



**INTEGRAL
UNIVERSITY**

LUCKNOW (INDIA)

P-ISSN: 0974-8032

e-ISSN: 2278-6120

INTEGRAL REVIEW

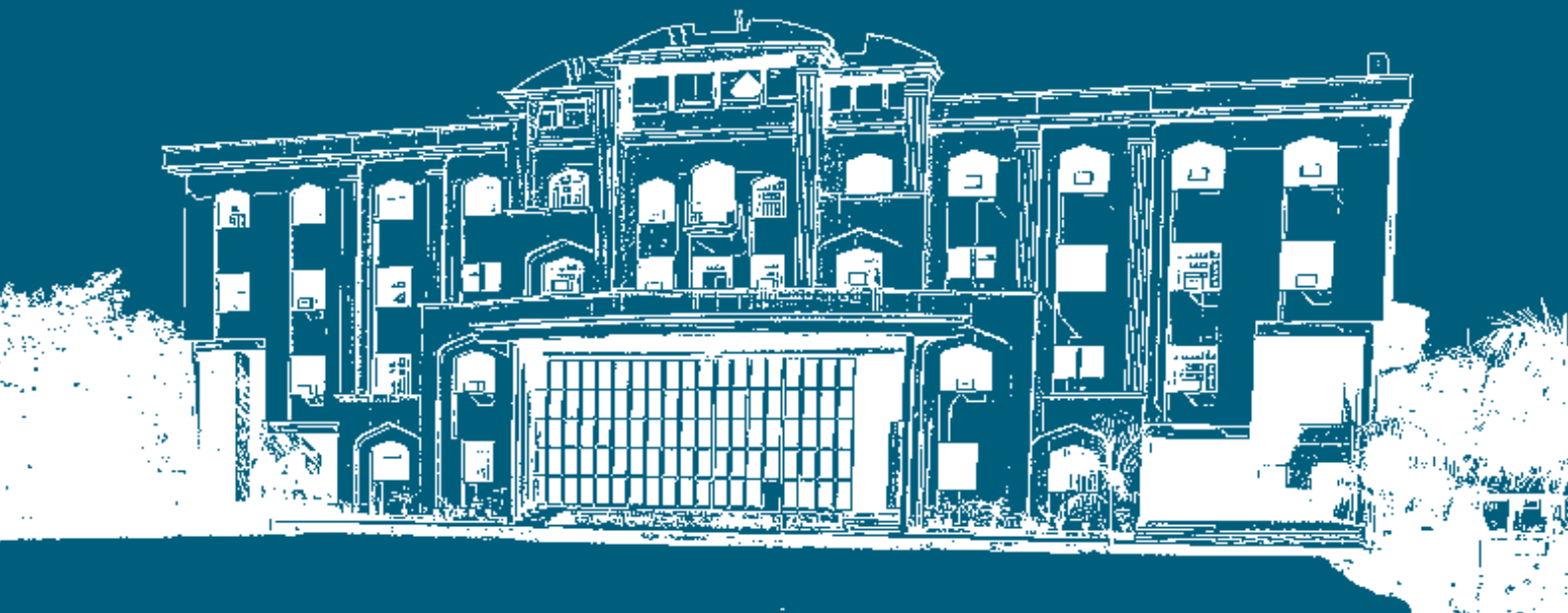
— A Journal of Management —

A Bi-Annual Refereed Journal

(Indexed at J-Gate and EBSCO)

Volume 14 | Issue 1

January-June, 2024



**Department of Business Management
Integral Business School**



Integral Review – A Journal of Management

(INDEXED AT J GATE & EBSCO)

Aims and Scope

The Integral Review: A Journal of Management is a peer-reviewed academic publication focused on contemporary issues and emerging trends in business management and its broader societal implications. Its goal is to offer readers valuable insights and explore new frontiers of knowledge, benefiting both academics and industry professionals. Designed to be easily accessible and engaging, the journal ensures a reader-friendly format, making it a valuable resource for scholars, educators, and corporate leaders alike.

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Editorial



To the Readers of Integral Review - A Journal of Management,

I am honoured to present the July-December issue of Integral Review. This volume underscores a critical theme in contemporary research—the importance of timeliness. Timeliness is not just about meeting deadlines; it is about aligning research efforts with strategic goals that ensure your work does not become a rushed compromise, but rather something that can create real, tangible social impact. Managing time effectively, particularly when writing proposals and applying for grants, can be the key to determining whether your research makes a lasting contribution or becomes a Faustian bargain—a trade-off between potential and purpose.

We live in an era defined by **Industry 4.0** and the global agenda shaped by the **2030 Sustainable Development Goals (SDGs)**, encompassing 17 goals, 169 targets, and 248 indicators. In today's world, research must transcend the pursuit of mere publication metrics and align with broader social, environmental, and economic priorities.

Research should not only serve individual and institutional interests but should also be positioned to advance

national and international agendas. Research for its own sake, detached from a larger purpose, runs the risk of becoming irrelevant. Instead, it must deliver meaningful societal benefits by aligning with national priorities and international agreements.

An exemplary model of such alignment is found in the 2008 report from the **International Commission on Education for Sustainable Development Practice**, led by Columbia University's Earth Institute, in collaboration with the MacArthur Foundation. This initiative led to the creation of a global network of institutions focused on transdisciplinary, outcome-oriented, and action-based research. Sixteen years later, the relevance of management research in bridging disciplines and driving innovation has only grown. Management science remains central to integrating health, physical, and social sciences—an approach that is more vital today than ever. I encourage you to read my article in this issue, which discusses the role of management not just in business but in wider societal contexts.

This issue of Integral Review addresses pressing contemporary topics at the intersection of **academia and industry**. One article examines how management education, influenced by digital transformation, artificial intelligence, and shifting consumer behavior, has evolved into a more commercial enterprise, shaped by external forces like fictional conditioning and surveillance. Another paper explores how **third-generation companies in Gujarat** are navigating generational challenges, while India's retail sector embraces **technological innovations** to adapt to changing consumer trends.

Other studies examine the **consumer acceptance of startups** within the Open Network for Digital Commerce (ONDC), emphasizing the importance of customized business models. Additional topics include **fintech innovation**, **income inequality in India's agricultural sector**, and **AI's impact on human resource management**, presenting both challenges and opportunities for future research and development. The **entrepreneurial ambitions of students** also offer exciting avenues for innovation.

This issue also highlights **regional improvements** fuelled by IT modernization, with a focus on the Indian postal system, and the development of **Noida International Airport** through a public-private partnership. Case studies on emotional intelligence, Six Sigma, and competition in the herbal tea market emphasize the need for adaptability and strategic leadership in today's dynamic business environment.

For researchers interested in sustainability, innovation, or technology, I strongly recommend exploring the latest call for proposals from the Anusandhan National Research Foundation (ANRF), which aims to promote long-term sustainability in the electric vehicle (EV) value chain. This includes tropical EV batteries, power electronics, machines, drives, and charging infrastructure. The EV mission extends beyond technological advances—it's about transforming ecosystems, reducing costs, and strengthening local supply chains. Other opportunities exist in road safety research, where India's staggering rate of 1 million deaths per year calls for urgent public health solutions. Similarly, the \$8 trillion toll of cybersecurity issues on the global economy highlights the pressing need for research that addresses real-world problems.

The common theme across all these domains is solution-oriented research—work that seeks to improve lives. Whether your focus is on sustainable mobility, road safety, cybersecurity, or any other pressing issue, your research should aim to make a difference.

We hope the insights shared in these articles will spark deeper inquiry and catalyse significant advancements in management research. I am confident that the next generation of researchers will push beyond methodological rigor and towards ensuring social relevance. Together, let's make the coming years count—both in terms of academic contributions and societal impact.

Wishing all o

Dr. Rajiv Ranjan

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Why Management Education has become Business School business?: The Twin Traps of Fictional Conditioning and Surveillance Panopticon in Industry 4.0. era

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Abstract

The assumption that critical thinking skills develop automatically through the education system is challenged by the varied social conditioning and maturity levels of graduates. This issue is particularly acute among management graduates, whose education often reflects Orwellian characteristics. This research investigates whether reforms in management education should arise from grassroots societal mandates or top-down bureaucratic approaches, using the framework of a caring economic system, analysing its historicity. It compares the Indian Institute of Management Ahmedabad (IIMA) and Harvard Business School (HBS) to explore their differing visions of management education within developed and developing economies. HBS, a mentor to IIMA in the 1960s, provides a unique perspective on the evolution of management education in distinct economic contexts. The analysis reveals that both IIMA and HBS are influenced by their economic and social contexts, with HBS reflecting a developed economy and IIMA a developing one. Both institutions face criticism for not adequately addressing value distribution mechanisms necessary for social impact, indicating a broader issue within management education. This research contributes to the literature on business and society by explaining why management education often fails to foster social impact. The comparison of IIMA and HBS highlights the need for critical revaluation and reform of management education. It advocates for reforms informed by the principles of a caring economic system and communicative rationality, emphasizing the importance of an engaged and active citizenry in shaping socially valued outcomes. This research contributes to the literature by providing an explanation for the why question emerging in business and society literature wherein businesses, the outcome of business schools and management education, often used interchangeably, fail to contribute to value distribution mechanism required for social impact.

Key words: Management education, business schools, social impact, fictional conditioning, surveillance panopticon. Industry 4.0.

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ARTICLE INFO

Received: 23/09/2024 | Revised: 30/09/2024 | Accepted: 25/10/2024 | Published Online: 31/10/2024

DOI: 10.13140/RG.2.2.34319.39842

CITATION

Ranjan, R., 2024. Why Management Education has become Business School business?: The Twin Traps of Fictional Conditioning and Surveillance Panopticon in Industry 4.0. era. *Integral Review-A Journal of Management*. 14(2): 1–8. DOI: 10.13140/RG.2.2.34319.39842

The Wrong Turn in Management Education

The management education and profession find it at crossroads in current scenario due to the deeply seated understanding of it as an endeavour of “accumulation” for self (Ranjan, 2021a). Management profession and in turn its educational and training system was created to boost the capital power of the wealthy capital owners by use of a highly paid small set of middle managerial class who could then utilize the larger population of labour class paying them low wages in name of scaling, economic growth, and progress (Tsoukas, 1994) and ignoring the idea of “Small is Beautiful” (Schumacher, 2011). The current issues arising in the business and society relationship and the attributions of societal inequality to businesses (Bapuji et al., 2018) arise out of this wrong turn at the very beginning of the profession's creation and its educational design (Ranjan, 2021b).

This research breaks away from taking the naïve assumption of education by itself will lead to social change and create public good of social equity. In this context, think of the earlier stages of learning and lifecycle of children (Gardener, 2006; Robinson, 2010). The training at that stage leads to a conditioning of certain kind and as far as education systems are concerned it is only normative to belief that their purpose is to bring about democratization and societal change/equity. There is a difference between social service and social change (Kivel, 2007). The questions raised on the business management education field per se is very pertinent as it is cause of this deep-rooted evil of immaturity (Scherer and Neesham, 2020) which seems to be part of the larger agenda or schema. The management discipline graduates training is a classic case of a two-legged animal typical of the Orwellian society in an *Animal Farm* (Orwell and Heath, 2003). Also, in this technological age, we need to take in the factor of surveillance (Zuboff, 2019) panopticon (Bentham & Božovič, 1995; Bourdieu, 1991) being used by the elite groups and we cannot also forget the self-trap of fictional reality (Harari, 2014) conditioning.

This research adopts a care economy framework to analyse the debate of “management education under neoliberalism” (Birch and Springer, 2019; Vijay, 2021) and do a theoretical analysis of management education and the broader framework within which it is studied and understood in the spirit of critical pedagogy (Freire, 2018) which is later also proposed for the students of management in particular and any discipline in general.

What makes a society rich? A care economy framework

The neo-classical economists cite the market failure approach (Smith and Garnier, 1845) i.e., the efficiency argument as the rationale for government intervention in the market for education even higher education and management discipline especially in India and its institutions have been no exception. Another alternative explanation for government intervention in education is the redistributive justice arguments (Porteba, 1996; Weiner, 1991) i.e., the equity approach, which is not primarily an economic explanation.

The goal of education is providing 'equality of opportunity' to remove inequalities in the societies. It has its roots in the 'specific egalitarianism' principle (Tobin, 1970). Although, it cannot be denied that there are positive externalities associated with education (Cohn and Geske, 1990; Dee, 2004; Hall, 2006) and there are public benefits of education besides private benefits. In terms of provisioning, it seems that it has characteristics more like a private good as opposed to a public good. Quality education seems like a private good and hence ideally the market should take care of financing and provision of this if there is an existent free market. There is empirical evidence which show that sometimes private sector has seen to underprovide quality education (Larocque, 2008) because the benefits associated with it are more public in nature which leads to lack of private investment in the sector because charging for the positive externalities of education is not possible thus conflicting with the profit-making objective of the private sector. Thus, education seems to be a 'quasi-public good' i.e., a public good with private good characteristics or vice-versa. The debate of whether educational provisioning and financing should be done by government or private parties arises due to the mismatch between the private & social benefits and costs. It is more so because of the inability of the social planner to exactly find out what part of the benefits are social and what part is private and accordingly allocate the costs. The view of education as a tool to enhance social mobility and increase equity by providing the poor the same opportunity makes the job of the social planner more complex. In case of public provision, there are capacity and financial constraints of the government and in case of private provision there is constraint in lack of incentives because the benefits of education are more public in nature which contrasts with the private sector's profit maximizing objective. Hence, we can see that quality education hangs somewhere in the continuum of the public private streams (Musgrave, 1991).

If we keep looking at the problem of education in general and management education in particular in the earlier economic frameworks (Smith, 1937), we will not be able to go beyond discussing the issues of diversity and access, (Neave and Vanvught, 1991), demand and constrained supply (Barr, 2004), ideology of the markets, privatization, “profiteering” (Altbach, 1999) and neoliberalism. Alternatively, the criticism of the government and its failure to address the problem (Friedman, 1955). This is a very restrictive lens in terms of public-private dichotomy and debate (Teixeira et al., 2012) to look given the contemporary evolution in economic frameworks. This research therefore adopts the care economy framework (Eisler, 2008) which divides economy into six sectors viz., household, unpaid, illegal, market, government and the natural. Management is seen as “co-habitation” instead of accumulation and this approach to management is envisioned to have the ability to “bring back the happiness and harmony in society and a certain amount of holiness in dealing with the natural world” (Ranjan, 2021a).

The Educational Divergence of HBS and IIMA in Management Education: An analysis

The comparative analysis of Harvard Business School (HBS) and the Indian Institute of Management Ahmedabad (IIMA) unveils a rich tapestry of foundational philosophies, educational scopes, and the profound impact of socio-economic contexts on management education. This section delves into the nuanced examination of these aspects, offering insights into the evolution of management education and its potential future trajectories.

Foundational Philosophies

The inception of HBS in 1908 was rooted in a distinct ethos, tailored to meet the demands of an industrializing America. Its foundational philosophy centred on producing leaders adept at navigating corporate landscapes, emphasizing core business disciplines—finance, marketing, operations, and strategy. In contrast, IIMA, established in the early 1960s, bore the imprint of a broader vision. Dr. Vikram Sarabhai and Prof. Ravi J. Matthai consciously chose "Management" over "Business," setting the tone for an education that transcended traditional corporate paradigms.

The choice of nomenclature holds profound implications. While HBS was inherently business-focused, IIMA's deliberate choice of "Management" signalled an expansive approach that extended beyond traditional business boundaries. This dichotomy in foundational principles sets the stage for a nuanced exploration of how educational philosophies were intricately tied to the socio-economic contexts of their respective regions.

Scope and Focus

The scope of education at HBS historically gravitated towards a specialized, business-centric model. Its curriculum, though comprehensive within the realms of business management, often operated within disciplinary boundaries. On the other hand, IIMA's approach was revolutionary in its inclusivity. By targeting seven diverse sectors—Agriculture, Industry, Banking, Government Systems, Co-operatives, Trade Unions, and Research/Teaching—IIMA sought to create a holistic framework for societal development.

The diversification of sectors by IIMA went beyond the traditional confines of business education. It envisaged managers not only proficient in corporate strategies but also equipped to address challenges spanning agriculture, governance, and societal development. The inclusion of "Research/Teaching" as a sector underscored the institution's commitment to an academic feedback loop, emphasizing the importance of research in informing managerial practices.

Socio-Economic Contexts:

A critical lens on the socio-economic contexts of the United States and India in the periods of HBS and IIMA's founding is pivotal to understanding their divergent paths. HBS emerged during the American industrial boom, where the focus was on producing managers for burgeoning corporate entities. The educational philosophy aligned with the needs of an industrialized economy,

- emphasizing skills tailored to meet corporate demands.

Conversely, IIMA's inception unfolded in post-independence India, a nation striving for socio-economic transformation. The emphasis on a diversified approach to management education was a response to the multifaceted challenges of a nascent economy. IIMA recognized that the development of India required a managerial cadre capable of navigating complexities extending beyond traditional business domains.

Interdisciplinary Education

The comparison between HBS and IIMA vividly showcases their perspectives on interdisciplinary education. HBS, anchored in a specialized business-centric model, initially operated within disciplinary boundaries. Its curriculum, while comprehensive within the confines of business management, did not actively encourage the integration of insights from diverse sectors.

In contrast, IIMA's approach embraced interdisciplinarity and transdisciplinarity. It acknowledged the interconnectedness of sectors and sought to synthesize knowledge from various domains to address real-world challenges. The decision to intertwine sectors was a forward-thinking approach that recognized the intricate socio-economic fabric and the need for holistic problem-solving.

Evolution and Future Directions

As the landscape of business and society evolves globally, the limitations of a myopic business-centric education, as championed by HBS, become apparent. The need to address broader societal, environmental, and governance challenges demands a shift toward a more inclusive, interdisciplinary model—akin to the visionary approach of IIMA.

The future of management education lies in navigating a delicate balance between specialized business education and the broader interdisciplinary approach advocated by institutions like IIMA. The open-ended question for discussion probes this delicate balance: how can educational institutions adapt to the dynamic global landscape, offering specialized business education while incorporating the interdisciplinary approach advocated by institutions like IIMA?

The comparative analysis of HBS and IIMA provides a profound understanding of the evolving paradigms in management education. It unravels the intricate threads of foundational philosophies, scopes, and the impact of socio-economic contexts. As the global landscape continues to transform, the lessons gleaned from these institutions pave the way for a reimagined future in management education—one that integrates specialized business knowledge with a holistic, interdisciplinary approach to address the complexities of an ever-evolving world.

Analysis through the lens of Care Economy Framework

The most contemporary approach for public action and public service achievement is market-public-civil society synergism (Thynne and Peters, 2015). It needs to be understood then in the context of training and education of management graduates that we need not fall into issues of false dichotomies of market and public i.e. government

failure debates and understand that both contribute to public good within the limits of their organizational capacity, design, and boundaries. Therefore one needs to question the past economic frameworks and adopt the most evolved ones, like the Care Economy Framework (Eisler, 2008) to understand that it is the ignorance of illegal, unpaid and household economy which has laid to the same debates being raised over and over again. There are some deep ethical questions that needs deliberation and more importantly action, behavioural changes, practices which can foster learning then which are lifelong and then can bring about pervasive social change. Management Education and academia need this approach both at an individual as well as institutional levels.

Recommendations towards a societal turn were being given from long back (Bach, 1958) but it needed a mending in the philosophical assumptions which have not happened even now in the most dominant contexts. This is actually having a trickle-down effect on places where the foundations were laid stronger in terms of management education discipline but other factors like job opportunities, placement, rat race etc. i.e. the fictional conditioning is affecting it in an adverse way. The penetration of technologies in daily lives have also given wings to the surveillance panopticon in the Industry 4.0. age.

As far as management education is concerned, it needs to go beyond the research-practice debate (Walsh et al., 2007) and bring balance to its pedagogy in terms of theory and application (Wren, Halbesleben & Buckley, 2007). It needs to go beyond the market-driven approach (Zell, 2001) knowing its perils. The issues of hegemony and inclusivity (Varman, 2014) in management thought comes largely because (Ranjan, 2015) management academia serves a certain clientele and are aware of the other at the bottom of the economic pyramid, but they fail to recognize – “MINDS ON THE MARGIN ARE NOT MARGINAL MINDS” (Gupta, 2016).

The Twin Traps of Management Education in Contemporary Times

Management education and its lost ways (Alvesson and Sandberg, 2013) can be attributed to the capitalist architecture to give support to which it was designed in the first place (Tsoukas, 1994). Its origins in North America (Augier and March, 2011) and Europe and design to maintain the power structure of the world was something the Eastern giants like China have realised over time. This has given rise to a whole new set of Chinese Theory of Management (Barney and Zhang, 2009; Cheng, Wang, and Huang, 2009; Chunhua, 2010) and literature, range of papers, and number of authors working around that. The contextualization requirement of Management (Child, 2009) and it as an applied field is well established. There is the question and debates about etic versus emic theory development as well in terms of research, teaching, and applications in practice.

This gave rise to the birth of rituals and rhetoric in management education which was later coined as “management fashion” (Abrahamson and Fairchild, 1999) though it was challenged (Kieser,

Nicolai and Seidl, 2015) and rightly so, and needs a moderate treatment. Also, the management scholars in name of creating scholarly impact were turned to basic disciplines like sociology, psychology, political science, statistics etc. and methodological rigour gained prominence and relevance lost its way in this “Faustian bargain” (Agarwal and Hoetker, 2007) for scholarly Impact (Aguinis et al., 2014) and got entangled in the hierarchy of sciences (Cole, 1983). Actionable knowledge (Argyris, 2003) could not be chiselled out from the research, and this was the reason for research findings to be unimplementable (Beer, 2001; Brennan and Ankers, 2004) and research-practice gap started widening (Bansal et al., 2012). Questions started being raised in the academic circles regarding “Are business schools doing their job?” (Behrman and Levin, 1984) and this is how business schools lost their way (Bennis and O’Toole, 2005). Therefore, even managers started disrespecting the scientific research of business schools (Churchman, 1964). How to make business schools and management education again relevant started being asked (Choudhury, 1986). One way found was bringing in executive professors (Clinebell and Clinebell, 2008), but the question there was how to create a balance between experience and theory. For academics action research, a philosophy and method of practical knowing was the way to proceed (Coghlan, 2011). Both the first and the second will bring together and initiate dialogue and conversation between very separate worlds of academic and practitioners (Cohen, 2007), and the society at large which was not considered in most North American and European Schools earlier. The business and society issues only saw light of the day in business academy circles only in the last two decades in a vibrant way.

In the spirit of usefulness of useless knowledge (Flexner, 1939), management academia should build a dialogical relationship between themselves and the outer-world and understand relevance can be of different kinds (Nicolai and Seidl, 2010) for the stakeholders they serve, and it comes out in unpredictable ways which are both measurable and unmeasurable. Rather than falling into these false dichotomous categories of rigour and relevance and assume management education, research, and academia as a whole in a fragmented state (Whitley, 1984a), one needs to bring to the status of a practically oriented discipline (Whitley, 1984b).

Fictional Conditioning

On the one side of the management discipline coin are business professors who struggle irrelevance but have a certain amount of intransigence (Oviatt and Miller, 1989) in dealing with managers in the business world, who are involved in playing power, politics and language games and advancing the capitalist agenda (Astley and Zammuto, 1992). Whilst most are caught in this debate of knowing versus doing, the smart companies benefit by converting knowledge into action (Pfeffer and Sutton, 2013). But there is also an agenda that is pushed by utilization of hard facts in a certain way to covert it into dangerous half-truths to serve the profit-making goal of the enterprise (Pfeffer and Sutton, 2006). The larger society who is a big stakeholder and from where majority of participants come in the management

education system loses out. It is on two counts. One is direct that there is resource transfer in the reverse direction which creates inequities. Secondly, it creates a norm in the society and sets the tone for what meritocracy means i.e., the chase and pursuit of accumulation of fictional realities. This leads to a fictional conditioning of the human beings at all levels of the socio-economic pyramid.

Surveillance Panopticon

Given the history of management education and the purpose of its creation and its foundations through there has been several new drifts and phenomenon that have emerged like business and society, entrepreneurship etc. it gets subsumed within the larger agenda of furthering capitalist architecture. In the Industry 4.0. era, with data access to the elite groups in the society this becomes obvious that the scholastic point of view (Bourdieu, 1990), which was homogenized (Bourdieu, 1988) earlier that process will even get strengthened in the era of surveillance capitalism (Zuboff, 2019).

“Never the twain shall meet?”

In the Indian context, also questions keep on getting raised about research relevance and the why of management? (Mulla, 2007). This seems very paradoxical, and it is due to lack of awareness of history of creation of institutional excellence at IIMA (Sherry Chand and Rao, 2011). IIMA took a different approach to management education than HBS, its mentor institute which has only focussed on Business management. The first important transition to note is the nomenclature itself as Indian Institute of “Management” and not “Business”. This was a conscious choice of Dr. Vikram Sarabhai, the first acting directing and founding father of the institution and Prof. Ravi J. Matthai, the first full time director. They chose to focus on 7 sectors viz., 1. Agriculture and Allied Areas, 2. Industry, 3. Banking, 4. Government Systems, 5. Co-operatives, 6. Trade Unions and 7. Research/Teaching (which will act as a feedback loop). Though the Harvard University had all these as separate entities only later they realised to develop the interconnectivities and come out of disciplinary boundaries in the true spirit of interdisciplinarity and trans disciplinarity (Mayr, 1982) in an effort to solve real world socio-technical challenges.

The American management education focussed largely on business management education (Pierson, 1959a, 1959b) and till today even top scholars who talk of business society issues and reforming management education for 21st century (Porter and McKibbin, 1988) get limited by the homo-academic approach to management education they adopted earlier. That is why the idea that the twain shall never meet (Leung, 2009), but one should be hopeful of future possibilities. In that vein, the Chinese counterpart have come up with their own set of indigenous Chinese management research (Leung, 2009; Longwei, 2008; Von Glinow and Teagarden, 2009; Zhao and Jiang, 2009).

Humanistic Management Education Beyond Industry 4.0. – Principles and Pedagogies for the 21st century

Academic description is a choice (Sen, 1980) and thus bringing about

relevance is never an issue. Being caught in complex methodologies like the "F-twist" and the methodology of Paul Samuelson (Wong, 1973) and not looking beyond boundaries and assumptions (Maxey, 1999) leads researchers and even learners to lose their reflexivity. Interdisciplinary and transdisciplinary thinking and approach as well as an investigation on the science of science (Mayr, 1982) itself to solve socio-technical problems of the 21st century with empathy, humility and willingness to learn will create the scientific temper and the spirit of enquiry not only in the field of management but in other higher education fields as well. Then only F-Twist's will be untwisted (Musgrave, 1981) and relevance will be reframed as “social usefulness” and rhetorical questions will go out of the academic circles (Willmott, 2012). This then can be called a human-centred and science-based approach (Pascal, Thomas and Romme, 2013) to problem solving.

Management theorists writing meta-research and future proposals (Rynes, 2007) find that management field finds it at crossroads of relevance. It is because of the following reasons. First, it has not taken the right agendas and hence got caught up in the “Faustian Bargain” between applied and socially relevant versus inwardly methodological rigour asking the same questions that other social scientist in pure disciplines keep posing. Secondly, its inability to understand that management is a socially constructed truth (Astley, 1985) and needs pragmatic action research to advance as well as transform its agenda (Levin and Greenwood, 2001; 2008). Thirdly, the pedagogy of communicative rationality (Niemi, 2005) and spirit of Socratic dialogue (Gose, 2009) need to be advanced in management education institution and universities. This will create a space of critical engagement (Routledge, 1996) and bridge the science-management divide to create an environment of bidirectional knowledge interfacing and sharing (Roux et al., 2006). The management academia and education will then move away from its "Homo Academicus" roots (Wacquant, 1989) and also an attitude of “I shall not remain insignificant” (Vermeulen, 2007) and do something for the society and contribute for this world.

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APPENDIX

Figure 1. The New Economic Map as proposed by Care Economic School of Thought

THE NEW ECONOMIC MAP

The new economic map includes all six economic sectors:

Core sector: Household economy

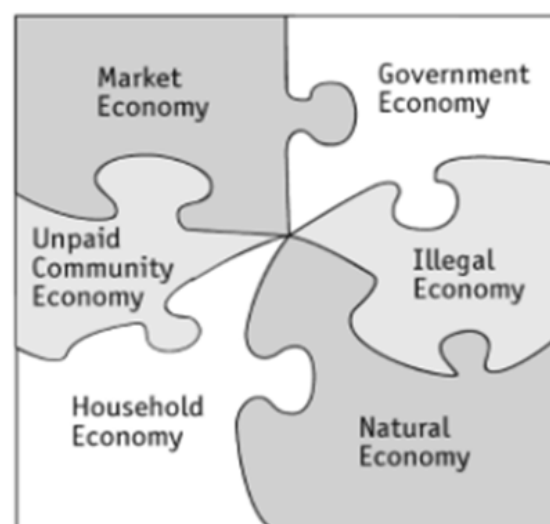
Second sector: Unpaid community economy

Third sector: Market economy

Fourth sector: Illegal economy

Fifth sector: Government economy

Sixth sector: Natural economy



Source: Eisler, R. (2008). *The real wealth of nations: Creating a caring economics*. Berrett-Koehler Publishers.

Case Study on Gujarat's New Generations Overcoming the Challenges of Third Generation Company

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Abstract

Professors of management education believe that since the third generation was born into prosperity, it was not groomed well enough to undertake hard work. In addition, the changing complexities of businesses and the environments in which they operate have become major hurdles for the third generation. “In the first generation, you have the patriarch taking all the decisions; the second generation [of brothers and sisters] follows. By this logic, family and business are established by the second generation. “The third generation, which typically consists of cousins, does not want to restrict itself to the family business it wants to do many other things. This research focuses on lesser-known family businesses that have successfully gone beyond the third generation. The research sheds light on what some business families have done very differently to be successful at this point and remain together as well.

Key words: Third-generation company, family business, delegation.

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ARTICLE INFO

Received:12/04/2024 | Revised: 20/06/2024 | Accepted: 23/06/2024 | Published Online: 31/10/2024

DOI: 10.13140/RG.2.2.25930.79047

CITATION

Kumar, S., 2024. A Case Study on Gujarat's New Generations Overcoming the Challenges of Third Generation Company
Integral Review-A Journal of Management. 14(2): 09–13. DOI: 10.13140/RG.2.2.25930.79047.

Introduction

Throughout history, family businesses have proven resilient. However, succession – even when someone has been waiting in line for years – remains a weak point that often fails. Only a few family businesses survive in the third generation, which has a poor succession plan. To break the so-called third-generation curse, families need to think beyond strength and instead focus on their choice to create a succession plan that gives everyone a say in their future. According to (Wibowo, 2018) family businesses are companies that have at least two generations involved in production activities, and the second generation can influence company policy. According to Harms, Santoso, and Kristanti (2018), a business can be considered a family business when it reaches at least the second generation of close relatives and when the second generation has entered the company. It is not surprising that the myth arises that the first generation was established, the second generation was developed, and the third generation was destroyed (Chitania et al., 2014). Santosa and Praptiningsih (2014) stated that only 20 percent of family businesses in the United States could survive for more than 60 years in the same family. In the family business delegation process, leaders must have the knowledge and ability to carry out the process from the senior to junior generation. This involves several steps, starting when the founder encourages his children to become part of the business (Wibowo, 2018). According to Campbell in Wibowo (2018), delegation is a process in which someone asks for help or gives responsibility to others. In addition, Hunt and Wibowo (2018) stated that effective delegations within the family company include the following:

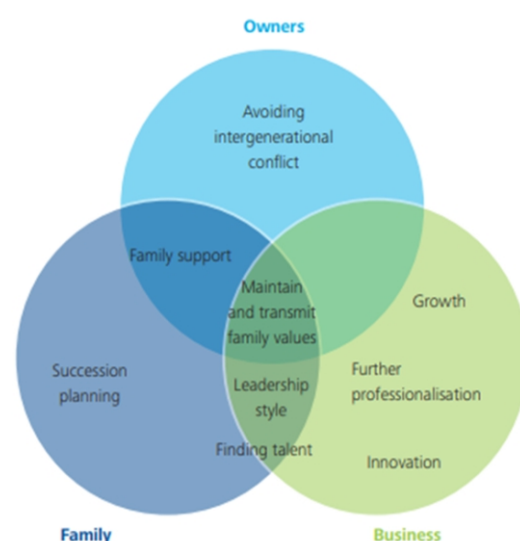
1. The first stage is the provision of education by the senior generation to the successor generation, in which education follows the field of family business.
2. Second stage: The senior generation includes prospective successors after receiving education. This involvement should start from the smallest or lowest field and not directly provide key positions.
3. Third stage: The senior generation entrusts several things to the prospective successor so that they can practice and be more responsible. According to Stoner in Wibowo (2018), with delegation from the senior to junior generation, the junior generation will gain confidence as they are given responsibility within the business. The senior generation will also benefit, as they will feel helped by the division of responsibilities, so that the results will be more accurate for the junior generation. The acceptance of transition and the ability to change for the better lie behind these family owned firms' resilience, dominance, and success. There are numerous stories in India about successful family owned businesses, and change has pivoted them. Changes that had to be adapted to due to changing mindsets, changing generations, and changing patterns of consumerism. It is the responsibility of the younger generation joining family businesses to offer a fresh pair of eyes. As the country's evolving landscape came new opportunities and challenges, the game changed for every generation. However, the core value system has remained constant with most family businesses.

The next generation's role is that of renewal and being the voice of the new generation, modern customers, and competition. Ward (Ward, J.L., 1987) explains that only 30% of family companies survive in the second generation's administrations and only 10-15% in the third generation's hands. Lambercht and Donckels (Lambercht, J. and R. Donckels (2006) explains that a succession process is lengthy, and succession planning becomes part of this process. Family businesses are found to split up like amoeba as they grow, and very few of them survive beyond three generations, supporting the age-old saying, "shirt sleeve to shirt sleeve in three generations" (Carlock and Ward 2001, McCulloch 2004). As discussed by Paisner (1999), developing a sustainable mechanism for business ownership that does not lead to inequitable wealth distribution and avoids amoebic-type breaks is also an important area of concern. Paisner's idea of a trust route seems to be good but needs to be empirically validated. This research focuses on lesser-known family businesses that have successfully gone beyond the third generation. The research sheds light on what some business families have done very differently to be successful at this point and remain together as well.

The challenge for next-generation

A new generation of young, highly motivated men and women are ready to take over the leadership of their family businesses. The long-term prospects for their company and the challenges they face are high on their agenda. The biggest challenge is maintaining and transmitting family values. Family firms need to maintain a balance between business goals (such as growth, innovation, and recruiting talented staff) and family goals (such as maintaining family values and protecting family wealth). They also need to arrange a smooth transition in leadership from one generation to the next. These goals may sometimes conflict and may be difficult to reconcile. The main challenges faced by the next generation of family business leaders are shown in the three-circle model in Figure 1.

Figure 1. Conflicting objectives in family business



(Source: Deloitte)

For the next-generation leaders of family businesses, having their leadership style and being recognized and accepted as the new leader are seen as the main challenges. In the past, family businesses were considered cautious in their approach to growth, but the next generation saw the expansion of the company as their second main challenge, building further on the achievements of their predecessors. These views are most commonly found in companies where the next generation leaders are the second or third generation.

Ability versus willingness case studies of some successful third-generation companies of Gujarat

Gujarat is full of family businesses that were founded over 100 years ago, when priorities, approaches towards innovation, and business models were very different. As the country's evolving landscape came new opportunities and challenges, the game changed for every generation. However, the core value system has remained constant with most family businesses.

Wagh Bakri

For more than a century, Wagh Bakri was the sole business selling tea. The company dates back to 1892, when the first-generation entrepreneur Narandas Desai started leasing 500 acres of tea estate in Durban, South Africa, only to return to India in 1915 after facing racial discrimination. "Today, we are the largest family run packaged tea business in the world," says Parag Desai, over a cup of Darjeeling tea. Parag, Paras, and Priyam manage the main operations of the 131-year-old business and the fourth and fifth generations of the family. Veterans Rasesh and Piyush, from the third generation, have taken a back seat and mostly look after corporate social responsibility (CSR). After pursuing his master's degree from New York's Long Island University, Parag joined the business in 1995, when it was less than Rs 100 crore. "Our revenue is more than Rs 2,000 crore now." He took charge of expanding business outside Ahmedabad and introduced the e-commerce platform buytea.com 20 years ago. The brand has a presence across 24 states in India, exports to over 60 countries, and sold 48 million kilograms of tea last year. It expanded slowly and steadily. For instance, after spending ten years in Rajasthan and Madhya Pradesh, the brand moved to Maharashtra and Delhi. The main concern was to test water and develop a robust distribution network. "I don't know how good or bad that is, but it has worked for us because our needs are also limited. The business has been growing well," said the 48-year-old executive director. Parag and Paras looked after product innovation, growing their brand awareness, e-commerce, and international business. Crediting the earlier generation, Parag acknowledges the freedom to run the business and introduce changes. From foraying into newer regions to launch the first tea café, "our decisions were never questioned as long as we took complete accountability for success and failure." The unlisted brand runs over 70 tea lounges and worlds across India. The third-largest packaged tea company in India, after Tata and HUL, is also looking to expand in the eastern region. Parag also credits professionals for running the brand smoothly. "For the last 20 years, we have been a family-owned but professionally run company."

Strong value mechanisms, ethics, and morality are some of the values carried forward by all generations. "We hope our kids pick up this from where we left it and take it ahead," says Parag.

Vadilal

Growing up, Aakanksha Gandhi's dinner table conversations only revolved around the ice cream industry, and the day-to-day challenges her father faced at work. "It was always my dream to eventually work with the family business," says Gandhi, the fourth generation to have joined the family business, as president-branding and parlours at Vadilal Enterprises. The company dates back to the year 1907. From a fountain soda shop in Ahmedabad to making traditional kothi-based ice cream (using a hand-operated machine to churn milk with other ingredients), Vadilal is one of the most popular ice cream brands nationally. Ranchod Lal Gandhi set up a small retail outlet in 1926. After its flagship, Cassata ice cream was introduced in the 1950s, and there was no looking back. By the 1970s, Vadilal was a household name, with eight to ten outlets in Ahmedabad and the third generation, when Ramchandra and Lakshman Gandhi joined the business. By 1989, the company had become a listed entity. Since then, the business has grown significantly. After some reported tiffs within the family, the business is led by Ramchandra's son Rajesh and Lakshman's son Devanshu. The new generation is trying to bring in much more innovation, while keeping the family's core values intact. Vadilal has two separate entities: Vadilal Industries, which looks at manufacturing, and Vadilal Enterprises, which are responsible for marketing and distribution. Devanshu's daughter Aakanksha joined the business in 2018 and is in charge of marketing and branding efforts nationwide. "Being in a generational family business, there is always an opportunity to add value to the legacy. Since becoming part of the brand, my primary goal has been to ensure continued relevance among the Gen Z and Gen Alpha demographics. The 26-year-old has been spearheading efforts to elevate Vadilal's presence in the e-commerce landscape and collaborating with influencers. "All of this has been achieved while maintaining a delicate balance with the company's existing values." A year ago, she spearheaded the launch of a dessert café, Vadilal Now, forever. "The idea behind this was to connect with the young generation, to build lifelong loyalty," she adds. Even the standalone ice cream parlours, the Vadilal Scoop Shops, have expanded to 30 locations across Gujarat and four locations in Delhi. Vadilal is soon gearing up for a franchise-based, pan-India launch. The manufacturing business clocked in net revenue of operations of the Rs 896 crore, whereas the marketing and distribution business's net revenue was Rs 930 crore in FY23. With much more innovation on the marketing and branding side, Aakanksha is all geared up to transform Vadilal. How different is her leadership style? "I don't want to change the essence of the corporate culture that has been built over the years. However, we are encouraging a more democratic style of leadership, allowing more opportunities to engage with team members and value their insights."

Symphony Fabrics

After studying textile materials technology in the US, Abhishek Shah wanted to return to India to diversify his 80-year-old family textile business. Given that he has studied biomaterials and sustainability, he suggested focusing on sustainable textiles. Along with his father, Jigesh Shah launched the Symphony Fabrics. Around 2017, sustainability was not a new concept; however, sustainable textiles were still at a relatively nascent stage in the Indian market. “We started R&D for hemp fabrics and invested more than Rs 40 lakh in it. It was very difficult to run hemp on looms. The existing business has been manufacturing corduroys for massive industry players, such as BVM, Arvind, M&S, and other export houses. The 29-year-old is working closely with his father to introduce newer fabrics, including hemp, bamboo, and hemp corduroys. The father-son duo has also started catering to many new industries, including medical, technical textiles, and tyre cord fabrics. However, before joining the family business, was it never thought of setting up a startup? Shah says, “Textiles are in my blood. I was always certain of two things: Working in the field of textiles and expanding the family business.” ‘Quality over quantity’ has been a core value in the family, and Shah has ensured he sticks by it. Earlier, the business catered only to large multinationals. “Now, when we produce any of our fabrics, we keep a few extra meters in stock. This allows us to not only cater to MNCs but also startups and mid-size companies across the globe at short notice.” Earlier, the business was very focused on India. With Shah's entry, he started focusing on digital marketing, “We started participating in trade shows across the globe, which allowed us to connect with international brands directly. We are working with many of them directly now, without any agent presence... this has helped grow our revenue as well.” This strategy also allows customers to offer better prices. “For instance, in a recent trade show in the UK, our competitors were selling hemp fabrics at significantly higher rates, and we were offering better quality and rates. This has been a game-changer for companies. Symphony Fabrics exports to approximately 14–15 countries across sectors. Being a textile engineer has also helped me. “Often customers reach out to us, wanting to custom-make certain fabrics. We ask them to send across a swatch, and then we reverse engineer and create the fabric as per their requirement. Shah soon plans to launch a new gifting and lifestyle brand called ‘SUMORE.’ “We are hoping to sell HEMP-Bamboo bed linens, tote bags, table runners, and more—all made using our fabrics—for gifting. Our products will range from Rs 500 to Rs 10,000. Symphony Fabrics is hoping to make the most of the large margins that can be made by selling products directly while still keeping the B2B business as the core. Apart from diversification plans, the company is investing heavily in adding more machinery to increase its monthly capacity from 200,000 to 3 lakh metres per month. Going forward, the company hopes to find strategic partners and investors in India and across the globe to expand its offices and presence.

Aava Water

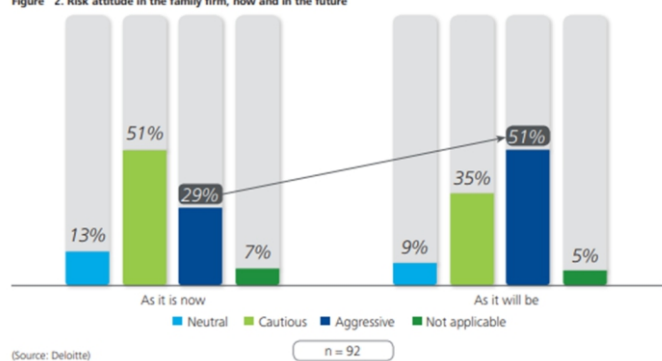
Inside Ahmedabad's cantonment area in Hansol is a 50-acre campus, where, 63-year-old Behram Mehta points out, “We inaugurated Aava Water in 2005. Every element illustrated on our labels is from this protected ecosystem, which is home to thousands of indigenous flora and fauna.” In India's cluttered sector of packaged drinking water, Aava claims to offer water in its natural state without any artificial processes. It is also Western India's first brand to sell natural mineral water that originates in Aravallis, the world's oldest mountain range. Aava Water, which is run by two generations, has been focused on its B2B business and is now aggressively expanding its B2C reach. “When I joined in 2011, we were a completely different outfit, with 90 percent of our sales coming from B2B clients like Jet Airways, Air India, Four Seasons and so on, with a heavy dependence on a few clients,” says Shiroy (33), Behram's son. After making a call to change the client mix, 50 percent of the business is now generated from B2C. While Shiroy looks at operations and logistics, his younger sister Avanti (30) wears the hat of the brand manager and the creative director. Behram takes the lead in strategy, legality, and firefighting. “We as a family have divided our duties, which enables growth and synergy. I still supervise quality, taste, testing, laboratories, and manufacturing processes, among other responsibilities,” said Behram. Approximately 90 percent of the business is in the domestic market, with only 10 percent originating from exports through airlines and flight kitchens. “We see exports playing a significant part in our growth over the next three to four years, beginning January 2024,” says Shiroy. When different generations of the family run a business, they are bound to have clashes of opinions. “Differences are inevitable. However, they do not hold us down. Even if it is a disagreement, it's voiced, discussed, and put to an end,” says Avanti, who joined the business in 2019 and is India's youngest water sommelier. Within the natural mineral water space, Aava has been on top and claims to be Shiroy. The Ahmedabad-based company manufactures, distributes, and sells more than four lakh PET bottles and glass bottles per day. The price of Aava Water is higher than that of other market players, making it a premium product. Post- Covid 19, the company has seen an upward growth trajectory and is growing 30 percent year-on-year. Natural mineral water brands are currently valued at Rs 1,000 crore. The brand is now focusing on building a basket of products that includes sparkling water and some unique beverages, which will give them an entry into the retail segment.

Risk attitude in the family firm, now and in the future

Like other companies, family businesses are exposed to various strategic, financial, and operational risks. However, they also face risks related to the family arising from matters such as lack of succession planning, divorce, death, and family conflict. There is a link between risk taking and business value. This may lead to risk-averse behavior to preserve the family's wealth. 51 percent of the next generation is more willing to take risks. There is a common view that family businesses are inclined to be risk-averse and unwilling to innovate,

even though they have the resources to do so, because of concerns about the possibility of a negative outcome and a reduction in the family's wealth. According to our respondents, family companies tend to avoid risks. Almost 65 percent are either risk-averse or risk-neutral, and about one-third are willing to take on some risk. Looking forward, a majority of respondents said that they would be more willing to take risks to improve growth in the business and increase profit while also protecting family interests than the previous generation (see Figure 2).

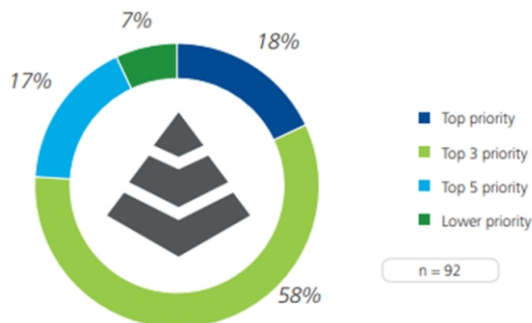
Figure 2. Risk attitude in the family firm, now and in the future



Result & Findings

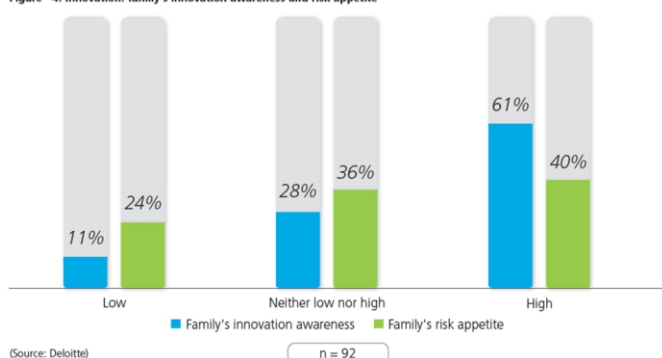
Innovation in the family business appears to be important to our respondents: for 18%, it is the number one priority, and it is the top three priorities for 76 percent (see Figure 3).

Figure 3. Priority of innovation for next-generation leaders



Although 61 percent of the respondents stated that the level of awareness of innovation in their business was quite high, only 40 percent thought that there was a sufficient risk appetite for innovation among family members. Therefore, for the majority of businesses, the family wants to be innovative but with limited risk exposure.

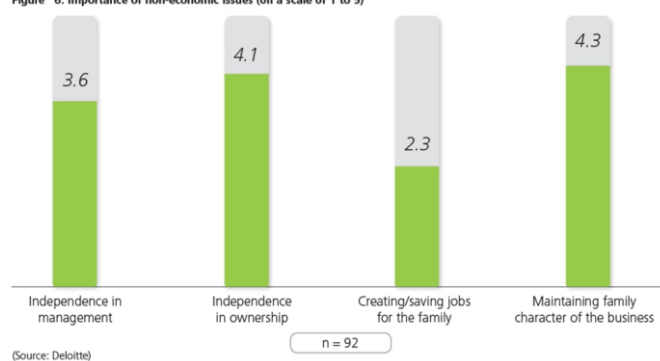
Figure 4. Innovation: family's innovation awareness and risk appetite



Conclusion

In a certain way, the family business represents the family's values, originated by the company's founder, and transmitted through succeeding generations. Values increase in importance over time. As families become larger and the business expands, shared values become more important in binding family members together. Non-financial goals such as the family character of the business and independence are extremely important.

Figure 6. Importance of non-economic issues (on a scale of 1 to 5)



Creating jobs for family members is not considered important, as this is inconsistent with the desire to employ individuals who are the most competent.

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Navigating the Future of Retail in India: Embracing Innovation, Technology, and Switching Consumer Trends

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A b s t r a c t

India has experienced a steady increase in consumption in recent years owing to robust socio-demographic dynamics and a favorable environment. The country's retail sector has consistently displayed liveliness and adaptability and is firmly integrated into its economic and cultural framework. The sector has experienced substantial transformation, adjusting to evolving customer tastes, technological progress, and growing market dynamics. With the advent of the Internet and geopolitical changes, the Indian retail sector has been poised for a promising and expansive future. Retail remains a substantial driver of India's gross domestic product (GDP) and jobs. Projections indicate that India is projected to emerge as the third largest consumer market by 2030. Continuous advancements in technology and innovation have consistently transformed how consumers interact with products and services, resulting in the emergence of new channels and formats. E-commerce is projected to sustain its rapid expansion and surpass the organized retail industry in terms of both scale and magnitude.

Moreover, emerging platforms such as social commerce, fast commerce, and direct-to-consumer models will revolutionize the purchasing habits of millennials and Generation Z. With improvements in consumption, Indian retailers are presented with numerous options due to the evolving landscape. Anticipate a rise in investment in niche vertical e-commerce in the future. Retailers prioritize the shift from simple transactions to creating rich and memorable experiences with long-lasting effects. This study explores the future of retail to promote innovation, foster collaboration, and create a retail environment that not only meets but surpasses customer expectations. It aims to use technological breakthroughs and prepare for endless possibilities of the future.

Key words: Consumption, Environment, Generation Z, Technological

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ARTICLE INFO

Received:11/03/2024 | Revised: 10/05/2024 | Accepted: 12/06/2024 | Published Online: 31/10/2024

DOI: 10.13140/RG.2.2.29286.23365

CITATION

Pandey, S.P, 2024. Navigating the Future of Retail in India: Embracing Innovation, Technology, and Switching Consumer Trends, Integral Review-A Journal of Management. 14(2): 14–22. DOI: 10.13140/RG.2.2.29286.23365.

Introduction

The Indian retail sector is a powerful domestic and global sector. Contributing significantly to India's Gross Domestic Product and occupation, the industry is projected to become the third largest consumer market by 2030 (Deloitte analysis). In recent years, the industry has experienced substantial interference from introducing new business models and enhancing customer experiences to increasing digitization diagonally in the value chain. Over the next decade, further disruptions are expected to reshape India's retail landscape. Retailers grapple with the challenges of disruptive trends that strain their traditional value propositions. Historically, retail business models have been product- or store-centric, focusing on their scale, scope, and efficiency. However, as consumer expectations evolve and diversify, there is heightened pressure on retailers to deliver authentic customer-centric values. (Tribune, Economic Times)

The shift towards online platforms has opened new engagement opportunities, while the business landscape is expanding to encompass technology, media, services, and healthcare. The rise of D2C models prompts brands to adopt retail practices, whereas private labels encourage retailers to operate more like brands. The expansion of physical and digital retail spaces and globalized supply chains has greatly increased consumer choice, transparency, and availability. Consumers enjoy various purchasing options across multiple products and channels. Today's consumers demand seamless, ultra-convenient shopping experiences and personalized, immersive interactions that align with their values and aspirations. Retailers must navigate this landscape by balancing invisibility, intimacy, and indispensability to maintain relevance. This study examines how the retail sector must adapt and the implications for emerging value propositions that are essential for maintaining relevance in the future.

Key Drivers of Consumption

Value	Price-savvy consumers are increasingly hunting for value. With growing pressure on household budgets, consumer perception of value is changing. Shoppers are willing to search extensively to find the best deals.
Convenience - quick commerce	Consumers need more free time and seek seamless experiences that are available anytime, anywhere. Preferences for online ordering, curbside pickups, and home delivery are growing, along with expectations for easy (and free) returns.
Consumer Awareness	Indian consumers have become more health savvy, with the health quotient of a product being a critical factor in their purchasing decisions. More people are embracing product attributes such as zero sugar, low fat, natural, or organic.
Conscious Consumerism	Consumer awareness about the environment, planet, and people shapes India's buying and usage habits. Behavioral patterns indicate that Millennials and Gen Z are more Eco-conscious than previous generations.
Experience	Customers are actively interacting with shops in ways that go beyond traditional purchases, which is causing retailers to prioritize providing customised, smooth, and quick experiences. There is a high demand for experiences that are both immersive and distinctive.
Choice	Customers are increasingly drawn to online retailers with extensive product offerings or discount stores with limited yet cost-effective choices. Product assortment is becoming a crucial factor that sets stores apart.

Privacy and Security	Consumers are becoming more cognizant of the potential dangers to their data privacy. However, they are willing to accept a certain level of risk in exchange for a smooth purchasing experience with reputable brands. Although 71% of consumers have apprehensions regarding data privacy, a significant majority 66%, are still eager to disclose their data.
Purpose	Consumers are more aware of retailers' behaviours and prefer those whose actions align with their values and expectations. Retailers with the proper behaviour and purpose will likely hold a strong market position.

Source- Deloitte Consumer Survey,2023

4A - Factors for Driving Consumption

AFFLUENCE <ul style="list-style-type: none">● The income of households is increasing.● There is a growing proportion of affluent and elite individuals.● There is predicted to be a 40% increase in yearly household income by 2030.	AWARENESS <ul style="list-style-type: none">● Optimistic attitude towards future opportunities● Inclination to expand expenditures● 120 Crore It is anticipated that by 2026, most individuals will possess a smartphone.
ACCESSIBILITY <ul style="list-style-type: none">● Individuals can reach places of consumption such as malls, retail complexes, and theatres.● There is a more significant amount of information accessible through both online and physical media.● 77% of households are now connected to television.	ATTITUDE <ul style="list-style-type: none">● Inclination to make purchases at any location and at any time.● There has been a rise in optional expenses. T● The Consumer Confidence Index (CCI) experienced a 30% growth in March 2022 compared to July 2020.●

Source: Consumer Confidence Index as reported bi-monthly by RBI

India's retail industry is projected to grow at a rate of 9-10%, reaching approximately \$2 trillion by 2032. However, this timeline has been pushed back by to 1-2 years due to delays caused by the COVID-19 pandemic. Over the past two years, retail players have encountered unprecedented challenges, significantly influenced by global trends impacting the sector. (Economic Times, ibef.org)

Macro-Economic Trends	This includes the impact of COVID-19, store closures, depressed demand, health and safety concerns, operational and supply chain challenges, and the effects of climate change and urbanization.
Political Influencers	Include factors such as trade conflicts, increasing wages, and the practice of off-shoring and outsourcing.
Data and Identity	Spans topics such as cyber-security, the prevention of identity theft, the study of modern payment methods, and the use of advanced analytics.
Digitization	The three major trends shaping the current landscape are digitization, the emergence of platform firms, and the increasing automation through artificial intelligence (AI) and robots. Additionally, virtual and augmented reality technologies are also gaining prominence.

Switching Demographics	Demographic shifts include population growth, increased diversity, and an aging population with longer lifespans. Additionally, a new generation of consumers, including Gen Z and Millennials, has different preferences and behaviours. The workforce profile is also changing.
Human Aspirations & behaviours	Shifting perspectives on the value of possessions compared to experiences • Rising demands for better service • Emphasis on convenience and saving time Trading up or down refers to exchanging one item or asset for another of higher or lower value, respectively. Well-being and physical fitness
Brands & Product	The process of turning a product into a commodity and making its information easily accessible to consumers. There is an increase in the number of brands available in the market, especially those that sell directly to consumers, and there is a desire for unique and exclusive products.
Global Connectivity	Global connectivity connects individuals, platforms, and ecosystems worldwide. It includes large IT corporations, IoT, Voice Technology, and the sharing economy.

Source: Deloitte Consumer Survey, 2023

Customers have become the dominant force in the market, wielding a significant influence over product, brand, and service choices. With increasing knowledge and awareness, customers are increasingly discerning and demanding the services they receive, pushing expectations even higher. Businesses must understand what customers truly want, and identify the gap between their offerings and customer desires. Closing this gap is essential to enhance customer satisfaction and drive sales. Retail accounts for 8–10% of India's GDP and is the most employed industry. India's retail sector is predicted to grow by 25% per year owing to robust economic growth, changing lifestyles, and positive demographic trends. This expansion could value the sector from \$179 billion to \$302 billion by 2023 (McKinsey 2024). The industry is proliferating, with a predicted revenue of \$ 420 billion and an annual growth of 5 %. Rising urban consumerism, affluence, and rural consumption support have predicted expansion. Kearney Research expects India's retail sector to increase 9% annually from 2019, reaching \$1.4 trillion by 2026 and \$1.8 trillion by 2030. (mospi.gov.in, ibef.org)

E-commerce has seen substantial benefits from the pandemic, with a report by Bain & Company and Flipkart forecasting that the market will grow to \$120–140 billion by FY26 at 25–30% annually. India has the third-largest e-retail market globally. Direct-to-consumer (D2C) shipments are expected to reach 2.5 billion by 2030, and a nine-fold increase in online used car transactions is anticipated in the next decade. E-commerce in India is growing, offering a wide range of products at low prices. E-commerce is a significant shift in retail business that is expected to continue. Retailers use digital channels to reach customers in Tier II and III cities, thus reducing retail costs.

The Internet retail market is projected to grow from \$55 billion in 2021 to \$350 billion by 2030. Online sales are expected to increase from 4.7% to 10.7% of retail sales by 2024. Despite these challenges, increasing earnings, favorable demographics, worldwide competition, and urbanization bode well for businesses. (Ibef.Org,)

Objectives of the study

Indian and global retailers have implemented innovative strategies to leverage technology and promote the adoption of advanced solutions to improve the customer experience, service quality, and productivity. The present study attempts to address the following issues:

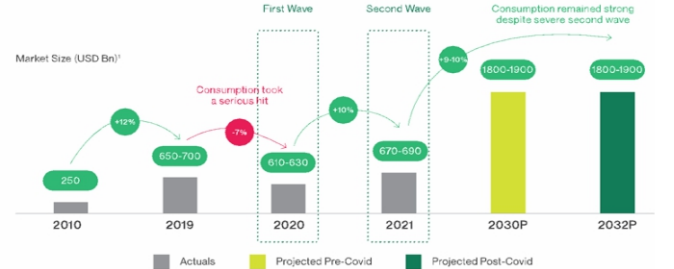
- To provide a clear and strategic plan for navigating dynamic and fast-changing retail businesses and to gain insights into purchasing habits.
- To acquire an understanding of retail within the context of India to investigate the growth patterns of the retail sector in India.
- This study highlights the issues that the retail business in India is currently facing and explains its likely future.

Research Methodology:

This study was grounded in the research philosophy of pragmatism. Writers hold a pragmatic perspective on the concepts' utility, feasibility, and applicability (Thayer 2015). This is evident in the stated objective, which highlights the primary goal of the study: to identify the practical components of retailing. This study is characterized by its objectivity, as it aims to identify universal causes for the current state of retailing and maintains the belief that it is feasible to establish a universally applicable framework. This pragmatic perspective significantly impacts the methodology and method part, in which we employ the secondary data approach to ensure the data's suitability, dependability, and excellence in acquiring genuine knowledge and accurately interpreting reality (Schmitt, B.H., & Zarantello L).

Retail Scenario in India

Retail accounts for 10% of GDP and 8% of employment in India. Urbanization, growing disposable income, improved logistics, expanded product choice, and rural customer digital accessibility have fuelled the sector's rapid growth. After China and the US, India is predicted to be the third-largest consumer market by 2030. India's retail sector expansion shows its potential for a bright future. With technological advances, infrastructure improvements, and a growing consumer base, the retail business will flourish, boosting economic growth. (voguebusiness.com)



Source: Euromonitor; BCG analysis

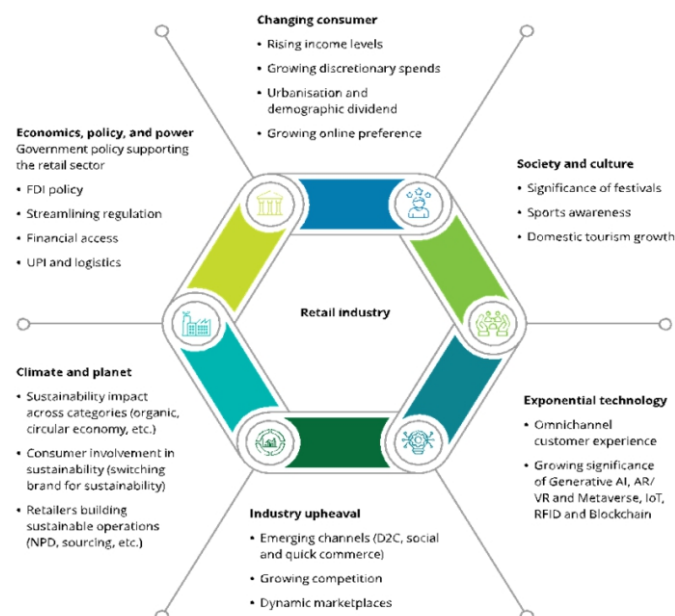
The Future Drivers of Retail Sector Growth

The future growth of the retail sector in India is expected to be influenced by several key factors (India_economy_report_2023)

- 1. Continued Economic Expansion:** India's economy could be third largest by 2030. The country will add 110 million middle-income and 14 million high-income households by 2030, thereby increasing consumer expenditure.
- 2. Key Consuming Demographics:** By 2030, up to 65% of India's population (50 million or more) will remain in the 15-59 age range, ensuring strong purchasing habits.
- 3. Population Growth and Urbanization:** India will continue to grow after surpassing China as the most populous nation. Retail activity increases when the urban population increases from 35% to 40% by 2030.
- 4. Shift to Online Retail:** Although traditional retail now holds the highest market share in India, online retail is projected to experience a growth rate 2.5 times higher than offline retail. E-commerce is experiencing significant growth and is expected to surpass organized retail. This growth is driven by various factors, including the convenience of ordering and returning products, a well-developed logistics network that covers a wide range of locations, a large consumer base of 220 million online shoppers who are comfortable with digital technology, and substantial investments of \$23 billion in private equity and venture capital over a period of five years. The prevalence of omni-channel retail, which involves seamless integration of both offline and online channels, is expected to grow further. (India_economy_report_2023, investindia.gov.in)
- 5. Growth in Tier-2 and Tier-3 Cities:** The expansion of retail is significantly driven by tier-2 and tier-3 cities, which are experiencing shifts in consumption patterns and growing purchasing power. These cities now account for over 60% of total e-commerce orders, with tier-3 cities seeing 65% growth in order volumes, tier-2 cities 50%, and tier-1 cities 10%. In response to this trend, retailers are extending their presence to cities beyond tier 1. (india_economy_report_2023, live mint, investindia.gov.in)

Six Transformative Forces

The retail industry is currently experiencing significant disruptions as a result of new business models, improved customer experience, and pervasive digitization. The market is influenced by several important variables, which cause significant changes. These elements include changes in consumer behavior; transformations in society and culture; rapid breakthroughs in technology; disruptions in the sector; the economic effects of climate change and sustainability; and changes in economic, social, and power dynamics. In order to prosper, firms must modify their plans to align with these dynamics, showcasing lucidity, foresight, and the capacity to handle the rapid pace of transformation in the retail sector. (KPMG-2023)



Source: Deloitte analysis

Kaleidoscopic Consumers

India's disposable income has increased significantly, especially in the country's expanding middle-class. Consequently, customers now prioritize convenience, quality, and enhanced purchasing experience. The shifting demographics, primarily influenced by Gen Z and millennials, also have an impact on these evolving preferences. India's per capita GDP has increased to about US\$2,200 in 2022 from about US\$1,400 in 2014. The middle class has grown as a result of economic growth, and between 2021 and 2030, 110 million more households are predicted to join it. In India, Gen Z and Millennials are becoming increasingly affluent, and they are frequently prepared to pay more for convenience and value-added services. 66% of Gen Z members and 72% of millennials are willing to pay more for thorough after-sales services. (Festivals from India, Business standard)

Towards a Productive and Urban India

India is expected to have a substantial increase in its urban population by 2030—roughly 100 million more people—and see a rise in urbanization from 35% to 40%. The unrealized potential of rural markets is demonstrated by the forecasted 4.3-fold increase in per capita consumption in rural areas by 2030, which will outpace the 3.5-fold growth in metropolitan areas. By 2030, the number of people in the 15–59 age group, a major contributor to economic growth, is predicted to reach 950 million. It is also anticipated that the number of retirees (aged 60 and older) will increase by 50 million. (Business Today)

Culture and Society

Indian retail and commercial landscapes are significantly shaped by societal and cultural factors. Holidays increase consumer spending, which is advantageous for both traditional retail and e-commerce. Sports-related industries, including health, fitness, sports gear, nutrition, and apparel, are driven by increased interest in sports.

The economy is also boosted by domestic travel, which boosts industries, such as airport shopping. Brands with a purpose—those that highlight the good things they do for society, the environment, and individual lives—are becoming increasingly significant. Approximately 55% of urban customers think that Diwali is the best time to buy, with clothes and appliances for the home being the top category. During festival seasons, retailers offer incentives and discounts to increase sales. (brand equity.economictimes.com)

Technology at an Exponential Rate

India is a digital powerhouse with 750 million smartphone users and 830 million internet users worldwide. With 220 million users, India is the world's third largest online shopping country. The strong desire for cutting-edge technologies has spurred investment and development in the retail industry, resulting in "physical" experiences that combine the digital and physical components.

Sector Upheaval

The growth of Internet platforms and significant investments from VC/PEs are changing the Indian retail industry. India's youth population, higher GDP growth, and increasing income levels all contribute to the country's ability to emulate China's economic achievements. Digital technologies and the increasing familiarity of Indian consumers with online shopping platforms also played a role in this transition. Government laws and policies have a significant impact on the development of the retail industry.

The Planet and Climate

Since the pandemic, consumers' awareness of climate change has grown, resulting in a preference for environmentally friendly and sustainable products. Businesses are embracing renewable energy sources, reducing emissions, and implementing sustainable practices. India has pledged to cut its GDP's emissions intensity by 45% by 2030. (livemint.com)

Policy Power & Economy

Retail policies aim to enable sustainable growth by addressing industry challenges, streamlining approval, and creating job opportunities. Retail-specific initiatives include: (FDI. finance)

100% FDI in single-brand retail and the e-commerce marketplace model.

–51% FDI in multibrand retailing.

– Reduction in corporate income tax to 22%.

– Implementation of faceless assessment and appeal schemes.

– Pradhan Mantri Mudra Yojana (PMMY) for easier access to business loans for small businesses.

Reforms to Transformative Policies

The Indian government decriminalized nearly 3,400 laws, repealed over 1,500 unnecessary legislations, and eliminated 39,000 compliance requirements in the 2023 budget to spur MSME growth. Benefits from the implementation of the Goods and Services Tax (GST) include lower levies and improved supply chain efficiency. Retailers can now operate throughout the clock in states such as Telangana, Tamil Nadu,

Maharashtra and Karnataka. New labor laws that acknowledge gig and platform workers are anticipated to increase labor availability and lower unemployment in the retail industry. With its incorporation on December 31, 2022, the government-backed Open Network for Digital Commerce (ONDC) seeks to establish an inclusive e-commerce ecosystem. In two years, it wanted to increase the percentage of customer purchases in e-commerce from 8% to 25%. Twenty governmental and private financial organizations have contributed about \$35 million to ONDC (livemint.com, pib.gov.in)

Workplace Efficiency

To increase worker productivity, the government has started implementing skill development programs, including the "National Skill Development Corporation" (NSDC) and the 'Pradhan Mantri Kaushal Vikas Yojana' (PMKVY). (pib.gov.in)

Important Factors Promoting Retail Digital Payment Growth.

BHIM and UPI AutoPay applications, which provide users with simplicity, security, and dependability, have sped up acceptance of digital payments. More than USD 1.26 trillion worth of digital payments were made in FY22, more than doubling from the year before.

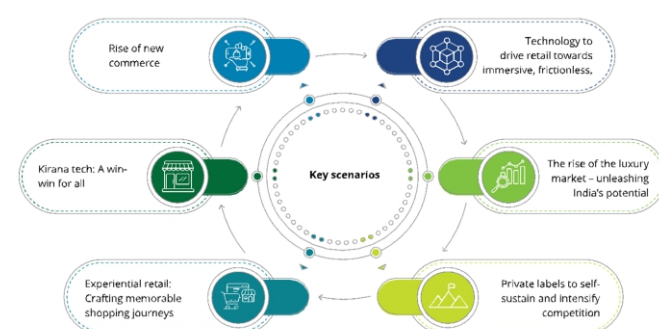
Encouraging Electronic Transactions

Policies have been put in place to encourage digital transactions, such as the imposition of a withholding tax on cash withdrawals over USD 27 K and a cap of roughly USD 121 on cash business expenses. (Brand Equity ET)

Logistics Advancements:

Multi-modal logistics parks such as the 'JNPT-SEZ' Multi-Modal Logistics Park and Mundra Port Multi-Modal Logistics Park resulted in a 10% reduction in transportation expenses, decreased pollution from goods, and improved storage facilities. In 2020, the government-sanctioned 27 integrated cold chain development projects under the 'Pradhan Mantri Kisan SAMPADA Yojana'. (pib.in)

Indian Retail's Future



Source: Deloitte survey & Research

Rapid changes in the country's economic distribution, widespread use of technology, and initiatives by the public and private sectors to improve rural India contribute to the rapid transformation of the Indian retail ecosystem.

Retail environments, both online and offline, are vying for customer attention. E-commerce is expanding at a 20% annual rate through channels such as D2C, social, live, and rapid commerce, and a new type of online selling known as new commerce has taken over one-fifth of the e-commerce market. These business models have crossed USD 300 billion in China, and double-digit growth is anticipated. (Business Today)

In India, physical retail continues to dominate, despite notable changes in online e-commerce. Value-conscious customers are becoming more interested in private label sales, because they encourage the expansion of contemporary commerce throughout the nation. Some internet vendors make up more than 40% through private label offers, with category margins as high as 60%. To appeal to budget-conscious clients, large-format retailers continue launching their brands. As large-format stores grow throughout important markets, technology is turning conventional mom-and-pop shops (Kiranans) into almost entirely digital merchants. Small businesses have adopted technology-based solutions for credit administration, inventory control, and procurement. Large- and medium-sized Kirana stores are evolving into contemporary trade locations by fusing e-commerce facilitation with cutting-edge retail designs to create unique shopping experiences. These technology-enabled businesses hope to lower their client acquisition expenses and increase their customer base through the launch of the Open Network for Digital Commerce (ONDC).

The ambitious upper-middle class and growing high-income segment in India are driving luxury consumption. Over the next five years, it is anticipated that the number of Ultra-High Net Worth Individuals (UHNIs) will rise by 58%, while the number of high-net worth individuals (HNIs) will rise by 107% to reach 16.5 lakh individuals. The wealthy populations of non-metropolitan areas now have access to luxury goods owing to luxury e-commerce, which has increased the demand for luxury goods relative to metro areas. The retail industry is becoming increasingly crowded as more firms provide comparable goods. By utilizing disruptive technologies such as AR/VR, IoT, and storytelling in both online and offline formats, businesses can redefine the customer experience. (Deloitte analysis, business today.in, statista.com)

These strategies seek to set product offerings apart and give clients an exceptional, one-of-a-kind experience. According to projected future scenarios in the Indian retail industry, retailers must concentrate their strategies on adjusting to shifting market dynamics, emerging business models, and mechanisms necessary for a successful transition in the nation's new retail landscape.

Growth of Online Shopping

Although conventional shopping saw a comeback after the pandemic, online retail is still increasing. The rise of innovative e-commerce models, including direct-to-consumer (D2C), social commerce, fast commerce, live commerce, and marketplaces, is the main driver. Approximately 16 percent of India's online retail sales are currently

made up of these models, filling customer base gaps. By 2030, they are expected to grow at an annual pace of 36 % and reach USD 125 billion. New commerce channels are poised to transform the world of commerce due to rising e-commerce penetration, broad smartphone use, growing numbers of active internet users, increased usage of social media platforms, and supportive government efforts. (statista.com aboutamazon.com)

Social Commerce: Merging Content and Commerce

Thanks to integrating social media with e-commerce, known as social commerce, businesses can now directly sell things on social media sites such as Instagram, Pinterest, and Meta. This creates interactive retail experiences that improve customer engagement and streamline online transactions by leveraging user-generated content and recommendations.

Live Trade: Home- Based Retail

Real-time video streaming is used in live commerce—an e-commerce model—to market and sell goods and services. To promote instant sales, it incorporates the aspects of live video streaming, product presentations, and interactive spectator participation. This format uses accessibility and convenience of online platforms to mimic the experience of buying at a physical store.

Technology to Push Retail in the Direction of Intelligent, Frictionless, Immersive Experiences

By concentrating on technology that makes the consumer experience more immersive, frictionless, and intelligent, the retail sector is undergoing dramatic transition. Customer interactions are about to transform thanks to immersive buying experiences made possible by augmented reality (AR), virtual reality (VR), the metaverse, and experiential retail. With the help of these technologies, retailers can create engaging spaces to boost sales and customer happiness. Using technologies such as computer vision, blockchain, Internet of Things (IoT), artificial intelligence/machine learning (AI/ML), and drone delivery, frictionless retail simplifies the shopping process. To ensure smooth shopping experiences, this strategy removes obstacles, improves inventory control, automates checkout processes, and strengthens logistics. Furthermore, generative AI enables contextualized shopping, predictive analysis, and customized recommendations, further improving the intelligence and personalization of the retail experience. (McKinsey, statista.com KPMG)

Kirana Tech

An Advantage for Kirana tech start-ups is the improvement in the productivity and financial gain of Kirana stores, which comprise more than 80% of the Indian retail industry. Kirana stores continued to be crucial despite the expansion of the Indian FMCG sector. Start-ups in the Kirana technology space provide various solutions to enable Kirana establishments to take on internet retailers.

Major retailers are also modernizing their conventional shopfronts. Kirana stores can handle changes in the traditional retail environment by using technology. Kiranas' Integration into the Broader Retail Ecosystem Enhancing discovery ability for customers and sellers is achieved by utilizing the ONDC network to integrate Kirana outlets into the broader retail ecosystem. By connecting Kiranas to a larger range of suppliers and customers, this network broadens its customer base and prospects for growth. Kiranas can expand their product offerings, reach new customers, and improve their overall brand recognition by joining the broader retail environment. (business today.in)

Private labels to boost competition and maintain India's private label sector have expanded dramatically, drawing the attention of major retail chains and e-commerce companies. At around 30% less than national brands, private labels provide competitive items with quality that occasionally exceeds those of major brands. By 2030, privately labeled groceries should account for approximately 30% of total sales. Between 20% and 40% of the market is occupied by private labels in developed areas such as the US and Europe. (statista.com, nielseniq.com)

The Luxury Market's Ascent: Unlocking India's Potential

Similar to China, India's luxury industry is expected to increase significantly over the next 20 years as the country moves closer to becoming a high-income country. India's demand for luxury goods is growing due to several factors, including the rise of high-net-worth individuals, the growth of the middle class, the country's thriving entrepreneurial culture, and its non-metropolitan areas. Since the pandemic, international luxury brands have flooded the Indian market through partnerships with Indian companies and luxury merchants that operate online. The Gen Z and Alpha generations are major forces behind the shift in consumerism, as marketers target younger consumers with entry-level products in the hopes of winning their long-term commitment. (business today.in Mckinsey, nielseniq.com, statista.com)

Experience Retail: Creating Treasured Buying Experiences

Experience retail is a new and robust strategy aimed at creating immersive and memorable shopping environments in both physical and virtual spaces. This strategy combines personalized brand experiences, streamlined Internet experiences, and engaging in in-store interactions. By concentrating on these aspects, retailers can interact with customers in ways that are never seen before and take retail experiences to new heights.

Shaping the Future of Retail

The future of retail will be shaped by three key areas:(retail.economictimes.indiatimes.com, startuptalky.com, and capgemini.com)

1. Innovation and Technology: Consumers expect convenience and find what they want whenever and wherever. Providers need to be almost invisible, delivering seamless experiences.
2. Convergence of Consumer Needs: Blurring boundaries between different areas of consumer needs leads to new service models. Providers offering holistic solutions are indispensable to consumers.
3. Understanding Historical Relevance: Retail has historically been more than just a place to shop; it serves as a community hub for social interaction. Modern retailers must replicate the intimacy and relevance of traditional stores.
- These areas enable retailers to differentiate their offerings and provide tangible benefits and value to consumers, shaping successful retail value propositions in the future. (capgemini.com. IBEF& Mckinsey)

The Three I's of Future Retail

Three I's	Explanation
Invisibility	Retailers can simplify consumers' lives by providing the products they need precisely when and where they need them, creating a seamless transaction process that is almost unnoticed.
Indispensability	Retailers can enhance consumers' lives by offering bundled products and services that address holistic needs. By leveraging an ecosystem of partners, these bundled solutions become part of a comprehensive service that improves overall lifestyles.
Intimacy	Retailers can enrich consumers' lives by offering experiences that resonate deeply with their core values. By prioritizing meaningful engagements, the transaction becomes secondary to the value and service provided, fostering a stronger connection with the consumer.

Each of these value propositions will be examined further, but it is important to consider them together rather than individually. Furthermore, it is important to note that not all three options should be considered equal when a retailer is seeking to transform the future. To redefine their strategies, merchants need to analyze their fundamental talents and corporate missions to determine the optimal combination of inconspicuousness, indispensability, and closeness for their firm. A potential future value proposition could prioritize providing a smooth and invisible experience through retailers' online platforms. Meanwhile, physical stores can be transformed to offer personalized and immersive services, with the staff being trained to provide expert guidance to establish a strong connection between products and services, making them essential and irreplaceable. Retailers who do not adopt the three Is or fail to achieve their optimal combination face the potential consequence of being irrelevant.

Merchants can create a contextual experience for their customers by adopting a strategy that provides degrees of invisibility, intimacy, and indispensability through different channels. This strategy allows merchants to meet the demands of their customers at any given time.

3 I'S	Present	Future
Invisibility- Time Saver	using retail space and fast turnaround times to provide consumers with easy, reasonably priced clothes with the least hassle. Experiences are only available at flagship locations.	A circular and sustainable business strategy incorporating repair, resale, rental, and recycling capabilities into a service-led offering.
Indispensability- Problem Solver		
Intimacy – Experience Creator		

Product, site, and pricing remain unchanged, but their importance to customers and retailers is changing. Customizing products to meet consumer preferences and evolving service expectations is becoming increasingly common. The place has expanded from being a physical location to being available wherever consumers need anything. Price is redefined to include intangible things, such as time, people, and the environment. Customer eccentricity, which retailers ignore for years to focus on scale, scope, and efficiency, is now a more precise goal. Customer happiness and meeting needs can boost retailers' strategic value proposition. This can be achieved by providing time-saving solutions, necessary living solutions, and tailored experiences that enrich their lives.

One significant obstacle faced by numerous existing retail business models is that the primary source of value generation remains the transaction. Several key performance indicators (KPIs) in the retail industry measure the monetary value produced per square meter of store space, the average size of shopping baskets, and the conversion rates of online store visits from browsing to checkout. However, this is a single phase in the client lifecycle, indicating that retailers frequently cater to immediate requirements rather than foster a lasting connection. Integrating services. Even if a customer purchases food from a merchant on a weekly basis, they may opt for a different retailer the following week. Purchasing discretionary items, such as apparel, household appliances, or consumer electronics, typically entails comparing various options and selecting the optimal combination of price, quality, values, and service.

Conclusion

Retail products, client demographics, and market values have changed drastically. New commerce and revolutionary technologies will revolutionize business structures, sourcing capacities, and value generation models. Retailers must execute operations successfully, use labour efficiently, and prioritize operational decisions to produce value to succeed in these marketplaces and rethink their business models. Success in this ever-changing retail environment depends on reacting to market movements, implementing new models, and optimizing operations to create excellent customer experiences and strong profit margins. Retailers must communicate their expectations to channel partners and set realistic implementation deadlines. Retailers should provide a change framework and appropriate resources to guarantee smooth transition and minimize the relationship between ecosystem disruptions. A helping hand culture is crucial to long-term success and growth. A successful retailer-channel partner relationship relies on trust, involvement, and communication. Couples are more inclined to collaborate, offer feedback, and fulfil their goals. Retailers should recognize channel partners and celebrate successes to foster teamwork. These six progressive drivers are transforming and expanding India's retail sector. Such reasons include economics, regulation, power, technology, social and cultural changes, climate change, and industrial upheaval.

Six themes will shape retail: new commerce, superior technology, kirana tech, private labels, high-end retail, and experiential retail. New commerce models, technology, integrating "kirana" stores with digital ecosystems, engaging customer experiences, catering to the expanding luxury retail sector, and private labels for increased profitability are essential themes to watch. The consequences for stores selling goods are apparent. Customer experience will be a deciding factor in the highly competitive retail industry. As shoppers strive for effortless and efficient journeys, convenience will precede brand loyalty. Opportunities for merchants to reach customers in non-metro areas and cater to their specific requirements have arisen with the rise of the modern consumer. A greater focus on omni-channel strategy is essential in the face of the current e-commerce revolution that new commerce models are driving. This revolution will continue to alter the retail industry. Getting from here to there won't be a picnic. To find their way forward, merchants must reevaluate the trends shaping the future, their long-term goals, and their present capabilities. A crystal-clear picture of present trends propelling future company models will be required.

Additionally, there is an obvious and doable way to put it into action. Quickly adapting to new circumstances, merchants will have to become platform ecosystems, genuine omni-channel players, or smaller, niche-focused experts if they want to thrive in the future. Since most organizations need more resources to make this shift quickly, many will need to seek partnerships aggressively.

Retailers with a prolonged history of physical stores/ mom-pop stores will compete with data, technology, and supply chain management experts in the future. In some instances, these companies provide consumer goods and services. Due to the rise of new market channels, merchants must choose an operating model to avoid failure. Researchers predict seven business models in the next ten years as retailers react to changing customer expectations and market conditions.

S.NO.	Model	Explanation
1	Platform-oriented companies	Formal enterprises have grown over the past two decades by using the digital market. In other cases, platform business models allow consumers and producers to exchange goods and services. Platforms create a retail environment with banking and retail items to maximize consumer lifetime value.
2	D2C	In the age of online retail, manufacturers are finding direct-to-consumer sales increasingly successful. Companies are sometimes building or buying their resources to offer this.
3	International Retailers	Recent acquisitions of service- or digital direct-to-consumer companies have changed their go-to-market strategy. They are gradually transitioning into platform businesses through acquisitions and organic expansion to monetise their product offerings, previously limited to physical items and services.
4	Value retailers	Value merchants have grown the most of any physical medium over the past decade. They aim to undercut competitors by offering cheaper items and services than traditional retailers. Due to their leaner operational and business models, they often outperform their competitors. They must improve their online value offer to stay profitable.

5	Category specialists	Category experts offer unique products and services to specific retail categories or consumer segments. Specialists may distribute their products or host brands that fit their business plan. Category specialists often have product innovation expertise and loyal customers.
6	Mutual/independent	Mutual, consumer—or retailer-owned businesses that put members first unite retailers and customers. In addition to the mutual, independent local merchants are regaining prominence and often use the Internet as their primary or secondary marketing tool.
7	Heroes of the nation	National heroes are often well-known merchants with a strong local brand offering a variety of specialist goods and services. They benefit from loyal fans and loyalty schemes. Companies could form Generation 2 Buying Groups with non-competitive peers to protect themselves from alternative winning business models.

Source: KPMG-2023

Retailers must carefully manage expenses and maximize revenue to succeed in this changing business. Faster technological investment is needed to stay competitive and please tech-savvy clients. Sustainable programs will be essential to customer confidence as conscientious consumption expands. In this changing retail market, merchants must decide if they are ready to adopt new technology and change their operations. Suppose retailers want to build a future-fit retailer. In that case, they must design KPIs that compare customer lifetime value to systemic value they can create for themselves, their customers, and their environment. Consider the entire customer life cycle. They may consider how much time they save clients and themselves, how much experience they utilize to drive loyalty and advocacy, and how they may use their network of partners to provide more and better products and services. Prioritizing consumers' demands helps retailers customize strategic value offers to individual needs and simplify customers' lives. Customer preferences and emerging trends like "seamless" shopping, next-gen stores, personalization, and enormous ecosystems and revenue models will shape India's retail industry. According to our observations, some taste alterations are temporary, while others will likely impact supply. These trends and swift aggressive responses can help retailers establish competitive strategies for the next decade.

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Predicting the Influence of Factors affecting Consumer Acceptance on Startups in the Proposed Open Network for Digital Commerce

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Abstract

Open Source for Digital Commerce (ONDC) aims to democratize e-commerce. This study explores the motivating and demotivating factors that influence customers' acceptance of startups in ONDC. Using a combination of approaches that involve qualitative and quantitative research, this study indicates a strong relationship between motivating factors and transaction intentions, emphasizing the potential of ONDC to transform digital commerce. To encourage wider adoption, usability, and security concerns must be resolved. Although the research acknowledges the limitations of demographic representation, it also emphasizes the need for further study on technological and cultural barriers. This study recommends extensive awareness initiatives, improved security measures, and focused marketing strategies to encourage ONDC adoption. Furthermore, the study provides valuable insights to startups in the network that enable them to make informed decisions, mitigate risks, and seize opportunities in ONDC.

Keywords: ONDC, Startups, Consumer Adoption, Digital Commerce, E-Commerce, Technological Barriers, Cultural Barriers, Marketing Strategies Security Measures, Informed Decisions

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ARTICLE INFO

Received:13/02/2024 | Revised: 15/04/2024 | Accepted: 23/05/2024 | Published Online: 31/10/2024

DOI: 10.13140/RG.2.2.22575.34729

CITATION

Augustine, A., G, Devakirubai, T., S. 2024., Predicting the Influence of Factors Affecting Consumer Acceptance on Startups in the Proposed Open Network for Digital Commerce, Integral Review-A Journal of Management. 14(2): 23–29. DOI: 10.13140/RG.2.2.22575.34729.

Introduction

The emergence of e-commerce has transformed the way businesses interact with their consumers; nevertheless, a large number of platforms has minimized its actual scope. In recent years, platform-concentric business models, such as Amazon and Flipkart, have served as middlemen between customers and sellers. 'ONDC has the potential to be a game-changer for e-commerce in India, but its success will depend on careful planning and execution' (Ram Girdhar). India's Open Network for Digital Commerce (ONDC) defies this convention by promoting an open-network ecosystem. Using an open-source methodology, ONDC promotes accessibility and transparency, thereby facilitating smooth transactions across numerous platforms and removing the need for users to explore several markets. The ONDC is projected to digitize the whole value chain, standardize processes, encourage supplier inclusion, improve logistics efficiency, and increase consumer value' (Bibhu Dash). To estimate future market acceptance, this study examines consumer behavior across demographics, highlighting the need to resolve customer concerns regarding widespread adoption. Additionally, it provides guidance on how companies can efficiently explore and take advantage of ONDC's potential. 'ONDC aims to make e-commerce procedures open source, thus creating a platform that can be utilized by all online retailers.' (Shaji George)

PURCHASE INTENTION IN THE ONDC: MOTIVATION FACTORS

1. Convenience
2. Product Variety
3. Purchase Surrounding
4. Information Depth
5. Brand

CONCERNS FOR ONDC: DEMOTIVATING FACTORS:

1. Risk:
2. Economic considerations
3. Conditions and Ability
4. Time and Socialization
5. Users' sensory experiences and decision-making processes

Literature Review

Amit Bhatnagar (2000) demonstrates how people still find the Internet risky compared to its convenience. Managers of online stores should focus on reducing these perceived risks, like making connections more secure and addressing product concerns. Tailored strategies based on gender marital status, and age can help. However, the study has some limitations, like not including those who don't use the Internet. It also acknowledges that, as technology advances, people's views may change. Their study emphasizes understanding how risk and convenience influence people's choices between online and traditional stores, raising the question of what financial risk level would make the Internet a strong competitor to traditional outlets.

Anita Walia (2023) talks about ONDC, a technology-driven system supporting small businesses in smart digital commerce. It has shifted from a platform-focused approach to an open-source setup that connects sellers and customers smoothly. Security is a major concern because of data theft. Price is also vital, and ONDC stands out for speeding up discovery, cutting out middlemen, and offering competitive prices. Trust is crucial for sellers and customers. To build trust, this study recommends a big awareness campaign by the Indian government regarding ONDC benefits.

Baumeister (2002) explores how perceived usefulness is a key motivator for buying in an open market, saving time and money for both sellers and buyers. According to the technology-accepted model, this directly influences purchase intentions in the open network market by combining rational and economic assessments with emotional values tied to social dimensions. This creates a dynamic platform for transactions between many buyers and sellers. Stern's 1962 study points out that low prices, many choices, mass advertising, and prominent store displays strongly influence online market purchases in a self-service setting.

Nurul Nadia Abd Aziz (2018) looks at why some people don't shop online and finds that worries about product quality and privacy are key concerns. This suggests that online stores can be improved by addressing these concerns through better design and customer support. Their study also notes that traditional stores still have a place offering a fun experience and unique services. Understanding these reasons is crucial for digital marketing strategies and effective use of websites and social media. The findings help fill research gaps, shedding light on why some prefer traditional shopping and are hesitant to buy online, thus improving our overall understanding of this area.

Sang Soo Kim (2020) explores why people shop online and how certain things affect their decisions. The findings show that saving money and time and finding it easy to use makes people more likely to buy online. Privacy concerns negatively affect the connection between time-saving, ease of use, and buying intention. Surprisingly, privacy concerns positively influenced the link between saving money and buying intention. Security concerns also have a negative impact on the relationship between saving money and buying intention. However, business integrity concerns do not significantly impact money savings and have an unexpected positive effect on the link between time saving and buying intention.

Significance of the Study

This study is crucial for understanding the dynamics of customer acceptability within the ONDC framework, as it provides insights into the factors that determine the success of startups in this ecosystem. Investigating motivating and demotivating factors provides useful insights for administrators and entrepreneurs seeking to capitalize on ONDC's revolutionary potential.

Statement of Problem

The introduction of ONDC represents a paradigm shift in the e-commerce environment, but its success depends on

the platform. This study aims to determine the key factors affecting consumer acceptance as well as the implications for startups in the ONDC network. Addressing these issues is critical for promoting widespread adoption and long-term growth within networks.

Need for the Study

This study highlights the pressing need to fully understand the factors influencing consumer acceptance and start-up performance in this network. By addressing this requirement, this study intends to provide stakeholders with actionable information to overcome barriers, optimize tactics, and foster long-term growth within ONDC networks. Finally, this study aims to contribute to the realization of ONDC's revolutionary vision for digital commerce in India.

Research Methodology

Primary and secondary data were used in this study. The primary data were collected using a questionnaire. The sample size of the study was limited to 200; since the study is exploratory, awareness is limited to understanding that the sample size was limited to 200.

A Convenience Sampling Method was used for data collection, due to time and financial constraints, the population for this study cannot be identified clearly, hence convenient sampling method is used. In this study, the SPSS statistical tool was used for analysis. The following tests were used for analysis.

- One-Sample T-Test
- Independent Sample T-Test
- One-way Analysis of Variance (ANOVA)
- Chi-Square tests
- Test for Significance of Correlation Coefficient

Objectives

- To investigate the influence of motivating factors on consumer acceptance of startups in ONDC
- To Identify the influence of demotivating factors hindering consumer acceptance of startups in ONDC, and potential solutions to address these concerns.
- To assess how these factors affect consumers' purchase intentions in ONDC.

Hypotheses of the Study

- There is no significant difference between Males and Females concerning motivating/demotivating factors affecting the Purchase Intention of Consumers.
- There is no significant difference among different age groups for motivating/ demotivating factors affecting the Purchase Intention of Consumers
- There is no association between consumers' intention to try ONDC in the near future and their age, education, and location.
- There is no significant correlation between motivating/demotivating factors and the transaction intention of consumers.

Scope of the Study and Research Gap

- This study focuses on the choices, concerns, and awareness of platforms, such as ONDC, to better understand how individuals shop online and what drives their decisions.
- To provide a comprehensive picture of consumer behavior, this study aims to determine how various demographic groups interact with online buying.
- The goal of this study is to determine how much individuals know about ONDC and how they feel about it, offering information about the platform's potential market adoption.
- This study attempts to identify opportunities for improvement in online shopping by examining the factors that matter most to consumers when shopping online, such as saving money and time.
- This study seeks to understand whether people are willing to recommend ONDC to others and try it themselves, highlighting the potential of its widespread adoption and the significance of resolving customer concerns.

Data Analysis and Interpretation

Demographic Variables

A percentage analysis was deployed on the demographic variables, which would provide an understanding of the characteristics of the respondents. The analyses are presented below

Table 1: Demographical variable of the respondents

THE AGE OF THE RESPONDENTS		
Particulars	No. of respondents	Percentage
18-24 years	106	53.0
25-34 years	42	21.0
35-54 years	39	19.5
Above 55	13	6.5
Total	200	100.0
GENDER OF THE RESPONDENTS		
Particulars	No. of respondents	Percentage
Male	92	46.0
Female	108	54.0
Total	200	100.0
LOCATION OF THE RESPONDENTS		
Particulars	No. of respondents	Percentage
Urban	107	53.5
Suburban	62	31.0
Rural	31	15.5
Total	200	100.0
EDUCATION LEVEL OF THE RESPONDENTS		
Particulars	No. of respondents	Percentage
High School	4	2.0
Undergraduate	121	60.5
Postgraduate	75	37.5
Total	200	100.0

Compiled by author

Interpretation

a. From Table 4.1, it is revealed that among the 200 respondents, 53% fell within the age bracket of 18-24 years, 21% belonged to the age group of 25-34 years, 19.5% were between 35-54 years and only 6.5% were above 55 years.

b. As shown in Table 4.2, 46% of the respondents were male, and 54% were female.

c. From Table 4.3, it is observed that 53.5% of the respondents belonged to urban areas, 31% to suburban areas, and 15.5% to rural areas.

d. From Table 4.4, it can be observed that 2% of the respondents had completed high school education, 60.5% had completed undergraduate education, and 37.5% had completed postgraduate education.

i) One-Sample T-Test for Motivating Factors of Purchase Intention

Table 4.2 One-Sample T-Test for Motivating Factors of Purchase

Factors	Mean	SD	t value	p-value	Rank
Cost-Savings	10.97	1.616	95.989	<0.001	2
Time-Savings	10.98	1.585	97.970	<0.001	1
Perceived Ease of Use	7.32	1.164	88.952	<0.001	3

Interpretation

The results reveal that all three motivating factors—purchase intention, cost savings, time savings, and perceived ease of use—have statistically significant impacts on the purchase intention of consumers. With a mean score of 10.98 and 10.97, time saving and cost savings hold the highest priority, respectively. This was followed by perceived ease of use with a mean score of 7.32. These factors play a crucial role in influencing consumer purchase decisions.

ii) One-Sample T-Test for Demotivating Factors of Purchase Intention

Table 3 One-Sample T-Test for Motivating Factors of Purchase Intention

Factors	Mean	SD	t value	p value	Rank
Privacy	7.37	1.153	90.385	<0.001	1
Security	7.25	1.181	86.826	<0.001	2
Trust	7.03	1.175	84.532	<0.001	3

Interpretation

The results reveal that all three demotivating factors of purchase intention – Privacy, Security, and Trust – have statistically significant effects on consumers' purchase intentions. With a mean score of 7.37 and 7.25, privacy and security hold the highest priority, respectively. This was followed by trust, which had a mean score of 7.03. These factors play a crucial role in influencing consumer purchase decisions.

Independent Sample T-Test

The factors affecting consumers' purchase intentions were affected by the research study based on their gender. The results are established through an Independent Sample T-Test, which is given below:

i) Independent Sample T-Test for Motivating Factors of Purchase Intention

Table 4: t-test for significant difference between Male and Female concerning Motivating Factors of Purchase Intention

Factors	Gender				t value	p-value
	Male		Female			
	Mean	SD	Mean	SD		
Cost-Savings	11.25	0.968	10.73	1.984	2.285	0.023
Time-Savings	11.25	0.979	10.75	1.934	2.246	0.026
Perceived Ease of Use	7.54	0.619	7.13	1.454	2.541	0.012
Total	30.04	2.143	28.61	5.132	2.498	0.013

Interpretation

The findings suggest that there is a significant difference between male and female consumers regarding the motivating factors of purchase intention ($t = 2.498$, $p = 0.013$). A P value of 0.013 was considered statistically significance level of 0.05. Hence, the null hypothesis was rejected at the 5% level in terms of the motivating factors affecting purchase intention. This implies that the observed variations in motivating factors between genders are statistically significant, suggesting that gender plays a significant role in motivating purchase intention among consumers.

ii) Independent Sample T-Test or Demotivating Factors of Purchase Intention

Table 5: t test for significant difference between Male and Female with respect to Demotivating Factors of Purchase Intention

Factors	Gender				t value	p value
	Male		Female			
	Mean	SD	Mean	SD		
Privacy	7.54	0.619	7.22	1.449	1.978	0.049
Security	7.52	0.763	7.02	1.407	3.066	0.002
Trust	7.18	0.937	6.89	1.335	1.784	0.076
Total	22.25	1.419	21.13	3.676	2.753	0.006

The findings suggest that there is a significant difference between male and female consumers regarding the demotivating factors of purchase intention ($t = 2.753$, $p = 0.006$). A P value of 0.006 was considered statistically significance level of 0.05. Hence, the null hypothesis is rejected at the 5% level regarding the demotivating factors that affect purchase intention. This implies that the observed variations in demotivating factors between genders are statistically significant,

suggesting that gender plays a significant role in hindering purchase intention among consumers.

ANOVA

The factors affecting consumers' purchase intentions were affected by the research study based on their age group. The results were established through a One-way Analysis of Variance, which is given below:

Impact Of Age on Factors of Purchase Intention

Table 6: ANOVA for significant differences among age groups with respect to motivating factors for consumers' purchase intentions

Motivating Factors	Age				F value	P value
	18-24	25-34	35-55	Above 55		
Cost-saving	11.32 (0.698)	9.79 (2.859)	11.31 (0.655)	10.92 (1.847)	11.261	<0.001**
Time-saving	11.29 (0.743)	9.88 (2.787)	11.31 (0.655)	11.00 (1.871)	9.812	<0.001**
Perceived Ease of Use	7.56 (0.536)	6.48 (2.075)	7.56 (0.641)	7.38 (0.870)	10.795	<0.001**
Overall Total	30.17 (1.363)	26.24 (7.511)	30.18 (1.335)	29.31 (4.404)	12.301	<0.001**

Interpretation

The data show that consumers' perceptions of the motivational factors for purchase intention differ significantly by age group. Compared to older age groups, younger age groups, especially those between the ages of 18 and 24, tend to give more importance to features that save money and time, and are perceived as being easier to use.

Table 7: ANOVA for significant differences among Age Groups concerning the demotivating factors of consumers' purchase intentions

Demotivating Factors	Age				F value	P value
	18-24	25-34	35-55	Above 55		
Privacy Concern	7.59 (0.644)	6.62 (2.048)	7.46 (0.643)	7.69 (0.480)	8.574	<0.001**
Security Concern	7.40 (0.801)	6.69 (1.944)	7.36 (0.873)	7.54 (0.877)	4.253	0.006**
Trust	7.24 (0.879)	6.31 (1.760)	7.10 (0.912)	7.38 (0.768)	7.448	<0.001**
Overall Total	22.23 (1.423)	19.62 (5.282)	21.92 (1.596)	22.62 (1.121)	9.944	<0.001**

Compiled by author

Interpretation

The data show that consumers' views of the demotivating factors connected to purchase intention are highly influenced by age. Older age groups, particularly those over 55, tend to be more concerned about privacy, security, and trust in online transactions than younger age groups.

From the above table, it is found that 60.9% of the consumers who are very likely to try ONDC have completed an undergraduate degree and 72.2% of the consumers who are likely to try ONDC have also completed an undergraduate degree. It is also found that consumers who are unlikely or very unlikely to try ONDC have completed their postgraduate degrees. This leads to the computation of the chi-square statistics, as shown in the table below.

Table 10: Showing Chi-square Tests for Transaction Intention and Education

Computed Statistics	Value	df	Sig. (2-sided)
Pearson Chi-Square	19.078 ^a	6	0.004
Likelihood Ratio	21.087	6	0.002
Linear-by-Linear Association	1.916	1	0.166
N of Valid Cases	200		

From the above table, it is found that Pearson's chi-square = 19.078a, p=0.004 is statistically significant. There is a strong association between consumers' transaction intentions and their educational level. The data indicates that education is an important variable that plays a significant role in influencing consumers' transaction intentions.

Association between consumers' intention to try ONDC shortly and their Location

Table 11: Cross-tabulation of transaction intention and Location

Transaction Intention	Location			Total
	Urban	Suburban	Rural	
Very Unlikely	0 (0.0%)	0 (0.0%)	4 (100.0%)	4 (100.0%)
Unlikely	0 (0.0%)	0 (0.0%)	4 (100.0%)	4 (100.0%)
Likely	20 (55.6%)	13 (36.1%)	3 (8.3%)	36 (100.0%)
Very Likely	87 (55.8%)	49 (31.4%)	20 (12.8%)	156 (100.0%)
Total	107 (53.5%)	62 (31.0%)	31 (15.5%)	200 (100.0%)

From the above table, it is found that 53.5% of the consumers who are very likely to try ONDC belong to urban areas, and 55.6% of the consumers who are likely to try ONDC are also from Urban areas. It was also found that consumers who are unlikely or very unlikely to try ONDC belong to rural areas. This leads to the computation of the chi-square statistics, as shown in the table below.

Table 12: Showing Chi-square Tests for transaction intention and Location

Computed Statistics	Value	Df	Sig. (2-sided)
Pearson Chi-Square	46.019 ^a	6	<0.001
Likelihood Ratio	32.507	6	<0.001
Linear-by-Linear Association	14.866	1	<0.001
N of Valid Cases	200		

From the above table, it is found that Pearson's chi-square = 46.019a, $p < 0.001$ is statistically significant. There is a strong association between consumers' transaction intention and their location. The data indicate that location is an important variable that significantly influences consumers' transaction intentions.

Test For Significance of Correlation Coefficient

Table 13: Karl Pearson correlation coefficient between motivating factors of consumer transaction intention

Factors	Cost-Saving	Timesaving	Perceive Ease of Use	Privacy Concern	Security Concern	Trust	Transaction Intention
Cost-Saving	1.000	0.963**	0.726**	0.667**	0.538**	0.516**	0.590**
Timesaving		1.000	0.712**	0.645**	0.540**	0.486**	0.604**
Perceive Ease of Use			1.000	0.679**	0.563**	0.545**	0.658**
Privacy Concern				1.000	0.585**	0.527**	0.649**
Security Concern					1.000	0.495**	0.473**
Trust						1.000	0.478**
Transaction Intention							1.000

Interpretation

Perceived cost savings ($r = 0.590$, $p < 0.01$), time savings ($r = 0.604$, $p < 0.01$), and perceived ease of use ($r = 0.658$, $p < 0.01$) were positively correlated with users' intention to transact. This suggests that users are more likely to transact when they believe they save time and money and when they find the platform easy to use. Transaction intention and privacy concerns had a positive correlation ($r = 0.649$, $p < 0.01$), suggesting that users prioritized privacy while choosing platforms. Transaction intention and security concerns also showed a moderate correlation ($r = 0.473$, $p < 0.01$), indicating that individuals are more inclined to transact on platforms that they believe are safe. Furthermore, there was a positive correlation ($r = 0.478$, $p < 0.01$) between transaction intention and platform trust, suggesting that trust affects users' tendency to transact. Strong positive correlations between perceived ease of use, cost saving, and time saving (0.726** and 0.712**, respectively) have also been observed.

Findings of the Study

- Positive experiences were mentioned by the respondents; 27.5% were satisfied and 18% were very satisfied. Neutral responses (31.5%) indicated openness to new platforms, although dissatisfaction (18%) presented the potential for improved insights.
- Occasional participation (50.5%) implied that the respondents regularly used online shopping. Regular participation (29.5%) indicates that a sizable percentage appreciates the convenience of internet buying.
- A significant portion of the population is still uninformed (56%) despite growing knowledge of ONDC (31%), underscoring the need for awareness initiatives.

Effective communication platforms are indicated by the significant role of online media channels in educating people about ONDC.

- The respondents had a significant knowledge gap, with the majority claiming low to extremely low understanding. This emphasizes the importance of developing ways to bridge this gap and increase awareness.
- Online buying is primarily motivated by the importance of cost- (66%) and time-saving (69%) considerations. The effectiveness and ease of use of online platforms were evaluated as crucial factors with a focus on customer preferences.
- The results reveal that all three demotivating factors of purchase intention – Privacy, Security, and Trust – have statistically significant impacts on consumers' purchase intention.
- The findings suggest that there is a significant difference between male and female consumers regarding the motivating factors for purchase intention.
- There is a significant difference between male and female consumers regarding the demotivating factors of purchase intention.
- There is a positive correlation between motivating factors (cost savings, time savings, perceived ease of use), and transaction intentions. Similarly, there are positive relationships between the demotivating characteristics (privacy, security, and trust) and transaction intent. Consumers tend to actively choose platforms that address their concerns and provide easy and safe transaction experience. Consumers' perceptions of motivational factors for purchase intention differed significantly by age. Consumers' views on the demotivating factors connected to purchase intention are highly influenced by age.
- There is a strong association between consumers' transaction intentions and their age. It was found that 60.9% of consumers who are very likely to try ONDC have completed undergraduate degrees, and 72.2% of consumers who are likely to try ONDC have also completed an undergraduate degree.
- There is a strong association between consumers' transaction intention and their location.

Suggestions

- Launch extensive awareness campaigns to educate the public about the features and benefits of ONDC, particularly regarding online platforms.
- Provide top priority to improving ONDC security measures to reassure users and foster trust. Provide clear instructions on how to safely use ONDC, particularly for those who are not used for online transactions.
- Constantly work to enhance ONDC's usability and efficiency of ONDC for customers.
- Tailor marketing campaigns target particular demographics, such as younger people, those with lower levels of education, or those belonging to rural areas.

- Ensure that ONDC continues to be supported and promoted by the government. Establish feedback channels to collect data and improve ONDC based on the user experience.
- Collaborate with MSMEs, retailers, and other stakeholders to better align ONDC with their needs and preferences.

Future Research

- A detailed study can be carried out on a larger scale to study the customer attitude and behavior towards ONDC
- Further research on customer preferences for ONDC.
- More variables on motivating and demotivating factors can be included in this study.

Limitations of the Study

- The study did not fully represent all demographics, especially older age groups or certain socioeconomic backgrounds.
- Other crucial factors such as technological and cultural barriers have not been fully explored.
- External factors that could affect online purchasing behavior, such as competitive markets, laws, and economic conditions, were not explored in this study.
- In the long term, the dynamics of consumer behavior and e-commerce may differ, which this study does not explore.

Conclusion

This study highlights significant aspects of customer behavior and attitudes toward an Open Network for Digital Commerce (ONDC). It emphasizes how revolutionary digital commerce may be with ONDC, particularly for small firms. However, customer acceptance depends on resolving important concerns including usability, cost, and safety. Demographics, such as location, age, gender, and education, also influence consumer attitudes, requiring specific marketing efforts. Building trust requires addressing privacy and security issues while simultaneously boosting transaction intentions through platform features that align with customer preferences such as cost savings and ease of use. In short, responding to consumer concerns and evolving along with the market is vital for startups under the ONDC network.

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Exploring Opportunities and Challenges in Fintech Innovation

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Abstract

Fintech (financial technology) is an emerging concept in the financial industry. Businesses have been market pioneers in introducing cutting-edge methods and technologies. The existing ones have been disrupted by these new procedures, processes, and technology, which also satisfy current customers' needs. In addition to creating entirely new business prospects, this disruption presents challenges for the way things are currently done. The banking and financial industries are undergoing an unprecedented transformation, as numerous new companies enter the market and challenge established forms of functioning. These participants are part of FinTech, the most recent financial and banking industry upheaval (which is an amalgamation of finance and technology). The way this industry and its clients operate is completely restructured as a result of its alternative solutions and business strategies. The goal of this chapter is to examine new opportunities and challenges linked to fintech in the banking industry. This study employs both qualitative method techniques and a descriptive-analytic research methodology. To conduct this descriptive analysis, we critically examine several pertinent scientific journals, facts relating to the FinTech phenomenon in banking, and supporting documents from financial institutions. What happened to FinTech, as a developing technology in the banking industry, is examined in this study. This study's expected contribution offers solutions to possibilities and difficulties specific to FinTech and the banking sector in full depth.

Keywords: Fintech, Banking, Emerging Technologies, Fintech innovation

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ARTICLE INFO

Received:25/02/2024 | Revised: 09/05/2024 | Accepted: 30/05/2024 | Published Online: 31/10/2024

DOI: 10.13140/RG.2.2.11670.15681

CITATION

Jaiswal, S., 2024., Exploring Opportunities and Challenges in Fintech Innovation, Integral Review-A Journal of Management. 14(2): 30–34.

DOI: 10.13140/RG.2.2.11670.15681.

Introduction

Financial technology is an emerging field initiated by entrepreneurs and has been extensively studied by academics. It is merely technology applied to enhance the provision of financial services. Although the term only became popular in the twenty-first century, it has influenced how people deal with money for well over a century. It is now gaining interest among past, present, and potential FinTech regulators in the banking sector. Today's fintech sector employs information technology centered on mobile devices to boost the effectiveness of the financial system. As Frame, Wall, and White (2019), show technology change that results in banking advances has implications for fintech advancements, which are interconnected through cloud computing or mobile Internet, which supports well-known businesses in the financial services industry, such as loans or bank activities. Fintech businesses try to attract customers by providing products and services that are more user-friendly, efficient, transparent, and automated. than that currently offered. (Dorfleitner, Hornuf, Schmitt, & Weber, 2017)

Fintech companies offer the same services as banks do, albeit in a unique and unbundled manner that may be more technologically efficient. The information they use, however, differs from that of banks in that it is based on big data rather than long-term connections, access to services is only decentralized through online platforms, risk and maturity transformation is not done, and lenders and borrowers and opportunities are matched directly. Disintermediation occurs in this situation. These actions are related solely to fintech.

Our bottom line is that FinTech enhances competition in financial markets, provides services that traditional financial institutions do less efficiently or do not do at all, and widens the pool of users of these services. However, they do not replace banks in most key functions. In most cases, FinTech provides a more efficient way of doing the same old things. However, banks are well placed to adopt technological innovations and do old things in the new way themselves.

Blockchain and cryptocurrency, new digital advising and trading platforms, equity crowdfunding artificial intelligence, P2P, lending machine learning, and mobile payment systems are just a few examples of innovations based on today's fintech. According to Pierrakis and Collins (2013), such innovations can disrupt existing industry structures and blur industry boundaries, facilitate strategic disintermediation, revolutionize how existing firms create and deliver products and services, provide new gateways for entrepreneurship, democratize access to financial services, but also create significant privacy, regulatory, and law enforcement challenges". This study achieved its objectives in two main phases: first, the background and definition of FinTech, followed by an overview of the present FinTech industry landscape and its many market categories, as well as a discussion of some FinTech platforms for alternative forms of funding.

Literature Review

Romanova & Kudinska (2016) Due to the rapid growth of fintech, the banking industry now needs more creative solutions

Owing to these recent trends, banks must expand FinTech investment, evaluate service distribution channels, particularly business-to-consumer models, and further standardize back-office operations.

Gond (2017) claims that India's banking industry is rapidly expanding. A study found that banks utilize cutting-edge technologies, such as big data analytics, to draw in clients, keep them around, uncover new opportunities, optimize income, and reduce their losses. Using HDFC Bank as an example, he explained how big data analytics is used to obtain a complete image of a consumer. Business intelligence and analytics are used by ICICI Bank to lower credit losses. The placement of ATMs and the recommended amount of cash were determined by the SBI using analytics.

Nancy & Syan (2018). stated that Indian banks introduced new, value-added, and specialized products as a result of digitization, defining banking as innovative or creative banking. The researcher examined how digitization has given rise to new methods that aid banks in developing products that are more focused on consumer needs. However, the use of networking and the Internet has also brought new difficulties to banks in terms of transaction security, privacy, and secrecy.

Gupta and Xia (2018) focus on how Financial Technology (FinTech) is upending the conventional banking sector. Deposits & Lending, Capital Raising, Investment Management, and Insurance have highlighted the evolution of FinTech in Asia. We can now have a banking system built on values that better serve clients, lower risk to society, and increase shareholder profits, thanks to the technological revolution.

Sanmath (2019) The primary aim of this research paper is to the function of Fintech in Indian banking, financial services, and financial gateways providing information about future banking in partnership with Fintech. This study aims to explain the modifications brought about by the execution and implementation of the fintech program across the entire financial sector.

Quddus (2020) This paper's goal is to bring to the notice of those involved in the FinTech and finance sectors the current infrastructural gaps in banking and the pressing need to use emerging financial technologies to inform corporate plans. The analysis in this paper sheds light on how the financial sector is changing and how transformative financial technologies are being used. It also provides a quick description of some academic research on FinTech applications in fields including lending and payment services, big data analytics for customer and risk management, and blockchain applications.

Kukreja et al. (2021) discuss the growth, prospects, and difficulties facing India's financial sector owing to new technologies. This chapter highlights the opportunities that have arisen as a result of the demographic dividend, high penetration, and access to the most recent, cost-effective technology, as well as government initiatives such as Digital India, Startup India, and Make in India. Finally, this chapter illustrates the unrealized potential of India's fintech industry..

Murinde et.al (2022) In this essay, we evaluate the expanding literature on fintech and services provided by fintech, highlighting the benefits and drawbacks for banks. We compute the statistical moments of several key indicators of the shifting financial landscape in the FinTech era using high-quality bank-level data collected over the past 16 years from 115 countries worldwide. Our initial findings indicate that banks are unlikely to be replaced by FinTech lenders, either as a result of banks' own FinTech platform development or collaboration with FinTech start-ups.

Kumari and Devi (2022) find that banks and financial institutions worldwide utilize new technologies to their advantage. Smartphones, Internet access, and the rapid development of information technology have all had an impact on the banking and financial services industry. Blockchain and financial technology (FinTech) are purposefully evolving digital banking services. This study investigates how blockchain and fintech influence online banking and financial services. According to the current study, blockchain technology and fintech significantly impact current trends in digitization. In addition to focusing on the community, this research focuses on the modernization processes in banking and financial services.

Concept of Fintech

Fintech refers to innovative procedures that have been made possible by advances in digital technology in the financial banking sector. As the Financial Stability Board (FSB) defines fintech as “technologically enabled financial innovation that could result in new business models, applications, processes, or products with an associated material effect on financial markets and institutions, and the provision of financial services.”

Objectives

1. To study and understand emerging technologies like Fintech in the banking sector
2. To examine the opportunities and challenges associated with the adoption of fintech in banks.

Research Methodology

This study uses a qualitative descriptive analysis method. To conduct this descriptive study, secondary data were gathered from a number of pertinent scientific journals, articles, and information about the Fin Tech phenomena and supporting documents from banking institutions.

Fin techs In Banks

The digital revolution has raised several concerns about the future of the financial industry. The future relationship between banks and fintech and what this means for the provision of financial services, as well as for the profitability and market strength of banks, is a critical question. Fin Tech enables banks to transform their conventional brick and mortar business models into digitally advanced ones. Currently, the way banks operate is changing because of technologies such as machine learning, cloud computing, big data analytics, and artificial intelligence (A). Fin Tech developments in banks are anticipated to go well beyond what most people think of when they think of technological improvement in banks which is online banking.

Banks must utilize technology more effectively than in the past, when it was merely being utilized to replace more time-consuming tasks. Although bank offices will not fully vanish because I do not see many people receiving a mortgage online, they must employ distant digital services to replace rather than supplement conventional distribution channels.

This study examines the newly developed technology [FINTECH] that the banking sector has adopted.

1. The Internet of Things (IoT) is a technology that consists of a network of online-connected devices that can transmit and receive data. Banks can use this technology to increase their consumer loyalty. It aids financial institutions in making critical decisions regarding the placement of ATM centers. Banks can use the IoT to determine the location and number of ATM centers based on the volume of usage.
2. Cloud Computing- Cloud-based services are only offered to Indian banks through the IBCC (Indian Banking Community Cloud) initiative of IDBTL. Cloud-based solutions are widely used among NBFCs, credit societies, and small financing institutions. This assists banks in lowering their capital expenditures while also giving them the flexibility to scale up infrastructure if their business expands in the future.
3. Machine Learning (ML)- It is a branch of science that investigates the concepts and systems that give computers the capacity to learn, carry out, and enhance activities without explicit instructions. The term 'machine learning' (ML) was also used. Banks utilize machine learning (ML) applications for market analysis and streamline ineffective loan approval procedures. This can be applied to improve call center operations. KNOW YOUR CUSTOMER [KYC] is the most crucial application of ML in banking.
4. Block chain-Top: This technology is being used to finance international trade by Indian banks. Block chain use in the financial sector is being investigated by IDBTL and RBI, both of whom have expressed interest in it. Banks use block chains for trade financing, KYC, anti-money laundering, and cross-border remittances.
5. Big Data Analytics: Banks can analyze customer feedback more effectively thanks to this technology. Big data analytics enables the bank's customer service center to answer each inquiry and provide feedback in a correct manner. Inquiries and comments from social media platforms were considered during the analysis.
6. Artificial intelligence (AI) is a branch of computer science concerned with building intelligent machines that function and respond much like humans. Banks are investigating AI for security and wealth management, fraud detection, customer assistance, and helpdesks.

Opportunities

1. Higher capital access: This may be seen in P2P and ECF platforms, which open up new channels for equity financing and provide credit to borrowers, especially SMEs, who are not eligible for bank loans.
2. Cost advantage: This is a result of fintech companies' ability to provide quicker and more affordable financial services. Reduction

of the settlement cycle from two to three days has been beneficial for several markets, and blockchain technologies may lead to almost instantaneous settlement.

3. Financial Inclusion: The availability of financial services for underprivileged communities has increased because of digital finance. Remote areas are increasingly targeted by technology, and firm and executable orders are being used instead.

4. Increasing competitiveness could have a favorable effect on financial stability, and the market for banking services may eventually become fragmented when new companies that compete with established banks enter the market, which would lower the systemic risk posed by players with a systemic impact.

5. Improved and more personalized banking services: Banks can improve their traditional offerings to deliver them in a flexible and cost-effective manner by utilizing FinTech firms' specialized services. For instance, banks may help clients navigate the world of investing and deliver a better, more specialized customer experience.

6. Increase in security: Security is incorporated into the blockchain for one of the key breakthroughs in Fin Tech through encryption of the blocks and the connections between the blocks. With the current technology, attacking every node in a blockchain is more challenging than attacking a central database. Fintech platforms also provide a number of options to protect privacy and prevent data leaks.

7. Regulation Technology (Regtech): Financial institutions can comply with regulatory regulations and accomplish regulatory goals with the use of modern, creative technologies (such as prudential requirements including reporting and consumer protection). RegTech can provide banks with efficient solutions to enhance their risk management and compliance. It might also be a way to manage regulatory environmental changes and reduce the expenses associated with fulfilling necessary standards.

Challenges

Fin-tech, like any development, provides both benefits and possibilities, as well as a variety of risks that cross many industries and frequently include tactical and strategic risk elements. The main sources of Fin Tech risks and threats are concerns about compliance, liquidity, operational risk, and volatility of bank sources of funding, as well as intense rivalry. The following Fin Tech risk is particularly relevant to the banking industry:

1. Market share competition (strategic risk): Risks to the profitability of individual banks are increased by the prospect of rapid unbundling of bank services to fintech or big-tech companies outside of banks. If new entrants are able to exploit innovation effectively and produce less priced superior services, existing financial institutions incur the chance of losing a significant amount of their share of the market or profitability if they fail to meet client expectations.

2. Systemic component of high operational risk: An IT risk event could turn into a systemic crisis as a result of the growth of fintech because it increases the IT interdependencies between market participants

(banks, fintech, and others) and market infrastructure. This is especially true when services are centralized among one or a small number of dominant players. Fintech companies' systems have become more complex as people enter the financial industry, and brings stakeholders who lack sufficient knowledge to manage IT risks.

3. Increased difficulties in fulfilling compliance duties, especially those pertaining to AML/CFT (anti-money laundering and fighting the financing of terrorism), reduced transparency on the growing degree of automation, and the spread of goods or services among banks and fintech companies may have an impact on how transactions are conducted and who is in charge of compliance.

4. Cyber risk: The financial system may become more exposed to significant volumes of sensitive information being exposed to cyber threats and breach risk if it relies more heavily on application programming interfaces (APIs), cloud computing, and emerging technology, enabling higher interconnection.

5. Volatility of bank financing sources and liquidity risk: Customers have options automatically to switch between various mutual funds or savings accounts to get an improved return thanks to the usage of modern technology and aggregators. While this can boost productivity, it may also diminish consumer loyalty and make deposits more erratic. Consequently, this could expose banks to greater liquidity risk.

6. Technical risk: The total digitalization of the banking system may be hindered by the fact that some classic banking procedures may not work with modern technologies. In addition, there is a chance of technological failure, similar to any IT-based method.

7. Regulation risk: Since many FinTech solutions, such as block chains, crowdfunding, and cryptocurrency, are novel to the banking sector, worldwide central banks have been attempting to keep up with the developments by supplying them the necessary rules; nonetheless, there is a danger in the event that a regulation is delayed or does not exist at all. Since P2P lending is not technically lending, lending restrictions that are often based on financial institutions' capital may not apply in the case of a FinTech firm performing P2P lending.

Results And Discussion

The findings of this study clearly define Fin Tech as a new technology supporting financial services, whose goal has been to enhance and automate the usage of financial services in the banking sector. Fin Tech implementation carries a number of hazards, necessitates original thinking to address the function of Fin Tech in assisting banking, and has consequences for monetary policy in the banking sector. India's implementation of Fin Tech in the banking sector is governed by rules and regulations. The Future Bank must carefully consider the future presence of Fin Tech and Big Tech enterprises.

Conclusion

Through this study, we attempted to clarify the function of Fin Tech in the banking sector and shed light on it as a wave of growth. In the banking sector, it has merged with modern communications

and information technologies. Although the managers of the banking sector and legislators pay close attention to the Fin Tech phenomenon on a worldwide scale, there has not yet been much scientific research on the topic. The primary goal of this study is to shed light on and provide an overview of fintech in the present scenario development in banking that integrates high technology. It also intends to clarify how fintech technologies work together, specifically in the banking industry. This article met its objectives by providing a concept of fintech and examining how experts define it.

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Income Inequality among Agricultural Holdings in India within the Framework of Sustainable Agricultural Development

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Abstract

India's agricultural landscape is incredibly diverse, encompassing a wide array of crops, farming practices, and regional variations. Within this intricate tapestry, income inequality among agricultural holdings remains a persistent and pressing challenge. This study delves into the conditions of farmers and agriculture in India, contextualizing it within the broader framework of the Indian agricultural sector. This study aims to examine various aspects of income inequality in Indian agriculture, including its root causes, consequences, and potential solutions. Understanding these factors is crucial for policymakers, researchers, and practitioners seeking to promote equitable and sustainable agricultural development. This study also explored the consequences of income inequality in agriculture. This could involve policy interventions aimed at promoting equitable access to resources, enhancing market opportunities for smallholder farmers, and strengthening social safety networks. Institutional reforms such as land redistribution programs and agricultural extension services may also be considered. This study seeks to provide comprehensive insights into the complex issue of income inequality in Indian agriculture.

Keywords: income inequality, Households income, Indian agriculture, Sustainable Agricultural Development.

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ARTICLE INFO

Received:02/02/2024 | Revised: 05/06/2024 | Accepted: 10/06/2024 | Published Online: 31/10/2024

DOI: 10.13140/RG.2.2.36462.42568

CITATION

Ansari, T.H, Ansari, T.I., 2024., Income Inequality among Agricultural Holdings in India within the Framework of Sustainable Agricultural Development, Integral Review-A Journal of Management. 14(2): 35–42. DOI: 10.13140/RG.2.2.36462.42568.

Introduction

Kuznets (1955) proposed a theory of the correlation between income inequality and average income, suggesting an inverted U-shaped relationship. Initially, income inequality tends to increase with economic growth but eventually declines over time. Kuznets justified this through the migration of workers from rural areas with low wages and inequality to urban areas with higher wages and inequality. In the context of developing nations, such as India and China, Borooah et al. (2015) posit that the elimination of economic regulations may contribute to income inequality. This growth trajectory tends to exacerbate inequality while reducing absolute poverty. However, certain studies challenge this hypothesis, highlighting significant sociocultural, historical, religious, and caste-based differences that influence household income and asset ownership. It is imperative to discern between outcome inequalities such as income and assets and opportunity inequalities, which encompass factors such as education, healthcare access, and gender and caste disparities (Kanbur et al. 2014). Economic inequalities often intersect social and cultural disparities stemming from variations in caste, religion, and gender.

In India, both inter- and intra-state income disparities have been a significant policy concern. Various studies have focused on assessing disparities in economic and social advancement across regional parameters, such as per capita income, infrastructure development, educational access, and healthcare provision across different castes and segments of society. Bhattacharya and Sakthivel (2004) explored regional gaps by analyzing the growth patterns of overall and sector-specific incomes in key states before and after the reform era. Their findings revealed that while India's GDP growth rate marginally improved after economic reforms, there was a significant widening of regional disparities in the Gross State Domestic Product (GSDP). Industrialized states experienced much faster growth than states with a dominant agricultural sector, and there was little evidence of growth rate convergence. A notable finding is the negative relationship between population expansion and GSDP growth, which has significant implications for poverty levels, employment opportunities, and the political economy of India.

Agricultural sustainability entails the efficient production of sufficient food without harming ecosystem services. This involves optimal crop production while preserving the environment and human health. In addition, it aims to enhance agricultural production, protect the environment, and promote human well-being. Agricultural sustainability incorporates socioeconomic and bioecological aspects influenced by environmental, social, and economic factors. Achieving sustainability involves maintaining economic, social, and environmental development, while considering social fairness, human welfare, efficiency, and resource optimization. However, agricultural activities can adversely affect ecosystem services and contribute significantly to greenhouse gas emissions. Consequently, ensuring sustainability in agriculture poses challenges for maintaining environmental, economic, and societal progress in substantial

agricultural nations, such as India and China.

In India, where a significant portion of the population relies on agriculture, enhancing agricultural sustainability is crucial for ensuring food security and supporting agricultural-based enterprises. With India projected to become the most populous country by 2025, demand for food will rise accordingly. Numerous studies have investigated the impact of various factors on agriculture across different geographical levels, focusing on climatic and nonclimatic aspects. However, research assessing agricultural sustainability at the state level in India is limited, with only a few studies addressing the association between climatic factors and sustainability. In addition, the impact of climate change on agricultural sustainability in India remains poorly understood. Therefore, this study evaluates the conditions of farmers and agriculture in India and discusses income inequality within the framework of sustainable agricultural development in India.

Literature review

Income inequality among agricultural holdings in India is a significant issue affecting sustainable agricultural development. Studies have revealed high-income disparities within the agricultural sector (Ryszard et al., 2020; Prasant et al., 2018; Mada et al., 2015). The factors contributing to this inequality include disparities in land ownership, income sources, and state-level differences in income generation (Sanjoy et al. 2019). The Gini coefficient, used to measure income inequality, indicates substantial disparities in income from agriculture across different states in India (Jasmeet and Kaur, 2015). Addressing these disparities is crucial for achieving sustainable agricultural development, as highlighted by the need to focus on underdeveloped regions, increase government expenditure on agricultural infrastructure, and enhance credit facilities and technology access. Efforts to mitigate income polarization and reduce income spreads through targeted policies and interventions are essential for fostering a more equitable and sustainable agricultural sector in India. Manas Ranjan Behera (2022) addresses income inequality in Indian agriculture among states from 1981-2015, highlighting disparities and factors influencing them, but does not specifically discuss sustainable agricultural development. In this article, the extent of disparity that exists in the agricultural sector among the 15 major states of India, and the major factors explaining this disparity were identified and analyzed. However, there has been little systematic documentation of what has happened to Indian agriculture in terms of spatial and regional inequality over the past three decades. Ryszard Kata et al. (2020) investigated the re-distributive effects of agricultural policy and the importance of income inequalities among agricultural holdings for sustainable agricultural development based on the infra-sectoral differences of the disposable income of farmer households and the income from family agricultural holdings in Poland. Bathla (2018) examined how income disparities among agricultural households in India are shaped by variables such as land ownership, nonfarm revenue, and agricultural assets. By addressing these factors, there is the

potential to bolster sustainable agricultural progress and narrow income discrepancies. Bathla emphasized the significance of dissecting income inequalities among agricultural households and their determining factors. This nuanced analysis could inform public policy discussions aimed at fostering inclusive economic growth and welfare. Jasmeet Lamba et al., (2020) focus on the relationship between sustainable agricultural development and rural poverty in India, highlighting regional disparities in agricultural development and poverty levels among states. The spatial pattern of sustainable agricultural development as a Composite Index of Agricultural Development (CIAD) and its relationship with rural poverty in India were addressed. However, regression analysis leads to various findings through model building and analysis of the overall structure of poverty. Prasant Kumar Behera et al (2018) have analyzed the objective of regional disparities in agricultural development in different states of India on several indicators like percentage of agricultural workers, percentage of net sown area, inputs use, the proportion of net irrigated area, cropping intensity, total agricultural productions and productivity, and percentage of agriculture contribution to state GDP, etc. Mada Melkamu and Richard Kwasi Bannor's (2015) study revealed that income inequality among agricultural holdings in India is relatively low, as indicated by a Gini coefficient of 0.2 for per capita income at current prices (2012-2013). This finding suggests a relatively equitable income distribution. The authors examined the disparity in agricultural resources among Indian states using the Lorenz curve and Gini coefficient. They found that irrigation inequality was the highest, with a Gini coefficient value of 0.66, followed by the agricultural landholding size at 0.6. To further understand the factors contributing to consumption expenditure inequality, they employ a regression-based inequality decomposition method similar to that used by Areef et al. (2021). V. Basil Hans (2018) analyzed the National Sample Surveys of agriculture in 2003 and 2013 using descriptive and regression-based methods, and estimated income inequality in the agricultural sector at the national scale and in the 17 largest states. Sanjoy Chakravorty et al (2019) shown income inequality in India's agricultural sector is high, with a Gini Coefficient of around 0.6. Land ownership significantly influences income distribution, thus impacting sustainable agricultural development and equity. The authors analyzed the National Sample Surveys of Agriculture in 2003 and 2013 using descriptive and regression-based methods and estimated income inequality in the agricultural sector at the national scale and in the 17 largest states. Jasmeet Kaur (2015) found that Public investments, particularly in education and health, contribute significantly to income inequality among agricultural holdings in India. Targeting roads, energy, and irrigation can help to alleviate rural poverty. The impact of public investments on agricultural income disparities across 17 major Indian states from 1981/82 to 2013/14, both pre-and post-liberalization periods, was investigated by Mulla Areef and Yanamadala Radha (2022). They emphasize optimizing agricultural resource utilization for sustainable development, particularly focusing on natural

capital elements. They underscored the significant environmental impact of agricultural holdings and their implications for the rural economic and social dynamics. Tushar Kanti Das and Lopamudra Mishra's study (2010) delved into income inequality within Indian agriculture, within the framework of sustainable development. They stress the necessity of strategies to bolster the performance of the sector for inclusive economic growth. Their research aimed to gauge inequality and identify underperforming states by applying the convergence principle and considering both per capita income and per capita agricultural income as indicators of convergence. Bino Paul et al. (2023) found income inequality among Indian agricultural holdings is evident, with small farmers using more chemical fertilizers. The transition to sustainable inputs requires policy reforms to address affordability and distribution challenges. Their study also examined the propensity of Indian farmers to adopt bio-fertilizers and other sustainable inputs and illustrated the transition to sustainability through a framework that includes scale, affordability, and sustainable inputs.

Research Objectives-

- To study and analyze Income Inequality among Agricultural Holdings in India within the Framework of Sustainable Agricultural Development.
- This study delves into theoretical discussions and causes of income inequality in the context of sustainable agricultural development.

Methodology

This study uses farm-level data obtained from nationally representative surveys conducted by the NSSO, including the 59th and 70th Situation Assessment Surveys. These surveys spanned 4,000 villages nationwide and captured a diverse range of characteristics.

Agricultural household income

From 1993–94 to 2011–12, India's rural economy underwent significant transformation. One notable change was the decline in the share of agriculture in the rural income. In 1993–94, agriculture contributed 57 percent of rural income, but by 2011–12, this share decreased to 39 percent. This decline suggests a shift in the composition of rural income away from agriculture towards other sectors. Additionally, the contribution of agriculture to rural employment decreased during the same period. In 1993–94, agriculture accounted for 78 percent of rural employment, whereas it decreased to 64% by 2011–12. This decline indicates a structural change in the rural labor market, with fewer people relying on agriculture for employment. Several factors may have contributed to this change. Industrialization, urbanization, and the growth of non-agricultural sectors may have led to increased job opportunities outside agriculture, attracting rural labor away from farming. Technological advancements and mechanization in agriculture may have also reduced the need for labor in rural areas, further diminishing the sector's contribution to both income

and employment. Overall, these shifts highlight the evolving dynamics of India's rural economy, and the need for policies and interventions to address the challenges and opportunities arising from these changes. However, this shift is not consistent across all sectors and states within the rural economy, exhibiting significant variations, even within the agricultural sector across different household categories (Chand et al., 2017).

Income Levels and Growth

Table 1 provides an in-depth look at the economic progression of various Indian states by comparing per capita annual income and the share of household income from non-farm sources (NFS) between two time periods, 2012-13 and 2022-23. The per capita annual income figures represent the average earnings per person per year in Indian Rupees (₹), adjusted to 2011–12 prices. These data are crucial to understanding the economic well-being of individuals in each state over time.

The Compound Annual Growth Rate (CAGR) column quantifies the annualized growth rate of per capita income over ten years. States such as Odisha (5.13 percent), Karnataka (4.44 percent), and Haryana (4.27 percent) have shown robust income growth, indicating strong economic performance and potential improvements in their standard of living. On the other hand, states such as Bihar (-0.13 percent) and Uttarakhand (-2.31 percent) experienced negligible or negative growth, indicating economic challenges or stagnation.

The NFS share of household income provides insights into economic diversification within these states. This metric highlights the proportion of the total household income from non-farm sources, including wages, salaries, and non-farm activities. A decrease in this share, as seen in Andhra Pradesh (from 39.1 percent to 28.4 percent) and Chhattisgarh (from 35.5 percent to 22.3 percent), suggests a potential increase in dependence on agricultural income and a decline in non-farm job opportunities. Conversely, states such as Jammu and Kashmir (from 70.0 percent to 74.4 percent) and West Bengal (70.0 percent to 74.7 percent) show an increased reliance on non-farm income, indicating a shift towards more diversified economic activities and possibly more stable income sources.

Table 1- Per Capita Annual Income and NFS Share Income

States	Per Capita Annual Income (₹)			NFS Share of HH Income (Percent)	
	2012–13	2022–23	CAGR (Percent) (2013–23)	2012–13	2022–23
Andhra Pradesh	15,988	23,435	4.05	39.1	28.4
Assam	14,629	17,234	1.62	25.3	17.3
Bihar	7,043	6,955	-0.13	43.3	52.3
Chhattisgarh	10,791	13,238	2.01	35.5	22.3
Gujarat	16,242	23,861	3.97	38.5	33.4
Haryana	26,683	40,443	4.27	27.2	21.6
Himachal Pradesh	20,899	27,342	2.70	54.9	41.4
Jammu and Kashmir	24,640	26,232	0.62	70.0	74.4
Jharkhand	10,057	13,266	2.73	42.6	20.0
Karnataka	19,076	29,332	4.44	37.5	26.5
Kerala	30,249	42,242	3.34	65.9	62.3
Madhya Pradesh	12,603	17,202	3.21	23.6	15.1
Maharashtra	15,974	21,384	2.92	40.0	32.4

Odisha	11,589	19,002	5.13	45.4	31.5
Punjab	37,144	52,301	3.62	30.5	27.4
Rajasthan	14,654	20,346	3.34	43.7	22.4
Tamil Nadu	18,806	27,673	3.87	57.3	49.5
Uttar Pradesh	9,210	12,720	3.27	31.1	22.1
Uttarakhand	10,542	8,292	-2.31	27.8	21.5
West Bengal	9,797	11,305	1.44	70.0	74.7
India	13,572	19,548	3.75	40.1	33.2

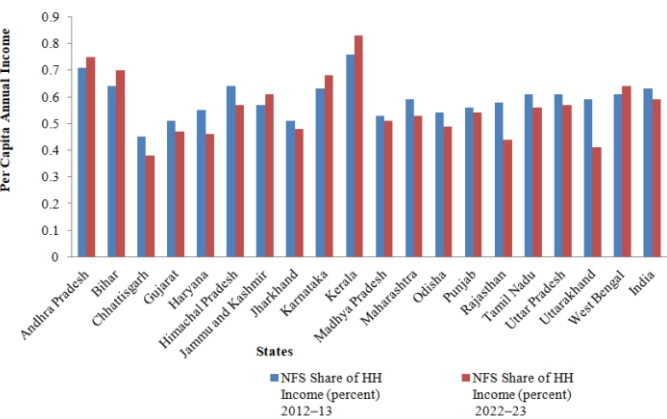
Source: NSSO 70th and 79th rounds.
Note: *Net annual income is given at 2011–12 prices; \$1=₹63.
*Non-farm income is from non-farm activities and wages/salary.

The data reveal significant regional disparities in economic growth and structural transformations. For example, Gujarat, with a CAGR of 3.97 percent, shows steady income growth coupled with a relatively stable NFS share, reflecting balanced economic development. In contrast, states such as Bihar and Uttarakhand exhibit economic vulnerabilities, with negative or minimal income growth and varying changes in NFS share, highlighting their economic struggles.

Table 1 also offers a comprehensive overview of the economic changes in Indian states over the past decade, highlighting both progress and ongoing challenges. By examining per capita income growth and diversification of household income sources, policymakers and researchers can gain valuable insights into regional economic health and devise targeted strategies for balanced and inclusive economic development.

Figure 1 illustrates the changes in per capita annual income across various Indian states between two time periods, 2012-13 and 2022-23. Each state is represented along the horizontal axis with two bars indicating income for the specified years: blue for 2012–13 and red for 2022–23. Generally, most states have experienced an increase in per capita income over the past decade, with the red bars being taller than the blue bars. Notably, states such as Punjab, Haryana, Karnataka, and Tamil Nadu have shown substantial income growth, indicating strong economic performance. Punjab stands out with the highest per capita income in both years, reflecting its economic strength. Conversely, states such as Bihar and Assam exhibit modest increases, highlighting slower economic progress. Bihar, in particular, shows negligible change, suggesting economic stagnation.

Figure 1: Per Capita Annual Income of Indian States



The national average, represented at the end, also shows a significant increase, indicating overall economic growth in India. This chart underscores the diverse economic trajectories of Indian states with varying rates of growth, reflecting regional disparities in economic development.

Figure 2:Non-farm Sector (NFS) Income in the Economic Landscape of Agricultural Households across Different States

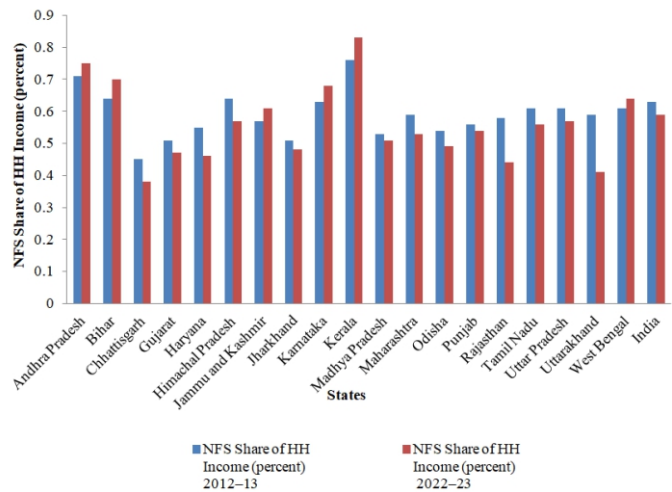


Figure 2 illustrates the share of household income derived from the non-farm sector (NFS) in agricultural households across various Indian states for 2012–13 and 2022–23. Each state is represented along the horizontal axis, with two bars for each state: blue for 2012–13 and red for 2022–23. The vertical axis represents the NFS share of household income as a percentage. The chart highlights significant variations in dependence on nonfarm income across states and over time.

In many states, the red bars, representing the years 2022–23, are shorter than the blue bars, indicating a decrease in the share of income from non-farm sources. For instance, states such as Andhra Pradesh, Chhattisgarh, and Jharkhand show substantial reductions in their non-farm income shares, suggesting a possible shift back towards agriculture or other income sources. Conversely, some states, such as Jammu Kashmir and West Bengal, display an increase in non-farm income share, reflecting a growing reliance on non-farm activities over the past decade.

Notably, Jammu and Kashmir consistently had the highest non-farm income share in both years, indicating a strong dependence on non-farm sectors. Kerala also shows high non-farm income shares, although with a slight decrease over time. The overall trend at the national level, represented by the bars for India at the end, shows a decrease from 40.1 percent in 2012–13 to 33.2 percent in 2022–23, suggesting a nationwide shift in income sources for agricultural households.

This chart provides valuable insights into the changing economic landscape of agricultural households and highlights regional disparities and trends in income diversification. This underscores the dynamic nature of household economies and the varying degrees of dependence on non-farm income across different states.

Disparities in Earnings among agricultural Households

Table 2 presents the per capita inequality in net income among agricultural households across various Indian states for 2012–13 and 2022–23. The figures represent inequality levels, with higher numbers indicating a greater disparity in income distribution. Over the past decade, most states have experienced changes in their income inequality.

Table 2- Inequality in Per Capita Income (Gini Coefficient)

States	Per Capita Inequality in Net Income (₹)	
	2012–13	2022–23
Andhra Pradesh	0.71	0.75
Bihar	0.64	0.70
Chhattisgarh	0.45	0.38
Gujarat	0.51	0.47
Haryana	0.55	0.46
Himachal Pradesh	0.64	0.57
Jammu and Kashmir	0.57	0.61
Jharkhand	0.51	0.48
Karnataka	0.63	0.68
Kerala	0.76	0.83
Madhya Pradesh	0.53	0.51
Maharashtra	0.59	0.53
Odisha	0.54	0.49
Punjab	0.56	0.54
Rajasthan	0.58	0.44
Tamil Nadu	0.61	0.56
Uttar Pradesh	0.61	0.57
Uttarakhand	0.59	0.41
West Bengal	0.61	0.64
India	0.63	0.59

Source: NSSO 70th and 79th rounds.

Notably, Kerala has the highest increase, with inequality rising from 0.76 in 2012–13 to 0.83 in 2022–23, highlighting significant income disparity. States such as Bihar, Karnataka, and West Bengal also showed increases, suggesting growing economic inequalities. In contrast, some states have managed to reduce inequality. For instance, Chhattisgarh and Haryana exhibit substantial decreases, with Chhattisgarh's inequality dropping from 0.45 to 0.38 and Haryana's from 0.55 to 0.46. Other states, such as Gujarat, Jharkhand, and Odisha, also show reductions in inequality.

The national average indicates a slight decrease in inequality, from 0.63 in 2012–13 to 0.59 in 2022–23, suggesting an overall trend towards a slightly more equitable income distribution among agricultural households at the national level. This table underscores regional variations in income inequality and highlights the differing economic dynamics and policy impacts across Indian states. Figure 3 depicts the per capita income inequality among agricultural households in various Indian states for 2012–13 and 2022–23. Each state is represented along the horizontal axis, with blue bars indicating the inequality level in 2012–13 and red bars representing 2022–23. The vertical axis measures per capita income inequality in rupees (₹).

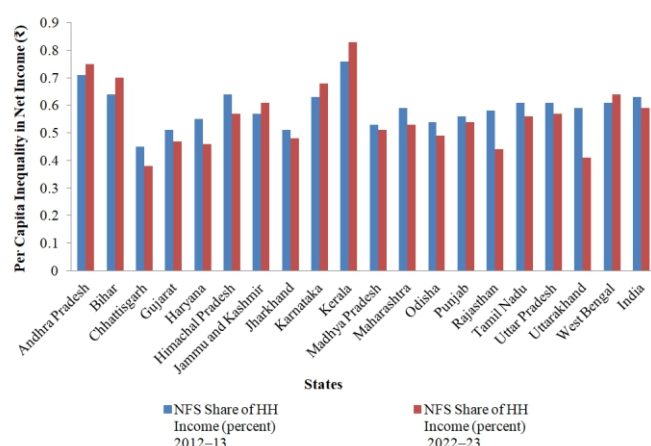
Figure 3: Inequality in Per Capita Income among Agricultural Households in India

Figure 3 reveals that most states experienced an increase in income inequality over the decade, as evidenced by the taller red bars compared to the blue bars. States such as Bihar, Gujarat, Kerala, Tamil Nadu, and West Bengal show significant increases in inequality, with Kerala exhibiting one of the highest levels of inequality in 2022–23. In contrast, states such as Andhra Pradesh and Haryana display relatively stable inequality levels, while Chhattisgarh and Jharkhand show slight decreases. At the national level, income inequality increased slightly, reflecting broader trends of growing economic disparities. This chart underscores regional variations in income distribution and highlights the need for targeted policies to address rising inequality among agricultural households.

Table 3: Household Income, Inequalities, and Farm Size

Farm size	Per Capita Annual Income			NFS Share of Income (percent)		Inequality in Net Income	
	2012–13	2022–23	CAGR	2012–13	2022–23	2012–13	2022–23
Marginal(<1ha)	10,359	13,192	2.45	56.5	45.3	0.57	0.54
Small (1–2 ha)	15,089	13,539	-1.10	31.5	23.4	0.58	0.51
Medium(2-10ha)	20,965	32,103	4.41	20.3	14.8	0.61	0.53
Large (>10 ha)	37,051	53,291	3.64	12.0	8.3	0.65	0.38

Source: Based on NSSO 70th and 79th rounds.
CAGR = compound annual growth rate.

Table 3 highlights the economic characteristics of agricultural households in India by farm size between two time periods, 2012-13 and 2022-23, showing per capita income, non-farm sector (NFS) income share, and income inequality. Marginal farmers (<1 ha) saw a modest income increase (CAGR 2.45percent) with a decreased NFS income share, while small farmers (1-2 ha) experienced a decline in income (CAGR -1.10percent) and reduced NFS reliance. Medium farmers (2-10 ha) and large farmers (>10 ha) enjoyed significant income growth (CAGR 4.41percent and 3.64percent, respectively) with a decreasing NFS share, indicating a shift towards farming. Income inequality generally decreased across all categories, with the most notable reductions among large and medium-sized farmers, suggesting improved income equity in these groups.

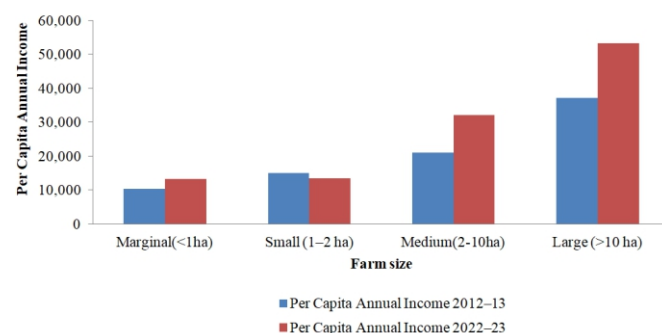
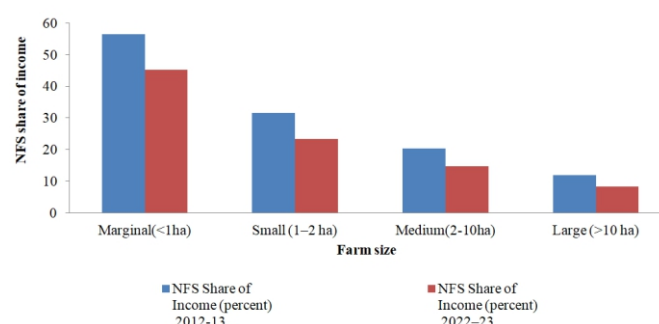
Figure 4: Per Capita Annual Income of Household

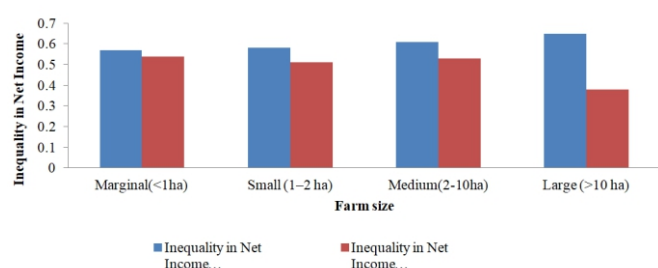
Figure 4 illustrates the per capita annual income of households categorized by farm size for the years 2012-13 and 2022-23. Marginal farmers with less than 1 hectares of land experienced an increase in per capita annual income from approximately ₹10,359 in 2012-13 to around ₹13,192 in 2022-23. Small farmers with 1-2 hectares of land saw a slight decrease in per capita annual income from ₹15,089 to ₹13,539 over the same period. Medium-sized farms (2-10 hectares) witnessed a significant rise in per capita annual income from ₹20,965 to ₹32,103. Large farms, those with more than 10 ha, observed the highest increase, with per capita annual income growing from ₹37,051 to ₹53,291. This trend shows that larger farms have generally seen higher growth in per capita income over the decade, reflecting potentially greater economic benefits for larger-scale agricultural operations.

Figure 5 presents the non-farm sector (NFS) share of income as a percentage of household income for various farm sizes in India, comparing the years 2012–13 and 2022–23. For marginal farmers with less than one hectare, the NFS share of income decreased from approximately 56.5 percent in 2012–13 to about 45.3 percent in 2022–23. Small farmers of 1-2 hectares saw a decline from approximately 31.5 percent to 23.4 percent. Medium-sized farms (2-10 hectares) experienced a reduction from approximately 20.3 percent to 14.8 percent. Large farms, greater than 10 hectares, showed a decrease in the NFS income share from 12.0 percent to 8.3 percent. This trend indicates a decreasing reliance on non-farm income across all farm sizes over the decade, reflecting a possible shift towards increased agricultural income or other economic changes affecting non-farm sector income contributions.

Figure 5 Non-farm sector(NFS) share of income of household(%)

The bar chart titled in figure 6 shows "Household's Inequality in Net Income" compares income inequality among households with different farm sizes between two time periods, 2012-13 and 2022-23. Farm sizes were classified into marginal (<1 ha), Small (1-2 ha), Medium (2-10 ha), and large (>10 ha). For each farm size, the chart displays two bars: a blue bar representing income inequality in 2012-13 and a red bar for 2022-23. Across all categories, inequality has clearly decreased over the past decade. Marginal farms saw a reduction from about 0.55 to 0.45, Small farms from 0.6 to 0.4, Medium farms from 0.55 to 0.35, and large farms from 0.65 to 0.4. This consistent decline suggests significant improvements in the income distribution within farming households, with larger farms showing the most pronounced decrease in inequality. The data reflect a trend towards a more equitable income distribution across different farm sizes over the ten-year span.

Figure 6 Household's Inequality in Net Income



Income Inequalities and Agricultural Sustainability

Income derived from agricultural activities plays a crucial role in sustaining livelihoods and ensuring farm development. Adequate income levels enable families to maintain their connections to agriculture, supporting their economic and social needs, while facilitating sustainable farm growth. Conversely, insufficient income leads to disengagement from agricultural activities, affecting the primary role of farms as sources of livelihood and reducing their significance as places of employment for families.

Income levels not only reflect the economic status of agricultural households but also influence their overall well-being and satisfaction. Farmers' decisions regarding agricultural production, investments, and farm development are influenced by their perceived prosperity, which in turn affects their economic activities and choices. High income disparities within the agricultural sector and between countries can disrupt economic, social, and environmental harmony, which is essential for sustainable development. Excessive inequality may exacerbate issues, such as poverty and social exclusion, hindering efforts to achieve economic and social stability. While income differences are inherent in agricultural activities owing to variations in productivity and other factors, extreme inequality poses significant challenges, including poverty and social marginalization.

The progressive concentration of income on larger, economically robust farms may lead to both positive and negative outcomes. While it facilitates the efficient allocation of resources within the agricultural sector, it also risks the overconcentration of assets in larger enterprises,

leading to the displacement of smaller farms and adverse effects on agricultural sustainability. Additionally, excessive income disparities can impede environmental conservation efforts, as economically marginalized individuals may resort to environmentally harmful practices. Achieving economic, social, and environmental harmony in agriculture requires addressing income disparities and ensuring a decent standard of living for the farmers. Social acceptance of agricultural producers, preservation of rural culture, rural development, social cohesion, and poverty alleviation are essential for fostering social order. Balancing economic, social, and environmental objectives is the key to addressing income disparities and fostering sustainable agriculture. Excessive income inequality undermines economic and social sustainability, highlighting the need for concerted efforts to promote equitable development in agriculture.

Conclusion and suggestions

Income inequality among agricultural holdings in India poses significant challenges to sustainable agricultural development. However, concerted efforts aimed at addressing the root causes of income disparities and promoting inclusive growth are key to unlocking the sector's potential for equitable and sustainable development. By embracing a holistic approach that integrates the economic, social, and environmental dimensions, India can pave the way for a more equitable, resilient, and environmentally sustainable agrarian future. This chapter underscores the urgency of collaborative action from policymakers, researchers, and practitioners to bridge the gap between prosperity and deprivation in India's agricultural heartlands.

Addressing income inequality in Indian agriculture requires a multifaceted approach that integrates policy interventions, institutional reforms, and stakeholder engagement. Enhancing access to resources and technology is paramount for mitigating the income disparities among agricultural holdings. Land reforms aimed at equitable land redistribution, coupled with targeted investments in irrigation infrastructure, extension services, and agro-ecological practices, can empower smallholders and enhance their productivity and income-generating opportunities. Market reforms aimed at fostering inclusive and fair market systems are essential to reduce income inequality in agriculture. Strengthening market infrastructure, promoting farmers' collectives and cooperatives, and implementing price support mechanisms can help smallholders' access markets, obtain remunerative prices for their produce, and mitigate income volatility. Policy interventions and institutional reforms are crucial to address income disparities and promote sustainable agricultural development. Proactive social welfare policies such as income support schemes, crop insurance, and social safety nets can provide a safety net for vulnerable farming communities, cushioning them against income shocks and vulnerabilities. Additionally, fostering collaborative governance mechanisms that involve stakeholders at all levels can ensure inclusive decision-making processes and equitable resource allocations.

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Exploring the Impact of Artificial Intelligence on the Future of Human Resource Management

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Abstract

The field of Human Resource Management (HRM) is on the brink of significant transformation owing to rapid advancements in artificial intelligence (AI) technologies. This study aims to investigate the implications of AI on the future of HRM, focusing on potential opportunities, challenges, and ethical considerations. Through a comprehensive review of the literature, this study analyzes how AI-driven automation, predictive analytics, and natural language processing are likely to revolutionize HR functions, such as recruitment, talent management, performance evaluation, and employee engagement. Furthermore, this research will explore the ethical dilemmas surrounding AI adoption in HRM, including issues related to data privacy, algorithmic bias, job displacement, and the human-machine interface. By gaining insights into these aspects, this study provides valuable recommendations for HR practitioners, policymakers, and organizational leaders to effectively navigate the evolving landscape of HR management in the AI era.

Keywords: Artificial Intelligence, Automation, Accountability, Bias, Employee Well-being, Fairness, HR Management, Privacy, Transparency.

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ARTICLE INFO

Received: 11/03/2024 | Revised: 13/06/2024 | Accepted: 12/06/2024 | Published Online: 31/10/2024

DOI: 10.13140/RG.2.2.23669.79842

CITATION

Chauhan, S., 2024., Exploring the Impact of Artificial Intelligence on the Future of Human Resource Management, Integral Review-A Journal of Management. 14(2): 43–46. DOI: 10.13140/RG.2.2.23669.79842

Introduction

In an era characterized by rapid technological advancement, the integration of Artificial Intelligence (AI) has become increasingly prevalent across various industries, fundamentally reshaping traditional practices and processes. Human resource (HR) management is among the domains that experience profound transformation. As organizations strive to adapt to evolving market landscapes and remain competitive, the utilization of AI in HR functions presents unprecedented opportunities and significant challenges.

The traditional role of HR is multifaceted, encompassing recruitment, talent management, employee engagement, and performance evaluation. Historically, these tasks have relied heavily on human intuition, subjective assessments, and manual processing. However, the advent of AI technologies has revolutionized these practices by offering data-driven insights, automation capabilities, and enhanced decision-making support.

This study explores the profound impact of AI on the future of HR management by examining the opportunities it presents for streamlining operations, improving employee experiences, and driving organizational success. In addition, it delves into the challenges and ethical considerations associated with the widespread adoption of AI in HR, including issues related to privacy, bias mitigation, and workforce displacement.

By analyzing current trends, emerging technologies, and best practices, this study aims to provide a comprehensive understanding of how AI is reshaping the HR landscape and shaping the future of work. Through careful examination and strategic planning, organizations can harness the transformative potential of AI to optimize HR processes, cultivate talent, and foster a culture of innovation and agility in the workplace.

Literature Review

Artificial Intelligence (AI) has revolutionized various industries, and human resource (HR) management is no exception. This literature review examines the opportunities, challenges, and ethical considerations surrounding the integration of AI into HR management. The integration of Artificial Intelligence (AI) into human resource (HR) management has emerged as a significant area of interest, offering transformative potential for various HR functions. This literature review aimed to explore the impact of AI on the future of HR management by examining key research findings and insights.

Talent Acquisition and Recruitment

- AI technologies such as machine learning algorithms have been widely adopted in talent acquisition processes to enhance candidate sourcing, screening, and matching (Dhar, 2018). By analyzing vast amounts of data from resumes, social media profiles, and job descriptions, AI-driven recruitment platforms can identify suitable candidates more efficiently and accurately (Sinha & Sinha, 2017).

Employee Engagement and Retention

- AI-powered chatbots and virtual assistants are increasingly being utilized for employee engagement and support, providing personalized communication, feedback, and assistance to employees (Marler & Boudreau, 2017). Predictive analytics models enable HR professionals to identify the factors contributing to employee turnover and take proactive measures to improve retention (Bersin, 2017).

Performance Management:

- AI technologies enable real-time performance monitoring and feedback mechanisms, thereby facilitating continuous performance management processes (Cappelli and Keller, 2019). Natural Language Processing (NLP) algorithms analyze employee feedback and sentiment data to provide actionable insights into performance improvement (O'Boyle et al., 2020).

Predictive Analytics in HR

- Predictive analytics models powered by AI algorithms help HR managers forecast future workforce trends such as talent demand, skill gaps, and succession planning (Niu et al., 2019). By leveraging historical data and external factors, HR professionals can make data-driven decisions to optimize workforce planning and resource allocation (Shen et al., 2020).

Ethical and Legal Implications

- Despite its potential benefits, the integration of AI into HR management raises ethical and legal concerns regarding data privacy, algorithmic bias, and job displacement (Rudolph et al., 2020). HR practitioners must ensure transparency, fairness, and accountability in AI-driven decision-making processes to mitigate these risks and maintain trust (Martin & Freeman, 2021).

Research Objectives

To examine the potential impact of artificial intelligence (AI) on future human resource (HR) management.

To understand the impact of AI on recruitment, employee engagement, performance evaluation, and overall organizational effectiveness.

Research Methodology

This paper utilizes secondary research methodology, which involves collecting and analyzing existing data, literature, and studies related to the topic of "Exploring the Impact of Artificial Intelligence on the Future of HR Management"

- Identified and reviewed academic journals, articles, books, other relevant publications, hybrid work models, and corporate success.
- Databases such as Google Scholar and others have gathered scholarly articles and research papers.
- Explored reputable online sources such as company websites, industry reports, and professional blogs for insights into current practices, case studies, and expert opinions on nurturing employee engagement in hybrid work settings.
- Online databases and repositories were used to access reports.

Opportunities

1. **Efficiency and Automation:** AI technologies such as machine learning and natural language processing enable HR departments to automate repetitive tasks, such as resume screening, scheduling interviews, and employee onboarding (Alam et al., 2020).
2. **Data-Driven Decision-Making:** AI tools can analyze large volumes of HR data to identify patterns and trends, facilitating informed decision making in recruitment, performance evaluation, and talent management (Jiang et al., 2021).
3. **Personalized Employee Experience:** AI-powered chatbots and virtual assistants provide personalized support to employees and promptly address their queries and concerns, thereby enhancing employee experience (Davenport et al., 2018).

Challenges

1. **Bias and Fairness:** AI algorithms may inherit biases present in training data, leading to discriminatory outcomes in recruitment, performance assessment, and promotions (Crawford et al., 2019).
2. **Privacy Concerns:** The collection and analysis of vast amounts of employee data raises privacy concerns regarding data security, consent, and transparency in AI-driven HR systems (Strohmeier, 2020).
3. **Skills Gap and Job Displacement:** The adoption of AI in HR necessitates reskilling HR professionals to leverage AI tools effectively while also raising concerns about potential job displacement due to automation (Brynjolfsson & McAfee, 2017).

Ethical Considerations

1. **Transparency and Accountability:** Ethical AI practices require transparency regarding the use of AI in HR processes and mechanisms for accountability in the case of algorithmic errors or biases (Jobin et al., 2019).
2. **Fairness and Equity:** HR departments must ensure fairness and equity in AI-driven decision-making processes, and actively mitigate biases and discrimination to uphold employee rights and diversity (Mittelstadt et al. 2019).
3. **Employee Consent and Control:** Employees should have control over their data used in AI-based HR systems, with mechanisms in place to obtain informed consent and provide avenues for data access and rectification (Floridi et al., 2018).

Findings

1. **Automation of routine tasks:** Artificial intelligence (AI) has the potential to automate many routine tasks within HR management, such as resume screening, scheduling interviews, and answering frequently asked questions from employees.
2. **Enhanced Recruitment Process:** AI-powered tools can help in sourcing candidates more efficiently by analyzing resumes and identifying the best fit based on predefined criteria. This could lead to quicker and more accurate hiring decisions.
3. **Improved Employee Engagement:** AI can analyze employee

sentiment through various channels such as surveys, emails, and social media to provide insights into employee engagement levels. This allows HR managers to take proactive measures to improve their workplace satisfaction and retention.

4. Personalized Learning and Development: AI-driven platforms can offer personalized learning and development opportunities to employees based on their learning styles, preferences, and skill gaps. This can result in more effective training programs and skill-development initiatives.

5. Data-driven decision-making: AI enables HR departments to harness large volumes of data to make informed decisions regarding workforce planning, talent management, and performance evaluation. Predictive analytics can also help forecast future HR trends and challenges.

6. Ethical and Bias Concerns: There concerns regarding the ethical use of AI in HR, particularly related to bias in algorithms and data privacy issues. HR managers must ensure that AI tools are designed and implemented in a way that mitigates bias and respects employee privacy rights.

Recommendations

1. **Invest in AI Education and Training:** HR professionals should undergo training to familiarize themselves with AI technologies and their applications in HR management. This enables them to effectively leverage AI tools and platforms for various HR functions.
2. **Carefully Evaluate AI Solutions:** Before adopting AI solutions, HR managers should thoroughly evaluate vendors and their offerings to ensure that they align with the organization's values, objectives, and regulatory requirements. It is essential to select AI tools that are transparent, explainable, and ethically sound.
3. **Address Bias and Diversity:** HR departments must actively work to identify and mitigate bias in AI algorithms used for recruitment, performance evaluation, and other HR processes. Regular audits and reviews of AI systems can help to identify and address potential biases.
4. **Promote Transparency and Communication:** Organizations should be transparent to employees about the use of AI in HR processes and communicate how it will impact their roles and interactions with the company. Clear communication can help build trust and acceptance in AI-driven initiatives.
5. **Balance Automation with Human Touch:** While AI can streamline many HR processes, it is essential to maintain a balance between automation and human interaction. HR managers should focus on using AI to augment their capabilities rather than entirely replace human involvement.
6. **Stay Updated with Legal and Ethical Guidelines:** HR professionals must stay updated with evolving legal and ethical guidelines related to AI in HR management. This includes regulations on data privacy, discrimination, and fairness in AI algorithms. By embracing AI technologies responsibly and strategically, HR departments can enhance efficiency, effectiveness, and employee

satisfaction in the workplace, while mitigating potential risks and challenges. In conclusion, the adoption of AI technologies in HR management offers promising opportunities for enhancing efficiency, effectiveness, and decision-making capabilities. However, organizations need to address ethical, legal, and socioeconomic considerations to maximize the benefits of AI while mitigating potential risks.

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Entrepreneurial Intentions of Undergraduate Students

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A b s t r a c t

This study explores the perceptions and attitudes of first- and final-year undergraduate students toward entrepreneurial intention. The research design was exploratory. A sample of 194 students from Bachelor of Business Administration and Bachelor of Commerce studying in two private universities in Bangalore was selected using the purposive sampling technique. Based on the research question, the hypotheses were developed and tested, and the results revealed significant differences among the gender of the respondents and entrepreneurial intention. Further, the Analysis of Variance test results found a significant difference in the perception of first-year students' entrepreneurial intention compared to students in the final year of the program. The final-year students focused more on their placement. In addition, startup initiatives, incubation centers, and inspiring entrepreneurs' sharing sessions play a crucial role in developing entrepreneurial intentions among undergraduate students. On this basis, the study concludes that to achieve the vision of the Hon'ble Prime Minister 'Self Reliant India' or 'Atma Nirbhar' the awareness of these initiatives should be educated to the youth that is the students especially post-pandemic.

Keywords: attitude, entrepreneurship, entrepreneurial intention, government initiative, pandemic

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ARTICLE INFO

Received:21/04/2024 | Revised: 20/06/2024 | Accepted: 30/06/2024 | Published Online: 31/10/2024

DOI:10.13140/RG.2.2.30380.68486

CITATION

Khan, S.R,K 2024., Entrepreneurial Intentions of Undergraduate Students, Integral Review-A Journal of Management. 14(2): 47–51.

DOI:10.13140/RG.2.2.30380.68486

Introduction:

The last ten years have seen a significant rise in the frequency of political and economic crises, which has made working conditions unpredictable, and insecure, and contributed to a rise in unemployment (Nawang, 2023; McGuire, 2015). In a developing and emerging economy like India, entrepreneurial activity would eliminate unemployment to a greater extent, especially among the youth. Romer, 1994, defines "Entrepreneurial activity as an engine of a nation's long-term economic growth." This activity governs the molding of a nation-building. The Indian government launched the "Atmanirbhar Bharath Abhiyan" and "Startup India" as a means of encouraging innovation, entrepreneurship, and the creation of an atmosphere that fosters the symbiotic growth of rural and urban areas. The youth of the nation need to understand the purpose of building this initiation, as it helps them nurture the ventures that they dream of. Universities and colleges play a vital role in making this understood as the moral responsibility of these institutions in creating one. The entrepreneur creates passion for himself and the society around him. A report published in India in 2024 highlighted the growth of the landscape of education and how the sector's focus shifted from traditional academics towards instilling an entrepreneurial mindset among students. Post-COVID, there has been a huge change in the job market in India, where nearly 42% of graduates less than 25 years old are unemployed, as per the reports published by the Azim Premji University Periodic Labour Force survey published in 2022. Nayang (2023), Lim et al. (2021), Mengesha (2020), and Meyer and Meyer (2017) focused on tackling this situation of joblessness and highlighted that young graduates of India, that is, 72% of our population in the 15-29 age group, have a high potential for entrepreneurship.

Thus, the role played by higher education institutions contributes to shaping student's mindsets. Many countries have begun to probe entrepreneurial activities, as they facilitate job creation and develop inclusive economic growth. According to Neumann (2021), research on the potential effects of entrepreneurship, particularly in emerging economies, has been conducted extensively over the past 20 years; however, the idea is continually growing and changing. Among the numerous studies conducted among university students, a large number of them have focused on entrepreneurial intention, examining various key internal factors such as psychological traits, personal characteristics, and the cognition of entrepreneurs, and have analyzed the development mechanism of entrepreneurial intention (Shapero and Sokol, 1982; Scott, 1991; Kickul and Krueger, 2003). However, many of these studies have overlooked the influence of external environmental factors on entrepreneurial intention.

In this study, the Theory of planned behaviour Ajzen's model (1985, 1987, 1988, 1991) developed a model using external environmental factors was used. This theory is said to accurately anticipate the various behaviors studied, showing significant effectiveness.

Literature Review

Nayang (2023) explored entrepreneurial intentions using the Entrepreneurial Intention Model (EIM), using the Theory of Planned Behavior (TPB) among undergraduate students. It examined professional attraction, social valuation, and entrepreneurial capacity, the three key variables, using a redesigned Linan and Chen's version of the Entrepreneurial Intention Questionnaire (EIQ) in the Malaysian Higher Education Context. Analyzing the data through multiple linear regression, the study found support for all hypotheses framed and revealed a strong desire among students to pursue entrepreneurship as a career, despite perceiving it as a lower priority within their social circles, especially in the post-COVID-19 era. Soam et al. (2023) investigated entrepreneurial interest among agricultural students to offer insights into entrepreneurship advancement in India. This study surveyed 1797 students from 17 state agricultural universities. This highlights the importance of Career Development Centers, government backing, and awareness initiatives to promote entrepreneurship. Policy recommendations include promoting entrepreneurship through education and incentivizing entrepreneurial activities. This study contributes to Sustainable Development Goal 4 (quality education) by enhancing students' soft skills, leading to innovative agricultural entrepreneurs. Amofah et al., (2020) explored the effects of attitudes toward entrepreneurship, social norms, locus of control, and entrepreneurial intentions on 159 MBA students from two private universities in Ghana, employing structural equation modeling (SEM). Their findings revealed that all factors except entrepreneurial self-efficacy notably influenced students' entrepreneurial intentions. Students expressed a preference for policymakers to create opportunities that foster entrepreneurship among students, which could help bridge the employment gap in emerging economies by translating intent into action. Similarly, Angulo et al. (2019) conducted research on the link between student interest and entrepreneurial intentions during the early stages of education. The results of this study have significant implications for both educational practices and organizations that aim to promote entrepreneurship, highlighting the importance of incorporating specialized training in educational programs. Anwar et al. (2019) conducted a study on entrepreneurial traits among students from three different universities. Their findings suggested that students leaning towards entrepreneurship demonstrated increased tendencies of locus of control, taking risks, and innovation. Additionally, they noted disparities in entrepreneurial traits among students pursuing business versus those in other fields of study. Based on the various reviews discussed, the developed framework is presented below.

Research Objectives

- To explore the perceptions and attitudes of first- and final-year undergraduate students towards entrepreneurial intention.
- To analyze the entrepreneurial intentions of students based on certain demographics.

Hypotheses

H1: Scores on entrepreneurial intention among students are expected to be consistent across the different years of the program.

H2: The gender of the students and their scores on entrepreneurial intention were significantly different.

Methodology

The Entrepreneurial Intention Scale was developed using Ajzen's model of planned behavior. There were 15 positively worded items across the four dimensions. To measure students' entrepreneurial intent, the study adopted a scale developed based on Ajzen's model. The dimension had four items for measuring entrepreneurial intent, two for measuring attitude toward a behavior, four for the dimension of Perceived Social Norms, and five for perceived behavioral control. The maximum score was 75 and the least was 15, and all students achieved a higher score, indicating a higher inclination towards becoming an entrepreneur. The split-half reliability formula by Spearman-Brown (1910) was applied to assess the reliability of various dimensions of entrepreneurial intention. The results indicated reliability scores of 0.73 for entrepreneurial intent, 0.71 for attitude toward behavior, 0.75 for perceived social norms, and 0.69 for perceived behavioral control.

After a thorough in-depth analysis, a purposive sampling technique was used to choose 194 students from the Bachelor of Business Administration and Bachelor of Commerce studying in two private universities in Bangalore. The research design was exploratory.

Analysis & Interpretation

Table 1 -Demographic Classification

Category	Number of respondents	Percentage
Gender		
Male	82	42.26
Female	112	57.74
Age distribution		
17-23	148	76.28
Above 23	46	23.72
Year of study		
I st year	89	45.87
II nd year	28	14.43
III rd year	77	39.70
Program		
BBA	101	52.06
B. Com	93	47.94
Awareness received from college to understand entrepreneurship		
Yes	111	57.22
No	83	42.78
Have a family business to take over		
Yes	88	45.36
No	106	54.64
Webinars/ Workshop/Success sharing sessions attended on entrepreneurship from college		
Yes	88	45.36
No	106	54.64

* Source: Primary data

From the demographic classification, it is inferred that the majority of the respondents who answered the questionnaire were female, with 57.74% in the age group classification and 76.28 % falling between 17-23 years. 45.87% Of students belonged to the first year followed by 39.70 % of students from year III, and 14.43 belonged to IInd year. Of the students, 54.64% knew about entrepreneurship in college by attending various webinars, workshops, and success-sharing sessions. A total of 54.64% of the students did not have a family business to take over. To test the mean difference, Analysis of Variance and the z-test were performed to determine the perception of entrepreneurial intention.

Data Interpretation

H1: Scores on entrepreneurial intention among students are expected to be consistent across the different years of the program.

Table 2 - ANOVA test shows significant differences

Variables		Sum of Squares	df	Mean Square	F	Sig.
Entrepreneurial intent	Between groups	122.327	6	40.781	4.131	.009 *
	In the groups	1560.233	188	9.886		
	Total	1682.550	194			
Attitude	Between groups	176.939	6	58.980	3.399	.019 *
	In the groups	2741.981	188	17.354		
	Total	2918.920	194			
Perceived Social Norms	Between groups	187.254	6	62.418	4.238	.007 *
	In the groups	2327.024	188	14.728		
	Total	2514.278	194			
Perceived behavioural control	Between groups	53.381	6	15.810	3.992	.018*
	In the groups	1497.945	188	4.459		
	Total	1551.331	194			

* results based on primary data

* significance at 5%

Interpretation: The results show significant differences among the years of the study program of students between groups and entrepreneurship intention. The ratio (4.131) is significant ($p=0.009$) at the 0.05% level of entrepreneurial intent, and the null hypothesis is rejected; The F ratio (3.399) is significant ($p=0.019$) at the 0.05% level of attitude towards a behavior, so the alternate hypothesis is accepted, followed by the F ratio (4.328) being significant ($p=0.007$) at the 0.05% level of perceived social norms, and hence the alternate hypothesis is accepted. The F ratio (3.992) had significance ($p=0.018$) at the 0.05 levels of attitude towards perceived behavioral control, so the alternate hypothesis is confirmed.

As significant difference results were obtained, a post hoc test was performed.

Table 3- Post Hoc Results

MEAN (year of study)	N	Subset for alpha=0.05
I st year	90	17.8
II nd year	29	16.7
III rd year	75	15.6
Significance		0.141

* Source: Primary data

The students in their first year obtained a score of 17.8, followed by final-year students who obtained a score of 15.6. The score difference obtained was 2.20, showing differences in students' entrepreneurial intention based on their year of study, which indicated a significant difference in their intention in entrepreneurship, whereas the final-year students were more focused on placement than on entrepreneurship.

H2: The gender of students and their scores on entrepreneurial intention were significantly different.

Table 4

Entrepreneurial Intention differences using the z-test						
Entrepreneurial intent						
Category	N	Mean	Standard Deviation	Mean	z score	p-value
Male	82	16.7465	3.76343	1.1656	-1.740	0.084*
Female	112	17.9121	4.56228			
Variables						
Category	N	Mean	Standard Deviation	Mean	z score	p-value
Male	82	14.8169	3.80717	1.282	-2.082	0.039*
Female	112	16.0989	3.99181			
Perceived Social Norms						
Category	N	Mean	Standard Deviation	Mean	z score	p-value
Male	82	16.9114	2.32236	-.56663	-2.454	.044*
Female	112	17.4780	1.93458			
Perceived behavioural control						
Category	N	Mean	Standard Deviation	Mean	z score	p-value
Male	82	16.9125	2.32236	-.56663	-2.454	.043*
Female	112	17.4780	1.93458			

*based on primary data

*significant at 5%

The results in Table 4 demonstrate the average, standard deviation, and mean difference scores in all the dimensions of entrepreneurial intentions. z-test results between the dimensions of entrepreneurial intention and between male and female students a significant discrepancy towards entrepreneurial intent, attitude towards behavior, perceived social norms, and perceived behavioral control dimensions was observed as the p-values of these dimensions were below 0.05, so the alternate hypothesis was accepted, and it can be inferred that the gender of the students exhibits a higher level of variation towards the dimensions. This suggests that female students have a stronger inclination towards entrepreneurship than male students.

Results and Discussions

This study aimed to find any significant differences in the demographic profiles of students regarding their levels of entrepreneurial intent. The results indicated no significant differences in the demographic profile, year of study, and entrepreneurial intention. However, the analysis of variance suggested that the students enrolled in the first year of BBA or B.Com programs to become entrepreneurs. Over the years, students became involved in other activities, and their focus on entrepreneurship decreased. In the final year, the results showed that the level of significant differences was low. Universities should provide their final-year students with practical experience by engaging them in real-world business projects, organizing business plan competitions, hosting entrepreneurial talks more frequently, and employing incubation and simulation models to comprehend the various components of a business plan.

Further, the results on gender using the z-test showed significant differences in students' entrepreneurial intentions. The study results are in line with those of Thirkwala (2011), who highlighted the statistical differences between entrepreneurial intent and male and female students. Based on findings regarding gender, when appropriately motivated and provided with awareness of the diverse opportunities available, female students can transition into entrepreneurship through workshops and education about government schemes. This support empowers them to progress confidently and develop effective leadership skills, thus facilitating their entrepreneurial journeys.

The study also focused on checking for any significant differences among students in B.com and BBA programs, but there was no difference between them, as the courses taught did not make any difference in nurturing entrepreneurship. This results in a developing country like India that focuses on New Education Policy (NEP), which shows that private universities should take initiatives in framing the curriculum unique to the programs that focus and highlight, as mentioned by Brookhart and Freeman (1992) on three bases, extrinsic, intrinsic, and altruistic motives, thereby shaping a major change in the mindset.

9. Implications of the study: India, a developing nation, should concentrate on creating educational institutions that can encourage entrepreneurial endeavors. However, in this study, the demographic variables showed significant differences, so tapping this risk-taking behavior by setting up entrepreneurial goals among the younger generation is very important.

Future research

Although the study was quantitative, a few other constructs, such as locus of control, psychological contract, behavioral factors, and emotional intelligence, can also be included in future studies to appraise the intention among entrepreneurship in graduates. Further qualitative techniques, such as focus groups or interviews, can be conducted to further understand this intention.

Conclusion

Unemployment among Indian graduates is not a new phenomenon. Various factors contribute to this, such as an unstable economy or political situations. However, higher education institutes aim to provide a good, practical learning environment with a focus on entrepreneurship for the graduating youth, which helps accelerate overall economic development and nurture innovative talents. India is currently a house for 113 unicorns, with a combined valuation of over \$350 billion. The unicorns that emerged from India contributed 62% of graduates who had completed their graduation. This study addressed and targeted assessing the entrepreneurial intentions of students at the undergraduate level at two private universities in Bangalore contributed an interesting study result as it highlighted that the first-year students of the program were highly motivated to be entrepreneurs. Based on gender, female entrepreneurs choose entrepreneurship as a profession based on their skills, attitudes, and potential to embark on their journey.

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Performance of Indian Post Offices: A Regional Perspective on the Impact of IT Modernisation

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A b s t r a c t

Postal business is however offering a strand, which can help today's India to become a leader in the sector, it needs to be. Hence, there is scope for consideration. This has interested the investigator in conducting a scan of Post Offices and identifying the factors that impact the performance of post offices. For this purpose, secondary data inputs were used. The study assesses the performance across segments and circles, which is useful and utilizable for the department of posts and the government of India to improve its regional integration and product delivery in the assessed regions, especially in the earmarked segments of development. In addition, this study is very useful for postal services across the globe that are of the kind and have similar operating circumstances, especially in South Asia, the Middle East, and the developing world. Some of the key implications and recommendations are as follows: a deep fall in several letterboxes thoroughly implies that the postal sector is moving its business focus from service inclusion, especially from lesser-used avenues, to new modes of mail communication such as digital posts. Registered and unregistered mail traffic is more congregated in the state of Maharashtra, perhaps bearing commercial viability and a vast business sector using such services. It is recommended that such services be enhanced and redesigned in the respective circles to address the needs of the core consumer segment better. For speed post and express parcel segments, Delhi is observed as vastly benefiting from the products. Maharashtra was observed to improve in this segment. Hence, in terms of commercial development, the largest region of the country should focus on a priority basis to better address the growth prospects of the segment. For the Money Orders segment, with Tamilnadu, Karnataka, and Rajasthan as the leading states, the business may be more focused in the circles to make the segment more indulged with ultramodern customized products according to the needs of the consumer segment. The business in Kerala may be condensed to leap up excess costs incurred by the department. 65.88% of the variation in Letters Unregistered was caused by a change in No. of Letter Boxes. There is a need to explore other causes that result in the remaining variations. Only 01.07% of the variation in the Use of Postcards is caused by a change in No. of Letter Boxes. Other major causes are unrelated to the availability of postboxes and may be related to some consumer-related aspects, resulting in variation in the usage of postcards. These causes should be explored in further official and voluntary investigations to better address the needs of the segments. For the Total Strength to Total Mail Traffic and Money Orders, the department needs to improve its strengths as much as possible to improve ahead in the segment. For the Total Strength to Value Payable Articles, the department needs to explore other causes affecting the change in sales of such products to improve ahead.

Keywords: India Post, IT Modernization, Postal Savings, The Changing Postal Environment.

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ARTICLE INFO

Received:21/04/2024 | Revised: 20/06/2024 | Accepted: 30/06/2024 | Published Online: 31/10/2024

DOI: 10.13140/RG.2.2.13603.46887

CITATION

Kanda., R., Naveed, M., Kalka., P.C., Gurusamy, S., Suri, G., Bhalla, G.S., and Handa, H., et al., Performance of Indian Post Offices: A Regional Perspective on the Impact of IT Modernisation, Integral Review-A Journal of Management. 14(2): 52–62. DOI: 10.13140/RG.2.2.13603.46887

Overture

It is difficult for POs to reach all, despite having a far better comparison with banks. Of the 1.55 lakh post offices, 90% are in rural areas covering a population of 6,301 per post office in rural areas and 29,299 in urban areas, on an average of 8,605 people are served by one post office as of 31.03.2020 (India Post, 2021). The core tool was accounts operated through a post-office savings bank. To further facilitate the inclusion process across India, the INR 4909 Cr. The Information and Communication Technology (ICT) project began with GDS. ICT became interoperable with Banks on 31-12-2016. As of 31.03.2019, CBS has been operational in 23,686 post offices, and 1000 ATMs are bespoke (Postal Schemes). For IP, offering a strand is always a challenge, which again became a part of their lives and aimed for total inclusion. We attempted to examine several perspectives and obtained diverse results. We have tried to examine the impact afterward, with the development of variant statistics and events, such as infrastructure development, IT connectivity enhancement, an increase in the number of computer nodes, establishment of data centers and warehouses, establishment and increase in the number of automatic teller machines, pilot projects on the use of drones for delivery, and many other digital initiatives of communication.

Text Survey

Past studies have looked at different perspectives on Indian and global outreach. Palacios (2001) in his study had observed the challenges of old-age income security in India. Scher (2001) in their study had observed that in many countries, postal savings and large remittances have long enabled the provision of financial services to all segments of the population. Salam (2004) in their study had observed savings behavior in India during 1980-99. Multiple regression models were used in this study. Suresh (2004), in an analysis of popular perceptions, states that retail investors swarmed back to stock markets in the year 2003-04. Investments in shares and debentures increase by 8.6 percent. Raghavan (2005) highlighted some of the issues of the India Post, such as recurring deficits, limited capital expenditure, the preponderance of staff costs, an adverse net operating ratio, lagging circles, unsuitable costing methods, non-economic pricing, and lack of commercial orientation. As he recommended, training reoriented to service, he added, referring to an increased pace. Ranganathan (2005) states that postal monopolies throughout the world are undergoing restructuring and/or privatization. Hari Sundar and Jacob (2009) researched Cochin POs looking influence proportion of Age and Gender on the Percentage of income saved using the India Post scheme instead of e-commerce and e-government portal for saving and income. Subrahmanian (2010) highlighted the importance of training employees in the post department. The Planning Commission (2011) has emphasized the need for the modernization of the India Post and hardly recommended it. Rajeshwari and Sunmista (2011) compared customers' perceptions of service quality in the Post Office in the Virudhunagar and Madurai districts. Agarwal (2012) concludes in her study the various factors

that influence investors to invest in different savings schemes of post offices. This IT makes a key challenge to PO. Gupta, and Gupta (2012) expresses that the customers satisfaction is a key to success for a postal company. Jain and Kothari (2012) revealed that post offices are the backbone of the country. POs in countries with no banking facilities are very important. Moez and Gharbi (2012) studied customer satisfaction in delivering services by the postal department in Tunisian city related to mail services and the loyalty of customers towards post services. Anand, et. al (2013) focuses on the performance aspects of Indian Postal Services and its future growth strategy tradition. This is the core aspect, so presently, it is under study. Chhatbar (2013) tried to explain in his study the satisfaction of consumers, which they derive from using post office services, and in comparison, the satisfaction derived from private courier services in Mumbai. Hosseini, et. al (2013) study the strengths, weaknesses, opportunities, and threats of Postal Services in Rasht (Iran), referring to customer services. Khator (2013) highlights the working way of traditional post-office services in growth with modern corporate entities in Kenya registered for the activities. Malakar (2013) studied the role played by the Indian post in financial inclusion and the challenges before the Indian post in providing banking services to the masses. Mokoena and Mbohwa (2013) discussed the performance management of Postal Organizations. Samal (2013) put forward the idea that due to the vast use of electronic media, more demanding customers, the presence of organized/unorganised courier for mail service, Financial Institutions such as banks and insurance companies, and above all the challenges of globalization, corporation, and liberalization, posts should take the proper steps for its survival. Thangapandi (2013) acknowledges the fact that post offices provide numerous services to the economy. The objective of this study was to examine demographics (age, gender, and income). Gayathri (2014) studied investors' attitudes towards different schemes with postal offices in Cumbum Town. Giri, S. (2014) looked at the modernization of POs in Pondicherry Division. Kaniganat and Chaipoopirutana (2014) highlight the relationship between operational performance, relational performance, cost performance, organization, and customer satisfaction with the Thai Postal Service in Bangkok. Kumar and Kannaiah (2014) shows in their study the importance of investment avenues and attitude of the investors towards Post Office savings schemes, referring respondents in rural Karnataka. Kumar and Prakash (2014) attempted to study the importance of precious metals, such as gold, and the expectations of customers in buying gold through Post Offices after various discounts. Lykogiannis (2014) attempted to study the behavior, perception, and attitude of customers related to Greek Postal Services. Shafee and Prabakaran (2014) studied postal ATM introduction. Kumar (2015) conducted a comparative study of the role played by the Post Office in rural areas in developed countries, underdeveloped countries, and emerging economies. Mathew (2015) includes in her study the role of postal administration in providing the excellence services and enjoying the trust and loyalty in customers by diversifying themselves through innovative products and services

and the changing role of post offices by entering into new areas such as telephony and financial services as critical mega projects. Potadar et. al. (2015) emphasized the promotion of advertisements and service re-engineering. Saranya and Karthikeyan (2015) concluded in his paper on the importance of savings among investors in post office schemes to analyze the satisfaction they derive using the services of post offices and to identify SWOT. Birajdar and Joshi (2016) focused on the quality of services provided by India to its customers. The modernization of POs hesitates qualitatively, as there is a lack of professional attitudes and competitive foresight by members. Appropriate handling of customer complaints is necessary. For this study, Dombivli and the rest of the surroundings of the Mumbai suburbs were taken. Mehta and Mirchandani chose a developed approach towards preference in a tax-saving scheme. Mirchandani examined IT implementation in the US and other developed countries' postal providers. A lack of specific literature on the IT modernization of postal services as a gap is felt and observed to move with. Studies on IT-related UTUAT perspectives include TAM by Venkatesh and others in "User acceptance of information technology: Toward a unified view" (Venkatesh et al., 2003), referring to UTAUT. Validation of UTAUT by Venkatesh et al. (2003) in a longitudinal study found it to account for 70% of the variance in behavioral intention to use and about 50% in actual use.

Research Gap and Objectives

A wholesome lack of study was observed as imaginary. However, the results were not similar everywhere. Hence, there is a need to conduct an in-depth study on POs, which has not been studied previously. Hence, the goals include a more comprehensive study of:

- 1) Assess and analyze performance across various offices.
- 2) Measure the impact of IT Enabled services on the performance of post offices.

Methods, Analysis and Interpretation

The whole analysis was based on secondary data information taken from officially published statistics, including India Post Annual Report 2000-01 to 2020-21, Business performance report, IIMA Project Arrow - Blue Book, and UPU report, among others. Secondary data, as available in the reports, were collected and compiled in the form of cross-sectional and time-series datasets. This facilitated further data analyses. Data analysis techniques included graphical representation of trends, correlation, and regression analysis of financial and other related information of the department. Various secondary data inputs have been taken to look at various reforms and business upliftments with many IP's embedded initiatives. We have tried to examine the impact afterwards, with the development of variant statistics and events, such as infrastructure development, IT connectivity enhancement, an increase in the number of computer nodes, establishment of data centers and warehouses, establishment and increase in the number of automatic teller machines, pilot projects on the use of drones for delivery, and many other digital initiatives of communication. This investigation yielded many fruitful results, which

are discussed in the following section. The data collected were analyzed using the following tools:

1) PO-Box-Articles from 2000 to 2014-15

a) National Statistics

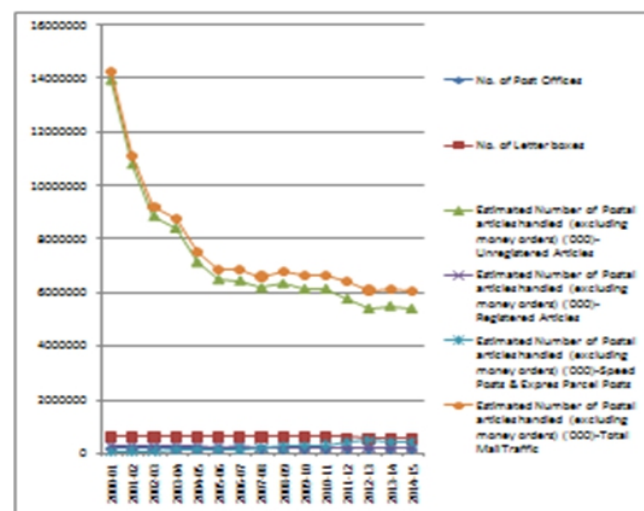


Figure 1. National Statistics

Source: Author's calculations.

Interpretation: The Estimated unregistered articles and total mail traffic were observed mostly in the declining phase between 2000-01 and 2005-06, with a major recovery later. However, a decline was also observed. Post IT modernization and other related initiatives, there is some positive recovery or stability.

b) State Analysis

ii) POs (in '000)

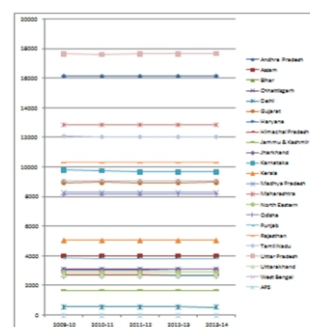


Figure 2.

ii) Boxes (in '000)

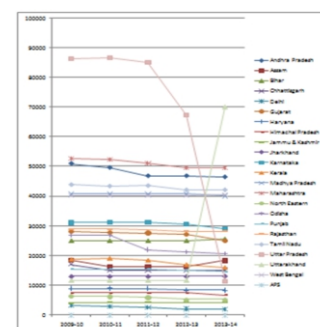


Figure 3.

Source: Author's calculations.

The interpretation (Fig. 2): All States have observed a throughout horizontal no change trend, with Uttar Pradesh having maximum no., followed by Andhra Pradesh, Maharashtra, Tamilnadu, Rajasthan, Karnataka and so on, having Jammu and Kashmir and Delhi on reverse. The interpretation (Fig. 3): Although Uttar Pradesh, having the top position at the beginning, faced a deep fall in number after 2011-12, reaching a very low of barely 10000, from the beginning 85000. Uttarakhand observed a maximal rise, exactly opposite to the United States, reaching 70000 in 2013-14, with states mostly observing a declining trend.

iii) Articles (in '000)

1. Unregistered Articles

2. Registered Articles

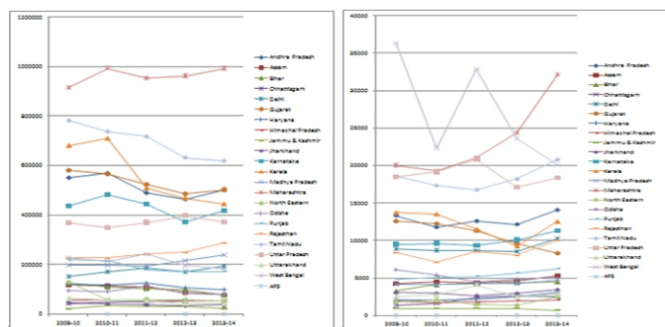


Figure 4. Unregistered Article

Figure 5. Registered Articles

The interpretation (Fig. 4) With the exception of Maharashtra, most of the states observed a decline, with recovery only in the modernization phase. In the lower bound, only the states of Rajasthan and Madhya Pradesh observed an increase.

The interpretation (Fig. 5): West Bengal, the top bound state as a whole, observed a decline, with Maharashtra rising significantly. States have observed a recovery after modernization.

iv) Articles (in '000)

1. Speed and Parcel

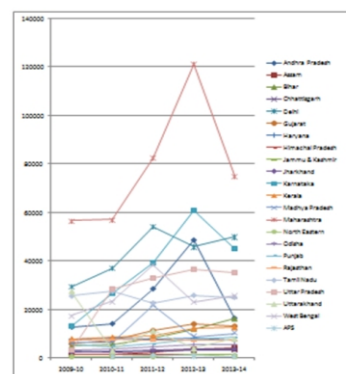


Figure 6. Speed and Parcel

2. Total Mail Traffic

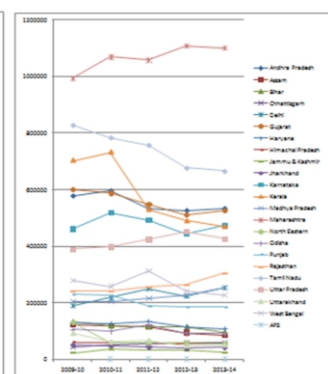


Figure 7. Total Mail Traffic

Source: Author's calculations.

The interpretation (Fig. 6): Maharashtra on the top is facing an acute fall, a post-modernization initiative, giving a surprising advent. Karnataka and Andhra Pradesh are facing a decline same way. In opponency, only Delhi was observed to have benefited from the initiative.

The interpretation (Fig. 7): On the upper bound, only the state of Maharashtra observed an increase but declined after the modernization initiative. In the mid-bound, Only Karnataka observed the recovery caused by modernization. Tamil Nadu is facing a decline. At the lower bound, Rajasthan was observed to have a positive impact on the event.

2) Estimated Number of Total Mail Merged Traffic Handled from 2000-01 to 2014-15

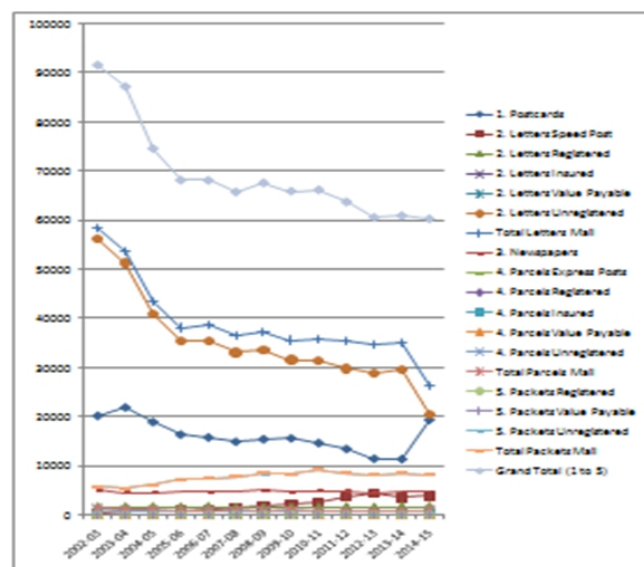


Figure 8. Total Mail Merged Traffic Handled

Source: Author's calculations.

Interpretation: The Grand Total of Mail Merged Traffic Handled, Total Letter Mail, and Letters Unregistered have observed a fast fall between 2002-03 and 2005-06. They showed a major recovery in such a fast decline after the period, but were still observed to decline. After taking IT modernization and other related initiatives, some positive recovery has been noticed in the trends. Total Packets Mail and Speed Post showed recovery. Letters unregistered and total letters mailed have shown a high fall post IT modernization, with postcards having a large increase, with the use of more sophisticated techniques.

3) General Statistics of Post Offices 2000-01 to 2014-15

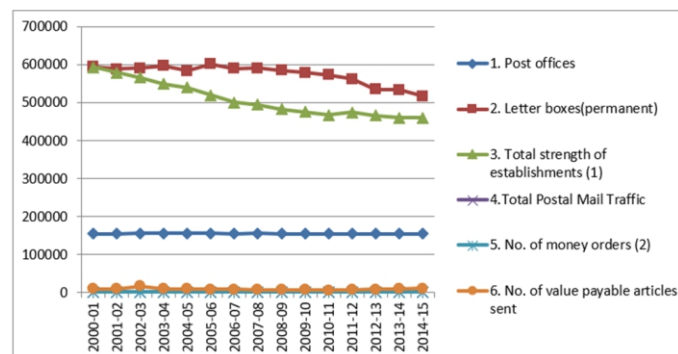


Figure 9. General Statistics of Post Offices

Source: Author's calculations.

Interpretation: There was a slight decline in No. of permanent letter boxes, bearing the lesser utility of maintenance expenses, with the decline increasing post-modernization. The Total Strength of Establishments also exhibited an excessive decline, bearing low utility. The same was observed with some recovery after modernization.

4) MOs (State-wise Analysis)

a) Number issued (in lakhs)

b) Amount issued (in Rs. Crore)

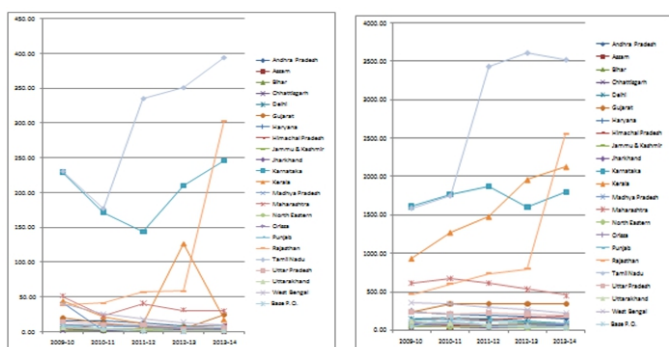


Figure 10. Money Order Number issued

Figure 11. Money Orders Amount issued

Source: Author's calculations.

The interpretation (Fig. 10): Tamilnadu has been observed as the most increasing state for the period, followed by Karnataka and Rajasthan, with high growth post-modernization. Kerala faced a fast decline, post a quick rise.

The interpretation (Fig. 11): Trends followed somewhat similar pattern here as well, with Tamilnadu on the top followed by Karnataka, Kerala and Rajasthan, with Rajasthan having a high rise and Kerala exceptionally also rising post modernisation initiative. Moderation can be observed in the growth of the Tamil Nadu figure, even with a decline in post-modernization.

5) Bank's (Saving)

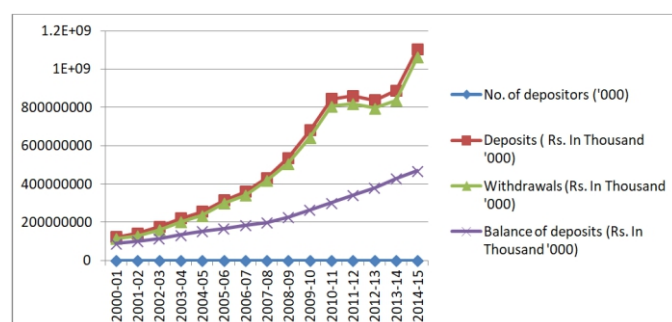


Figure 12. Post Office Savings Bank's Depositors and Deposits

Source: Author's calculations.

Interpretation: Both deposits and withdrawals have observed a highly rising trend with the same pattern throughout, with withdrawals below the level of deposits for the period between 2010-11 and 2013-14. The Balance of Deposits showed an exponential rise, with no change in no. of depositors.

6) Fund Flows from 2000-01 to 2014-15

a) Receipts

b) Deduction

c) Receipts and Charges

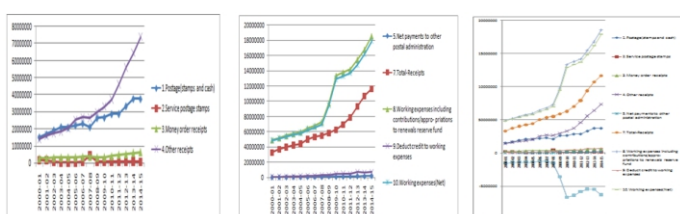


Figure 13. Receipts of POs Figure 14. Figure 15 Deductions of POs Figure 15. Receipts and Charges

The interpretation (Fig. 13): Other Receipts were on continuous rise, whereas receipts from postages (stamps and cash) were rising at a slow pace, post 2008-09.

The interpretation (Fig. 14) Renewal and Working Expenses (Net) are on an exponential rise, which is a matter of concern, stressing the revenue surplus. The total receipts also showed a high rise.

The interpretation (Fig. 15): As depicted above, expenses are on a higher rise than receipts, which is a matter of concern. The same results in increasing net expenditures, causing an exponential strain on the budget allocation front (deficit). Thus, there is a need to raise receipt.

7) Analysis of Correlation

Table 1. Correlation analysis

Variable Name	Correlation	Variable To	Correlation	Variable To
Savings Bank, Outstanding	0.979	Revenue	0.946	Expenditure
Recurring Deposit, Outstanding	0.798	Revenue	0.541	Expenditure
Time Deposit, Outstanding	0.529	Revenue	0.159	Expenditure
NSS 87, Outstanding	-0.343	Revenue	-0.335	Expenditure
NSS 92, Outstanding	-0.979	Revenue	-0.892	Expenditure
C.T.D., Outstanding	-0.887	Revenue	-0.839	Expenditure
M.I.S., Outstanding	0.488	Revenue	0.734	Expenditure
P.P.F., Outstanding	0.989	Revenue	0.917	Expenditure
Fixed Deposit, Outstanding	0.332	Revenue	0.293	Expenditure
Senior Citizen, Outstanding	0.109	Revenue	0.434	Expenditure
Total, Outstanding	0.915	Revenue	0.922	Expenditure
N.S.C. VIII, Outstanding	0.808	Revenue	0.477	Expenditure
K.V.P., Outstanding	-0.843	Revenue	-0.547	Expenditure
Grand Total, Outstanding	0.759	Revenue	0.866	Expenditure
Revenue	0.872	Expenditure		
Net Deficit	0.894	Expenditure		
Railway Charges	-0.929	Gross Revenue	-0.911	Expenditure
Airmail Charges	-0.015	Gross Revenue	0.375	Expenditure
Mail Motor Service Charges	0.875	Gross Revenue	0.993	Expenditure
Others	0.924	Gross Revenue	0.976	Expenditure
Sale of Stamps	-0.029	Gross Revenue	-0.051	Expenditure
Postage Realised in Cash	0.979	Gross Revenue	0.874	Expenditure
Other Net Receipts	-0.795	Gross Revenue	-0.842	Expenditure
Receipts - Money Orders, IPO	0.998	Gross Revenue	0.883	Expenditure
Net Other Receipts	0.944	Gross Revenue	0.753	Expenditure
Pay & Allowances etc.	0.998	Expenditure	0.851	Gross Revenue
Accounts & Audit	0.972	Expenditure	0.775	Gross Revenue
Pensionary Charges	0.994	Expenditure	0.902	Gross Revenue
Stamps, Postcards etc.	-0.217	Expenditure	-0.438	Gross Revenue
Stationery & Printing etc.	0.861	Expenditure	0.939	Gross Revenue
Maintenance of Assets	0.887	Expenditure	0.934	Gross Revenue
Conveyance of Mails	0.871	Expenditure	0.941	Gross Revenue
PLI Fund up to the year	0.924	Expenditure		
No. of Policies up to the year	0.975	Expenditure		
Value of Business up to the year	0.947	Expenditure		
Premium during the year	0.931	Expenditure		

Source: Author's calculations.

Interpretation: For outstanding balances, P.P.F. Outstanding and savings banks had a high correlation with revenue. Savings Bank Outstanding and P.P.F. Outstanding also had a high correlation with expenditure, depicting them as one of the key factors influencing postal performance. Grand Total Outstanding (overall) 'r' was 0.76 and 0.87 with Revenue and Expenditure respectively. Revenue 'r' was 0.87 with Expenditure. Returns on expenditure and productivity need to be improved to achieve Unit Correlation with a break-even level. Net Deficit had a positive correlation of 0.89 with Expenditure. The same needs to be focused on decreasing excess expenses, thereby reducing the net deficit.

Regarding expenses in detail, Railway Charges had a negative correlation with Gross Revenue and Expenditure at -0.93, -0.91, respectively, depicting railway charges declining as a proportion of expenses, but expenses still increase. On the other hand, gross revenue does not increase proportionally with railway charges. This suggests that the productivity and cost efficiency of railway charges are questionable and need to be focused upon. Airmail Charges had a negative correlation with the Gross Revenue having 'r' -0.02, and had a positive correlation with Expenditure, at 'r' 0.38. This suggests that the productivity and cost efficiency of airmail charges are questionable and need to be focused upon. Mail Motor Service Charges had a positive correlation with Gross Revenue and Expenditure, with correlation coefficient of 0.88 and 0.99, respectively. The excess correlation with expenditure must be focused on to reduce costs. Other Charges also have a positive correlation with Gross Revenue and Expenditure, with correlation coefficients of 0.92 and 0.98 respectively. The excess correlation with expenditure may be focused on reducing costs. Pay and allowances also had a positive correlation with Gross Revenue and Expenditure, with correlation coefficients of 0.998 and 0.85, respectively. Accounts and audit also had a positive correlation with Gross Revenue and Expenditure, with correlation coefficient value of 0.97 and 0.78 respectively. Pensionary Charges also have a positive correlation with Gross Revenue and Expenditure, with correlation coefficient of 0.99 and 0.9 respectively. Stamps and Postcards had a negative correlation with Gross Revenue, with correlation coefficients of -0.22 and -0.44 respectively. Unproductive expenses must be eradicated, as previously observed. Stationery & Printing had a positive correlation with Gross Revenue and Expenditure, having 'r' 0.86, 0.94 respectively, being observed productive. Maintenance of Assets had a positive correlation with Gross Revenue and Expenditure, having 'r' 0.89, 0.93 respectively, being also observed productive. The conveyance of mail also had a positive correlation with Gross Revenue and Expenditure, having 'r' 0.94, 0.87, respectively, and was also observed to be productive.

Discussing the components of revenue, Sale of Stamps had a lesser but negative correlation with revenue and expenditure, having a negative correlation coefficient value of -0.03 and -0.05 respectively. Hence, this component was categorized as having no influence on the low-expenditure component.

Postage Realized in Cash had a high positive correlation with revenue and expenditure, having 'r' 0.98, 0.87 respectively, being observed well productive. Other Net Receipts had a negative correlation with revenue and expenditure, with negative correlation coefficient values of -0.795 and -0.84, respectively. It needs to be tackled, and unproductive sources need to be wound up from the operation. Receipts from Money Orders and IPO had a high positive correlation with revenue and expenditure, having 'r' 0.998, 0.88 respectively, being observed productive. Net Other Receipts had a high positive correlation with revenue and expenditure, having 'r' 0.94, 0.75 respectively, being also productive.

Discussing the insurance business, the PLI Fund made positive 'r' 0.92 with expenditure. This resulted in a positive and productive picture of the expenditure. No. of Policies also had a positive correlation coefficient value of 0.98 with Expenditure. This brought about a positive and productive picture of expenditure. The value of Business also had a positive correlation coefficient value of 0.95 with Expenditure. This creates a positive and productive picture of expenditures. The premium during the year also had a positive correlation coefficient of 0.93 with expenditure. This resulted in a positive and productive picture of the expenditure. Overall, expenditure had the maximum positive impact on the increase in policies.

The graph below better presents the picture in rural areas and the whole segment:

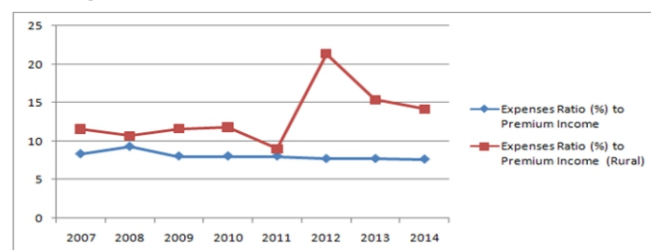


Figure 16. Ratio analysis

Source: Author's calculations.

Interpretation: Expenses to Premium ratio as a whole is, on average, on a straight-line trend, whereas in the case of the rural market, it increased after 2011, followed by decline, but still, it is above the overall market ratio, which depicts the excessive expenses over premium in rural areas.

8) Regression Analysis

a) Letters Unregistered to No. of Letter Boxes

. regress LettersUnregistered NoofLetterboxes					
Source	SS	df	MS	Number of obs	=
Model	55540149.3	1	55540149.3	F(1, 4)	= 7.72
Residual	28764954.1	4	7191238.52	Prob > F	= 0.0499
Total	84305103.4	5	16861020.7	R-squared	= 0.6588
				Adj R-squared	= 0.5735
				Root MSE	= 2681.6

LettersUnr-d	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
NoofLetter-s	.134245	.0483055	2.78	0.050	.0001275 .2683624
_cons	-45149.46	26613.33	-1.70	0.165	-119039.9 28740.98

Source: Author's calculations.

Interpretation: The results gave an R-square value of 0.6588, which means that 65.88% of the variation in unregistered letters was caused by a change in the number of letter boxes. There is a need to explore other causes that result in the remaining variations.

b) Postcards to No. of Letter Boxes

```
. regress Postcards NoofLetterboxes
```

Source	SS	df	MS	Number of obs	=	6
Model	492322.85	1	492322.85	F(1, 4)	=	0.04
Residual	45457591.6	4	11364397.9	Prob > F	=	0.8453
				R-squared	=	0.0107
				Adj R-squared	=	-0.2366
				Root MSE	=	3371.1
Total	45949914.5	5	9189982.9			

Postcards	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
NoofLetter-s	-.0126392	.060725	-0.21	0.845	-.1812389 .1559605
_cons	21301.09	33455.73	0.64	0.559	-71586.92 114189.1

Source: Author's calculations.

Interpretation: The variables had an R-square value of 0.0107, which means that only 01.07% of variation in the use of postcards was caused by a change in the number of letter boxes. There are some other major causes not related to the availability of post boxes and may be related to some consumer-related aspects resulting in variation in usage of postcards.

c) No. of Letter Boxes to Postcards and Letters Unregistered

```
. regress NoofLetterboxes Postcards LettersUnregistered
```

Source	SS	df	MS	Number of obs	=	6
Model	2.9831e+09	2	1.4916e+09	F(2, 3)	=	45.32
Residual	98729147.9	3	32909716	Prob > F	=	0.0057
				R-squared	=	0.9680
				Adj R-squared	=	0.9466
				Root MSE	=	5736.7
Total	3.0818e+09	5	616369448			

NoofLetter-s	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Postcards	5.984154	1.112152	5.38	0.013	2.44479 9.523518
LettersUnr-d	7.773843	.8210689	9.47	0.002	5.160835 10.38685
_cons	241150.6	36135.15	6.67	0.007	126152.4 356148.8

Source: Author's calculations.

Interpretation: Testing the inverse relationship impact, the variables had an R-square value of 0.9680, which means that, in turn, 96.80% of the variation in change in no. of letter boxes is caused by a change in the use of postcards and unregistered letters.

d) No. of Post Offices to Unregistered Post, Registered Post and Speed and Express Post

```
. regress NoofPostOffices PostalarticlesexcludingMDU PostalarticlesexcludingMOR
> PostalarticlesexcludingMDS
```

Source	SS	df	MS	Number of obs	=	6
Model	11760.2545	3	3920.08482	F(3, 2)	=	1.57
Residual	4979.07888	2	2489.53944	Prob > F	=	0.4111
				R-squared	=	0.7026
				Adj R-squared	=	0.2564
				Root MSE	=	49.895
Total	16739.3333	5	3347.86667			

NoofPostOf-s	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Postalarti-U	-.0002173	.0002328	-0.93	0.449	-.0012191 .0007845
Postalarti-R	.0008964	.0029608	0.30	0.791	-.0118427 .0136355
Postalarti-S	-.0012144	.0009374	-1.30	0.324	-.0052476 .0028187
_cons	156407.2	2115.542	73.93	0.000	147304.7 165509.6

Source: Author's calculations.

Interpretation: Testing the inverse relationship impact, the variables had an R-Square value of 0.7026, which means that, in turn, 70.26% of the variation is caused by a change in unregistered, registered, and speed and express post.

e) Total Strength to Total Mail Traffic, Money Orders and Value Payable Articles

```
. regress Totalstrengthofestablishme TotalPostalMailTraffic Noofmoneyorders2 No
> ofvaluepayablearticles
```

Source	SS	df	MS	Number of obs	=	6
Model	211964302	3	70654767.4	F(3, 2)	=	24.03
Residual	5879911.19	2	2939955.59	Prob > F	=	0.0402
				R-squared	=	0.9730
				Adj R-squared	=	0.9325
				Root MSE	=	1714.6
Total	217844213	5	43568842.7			

Totalstren-e	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
TotalPosta-c	155.2085	46.3987	3.35	0.079	-44.42904 354.846
Noofmoneyo-2	101.7412	20.36883	4.99	0.038	14.10124 189.3813
Noofvaluep-s	-15.90928	2.873854	-5.54	0.031	-28.27448 -3.544086
_cons	408735.2	31873.92	12.82	0.006	271592.8 545877.6

Source: Author's calculations.

Interpretation: Testing the inverse relationship impact, the variables had an R-square value of 0.7026, which means that, in turn, 70.26% of the variation is caused by a change in unregistered, registered, and speed post.

f) Regression Graph - Total Strength to Post Offices

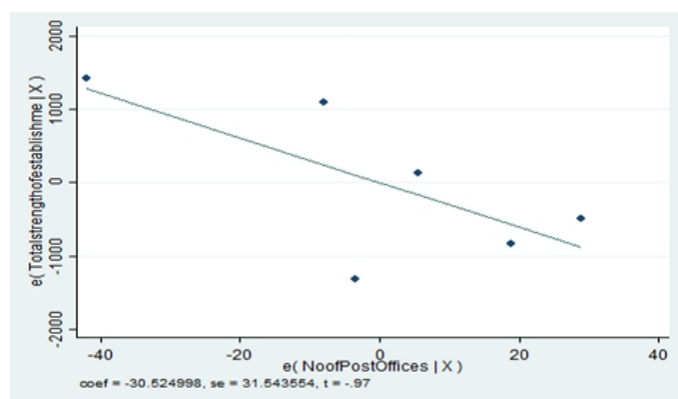


Figure 17. Regression Graph - Total Strength to Post Offices

Source: Author's calculations.

Interpretation: A negative relationship was observed in the regression of total strength to number of post offices. This depicts the excess expend and no-productivity scenarios. The department needs to improve productivity in order to improve the relationship.

g) Regression Graph - Total Strength to Total Mail Traffic

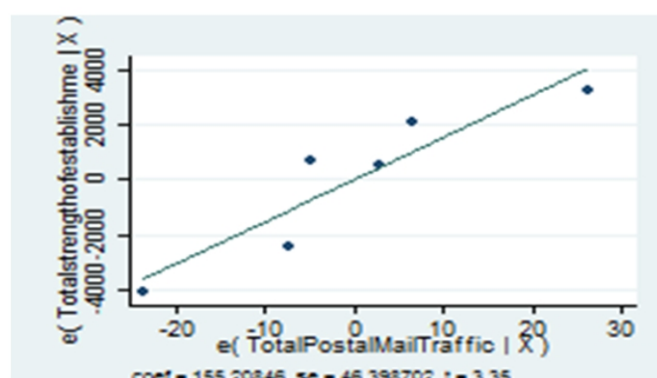


Figure 18. Regression Graph - Total Strength to Total Mail Traffic

Source: Author's calculations.

Interpretation: A positive relationship was observed in the regression of total strength to total postal mail traffic. Hence, the department must improve its strengths as much as possible.

h) Regression Graph - Total Strength to Money Orders

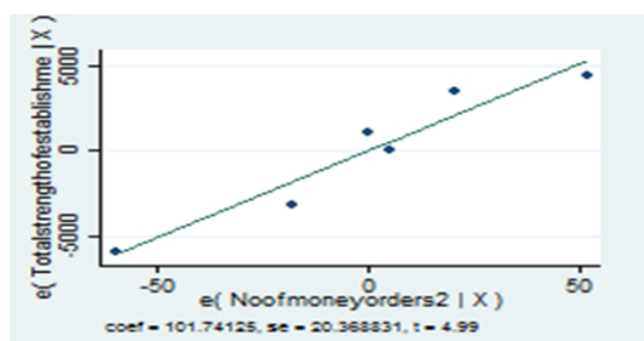


Figure 19. Regression Graph - Total Strength to Money Orders

Source: Author's calculations.

Interpretation: A positive relationship is observed in the case of the regression of total strength to the sale of money orders. Hence, the department needs to improve its strengths as much as possible in order to improve ahead in the segment.

i) Regression Graph - Total Strength to Value Payable Articles

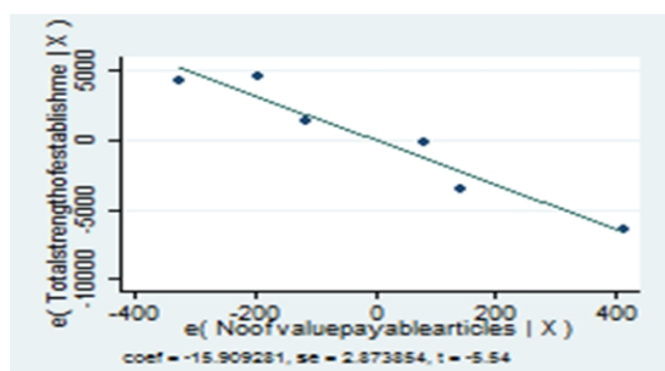


Figure 20. Regression Graph - Total Strength to Value Payable Articles

Source: Author's calculations.

Interpretation: A negative relationship is observed in the regression of total strength to the sale of value-payable articles. To improve ahead, the department needs to explore other causes affecting the change in sales of such products.

CONCLUSION AND RECOMMENDATIONS

For IP, offering a strand is always a challenge, which again became a part of their lives and aimed at total inclusion. We attempt to look at several perspectives and obtain diverse results. The key findings are as follows.

For India Post as a whole, the estimated No. of the Postal Articles handled have been observed to falling between 2000-01 and 2005-06, with a major recovery later. Post IT modernization, some positive recovery has been noticed in the trends. For No. of Letter boxes, Uttar Pradesh, which had the top position at the beginning, faced a deep fall post 2011-12. Uttarakhand observed a maximum rise, while other states mostly observed a decline.

For the Estimated Number of Postal articles handled, in the case of Unregistered Articles, except Maharashtra, most states observed

a decline, with a recovery in the modernization phase. Only the states of Rajasthan and Madhya Pradesh observed an overall rise.

modernization phase. Only the states of Rajasthan and Madhya Pradesh observed an overall rise. For Registered Articles, West Bengal wholly observed a decline, with Maharashtra rising significantly. Other States observed recovery after modernization. For Speed Posts & Express Parcel Posts, Maharashtra is facing an acute fall, post-modernization. Karnataka and Andhra Pradesh are facing a decline same way. Only Delhi observed benefitted from this initiative. For Total Mail Traffic, only Maharashtra faced upraises but declined post-modernization. Only Karnataka observed the recovery caused by modernization. Tamil Nadu faced a decline throughout the period. Rajasthan observed a positive impact of the event.

For the Estimated Number of Total Mail Merged Traffic Handled from 2000-01 to to 2014-15, The Grand Total of Mail Merged Traffic Handled, Total Letter Mail and Letters Unregistered observed a fast fall between 2002-03 and 2005-06. They showed major recovery after this period. After IT modernization, some positive recovery has been noticed. Total Packets Mail and Speed Post Shown as Recovery. Letters Unregistered and Total Letters Mail have shown a high fall after IT modernization, with postcards receiving high upraises.

Observing the General Statistics of Post Offices, there was a steep decline in the No. of permanent letter boxes, bearing a lesser utility of the maintenance expend, with a sharp decline after modernization. The Total Strength of Establishments showed a substantial decline, bearing low utility. The same shows some recovery after modernization. For Total Number and Amount of Money Orders, Tamilnadu was a foremost high rising state, followed by Karnataka and Rajasthan, with upraise post modernisation and Kerala facing a fast decline. Taking Amount as a base, trends followed a similar pattern. Moderation can be observed in the growth of the Tamil Nadu figure, even with a decline in post-modernization.

For banks from 2000-01 to to 2014-15, deposits and withdrawals observed a highly rising trend with the same pattern throughout, with withdrawal below a level that of deposits for the period between 2010-11 and 2013-14. The Balance of Deposits observed throughout the exponential rise, with the No. of the depositors remaining in straight lines.

Observing Receipts and Charges of the Post Offices from 2000-01 to to 2014-15, in the case of Receipts, Other Receipts are on a continuous rise, whereas Receipts from Postage are on a low-speed rise after 2008-09. For deductions, renewal and working expenses are on an exponential rise, which is a matter of concern, stressing revenue surplus. The total receipts showed a significant increase. Expenses are on a higher rise than receipts, which is a matter of concern. The same results in increasing net expenditures, causing an exponential strain on the budget allocation front. Thus, there is a need to raise receipt.

Extending the analysis using Pearson Correlation, in the case of outstanding balances, P.P.F. Outstanding and Savings Bank Outstanding has shown a maximum correlation with revenue in recent decades. Correlation with Expenditures,

decades. Correlation with Expenditures, Savings Bank Outstanding, and P.P.F. Outstanding has shown maximum correlation, depicting it as one of the key factors influencing postal performance. Expenditure return and productivity need to be improved for a while to achieve Unit Correlation at the level of Break Even. Expenditure needs to be focused on by decreasing excess expenses and hence reducing the net deficit. Railway charges are declining as a proportion of expenses, but they continue to increase. The productivity and cost efficiency of railway charges are questionable and need to be focused on. The productivity and cost efficiency of airmail charges are questionable and need to be improved. Negatively expending unproductive expenses must be eliminated. Other net recipients need to be tackled and productive and unproductive sources need to be wound up. Receipts from Money Orders are observed to be productive here. Net Other Receipts are also observed to be productive. No. of policies also brings a positive productive picture of expenditures. Expenditure had a maximum positive impact on the increase in No. of policies here. Excessiveness of expenses over premiums exists in the rural market.

In the case of letters unregistered to the No. of Letter Boxes, 65.88% of the variation in Letters Unregistered was caused by a change in No. of Letter Boxes. There is a need to explore other causes that result in the remaining variations. For Postcards to No. of Letter Boxes, only 01.07% of the variation in the Use of Postcards was caused by the change in No. of Letter Boxes. There are some other major causes not related to the availability of post boxes and may be related to some consumer-related aspects resulting in variation in usage of postcards. For No. of letter boxes to postcards and unregistered letters, 96.80% of the variation in change in no. of Letter Boxes is caused by a change in the usage of postcards and unregistered letters. For, No. of post offices to unregistered posts, registered posts, and speed and express posts, 70.26% of variation in change in no. of Post Offices is caused by a change in unregistered, registered, and speedy posts. For Total Strength to Total Mail Traffic, Money Orders and Value Payable Articles, 70.26% of the variation in change in no. of Post Offices is caused by a change in unregistered, registered, and speeded posts.

Policy Recommendation, Future Directions and Implications of the Study

The study provides an assessment of the performance across segments and circles, being useful and utilizable for the department of posts, the government of India, to improve its regional integration and product delivery in the assessed regions, especially in the earmarked segments of development. In addition, the study is very useful for postal services across the globe that are of the kind and have similar operating circumstances, especially in South Asia, the Middle East, and the developing world. Some of the key implications and recommendations are as follows:

A deep fall in the number of letter boxes thoroughly implies that the postal sector is moving its business focus from service inclusion, especially from the less used avenues to the new modes of mail communication, such as digital posts. Registered and unregistered mail

traffic is more congregated in the state of Maharashtra, perhaps bearing commercial viability and a vast business sector using such services. It is recommended that such services be enhanced and redesigned in the respective circles to address the needs of the core consumer segment better. For the speed post and express parcel segment, Delhi is observed as having vastly benefitted from the products. Maharashtra was observed to improve in this segment. Hence, in terms of commercial development, the largest region of the country should focus on a priority basis to better address the growth prospects of the segment.

For the Money Orders segment, with Tamilnadu, Karnataka, and Rajasthan as the leading states, the business may be more focused in the circles to make the segment more indulged with ultramodern customized products according to the needs of the consumer segment. The business in Kerala may be condensed to leap up excess costs incurred by the department. 65.88% of the variation in Letters Unregistered was caused by a change in No. of Letter Boxes. There is a need to explore other causes that result in the remaining variations. Only 01.07% of the variation in the Use of Postcards was caused by the change in No. of Letter Boxes. There are some other major causes not related to the availability of post boxes and may be related to some consumer-related aspects resulting in variation in usage of postcards.

These causes should be explored in further official and voluntary investigations to better address the needs of the segments.

For the Total Strength to improve the productivity of its post offices, to improve the relationship. For the Total Strength to Total Mail Traffic and Money Orders, the department needs to improve its strengths as much as possible to improve ahead in the segment. To improve the total strength of valuing payable articles, the department needs to explore other causes affecting the change in sales of such products.

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Looking for Vikalpas: Bikalp Herbals and the Competitive Herbal Tea Market

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Executive Summary

Bikalp Herbals, a nascent player in the herbal tea market, seeks to establish a strong brand for its therapeutic infusions tailored to lifestyle disorders. This journey is fraught with challenges, notably in conducting comprehensive market research, executing rigorous product development, and devising strategic marketing initiatives to carve out a niche in a competitive landscape dominated by established players like Patanjali. Central to Bikalp Herbals' mission is the validation of its products for safety, efficacy, and quality, critical for earning the trust of consumers and healthcare professionals. Noteworthy endorsements, such as recognition from the Prime Minister of India through the Namo App, participation in the Viksit Bharat@2047 initiative, collaborations with reputable institutions like Kumaon University and CSIR, and business model validation by the Global Jury of the Wadhvani Foundation, bolster Bikalp Herbals' credibility and

attractiveness to investors and strategic partners. This case examines the dual opportunities and challenges Bikalp Herbals faces in navigating product validation and establishing itself in the herbal tea market.

Introduction and Background of the Challenge

Ms. Stuti Lal, the visionary founder of Bikalp Herbals, confronts a pivotal decision in her quest to build a reputable brand for herbal therapeutic infusions. The burgeoning market for herbal products, driven by increasing consumer demand for natural health solutions, is fiercely competitive. Ms. Lal must validate her products' safety, efficacy, and quality to gain credibility amidst competitors offering cost-effective herbal solutions. A firm commitment to sustainability and ethical sourcing further distinguishes Bikalp Herbals, positioning it as a frontrunner in the herbal products arena.

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ARTICLE INFO

Received: 25/03/2024 | Revised: 14/06/2024 | Accepted: 30/06/2024 | Published Online: 31/10/2024

DOI: 10.13140/RG.2.2.27025.24167

CITATION

Ranjan., R., Stuti., L. 2024 Looking for Vikalpas: Bikalp Herbals and the Competitive Herbal Tea Market, Integral Review-A Journal of Management. 14(2): 63–64. DOI: 10.13140/RG.2.2.27025.24167

The relentless demands of modern work culture often lead to lifestyle disorders such as obesity, diabetes, and cardiovascular diseases. As professionals neglect their health in pursuit of career advancement, there is a growing consumer desire for convenient, palatable solutions. Establishing trust is imperative in this landscape, where consumers seek safe, effective, and high-quality herbal products. Bikalp Herbals aims to earn this trust through rigorous validation processes, ensuring safety and quality.

Market Research and Product Development

The intersection of food and medicine in nutrition and health policies creates confusion for consumers and health professionals alike. The increasing popularity of functional foods—products that offer health benefits beyond basic nutrition—highlights a gap in regulatory clarity. Recognizing the challenges associated with exporting herbal products, Ms. Lal has established a checklist to comply with packaging, labeling, and ingredient regulations, aligning with guidelines from Ayush Executive Council and the Ministry of Ayush, Government of India. This proactive approach ensures Bikalp Herbals meets international standards, bolstering its commitment to quality and compliance in both local and global markets.

Maintaining Credibility Amidst Conflict

The formulation of therapeutic infusions, such as “kadha”, particularly during the COVID-19 pandemic, poses unique challenges. While kadha offers numerous health benefits, its complex preparation process can deter consumers. Selecting and processing the right herbs for maximum efficacy while ensuring a pleasant taste is paramount. To address this issue, Bikalp Herbals introduced the Dip-n-Sip infusion bag—an innovative, user-friendly product that simplifies the infusion process. With insights drawn from 42 years of research by Ms. Lal's father, Dr. V. K. Lal, the Dip-n-Sip product aims to provide quick, effective results while enhancing consumer experience.

The Necessity of Rigorous Validation

In the healthcare sector, establishing trust is crucial for marketing products that directly impact patient health. Rigorous safety and efficacy studies provide the evidence necessary to support product claims. By prioritizing scientific research and testing, Bikalp Herbals demonstrates its commitment to patient well-being, ultimately fostering stronger relationships with stakeholders.

Building Trust Through Transparency and Accountability

Partnerships with esteemed institutions, such as Kumaon University and CSIR, enable Bikalp Herbals to conduct essential research on the efficacy and safety of its products. These collaborations enhance the company's credibility and facilitate compliance with regulatory standards, contributing to the establishment of Bikalp Herbals as a leader in evidence-based herbal medicine.

Leveraging External Validation for Growth

The Wadhvani Foundation's validation of Bikalp Herbals' business model serves as a catalyst for attracting investors and strategic partnerships. Participation in esteemed events, such as the BIRAC Innovation Showcase and recognition from CSIR and the Prime Minister's initiatives, underscores the company's potential for global growth. These endorsements not only validate the business model but also position Bikalp Herbals as an influential player in the herbal product sector.

Dilemma Faced by Ms. Stuti Lal

Ms. Stuti Lal is confronted with a multifaceted dilemma as she strives to establish a successful and sustainable brand for Bikalp Herbals. Her challenges include:

1. Conducting Extensive Market Research: Understanding consumer preferences and needs is critical to inform product development strategies. The evolving global job market creates a demand for health solutions that cater to busy lifestyles.
2. Developing High-Quality, Effective Products: The challenge lies in integrating Ayurvedic “rasayana” herbs known for their holistic benefits into palatable formulations that resonate with consumers.
3. Implementing Strategic Marketing Efforts: Differentiating Bikalp Herbals from established competitors requires innovative marketing strategies that highlight the unique value of its products.
4. Ensuring Rigorous Product Validation: Adhering to international standards for safety and efficacy validation is essential for maintaining credibility in the herbal products market.
5. Building and Maintaining Trust with Consumers and Healthcare Professionals: Transparency and accountability are vital for fostering long-term relationships with stakeholders.
6. Leveraging External Validation: Ms. Lal must strategically harness external endorsements to attract investments and partnerships while reinforcing her brand's credibility.

What next?

Bikalp Herbals stands at a crossroads, poised to make a significant impact in the competitive herbal tea market. Ms. Stuti Lal's commitment to quality, sustainability, and transparency positions the company for success. By navigating the challenges of product validation and strategic positioning, Bikalp Herbals has the potential to redefine consumer trust in herbal remedies, paving the way for sustainable growth and innovation in the herbal products industry.

Transformation of Civil Aviation Sector in Uttar Pradesh: A Case Study on Development of Noida International Airport on PPP Mode

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Abstract

Should the adage "all roads lead to Rome" have served as the primary gauge of a city's economic might in antiquity, then a contemporary city's corresponding assertion would have to be "all airlines land here." Global air transportation networks will be crucial in the future for determining the economic power of cities, regions, and nations, just as shipping, railroad, and subsequently, highway systems were in the past. Economists and policymakers are interested in how geography, centrality, and remoteness affect how economic activity is distributed in a globalizing world. Some scholars have declared the "End of Geography" (O'Brien, 1992) or the "Death of Distance" (Frances, 2001) because of major transportation and telecommunications advancements that have lowered the cost of interaction; for instance, the real price of air freight decreased by 0.5% annually between 1973 and 1993 (Hummels, 2007). Despite this, recent research still suggests that geography plays a significant role in how economic activity is distributed. The only method currently in use for moving people or cargo around the world in a single day is air transportation. As such, it is frequently regarded as the main force behind globalization (Hummels, 2007). The growth of the population and per capita GDP have been two major factors driving the aviation industry's exponential growth in recent decades (Profillidis and Botzoris, 2015). Some claim that the economic effects of aviation extend beyond the aviation value chain and the industry itself (Allroggen, 2013; Lakshmanan, 2011). The causal relationship between aviation and the wider economy remains unresolved even though numerous studies (e.g., Campante and Yanagizawa-Drott (2018), Lakew and Bilotkach (2018), and Sheard (2019)) have empirically examined these wider economic impacts. This is due to methodological shortcomings. (Zak and Getzner, 2014).

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ARTICLE INFO

Received:08/02/2024 | Revised: 11/06/2024 | Accepted: 30/06/2024 | Published Online: 31/10/2024

DOI: 10.13140/RG.2.2.31101.58089

CITATION

Khan ., A.T., 2024 Transformation of Civil Aviation Sector in Uttar Pradesh: A Case Study on Development of Noida International Airport on PPP Mode, Integral Review-A Journal of Management. 14(2): 65–71. DOI: 10.13140/RG.2.2.31101.58089

India's commercial airline industry has grown to be one of the fastest-growing in the nation since 2014. With the UK expected to lag behind in 2024, India has overtaken the UK to become the third-largest regional airline marketplace globally. To accommodate the expanding demand, the Indian government has been working to expand the number of airport terminals. As of March 2024, India has 149 operational airports, with plans to increase that figure to 190–200 by FY40. Since the nation's economic growth and sustainability depend on the availability of transportation infrastructure, it is viewed as a tactic to promote commercial expansion. Infrastructure is viewed as essential to any socio-economic and sustainable growth, even though it does not always lead to development.

In India, Civil Aviation is a subject in the Central List. The Central Government announced the Regional Connectivity Scheme (RCS) with the motto of UDAN (Ude Desh ka Aam Nagrik) with an ambitious plan of developing new airports in tier-II cities to harness the untapped potential of Indian skies. The scheme had support for infrastructure development as well as an incentive structure for airlines to take up new undeveloped routes. Incentives were to be in the form of Viability Gap Funding (VGF), concessional rates of taxes, exemption from airport charges, etc to attract the airlines in small sector businesses.

State governments generally do not have an aggressive policy approach on this subject. The state Civil Aviation Department (CAD) of UP had a total budget of around rupees 100 crores during the year 2016-17. It was mainly used for the maintenance and operation of VIP aircraft. CAD had three helicopters and three fixed-wing aircraft. CAD Also had 18 airstrips situated in almost all divisional headquarters capable of landing these small fixed aircraft.

When Yogi Adityanath became Chief Minister of Uttar Pradesh in 2017 UP had only two fully functional airports at Lucknow and Varanasi and two occasional/seasonal airports at Gorakhpur and Agra. The officers were asked to design the first-ever State Civil Aviation Policy to promote the Civil Aviation sector. Civil Aviation Policy for UP was designed to develop Noida International Airport on PPP mode as the largest airport in India and upgrade 18 of its existing airstrips, which were previously used for operating VIP flights only, into fully functional airports capable of handling commercial flights of at least ATR (72 seater passenger) aircraft. The central RCS/Udaan scheme had a provision of giving financial support of up to Rs 100 crore per airport for development provided any air operator bids for a route covering that airport. On 24th August 2017, the Civil Aviation Promotion Policy of Uttar Pradesh 2017 was notified.

Between 2017 and 2021 multiple rounds of RCS bidding were organized by the Government of India in which UP got sixteen additional airports Agra, Kanpur, Aligarh, Prayagraj, Azamgarh, Bareilly, Chitrakoot, Gorakhpur, Hindon, Jhansi, Moradabad, Sonbadra (Muirpur), Shravasti, Ayodhya, Ghazipur, Kushinagar which received a bid by an airline operator.

India had 74 operational airports in 2014. But, as of 29th March 2024 the total number of operational airports in India now stands

at 149 including 33 international airports. In UP, a total of 14 airports are operational now, and commercial flights are scheduled in the summer schedule of 2024, making Uttar Pradesh the state having the highest domestic airports in India. Noida International Airport was planned for PPP development and Zurich Airport is developing the airport to be operational by 2025.

Civil Aviation Promotion Policy of UP: the Background, Scope and Reality

In 2014-15, Sri Alok Bisaria, a senior management representative from Surya Food Agro Ltd having a brand by the name of Priya Gold, a biscuit manufacturing company had a proposal of investing around Rs 1000 crore in establishing a biscuit manufacturing unit in Varanasi to cater to the requirements of Demand from Bihar. Even after serious efforts, he could not get the appropriate land to establish the factory. The Government officials asked him to explore in Prayagraj City for establishing a Factory for the need of production for Bihar. After discussing with top management, the idea of alternate land in Prayagraj was not considered because the owners wanted the factory site not to be more than 30 minutes away from the nearest airport. The owners frequently visit the factory and they will not be interested in establishing any factory where they have difficulty in personally reaching that place. Connectivity through air is the essential component of any development plan for eastern UP. Did it explain the reasons for the under-development of the geographical area which is covered in the eastern and Bundelkhand region of Uttar Pradesh? It set the agenda but no one knew - how to achieve this.

The time has flown by and in 2017, Priyagold could not find a site near the airport even after 3 years. Things have changed at the government level now. The Regional Connectivity Scheme (UDAN scheme) of the Ministry of Civil Aviation was in place and the state was ready to take advantage of the provisions in that scheme. However, this was a difficult idea to get approval from the state government as state governments always have budget constraints to finance big projects.

One day Mr. Alok Bisaria of Priyagold met Mr S P Goyal who had recently joined as Principal Secretary to the Hon'ble Chief Minister and also Principal Secretary to the Civil Aviation department. He also tried but could not make land available to Priyagold near Varanasi Airport. This was a realization of the government that to develop the state, we need new airports.

The draft policy document was made highlighting the state government will not be required to spend much, but the central government will give up to Rs 100 crore per airport. This way the state can upgrade existing airstrips to fully functional airports with little extra expenditure. The then Chief Secretary Mr Rajive Kumar approved it at his level and the Hon'ble Chief Minister was briefed and he gave his consent to the idea. The proposal for Civil Aviation Policy and Jewar Airport got cabinet approval. This was the start of a new aviation era in the history of Uttar Pradesh.

Indian Aviation Industry: Background

India, with its 1.4 billion people, is home to the world's fastest-growing air passenger market and is poised to become the world's third-largest aviation market after China and the United States. India's domestic air passenger traffic is expected to double, reaching 300 million by the end of 2030.

According to the ICAO (i.e International Civil Aviation Organisation), "The output multiplier in aviation sector are 3.25 which means for each Rs 100 spent on Civil Aviation activities contributes to Rs 325 equivalent of benefits. The employment multiplier in Civil Aviation is 6.1 means 1 direct employment in Civil Aviation leads to 6.1 employment". India's air travel market is expanding at the fastest rate in the world. The factors driving this growth include India's rapidly expanding economy. Increase in the proportion of middle-income households, a very healthy competition, and the government helping in the build-up of infrastructure at the leading airports through their very supportive policy framework. India is expected to rise from its current position of ninth in the largest civil aviation market to third by 2025, according to IATA. A USD 1.83 billion investment in the development of airport infrastructure has been announced by the Indian government. In line with the government plan, the Ministry of Civil Aviation has started the NABH (NextGen Airports for Bharat) Nirman initiative. With this initiative, the government hopes to handle one billion trips annually by increasing airport capacity five times over the next ten to fifteen years.) Under the same plan, the Uttar Pradesh government has been given permission to develop the 5,000-hectare Noida International (NIAL) Greenfield Airport in Jewar. The airport is expected to open in 2025 and is planned to have six runways. Zurich International Airport is building NIAL with the intention of becoming the best airport in India for customer service.

In addition, the Central Government planned to privatize thirty to thirty-five airports. Concession agreements have been signed for six airports that have already been awarded to the private sector. Six to ten airports will be included in the upcoming round of privatization, which is being planned by the Airport Authority of India. According to Deloitte, these airports will be constructed in the same architectural style as the renowned airports in Mumbai, Delhi, Kochi, Hyderabad, and Bengaluru, which together handle more than 60% of the country's air traffic.

The Need and Rationale of the Noida International International Airport

Indira Gandhi International Airport is going to achieve its optimum capacity, thus there is a need for another airport in the NCR region. Passenger traffic at IGI Delhi Airport has seen a growth of 14% while national average growth rate is 11.7%. Moreover, 57% of the passengers at IGI airport are from NCT of Delhi, and districts of UP account for nearly 11 to 12% of the total passenger movement at IGI airport. Similarly, Gautam Buddha Nagar and Ghaziabad account for almost 50% of the cargo movement at Indira Gandhi International Airport.

Hence Both the provincial government and the people of the state recognized the need for an international airport in Taj City, Agra, and after 16 years, since the project's outline was drawn by Mr Rajnath Singh, the Chief Minister of Uttar Pradesh at the time, the Noida international airport (formerly known as the Taj International Airport) appears to be a reality. Noida International Airport is the upcoming greenfield airport at Jewar, which will enhance connectivity to and from Delhi NCR, Noida, and Western UP cities Agra, Mathura, Gautambuddh Nagar etc to the world aviation network. The Noida International Airport development project came into discussion from 2004 and a techno-economic feasibility report (TEFR) was also done by L&T Ramboll Consulting Engineers.

An estimated approx. Rs 30,000 crore has been planned to be invested in the proposed Jewar Airport in four phases. Aside from passenger facilities, it would finally have six runways, four taxiways, and terminal buildings. According to the Indian Civil Aviation Ministry, during the next ten to fifteen years, the greenfield airport at Jewar would handle thirty to fifty million passengers annually. It is planned to be built in close proximity to the NCR in a strategic location, catering to nearby Indian cities and towns such as Agra, Bulandshahar, and Meerut. Covering an area of over 3000 hectares, it would function as more than just an airport. It could also be used as a logistics hub and cargo center, connecting to the Delhi-Mumbai Industrial Corridor, the Eastern and Western Peripheral Expressways, and the Railway Freight Corridor. It is expected to emerge as a multimodal connectivity hub.

There is approximately 80 kilometers of aerial distance separating the new airport and Delhi International Airport. Given their proximity, it appears likely that the markets of Jewar Airport and Delhi Airport will soon be in sharp competition. Rose-colored runways are likely to sprout thorns as the airport operator is forced to provide airline companies with more incentives, like lower landing and parking fees. This will provide airlines the leverage to bargain with the airport for more favorable landing and parking fees.

Indian Profile of Brownfield and Greenfield Airports :

Brownfield airports are those operational airports which are given to private players to operate and do modification, upgradation and modernization of existing airport They include - Chaudhary Charan Singh International Airport at Lucknow, Mangalore International Airport, Thiruvananthapuram International Airport, Sardar Vallabhbhai Patel International Airport at Ahmedabad, Lokpriya Gopinath Bordoloi International Airport at Guwahati, Jaipur International Airport, Indira Gandhi International Airport at Delhi and Chhatrapati Shivaji Maharaj International Airport at Mumbai.

Greenfield Airport is an airport which was constructed as a fresh project from the beginning. They include - Sindhudurg Airport, Noida International Airport at Jewar, Navi Mumbai International Airport, Manohar International Airport, Mopa at Goa, Bhogapuram Airport, Rajiv Gandhi International Airport at Hyderabad, Kempegowda International Airport at Bengaluru

Noida International International Airport as a Case Study for the PPP Greenfields Airport Project

For around 15 years an airport near Delhi was under discussion but could not be finalized. In 2017, It was decided to take the project seriously under PPP mode. The government called for bids from the private party to construct an airport. As per the model bidding document prescribed for Aviation projects, A revenue-sharing model based on competitive bidding for a greenfield airport was planned. There were two components of revenue share: one was the rental of the land which was fixed so as to recover the estimated cost of land and the other component was Premium per passenger/pax to be the parameter of competitive bidding. The highest offer of Premium per pax would win the financial bid. Since the bid was drafted to be competitive, international players were also encouraged to participate in the bid on equal footing.

Process of PPP Model in Noida International Airport-

3000 acre land was to be acquired by the state government through land Acquisition Act of 2013. It was the first nonlinear big project for which the land acquisition was to be taken up after 2013. It had its own challenges and apprehensions. It was decided to divide the initial requirement of funds for land acquisition among 4 entities of Government of UP, i.e GoUP, NOIDA, Greater Noida and YEIDA. The Stages of Airport Development on PPP mode planned were Development-Construction-Commissioning-Operations

The entire project was planned in phased manner as mentioned in the table below-

Phasing	Traffic Design Capacity (Million Passengers per annum - MPPA)	Project Cost (Final Capex) (Incl. Interest During Construction (IDC)) (in INR Crores) (Stage-1)	Operation Period
PHASE-I	12	4588.00	FY23-FY27
PHASE-II	30	5983.00	FY31-FY32
PHASE-III	50	8415.00	FY36-FY37
PHASE-IV	70	10575.00	FY40-FY50
Total		29561.00	

Key Features of the Airport Project-

Modern Infrastructure-

Some of the astonishing features of the airport are- In terms of land area, it is being developed to be the biggest airport in India. With six runways planned, it will eventually rank among the biggest airports in the world. The airport will be equipped with cutting-edge facilities and infrastructure, such as contemporary terminals, facilities for handling cargo, and facilities for maintenance, repair, and overhaul (MRO). The economic viability of MRO was Through the use of eco-friendly practices, eco-efficient systems, and green initiatives, the project seeks to advance sustainable development. During its first phase of operation, the airport will be able to handle about 70 million passengers annually,

and plans are in place for future expansions to handle even higher passenger volumes. Modern security systems will be installed at the airport to guarantee the security and welfare of travelers and staff. The airport will build a Ground Transportation Center with private parking, taxi and bus services, a multi-modal transit hub, and stations for high-speed and metro trains. Modern amenities and cutting-edge technology at the airport guarantee seamless travel experiences for patrons.

The Aerotropolis form of urbanization in the Indian subcontinent is an evolving concept. Federal policy is yet to be placed in public sources while examples of aerotropolis and airport led development do exist at Andal in West Bengal, Hyderabad, and Delhi. Aerotropolis policy evolution facets against the backdrop of Jewar Airport's proposed green field development with the private sector.

Economic Growth-

The International Civil Aviation Organization states that aviation has an output multiplier of 3.25 and an employment multiplier of 6.10. This suggests that for every Rs. 100 spent on air travel, Rs. 325 in benefits are generated, and for every 100 direct air travel jobs, 610 jobs are created in the economy overall. Airport connectivity will enhance the region's industrialization by integrating its industries into the global value chain. The project stimulates economic growth by encouraging the creation of jobs, tourism, and general development. The establishment of a new airport will result in an increase in both the number of new tourist destinations and the volume of traffic visiting already-existing ones. It will result in the general development of the neighborhood. As is clear from the fact that the Gautam Buddh Nagar administration was requested by the YEIDA to purchase a minimum of 5,000 hectares in Jewar, close to the future Noida airport, for the purpose of developing industrial and residential use. This land is needed by the YEIDA for a number of projects, including the logistics hub in Tappal, warehouses, data centers, medium-sized microbusinesses, IT companies, and residential and commercial projects.

Enhanced Connectivity-

Due to its proximity to the Greater Noida-Agra Yamuna Expressway, the Eastern Peripheral Expressway, the Delhi-Mumbai Expressway at Ballabhgarh, the Khurja-Jewar NH 91, and the dedicated freight corridor, the airport will have multi-modal connectivity. The airport connects areas and promotes global connectivity thanks to its advantageous location and cutting-edge transit systems.

Challenges Faced and Lessons Learned-

Environmental Considerations

According to MoEFC's observations, there has been ecological damage to natural ponds, a canal, thousands of potentially falling trees, and disturbances to the wildlife habitat, which is home to the state bird, cranes, and blackbucks, among other species. The MoEFC requests that the Yamuna Expressway Industrial Development Authority (Yeida) and the NIAL take preventive action to safeguard the region's flora, fauna, and ecology. Following a thorough discussion in Dehradun with representatives from airport consultant, PwC,

the WII decided to prepare the conservation plan. On August 30, 2019, WII and Noida International Airport Limited (NIAL), the project's nodal agency, signed a memorandum of understanding for the creation of a conservation plan, which is essential to getting an environmental clearance. A presentation was made by Yamuna Authority officials and consultant PWC before the Expert Appraisal Committee (EAC) of the Environment Ministry in order to obtain Environmental Clearance of the proposed NIGA.

Collaborative Decision-Making-

An MOU was signed between the Government of Uttar Pradesh, Noida, Greater Noida and Yamuna Expressway Authority for the purpose of incorporating a Joint Venture Company for the development of Noida International Greenfield Airport. The company was incorporated in the name of Noida International Airport Ltd. For this purpose, the process of preparing necessary JV agreement, Memorandum of Association and Article of Association etc was done by the nodal agency YEIDA.

The Company was formed under the Companies Act with the following shareholding pattern:

Name of shareholder	Percentage of the holding of "Paid-up capital"
The government of UP through the Civil Aviation Department (CAD)	37.5%
Noida	37.5%
Greater Noida	12.5%
YEIDA	12.5%
Total	100%

The purchased/ acquired land will be registered in the name of the State government which will be given on lease to the developer (concessionaire) by the JB company for a stipulated period. The lease period will be extended as per the requirement. The concession will be selected through global bidding to develop the airport on PPP model. The opinion of 19 Department was obtained for establishment of Noida International Greenfield Airport near Jewar.

Conclusion-

Located in Jewar, Uttar Pradesh, India, Jewar Airport—officially named Noida International Airport—is a greenfield airport project. In terms of land area, it is being developed to be the biggest airport in India. The total area covered by Jewar Airport is roughly 5,000 hectares. With six runways planned, it will eventually rank among the biggest airports in the world. The airport will be equipped with cutting-edge facilities and infrastructure, such as contemporary terminals, facilities for handling cargo, and facilities for maintenance, repair, and overhaul (MRO). Through the use of eco-friendly practices, eco-efficient systems, and green initiatives, the project seeks to advance sustainable development. During its first phase of operation, the airport will be able to handle about 70 million passengers annually, and plans are in place for future expansions to handle even higher passenger volumes. It is projected that the project will create many job opportunities and draw in investments exceeding USD 3 billion. It will link the NCR with both domestic and foreign locations, functioning as a significant aviation hub. The airport will help the tourism industry in the area by offering easy access to well-known locations like Delhi,

Jaipur, and Agra (Taj Mahal). Because it will draw in investments, companies, and industries, Jewar Airport is anticipated to have a major positive economic impact on Uttar Pradesh and the surrounding regions.

The airport will accommodate multiple airlines, promoting competition and offering passengers an extensive selection of flight options. The region as a whole benefits from the airport's location in Jewar, which provides convenient access to neighboring towns and cities. It is anticipated to help with decongestion efforts in the NCR and lessen traffic at Delhi's current airports. It is anticipated that the airport will serve both domestic and foreign passengers, improving India's global connectivity. Opportunities for the growth of aviation-related services, like aircraft maintenance, flight instruction, and aviation technology research, will be presented by it. India's standing in the international aviation industry has been further reinforced by the project's attraction of interest from investors and international aviation companies. The construction of Jewar Airport is being done in stages to ensure that different parts of the project will be finished on schedule. Indian architecture and cultural heritage are incorporated into the airport's design to create a distinct sense of place. It will offer top-notch amenities, such as food courts, duty-free stores, lounges, and entertainment areas, giving travelers an unforgettable trip. To guarantee seamless connectivity for travelers and passengers, the airport is developing access roads, parking structures, and public transportation infrastructure. With specialized cargo facilities at Jewar Airport that can manage substantial air freight volumes, trade and commerce in the area are expected to flourish.

Future technological developments are taken into account in the design of the airport, including the possibility of autonomous vehicles and smart airport systems. By putting in place waste management systems, renewable energy sources, and energy-efficient procedures, the airport will put sustainability first. To ensure safe and effective aircraft operations, it will have cutting-edge aviation technologies, such as modern air traffic control systems. The building of the airport is anticipated to create a sizable number of jobs, both directly and indirectly, enhancing the local economy and helping the communities. By offering top-notch venues for conferences, conventions, and trade exhibits, it will support the expansion of the MICE (Meetings, Incentives, Conferences, and Exhibitions) sector in the National Capital Region. It will draw international airlines and aviation operators, creating new direct flight routes and expanding traveler connectivity options. The infrastructure and design of the airport will be centered on delivering a smooth and pleasurable travel experience, mirroring India's aspiration to become a major international aviation hub. Strict environmental regulations are followed during the construction of the airport, including precautions for conservation, noise abatement, and ecosystem preservation. The expansion of the airport demonstrates India's dedication to building out its infrastructure and establishes the nation as a major player in the aviation sector worldwide. These amazing details highlight Jewar Airport's

enormous potential and the revolutionary effects it will have on the National Capital Region and the aviation industry in India.

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Case Synopsis

Located in Jewar, Uttar Pradesh, India, Jewar Airport—officially named Noida International Airport—is a greenfield airport project. In terms of land area, it is being developed to be the biggest airport in India. The total area covered by Jewar Airport is roughly 5,000 hectares. With six runways planned, it will eventually rank among the biggest airports in the world. The airport will be equipped with cutting-edge facilities and infrastructure, such as contemporary terminals, facilities for handling cargo, and facilities for maintenance, repair, and overhaul (MRO). Through the use of eco-friendly practices, eco-efficient systems, and green initiatives, the project seeks to advance sustainable development. During its first phase of operation, the airport will be able to handle about 70 million passengers annually, and plans are in place for future expansions to handle even higher passenger volumes. It is projected that the project will create many job opportunities and draw in investments exceeding USD 3 billion. It will link the NCR with both domestic and foreign locations, functioning as a significant aviation hub. The airport will help the tourism industry in the area by offering easy access to well-known locations like Delhi, Jaipur, and Agra (Taj Mahal). Because it will draw in investments, companies, and industries, Jewar Airport is anticipated to have a major positive economic impact on Uttar Pradesh and the surrounding regions.

The airport will accommodate multiple airlines, promoting competition and offering passengers an extensive selection of flight options. The region as a whole benefits from the airport's location in Jewar, which provides convenient access to neighboring towns and cities. It is anticipated to help with decongestion efforts in the NCR and lessen traffic at Delhi's current airports. It is anticipated that the airport will serve both domestic and foreign passengers, improving India's global connectivity.

Opportunities for the growth of aviation-related services, like aircraft maintenance, flight instruction, and aviation technology research, will be presented by it. India's standing in the international aviation industry has been further reinforced by the project's attraction of interest from investors and international aviation companies.

The construction of Jewar Airport is being done in stages to ensure that different parts of the project will be finished on schedule. Indian architecture and cultural heritage are incorporated into the airport's design to create a distinct sense of place. It will offer top-notch amenities, such as food courts, duty-free stores, lounges, and entertainment areas, giving travelers an unforgettable trip. To guarantee seamless connectivity for travelers and passengers, the airport is developing access roads, parking structures, and public transportation infrastructure. With specialized cargo facilities at Jewar Airport that can manage substantial air freight volumes, trade and commerce in the area are expected to flourish.

Future technological developments are taken into account in the design of the airport, including the possibility of autonomous vehicles and smart airport systems. By putting in place waste management systems, renewable energy sources, and energy-efficient procedures, the airport will put sustainability first. To ensure safe and effective aircraft operations, it will have cutting-edge aviation technologies, such as modern air traffic control systems. The building of the airport is anticipated to create a sizable number of jobs, both directly and indirectly, enhancing the local economy and helping the communities. By offering top-notch venues for conferences, conventions, and trade exhibits, it will support the expansion of the MICE (Meetings, Incentives, Conferences, and Exhibitions) sector in the National Capital Region. It will draw international airlines and aviation operators, creating new direct flight routes and expanding traveler connectivity options. The infrastructure and design of the airport will be centered on delivering a smooth and pleasurable travel experience, mirroring India's aspiration to become a major international aviation hub. Strict environmental regulations are followed during the construction of the airport, including precautions for conservation, noise abatement, and ecosystem preservation.

The expansion of the airport demonstrates India's dedication to building out its infrastructure and establishes the nation as a major player in the aviation sector worldwide. These amazing details highlight Jewar Airport's enormous potential and the revolutionary effects it will have on the National Capital Region and the aviation industry in India.

Pedagogical Objectives

The objectives of this case are:

- To discuss the development of Indian aviation industry specifically the NOIDA International Airport and its utility for Administrators & Managers
- To highlight the need for PPP model in civil aviation industry. proper HR strategy- This shall introduce the need for a proper strategy and its alignment with the public need. The case shall help in introducing this topic by highlighting the lacunae created by absence of a proper strategy.

Target Audience & Subjects

The case can be used for:

- Students of MBA/Management Courses at Post Graduate Level
- Participants of Management Development Programs on Leadership & Effective Management

The case can be used in teach the following subjects:

- Strategic Management
- Project Management
- Organizational Behaviour
- Leadership

Teaching Plan

The case may be given to the students in advance. Before introducing the topic of project management and strategic management, this case may be given as a reading. This can be done one session prior to these topics. The case has to be used as a supplement to the lecture method. After students/participants are briefed on the concepts, the instructor can ask them to weigh the PPP model in civil aviation. The pros and cons can then be explained from the case. It is suggested to introduce the various PPP models in the first half the class and stimulate individual discussion on the case in the second half. **The time duration of this case may range from 60 minutes to 75 minutes.**

Suggested Questions:

- Q1) Analyse the whole case on the basis of PESTLE analysis and the hurdles encountered in government setup.
- Q2) How can the aforesaid hurdles be overcome using Micheal Porter's 5 Forces Model?

Suggested Readings:

- Andersen T. J. (2004) Integrating decentralized strategy making and strategic planning processes in dynamic environments, *Journal of Management Studies* 41(8): 1271-1299
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Six Sigma: A Case on Analysis of Amazon.com

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A b s t r a c t

Six Sigma remains a cornerstone of the business world year after year, allowing aspiring professionals to adopt the principles that have already brought so many people success. Nowadays, Six Sigma is a huge "BRAND" in the corporate development industry.

The phrase "Six Sigma" is sometimes used cryptically to refer to a quality standard that a company has implemented. In actuality, Six Sigma is much more than just the vague notion that some people may have of its tenets.

Six Sigma is a set of methods and instruments for process improvement through defect reduction; it entails preserving the intended level of quality in processes and final goods. This case will cover the Six Sigma introduction, features, methodology, context, and history, as well as a case study of Six Sigma applications on Amazon.com.

Keywords: Strategy, Methodology, DMAIC, DMADV, Six Sigma

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ARTICLE INFO

Received: 18/02/2024 | Revised: 12/06/2024 | Accepted: 30/06/2024 | Published Online: 31/10/2024

DOI: 10.13140/RG.2.2.14324.36481

CITATION

Akhtar. M., 2024 Six Sigma: A Case on Analysis of Amazon.com, Integral Review-A Journal of Management. 14(2): 72–75. DOI: 10.13140/RG.2.2.14324.36481

Introduction

A Six Sigma process is one in which there are 3.4 defective features per million opportunities, or 99.99966% of all opportunities to manufacture a part feature free of defects, according to statistical expectations. Six Sigma looks for and eliminates defect sources to increase the quality of process outputs. It is an extremely structured process that aids in creating and providing nearly flawless goods and services.

Six Sigma is a collection of methods and resources for streamlining processes. When Bill Smith was an engineer at Motorola in 1986, he introduced it. He is referred to as the father of Six Sigma as a result. Six Sigma initiatives yield significant returns on investment. In 1995, General Electric's CEO Jack Welch made Six Sigma a key component of his company's business plan. He stated in the annual report that in just three years, the company had saved over \$2 billion thanks to Six Sigma.

Characteristics: Six Sigma prioritizes the needs of the client and develops superior solutions by using data and facts. Three key areas are targeted by Six Sigma efforts:

- Raising client contentment.
- Cutting the length of the process cycle.
- Cutting faults.

The History of Six Sigma: Since the 1920s, engineers and mathematicians have utilized the term "SIGMA" to denote a unit of measurement for variations in product quality. During the mid-1980s, engineers at Motorola in the United States adopted an informal term called "SIX SIGMA" to refer to an internal project aimed at decreasing production process flaws, as it demonstrated a sufficiently high degree of quality. Around the end of the 1980s, Motorola began implementing Six Sigma techniques in its crucial business processes. This marked a significant turning point for the company as Six Sigma was formalized as an internal "branded" moniker for a performance improvement methodology that went beyond simple "DEFECT REDUCTION." The formalization of recognized training for Six Sigma processes began when Motorola certified its first "BLACK BELT" Six Sigma experts in 1991.

Methodology of Six Sigma

Six Sigma looks at complementing parts of business processes through the lenses of two distinct sets of techniques, DMAIC and DMADV. The goals of the DMAIC and DMADV distinctions are to examine and address multiple business segments concurrently. Notwithstanding their significant differences, the approaches overlap during the review process and have the same ultimate objective, which is the enhancement of business processes.

Every methodology aims to improve business operations by using statistical tools and data collection. Each methodology has its own set of goals and rules. Although the two approaches aim to accomplish the same goal, there are significant distinctions between

them that individuals in leadership positions or in corporate settings with diverse organizational structures should take into account.

DMAIC

DMAIC, the collection of Six Sigma approaches best suited for a product or service's manufacturing or production side, consists of the following project phases:

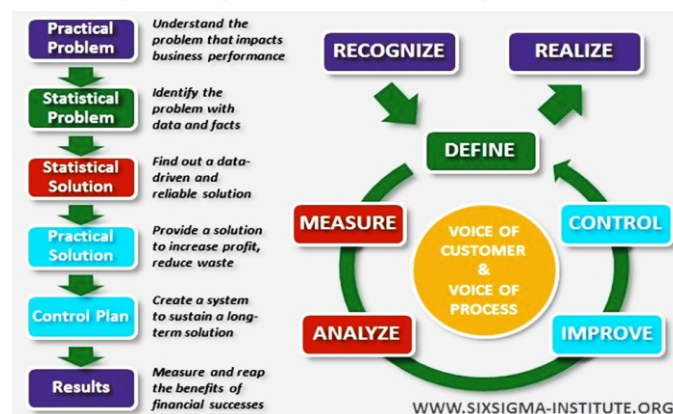
Define: Deal with the identification of particular processes that need to be looked at.

Measure: To monitor efficacy and assess efficiencies, gather data and use metrics.

Analyze: Apply critical thinking abilities to examine information and define objectives.

Improve: Make adjustments to business procedures with the intention of enhancing and better aligning them with company objectives.

Control: Establish a system of audits and modifications to ensure continuous process improvement in manufacturing.



Source: <https://www.linkedin.com/pulse/whats-six-sigma-methodology-deniz-enis-aktepe/>

DMADV

DMADV, the complimentary set of Six Sigma processes, consists of the following project stages and is most useful for analyzing and enhancing a company's customer relations department:

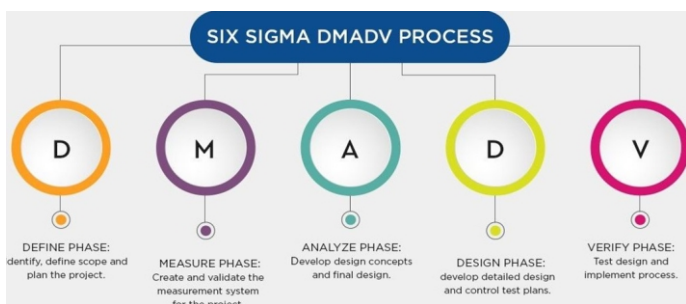
Define: Identify and respond to consumer needs regarding a good or service.

Measure: entail using electronic data collection to gauge consumer demand, product acceptance, or service evaluation

Analyze: Apply metrics to assess areas where a product or service can be more closely matched with the objectives and requirements of customers.

Design: Overlap is the practice of streamlining corporate objectives through the enhancement of business processes to effectively serve client and customer needs.

Verify: Establish a framework of assessments and simulations to ensure that client requirements are being fulfilled by continuous enhancements.



Source: <https://www.linkedin.com/pulse/title-understanding-dmadv-methodology-six-sigma-guide-netish-sharma-ojxze/>

Who is applying the Six Sigma method?

Almost all industries have adopted Six Sigma since it is the pinnacle of appropriate business improvement. A few of them are:

Financial: American Express, HDFC, HSBC, GE Capital, Bank of America.

IT: Accenture, Satyam PO, IBM Daksh, TCS, Infosys, ICICI One Source.

Hospitality: Apollo Hospitals, GRT Hotels, ITC Hotels.

Manufacturing: Nestle, Samsung, GE Plastic, Johnson & Johnson, Motorola, Nokia, Microsoft, Ford, and Wipro.

Telecom: Tata, Vodafone, and Bharti Cellular.

Online shopping: Amazon.com

AMAZON.COM Case Study

In fact, Amazon is such a great example of Six Sigma that your organization would benefit greatly from studying the corporation. Amazon's annual reports and press releases hardly ever specifically reference six sigma, despite the approach being deeply ingrained in the company's culture. Amazon.com's past.

When Jeff Bezos originally founded Amazon.com on July 5, 1994, it was an online bookshop that many believed was destined to fail. When Jeff Bezos filled his online bookstore with one million book titles, many critics believed he was insane. Since then, the online store has grown to offer food, electronics, music, movies, pet supplies, medications, and home renovation items. Not to mention how it has developed into a marketplace for independent contractors, a business client resource for supply chain management, and a platform for networking infrastructure provided by Amazon Web Services (AWS). Approximately 30 million people have become Amazon customers between the years 2000 and 2010.

Important Status

- **Prime Function:** Amazon.com is a global e-commerce firm with its headquarters located in the United States.
- **Founder:** Jeff Bezos (established in a Seattle garage in 1994, going online in 1995).
- **Vision:** "We want to become the most customer-focused company on the planet by creating a website where people can search for and

find anything they might want to purchase online."

- **Start-up costs:** were \$10,000 from personal equity savings, \$44,000 from a bank loan, and \$245,000 borrowed from relatives. About twenty angel investors contributed an additional \$1 million after 1996 (venture capital).

Amazon.com has six Sigma applications.

Since launching as an online book retailer, Amazon.com has significantly increased the variety of products it offers. They have also adopted cutting-edge procedures like same-day delivery and autonomous drone delivery, which are poised to achieve unprecedented levels of efficiency. But have you ever pondered how one of the biggest internet shops in the world, Amazon, came to be?

Six Sigma is the answer.

The organization has a culture rooted in the Six Sigma approach. The operational excellence Program, which started in 1999 when Jeff Wilke joined Amazon as VP of operations, includes Six Sigma. His experience with Six Sigma and his background at Allied Signal made him the ideal candidate to increase operational efficiencies.

"Operational excellence: delivering continuous customer experience improvement and driving productivity, margin, efficiency, and asset velocity across all over businesses are what we mean by operational excellence," the statement reads. Amazon.com Annual Report for 1999."

How Amazon Has Applied Six Sigma to Their Operations

Six Sigma was created as a means of reducing expenses in commercial manufacturing operations. The Six Sigma method of business has been included in the strategy of one of the biggest online retailers in the world, Amazon.com, which means that its application is not limited to the manufacturing of goods.

Operational Excellence: Six sigma has long been deeply ingrained in the corporate culture of Amazon. Given that 2000 things are ordered on Amazon every 60 seconds, it is imperative that standards are upheld. The corporation started an operational excellence program in 1999 with the goal of streamlining internal procedures. Operational excellence is defined by Amazon in two ways: First and foremost, to provide ongoing customer experience enhancement. The second goal is to increase asset velocity, productivity, margin, and efficiency throughout the whole company.

Hiring "BEST & BRIGHTEST": To reach their objective, Amazon employed a common six Sigma tactic to hire the best and brightest candidates. By giving their staff Six Sigma Black Belt training, they went above and beyond.

Six Sigma techniques: By actively seeking for variation using DMAIC, Root Cause Analysis, and related technologies, Amazon was able to reduce it through the application of six sigma techniques. By reducing expenditure, getting rid of non-value-adding process steps, and fostering a Kaizen-based corporate culture, they decreased waste.

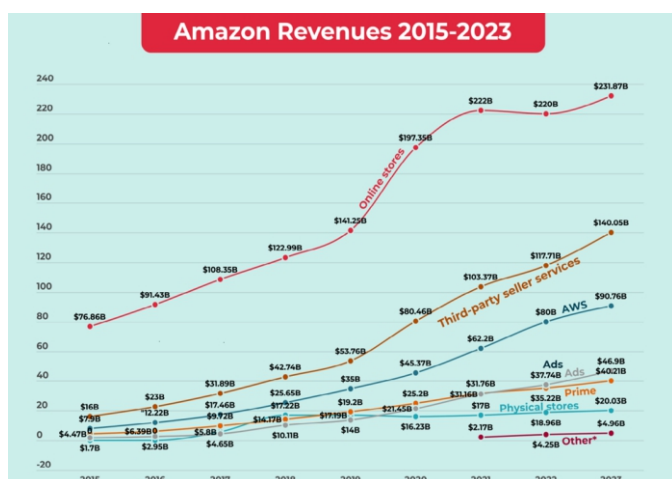
Outcome: Six Sigma produced a different company with improved inventory control, enhanced efficiency, and stronger value stream management.

Six Sigma's Impact on Amazon.Com

Excellent customer service and experience are Amazon's top priorities. They were exactly like every other online bookstore before they completely redesigned their business practices at the beginning of the new millennium.

With the help of Six Sigma, they have quickly expanded into a major international internet retailer. With a culture that emphasizes efficiency maximization and ongoing development, Amazon has become a global force. By doing this, they have become a technological behemoth that can compete with companies like Apple and Microsoft.

With the statistical depiction, one can see how Six Sigma affected Amazon.com. Sales at Amazon from 2015 to 2023. The data below shows that Amazon.com's revenues have increased significantly since introducing six sigma in 1999:



Source: <https://fourweekmba.com/amazon-revenue-breakdown/>

Conclusion

Six Sigma is a well-known word in the industrial sector today. It benefits management in several ways, including total management commitment, process improvement, customer focus, excellence philosophy, and using measurement as a guide rather than intuition. Enhancing the ability of every department within the company to better address the evolving demands of markets, consumers, and technologies would benefit all parties involved employees, clients, and shareholders. As everyone is aware, Six Sigma has flaws as well. It takes a lot of time, requires specialized labour, and some detractors claim that nothing new has been added to the methodology. However, Six Sigma's advantages outweigh any drawbacks and make the concept sufficient for process improvement. Therefore, after reviewing the Amazon.com case study, we can conclude that Six Sigma is essential for improving the company.

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Case Study: The Role of Emotional Intelligence in a Teacher's Classroom Management

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Introduction

In the dynamic and challenging environment of a classroom, a teacher's responsibility in a classroom is more than just imparting knowledge. Comprehending and handling students' emotional and academic demands is essential to effective teaching. The case study discusses the strength and use of emotional intelligence of Padma Pandey a school teacher at Maharaja Agrasen Public School. She fosters a supportive and effective learning environment. We can observe from her experience how emotional intelligence improves her teaching, especially in areas like classroom management, student engagement, and conflict resolution. With a Master's degree in Commerce and multiple certifications in emotional intelligence and classroom management, Miss Padma Pandey has been teaching Commerce at School for over 8 years. She is known for her compassionate approach and her ability to connect with students. Her conscious use of emotional intelligence makes her classroom a secure place where children feel respected and understood. It is hypothesized that Padma Pandey's primary emotional strength in emotional intelligence components is social awareness. She is thought to have an exceptional talent for emotional regulation, stress management, and minimal impulsivity.

Well-being and emotional regulation

One of the key facets of emotional intelligence is self-awareness, which Miss Pandey exemplifies through her well-being and emotional regulation. She believes that a teacher's emotional state directly impacts the classroom environment. This self-regulation enables her to respond calmly and constructively to challenging situations, such as when students are disruptive or disengaged.

For instance, Miss Pandey encountered a particularly challenging situation with a student named Smriti, who often exhibited disruptive behavior in class. Instead of reacting with frustration, she spoke with Smriti privately, expressing concern for his well-being rather than focusing solely on his behavior. Through this conversation, she learned that Smriti was struggling with issues at home, which were affecting his behaviour in school. By addressing the underlying issues with compassion, Miss Pandey was able to work with Jake to develop strategies for managing his emotions and improving his classroom conduct.

Sociability and building relationships

Emotional intelligence also involves the ability to build and maintain relationships. In her classroom, Miss Pandey fosters a strong feeling of belonging,

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ARTICLE INFO

Received:08/03/2024 | Revised: 12/06/2024 | Accepted: 30/06/2024 | Published Online: 31/10/2024

DOI: 10.13140/RG.2.2.21035.25125

CITATION

Iqbal., N.,Elahi., Y.A.,Yadav.,P., 2024 Case Study: The Role of Emotional Intelligence in a Teacher's Classroom Management, Integral Review-A Journal of Management. 14(2): 76–77. DOI: 10.13140/RG.2.2.21035.25125

thus demonstrating her excellence in this area. She thinks that when children have a sense of belonging, they are more willing to participate and interact.

Additionally, Miss Pandey emphasizes the need for trust and honest communication. She meets one-on-one with students regularly to talk about their progress and any worries they may have.

By doing this, she not only demonstrates to her students her genuine concern for their well-being but also helps her understand their unique needs and challenges.

Emotionality and empathy

Miss Pandey exhibits empathy, a critical component of emotional intelligence, in her interactions with students. She is aware that students have different origins and experience different obstacles in their academic and personal lives. Miss Pandey makes it a point to be personable and nonjudgmental so that students can feel at ease talking to her about their issues.

For example, Miss Pandey noticed a shift in Shambhavi's temperament when he started to fall behind in his duties and she approached him with empathy. Shambhavi confided in her about his anxiety problems and how they were interfering with his ability to concentrate on his studies. Miss Pandey collaborated with Shambhavi to create a plan that included concessions like longer deadlines and access to a school counselor because she understood how important it was to address these concerns.

Self-control and conflict resolution

Any group dynamic will inevitably involve conflict, and Miss Pandey's ability to handle and resolve it speaks volumes about her emotional intelligence and self-control. She ensures that all sides feel heard and respected by approaching conflicts with a cool-headed and collected approach. Miss Pandey emphasizes the value of communication, empathy, and compromise while teaching her students dispute-resolution techniques. One such incident involves a dispute over a group assignment between Alok and Anuj, two pupils. The students' refusal to cooperate grew out of the intensity of the argument. To give both pupils a safe and courteous space to voice their opinions, Miss Pandey intervened and called a mediation session. Miss Pandey fostered a resolution that enabled them to work together successfully by guiding a discussion that helped them comprehend one another's points of view.

Self-motivation and encouraging growth

Additionally, Miss Pandey's emotional intelligence is essential in helping her students develop a sense of self-motivation. She thinks that when pupils feel their efforts are appreciated and acknowledged, their motivation to learn increases. For instance, Miss Pandey observed that a student by the name of Mia was having trouble completing a particularly difficult writing project. Rather than concentrating on Mia's flaws, Miss Pandey emphasized her strengths and gave detailed, helpful advice on how she may get better. This support gave Mia more

self-assurance and inspired her to work even harder, which finally resulted in a notable advancement in her writing abilities.

Adaptability and continuous learning

Another essential component of emotional intelligence is adaptability, especially given how quickly the field of education is evolving. Miss Pandey is always looking for ways to enhance her teaching strategies and adjust to new situations. She incorporates new ideas into her classroom practice by often attending professional development courses on emotional intelligence and creative teaching techniques.

Miss Pandey encountered difficulties when she had to switch to an online teaching style during the COVID-19 pandemic. She swiftly adjusted, picking up new skills and creating plans to keep students interested in a virtual setting. Miss Pandey showed resilience by being adaptable and willing to change, giving her students a secure and encouraging learning environment through a trying period.

Conclusion

A remarkable example of how emotional intelligence skills can improve the learning environment for both teachers and students is Miss Padma Pandey's integration of these abilities into her teaching practice. Her capacity for self-awareness, empathy, and relationship and conflict resolution skills fosters a welcoming and inclusive learning atmosphere. Miss Pandey enhances her pupils' academic performance by serving as an emotional intelligence role model. She also assists her kids in acquiring vital life skills that they will need outside of the classroom. This case study emphasizes the value of emotional intelligence in education and the necessity for teachers to develop these abilities. Miss Pandey's experience shows that emotional intelligence is essential to good teaching and learning, not just a useful tool for classroom management.

Questions:

1. Take into consideration Miss Pandey's strategies for creating a feeling of community in her classroom. What potential effects might these methods have on academic achievement and student engagement, especially in a diverse classroom?
2. Talk about how Miss Pandey uses empathy in her instruction. In what ways can her compassionate methodology aid in attending to the specific requirements of pupils, and what are the possible enduring advantages for students in terms of cultivating their emotional intelligence?
3. Assess the techniques Miss Pandey used in the case study to resolve conflicts. How do these tactics demonstrate her emotional intelligence, and what can teachers take away from the way she resolves conflicts in the classroom?
4. Consider the potential and difficulties that came with switching to online instruction during the COVID-19 pandemic. How did Miss Pandey's flexibility and dedication to ongoing professional development help her succeed throughout this change?

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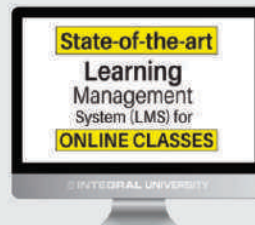
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