing property ownership. Lenders disburse payments based on property value, borrower's age, and prevailing interest rates, with repayment deferred until the property is sold, the borrower relocates permanently, or passes away. Noteworthy banks offering RML include State Bank of India (SBI), Punjab National Bank (PNB) Bank of Baroda (BOB), Union Bank of India (UBI) and private sector Bank such as Axis banks, Kotak Mahindra Bank. Banks in India can offer RML only after getting prior approval and permission from the National Housing Board (NHB) which is a regulatory body for RML. All the terms and conditions and rules and regulations are available on the websites of the NHB (RBI & NHB 2020).

## **THEORETICAL FRAMEWORK**

### **Theory of Planned Behaviour (TPB)**

The Theory of Planned Behaviour (TPB) serves as the theoretical foundation for comprehending the factors influencing homeowners' intentions to adopt reverse mortgage loans. The TPB posits that behavioral intentions are shaped by four pivotal factors:

1. **Attitude (A):** Attitude signifies the homeowners' positive or negative evaluation of adopting reverse mortgage loans. It encompasses beliefs about potential outcomes and the subjective assessment of those outcomes.
2. **Subjective Norms (SN):** Subjective Norms capture perceived social pressure or influence from significant others, such as family, friends, or the community, regarding the adoption of reverse mortgage loans. Homeowners are influenced by the opinions and expectations of those around them.

3. **Perceived Behavioral Control (PBC):** Perceived Behavioral Control reflects the homeowners' perception of the ease or difficulty in adopting reverse mortgage loans. It includes factors like financial resources, knowledge, and external circumstances that may facilitate or impede the decision-making process.
4. **Perceived Ease of Use (PEOU):** Perceived Ease of Use encompasses the homeowners' perception of the simplicity or complexity of the reverse mortgage adoption process. It includes considerations of user-friendliness and accessibility.

## **CONCEPTUAL FRAMEWORK**

### **Independent Variables (IdV)**

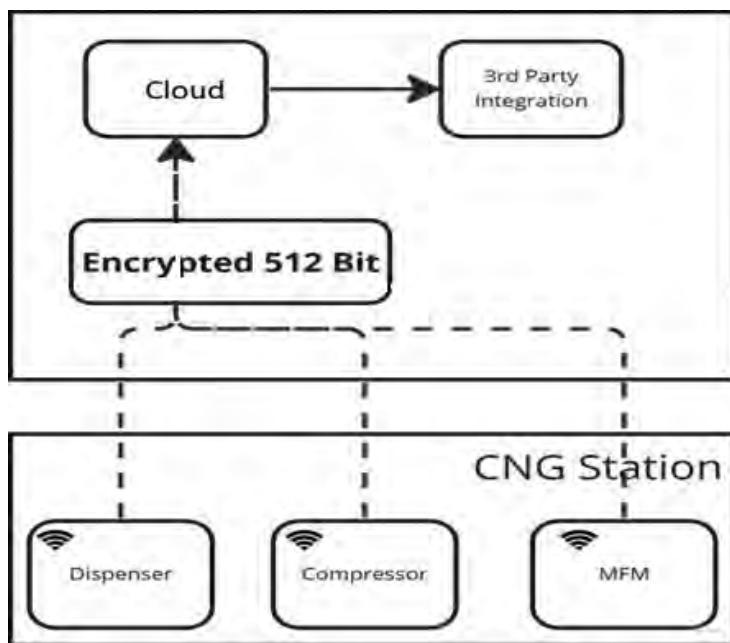
- Attitude (A): Represents homeowners' evaluations of adopting reverse mortgage loans.
- Subjective Norms (SN): Captures perceived social pressure or support regarding the adoption of reverse mortgage loans.
- Perceived Behavioral Control (PBC): Reflects homeowners' perceptions of control over adopting reverse mortgage loans, considering factors like financial resources, knowledge, and external circumstances.
- Perceived Ease of Use (PEOU): Reflects homeowners' perceptions of the simplicity or complexity of the reverse mortgage adoption process.

### **Dependent Variable (DV)**

**Behavioral Intentions (BI):** Signifies homeowners' intentions to adopt reverse mortgage loans in Goa, reflecting their likelihood and willingness to engage in this financial behavior.

### *Interpretation*

- **Attitude (A) Influence on Behavioral Intentions (BI):** A positive attitude towards reverse mortgage loans is hypothesized to positively influence homeowners' behavioral intentions to adopt reverse mortgage loan.
- **Subjective Norms (SN) Influence on Behavioral Intentions (BI):** Positive subjective norms, indicating social support or pressure, are expected to positively influence homeowners' behavioral intentions.
- **Perceived Behavioral Control (PBC) Influence on Behavioral Intentions (BI):** Higher perceived behavioral control is anticipated to positively impact homeowners' behavioral intentions.
- **Perceived Ease of Use (PEOU) Influence on Behavioral Intentions (BI):** Positive perceptions of ease of use are expected to positively influence homeowners' behavioral intentions.



**Figure 1:** Proposed Conceptual Model  
Source: Developed by Research Scholar

## RESEARCH PROBLEM

The research aims to investigate the determinants influencing homeowners' purchase intentions concerning reverse mortgage loans in Goa. Despite the availability of substantial home equity, there is a notable gap in understanding the specific factors that shape homeowners' willingness and intent to adopt these financial instruments. Identifying these determinants is crucial for developing targeted strategies and fostering a conducive environment for increased adoption, thereby addressing the financial needs of the aging population in Goa.

## RESEARCH QUESTIONS

1. What are the key factors influencing homeowners' purchase intentions regarding reverse mortgage loans in Goa?
2. How does the perceived ease of use influence homeowners' purchase intentions regarding reverse mortgage loan?
3. How do homeowners' attitudes towards reverse mortgage loans impact their purchase intentions regarding reverse mortgage loan?
4. What role do subjective norms play in shaping homeowners' purchase intentions regarding reverse mortgage loan?

5. To what extent does homeowners' perceived behavioral control influence their purchase intentions regarding reverse mortgage loan?

## **RESEARCH OBJECTIVES**

1. To explore the role of perceived ease of use in shaping homeowners' intention to adopt reverse mortgage loans.
2. To assess homeowners' attitudes towards the adoption of reverse mortgage loans.
3. To examine the influence of subjective norms on homeowners' intention to adopt reverse mortgage loans.
4. To investigate the impact of perceived behavioral control on homeowners' intention to adopt reverse mortgage loans.

## **RESEARCH HYPOTHESES**

- **H1:** Perceptions of ease-of-use influence homeowners' behavioral intentions to adopt Reverse Mortgage Loan.
- **H2:** Attitude towards reverse mortgage loans influences homeowners' behavioral intentions to adopt Reverse Mortgage Loan.
- **H3:** Subjective norms positively influence homeowners' behavioral intentions to adopt Reverse Mortgage Loan.
- **H4:** Perceived behavioral control impacts homeowners' behavioral intentions to adopt Reverse Mortgage Loan.

## **RESEARCH METHODOLOGY**

This study employs a robust research methodology to thoroughly investigate the determinants influencing homeowners' purchase intentions towards reverse mortgage loans in Goa. Utilizing structured surveys and employing snowball sampling, data has been collected from a targeted sample of 400 homeowners aged 50 or above. A Likert scale has been used as the primary instrument to measure participants' attitudes, subjective norms, perceived behavioral control, and perceived ease of use related to reverse mortgage loans. The research methodology incorporates various statistical analyses, including descriptive statistics to provide an overview of key variables, Cronbach's alpha to ensure survey instrument reliability, and inferential statistics such as correlation and regression analyses to reveal patterns, associations, and predictive relationships among the variables. This comprehensive approach ensures a rigorous examination of the factors influencing purchase intentions in the context of reverse mortgage loans.

In the analysis of the demographic profile of the 400 participants in this research investigation, a noteworthy gender distribution emerged, with a substantial majority of respondents being male, constituting 88.30% of the

**Table 1:** Demographic Profile of the Respondent

		<i>Respondents</i>	<i>Percent</i>
Gender	Male	353	88.25
	Female	47	11.75
	Total	400	100.00
Age	50–60 Years	371	92.75
	60–70 Years	26	6.50
	Above 70 Years	3	0.75
	Total	400	100.00
Qualification	SSC	30	7.50
	HSSC	161	40.25
	Diploma	21	5.25
	Graduation	165	41.25
	Post Graduation	23	5.75
	Total	400	100.00
Annual Income	Up to Rs. 5,00,000	287	71.75
	Rs. 5,00,001 to Rs. 10,00,000	82	20.50
	Rs. 10,00,001 to Rs. 15,00,000	19	4.75
	Above Rs. 15,00,000	12	3.00
	Total	400	100.00
Occupation	Private Service	252	63.0
	Government	55	13.75
	Business	25	6.25
	Profession	68	17.0
	Total	400	100.00
Location	Urban	103	25.75
	Semi Urban	77	19.25
	Rural	220	55.00
	Total	400	100.00
Marital Status	Married	394	98.50
	Unmarried	6	1.50
	Total	400	100.00

Source: Primary Source

total sample, while females accounted for 11.80%. The categorization based on age revealed that the preponderance of participants fell within the 50 to 60 years age range, encompassing 92.80% of the cohort, with a smaller percentage in the 60 to 70 years category (6.50%) and a minimal representation above 70 years (0.80%).

The educational background of the respondents exhibited diversity, with the highest proportion holding graduation degrees (41.30%), closely followed by those with higher secondary education (40.30%). Marital status predominantly reflected a married population (98.50%), with a marginal proportion identifying as unmarried (1.50%). Geographical distribution depicted that a majority of respondents resided in rural areas (55.00%), followed by urban (25.80%) and semi-urban (19.30%) locations.

An examination of annual income classifications revealed that the majority of respondents earned up to Rs. 5,00,000 (71.80%), with smaller percentages falling into higher income brackets. Occupation-wise, a significant segment of the respondents were engaged in private service (63.0%), followed by professionals (17.0%), government employees (13.8%), and business owners (6.3%).

**Table 2:** Descriptive Statistics

Constructs	N	Mean	Std. Deviation
Tot_PEOU	400	20.68	2.562
TOT_ATT	400	23.15	3.476
TOT_SN	400	20.08	2.856
TOT_PBC	400	18.75	3.341
TOT_PI	400	17.78	3.273

Source: Primary Data

The descriptive statistics for the five constructs in this study reveal valuable insights. Respondents, on average, perceived the system's ease of use (Tot\_PEOU) with a mean score of 20.68, demonstrating relatively low variability (SD = 2.562). Attitude (TOT\_ATT) exhibited an average score of 23.15, accompanied by higher variability (SD = 3.476). Subjective Norm (TOT\_SN) received an average score of 20.08, with moderate variability (SD = 2.856). Perceived Behavioral Control (TOT\_PBC) had an average score of 18.75, with notable variability (SD = 3.341). Lastly, Purchase Intention (TOT\_PI) yielded an average score of 17.78, showing moderate variability (SD = 3.273).

**Table 3:** Reliability Statistics

Construct	Tot_PEOU1	Tot_ATT	Tot_SI	Tot_PA	Tot_PI
Items	06	05	05	05	05
Cronbach's alpha	0.904	0.905	0.910	.906	0.909
<i>Overall Cronbach Alpha</i>					
<i>Over all Cronbach's Alpha</i>		<i>Number of total items</i>			
0.912		31			

Source: Primary Data

## RESULTS

The Cronbach's alpha reliability analysis shows that perceived ease of use = 0.904, attitude = 0.905, social influence = 0.909, perceived ability = 0.906 and purchase intention = 0.909. The Total scores for ATT, SN, PBC, and PI also demonstrate high reliability (Cronbach's Alpha = 0.904, 0.905, 0.910, 0.906, and 0.909, respectively). Overall, the reliability statistics confirm the robustness and coherence of the measurement instrument across all the constructs, as reflected in the high overall Cronbach's Alpha of 0.912 for the entire scale comprising 31 items.

**Table 4:** Correlation Analysis

		Correlations				
		Tot_PEOU	TOT_ATT	TOT_SN	TOT_PBC	TOT_PI
Tot_PEOU	Pearson Correlation	1	.770**	.560**	.447**	.309**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	400	400	400	400	400
TOT_ATT	Pearson Correlation	.770**	1	.454**	.587**	.509**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	400	400	400	400	400
TOT_SN	Pearson Correlation	.560**	.454**	1	.400**	.301**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	400	400	400	400	400
TOT_PBC	Pearson Correlation	.447**	.587**	.400**	1	.653**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	400	400	400	400	400
TOT_PI	Pearson Correlation	.309**	.509**	.301**	.653**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	400	400	400	400	400

\*\*. Correlation is significant at the 0.05 level (2-tailed).

Source: Primary Data

The correlation matrix presented in Table 4 indicates strong positive relationships among the constructs in the measurement instrument. The notation "r = 0.770, p < 0.05" signifies a substantial correlation at the 95% confidence level (2-tailed). Notably, Total Perceived Ease of Use (Tot\_PEOU) demonstrates significant correlations with Total Attitude (TOT\_ATT) (r = 0.770, p < 0.05), Total Subjective Norm (TOT\_SN) (r = 0.560, p < 0.05), Total

Perceived Behavioral Control (TOT\_PBC) ( $r = 0.447$ ,  $p < 0.05$ ), and Total Perceived Intention (TOT\_PI) ( $r = 0.309$ ,  $p < 0.05$ ). Total Attitude (TOT\_ATT) also exhibits strong correlations with Total Subjective Norm (TOT\_SN) ( $r = 0.454$ ,  $p < 0.05$ ), Total Perceived Behavioral Control (TOT\_PBC) ( $r = 0.587$ ,  $p < 0.05$ ), and Total Perceived Intention (TOT\_PI) ( $r = 0.509$ ,  $p < 0.05$ ). Additionally, TOT\_SN correlates significantly with TOT\_PBC ( $r = 0.400$ ,  $p < 0.05$ ) and TOT\_PI ( $r = 0.301$ ,  $p < 0.05$ ). Notably, TOT\_PBC and TOT\_PI exhibit a robust positive correlation ( $r = 0.653$ ,  $p < 0.05$ ). Therefore, the findings underscore the interrelated nature of users' perceptions of ease, attitude, subjective norm, perceived behavioral control, and intention within the context of the study, with correlations significant at the 95% confidence level (2-tailed).

**Table 5:** Multiple Regression (hierarchical) Analysis.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.309 <sup>a</sup>	.096	.093	3.116	.096	42.132	1	398	.000
2	.525 <sup>b</sup>	.276	.272	2.792	.180	98.629	1	397	.000
3	.542 <sup>c</sup>	.294	.289	2.760	.018	10.291	1	396	.001
4	.684 <sup>d</sup>	.469	.463	2.398	.175	129.691	1	395	.000

a. Predictors: (Constant), Tot\_PEOU  
b. Predictors: (Constant), Tot\_PEOU, TOT\_ATT  
c. Predictors: (Constant), Tot\_PEOU, TOT\_ATT, TOT\_SN  
d. Predictors: (Constant), Tot\_PEOU, TOT\_ATT, TOT\_SN, TOT\_PBC

Source: Primary Data

A hierarchical multiple regression analysis was conducted to explore the predictors of Purchase Intention (TOT\_PI) towards Reverse Mortgage Loan. The model demonstrated statistical significance,  $F(4, 395) = 87.053$ ,  $p < 0.05$ , indicating a collective contribution of the predictors to explaining the variance in TOT\_PI. The model accounted for 46.9% of the variability in TOT\_PI ( $R^2 = 0.469$ ). The multiple correlation coefficient (R) was 0.684, suggesting a moderate positive correlation between observed and predicted values. The adjusted  $R^2$ , considering predictors, was 0.463. The standard error of the estimate was 2.398. Change statistics indicated a significant model improvement with the addition of predictors,  $F(4, 395) = 87.053$ ,  $p < 0.05$ . The Durbin-Watson statistic was 1.978, suggesting no significant autocorrelation in residuals. These findings underscore the model's valuable insights into the relationship between predictors and TOT\_PI, with confidence at the 95% level.

**Table 6:** Hypothesis Results

Hypothesis	Regression Weights	B	T	p-value	Results
H1	PEOU → PI	.347	5.453	.000	Supported
H2	ATT → PI	-.226	-3.646	.000	Supported
H3	SN → PI	.059	1.309	.191	Not Supported
H4	PBC → PI	.527	11.388	.000	Supported
R	.684				
F(4, 395):	87.053				

Note: \*p<0.05. PEOU: Perceived Ease of Use, ATT: Attitude, SN: Subjective Norms, PBC: Perceived Behaviour Control

In summary, H1, H2, and H4 are supported based on the significance level of 0.05, while H3 is not supported. These conclusions are drawn by comparing the p-values to the predetermined significance level.

## FINDINGS

The study unveils compelling insights into the factors influencing homeowners' purchase intentions for reverse mortgage loans in Goa. Notably, positive attitudes towards reverse mortgages were prevalent among respondents, correlating strongly with a heightened intention to adopt. Subjective norms, particularly those influenced by family and friends, emerged as significant motivators, suggesting the role of social networks in shaping decisions. Perceived behavioral control played a pivotal role, with homeowners expressing greater intent when they felt a sense of control over the adoption process. Surprisingly, the perceived ease of use was a critical determinant, indicating that a straightforward and user-friendly process positively impacted purchase intentions. Socio-economic factors, including income and education, displayed nuanced effects, with higher socio-economic status individuals exhibiting a more pronounced influence of subjective norms on their decisions.

## CONCLUSION

In conclusion, this research delves into the factors influencing homeowners' purchase intentions for reverse mortgage loans in Goa. While the findings provide valuable insights, it is essential to acknowledge the limitations and recognize the scope for improvement. The study's focus on an older demographic in a specific region offers a foundational understanding, but future research should aim for a more diverse and comprehensive sample. The use of Likert scales, though effective, prompts consideration for mixed-method approaches to capture a more nuanced perspective. Longitudinal studies and the inclusion of external variables would enhance the study's relevance

and applicability. Qualitative methods could offer deeper insights into homeowners' decision-making processes. By addressing these considerations, future research can contribute to a more robust understanding of the complex dynamics surrounding homeowners' purchase intentions for reverse mortgage loans.

## **LIMITATION**

While this research provides valuable insights, certain limitations should be acknowledged. The study focuses on homeowners aged 50 and above in Goa, potentially limiting the generalizability of findings to other demographics or regions. The use of a Likert scale for data collection may introduce response bias, and the reliance on self-reported data may pose a risk of social desirability bias. Additionally, external factors such as economic fluctuations or legislative changes, not accounted for in this study, may influence homeowners' purchase intentions.

## **SCOPE FOR FURTHER STUDY**

While the study provides valuable insights, there are areas for enhancement. Diversifying the sample to include various age groups and geographic locations would improve the study's applicability. Employing mixed-method approaches could offer a more nuanced understanding, addressing potential biases associated with Likert scale responses. Longitudinal designs would capture the dynamic nature of purchase intentions over time. Considering external variables like economic fluctuations could enhance real-world relevance. Qualitative methods, such as interviews, would provide deeper insights. These improvements would contribute to a more comprehensive exploration of factors impacting purchase intentions for reverse mortgage loans.

## **THEORETICAL IMPLICATIONS**

The study enriches theoretical frameworks in consumer behaviour by empirically validating and extending existing theories, particularly in the context of financial decisions related to reverse mortgage loans. The integration of variables such as perceived ease of use, subjective norms, perceived behavioral control, and attitudes provides a nuanced understanding of their interplay. The age-specific focus on homeowners aged 50 and above contributes to refining existing theories, and the hierarchical regression analysis offers a systematic approach for future research in similar domains.

## **MANAGERIAL IMPLICATIONS**

For managers in financial institutions, the study provides actionable insights for refining marketing strategies and product offerings. Tailoring marketing

efforts based on positive influencers like perceived ease of use and attitudes can enhance communication effectiveness. Insights related to perceived behavioral control suggest the implementation of training and support programs, while a holistic approach to product development, considering multiple factors simultaneously, can align offerings with consumer expectations. Continuous monitoring and adaptation of strategies are recommended to address the dynamic nature of consumer perceptions in the realm of reverse mortgage loans.

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# Empowering India through Innovation: Insights from Emerging Economies

**POOJA CHAUDHARY & GUNMALA SURI**

## INTRODUCTION

*“While creativity is the generation of new and productive ideas, innovation is the process through which these ideas are implemented successfully within organisations as new products, activities or accepted processes for a new way of doing things”.*

– **Amabile, 1996**

The Swadeshi movement was one of the many Indian independence movements, which was started in the late 19<sup>th</sup> century by Dadabhai Naoroji, Gokhale, Ranade, Tilak, and other national leaders. This was the ‘make in India’ movement of last century, which has resurfaced in its new avatar now.

A Japanese diaper company has been engaged to re-design its products to ensure that their infant consumers and parents can change out of these easily. A Chinese pork producer takes the television route to market its signature hotdogs and does so through a two-hundred-episode cartoon TV shows. A study shows that jointly, Indonesia, Thailand, India, China, and the Philippines will create a consumer market worth USD 8.3 trillion by the end of 2020 (Yunita, 2014). Asian companies are reinventing the way they produce even the most mundane of consumer goods, and it shows on their ranking of the ‘Most Innovative Companies in the World’. Out of the 100 companies on innovation list, Asia contributes nearly 25% of all in 2015 (Ringel, Baeza, Panandikar & Harnoss, 2020).

As Yunita (2014) explains that two Unilever subsidiaries were classified by committee as top innovative Asian firms of 2014. These were Tingyi, a Chinese food maker and CP All, a Thai store operator. Fast-changing competitive landscape is making all companies to innovate to stay ahead of the curve. This requires challenging a company’s basic assumptions about designing, developing, manufacturing and marketing products on a regular basis. Gudlavalleti and Gupta (2013) had explained the pitfalls of lack of innovation in McKinsey Report of May 2013. A giant auto industry house had developed

a commercial truck for India's highly competitive market. The vehicle could run longer with reasonable operating costs. But the venture came unstuck because the company hadn't accounted for the road infrastructure of the country, which was poor at most of the places. Such cases highlight the importance of designing, developing and manufacturing products for local conditions and need innovations separately for each market. The authors in McKinsey Report called this process "design to value" (Gudlavalleti & Gupta, 2013).

Okpara (2007) stated that innovation is defined in many terms, but best fit would be that it is a process of bringing the best ideas into reality. This normally gives effect to creative ideas and innovative events, which must be useful to a user. Innovation is therefore a creation of new value in an existing product or a process. As many cases suggest, without innovation, any organisation or enterprise is unlikely to remain in the market and customers are quick to move to the best buy, which offers better value for the money (Okpara, 2007).

Covid-19 has shown the emerging economies that the nations have long ignored systemic problems and these can haunt all during a pandemic or disaster situation. There are massive inequalities around the nations, perpetual environmental degradation is further adding to the cycle of famine and hunger, poverty, and all this is correlated with the digital divide. In this age of technological progress, many innovators are attempting quick technological fixes to these deeply-ingrained issues. Emerging markets have been the net consumers of products and processes developed by the industrialised societies. As these markets grew in the networked global economy, almost all countries felt the need to bring in local flavours to the products and processes. This has also been necessitated due to global giants trying to monopolise the markets and to maintain competitive advantage to own products. These countries have succeeded in innovative planning, fresh set of ideations, excellent execution at technological level and come out with products more suited to the local markets.

## **OBJECTIVE OF THE STUDY**

India is still an emerging economy, beset with myriad of problems at rural infrastructure and urban poverty levels. It needs to take cues from the lessons that similar emerging economies have learnt in the past. The objective of this paper is to carry out a meta-analysis of lessons in innovation in other major emerging economies and create essential determinants for the Indian products, services and organisations. Twin features which distinguish an innovation are environmental conditions as a catalyst for a firm to innovate, and effects of innovation on the performance of an enterprise (Hassan, Shaukat, Nawaz, & Saman Naz (2013). This study aims to investigate the determinants of innovation performance in various organisations with these two elements

in mind. Therefore, there is a need to study the relationship between several constructs affecting innovative practices. These will include among others, mainly state policy, innovation strategy, formal structure, customer and supplier relationships, innovation culture, and technological capabilities are studied in emerging economy settings. A meta-analysis was carried out on ten emerging economies and their companies to understand above constructs.

## METHODOLOGY

The research paper explores the effectiveness of semi-systematic and integrative approaches and emphasizes that the choice of approach depends on the purpose and quality of execution. Sometimes, a research question requires a more creative collection of data, and in such cases, an integrative review approach can be useful. Rather than covering all published articles on a topic, an integrative review approach combines perspectives to create new theoretical models. Researchers can use various strategies, standards, and guidelines developed specifically for conducting a literature review, depending on the purpose of the review.

**Table 1**

<i>Authors</i>	<i>Discipline</i>	<i>Type of Literature Review</i>	<i>Contribution</i>
Baumeister and Leary (1997)	Psychology	Narrative Review	Overviews reasons for conducting a review
			Discusses common mistakes for conducting a review
Tranfield et al. (2003)	Management	Systematic review	Compares management and healthcare research
			Highlights the challenges of conducting a systematic review in management research
			Provides guidelines for conducting a systematic literature review in management research
Torraco (2005)	Human Resources	Integrative review	Defines the integrative literature review
			Provides guidelines and examples for integrative literature reviews
			Discusses contributions of a integrative literature review
Liberati et al. (2009)	Medicine	Systematic review and meta-analysis	Provides guidelines for conducting and reporting systematic reviews and meta-analysis

Authors	Discipline	Type of Literature Review	Contribution
Wong et al. (2013)	Medicine	Semi-systematic review	Provides guidelines for conducting a meta-narrative review
Davis et al. (2014)	Social Sciences	Systematic review and meta-analysis	Synthesizes guidelines for systematic literature reviews
			Provides guidelines for conducting a systematic review and meta-analysis in social sciences
Palmatier et al. (2018)	Marketing	Review papers and systematic reviews	Provides guidelines for publishing review papers in the Journal of the Academy of Marketing Science

Source: Snyder

### **VARYING ASSUMPTIONS AND BASICS OF INNOVATION**

To achieve success in any organization, one has to build assumptions and hypotheses about success. Thereafter, the structure must act on these hypotheses and reflect on their success or failure. This paves the way for upgrading products or processes. Successful ideas become reliable predictors of success and achievements. Unfortunately, over time these processes or manufacturing techniques tend to become gospel truths and tend to stagnate. No one challenges these laid down successful processes as questioning these assumptions is taken as a threat to the leaders. These assumptions give rise to the culture of an organization. It also imposes limits on change, and subdues the spirit of innovation.

Current industrial and technological frameworks are constantly challenging existing assumptions. These assumptions include that initial success followed by a steep downfall can drive innovative strategies for products, processes and market reach. In this area, Apple has been often quoted as a success story of rising from the ashes to become a winner.

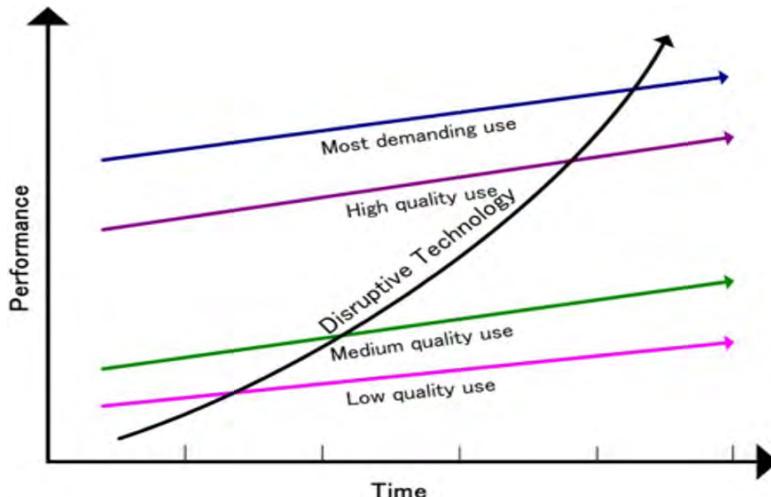
### **INNOVATIONS ARE DISRUPTIVE**

Japan's huge economic upsurge after the devastation during World War II and Europe's recovery has been attributed largely to disruptive innovation. Nippon Steel, Sony, Nissan, Toyota and Canon came to be known for their cost efficiency in 1960s, though products were initially qualitatively considered inferior to those of their Western competitors (Markides, 2012). Japanese companies were able to capture the lower segment of a market, while initiating innovations at their product levels. This allowed them to move into all market segments. Taking Japanese example, to be disruptive, a product must commence its sale as an inferior in terms of the performance but be

a price competitive. Many die-hard fans of products may ignore it initially but first-time buyers, non-consumers will be attracted by its novelty and low price, as these are aspirational products. To convert it to a disruptive strategy, it must quickly evolve itself through its life cycle and come out with superior performance. This alone can attract major segment of customers.

Scholars (Hassan et al., 2013; Markides, 2012; and Okpara, 2007) are of the opinion that similar disruptive innovations are taking place in emerging economies. For India, Nano is an inexpensive car of Tata Motors (2009), which captured the imagination of middle classes in the country. Mobile phones and many such products have witnessed constant innovations and lowering of costs. Most of these innovations can be termed as disruptive, causing disruptions to the existing products or processes. There are many examples of low-profile companies and social or services entrepreneurs, who are providing their low-cost but highly relevant services to billions of local consumers. The major point is that these entrepreneurs do not have any significant competition from any big global player.

In early 17th century, the global product share of India and China in the global economy was nearly 40%. Many multi-national companies from the more developed economies are imagining a repeat of this history, due to emerging companies from the markets like China and India. The Disruptive innovation moves quickly across all performance bands, starting at the low-end to most demanding use. Samsung fits the bill in this paradigm. Time is a critical factor and can upstage best placed products. Same is reflected in Figure 1, a simple design by Christensen.



**Figure 1: Low-End Disruptive Innovation**

Reference: Christensen (1997), Discontinuous and Low-end innovations.

As per Christensen (1997), there is difference between lower-end disruption, aimed to get the customers who may not be concerned with the full performance and equally high-end disruption targeted at the customers looking for a rich experience. Companies involved in innovating disruptions also can use various options to bridge the performance gap. Business strategy of merger and acquisition has been used as most effective tool. Technology sector, especially information technology enabled service witness this phenomenon on a regular basis. Tata Motor's acquisition of Land Rover or Jaguar fits this scheme of up gradation.

### **CLOSING THE PERFORMANCE GAP WITH CHINA**

Emerging countries with an innovative business models have an added advantage to start from an existing finished product or process. Countries or organisations need to build cost advantage in the strategy to surge ahead. Chinese products are playing out exactly the Japanese strategy on 1960s. Low performance yet exceptional cost advantage has seen a surge in flood of Chinese products in South Asia and African markets. Economy of scale is another strategy used successfully by Chinese manufacturing concerns. Besides, Cost advantage, aggressive response of the incumbent companies is a key to face and challenge such a competition. Existing companies need to understand that their own survival rests with themselves and their ability to constantly innovate (Markides, 2012).

China also took another innovation route, investing in research and development, licence import of technology and increased partnerships and alliances. Zhengzhou Zhongxing Medical Equipment witnessed surge in research and development activities. Much publicised Huawei Technologies entered into alliance with 3Com to gain competitive advantage (Markides, 2012).

### **GIG ECONOMY: THE NEW AGE INNOVATION**

With the rapid and sustained spread of Covid19, increasing layoffs were expected in all sectors. Besides, this pandemic led unemployment, trends in the western world had always been towards independent working models. Petriglieri, Ashford and Wrzesniewski (2018), writing in the Harvard Business Review stated that nearly 150 million North Americans and Western Europe workers left well organised organizational life and started working as independent contractors. During Covid19, this number would have gone up. This has created its own problems for the organisations as well as independent workers. Sustaining productivity in such a work-life can become constant challenge. Many disruptions, distress and distractions add to the challenges. Emerging economies have not yet caught up on this trend, therefore are in a

better position to work through their regular employees towards innovation and winning combinations. However, there has been increasing trend on start-ups and innovation in the confines of workers' homes.

Ahlstrom and Bruton (2006) studied the emerging economies, and concluded that these have attempted many fundamental institutional transformations as they mature in their life-cycle. Intangibles like the formal structures or hierarchy is getting replaced with flat structures. Venture capitalist function in a totally different environment. There is a clamour to superimpose formal institutional format or model on to the emerging organisations. Many emerging economies have tried this and succeeded, something India has also started catching on.

Alison Taylor, Executive Director, Ethical Systems, Stern School of Business, New York University had stated on 16 June 2020, that the distinction between internal and external factors has been reducing due to the pandemic. This is leaving room for more flexible or tighter controls and interpretations, specifically in terms of casual employment of the gig economy. Organizational boundaries across various dimensions have become transparent. The gig model coupled with the global emergency has affected the long-term transformation with regards to the vision, mission and values of many companies.

## **INNOVATION POLICIES IN BRAZIL**

Part of the now famous BRICS economy, Brazil emerged from its economic downturns to be the seventh largest economy on purchasing power parity. Innovation Policy Platform writing on Brazil (2016) explains that to enhance its economic performance, the 'Greater Brazil Plan' was conceptualised and executed, with innovation as a national policy through legislative frameworks. As per policy framework, decentralisation and co-ordination of central, state and private resources for innovation was attempted and implemented in stages. This is very close to India's recent efforts on "Atam-Nirbhar Bharat". The National Council for Industrial Development brought more focus into innovative practices.

Brazil (2016) describes the initiatives and support for start-ups and funding support in the form of grants. For example, "PRIME, the Primeir a Empresa Inovadora programme, supported 1381 enterprises with USD 104 million between 2009 and 2011" (Brazil, 2016, p 27). In 2012, Brazilian Innovation Agency's (FINEP) Inovacred policy was started to improve funding support. Brazil has also focused on absorptive capacity within larger framework of state policy. As Cohen & Levinthal, (1990) explained that the concept was based on a company's demonstrated ability to recognize external know-how, ability to assimilate it, and create a commercial enterprise out of this. Fabrizio

(2009) argued explained that the absorptive capacity was primarily based on a firm's ability to absorb new technologies and outside knowledge.

## **INDONESIA AND SOCIAL INNOVATIONS**

Howaldt and Schwarz (2010) defined social innovation as a process allowing creating new solutions to address social needs. Examples of recent social innovations are the fair-trade movement, guarantee of fair living wages to farmers and microcredit movements around the emerging economies. Social innovations are generally driven by exchange of ideas and cooperation among various stakeholders, like the public and private sectors, international organizations and NGOs. At times, natural calamities and scarcity can also be a driver for social innovation, since it requires finding creative solutions to use more effectively limited resources. In Indonesia, a young Indonesian, Gamal Albin said, won the AusAID<sup>1</sup> Indonesian Social Innovator Award in 2013, with the Garbage Clinical Insurance. It was a unique micro insurance model accepting garbage instead of money as payment for health insurance. The participants need to provide a bag of garbage worth \$84 cents once a month to a local clinic, and receive in exchange standard check-ups and recovery treatments. This system successfully addresses two issues - waste management, and scarce access to health insurance by poor people.

In mobile phone sector, major difficulty for average Indonesian was buying airtime, though the country has nearly 90% penetration. Social enterprise, PT Ruma, looked at this issue by targeting people below the poverty line to become micro entrepreneurs or RUMA agents. To increase dignity, income, and access for the poor through technology<sup>2</sup>. These people were provided the technology to sell air time for all the mobile networks in operation in the country. RUMA agents can offer financial services and accept payments for utilities. RUMA's technology also allows companies to conduct market researches and advertising campaigns in small businesses belonging to RUMA's network (Federica, 2014). With an innovative solution, multiple services are used and airtime became cheaper. Elsewhere, prominent innovators associated with the term include Pakistani Akhter Hameed Khan, Bangladeshi Muhammad Yunus, the founder of Grameen Bank (Domanski, Monge, Quitiaquez, & Rocha, 2016).

## **PAKISTAN'S INDUSTRY INNOVATION**

One of the key area essential for the economic growth of Pakistan has been the Manufacturing sector. It has a cumulative share of 18.7% in the GDP (Hassan,

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<sup>1</sup> Australian Aid, government aid agency.

<sup>2</sup> <https://www.crunchbase.com/organization/pt-ruma#section-overview>

M., Shaukat, S., Nawaz, & M., Naz, S., 2013). Industrial Policy sates 8% value add in the manufacturing, which is an indicator of innovative practices. A study by Hassan et al. (2013) revealed that level and scale of innovations is directly dependent upon the organizational practices of a firm. The study also came to a conclusion that management practices and optimum utilisation of internal resources always encourages innovative practices.

Rehmat (2020) in his report to the IMS, explains that Pakistan's media had to resort to innovation to report and tackle Covid-19 pandemic. After the Covid-19 outbreak, with media was found to be struggling to offer reliable and adequate information. The trust in government reports has always been dwindling in the country. Therefore, media organised itself with many innovative and new found practices to carry field reports to the larger public. The media in Pakistan is aware of the challenges in view of the severe impact of Covid-19; which also offers optimal transformation in the field of digital news footprint and journalism with social reach and public interest.

Hassan et al. (2013) has further studied innovativeness in the country with respect to products, processes and other post production marketing efforts. The study carried out analysis of manufacturing sector on a sample of 150 companies. Empirical evidence was provided about the types of innovations and whether these positively related with firm performance. The study reveals the tenuous relationship between the value generation for the customers and costs optimization for price-sensitive markets. Raja & Wei. (2014) studied services sector for innovative practices, which are as well useful in pandemic situations. The study discussed innovation practices in the service industry and various quality practices followed by the companies. The study measured the relationship between innovations, quality practices and firm's performance of 157 service sector firms. The study revealed that at any time, organizational innovations will have a positive influence on the leadership, long-term policies, and quality. Process innovation can be useful adoption during any pandemic-like situation.

A study by Sengupta et al. (2023) explores the impact of authentic leadership on innovative work behavior in Indian startups that recently expanded globally. Findings reveal a significant direct effect of authentic leadership, mediated by readiness for change, while organizational climate shows no significant influence. The research emphasizes the importance of authentic leadership, particularly for startups with millennial employees planning international growth.

## **INNOVATIONS INDICATORS IN INDIA**

As an overall assessment, innovations can also be judged by looking at the publications of any country over a period of time (Gaillard, 2010). From

Table 2; one can understand the position of India in terms of research paper publications. Research and paper publications are considered the first step to innovation, patent registration and copyright claims. China has leap frogged in this area with its well-focussed attention on higher education.

**Table 2:** Total Publications by Various Countries  
(Data base as on 27 July 2020)

Rank	Country	Documents	Citations Per Document	H Index
1	United States	12839607	26.42	2386
2	China	6589695	9.36	884
3	United Kingdom	3715590	24.05	1487
4	Germany	3222549	21.84	1298
5	Japan	2893614	16.67	1036
6	France	2249498	21.5	1180
7	Italy	1881818	19.89	1030
8	Canada	1877183	24.38	1193
9	India	1873277	9.74	624
10	Australia	1489730	21.56	1001
11	Spain	1483214	18.62	904
12	Russian Federation	1202476	7.6	580
13	South Korea	1196961	14.24	687
14	Netherlands	1038372	28.58	1032
15	Brazil	1027748	11.89	578

Source: Scimago Journal and Country rank (July 27, 2020), from [www.scimagojr.com/](http://www.scimagojr.com/)

Applying and granting of patents is another way of assessing a country's progress on innovation and new product launch. Thaker (2018) described the number of patents filing in India during 2017 in her report in Quartz India. As per the report of 2017, India's patent office granted 12,387 patents, while in 2016 these were 8,248 and still lesser at 6,022 in 2015. However, the big dampener is that in 2018, only 1,712 patents were granted to resident individuals and entities of India and as many as 10,675 went to non-residents.

World Intellectual property Organisation (WIPO) estimated that as many as 3.17 million applications were filed, out of which 1.4 million patents were granted in 2017 (WIPO, 2018, p. 24). China received 1.38 million applications during the year 2017. In 2016 India introduced National Intellectual Property Rights Policy, with the aim to boost innovation by simplifying procedures. Patents and The Office of the Controller General of Patents, Designs and Trade Marks is the Indian Patent Office, whose role under the Department for Promotion of Industry and Internal Trade is to administer all policies and laws regarding the patents and intellectual property rights in India. India

is ranked 9 in the table of Total IP filing activities in 2017 (WIPO, 2018, p 8). As reflected in Table 3, top 15 patent offices in 2017 reflects that the list is stable and very little changes were seen over the past 15 years. The only glaring statistics is the rapid rise of China. The IP offices of China, Japan and the Republic of Korea received the bulk of their applications from resident applicants. In contrast, Australia, Canada, India and the U.S. reported a high share of non-resident filings.

**Table 3:** Ranking of Total (Resident and Abroad) IP Filing Activity by Origin, 2017

S. No.	Country	Patents	Marks	Design
1	China	1	1	1
2	U.S.	2	2	4
3	Germany	5	4	2
4	Japan	3	3	6
5	Republic of Korea	4	11	3
6	France	6	5	8
7	U.K.	7	8	9
8	Italy	10	12	5
9	India	11	9	13
10	Switzerland	8	14	11
11	Iran	16	6	12
12	Russian Federation	12	7	18
13	Turkey	22	10	7
14	Netherlands	9	19	14
15	Spain	23	16	10

Source: WIPO (2018), Overview of IP filing activity, p. 8.

## **INNOVATIONS DURING PANDEMIC AND CHALLENGES**

The outbreak of COVID-19 and other similar pandemics has always been a major concern for the public policy and business responses worldwide, as it affects people's lives, livelihoods, and learning. Clift & Court (2020) have described the response of companies to the pandemic in their writing for the World Economic Forum. They highlighted HKEX, a financial exchange and market regulator based in Hong Kong, which donated HK\$10 million to local communities and NGOs, providing them with sanitization packages that included surgical masks and hand sanitizers. They also offered hot food for families and a special call service for health consultation, while investing in the wellbeing of underprivileged families and vulnerable groups. Similarly, Acciona, an infrastructure and renewable energy firm managing several

hospitals in Spain, Mexico, and Canada, used 3D printers to create protective masks for healthcare professionals at the Infanta Sofia Hospital in Madrid, Spain.

In a study highlighted by Clift & Court (2020), a Swiss company, The Adecco Group, analyzed the government responses to the COVID-19 crisis and innovative practices across 12 countries, including Austria, Belgium, France, Germany, Italy, Japan, Netherlands, Spain, Sweden, Switzerland, the UK, and the USA. The study measured innovativeness and efficacy using various macro-economic indicators. The analysis found that Switzerland, Sweden, and Germany performed the best across the selected indicators owing to their ability to be nimble and innovative and prioritize healthcare even if the company was involved in manufacturing industries like cars, trucks, or telecom equipment. The private sector in UAE also played a significant role in reducing the spread of the virus by working in sync with the government. For instance, Gulfainer, a global port operator in UAE, innovated its port material handling processes and launched a fast-track service to deliver medical equipment quickly.

The COVID-19 pandemic has forced many sectors to rethink their approach to work. In response, the World Economic Forum has highlighted various innovative ways to avoid travel to offices. Education and technology have been the most impacted. To adapt to this new reality, many businesses and systems are now operating remotely or from home.

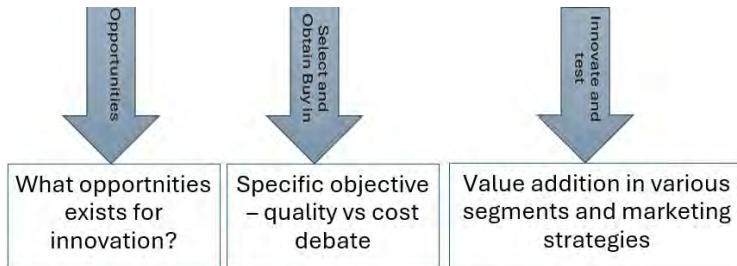
In Germany, Volkswagen Group has shown its support by providing medical equipment worth approximately €40 million. This equipment includes breathing masks, disinfectants, gloves, thermometers, protective goggles, and suits. Volkswagen Group sourced the materials from China, and public authorities handled the distribution within Germany. The company is also using its own facilities to produce medical equipment for areas in need. This includes 3D printed mountings for face shields, among other essential items.

## **ANALYSIS: INNOVATION LESSONS AND DETERMINANTS FOR INDIA**

2020s were touted to be a “decade of action” in order to fulfil UN sponsored and countries specific 17 Sustainable Development Goals. This made many social entrepreneurs, well-knit communities, government and private policymakers, and business executives speak for a sustainable social innovation. Covid-19 as one of the many Black Swan event (Ross, 2020) derailed and obliterated all the gains in one year. A major lesson from the pandemic is, that there is an urgent need to integrate knowledge centres in a country. Universities work on concepts and innovative ideas, which must have a linkage with the

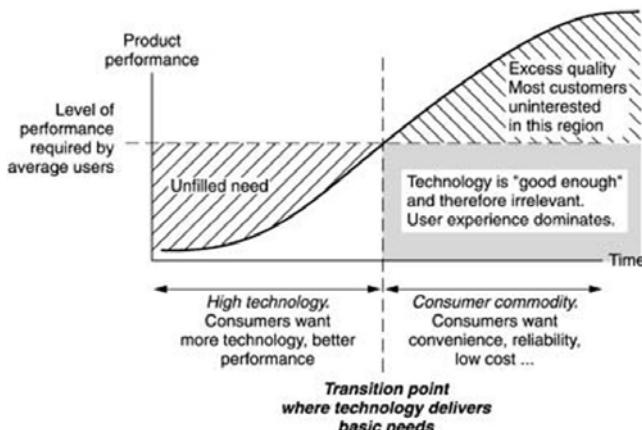
manufacturing or service sector companies. Scientific innovation cannot be done in isolated laboratories of various universities unconnected with the companies in field. Government of India has many comprehensive policies and with the New Education Policy (2020), greater emphasis is being laid on research and innovation. Like Brazil, India needs to execute innovation policies with a greater speed and thrust.

Indian companies also need to have a clear innovation strategy based on the identified determinants. The outline of this strategy could simply be as shown in Figure 2. There has to be a constant look out for value addition and opportunities. Customer segments must be well defined for both cost-based and quality-based strategies; well-studied to obtain buy-in to determine their urgent unmet needs. A dedicated team for innovation, is one such option, but culture of innovation must be spread in the entire value-chain from inception to after sales service force.



**Figure 2:** Simple Innovation Strategy

Norman (1998) used a model of need-satisfaction curve of technology to explain innovation in technologies. Going by the lifecycle example, many new technologies commence their journey to fulfil customer needs. As a result,



**Figure 3:** The Needs-Satisfaction Curve of a Technology

Reference: Donald A. Norman (1998), modified from Christen (1997).

customers demand better technology and more features, regardless of the cost or inconvenience. A transition occurs when the technology can now satisfy the basic needs. This is of concern to India's vast formal and non-formal sectors, as with increasing middle class and ever rising disposable incomes, companies must assess the need deficiency among the customers and innovate.

Narayana Hospitals in Bangalore, provides one of the best paediatric cardiac surgery in the world. Dr Devi Shetty has scaled up cutting-edge surgery on the power of economies of scale. Same model of healthcare is being replicated in Cayman Islands, Africa, and Southeast Asia. Affordable advanced healthcare is the desire of most economies in the world.

A program called India Innovation Growth Programme (IIGP) was launched as a collaborative initiative by the Govt. of India's Department of Science and Technology, Lockheed Martin Corporation, Indo-US Science and Technology Forum, Federation of Indian Chambers of Commerce and Industry, Stanford Graduate School of Business, and the IC2 Institute at the University of Texas. The main objective of the program is to expedite the introduction of innovative Indian technologies into the international markets.

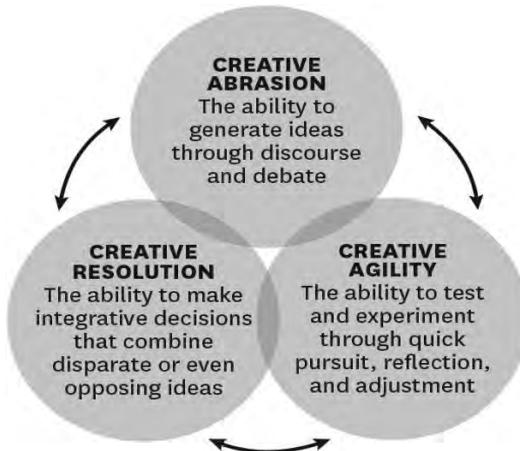
India is regarded as a huge market, but has also risen to be the favourite base for many research and development activities of global corporations. Some of the innovative products in news from India include, Fin, a tiny ring that can be worn on thumb and connect seamlessly to many devices through Bluetooth. Reliance Jio Wi-Fi Hotspots are another disruptive innovation in the country and in telecom sector.

**Table 4:** Key Determinants from the Analysis of Emerging Economies

	<i>Key Determinants</i>	<i>Benefit</i>
1	MSME	Adopt new technologies
2	WFH	New work mantra
3	Data Analysis	business moving to cloud
4	Good Org	take care of the mental health of employees
5	HR	inclusive, office-home separation
6	Digital transformation	govts in a dynamic mode – FB interaction of CMs
7	Cost reduction	may lead to losing competence of a team
8	Skill development	for a new age and scope has to be expanded
9	India is in villages	skill development for people to market in India
10	Social development	has to go hand in hand with the enterprise development
11	Technology innovations	CSR

After analysing emerging economies and their strides in innovation; three key activities can be identified in the successful companies. Firstly, the organisation and its stakeholders practice collaborative problem solving, fater

identifying areas for improvement. This step as per Hill et al. (2015) is creative abrasion. As a second step, organisations try out various combinations and learn by discovery, thus creating creative agility. As a final push towards innovation, there is a creation of new and better solutions. This is achieved by combining existing ideas in out of box thinking, which the authors called creative resolution.



**Figure 4:** Three Capabilities of Innovation

Source: Linda Hill, Greg Brandeau, Emily Truelove, & Kent Lineback (hbr.org)

According to an online news report published by Livemint in August 2016, India has been ranked at the top in innovation index among South Asian countries. The report stated that India is ranked 33 among the top 50 economies in terms of market sophistication and 43 in knowledge and technology outputs. However, despite the strong ranking, India is still lagging behind in overall ICT penetration, e-participation, ICT use, and e-governance services. The 2016 GII rankings are led by Switzerland, Sweden, the UK, the US, Finland, and Singapore. China is ranked as the world's 25th most-innovative economy in the same index. The report also mentioned that India has all the necessary ingredients to become a global driver of innovation, including strong market potential. However, some relative weaknesses exist in the indicators for business environment, education expenditures, and new technology adoption.

## CONCLUSION

Kim (1980) and Dahlman et al. (1987) argued that for innovation, technological capabilities of a firm or of a country are key factors. The empirical analysis of cross-country technological capabilities shows that India has very low technological capabilities in most sectors except information technology; as compared to the developed world. Additionally, in terms of

R&D commitment and scientific publications, developed countries are ahead of the developing world. A comparison based on the Global Innovation Index (GII) indicates the same. For a successful innovation culture to prosper, besides technological capabilities, availability of sufficient knowledge stock is a mandatory requirement. India has done in this regard with many centres of excellence and an inherent aptitude of jugaad or localised innovation. The national innovation systems of India need to be improved to achieve optimal results.

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# Exploring the Impact of Health Information on Holistic Wellness within Higher Education: An Investigative Analysis

SHIVARAMA RAO K & AKANKSHA PARMAR

## INTRODUCTION

Holistic wellness, encompassing physical, mental, and social well-being, has gained prominence within higher education as institutions recognize the integral role it plays in the overall success and satisfaction of students. In the past few years, there has been a growing emphasis on providing health information that goes beyond traditional medical interventions to encompass a more holistic understanding of well-being. The role of health information in student well-being within higher education is diverse and crucial for fostering holistic development. People require health information in order to stay healthy. According to (Bhat, 2014), 25 percent of medical students use online databases, online public access catalogues 'once a month,' and 18.75 percent of medical students use online journals 'rarely' in accessing health information. Although there are many resources and tools available for obtaining health information, accurate and accessible information enhances health literacy and enables students to make informed choices. Timely access to health information enables prevention and early intervention, addressing potential issues proactively. Mental health awareness initiatives contribute to destigmatizing mental health concerns and providing coping strategies. Institutions play a role in building healthy habits by offering practical advice on nutrition, exercise, and overall well-being. Social well-being is promoted through initiatives that encourage positive interactions and stress-reducing activities. Health information also guides students in navigating campus resources, ensuring they are aware of available support services. This article helps in finding the students obtained sources and perceived challenges in their access. As libraries transform into dynamic hubs of information, students and faculty not only access academic materials but also encounter a plethora of health-related information. This study investigates the channels and sources of health information utilized by students, as well as their level of awareness and the challenges that they face when trying to get

information. Another necessary aspect of this research pertains to the impact of the health and wellness course under NEP (New Education Policy) on the overall wellbeing of the students. Since Libraries are reservoirs of knowledge forever, researchers aim to examine the evolving role of libraries in higher education and their potential contribution to the dissemination of health information to students. Since, Librarians can effectively disseminate health information by coordinating workshops, conducting book discussions, organizing debates, creating web-based content, and offering digital resources to users.

### **Student Well Being**

“In higher education environment College students are one of the backbone forces for the future development of society” (Yuan, 2013). According to Chen (2020), mental health is an important factor in ensuring college students’ ability to study and live a healthy live. “According to a survey of 2018 white papers on China’s urban residents’ mental health, 73.6% of college students were in a state of mental sub-health. The problems were most severe among those with higher educations. Interpersonal communication disorders, Internet addiction, and emotional problems are the most common manifestations of college students’ mental health problems”. College students frequently use Internet platforms to search for information about mental health on relevant medical websites and apps, or to communicate with online doctors to determine whether their mental state is healthy. Mahajan, (2016) investigated the impact of excessive internet usage on college students at Kathua College (Jammu). “It was found that approximately 65% of their total internet usage time was dedicated to entertainment purposes. The most frequently reported health symptoms were headache (24%), unconsciousness (22%), eye strain (26%), and back pain (28%)”. Salmanizadeh, (2023) study showed that the majority of Iranian individuals acquire health information through various means, including performing internet searches, seeking advice from family or friends, using social networks, exploring specific websites, and using mobile apps. Jones (2022) study reveals that college students express a keen interest in health information, and health information seeking behavior (HISB). “Particularly, 89% of college graduates and 70% of high school graduates who have internet access use online platforms to gather health-related information”. Enhancing the quality of the healthcare platform, encompassing information quality, system quality, and service quality, holds significant importance. Enhancing the platform’s quality through design optimization and robust data management will facilitate college students’ utilization of the Internet for health information search, thereby playing a crucial role in enhancing their mental well-being (Chen, 2020).

Academic stress is a prevalent concern in higher education, stemming from high expectations, competition, workload, and fear of failure. This stress manifests physically, emotionally, and cognitively, impacting students' well-being and academic performance. Symptoms include headaches, anxiety, reduced concentration, and social withdrawal. When entering HE, Students frequently show mild symptoms of psychological, physically, and emotional distress. As a result, students' academic performance drops and they face serious repercussions in their careers. There has been an apparent increase in the frequency and intensity of mental health issues, which has heightened concerns for the welfare of students in recent years. Some of the possible causes of students' less-than-ideal well-being include adolescents who have been confronted with abuse, violence, or poverty may have a higher chance to experience changes in their physical, emotional, or social well-being, which can directly affect their mental health. Another factor, as stated by Brown, (2018), is "increasing class sizes, a lack of personal relationships on campus, and financial stress caused by tuition costs". "Globally, one in seven 10-19-year-olds experiences a mental disorder, accounting for 13% of the global burden of disease in this age group. Suicide is the fourth leading cause of death among 15–29-year-olds" and by preventing adolescents from adversity, promote their psychological and social well-being, and providing them with timely access to mental health services are all ways to lower the rates of suicide and mental health issues (World Health Organization: WHO 2019b).

The suggestions outline sector-by-sector initiatives that support adolescents' health and well-being, including health, education, social protection, and telecommunications, in order to adopt an appropriately comprehensive strategy. Adolescents need special attention because they are more susceptible to contemporary issues, such as cyberbullying and excessive gaming, and because they have less faith in healthcare systems than adults (World Health Organization, 2023).

### **Role of Teachers in Maintaining Holistic Wellness**

Teachers play a crucial role in cultivating holistic wellness in students by fostering a supportive and nurturing learning environment. Beyond academic instruction, they contribute to students' mental, physical, and social well-being. Through positive relationships, encouragement, and understanding, teachers promote emotional resilience and create spaces for open communication. They serve as role models, guiding students towards healthy lifestyle choices and stress management. Incorporating holistic approaches to education, teachers inspire a balanced development that encompasses not only academic success but also mental and emotional flourishing, thereby laying the foundation for lifelong well-being. Students well-being is linked with academic success.

“Considering its importance, NEP-2020 addresses this issue and provides that to ensure the physical, psychological, and emotional well-being of the students, support centers and career counselors are to be made available for all students in the higher education institutions (HEIs)” (University Grants Commission Guidelines for Promotion of Physical, n.d.). A large number of colleges in Jammu offer health and wellness courses as part of their value-added curriculum. “Which is a common pool of courses offered by different disciplines and aimed towards developing students’ personalities, fostering ethical, cultural, and constitutional values, promote critical thinking, Indian Knowledge Systems, scientific temperament, communication skills, creative writing, presentation skills, sports & physical education and team work which will help in all round development of students”. Course components relating to health and wellness seek to promote an optimal state of physical, emotional, intellectual, social, spiritual and environmental wellbeing of a person. Sports and fitness activities will be organized outside the regular institutional working hours (DRAFT Curricular Framework and Credit System for the Four-Year, n.d.)

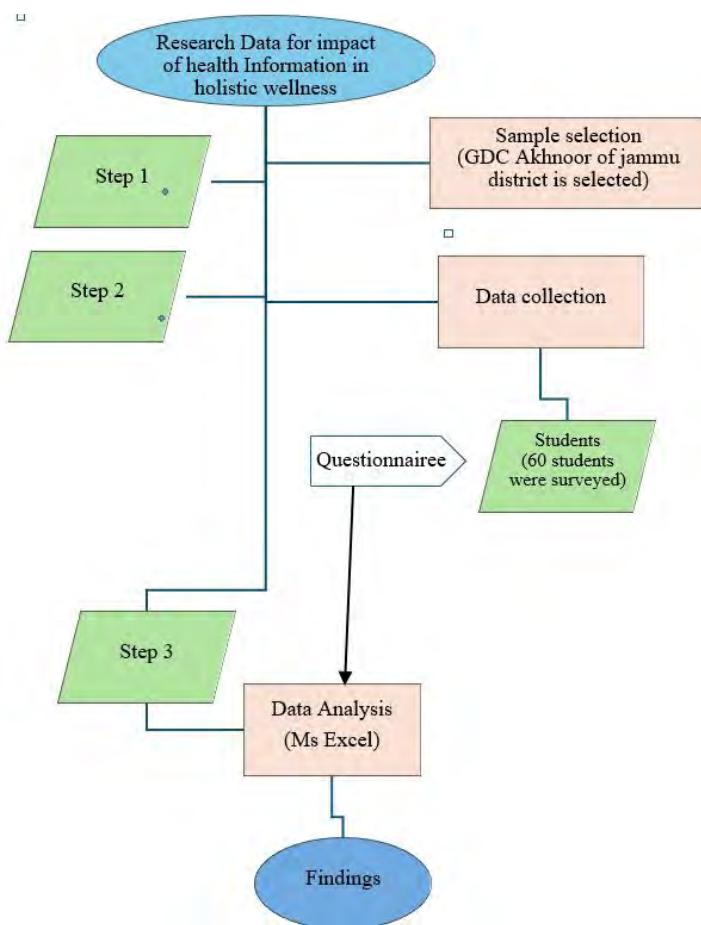
### **Academic Libraries and Student’s Well Being**

Academic libraries are essential in promoting students’ well-being through the provision of a favorable learning environment, resources for academic achievement, and areas for recreation and social engagement. These libraries provide an abundance health information through academic resources, such as books, journals, and online materials, creating an environment that is favorable for research and study. Furthermore, librarians often serve as useful resources, assisting students in accessing materials, enhancing their research skills, and enhancing their decision-making ability. In alignment with the prioritization of student well-being by their respective institutions, various academic libraries have started or actively engaged in wellness campaigns. “One of the top trends in academic libraries for 2020, according to the ACRL Research Planning and Review Committee (Benedetti et al., 2020), is the growing role that libraries play in promoting well-being on college campuses”. Libraries are forging impactful partnerships to enhance student well-being. Collaborating with educational institutions, mental health organizations, and community stakeholders, libraries are becoming holistic hubs for student support. These partnerships bring diverse resources under one roof, offering academic assistance, mental health services, and community engagement programs but somehow insufficient funds can hinder the establishment of partnerships.

Academic libraries can collaborate with health centers to carry out community outreach programs. Through these programs, libraries can

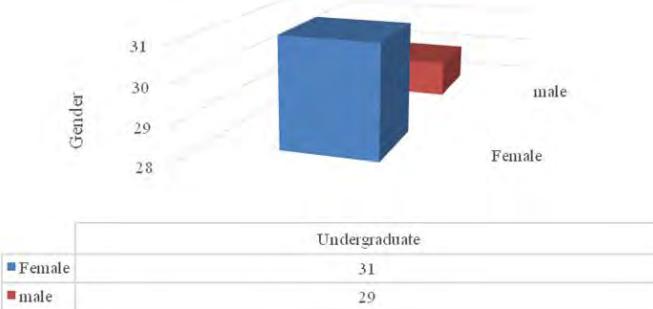
assess the health needs of students and their information-seeking behavior. By working together with health professionals, libraries can effectively meet these requirements. For instance, The Wellness and Recreation Coordinator and Health and Student Services collaborate to host regular yoga classes in the Grenfell Library at Memorial University (Rose, Godfrey, & Rose, 2015). Libraries may incorporate more games and arts activities into their activities. Academic libraries have a distinct advantage in carrying out well-being initiatives, either by participating in campus-wide efforts or by organizing their own interventions within the library. The diverse range of well-being support services offered by libraries showcases their adaptability to changing student needs and institutional goals. Current and potential well-being practices must be designed, implemented, and assessed in a manner that guarantees their efficacy and impact on students (Bladek, 2021).

## METHODOLOGY



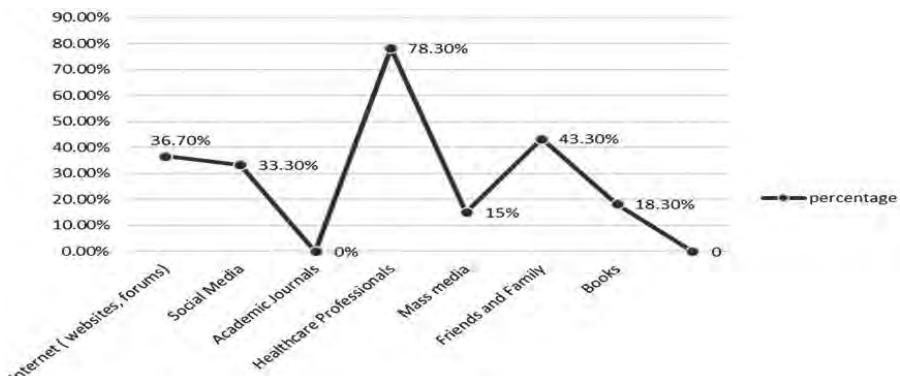
## DATA ANALYSIS AND DISCUSSION OF FINDINGS

The major objective of this study is to collect accurate data regarding the availability of health information for college students. The study seeks to identify various sources, channels, and barriers that come into play when accessing health information.



**Figure 1:** Demographic Details

Figure 1 depicts the chosen sample from the Government Degree College Akhnoor, Jammu. The sample consists of 60 undergraduate students, with 31 being female and 29 being male respondents.



**Figure 2:** Sources of Obtaining Health Information

The sources of health information that students receive for their own well-being at their organization are depicted in Figure 2. Health care professionals comprised the highest proportion (78.30%), followed by Friends and family (43.30%). Due to a lack of awareness among the majority of students regarding the nature of academic journals and their potential contribution to health maintenance, they were the least selected source at 0%.

In response to a question regarding the determinants that impact their reliance on a specific health information source, 81.7% of students cite healthcare professional recommendations.



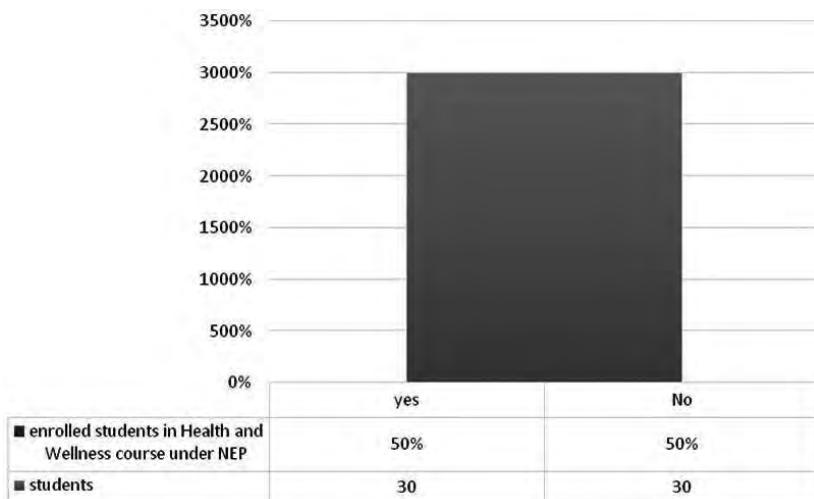
**Figure 3: Barriers Received in Health Information Access**

Figure 3 shows the challenges in receiving health information. The majority of respondents stated that they were unable to receive health information due to a lack of time, which accounts for 70% of the responses. This was followed by limited access to reliable sources and the difficulty in understanding complex terms, which accounted for 33.30 percent of the responses. When asked about any type of misinformation they have relied on in the past years, maximum students responded that that when they search for information on the internet, they are receiving false information about some of their issues. However, one student stated that when it comes to maintaining his physical fitness, social media gives false information about some of the exercises. In terms of their health literacy, students were evaluated on their understanding of the medical emergency numbers. All students are familiar with the emergency contact number for ambulance, which is 108.

### **Impact of Health and Wellness Course under New Education Policy (NEP) on Holistic Wellness among Students in Higher Education**

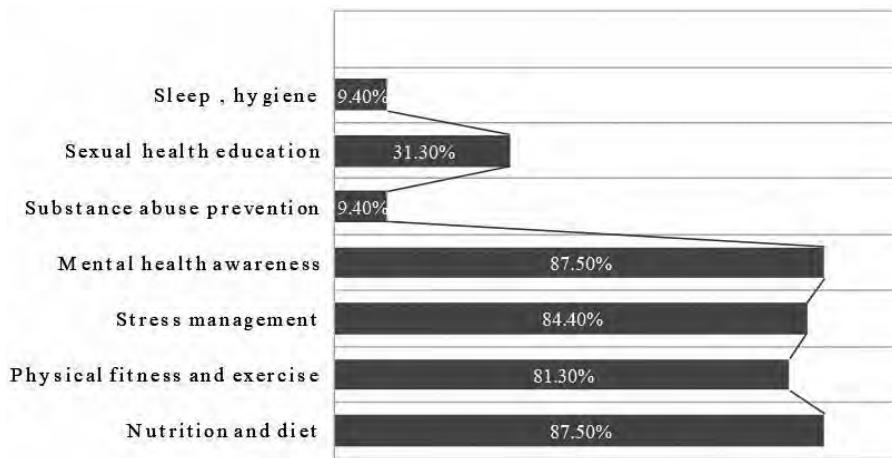
Holistic wellness in higher education is the comprehensive balance of physical, mental, and emotional well-being, fostering overall student health. Health and wellness course in higher education significantly impact students' holistic well-being. These courses emphasize physical health, incorporating nutrition and exercise education for a healthier lifestyle. Mental health is addressed through stress management and mindfulness, fostering resilience and improved focus. Additionally, these courses promote emotional intelligence and interpersonal skills, creating a supportive community.

Figure 4 illustrates the number of students who are enrolled in health and wellness course, which is an additional course offered as part of the New



**Figure 4:** Enrolled Students in Health and Wellness Course under NEP

Education Policy (NEP). The researcher has chosen a sample consisting of 30 present H&W students and others who are not enrolled in the course. When Asked H&W students to define holistic wellness, they all provide the same answer: when a person is healthy on all levels, physically, emotionally, and spiritually. However, among non-enrolled students, just a few have knowledge on the meaning of holistic wellbeing. When questioned about the course's impact on their lifestyle, most H&W students rated it on a scale of 2, which is highly effective. As per the participants feedback, this course has effectively given them the necessary knowledge and support to maintain optimum mental well-being. However, non-enrolled students are unaware of how to effectively manage stress during an adverse circumstance.

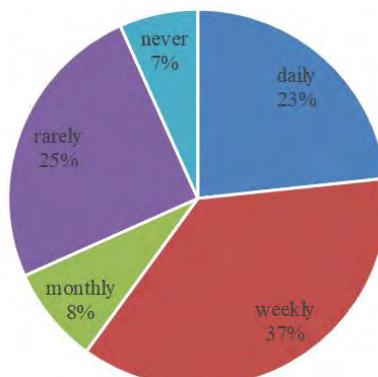


**Figure 5:** Modules Covered under Health and Wellness Course under NEP

Figure 5 displays the modules covered in the Health and Wellness course. The majority of respondents from the enrolled ranked mental health awareness (87.50%), stress management (84.40%), physical fitness and exercises (81.30%), and nutrition and diet (87.50%) as the most important. Apart from the modules already stated, the course also covers female hormonal issues, polycystic ovary syndrome (PCOS), and PCOD. When respondents were asked how this course could be improved or enhanced in order to maintain their well-being, 81.31 percent of respondents suggested that it should include more practical skills and activities, increase interactivity and student engagement, provide more resources and material, and involve more guest speakers associated with areas of specialization. Unfortunately, there are no yoga or meditation facilities in the campus, so students have to rely on education in the classroom only to improve their well-being. Furthermore, students have expressed their opinion that this course should be included in the school's curriculum, as it would significantly enhance comprehension of health maintenance during adolescence. The research also found that students who regularly exercised (71.7%), meditated or practiced yoga (68.3%), and indulged in their hobbies (43.3%) were better able to manage the health risks associated with academic stress.

### **Impact of Library and Information Resources, On Holistic Wellness among Students**

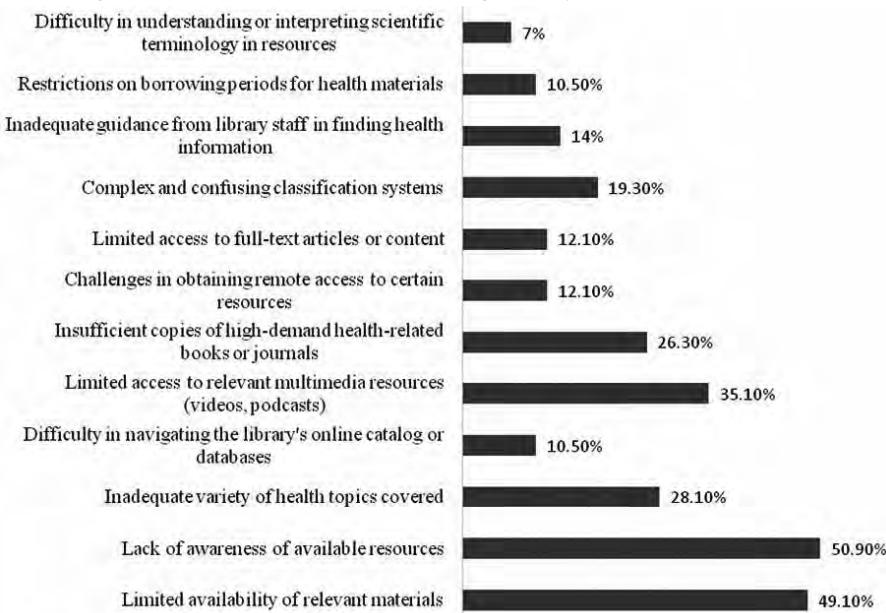
Libraries and information resources positively impact students' holistic wellness by providing a sanctuary for intellectual growth, fostering critical thinking and creativity. Access to a diverse range of materials promotes academic success and mental well-being, while curated resources on health empower students to make informed choices, contributing to a balanced lifestyle. In library and information resources, Health databases and journals cover a wide range of health topics, including nutrition, mental health, and



**Figure 6: Library Visits of Students**

preventive care. This broad perspective on health promotes holistic well-being, encouraging students to consider various aspects of their health. It also provides students with knowledge about public health crises, pandemics, and emergency response strategies.

Analyzing daily library visits reveals a positive correlation with student holistic wellness. Increased access to diverse resources fosters intellectual growth, enhances cognitive abilities, reduces stress, and cultivates a balanced academic and personal life, contributing to overall student wellness. The survey findings indicate that a significant 36.7% of respondents prefer weekly library visits for resource access, highlighting a commitment to regular engagement. Meanwhile, 25% opting for rare visits suggests a portion of students may underutilize available resources, signaling potential areas for encouragement and support in optimizing library use.



**Figure 7:** Challenges in accessing library services

Figure 7 illustrates prevalent challenges in accessing library resources, with a striking 50.90% citing lack of awareness about available sources. Additionally, 49.50% express difficulty due to limited access to materials. These findings underscore the need for improved communication about resources and enhanced accessibility to address barriers hindering optimal utilization of library facilities.

Figure 8 shows that the respondent point of view through which the library resources can be enhanced, what changes can enhance the library services. 61.7% respondents respond that library should increase variety & quality of

Increase the variety and quantity of health-related books and journals.	Improve the speed and reliability of internet connections for accessing online resources.	Establish dedicated spaces or sections for health and wellness materials.	Increase the availability of multimedia resources (videos, podcasts) on health topics.
Provide more user-friendly guides or tutorials for navigating health databases.	Enhance promotion and awareness campaigns about available health resources.	Expand access to digital resources, including e-books and online databases.	Introduce regular workshops or training sessions on effectively utilizing health resources.
		Implement a more intuitive and efficient search system for health resources.	Collaborate with health professionals to curate relevant and timely materials.

**Figure 8:** Library Services Enhancement Suggestions by the Students

health-related books and journals. The dominant preference for increasing the variety and quality of health-related books and journals (61.7%) suggests a strong interest in health and wellness materials, reflecting the relevance of such resources to the students. The secondary priority, with 46.7%, highlights the need for user-friendly guides or tutorials to navigate health databases. Furthermore, the call for more community engagement programs suggests a holistic perspective on education. Students desire not only access to materials but also opportunities to participate in collaborative and community-oriented learning initiatives.

## SUMMARY OF FINDINGS

The study explored students' access to health information within their educational institution. Healthcare professionals were the primary source (78.30%), revealing significant trust. Surprisingly, most students lacked awareness about academic journals' relevance, highlighting a gap in scholarly source understanding. 81.7% relied on healthcare professionals' recommendations, raising questions about balancing trust in experts versus fostering research skills. Time constraints (70%) hindered health information access, and 33.30% faced challenges with reliable sources and complex terms. The evaluation of a Health and Wellness course showcased its impact on enrolled students, defining holistic wellness comprehensively. Enrolled students experienced positive lifestyle changes and mental well-being improvements. However, non-enrolled students lacked stress management

skills, revealing potential educational gaps. Course modules covered vital aspects, with suggestions for improvements focusing on practical skills, interactivity, resources, and specialized guest speakers. The absence of yoga or meditation facilities led to a reliance on classroom education, prompting calls for curriculum integration to bolster adolescent health understanding.

Students engaging in activities like exercise, meditation, and hobbies showed better health risk management against academic stress. Increased library visits correlated positively with holistic wellness, but challenges in resource awareness and access persisted. Students' feedback advocated for enhancing library resources, particularly in health-related books and user-friendly guides. The findings offer insights into health information sources, the course effectiveness, access challenges, and suggestions for educational improvements supporting holistic student health and well-being.

## **CONCLUSIONS AND RECOMMENDATIONS**

In conclusion, this study highlights key insights into student well-being, including health information sources, course effectiveness, and access challenges. The findings underscore the crucial need for broader education on stress management and the integration of practical activities into the curriculum. These recommendations signal a pathway for colleges to enhance student welfare, promoting a more holistic and supportive learning environment.

Based on these findings, the research offers several recommendations to address the identified weaknesses and also highlights the crucial role of libraries in higher education as collaborative facilitators of holistic wellness initiatives:

- **Health and Wellness Programs:** Libraries, as academic institutions, have a unique opportunity to positively impact both communities and employees. Librarians can play a crucial role in health information dissemination through workshops, book talks, debates, and web-based services.
- **Physical Spaces:** Creating designated spaces within the library for various activities, such as silent zones, wellbeing nooks, respite rooms, chill-out spaces, and dedicated Well Being Zones, addresses diverse needs and fosters a holistic environment. Also creating a discussion room where students can engage in health discussions and share their experiences.
- **Digital Library:** Establishing a digital library focused on health and wellness resources can address students' claims of limited resources and lack of knowledge. This initiative promotes overall health and wellness through accessible digital materials.

- **Extended Library Hours:** The library remains open late so that students have a place to study for long periods of time. When libraries make their hours longer, they get rid of at least one source of stress for students: the lack of study spaces. This lets them get their work done without getting contend with a fixed library schedule.
- **Campus Activities:** Activities such as yoga, meditation, and gardening should be carried out in the college campus by the higher education institution. For students to engage in their personal hobbies, teachers need to identify their individual interests and involve them accordingly.
- **Health Databases and Journals:** Providing libraries with access to health databases and journals is imperative. It empowers students with valuable health information, promotes informed decision-making, and enhances overall health literacy. This collaboration between libraries and health resources is essential for a well-informed and healthier society.
- **Collaboration with Healthcare Professionals:** Libraries should collaborate with healthcare professionals and in their extension services they can conduct various community engagement programmes for maintenance of student wellness
- **Open Access Services:** Recognizing the limitations of closed access services in the college library, the college library should adopt open access and remote access services. This change will enhance resource utilization, cater to modern educational needs, and provide students with seamless access to resources from any location.
- **Counseling Center and Nursing Aid Room:** The absence of a counseling center and nursing aid room in the college poses a significant gap in student support. In case of mishaps, students lack access to immediate first aid assistance. It is imperative for the college to establish a counseling center and nursing aid room to ensure the well-being of students and provide timely support in emergency situations. This enhancement in infrastructure aligns with a holistic approach to student welfare, fostering a safer and more supportive learning environment.
- **Orientation Programs:** Libraries should organize orientation programs for new students to familiarize them with available resources and services, assessing student information needs helps libraries tailor services for relevance and effectiveness.
- **Guest Speakers and Instructors:** Inviting guest speakers and yoga instructor from specialized fields to enhance students awareness in recent health topics. Furthermore, by inviting traditional healers with specialized knowledge to the college benefits students from low backgrounds, offering insights and natural remedies for overcoming health conditions.

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# Financial Support/Incentives to Food Processing Sector in J&K

**ADITI CHOPRA & RAJENDRA MISHRA**

## INTRODUCTION

The food processing industry involves converting raw agricultural products into processed or value-added products. It encompasses a wide range of activities such as cleaning, sorting, grading, packaging, preserving, and transforming raw materials into food and beverage products that are ready for consumption. This industry plays a crucial role in adding value to agricultural produce, reducing food wastage, enhancing food safety, and providing convenient and diverse food options for consumers (Bhatia et al., 2020; Bharti et al., 2003).

## TYPES OF FOOD PROCESSING

There are three types of food processing categorized into various levels based on the extent of processing. The first type is Primary Processing which Involves basic cleaning, sorting, and initial processing of raw materials. For example, removing husks from grains or cleaning and packaging fruits. Secondly, Secondary Processing involves transforming primary products into more complex products. This could include making flour from grains or turning fruits into jams and juices. Lastly, Tertiary Processing involves creating final consumer-ready products like ready-to-eat meals, packaged snacks, and beverages (FASAR, 2016).

## IMPORTANCE

Food Processing helps in the value Addition of the perishable products. Food processing increases the economic value of agricultural commodities. Again, it ensures the food safety as processing methods like pasteurization and canning help extend shelf life and reduce microbial contamination. It also helps in the diversification of Processed foods offer a wide variety of options to consumers, contributing to dietary diversity. Proper processing can reduce post-harvest losses and food wastage (David et al., 2001). Processed foods often require less preparation time, making them convenient for consumers. Processed foods have the potential for export, contributing to foreign

exchange earnings. Techniques like pasteurization and sterilization are used to kill harmful microorganisms and extend shelf life. These methods slow down microbial growth and enzyme activity. It removes moisture from foods to prevent spoilage. Microbial fermentation is also used to create products like yogurt, cheese, and fermented beverages. Canning and Packaging ensures sealing food in airtight containers to prevent spoilage (Taherli, 2021).

## **CHALLENGES**

There are some challenges that come before the Food Processing sector. Maintaining the nutritional quality and taste of processed foods can be challenging. To maintain food safety is also a challenge ensuring that processed foods are free from contaminants requires strict adherence to safety standards (Adelaja et al., 2000). Supply Chain Complexities includes managing the supply chain for perishable processed products requires efficient logistics (Rais et al., 2015). Consumer Perception means that some consumers are concerned about the healthiness of processed foods due to additives or preservatives.

## **GLOBAL TRENDS**

There should be clean labelling on the product which satisfies the consumers who are seeking minimally processed foods with natural ingredients. Now a days, consumers also demand for healthier processed food options with reduced salt, sugar, and fat content. Busier lifestyles are driving the demand for convenient ready-to-eat or easy-to-prepare foods (Gaikwad, 2006). Environmentally conscious consumers are seeking sustainable packaging and ethical sourcing. Thus, the food processing industry is a vital part of the global food system. It transforms raw agricultural materials into a wide variety of safe, convenient, and value-added products that cater to the diverse preferences and needs of consumers.

## **REVIEW OF LITERATURE**

In both local and foreign markets, the food processing industry plays a critical role in connecting producers with ultimate customers. Food processing and marketing together have the power to address the fundamental issues of agricultural surplus, wastes, rural employment, and improved compensation for growers (Hyder et al., 2016). India, home to 1.21 billion people, offers a sizable and expanding market for food items. However, if we examine India's food processing industry's manufacturing side, we find that it is incredibly underdeveloped. In India, only 1.3% of fruits and vegetables are processed past the secondary level. Australia, the Netherlands, Germany, Poland, the USA, and the UK had respective rates of 80%, 33%, 31%, 25%, and 12%. In comparison to global averages, these numbers are incredibly low (Dharni et

al., 2008). Only by using a high processing level can the amount of food waste during processing be reduced (Chengappa, 2004). As consumer income levels rise, so does consumption of processed goods (Wilkinson, 2004)

Food processing is defined by Naqvi et al. (2015) in their study “A study on growth and employment trends of food processing sector in India” as the process of adding value to agricultural or horticultural produce using various techniques like grading, sorting, and packaging. India has a population of about 100 million people, and providing for them requires a robust FPI. A number of factors, such as the evolving customer profile and tastes, product innovation, rising expenditure on wholesome and nutritious foods, improved preservation and packaging methods, etc., have contributed to the FPI’s spectacular growth. Food and agricultural product demand is evolving in previously unheard-of ways. The demand for high-value commodities, processed goods, and already prepared food rises as per capita income rises, urbanisation increases, and the proportion of women working increases. One of India’s largest industries, the food processing sector accounts for around 32 percent of the nation’s overall food market and is rated fifth in terms of consumption, export, and anticipated growth (Meeta, 2007). Given that India’s domestic food market is predicted to reach US \$ 258 billion by the end of 2015, the nation’s overall food production is anticipated to treble over the following 15 years. Although there are many direct and indirect employment opportunities available in the food processing sector, which serves as a link between agriculture and manufacturing, according to an ASI survey conducted in 2013, FPI generated the highest level of employment of any industry, employing more than 17 lakh people.

The novel coronavirus (COVID-19) causes unprecedented health and economic crises. We, have a limited understanding of the economic impacts of the event on food supply chain actors. Food supply chain actors i.e., farm input suppliers, farmers, processors, raw material suppliers, logistics suppliers, wholesalers, retailers, customers may be affected by the pandemic differently (Hailu, 2020). First, COVID-19 may have an impact on the production activities of the food processing industry because of supply shocks (e.g, border measures, non-pharmaceutical interventions, labor market, supply of agricultural raw materials) and demand shocks (e.g, panic buying, non-pharmaceutical interventions, food establishment closure, a slump in the demand for restaurant meals). Secondly, the impact of COVID-19 on food processing may depend on the type of products (e.g. fruits and vegetables, eggs, seafood, grain processing, meat v. bread). Third, panic buying by shoppers to stockpile good may disrupt the food supply chain. Fourth, micro, small and medium businesses may be negatively affected and they may face closure leading to potential bankruptcy and permanent unemployment. Fifth, stock

prices of major food processors may also decline, making equity financing difficult for future investment in innovation and expansion. In response, the food processing sector adopted very comprehensive best practices for employee health and facility safety and some introduce employee financial incentives to maintain operations and mitigate the impacts of COVID-19. The federal and provincial governments have responded by categorizing the agri-food sector as an essential activity, and with bold non-pharmaceutical interventions and targeted fiscal measures. Measures taken by the government to flatten the medical curve may increase economic activities in food processing. The size and direction of the economic effect of the outbreak and public and private sector interventions on food processing sector are very uncertain (Baldwin et al., 2020).

In the SIDCO complex in the Jammu District, Sharma (2011) investigated how the new industrial policy affected the overall development of the industrial units. The analysis discovered that the state government played a significant role in supporting industrial incentives and implementing policy for the expansion and development of J&K. SIDCO (State Industrial Development Corporation) is the state's central organisation for the development and promotion of large-scale industries. J&K is a state that lacks a robust industrial basis and is therefore industrially backward. In order to attract businesses from outside the state and improve the state's industrial structure, additional incentives should be given to the units.

The productivity and marketing strategies in the J&K apple sector are impacted by the institutional and non-institutional credit delivery mechanisms. (Amin, 2017). Regarding institutional and non-institutional loans for apple producers, information was gathered from 5 districts, namely Shopian, Kulgam, Pulwama, and Baramulla in the Kashmir Valley, and District Doda in the Jammu region. Because institutional sources of funding are generally more affordable than non-institutional ones, interest rates linked with credit sources are what entice growers to choose them. The findings indicate that the demand for non-institutional credit is increased by documentation challenges and institutional credit's accessibility. Institutional and non-institutional credits are thus interchangeable. The issues around post-harvest processing, marketing, and finance need to be addressed for economic development of the state.

Choudhary (2010) conducted an analytical study that assessed and looked at how the industrial incentives package affected Himachal Pradesh's economic development. The state government of Himachal Pradesh announced special industrial incentives to encourage investment in the industrial sector because the state is one of India's least developed in terms of its industrial base (Sharma et al., 2008). The study examines the impact

of special industrial incentive packages in the socioeconomic development of the people of HP as well as the role of Industrial Promotional Agencies in the development of Industries in HP. 131 respondents from the industrial areas of Parwanoo, Baddi, Borotiwala, Nalagarh, and Solan in Himachal Pradesh provided primary data via a pre-tested questionnaire. The report discusses a variety of topics related to the industrialisation of district Solan in general and Himachal Pradesh in particular. It also looks at locational considerations, infrastructure development, and the function of industrial promotion organisations in the industrial growth of the studied area. The report made some recommendations for improving HP's industry development.

The Ministry of Food Processing Industry (MOFPI) was established in July 1988 to support the growth of the nation's food processing industry. This ministry is responsible for the processing and refrigeration of a variety of agricultural products, including milk powder, infant formula, malted milk, condensed milk, ghee, and other dairy products, as well as poultry, eggs, meat, and meat products, fish processing, fruit and vegetable processing, etc. There were 41,481 industries in India that were involved in the food processing sector in the year that ended in 2022(MOFPI,2023).Twenty-three million people are employed in recognised food processing industries in India. The total number of Food Processing units registered in J&K is 180.In India, processed food exports are expected to be worth 854.3 crores in 2021–22. In 2021–2022, imported processed food will be worth 2.756 crores. Food is processed at several stages through manufactured and other value-added procedures. Lack of product innovation and development, a lack of emphasis on quality and safety requirements, seasonality of operations, and low-capacity utilisation are the main difficulties facing the food processing industry. PMKSY (Pradhan Mantri Kisan Sampada Yojana), PLISFPI (Production linked incentive Scheme for food processing Industry), PMFME Scheme (Pradhan Mantri formulation of micro food processing enterprises scheme), and others are among the numerous programmes funded by this ministry (MOFPI, 2023).

## **OBJECTIVES OF THE STUDY**

The study has the following objectives:

1. To explore the incentives and subsidies offered by agencies for growth of food processing Industries in the estates of Jammu District.
2. To examine the contribution of State level agencies towards Food Processing units.

## **SCHEMES AND SUBSIDIES FOR FOOD PROCESSING INDUSTRY BY CENTRAL AND J&K STATE GOVERNMENT**

Subsidies and incentives can play a crucial role in driving the growth and development of the food processing industry in Jammu and Kashmir State, as in any other region. These measures can encourage investments, boost employment, enhance value addition, and contribute to overall economic development. Here we discuss how subsidies and incentives can impact the growth of the food processing industry specifically in J&K State. Subsidies and incentives can attract investments from both local and external sources. By offering financial assistance, tax breaks, or other incentives, the government can encourage entrepreneurs to establish new food processing units or expand existing ones in Jammu division. The food processing industry is labor-intensive, and incentives can lead to the creation of jobs, especially in rural areas where the industry is often concentrated. This can help address unemployment and underemployment issues, particularly among the local population. Incentives can encourage food processors to add value to agricultural products by processing, packaging, and branding them. This not only reduces post-harvest losses but also increases the value of the products, benefiting both farmers and processors (Bathla et al., 2018).

Incentives that support the food processing industry can lead to the development of efficient supply chains, connecting farmers to processors and markets. This reduces wastage and ensures a more organized distribution system. Jammu division's strategic location makes it a potential hub for export-oriented food processing activities. Incentives can help local processors meet international quality standards and become competitive in global markets. Incentives for research and development can encourage the adoption of advanced technologies and modern processing methods, improving product quality and production efficiency. Incentives can encourage the diversification of food products, leading to a wider range of processed foods that cater to local and regional preferences. Incentives that promote food processing contribute to food security by reducing food wastage and ensuring a consistent supply of processed and packaged foods.

Subsidies and incentives can foster a culture of entrepreneurship by providing support to local individuals and communities to venture into the food processing sector. The food processing industry often provides employment opportunities for women. Incentives that promote the industry can contribute to women's empowerment and economic participation. Incentives can encourage the adoption of sustainable and environmentally friendly practices, such as eco-friendly packaging and waste reduction, contributing to long-term sustainability.

There are various schemes sponsored by Central Government in the field of Food Processing Industry which are discussed as under:

### **Pradhan Mantri Kisan Sampada Yojana (PMKSY)**

The Pradhan Mantri Kisan Sampada Yojana (PMKSY) is a scheme launched by the Government of India to promote food processing and reduce post-harvest wastage in the agricultural sector. It aims to modernize and strengthen the entire food processing value chain from farm to market. The scheme was approved in 2017 and encompasses various components to achieve its objectives. There are the key components of the PMKSY:

- **Mega Food Parks (MFPs):** The scheme supports the creation of modern infrastructure in the form of Mega Food Parks. These parks provide facilities for sorting, grading, processing, packaging, and storage of agricultural produce. They are designed to reduce post-harvest losses, enhance value addition, and create a direct link between farmers and markets.
- **Integrated Cold Chain and Value Addition Infrastructure:** This component focuses on setting up integrated cold chain infrastructure, including pre-cooling facilities, cold storage, and transportation facilities, to maintain the quality and extend the shelf life of perishable produce. It also includes support for value addition activities like sorting, grading, and packaging.
- **Agro-Processing Clusters:** PMKSY supports the creation of agro-processing clusters that concentrate on specific commodities. These clusters aim to promote processing, marketing, and export of targeted agricultural products.
- **Creation of Backward and Forward Linkages:** The scheme emphasizes connecting farmers to markets and processors through backward and forward linkages. This involves creating efficient supply chains that ensure a fair price to farmers and reduce wastage.
- **Food Safety and Quality Assurance Infrastructure:** PMKSY encourages the establishment of food testing laboratories, quality control measures, and certification mechanisms to ensure that processed food products meet the required quality and safety standards.
- **Skill Development and Capacity Building:** This component focuses on providing training and skill development to individuals engaged in the food processing sector. It aims to enhance technical knowledge and promote the adoption of modern processing techniques.
- **Research and Development (R&D):** The scheme supports R&D activities related to food processing, which can lead to innovations in processing methods, product development, and packaging technologies.

- **Infrastructure for Agro-Processing Clusters:** PMKSY includes infrastructure development for agro-processing clusters to create an enabling environment for processing activities.

### **Production Linked Incentive Scheme for Food Processing Industry (PLISFPI)**

In a meeting, the Cabinet approved a Central Sector Programme called the “Production Linked Incentive Scheme for Food Processing Industry (PLISFPI)” with a budget of Rs. 10,900 crores. The program’s goal is to support the growth of international food manufacturing leaders who are compatible with India’s natural resource endowment.

Manufacturing businesses in all market categories, from small to large, are included in India’s food processing industry. India enjoys a competitive edge due to its abundance of resources, sizable domestic market, and potential for promoting value-added goods. Achieving this sector’s full potential will need Indian businesses to become more competitive with their international counterparts in terms of output volume.

Support food manufacturing organisations with required minimum sales and willingness to invest required minimum funds for processing capacity growth and international branding to encourage the emergence of powerful Indian brands. This scheme has the following objectives:

1. Support the development of global food manufacturing leaders;
2. Strengthen a few Indian food brands for greater visibility and acceptance abroad;
3. Increase the number of off-farm job opportunities;
4. Ensure that the prices of farm products are fair and that farmers receive higher incomes.

### **PMFME Scheme**

The Pradhan Mantri Formalization of Micro Food Processing Enterprises (PMFME) Scheme is an initiative launched by the Government of India to promote and support micro food processing enterprises in the country. The scheme aims to enhance the competitiveness of such enterprises, provide them with access to better markets, and help them integrate into the formal food supply chain. It was launched as part of the Atmanirbhar Bharat Abhiyan to strengthen the local food processing sector and create more employment opportunities. The PMFME Scheme aims to provide financial, technical, and business support to micro food processing enterprises, with the goal of increasing their productivity, improving their quality and safety standards, and promoting their competitiveness. Here are the key features of the PMFME Scheme:

- **Support for Capacity Building:** The scheme provides support for various aspects of capacity building, including skill development, training, and technical assistance to enhance the knowledge and skills of entrepreneurs involved in micro food processing.
- **Access to Credit:** The PMFME Scheme facilitates access to credit by enabling these enterprises to avail loans through various financial institutions and agencies. This helps them invest in modernizing their equipment, infrastructure, and operations.
- **Creation of Common Infrastructure:** The scheme supports the creation of common infrastructure facilities such as testing labs, storage facilities, and processing centers. This helps micro food processing enterprises adhere to quality and safety standards and increases their overall efficiency.

**Table 1:** Table showing the Implementation of central based schemes in J&K

Name of Scheme	Sub Schemes	Name of Food Processing Unit	Amount Grant Released in Crores	Physical Progress
PMKSY Scheme	Mega Food Park Scheme	RFK Greens Food Park Pvt. Ltd., Pulwama	29.09	Under Implementation
	Integrated Cold Chain	Kachroo Integrated Cold Chain	9.95	Commercial Production Started
		Mir Agro Industries	9.21	Commercial Production Started
		FIL Industries Ltd.	6.21	Commercial Production Started
		Safe and Fresh	7.50	Commercial Production Started
		Khyber AgroFarms Pvt. Ltd.	5.00	Commercial Production Started
		Hyacinth Product	2.46	Commercial Production Started
	DC Agro Project	—	—	Under Implementation
	Creation of Backward and Forward Linkages	SUS Agro Foods India Private Ltd.	1.28	Completed
		M/s Vrv Salesmart Pvt. Ltd.	4.13	Completed
		Mir Agro Industries	3.67	Completed

Source: MOFPI, 2023

- **Branding and Marketing:** Assistance is provided for branding, marketing, and promoting products produced by micro food processing enterprises. This helps these enterprises access wider markets and gain consumer recognition.
- **Financial Assistance:** Financial assistance is provided to eligible enterprises to support various activities such as training, capacity building, credit access, common infrastructure development, and branding.
- **Implementation:** The scheme is implemented through State/UT governments and their designated agencies.

## **INCENTIVES AND SUBSIDIES AVAILABLE TO FOOD PROCESSING UNITS OF J&K**

Jammu & Kashmir (J&K) was in the process of undergoing significant political and economic changes due to its reorganization as a union territory in India. There are some general incentives that are commonly offered to the food processing industry in various regions.

1. **Tax Incentives:** This could include exemptions or reductions in various taxes, such as Goods and Services Tax (GST), to make the operating environment more favourable for food processing businesses.
2. **Infrastructure Support:** Governments might provide infrastructure support, such as access to reliable electricity, water, and transportation facilities, to ensure smooth operations for the food processing industry.
3. **Technology Upgradation Support:** Subsidies or grants might be provided to encourage the adoption of modern and efficient technology in food processing units.
4. **Skill Development Initiatives:** Training programs and skill development initiatives might be offered to help develop a skilled workforce for the industry.
5. **Export Promotion:** Special incentives could be offered to food processing units that are engaged in export activities, such as export subsidies or assistance in meeting international quality standards.
6. **Research and Development Support:** Incentives might be available for companies that invest in research and development activities to improve food processing techniques, develop new products, or enhance food safety measures.
7. **Single-Window Clearance:** Streamlined approval processes and a single-window clearance system can significantly ease the process of setting up and running food processing units.

- Marketing and Branding Support: Assistance might be provided to promote and market locally produced food products, both within the region and nationally.

## RESEARCH METHODOLOGY

The present study aims at finding the financial support and findings available to food processing industries through unitholders judgement regarding availability of incentives. For exploring the incentives and subsidies sponsored by state government agencies in Jammu, the primary data is gathered from unit holders. Similarly, the secondary information regarding the incentives sponsored is gathered from official and non-official sources, viz., DIC, SICOP, SIDCO, MOFPI, various journals, magazines, e-books, etc. There are six industrial estates in Jammu District (Table 2). In order to maintain the objectivity of the study, the data is collected from the two estates having maximum number of food processing units i.e., Bari-Brahmana Industrial Estate and Gangyal Industrial Estate.

**Table 2:** Table showing Number of food Processing Units in Each Industrial Estate of Jammu

<i>S. No.</i>	<i>Name of the Industrial Estates</i>	<i>Total Number of Food Processing Units</i>
1.	Bari-Brahmana Industrial Estate	70
2.	Gangyal Industrial Estate	45
3.	Digiana Industrial Estate	3
4.	Gajansoo Industrial Estate	6
5.	Birpur Industrial Estate	16
6.	Sainik Colony Industrial Estate	3
7.	Out Of Estates	114
	<b>Total</b>	<b>257</b>

*Source:* Directorate of Industries and Commerce, 2023; DIC, 2023

Approximately 30 Food Processing units, out of which 20 units from Bari-Brahmana Industrial Estate and 10 from Gangyal Industrial Estate are selected for collecting data. The data collected is analysed with the help of Frequencies, Percentages and scores using SPSS software. In addition to these, pie charts, Bar-graphs and diagrammatic representation of incentives available to the estates are also undertaken in the study.

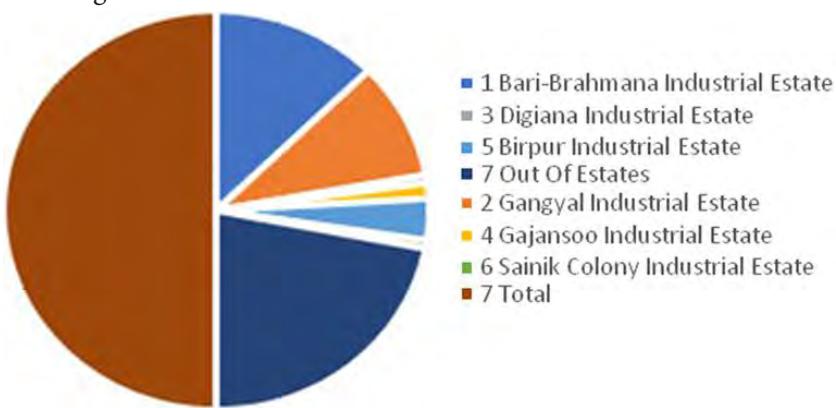
## BRIEF PROFILE/INDUSTRIAL BASE OF JAMMU DISTRICT

Jammu is the winter capital of the union territory of Jammu and Kashmir and is known for its industrial activities, which include various sectors such as manufacturing, textiles, handicrafts, and more.

Some key points about the industrial sector in Jammu include:

- **Manufacturing:** The manufacturing sector in Jammu includes the production of goods like cement, electronics, machinery, and other industrial products.
- **Food Processing:** Food processing is another significant industry in the region. Jammu is known for its food products such as apple, saffron, dried fruits, and various types of pickles and other processed products.
- **Small and Medium Enterprises (SMEs):** The industrial landscape in Jammu consists of numerous small and medium-sized enterprises that contribute to the overall economic growth of the region.
- **Government Initiatives:** The government of Jammu and Kashmir has historically taken steps to promote industrial development in the region through various policies and incentives aimed at attracting investment and fostering growth.

The detail of food processing units in each Industrial Estates of Jammu District is given in the Table 3.



**Figure 1:** Diagrammatic representation of Food Processing Units in different Industrial Estates of Jammu District

## ANALYSIS AND CONCLUSIONS

**Objective 1:** To explore the incentives and subsidies offered by agencies for growth of food processing Industries in the estates of Jammu District.

In the Table 3 given below, some incentives and subsidies that are provided by J&K Government to Food Processing Industries along with their percentage and amount upto which it is available to the units are shown:

**Table 3:** Table showing Incentives Available to Food Processing Units in Different Districts of J&K under Industrial Policy 2021–30

<i>Subsidy and Incentive</i>	<i>Percentage</i>	<i>Amount/ Eligibility/Method</i>
Subsidy on DG set	100%	Upto 45 Lakh
100% subsidy of stamp duty on land transactions in Govt. estates, i.e. Lease deed and Mortgage deed.	100%	–
Turnover Incentive	<ul style="list-style-type: none"> <li>2% (For existing small, medium and large units)</li> <li>3% (For existing micro units)</li> </ul>	<ul style="list-style-type: none"> <li>For 5 years upto maximum of 50 lakhs</li> <li>For 5 years upto maximum of 10 lakhs</li> </ul>
Procurement of Quality Certificate	30%	Upto 2 lakh
Subsidy on Automation	25%	Upto 2 lakh
Subsidy on Pollution Control Devices	60%	Upto 50 lakh
Subsidy of Stamp Duty and Court Fee	100%	New Units and Existing Units are eligible
Subsidy on Green and Environment Protection Initiative	50%	–
Capital Investment Incentive	30% 50%	<ul style="list-style-type: none"> <li>Zone A: Upto Maximum of 5 Crore</li> <li>Zone B: Upto Maximum of 7.5 Crore</li> </ul>
Goods and Services Tax Linked Incentive	100% 300%	<ul style="list-style-type: none"> <li>For 10 Years from the date of commercial production</li> <li>On Investment of Plant and Machinery</li> </ul>
Marketing Support	–	Trade Fairs, Exhibitions, etc.
MIDH Scheme	<ul style="list-style-type: none"> <li>50% for male Candidates</li> <li>60% for female Candidates</li> </ul>	On the investment

Source: DIC ,2023; SIDCO, 2023; SICOP,2023.

**Objective 2:** To examine the contribution of State level agencies towards Food Processing units.

***Analyses I*****Table 4:** Codes given to Subsidies and Incentives

S. No.	Code	Subsidy and Incentive
1	V1	Subsidy on DG set
2	V2	100% stamp duty on Land Transactions in Govt. estates (Lease deed and Mortgage deed)
3	V3	Subsidy on Automation/software/hardware/IT/ Online pollution control devices
4	V4	Subsidy on pollution control devices
5	V5	Subsidy on Turnover (GST) (Micro Units) (3%)
6	V6	Subsidy on Turnover (GST) (SME and Large Units) (2%)
7	V7	Subsidy on Turnover (GST) (Medium Units) (5%)
8	V8	Marketing Support (Trade Fairs, Buyer-Seller Meets etc.)
9	V9	Bank Loan(any)
10	V10	Subsidy on Machinery (30%)
11	V11	Capital Investment Subsidy
12	V12	MIDH Scheme
13	V13	PMFME Scheme (ODOP Scheme)
14	V14	Subsidy on Quality Certificate (FSSAI, ISO etc.)
15	V15	Pradhan Mantri Mudra Yojana

**Subsidies and Incentives available and availed by Food Processing Unit Holders in Bari- Brahmana Industrial Estate of Jammu.****Table 5:** Number of Respondents showing Awareness about the Availability of Subsidies and Incentives and Who Actually Availed the Same in Bari- Brahmana Industrial Estate

Subsidies and Incentives	Yes (1) / No (2)	Available		Availed	
		Frequency	%age	Frequency	%age
V <sub>1</sub>	1	15	75	15	75
	2	5	25	5	25
V <sub>2</sub>	1	15	75	15	75
	2	5	25	5	25
V <sub>3</sub>	1	10	50	0	0
	2	10	50	10	100
V <sub>4</sub>	1	15	75	0	0
	2	5	25	20	100
V <sub>5</sub>	1	20	100	6	30
	2			14	70

Subsidies and Incentives	Yes (1) / No (2)	Available		Availed	
		Frequency	%age	Frequency	%age
V <sub>6</sub>	1	20	100	2	10
	2			18	90
V <sub>7</sub>	1	20	100	12	60
	2			8	40
V <sub>8</sub>	1	15	75	15	75
	2			5	25
V <sub>9</sub>	1	20	100	16	80
	2			4	20
V <sub>10</sub>	1	20	100	15	75
	2			5	25
V <sub>11</sub>	1	20	100	18	90
	2			2	10
V <sub>12</sub>	1	11	55	2	10
	2			18	90
V <sub>13</sub>	1	10	50	4	20
	2			16	80
V <sub>14</sub>	1	17	85	16	80
	2			4	20
V <sub>15</sub>	1	10	50	3	15
	2			17	85

Source: Primary data (On Survey Basis)

Subsidy on Turnover, Subsidy on Machinery and Capital investment subsidy emerged as the most popular subsidies with 100% awareness among the surveyed food processing unitholders of Bari-Brahmana Industrial Estate, followed by subsidy on Procurement of quality certificate with 85% score (Table 5).

Again, out of 15 subsidies and Incentives available in this Estate, Four subsidies got the common %age of 75 as shown in the table which shows full awareness about the schemes available to the Unit holders in this estate and also availed the same in this estate. Very few of the respondents have the knowledge about PMFME(ODOP) scheme of Government and subsidy on Subsidy on Automation/hardware/software (Table 5). Thus, it indicates the necessity of strengthening entrepreneurial awareness so that the unitholders not only know about the schemes but also avail the same.

## Analysis II

### Subsidies and Incentives available and availed by Food Processing Unit Holders in Gangyal Industrial Estate of Jammu

**Table 6:** Number of Respondents Showing Awareness about the Availability of Subsidies and Incentives and Who Actually Availed the Same in Gangyal Industrial Estate

Subsidies and Incentives	Yes (1) / No (2)	Availed		Available	
		Frequency	%age	Frequency	%age
V <sub>1</sub>	1	7	70	10	100
	2	3	30		
V <sub>2</sub>	1	7	70	10	100
	2	3	30		
V <sub>3</sub>	1	4	40	4	40
	2	6	60		
V <sub>4</sub>	1	8	80	9	90
	2	2	20		
V <sub>5</sub>	1	6	60	10	100
	2	4	40		
V <sub>6</sub>	1	4	40	10	100
	2	6	60		
V <sub>7</sub>	1	3	30	10	100
	2	7	70		
V <sub>8</sub>	1	7	70	9	90
	2	3	30		
V <sub>9</sub>	1	8	80	100	100
	2	2	20		
V <sub>10</sub>	1	7	70	10	100
	2	3	30		
V <sub>11</sub>	1	7	70	10	100
	2	3	30		
V <sub>12</sub>	1	2	20	4	40
	2	8	80		
V <sub>13</sub>	1	2	20	3	30
	2	8	80		
V <sub>14</sub>	1	4	40	8	8
	2	6	60		
V <sub>15</sub>	1	1	10	4	40
	2	9	90		

Source: Primary Data (on Survey Basis)

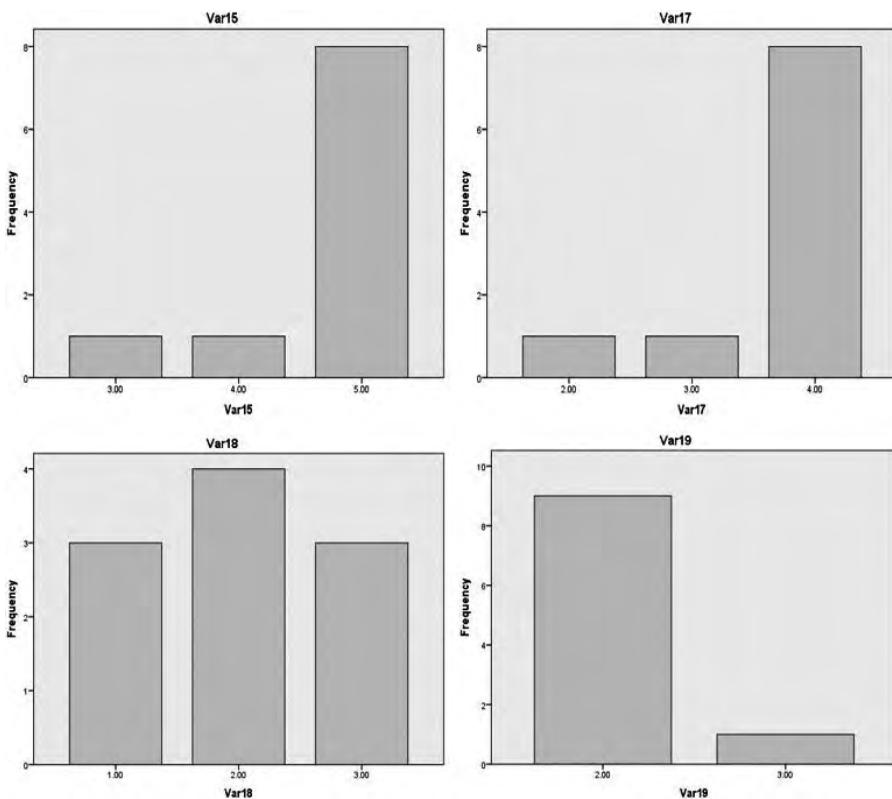
Various agencies converting the process of Industrialization in Jammu District of J&K state seems to have succeeded in creating awareness among the Food Processing Unit holders in the Gangyal Industrial estate. They are also aware about the availability of Incentives and subsidies to the unit holders. The majority of unitholders not only have proper knowledge about the ways to avail these benefits but they have actually availed the same (Table 6).

### Analysis III

**Table 7:** Table showing Number of Sample Respondents of Bari-Brahmana and Gangyal Industrial Estate under Different Levels of Performance

#### Gangyal Industrial Estate

		Frequency	Percent	Valid Percent	Cumulative Percent
<i>(Var 15) Initial Capital Investment</i>					
Valid	3.00 (5–10 lakh)	1	10.0	10.0	10.0
	4.00 (10–15 lakh)	1	10.0	10.0	20.0
	5.00 (15 lakh and above)	8	80.0	80.0	100.0
	Total	10	100.0	100.0	
<i>Var17 (Sales Turnover Per year)</i>					
Valid	2.00 (below 50 lakh)	1	10.0	10.0	10.0
	3.00 (50 lakh–1 crore)	1	10.0	10.0	20.0
	4.00 (1 crore and above)	8	80.0	80.0	100.0
	Total	10	100.0	100.0	



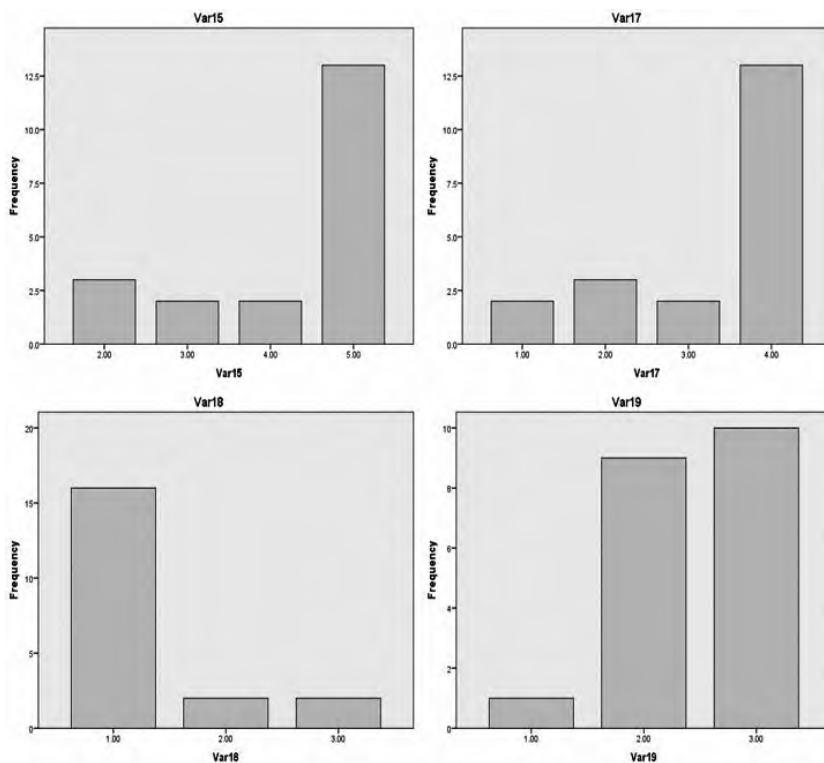
<i>Var18 (Annual production)</i>					
Valid	1.00 (below 1000 mt)	3	30.0	30.0	30.0
	2.00 (above 1000 mt)	4	40.0	40.0	70.0
	3.00 (above 2000 mt)	3	30.0	30.0	100.0
	Total	10	100.0	100.0	

<i>Var19 (Income of your unit, per month)</i>					
Valid	2.00 (50,000 – 1 lakh)	9	90.0	90.0	90.0
	3.00 (above 1 lakh)	1	10.0	10.0	100.0
	Total	10	100.0	100.0	

### BariBrahmana Industrial Estate

		Frequency	Percent	Valid Percent	Cumulative Percent
<i>Var15 (Initial Capital Investment)</i>					
Valid	2.00 (1–5 lakh)	3	15.0	15.0	15.0
	3.00 (5–10 lakh)	2	10.0	10.0	25.0
	4.00 (10–15 lakh)	2	10.0	10.0	35.0
	5.00 (15 lakh and above)	13	65.0	65.0	100.0
	Total	20	100.0	100.0	



		Frequency	Percent	Valid Percent	Cumulative Percent
<i>Var17 (Sales Turnover, per annum)</i>					
Valid	1.00 (below 10 lakh)	2	10.0	10.0	10.0
	2.00 (below 50 lakh)	3	15.0	15.0	25.0
	3.00 (50 lakh – 1 crore)	2	10.0	10.0	35.0
	4.00 (1 crore and above)	13	65.0	65.0	100.0
	Total	20	100.0	100.0	
<i>Var18 (Annual Production)</i>					
Valid	1.00 (below 1000 mt)	16	80.0	80.0	80.0
	2.00 (above 1000 mt)	2	10.0	10.0	90.0
	3.00 (above 2000 mt)	2	10.0	10.0	100.0
	Total	20	100.0	100.0	
<i>Var19 (Income of Unit, per month)</i>					
Valid	1.00 (below 50,000)	1	5.0	5.0	5.0
	2.00 (50,000 – 1 lakh)	9	45.0	45.0	50.0
	3.00 (above 1 lakh)	10	50.0	50.0	100.0
	Total	20	100.0	100.0	

Source: Primary (on Survey Basis)

The incentives and subsidies availed so far by the Food Processing unit holders shows the performance of these units in the form of growth in the Sales Turnover, their income level, their production etc. The result shows maximum number of survey respondents in Gangyal Industrial Estate showing their Sales Turnover more than 1 Crore per annum (80% of the total) followed by Bari- Brahmana Industrial Estate in same category of Sales Turnover is 65% of the total respondents.

Again, 9 (45%) from Bari-Brahmana Industrial Estate and 9 (90%) respondents from Gangyal Industrial Estate showed their monthly Income fluctuating between 50,000-1 Lakh per annum reveals good performance of food processing sector in both the estates. On the other side, annual production of these units fluctuates between the minimum of 10% (with above 1000 M.T) annual production to the maximum of 80% (Below 1000 MT) annual production in Bari-Brahmana Industrial Estate. In Gangyal Industrial Estate, annual production varies between minimum of 30% to maximum of 40% (Table 6).

All this shows that the Government infrastructure and benefits provided Government agencies helped the Food Processing Industries to gain positive growth in terms of Production, Turnover, Income, etc.

## CONCLUSIONS AND POLICY IMPLICATIONS

Few incentives and subsidies, i.e. Subsidy on Green and Environment Protection initiative and PMFME (ODOP) Scheme are being availed by Food Processing unit holders in these estates indicating lack of awareness. The EDP programme for creation of awareness should be conducted and focused among the unit holders according to their needs. These efforts make them much more confident and aware for running these units effectively. More efforts have been needed for strategic action/plan for development/setting up of more food processing units in the district. Out of 20 respondents surveyed 5% of the unit holders have Initial Investment of 1-5 lakh. Therefore, to enhance the productivity and margin, higher investment should be encouraged in the district with adequate support of subsidies and incentives. This is necessary due to globalisation, environment changes and various problems faced by food processing unit holders in the estate. The unit holders should invest in infrastructure development including cold storage facilities, transformation networks, etc. This will help in reduction of food wastage, increase shelf life and also ensure the efficient movement by raw materials and finished goods. Government should also provide training for workers in the food processing industry to improve productivity and maintain hygiene standards. The research and development efforts should be encouraged in Food Processing technologies and techniques to enhance product quality, reduce production costs and develop new food products. Government should also help these industries in export promotion by organising trade exhibitions, buyer-seller meets, export conclaves, forming trade partnership, providing export incentives etc. The process of need based strategic efforts will not only help the existing Food processing units for enhancement but also the prospective one's to come forward and to invest in small venture.

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# A Study on Role of Emotional Intelligence Among Banking Employees

**PARUL MAHAJAN**

## INTRODUCTION

The banking industry must adapt effectively to the changing, unstable, and competitive environment of the modern period. Therefore, in addition to technical skills, banks today require their staff to be emotionally and socially competent. One of the main forces behind India's economic expansion and, consequently, a major factor in the nation's overall development has been the banking industry in India. The emotional and competitive pressure that banking employees encounter has increased the need for research in the area of emotional intelligence as intelligence alone is insufficient to meet these demands. In other words, intelligence by itself cannot explain one's success in life or at business but emotions, on the other hand, are vital for organizational success.

Previously, behaviourists and psychologists disregarded emotions, viewing them as disordered reactions. However, psychologists now understand that, rather than confusing thinking, emotions of all kinds may actually help to contribute to thought processes (cognition). The term Emotional Intelligence (EI) was coined by John D. Mayer and Peter Salovey in 1990. But, Daniel Goleman popularized this concept in 1998, Emotional Intelligence (EI) has become a new benchmark for hiring and employee development in many western firms. This criterion focuses on emotional intelligence while assuming that employees possess the necessary technical and intellectual skills to do their jobs. It indicates who is most likely to falter and who is most likely to become a star performer (Krishnaveni & Deepa, 2008).

Brackett et al. (2006) concentrated on the significance of emotions in comparison to intellectual ability, especially in companies that assess employees' talents based on feelings rather than intellect. Emotional elements have a greater impact on human connections in organizations than rational ones, which highlight the significance of emotional intelligence (EI). The emotional quotient is more important than the intelligence quotient because emotionally intelligent people can perform task more efficiently and play

crucial roles in guaranteeing organizational outcomes (Druskat & Wolff 2001; Jung & Yoon, 2011). Consequently, competent communicators, emotional self-control, and technical proficiency are essential for success in the workplace. In general, emotional intelligence refers to a person's capacity to comprehend and get along with the feelings of others. Salovey & Mayer described EI as "a form of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use the information to guide one's thinking and action" (Salovey & Mayer, 1990). In other words, it can be thought of as the collection of skills that explains why people report different emotions and how a greater comprehension of emotions helps people solve problems in their emotional lives (Mayer, Salovey & Caruso 2000).

Since the banking industry is the foundation of every economy, this study concentrated on the emotional intelligence of bank workers, who must raise their EQ (Emotional Quotient) in order to successfully and efficiently control and manage their emotions. Despite the rapid growth of this industry, employee emotional intelligence has not received much attention. Therefore, this paper tries to understand the level of EI among the employees of J& K bank.

## **LITERATURE REVIEW**

Research has provided ample evidence that IQ alone is not a reliable indicator of success in life (Goleman, 1995; Hunter & Hunter, 1984; Sternberg, 1996). Other theories of intelligence were thereafter developed, such as Gardner's (1983) notion of multiple intelligences and Thorndike's (1920) concept of social intelligence. However, a formal definition of emotional intelligence as "the ability to monitor one's own and others' feelings, to discriminate among them, and to use this information to guide one's thinking and action" was first put forth by Salovey and Mayer (1990, p. 189). Although Salovey and Mayer first proposed the idea of emotional intelligence (EI) in 1990, it wasn't until 1995 that it gained massive traction with the release of Goleman's best-selling book *Emotional Intelligence: Why it can matter more than IQ*. Since then, numerous additional popular books, journals, newspaper articles, and even comic strips have discussed emotional intelligence (Zeidner, Roberts & Matthews, 2001).

According to Spielberger (2004), there are three main conceptual models of emotional intelligence in use today. The construct in question is defined as follows: (a) the Mayer-Salovey model (1997) uses an ability-based measure to measure this ability; (b) the Goleman model (1998) uses a multi-rater assessment to view this construct as a wide range of competencies and skills that drive managerial performance; and (c) the Bar-On model (1997) uses

self-report to describe a cross-section of interrelated emotional and social competencies, skills, and facilitators that impact intelligent behavior.

“Abilities such as being able to motivate oneself and persist in the face of frustrations, to control impulse and delay gratification, to regulate one’s moods and keep distress from swamping the ability to think, to empathize, and to hope” are among the qualities that Goleman (1995) classifies as emotional intelligence (EI). He outlines four main EI constructs.

- **Self-awareness:** The capacity to identify and comprehend one’s own feelings and how those feelings affect one’s ability to make decisions.
- **Self-management:** Essentially, self-management is the capability to restrain one’s feelings and impulses. It also includes adjusting to shifting surroundings.
- **Social Awareness:** This refers to the capacity to assist and comprehend the feelings, wants, and concerns of others. It involves understanding social networks and taking into account other people’s wants and situations.
- **Relationship Management:** Refers to the capacity to uphold and foster positive relationships with people, guide and inspire them, navigate the social intricacies of the work environment, and resolve problems.

According to Goleman, there are emotional abilities associated with each of the four emotional intelligence conceptions. These abilities may be learned, improved, and developed to produce exceptional results; they are not innate.

## **RESEARCH METHODOLOGY**

The present study is descriptive cum exploratory in nature. This study is descriptive as it describes the emotional intelligence of employees of Jammu and Kashmir Bank. It also seeks to explore and measure emotional intelligence scale.

### **Sample Size**

The sample of study was chosen as The Jammu and Kashmir Bank Ltd. (J&K Bank) was chosen since it is a leading organization in the state (J&K). It is one of the oldest and biggest organizations. The total sample of this study was 150 and convenience sampling method was used for this survey.

### **Measures**

To measure the emotional intelligence of the respondents 30 statements were prepared. This questionnaire measures the level of EI of the employees using 4 dimensions (Self Awareness, Self-Management, Social Awareness and Relationship Management) and 20 sub-dimensions originally operationalized by Daniel Goleman with five -point Likert scales, ranging from 1 (strongly disagree) to 5 (strongly agree).

## DATA ANALYSIS

The score of emotional intelligence variables have been taken with the help of factoranalysis. Before applying the factor analysis, the reliability of data for factor analysis has been examined with thehelp of KMO measures and Bartlett's test of sphericity. The KMO measure of .876 and the zero percent levelof significance of the chi-square value satisfy the validity of data for factor analysis which is shown in Table 1.

**Table 1:** KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.876
Bartlett's Test of Sphericity	Approx. Chi-Square	4.833E3
	Df	465
	Sig.	.000

Based on factor analysis, important determinants of emotional intelligence were self-awareness, social awareness, self-management, relationship management as explained in Table 2.

**Table 2:** Determinants of Emotional Intelligence

S. No.	Determinants of EI	Mean	Standard Deviation
1	Self -Awareness	3.98	0.24
2	Social Awareness	4.02	0.51
3	Self -Management	3.95	0.46
4	Relationship Management	4.16	0.38
	Overall Emotional Intelligence	4.05	0.41

The study indicates that J&K Bank employees have a high degree of EI. The employees' total EI of 4.05 indicates that they are able to identify and control their own emotions as well as those of others, as well as form relationships. However, the subscales measuring self-awareness and self-management revealed somewhat lower mean scores of 3.98 and 3.95, respectively. With a mean score of 4.020, the social awareness cluster has the highest value. It was 4.16 for relationship management. As a result, relationship management and social awareness scores were higher than those for self-awareness and self-management. It is necessary to develop these two abilities.

**Table 3:** Descriptive Statistics for EI and Gender

Gender	Emotional Intelligence
Male	4.04
Female	4.05

The above table, shows that male employees (4.04) reported an EI score that was marginally lower than that of female employees (4.05). The findings

demonstrated that, in comparison to men, women had a higher degree of emotional intelligence. This is because women are more adept at expressing, identifying, and comprehending their emotions than men are.

**Table 4:** Descriptive Statistics for EI and Highest Education Qualifications

<i>Qualification</i>	<i>Emotional Intelligence</i>
Graduation	3.04
Post Graduation	4.06

In contrast to people who are just graduates have low EI score as compared to the employees who are post graduates as shown in the Table 4. This demonstrates unequivocally that an employee's emotional intelligence rises as their level of education does.

## FINDINGS

The study shows that employees of J&K Bank had a high level of emotional intelligence. According to the study, employee at this bank has a high degree of self-awareness. This is because people who occupy higher hierarchical positions within an organization tend to be more self-aware, to recognize their own emotions, and to express their emotions in a way that is considerate of others around them. With a mean score of 4.03, the results show that the respondents have an understanding of others' feelings. This is due to the fact that managers are expected to supervise, counsel, and collaborate with their subordinates at all levels; therefore, it is critical that they comprehend how others feel and what they enjoy doing in a given situation. The respondents' mean score on self-management was a high 4.2. This is due to the fact that those workers who had the ability to regulate both positive and negative emotions as well as prevent intense emotions from influencing their interactions and behavior at work also expressed satisfaction with the outside parts of their jobs. Employees consistently work to maintain positive interpersonal relationships, which are demonstrated by their high mean relationship management score of 4.1. People with high emotional intelligence value collaboration and teamwork in order to meet deadlines.

## CONCLUSION

The liberalization, privatization, and globalization of the Indian economy have increased the difficulty of the work that Indian bank personnel must perform. As a result, banks nowadays need skilled and knowledgeable workforce to accomplish their goals because they have a significant impact on productivity levels. Emotional intelligence is significant as it offers an excellent framework for examining how individuals perceive, comprehend, and control their emotions. It takes social interaction into account, which cognitive ability

theories are unable to adequately explain. Abraham (1999) asserted that those who possess emotional intelligence are also better able to manage life's challenges and think creatively, which frequently involves affective awareness. This study suggested that EI is prevalent among the employees of J&K bank as they accorded normal to high range for all the four factors of EI.

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## About the Co-editors



**Dr. Damanjit Kour** earned her Ph.D. in International Business from ICcCR & HRM, University of Jammu. Her doctoral research, “Diagnosing the Impact of Entrepreneurial Learning on Innovation in Select Academic Institutions,” offers valuable insights into how higher education fosters creativity, research, and entrepreneurial development.

She has presented her research at prestigious academic platforms, including conferences organized by the Indian Institutes of Management (IIMs). She has published several research papers in Scopus-indexed and peer-reviewed journals. She is also the author of the book “Academic Entrepreneurship and Innovation: Gauging Literary Perspectives,” further highlighting her scholarly contributions to the field.



**Dr. Anamika Sharma** is a researcher affiliated with the Department of Commerce at the University of Jammu, with a focused academic interest in omnichannel marketing and consumer behavior. During her doctoral studies on Drivers and Consequences of Omnichannel Integration in Indian Retail, she actively participated in international conferences and contributed scholarly work to peer-reviewed and ABDC-listed journals. She currently serves as a Lecturer at Government Degree College, Marh, Jammu.

# Innovation and Sustainable Business Development

## A Multidisciplinary Perspective

### About the Book

The book Innovation and Sustainable Business Development-A Multidisciplinary Perspective is consolidation of national and international literary work of authors specialist in different domains of innovation and sustainability. The book acts as the frame of reference for the future research and academic work in the domain of innovation-sustainability research. The book is the consolidation of research work in naïve areas of sustainability research, spanning over different functional specializations and provides readers rich multidisciplinary perspectives. It is pertinent to mention that the authors who contributed across various domains are from different reputed academic institutions/universities of India and abroad, thereby reflecting the academic research inclusivity and significance.

### About the Editors



**Prof. (Dr) Hardeep Chahal** holds the position of Director at ICcR & HRM, University of Jammu, India and serves as a Professor in the Department of Commerce at the University of Jammu. In recognition of her outstanding research contributions, she was honored with the Prof. Manubhai M Shah Memorial Award for Excellence in Commerce and Management in 2019 by the Indian Commerce Association at the 72<sup>nd</sup> All India Commerce Conference (AICC). Her academic achievements extend globally, including a Commonwealth Fellowship at the University of Loughborough, UK, and a visiting fellowship at the Gandhi Institute of Business and Technology in Jakarta, Indonesia. Her extensive publication record includes more than 100 research papers in journals and books, with contributions to renowned publications such as the Journal of Business Research, International Journal of Production Research, and Managing Service Quality. Dr. Chahal has co-edited six books, including "Understanding the Role of Business Analytics (Some Applications)" published by Springer, Singapore, and "Sustainable Practices for Rural Development Intellectual Capital Perspective" by Palgrave McMillan Inc. (2020).



**Dr. Isha Sharma** is presently working as Assistant Professor, International Centre for Cross Cultural Research and Human Resource Management, University of Jammu, Jammu, India, ICcR & HRM. She has presented papers at national and international conferences of significant academic repute. She has published papers in journals, conference proceedings and book chapters that are globally recognized and are of contemporary academic significance. She is also associated with National Flagship Initiative of Govt. of India, Atal Innovation Mission as Regional Mentor of Change and has received various accreditations for working in the domain of mentoring and Innovation. She is also recipient of AIMS International Young Woman Management Teacher Award.

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