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DIGITAL TRANSFORMATIONS IN CONTEMPORARY BUSINESS

TRENDS, TECHNOLOGIES AND STRATEGIES

Editors

Dr. Bijal Zaveri

Dr. Tejal Shah





Digital Transformations in Contemporary Business: Trends, Technologies and Strategies

Editors

Dr. Bijal Zaveri

Dean & Director, Faculty of Management Studies, Parul University, Vadodara,
Gujarat, India

Dr. Tejal Shah

Assistant Professor, Faculty of Management Studies, Parul University, Vadodara,
Gujarat, India



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About the Book

In an era where digital technology is at the forefront of business innovation and evolution, “Digital Transformations in Contemporary Business: Trends, Technologies, and Strategies” provides an essential compendium for understanding the dynamic landscape of modern business practices. This book delves into the critical aspects of digital transformation, offering readers a comprehensive overview of current trends, cutting-edge technologies, and effective strategies for leveraging these advancements in various business contexts.

The book is meticulously divided into insightful chapters that explore a wide range of topics essential for navigating the digital age. Among these are corporate governance, which examines the role of digital tools in enhancing transparency and accountability within organizations, and online consumer behavior, which provides insights into how businesses can adapt to changing consumer preferences in the digital marketplace. Additionally, the economic impacts on foreign direct investment are analyzed, highlighting how digital advancements influence global business strategies and investment flows.

Furthermore, the book explores the role of digital technologies in enhancing business processes and employee well-being. It provides a thorough examination of how digital tools can improve corporate performance, outreach efforts, and training methodologies, thus fostering a more efficient and engaged workforce. The integration of digital technologies in business operations is discussed, emphasizing the benefits of adopting innovative solutions to stay competitive.

By presenting a holistic view of digital transformation, this book serves as an invaluable resource for academics, professionals, and business leaders aiming to stay ahead in a rapidly evolving digital world. Its in-depth analysis and practical insights make it a crucial guide for anyone looking to understand and implement digital strategies effectively in their business practices. The book not only highlights the importance of digital transformation but also provides actionable strategies to navigate this complex and ever-changing landscape.

About the Editors

Dr. Bijal Zaveri, Dean & Director of Faculty of Management Studies at Parul University, has 17 years of teaching and one year of industry experience. She teaches Marketing Management in the MBA program and holds a Ph.D. in Online Marketing from M S University Baroda and a PG diploma in Cyber Law from Asian School of Cyber Law Mumbai. Her research interests include Marketing, Advertisement, Communication, and E-commerce. Dr. Zaveri has published extensively in national and international journals, including IIM Indore, NITIE Bombay, Symbiosis, MICA, and IGI Global. She has presented papers at 40 conferences, won several awards, and published a book on E-marketing in 2012. As a Ph.D. guide at Parul University, she supervises Indian and foreign scholars. She is also on the Editorial Board of the IGI Global International Journal of Marketing and has been a review committee member and session chair for various conferences.

Dr. Tejal Shah, a faculty member at Parul University's Faculty of Management Studies since 2011, holds a Ph.D. from Sardar Patel University, an MBA in Finance, and a B.E. in Computers. She specializes in Finance and Computer Science, teaching subjects like Information System and Audit Control, SPSS, Project Management, and Financial Planning. Dr. Shah has published around 15 research papers on topics such as Fintech, Blockchain, and Crowd-Funding in UGC CARE listed and peer-reviewed journals. She edited two books on business management and finance. With four years of industry experience at Deloitte Touche Tohmatsu India Private Limited and Reliance General Insurance Company Limited, she focused on Information Security Audit, Control Assurance, and SOX compliance. Dr. Shah supervises six Ph.D. scholars and has guided numerous postgraduate students.

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Preface

The rapid pace of technological advancement has revolutionized the way businesses operate, creating both unprecedented opportunities and significant challenges. "Digital Transformations in Contemporary Business: Trends, Technologies, and Strategies" is born out of a need to explore and understand these profound changes. This book aims to provide a nuanced understanding of how digital technologies are reshaping contemporary business landscapes and to offer actionable insights for effectively navigating this transformation.

Our journey begins with an exploration of corporate governance and its impact on corporate performance, highlighting the pivotal role of corporate laws and governance frameworks in today's digital era. The book then moves to discuss the Pradhan Mantri Atal Pension Yojana, focusing on leveraging technology to enhance awareness and usage among unorganized sector workers in rural India, showcasing a practical application of digital outreach.

Further chapters delve into the intricacies of online consumer behavior, using the case study of Boat to elucidate the factors influencing purchase decisions in a digital age. The impact of Indian economic factors on foreign direct investment is analyzed through the VAR model, providing a quantitative perspective on economic dynamics.

The book also examines future trends in training and development, emphasizing innovations in learning technologies and methods, and explores the crucial link between performance appraisal and employee well-being and mental health in a digitally transformed workplace. The gamification and digitization of business management teaching, particularly through stock market simulations, illustrate the evolving pedagogical methods. Moreover, recent trends in consumer perception and digital payments in India are discussed, along with an analysis of digital technology diffusion, considering the interplay of capabilities and incentives. The ethical considerations of data privacy in human resource management are also scrutinized, offering a balanced view of the challenges and responsibilities in the digital age.

Each chapter of this book is crafted to provide deep insights and practical knowledge, making it an indispensable guide for those seeking to understand and harness the power of digital transformation in contemporary business. We hope this book will serve as a valuable resource for students, researchers, and practitioners, fostering a deeper understanding of the digital dynamics shaping the future of business.

Dr. Bijal Zaveri
Dr. Tejal Shah

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Our deepest appreciation goes to the organizers of the conference, whose meticulous planning and execution provided a robust platform for the exchange of ideas and research that significantly contributed to the content of this book. Your efforts in creating an environment conducive to academic discourse and collaboration have been invaluable.

We are immensely grateful to all the authors whose contributions form the backbone of this book. Your insightful research, dedication, and commitment to advancing knowledge in the field of digital transformation in contemporary business have enriched this publication and provided a wealth of information for our readers.

To the participants of the conference, we thank you for your active engagement and valuable feedback. Your perspectives and discussions have greatly enhanced the quality of the work presented here.

We also extend our sincere thanks to the speakers from industry and academia whose expertise and knowledge have significantly enriched the conference and, consequently, the content of this book. Your contributions have provided invaluable insights and perspectives that have deepened our understanding of the subject matter.

We also extend our sincere thanks to the reviewers whose rigorous and thoughtful evaluations have ensured the academic integrity and quality of this book. Your expertise and critical insights have been essential in shaping the final manuscript.

Finally, we are profoundly grateful to our publishers for their professionalism and support throughout the publication process. Your guidance and expertise have been crucial in bringing this book to a wider audience.

Dr. Bijal Zaveri
Dr. Tejal Shah

Foreword

The topic “Digital Technology Diffusion: Transforming the Business and Societal Landscape.” offered the excellent backdrop for the 4th International conference held on the 22nd and 23rd of December by Parul University’s Faculty of Management Studies. The world we live in today exhibits tripartite dimensions of interdependence, velocity, and complexity. Each of these concepts though distinct, reflect in various ways the impact of digitisation, globalization and technological interconnectedness which have come to the fore of attention of both academia and industry alike. While of course these concepts at once reflect the hyper-connected reality of a world that humans live, learn and thrive in, these concepts also provide rich fodder for global research across multiple disciplines. Here academia and industry inspire and complement each other’s efforts both for the larger good and better understanding of related phenomena while also inspiring thought and action.

The topic Digital Technology Diffusion: Transforming the Business and Societal Landscape unsurprisingly had motivated many scholars to contribute their research. In the grand scheme of things the publication of this COMPENDIUM, an endeavour of Parul University’s Faculty of Management Studies, reflects its effort to further the body of knowledge by providing a platform for researchers globally to show case their efforts and contribute to a better understanding of this disruptive though exciting phenomena. I thank these authors for sharing their Abstracts and we hope this will in turn be a start point to emergent learnings and disciplines.

After all, the true value of research is when it is shared as it enriches us all and triggers a multiplicative result.

Wishing you all the best!

Dr. Jacqueline Pereira Mundkur

Senior Adjunct Faculty School of Business, NMIMS, Mumbai

CEO The Nxt Levels Advisory

Independent Director

CHAPTER 1

A Contemporary Study on Corporate Laws and 3Ps of Corporate Governance in Enhancing Corporate Performance

*Dipak S. Gaywala**

ABSTRACT

Purpose of research: The plethora of laws, their rules and regulations govern companies in India. The listed companies in India are governed by various laws. The laws explicitly associated in governance are Companies Act, 2013, Security and Exchange Board of India Act, 1992, Competition Act, 2002 and Stock Exchange Regulations. The research aims to examine impact of these laws and regulations in contributing to 3Ps domain viz. People, Policies and Procedures of OECD.

Methodology: This is literature review based descriptive study.

Major results: The study will suggest effective corporate governance in 3Ps domain for listed companies in India. This will induce listed companies to improve performance in the weak areas of performance.

Managerial implications for theory and practice: OECD designed a model of Corporate Social Responsibility in 3Ps domain viz. People, Policies and Procedures. This study is extending its scope in finding contribution of corporate laws in corporate governance with these 3Ps domain. This is contribution for the existing theory and practice in Corporate Laws and Corporate Governance having impact on corporate financial performance.

Keywords: Corporate Governance, Corporate Laws, Organization for Economic Cooperation and Development.

1.0 Introduction

Corporate Governance lays down principles and procedures of companies' governance to adhere to goals and objectives of the companies for the benefit of all the stakeholders. These principles and procedures are set in force by the governing body of the companies. The corporate governance helps in meeting organizational goals of the companies without compromising economic and social goals of the society.

**Associate Professor, Faculty of Management Studies, Parul University, Vadodara, Gujarat, India (E-mail: dipak.gaywala@paruluniversity.ac.in*

Corporate Governance reflects efficient and effective leadership of the governing body of the companies and helps companies to achieve competitiveness in local and global markets and create jobs for the aspiring youth. The inbuilt mechanism to check unethical practices in corporate governance help businesses to gain society's acceptance and thereby ensures sustainability of the enterprises in the long run.

OECD published 3Ps Check List to establish strong company management through People, Policies and Procedures. Under People segment, key person is to be identified for who has sole responsibility for due diligence. The key person needs to appoint internal team from multiple departments to oversee implementation of the due diligence. The key person needs to impart training to the internal team to carry out tasks assigned effectively and efficiently. The key person needs to guide the internal team members from different departments to ensure smooth implementation of the tasks with no hindrance of coordination and communication issues. The internal team needs to adhere to policies framed for the purpose and keep documents for audit within time frame. The internal team needs to suggest improvements in the system and tackle issues of non-cooperation from the stakeholders. The relevant external shareholders are required to be informed about the due diligence process so as to seek their support in implementation of due diligence process.

Under Policies segment, conflict affected and high-risk areas (CAHRAs) need to be identified for the stakeholders in the supply chain of the business of the enterprise. The policies on issues such as money laundering, bribery or forced labour that a company intends to address with the suppliers in supply chain needs to be clearly informed to them. The risk mitigation policy of the company to deal with such issues is also required to be informed to the stakeholders in supply chain. The stakeholders in supply chain in turn also need to design their strategy of risk management to suit company's requirement of due diligence. The policies are also required to be circulated for knowledge of internal and external stake holders to ensure effective implantation of due diligence process.

Under Procedures segment, for effective implementation of due diligence process, a company needs to design a system of transparency, data collection and control over supply chain. Collection of supply chain information is vital for the risk identification and assessment in the supply chain to initiate action to mitigate situation in time before it is worsened. For timely collection of information from supply chain, use of software programs available in the market can be utilized on cost sharing basis with supply chain stakeholders if these software programs are costly. Use of data management system will also help in collection of information and risk assessment in supply chain of the company.

Post opening of economy in 1991 by the Government of India (GOI) under the theme of Liberalisation, Privatisation and Globalisation (LPG), policy makers thrust to strengthen corporate governance is reflected in bringing new or amended legislations to boost economic progress in India with measures to curb undesirable business practices by the public and private enterprises. The Companies Act, 2013, SEBI Act, 1992, Competition Act, 2002 and Stock Exchange Regulations are measures to bring transparency in primary and secondary securities market.

2.0 Literature Review

Shree & Kannappan (2018) examines improvement in corporate governance in Board functioning, Committees of Board, Related party transactions and prohibition of insider trading under Companies Act, 2013 akin to governance related to internal and external stakeholders under 3Ps Persons' segment of OECD Corporate Governance. Christiansen & Koldertsova (2008) studied impact on investors' preferences and revenue model of traditional stock exchanges of listed companies akin to 3Ps Policies segment of OECD Corporate Governance

Sultana (2018) brings out changes in roles and responsibilities of Board of Directors under Companies Act, 2013 akin to 3Ps Procedures segment of OECD Corporate Governance. Kanungo & Das (2016) studied provisions of Share Capital under Companies Act, 2013 impacting shareholders rights akin to 3Ps Procedures segment of OECD Corporate Governance. Waller (2011) deals with market forces impacting performance of the companies and proposes to improve anti-trust provisions in USA. The market forces are impacting 3Ps –Persons, Policies and Procedures segment of OECD Corporate Governance impacting Corporate Performance.

Afsharipour (2009) examines obstacles in implementation in formal CG reforms on account of India's socio-political situation. These obstacles impact CG and Corporate Performance of companies in India. Ching & Tardelli (2015) in their study similarities and differences in governance rules of difference stock exchanges in across the world. This means for the study of listed companies in India on all 3Ps-Persons; Policies and Procedures segment of OECD, the regulatory provisions of stock exchanges in India are relevant.

Garg (2016) examined role of independent directors under Companies Act, 2013 akin to 3Ps-Persons' segment of OECD Corporate Governance. Książaka & Fischbachb (2018) studies three pillars of CSR as a model. The corporate governance is examined under 3Ps- Persons, Policy and Procedures segment by OECD.

3.0 Rationale of the Study

The change in legislative framework in India has opened up a new field of study to compare and contrast Indian scenario with 3Ps check list of OECD. This study in turn will help companies in India to search areas of improvement in corporate governance practices.

4.0 Legal Aspects of Corporate Governance Practices in India

4.1 Companies Act, 2013

4.1.1 Appointment of board

The gist of provisions is as follows:

Strength of number of directors is restricted to fifteen. Approval of shareholders by special resolution is required if strength in number of directors exceeds fifteen. Appointment of one-woman director is mandatory for prescribed class of companies. Presence of 182 days in India for at least one director of the company is mandatory.

4.1.2 Number of directorships

A person cannot hold directorship of more than twenty companies. Within this limit, a person cannot hold directorship in more than ten public companies.

4.1.3 Appointment of independent directors

At least one-third of the total number of directors of a listed company should be independent directors. Central government has power to override this provision for prescribed class of companies. An independent director's role is to oversee board's performance and safeguard the interests of the stakeholders.

4.1.4 Duties of the directors

The gist of duties of directors is as follows:

Follow regulations laid down in articles of the company, conduct business of the company honestly and diligently and avoid situation of conflict of interest in their performance in such capacity.

4.1.5 Liabilities of the directors

Onerous civil and criminal liabilities are inflicted if directors, their relatives, partners or associates are found guilty of making undue gain in the course of their dealings of the company.

4.1.6 Establishment of committees

Board's committees' role is to assist companies' Board of Directors. Audit Committee is to be formed with minimum three directors comprising majority as independent directors. Independent directors to meet fit and proper criteria to understand needs and challenges of company's business and exhibit capacity to contribute in the growth of company's business.

A stakeholder relationship committee is to be formed for every public company having more than one thousand stakeholders to resolve grievances of stakeholders. A Corporate Social Responsibility committee is to be formed by every company having prescribed threshold limit net worth net profit. The committee's objective is to balance economic and social objectives of the company by taking CSR programs for the people in vicinity of companies' operations.

4.1.7 Contracts with related parties

Contracts with related parties need approval in Board's meeting. Interested director in such contracts is not required to remain present in deliberations in the meeting. Approval shareholders' is required by a special resolution for companies exceeding threshold limit of paid-up capital. The objective is to promote arms to length transactions in the company.

4.1.8 Provision for insider training

Onerous criminal provisions are made to punish any individual, any executive or KMP of a company engaged in sharing insider information to third party for personal gains. The objective is to prevent harm to company's stakeholders for such unethical activities of concerned persons.

4.1.9 National Company Law Tribunal

NCLT and National Company Law Appellate Tribunal is formed for speedy redressal of company's disputes with their stakeholders.

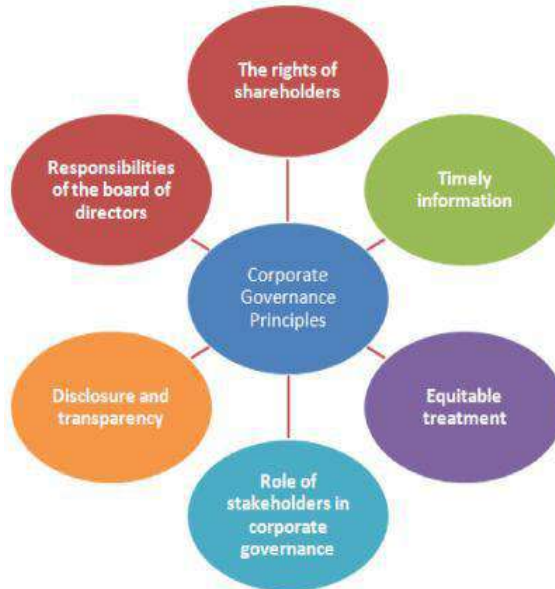
4.1.10 Issuance of shares

Shares with differential voting rights are permitted upon fulfilment of certain key conditions.

4.2 SEBI (LODR) Regulations, 2015

It lays down governance norms for listed companies in India as depicted in figure below:

Figure 1: SEBI (LODR) Governance Norms



Source: <https://www.sebi.gov.in>

These principles of CG are drawn from OECD’s principles of Corporate Governance.

4.3 Clause 49 of listing agreement of stock exchanges

This clause provides compliance mechanism for listed companies in India. Failure will result in to delisting of securities and financial penalty in appropriate cases. The key aspects of this clause are as follows:

4.3.1 Independent directors

The gist of provisions is as follows:

At least one-third of the total number of directors of a listed company should be independent directors where chairman of the board is a non-executive director. The strength of independent directors is increased to one half of the total strength where there is executive director as chairman of board meeting. This is to empower independent directors with greater power and responsibility. Independent director’s tenure in the office is for two terms of 5 years each. For reappointment of such person, cooling period of 3 years is prescribed. There is also cap on number of companies independent directors can serve. Independent directors need to hold a meeting once in a year in the absence of

executive directors. There are provisions for performance evaluation, non-entitlement of stock options and cap on remuneration of such directors.

4.3.2 Related Party Transactions (RPT)

The gist of provisions is as follows:

The concept of material RTP is evolved. There are provisions for such RTP to obtain approval of general meeting of shareholders by special resolution. There are provisions for non-participation of interested directors in the meeting where such deals are considered. The Audit committee is empowered to grant approval for transactions with such RTPs. There are provisions for disclosure of such RTP in CG Report.

4.3.3 Subsidiary company

There is a concept of material subsidiary company. The role of independent director and audit committee of holding company in such company is fixed. There is a cap on holding company to dispose shares or end control on its affairs in such companies. There is also cap on selling assets of a material subsidiary company.

4.3.4 Role of audit committee

This committee's role is to assist governing board with majority members as independent directors. The audit committee is entrusted with supervisory powers to monitor important aspects of company's operations including financial reporting of the company.

4.3.5 Compulsory whistle blower mechanism

There is a requirement to promote whistle blower mechanism in the company to check and prevent frauds and unethical activities in the companies. The company is required to design system to protect whistle blower from people engaged in such activities.

4.3.6 Nomination and remuneration committee

This committee's role is to design policy for independent directors' qualifications and the appraisal norms for such directors. The committee is empowered to recommend remuneration of independent directors and key management executives.

4.3.7 Other requirements

Framing and enforcement of code of conduct and constituting risk management committee are other requirements. There is a requirement of disclosure in respect of all material matters outlined above.

5.0 Evaluation of CG Practices in India with OECD 3Ps Principles

The CG legal provisions theoretically meet all 3Ps of OECD's principles of governance. The issues in India are basically in implementation of these governance rules in India. These aspects are outlined below:

There exists overlapping in multiple efforts by SEBI and MCA to cover important aspects of corporate governance leading to scenario of confusion in its implementation. In USA, Sarbanes and Oxley Act covers all CG governance principles at one place. In UK, Cadbury Committee report covers all CG governance principles of listed companies at one place. This brings clarity to corporate and compliance authorities in implementation process. Unlike unique CG code in USA and UK, multiple committee recommendations on CG leads to divergent interpretation of the same principles by corporate entities posing compliance issues.

The SEBI and MCA are in tussle in so far as issuance of corporate governance codes. SEBI CG provisions are based on recommendations of Birla committee and Narayan Murthy committee reports. MCA CG provisions are based on Naresh Chandra Committee and Irani Committee reports.

Clause 49 of Listing Agreement is based on Birla Committee and Narayana Murthy committee reports' recommendations. Irani Committee recognized liberal compliances for small companies and advocated broader classification of companies than prevailing classification of private and public companies. The Companies Act, 2013 incorporate major recommendations of Irani Committee Report.

The outcome is key differences in following important matters.

- Appointment of independent directors' posts after their duration tenure as executive directors.
- Independent directors require holding executive position prior to taking up their assignment as independent directors.
- Age limit criteria for the directors in Murthy Committee and Irani Committee report.
- The non-convergence is leading to confusion for companies and regulators of corporate governance.

SEBI's route of CG through clause 49 is criticised. The critics advocate corporate governance reforms through an amendment of the Companies Act.

The large public companies track record for CG compliances is better than public sector and small companies. The poor track record of public sector and small companies for CG compliance is due to political interference in PSU and traditional family owned structure of small companies.

SEBI's disclosure requirements need to be improved. There is no adequate sharing of information in public domain as regards non-compliance action taken against companies by SEBI. SEBI's reluctance to delist companies for non-compliance of listing regulations and allow them to function with financial penalties is evident in many cases.

There are 58 key matters of non-convergence found by a committee appointed by SEBI in 2017. The convergence on these issues is under way but process of convergence is slow. https://www.sebi.gov.in/web/?file=/sebi_data/attachdocs/oct-2017/1509102194616.pdf#page=8&zoom=page-width,-15,841

The family-owned structure of Indian firms and government control on PSUs is a barrier in implementation of corporate governance reforms. The situation is further aggravated by stakeholders' lack of interest in framing and implementation of CG Rules and Regulations.

The formal codes and structures of Indian governance follow Anglo Indian Model. The delays in disputes resolution by Indian Judicial System is another barrier in implementation of CG reforms. The creation of NCLT and NCLAT by the Companies Amendment Act, 2002 with independent jurisdiction to adjudicate all litigations of companies is government response to remedy situation of delays in adjudication. The Insolvency Act passed by GOI on 28 May, 2016 helps corporate to resolve their bankruptcy issues within time frame. More legal reforms are still needed to prevent delays in adjudication of companies pending and emerging cases.

6.0 Findings

The legal provisions of corporate governance are not sufficed. Uniform code is the need of the hour. The support of family structure and public sector listed companies is required for smooth implementation of CG provisions. The training need for manpower in the MCA, SEBI and companies need to be addressed. The recruitment of professional manpower in companies, MCA and SEBI is needed to support CG implementation process. The judicial process needs further improvement to mitigate delays in companies' litigations. There is a need to promote shareholders awareness programs. SEBI has initiated such programs from Investors Protection Fund. The professional bodies also need to collaborate actively with SEBI in these efforts.

7.0 Conclusions

The measures outlined above will support CG practices. The CG is one of the important contributing factors in enhancing and augmenting financial performance of the

companies and thereby builds environment of trust for the prospective investors to fund new and expansion projects and to fund CSR activities. This is also important for India's socio-economic growth. The creation of pool of skilled and trained manpower will lead India's corporate to match OECD's 3Ps of corporate governance.

8.0 Limitations

The study is limited to Corporate Governance practices for listed companies in India.

9.0 Future Scope for Research

The futuristic area of research is evaluation of CG practices of selected listed companies in India with existing CG provisions and 3Ps of Corporate Governance principles of OECD.

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CHAPTER 2

Boosting Atal Pension Yojana among Rural Gujarat Unorganized Sector's Workers using Technology

Tejal Shah, Frens Patel**, Aman Dhakad** and Amita Garg****

ABSTRACT

The objective of this study is to address the critical requirement for increased awareness and use of the Pradhan Mantri Atal Pension Yojana (PMAPY) among workers in the unorganised sector in some rural districts of Central Gujarat. Thus a pension system is vital for them and APY scheme provide such benefit for workers in unorganized sector. On the other hand, despite the fact that it may have certain advantages, there is still a lack of understanding and implementation of the system, particularly in rural areas. The utilisation of technology, which includes mobile applications, social media platforms, and community-based digital initiatives, provides an opportunity to overcome obstacles that prevent awareness and usage. This report is an attempt to find the knowledge level of persons regarding Atal Pension Yojana.

Keywords: Pradhan Mantri Atal Pension Yojana (APY), Technology, Unorganized Sector Workers, Awareness Enhancement, Social Security.

1.0 Introduction

1.1 Atal Pension Yojana (APY)

The Atal Pension Yojana (APY), a pension program that the government has introduced, is primarily intended to create social security for all Indians. It is particularly beneficial to the impoverished, the destitute, and members of the unorganized sector, such as gardeners, maids, and delivery boys. The former Swavalamban Yojana, which was not well received, was replaced by the APY plan.

**Corresponding author; Assistant Professor, Faculty of Management Studies, Parul University, Vadodara, Gujarat, India (E-mail: tejal.shah@paruluniversity.ac.in)*

***Student, Faculty of Management Studies, Parul University, Vadodara, Gujarat, India*

****Assistant Professor, Faculty of Management Studies, Parul University, Vadodara, Gujarat, India*

The scheme's aim is to give Indian citizens a sense of security by making sure they don't have to worry about any illnesses, accidents, or diseases as they age. Employees in the private sector or those employed by a company that does not offer pension benefits may also apply for the program. When a person reaches the age of sixty, they are eligible to receive a predetermined pension of one thousand rupees, two thousand rupees, three thousand rupees, four thousand rupees, or five thousand rupees. When determining the pension, both the individual's age and the amount of contributions will be taken into consideration. In the event that both the donor and his or her spouse end up passing away before the nominee, the accumulated corpus will be transferred to the nominee. Once the contributor has passed away, the spouse of the contributor is eligible to make a claim on the pension. The spouse, on the other hand, has two choices in the event that the contributor passes away before reaching the age of sixty: she can either withdraw from the plan or receive the corpus, or she can continue to participate in the plan for the remaining time.

2.0 Literature Review

During the course of a feasibility study, Sudindra conducted an investigation of the Atal Pension Yojana, which is a retirement planning instrument that has been launched. Some of the monthly pension following 60 years are of Rs. 1000, 2000 and Rs. 5000 for the age commencing from 18, 25, 30, 35 and 40. To examine the entire subscriber benefits out of the scheme, the author wants to compare the present value of pension benefit to the present value of contribution. The final conclusion of the author is that the Atal Pension Yojana will not fully satisfy the aim of income security and retirement benefit. The whole concept of a defined benefit plan specifically designed to safeguard workers in the unorganised sector will not function in an effective manner. This is the analyses done by the author. In order to meet the requirements of the workforce in the unorganised sector, the government can consider increasing the amount of money that is allocated to the pension plan.

Debashis Basu (2015) studied that the interest rate on APY during accumulation state is 7.94 % per month which is below current bank deposit rate, at the time of withdrawal interest rate is low 7.06%, investing largely in corporate debt and inflation will affect the advantage of retirement corpus. Also advised that APY must generate greater interest rate, invest larger point in index equities and allow withdrawal.

Dani & Modi (2015) studies relevant to fiscal equality in India. They initially create a fundamental requirement parameter which will form the basics of the study and sketched the significant portion of funding at the micro level and different schemes

launched by the government for microfinance. They then discuss the core topic of the research, microfinance, with the numerous ways that microfinance is given. The institutions such as Microfinance institutions and Self-Help Groups are analysed and differentiated to identify which of them is better. The writers present a list of schemes launched by the government, of these schemes the major focus of this study is on the Jan Dhan Yojana which this study states have been very successful in achieving its goals of providing formal banking to unprivileged and providing them with at least the basic financial literacy and inclusion. The other scheme studied by the writers was the Atal Pension Yojana.

Devi (2015) study regarding the awareness among people between different levels of individuals in Kerala about the Atal Pension Yojana is the purpose of the author here. Employing sampling approach and survey employing questionnaire, the primary data is acquired. All information from newspapers, internet and reference books is included in the secondary data. To choose samples from the population, the author has utilised convenience sampling approach which is a form of non-probability methodology. Over 120 samples from Rural and Urban regions in Thiruvananthapuram District were gathered. The authors found that Number of customers for the APY programme is increasing from year to year. But the strength of the APY plan is comparably modest in Kerala. The conclusion drawn by the authors is that the strength of the APY system is comparatively low in Kerala yet the number of persons enrolling for the APY scheme is increasing from year to year.

Rajasekhar *et al.* (2011) with the use of available data and studies, compare and contrast the design features of NPS-Lite and APY, India's two main government contributory pension schemes. Discuss the advantages and disadvantages of each scheme in meeting the needs of low-income workers. The authors of this paper contend that these schemes' design features fail to take into account the unique characteristics of households headed by unorganised workers. The authors have also offered a number of recommendations for how to better the current structure of contributory social security programmes in order to accommodate unorganised workers' pension needs.

Sandeep & Sharma (2022) explain how the programme was created to enable people, with a primary focus on small-scale businesses and informal labourers, acquire the habit of saving money so they will have a safety net in case they lose their jobs or experience other financial difficulties. The study examines the number of participants in APY across a range of demographics, including age, gender, and geography. It also examines how the beneficiary's final corpus value is determined through four annual compounding and how the programme offers a risk-free fixed pension upon reaching the age of sixty.

Devnath *et al.* examine a few creative financial inclusion initiatives implemented by GOI. Among these are the Atal Pension Yojana (APY), Pradhan Mantri Suraksha Bima Yojana (PMSBY), Pradhan Mantri Jan Dhan Yojana (PMJDY), and Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY). They examine the advancements made by each of these programmes and offer some analysis and recommendations on how to expand their scope even further. The author also includes information on the plans' financial inclusivity and beneficiary count.

Hooda (2022) research on the NPS and the investors' knowledge of both the APY and the NPS in the NCR area. Information is gathered from both primary and secondary sources. The questionnaire survey approach is used to gather primary data. The writers exclusively address educated urbanites (Article no. SAJSSE.94336), business professionals, and other Balamurugan in *S. Asian J. Soc. Stud. Econ.*, vol. 16, no. 4, pp. 1–9, 2022. Stratified sampling, which divides demographic strata based on gender, age, and occupation, is used for this study. In closing, they state that NPS is a special platform that provides investors with a range of investing options so they may select the finest pension funds that meet their needs. Additionally, they point out that PFRDA periodically takes significant steps to move the nation closer to offering social security to the elderly.

Rupjyoti Bhattacharjee (2023) conducted a survey in the Assamese district of Jorhat. The survey sample consisted of 120 individuals. The survey's primary goal was to determine whether or not respondents in two key demographic groups—those employed in the public and private sectors—had enrolled in the Atal Pension Yojana (APY). The authors also attempted to assess participants' attitudes and level of knowledge regarding the scheme's various components. The majority of respondents in both groups, according to the survey, had signed up for the APY programme. Additionally, the researchers found that the respondents' opinions of the scheme's numerous characteristics are generally favourable. The poll also revealed that a sizeable portion of the population is still registering for the programme, primarily due to their discomfort with the financial system and the enrollment procedure. Additionally, the respondents thought the program's return rate was a little lower. The authors came to the conclusion that there was a significant difference between how public and private sector personnel responded to the schema based on the Z-test results.

Vishnu Prasad (2015) addressed the Atal Pension Yojana's two fundamental flaws, a conservative investment mix and a lack of inflation indexation. In order to accomplish the intended NPS target, 85% of the fund will be invested in bonds, which will have an impact on the retirement corpus because the corpus may erode over time due to inflation.

Namratha Sharma (2015) recommended that as the economy expands, the anticipated rate of interest be reduced and that participants in the programme will continue to receive 8% interest.

Vidyashree (2015) observed that although the number of participants in these programmes is rising, it is still more crucial to properly implement the social security system for a wider segment of the population.

Hannig & Jansen (2010) Studies conducted during the financial crisis have shown that financial innovation may have disastrous structural effects. Opportunities to increase financial stability are presented by greater financial inclusion. Research indicates that low-income savers and borrowers prefer to pay back their loans, keep their deposits in a safe place, and practise healthy financial behaviour amid financial crises.

Kunt *et al.* (2013) determined that women are less likely than men to own accounts, save money, and take out loans in nations where women are legally restricted in their capacity to work, manage a household, choose where to live, and receive inheritances. After adjusting for other individual and national characteristics, the study further demonstrates that gender norm manifestations, such as the prevalence of early marriage for women and the degree of violence against women, help to explain the differences in the use of financial services between men and women.

Ajide (2015) outlined how both short- and long-term interactions supported the idea that financial inclusion is a viable tactic for reducing poverty in rural areas. Because individuals in distant locations have low literacy rates, they may not be aware of the financial services available to them. This presents a chance for banks to reach a larger client base by educating the rural populace. Financial inclusion in rural areas should be led by monetary authorities. The study has reaffirmed how crucial financial development is as an effective means of eradicating poverty. Deb (2016) discovered that initiatives for financial inclusion in northeast India have not expanded quickly thus far. The fundamental characteristics of the situation in this area and the predominance of numerous unofficial financial systems are some of the reasons why the official frameworks for financial inclusion have failed.

Gattoo & Akhter (2019) noted that the discussion of public policy in emerging economies now revolves around financial inclusion. Financial services accessibility enhances quality of life, helps the less fortunate increase and diversify their income, and improves their social and economic circumstances. The majority of those who are vulnerable depend on moneylenders, which prevents them from engaging in traditional financial institutions. The collapse of financial markets in isolated and percolate-deprived locations is hypothesised by economic theory to be caused by informational asymmetries, challenges to contract enforcement and craft, and increased transaction

costs. The demand side factors could include challenging loan contracts, minimal investment potential in rural locations, and low demand for these services due to illiteracy.

Bhattacharjee & Rengma (2020) discovered that the majority of respondents belonging to the two distinct professions had signed up for the APY plan. Additionally, it was discovered that they had a positive attitude towards several APY scheme components. It was noted, meanwhile, that some respondents have not yet enrolled for the plan because they are unfamiliar with the banking system and/or the low interest rate. The Z-test also revealed a considerable disparity between government and private employees' attitudes towards the benefits offered by the APY plan.

Goswami (2013), Kudrna-TranWoodland (2015) and Sinha (2008), the Indian pension system as it exists now and the need for reform in order to restructure the institutional framework. He goes on to say that the failure of pension plans such as pay-as-you-go, NOAP, IGNOAPS, IGNDPS, EPF, and EPS—the majority of which benefit public sector employees—is the reason for the need to rearrange the institutional framework.

Stelten (2011), Adema (2007), and Rajan (2006), claims that, it is the institutional framework that is needed restructuring to enhance the effectiveness of the pension schemes in India, again a similar theme is represented by Asher (2000), amongst the social security schemes the pension schemes are the most cumulative and integral requirement for social welfare, it should provide an outline for the future retirees as well.

Sanyal (2013) has given an overview of the working and restrictions of pension schemes that explained about the faults within the pension system explaining the possible structure of the pension schemes as per central government. Again, as the paper progresses, it can be observed that to improve the social welfare, the central authorities launched a well-structured pension scheme named as Atal Pension Yojna, to cover the informal workers mostly as per PFRDA (2015).

3.0 Hypothesis

- H_{01} : Monthly Income does not impact the level of awareness among the responded regarding APY.
- H_{02} : Monthly Income does impact the level of used among the responded regarding APY.
- H_{01} : Education does not impact the level of awareness among the responded regarding APY.
- H_{02} : Education does impact the level of used among the responded regarding APY.

- H₀₁: Occupation does not impact the level of awareness among the responded regarding APY.
- H₀₂: Occupation does impact the level of used among the responded regarding APY.
- H₀₁: Gender does not impact the level of awareness among the responded regarding APY.
- H₀₂: Gender does impact the level of used among the responded regarding APY.

4.0 Research Methodology

In this paper, our research objective was to assess the effect of demographic factors on the adoption of Atal pension yojana among rural people of Central Gujarat Region. The literature review suggested that demographic factors such as electronic age, gender, occupation, education, monthly income had significant effect the adoption of APY. Hence, the following hypothesis was included in the study.

5.0 Research Design

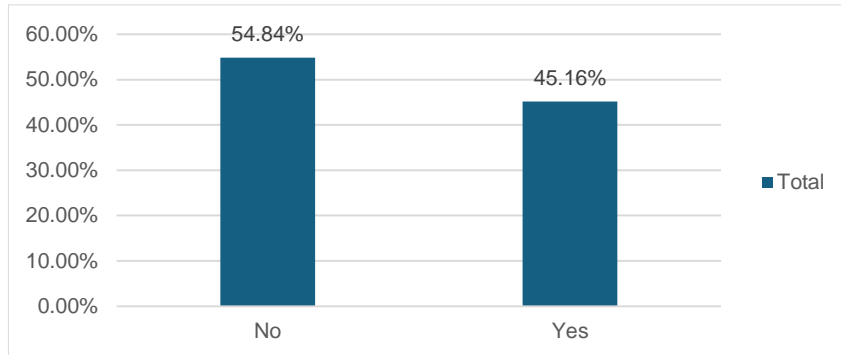
The research design for this study is a mixed-methods approach, which combines quantitative and qualitative research methods. It involves both pre- and post-implementation phases to assess the impact of technology-driven outreach.

6.0 Data Collection

- Surveys and questionnaires administered to unorganized sector workers.
- Government records and databases related to APY enrolment and beneficiary information.
- Data on technology usage and access.
- In-depth interviews with unorganized sector workers, community leaders, and government officials.
- Focus group discussions (FGDs) with groups of unorganized sector workers.
- Analysis of online content and social media discussions.
- Field observations in the selected rural areas.
- Academic research, government reports, and historical data.
- Comparative data from similar programs or regions.

It was found that around 55% of respondents were not aware about the APY. (Refer Figure 1.)

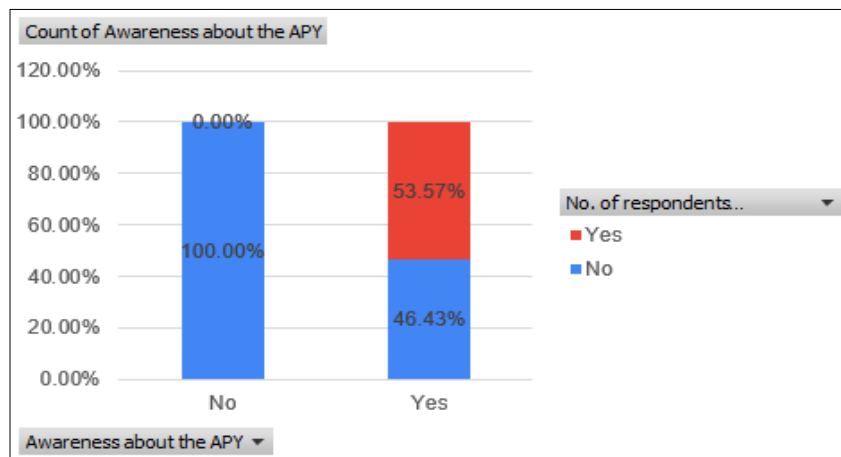
Figure 1: Awareness about APY



Source: From collected data through Google form

From the below Figure it was observed that those who were unaware, only around 46% respondents have enrolled for the APY. Hence, we can say that despite awareness about the APY, respondents did not enroll for the APY.

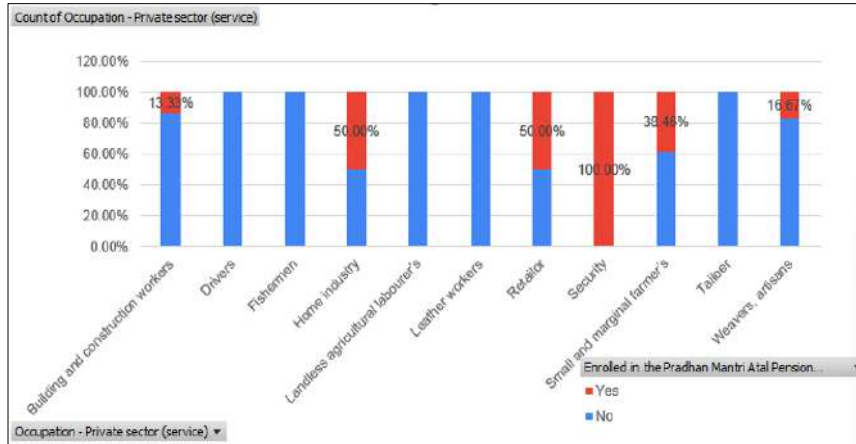
Figure 2: Awareness about APY (Segregated)



Source: From collected data through Google form

From the below Figure it was noted that respondents from only a few category have enrolled for the APY. It was observed from the below Figure that all respondents from security occupation are enrolled in the APY. Retailors, Small and marginal farmers, Home Industry (Gruh Udhog) were few occupation categories in which enrollments were done in the APY.

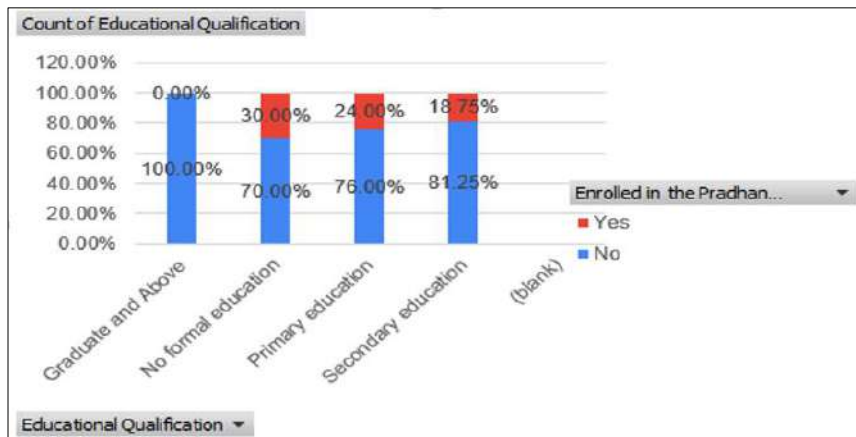
Figure 3: Count of Occupation



Source: From collected data through Google form

Surprising results were obtained for the education field. The respondents belonged to the ‘No Formal categories’ have enrolled highest in the APY as compared to zero enrollment among ‘Graduate and above’ category, which was observed in the Figure.

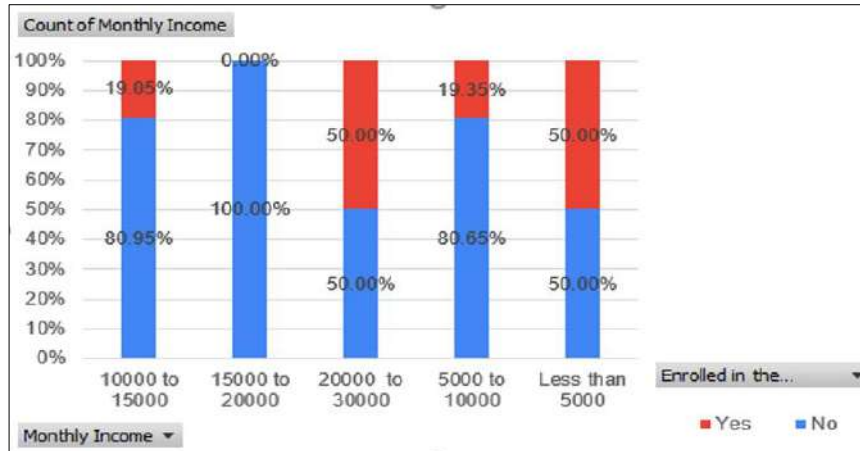
Figure 4: Count of Educational Qualification



Source: From collected data through Google form

In Monthly Income categories, ‘20,000 to 30,000’ and ‘Less than 5000’ 50% respondents have enrolled highest in the APY.

Figure 5: Count of Monthly Income



Source: From collected data through Google form

Table 1: Chi-square Statistic

Likelihood Ratio Tests				
Effect	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	Df	Sig.
Intercept	87.328 ^a	.000	0	.
Gender	87.459	.131	1	.717
Occupation Private sector service 1 Weavers artisans 2 Small and marginal f	117.974	30.646	10	.001
Educational Qualification 1 Primary education 2 Secondary education 3 No f	90.300	2.972	3	.396
Monthly Income 1 Less than 5000 2 5000 to 10000 3 10000 to 15000 4 15000 to 20000	92.142	4.814	4	.307

Source: From collected data through Google form

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0. Refer Table 1.

This reduced model is equivalent to the final model because omitting the effect does not increase the degrees of freedom.

A logistic regression was performed to ascertain the effects of age, weight, gender and VO2max on the likelihood that participants have heart disease. The logistic regression model was statistically significant, $\chi^2(4) = 27.402$, $p < .001$. The model explained .41%.2 (Nagelkerke R²) of the variances in heart disease and correctly classified 84.0% of cases. Males were 7.02 times more likely to exhibit heart disease than females. Increasing age was associated with an increased likelihood of exhibiting heart disease, but increasing VO2max was associated with a reduction in the likelihood of exhibiting heart disease.

Intercept: The intercept's -2 Log Likelihood of 87.328 indicates the model's goodness of fit when no predictors are considered. The chi-square statistic for the Intercept is 0, suggesting that the model with the Intercept significantly improves over a model without any predictors ($p < .001$).

Gender: The inclusion of Gender in the model does not significantly improve the model fit as indicated by the chi-square value of 0.131 ($p = .717$). Therefore, Gender may not be a significant predictor of the outcome in this analysis.

Occupation: Occupation significantly contributes to the model as indicated by the chi-square statistic of 30.646 ($p < .001$). The -2 Log Likelihood of the reduced model increases substantially when Occupation is omitted, indicating that Occupation is a significant predictor of the outcome.

Educational qualification: The chi-square statistic for Educational Qualification is 2.972 ($p = .396$), suggesting that it does not significantly contribute to the model's fit. However, the likelihood ratio test indicates that the -2 Log Likelihood of the reduced model increases slightly when Educational Qualification is omitted.

Monthly income: Monthly Income shows a chi-square statistic of 4.814 ($p = .307$), suggesting that it is not a significant predictor of the outcome in this analysis. That currently enrolled in the Pradhan Mantri Atal Pension Yojana of male is 63% and 36% Female have used them.

7.0 Findings

Gender does impact of the in APY Awareness. Then significate of them. That male is respondent high they are aware of them. Females are less aware of these schemes. Education Qualifications are does impact of awareness because many have primary education are them, they don't information about the APY. How to register them and all Things have to difficulty phase them.

Occupation are does not relate with awareness in APY. Because of the many occupations are there they have don't aware about them. That Information's are lake of them. Monthly income has a greater impact on them. There is a monthly subscription. Many respondents just heard about this scheme, but they are not aware about its benefits, eligibility, contribution, and procedure for starting an APY pension account. Findings may emphasize the importance of sustained efforts in raising awareness and promoting the uptake of APY among unorganized sector workers. Many respondents may indicate that they do not know where to obtain information about the scheme or how to enroll in it. Traditional outreach methods, such as pamphlets or public meetings, are less effective in reaching the target audience.

8.0 Conclusion

In Conclusion, it was observed that demographic factor such as Gender, Age, and Monthly income had highly significant effect on Awareness of Pradhan Mantri Atal Pension Yojana among Unorganized Sector Workers in selected rural areas of Central Gujarat. Gender dynamics can significantly impact the awareness and usage of PMAPY. In many rural areas, women may have limited access to financial resources and decision-making power. That male is more aware of the female.

Educational qualification individuals with lower levels of education may require more targeted and simplified educational materials to grasp the benefits and workings of the scheme. Monthly income is a significant determinant of the financial decisions and priorities of individuals. Lower-income earners may perceive long-term savings schemes such as PMAPY as less of a priority compared to immediate financial needs.

Occupation are does not impact of awareness Unorganized sector workers often lack access to formal employment benefits such as pensions, making schemes like PMAPY particularly relevant for them. Through our research, we have identified the potential of technology, such as mobile applications and digital platforms, in disseminating information about APY and simplifying enrollment procedures. Moreover, our findings highlight the importance of tailored communication strategies and community-based initiatives to effectively reach and engage the target demographic.

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CHAPTER 3

A Study on Factors Influencing Online Purchase Behaviour of Boat

*Axita Thakkar**, *Bijal Zaveri***, *Jay Lalwani**** and *Fuzel Siddiqui****

ABSTRACT

This study investigates the factors that influence the online purchase behavior of customers of BOAT, a prominent brand in the consumer electronics and accessories industry. With the rapid growth of e-commerce, understanding the determinants of online purchase behavior is crucial for businesses to effectively cater to consumer needs and preferences. Drawing upon existing literature on consumer behavior and e-commerce, this research employs a mixed-method approach, combining qualitative interviews and quantitative surveys. The qualitative phase involves in-depth interviews with a sample of BOAT customers to explore their perceptions, attitudes, and experiences regarding online shopping. Through thematic analysis, key themes and factors influencing online purchase behaviour are identified. Subsequently, the quantitative phase employs a structured survey to gather data from a larger sample of BOAT customers. Statistical techniques such as regression analysis are utilized to examine the relationships between various factors and online purchase behaviour.

Keywords: Online Purchase Behaviour, BOAT, Consumer Electronics, E-commerce, Factors Influencing Behaviour, Customer Experiences.

1.0 Introduction

Founded in the bustling streets of Delhi, BOAT emerged as a trailblazer in the consumer electronics and accessories industry, redefining the way people experience sound and technology. With a commitment to innovation, quality, and customer satisfaction, BOAT has swiftly ascended the ranks to become a prominent player on the global stage. From sleek earphones to immersive headphones and smart wearables, each product bearing the BOAT insignia represents a harmonious blend of cutting-edge technology and contemporary design.

**Corresponding autor; Assistant Professor, Faculty of Management Studies, Parul University, Vadodara, Gujarat, India (E-mail: axita.thakkar77775@paruluniversity.ac.in)*

***Dean, Faculty of Management Studies, Parul University, Vadodara, Gujarat, India*

****Student, Faculty of Management Studies, Parul University, Vadodara, Gujarat, India*

BOAT's journey to success is marked by a relentless pursuit of excellence and a deep understanding of consumer preferences. Leveraging a potent mix of strategic marketing initiatives and astute brand collaborations, BOAT has carved a niche for itself in the fiercely competitive market landscape. Notably, the brand's partnerships with local cricket luminaries, including renowned Indian cricketers such as KL Rahul and Shikhar Dhawan, have propelled its visibility and resonance among diverse consumer segments.

In an era dominated by rapid digitalization and evolving consumer behaviors, BOAT stands at the forefront of innovation, continually pushing the boundaries of possibility in the realm of consumer electronics. With a steadfast commitment to delivering unparalleled audio experiences and seamless connectivity solutions, BOAT remains dedicated to enriching lives and empowering individuals to embrace the rhythm of modern living.

As BOAT charts its course towards continued growth and expansion, fueled by a passion for excellence and a vision for the future, it remains steadfast in its mission to inspire, connect, and elevate the lives of its customers worldwide. Embarking on a journey fueled by innovation, creativity, and a deep-seated commitment to customer-centricity, BOAT invites you to join the voyage towards a world where sound knows no bounds and technology knows no limits.

The journey of BOAT to its current stature is characterized by a relentless pursuit of perfection and a keen insight into the evolving preferences of consumers. Through a strategic blend of marketing prowess and strategic alliances, BOAT has etched its name into the fabric of the fiercely competitive market landscape. Notably, the brand's strategic partnerships with esteemed cricketing icons, such as the celebrated Indian cricketers KL Rahul and Shikhar Dhawan, have not only elevated its visibility but also cemented its resonance across diverse consumer segments.

In an age defined by rapid digital transformation and shifting consumer dynamics, BOAT stands as a beacon of innovation, continuously pushing the boundaries of possibility in the domain of consumer electronics. With an unyielding commitment to delivering unmatched audio experiences and seamless connectivity solutions, BOAT remains steadfast in its mission to enrich lives and empower individuals to embrace the rhythm of contemporary living.

As BOAT charts its trajectory towards sustained growth and global expansion, propelled by an insatiable thirst for excellence and a forward-looking vision, it remains resolute in its endeavor to inspire, connect, and elevate the lives of its customers worldwide. Embarking on a journey fueled by innovation, creativity, and an unwavering dedication to customer-centricity, BOAT extends a heartfelt invitation to join its voyage towards a future where sound knows no bounds and technology knows no limits

2.0 Literature Review

The Influence of Online Customer Reviews on Purchase Decisions in the Fashion Retail Industry emphasizes the impact of online customer reviews on purchase decisions in the fashion retail industry, highlighting the role of user-generated content in shaping consumer perceptions and buying behavior.

The Impact of Product Presentation on Online Purchase Behavior” investigates the influence of product presentation, including visual aesthetics and product displays, on online purchase behavior, highlighting the importance of appealing product imagery in driving consumer engagement and conversions.

The Role of Online Customer Service in E-commerce Success” explores the significance of online customer service in enhancing customer satisfaction and fostering long-term relationships in the e-commerce landscape, emphasizing the role of efficient and personalized customer support in influencing online purchase decisions.

“Understanding Online Impulse Buying Behavior” .006 delves into the phenomenon of online impulse buying behavior, highlighting the psychological factors and situational triggers that contribute to impulsive purchase decisions in the digital realm, providing insights for Boat on how to cater to impulsive buying tendencies of its customers. The Impact of Online Brand Communities on Consumer Engagement and Loyalty” examines the influence of online brand communities on consumer engagement and brand loyalty, emphasizing the importance of fostering meaningful interactions and community participation in driving customer retention and advocacy. “The Role of Augmented Reality in Online Shopping: A Consumer Perspective investigates the consumer perspective on the role of augmented reality in enhancing the online shopping experience, highlighting the potential of AR technology in facilitating virtual product try-ons and enhancing consumer decision-making processes.

“The Influence of Online Product Recommendations on Consumer Purchase Behavior” explores the impact of personalized online product recommendations on consumer purchase behavior, emphasizing the role of data-driven recommendations in enhancing cross-selling and upselling opportunities in the e-commerce context. “Understanding Online Consumer Trust in Peer-to-Peer Marketplace Platforms” examines the factors influencing consumer trust in peer-to-peer marketplace platforms, emphasizing the role of platform transparency, seller credibility, and transaction security in fostering a trustworthy online environment for buyers and sellers. “The Impact of Online Product Information Quality on Consumer Decision Making” investigates the influence of online product information quality on consumer decision-making processes, highlighting the importance of accurate and comprehensive product details in building

consumer confidence and reducing purchase-related uncertainties. “The Impact of Online Shopping Convenience on Consumer Purchase Behavior” examines the influence of online shopping convenience on consumer purchase behavior, highlighting the importance of easy navigation, streamlined checkout processes, and flexible payment options in enhancing the overall online shopping experience. “Understanding Consumer Perceptions of Online Payment Security” investigates consumer perceptions of online payment security, emphasizing the role of secure payment gateways, encryption protocols, and fraud protection measures in fostering consumer trust and confidence in online transactions.

“The Role of Online Product Customization in Enhancing Consumer Engagement” explores the role of online product customization in fostering consumer engagement and brand loyalty, highlighting the importance of personalized product offerings and interactive design tools in catering to individual consumer preferences.

3.0 Research Methodology

In present research we utilized for this undertaking was to gather essential information on our exploration point, Elements impacting customer commitment and online people group. We gathered essential information through a Google structures made survey and we got reactions from 560 members.

4.0 Scope of Research

Primary data: Primary data are obtained by a study specifically designed to fulfil the data needs of the problem at first hand, such data are original in character and are generated in large number of surveys conducted mostly by the government, and also by some individual, institutions and research bodies.

Secondary data: Data that are not originally collected but rather obtained from published or unpublished sources are known as secondary data. The secondary data constitute the chief materials on the basis of which statistical work is carry out in many investigations. Secondary data are collected from magazine.

Population: In terms of research methods, the population size of our study, “A study on factor influencing online purchase behavior of BOAT customer,” is 560 people. This population size was deliberately chosen to adequately represent people who purchase online or by reference of someone allowing us to draw meaningful and statistically significant conclusions about how Boat engage and connect to its end users.

Sampling frame: The actual collection of units is called the sampling frame, sometimes referred to as the “sample frame” or “survey frame.” From this, a sample has

now been obtained. Every unit in a simple random sample has an equal chance of being drawn and showing up in the sample. The sample frame and the sample of individuals should, in theory, correspond.

Sampling method: Who is to be surveyed, how many are to be surveyed, how they are selected and how are they reached. All these details are to be given in this section. According to Blalock and Blalock define a sample thus. “It is a small piece of the population obtained by a probability process that mirrors, with known precision, the various patterns and bob-classes of the population”.

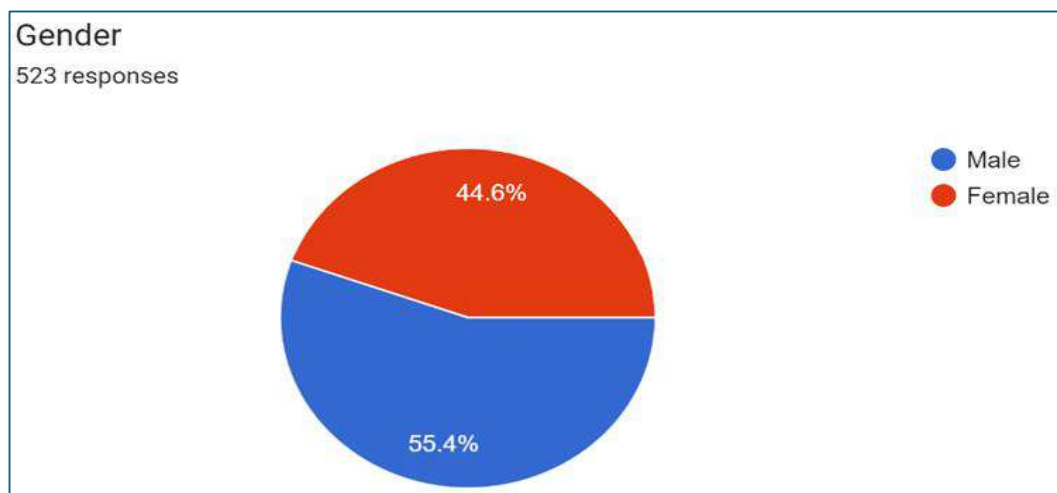
Sample Size: The sample size taken for the survey is 560 respondents.

Data collection instrument: The collected data were interpreted through MS Excel using percentage analysis method.

Data Collection instrument: We used Google Forms surveys as our primary data collection instruments in our research project. We created and sent surveys to our participants using Google Forms. We were able to develop structured questions that were properly tailored to our study objectives with the use of this digital instrument, making it straightforward for respondents to provide informative feedback. Our research process was efficient and productive since data collection was straightforward and replies could be collected and analyzed in real time. We used Google Forms to ensure that the data gathering process for our study was straightforward and orderly.

5.0 Data Analysis and Interpretation

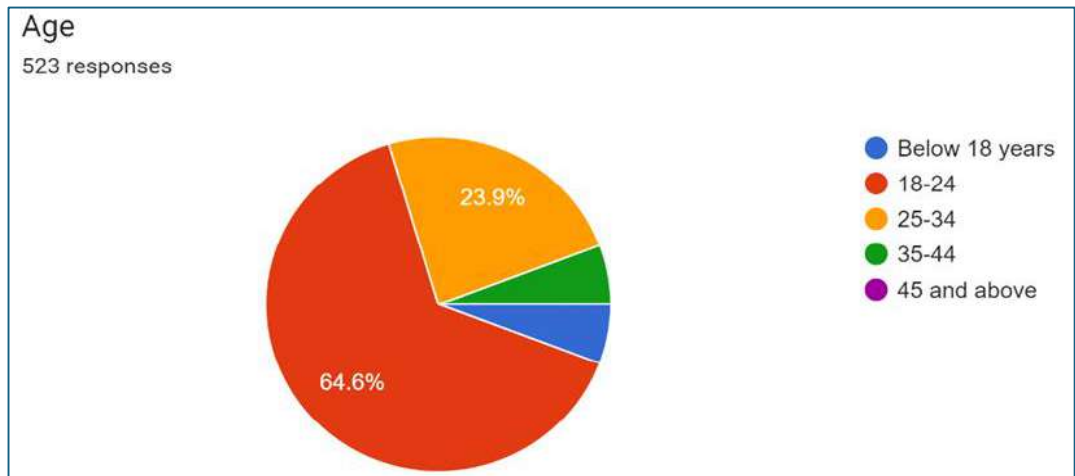
Figure 1: Gender



Source: From collected data through Google form

In this we show the gender ration of the data we collect and what is the majority's gender we have.

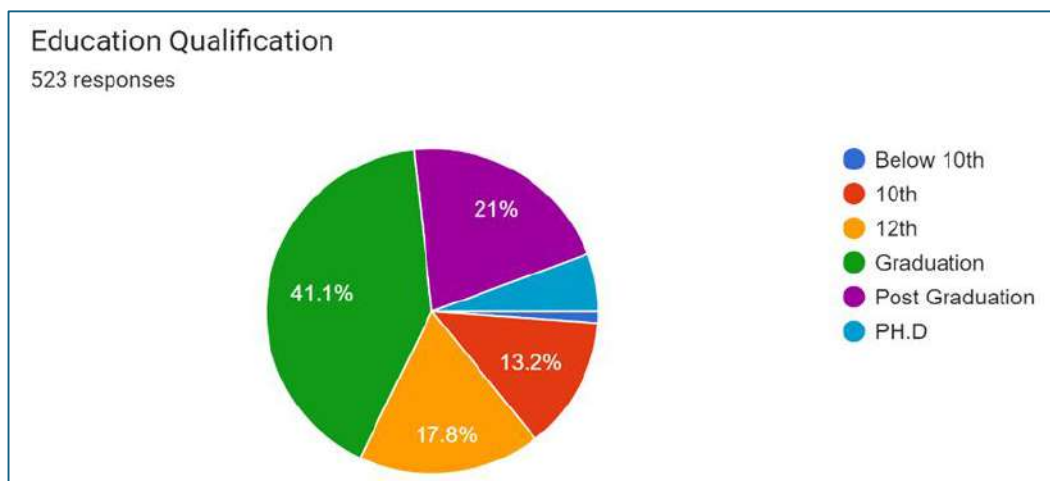
Figure 2: Age



Source: From collected data through Google form

In this we show the age the group of people that are interest in BOAT

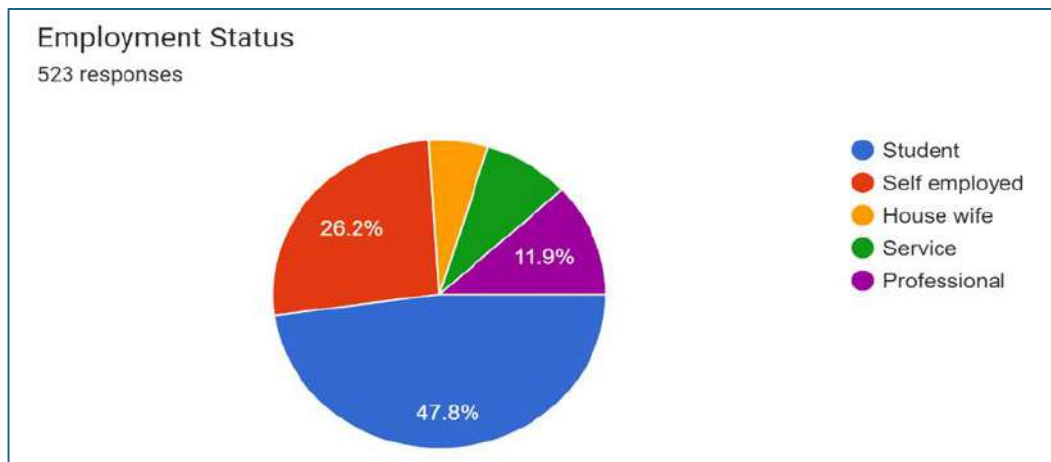
Figure 3: Education Qualification



Source: From collected data through Google form

In the pie chart we show the education qualification of the people from which we have collected the data

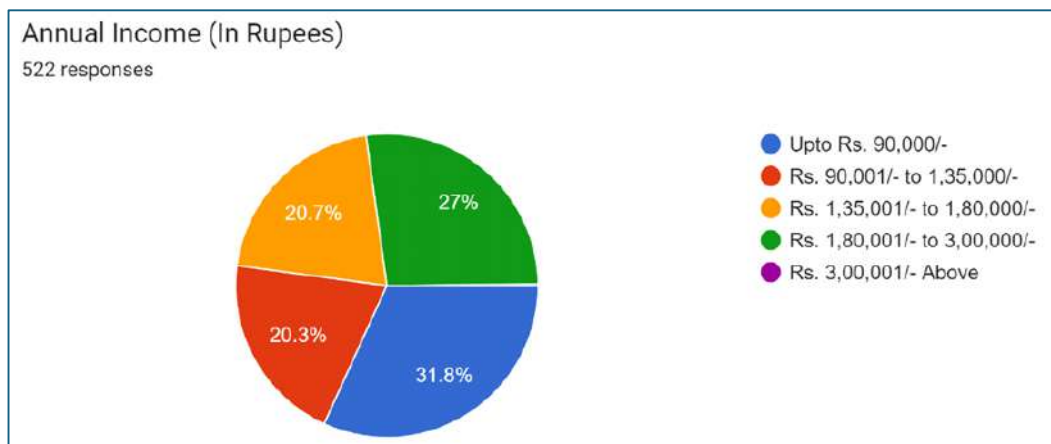
Figure 4: Employment Status



Source: From collected data through Google form

In this we have shown the Employment status of the people

Figure 5: Annual Income



Source: From collected data through Google form

In this we have shown that in what income range majorities of people are buying BOAT. This is the overall data collection in bar graph representation.

6.0 Findings

Factors Influencing Online Purchase Behavior: Through both qualitative interviews and quantitative surveys, several factors influencing online purchase behavior among BOAT customers were identified. These factors include product quality, brand reputation, pricing, website usability, and trust in online transactions, convenience, social influence, and perceptions of online payment security.

Impact of Marketing Strategy and Brand Ambassadorships: The success of BOAT, as evidenced by its rise in the global wearables market, is attributed to its powerful marketing strategy and collaborations with local cricket teams. Brand ambassadorships with Indian cricketers such as KL Rahul and Shikhar Dhawan have significantly contributed to the brand's visibility and popularity.

Role of Online Customer Reviews and Product Presentation: Previous literature highlights the influence of online customer reviews and product presentation on purchase decisions. BOAT can leverage positive customer reviews and ensure appealing product imagery to enhance consumer engagement and conversions.

Significance of Online Customer Service and Convenience: Efficient and personalized online customer service plays a crucial role in enhancing customer satisfaction and fostering long-term relationships. Additionally, the convenience of online shopping, including easy navigation and streamlined checkout processes, positively influences consumer purchase behavior.

7.0 Suggestions

Enhance Product Quality and Brand Reputation: BOAT should prioritize maintaining high product quality and reinforcing its brand reputation to instil confidence and trust among online shoppers. Investing in research and development to innovate and improve product offerings can further strengthen its position in the market.

Optimize Website Usability and Payment Security: Improving website usability and ensuring robust online payment security measures are essential for providing a seamless and secure online shopping experience. BOAT should focus on user-friendly website design and implement advanced security protocols to alleviate concerns regarding online transactions.

Utilize Customer Reviews and Implement Recommendations: Leveraging positive customer reviews and implementing recommendations from previous studies can guide BOAT in refining its marketing strategies and product presentation techniques.

Encouraging satisfied customers to share their experiences online can enhance brand credibility and attract potential buyers.

Strengthen Social Media Engagement and Community Building: Building strong online brand communities and leveraging social media platforms can facilitate meaningful interactions with customers. BOAT can capitalize on its collaborations with cricket personalities to engage with fans and foster a sense of belonging within its online community.

8.0 Conclusion

In conclusion, this research sheds light on the factors influencing the online purchase behavior of BOAT customers in the consumer electronics and accessories industry. By integrating insights from qualitative interviews, quantitative surveys, and existing literature, valuable findings have been generated to aid BOAT in optimizing its marketing strategies, improving customer satisfaction, and fostering long-term brand loyalty. By prioritizing product quality, enhancing website usability, and strengthening social media engagement, BOAT can position itself for sustained growth and success in the competitive e-commerce landscape.

Customer-Centric Approach: By understanding the nuanced preferences and behaviors of BOAT's online customers, the research underscores the importance of a customer-centric approach. Tailoring marketing strategies and product offerings to meet the specific needs and desires of the target audience can drive higher levels of engagement and satisfaction.

Competitive Advantage: In the dynamic e-commerce landscape, differentiation is crucial for success. The conclusion could further elaborate on how BOAT can leverage its unique selling propositions, such as its commitment to quality, innovative product range, or exceptional customer service, to carve out a distinct competitive advantage.

Continuous Improvement: Building on the recommendations provided, it's essential for BOAT to embrace a culture of continuous improvement. Regularly monitoring customer feedback, analyzing market trends, and adapting strategies accordingly will ensure BOAT remains agile and responsive to evolving consumer preferences and industry dynamics.

Long-Term Vision: Beyond immediate optimizations, the conclusion could emphasize the importance of a long-term vision for sustainable growth. By fostering enduring relationships with customers through consistent delivery of value, BOAT can establish itself as a trusted brand synonymous with quality and reliability in the consumer electronics market.

In conclusion, this research not only illuminates the factors influencing BOAT's online purchase behaviour but also provides actionable insights and strategic recommendations for the company's future success. By adopting a customer-centric approach, leveraging its competitive advantages, and committing to continuous improvement, BOAT can position itself as a leader in the competitive e-commerce landscape, driving sustained growth and fostering enduring brand loyalty.

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CHAPTER 4

Does 'Make in India' Make India Better? - A Study on the Impact of Foreign Direct Investment on Economic Factors in India

Dharma Theja T., Ravi Prakash S.** and Rohit K. Abhimalla****

ABSTRACT

This study investigates the relationship between foreign direct investment (FDI) and economic development in India. It examines how institutional quality, measured through seven key economic factors, influences FDI inflows. Data from 2022-2023 on GDP, exports, foreign reserves, GNP, human and natural resources, capital formation, and technological development is analyzed using Vector Auto regression (VAR) models. The findings reveal a positive co-integration relationship between FDI and GDP, indicating that FDI contributes to India's economic growth. Similarly, a positive relationship is found between exports and GDP. The VAR model suggests that future GDP is likely to increase based on current FDI trends. Interestingly, a negative association is observed between FDI and foreign reserves, suggesting further research is needed to understand this dynamic. This study contributes to the literature by employing a VAR model to analyze the impact of institutional factors on FDI flows in India, offering valuable insights for policymakers aiming to attract foreign investment and foster economic development.

Keywords: FDI, Indian Economic Metrics, Economy Growth, VAR Model.

1.0 Introduction

Through FDI, or foreign direct investment, one country may reap the benefits of their investment while another country boosts its production and rises in the social and economic ladder. For an investment to be considered efficient and effective, it must be seen as having a favourable impact on the economy over the long run.

**Corresponding author; Assistant Professor, Paari School of Business, SRM University, Guntur, Andhra Pradesh, India (E-mail: tdtheja@gmail.com)*

***Assistant Professor, Paari School of Business, SRM University, Guntur, Andhra Pradesh, India (E-mail: raviprakashsiddavatam@gmail.com)*

****Assistant Professor, Department of Business Management, SRM University, Amaravati, Andhra Pradesh, India (E-mail: rohitkumar.a@srmmap.edu.in)*

Its potential monetary effect may be little if its primary motivation is to generate profits in the near run. Federal direct investment (FDI) could have a greater or lesser impact on GDP, the IT industry, and the economy as a whole depending on government trade barriers and foreign investment regulations. Seeking actual evidence to support this notion, this research conducts an empirical examination of India using time series information.

An example of international investment is foreign direct investment (FDI), which happens when an individual or bunch from one nation has a drawn out stake in and huge impact over an organization in another economy. The current phase of economic development underscores the substantial impact of FDI on the stable, high-quality, and robust economic growth of the destination country. Nations participating in the global economic process are actively working to cultivate a competitive business environment to attract increased foreign investments.

Therefore, it becomes crucial to scrutinize the core determinants that exert the most significant influence on FDI inflows and their stability. Numerous studies on international capital flows reveal that the primary motivations behind making direct foreign investments historically revolve around ownership advantage, location benefits, and internationalization advantages. While factors like a strategically advantageous position, a large consumer base, and an abundance of raw materials contribute to a country's investment attractiveness, these alone are insufficient in today's highly competitive landscape for global capital.

In this fierce competition for FDI, attention must also be directed towards the regulatory framework within a nation. A well-structured regulatory environment not only reduces transaction costs for shareholders but also facilitates trade, providing essential safeguards and protections for foreign investors. Furthermore, it is critical to recognize that a combination of attractiveness to foreign direct investment (FDI) and good institutional efficiency is an important component in attracting FDI and reaping its benefits.

- Indian Gross Domestic Product
- Indian Exports
- Foreign Reserves
- Gross National Product
- Human & National resources
- Capital formation & social factors
- Technology development

2.0 Review of Literature

Mazumdar (2020): The research looked at how capital flows affected India's GDP growth and suggested that the early 1990s partial capital account liberalization had boosted hopes for a beneficial effect on India's GDP growth. This article examines the impact of foreign direct investment (FDI) entering India and considers the question of whether or not FDI has added to in general financial development.

Mahajan & Agarwal (2020): Proposes indicate that India has the potential to draw foreign investment through effective marketing strategies. To enhance transparency and simplify the foreign investment policy, the Government has eliminated pre-equity approvals, provided specific preconditions are fulfilled. When coupled with factors like robust financial development in both home and host nations, improved corporate benefit, and raised stock valuations, these measures are anticipated to contribute to a resurgence in Foreign Direct Investment (FDI) flows.

Click (2019): The study investigated the risk associated with US foreign direct investment spanning from 1982 to 1998 across 59 host countries. An empirical model was first built as part of the investigation to shed light on the patterns in return on assets (ROA), a measure of capital return, both across time and between countries. Four primary findings emerged from the study. Firstly, the ROA in a significant number of countries does not merely mirror global trends. Secondly, variations across countries are elucidated by financial risk. Thirdly, there exists a qualitatively distinct unexplained country risk.

Bhaumik (2019): The examination of the banking sector in the study contends that the expense productivity and benefit of public area banks have undergone substantial improvement. The article suggests that it is now opportune to take decisive action and privatize public sector banks. At the same time, the paper suggests encouraging more credit securitization as a means of reducing the dangers connected with the formation of bank assets.

Nagesh Kumar (20018): The article titled "Liberalisation of FDI Flows and Development—Indian Experience in the 1990s" delves into the specifics of FDI that reached India beginning in 1991 and how it affected the country's economy. It gives an extensive outline of the evaluation of the Indian Government's strategy concerning FDI spanning from 1948 to 2004. Additionally, the paper delves into the scrutiny of patterns and examples portraying FDI inflows in India during the 1990s. Note that the author uses only secondary sources, such are the official publications of the Indian government and the unfamiliar speculation information base kept up with by the United Nations Conference on Trade and Development (UNCTAD).

Peng Hu (2017): The effect of the financial emergency on firms' operational behavior in East Asia is explored in the study titled "Economic Crisis on the Operational Behaviour of Firms: Case of East Asia." Based on their industrial and financial strength, several Finnish enterprises saw the Asian crisis as a chance to expand their operations or enter new markets in the area. Transnational corporations (TNCs) may be eligible for further investment incentives while the economy is in recovery. Despite the difficulties brought on by the Asian crisis, the majority of the world's biggest companies showed remarkable tenacity and consistency in their strategy by continuing to have faith in the East Asian crisis nations as potential investment destinations.

Elissa Braum (2017): The report provides a thorough synopsis of the literature and government policy pertaining to the links between FII and development. It argues that growth occurs before Foreign Direct Investment (FDI), rather than the other way around, and provides substantial and consistent data in support of this claim. Moreover, the study emphasizes the critical role of the economic policy context in realizing developmental advantages from FDI. In addition to maintaining low creation expenses to draw in excellent FDI, countries should likewise have adequate homegrown abilities to effectively leverage the benefits derived from foreign direct investment.

Subramanya & Bhuma (2016): According to the research article "Studying Outward FDI by India," there is a significant relationship between remittances and the elasticity of government spending and labour outflows. Based on the data, the amount of investments made abroad is intently attached to the solace level of the financial backers. According to the report, remittances are affected by the amount of individuals joining the workforce, which is in turn affected by government expenditure on higher education and increasing the supply of qualified workers.

Rajesh Narula & Lal (2016): According to the articles included in the edited collection, one of the most important goals is to learn how to maximize the advantages that the host nation gets from FDI. The essays in this collection draw attention to a fundamental inconsistency: "With frail neighborhood capacities, industrialization turns out to be more dependent on FDI." This paradox is present despite the diverse range of nations and methodology used. Importantly, the studies presented in this volume do not lend support to the notion that FDI is an absolute prerequisite for economic development.

Karunakaran (2015): The research delved into a historical examination of foreign banks, scrutinizing their operations through the lens of historical perspectives. Drawing insights from this historical overview, the study proceeded to conduct an analysis of contemporary policies that have facilitated and encouraged the aggressive expansion of foreign banks.

Vasudevan (2015): The paper delineates the absence of a standardized theoretical framework concerning portfolio flows. Foreign direct investment (FDI) was the central idea in the early writings on the subject of foreign investment; this viewpoint became politically significant in the 1924 Soviet Union's Leninist New Economic Policy, as economic historians remember.

3.0 Statement of Problem

Foreign Direct Investment (FDI) has poured into developing countries at a rapid pace in the last few years. Attracting foreign direct investments (FDIs) seems to depend heavily on the level of economic and social growth in these developing nations, particularly in relation to future industries, institutional environments, and policy shifts. The use of measures including incentives, concessions, regulatory liberalisation, and investment assurances has been implemented. Yet, when it comes to luring a significant quantity of FDI, India falls short. Despite China's doubling of foreign direct investment (FDI) throughout the past ten years, India's all out FDI inflows show serious areas of strength for a pattern. The country has not attracted the foreign direct investment (FDI) anticipated, particularly in comparison to other large, economically oriented nations among the world's fastest-growing nations (BRICS), despite its dynamism, tremendous potential, and rising relevance for FDI.

4.0 Research Gap

Only a limited number of studies have undertaken an examination concerning the strategy influence on Foreign Direct Investment (FDI) flows. A few of these studies have focused on investment decisions, technological aspects, and economic challenges associated with financial mobilization through FDI. The government of India has recently examined the latest developments in attracting FDI flows, with most studies addressing regulatory bottlenecks in the field of unfamiliar direct speculation. In spite of a huge number of global, national, and local studies utilizing reasonably large samples, these efforts have not fully addressed the complexities and challenges related to the growth of FDI flows. It is noteworthy that smaller countries have demonstrated a more successful ability to draw in a bigger part of FDI than India. For instance, Belgium has achieved a 100% success rate in attracting FDI and is recognized as the highest FDI-attracting country globally. One major impediment identified is the institutional factors that appear to be unable to effectively channel funds into India.

5.0 Objectives of the Study

- To study the Role of Foreign Direct investment flows into India.
- To study the Foreign Direct investment (FDI) impact on Indian economic growth.

6.0 Hypotheses of the Study

H0: There is no impact of dimensions of Economic metrics on FDI flows.

H1: There is an impact of dimensions of Economic metrics on FDI flows.

7.0 Research Methodology

Study period: The period of the study is between the financial years 2022-23. And the data collected from DPIIT website and few journals.

Statistical tools to be used:

- Unit Root Test
- ARDL approach
- VAR Model
- MIDAS Model

8.0 Scope of the Study

In order to analyses the ten institutional variables that contribute to India's economic development, we will first examine the effect of unfamiliar direct speculation streams on the development of certain sectors in the nation.

9.0 Result and Discussion

To study the Role of Foreign Direct investment inflows in India.

Table 1: Share of Top Five Investing Countries in FDI Equity Inflow in April 2022 to March 2023

Rank	Country	FDI Equity Flow During 2022-2023.	% Share in FDI Equity Flow During 2022-2023.
1	Singapore	1,37,374	37 %
2	Mauritius	48,895	13 %
3	USA	48,666	13 %
4	UAE	26,315	7%
5	Netherland	19,855	5%

Source: DPIIT (https://dpiit.gov.in/sites/default/files/FOCUS_YEAR_MAR_23.pdf)

Table 2: Share of Top Five Investing Sectors in FDI Equity Inflow in April 2022 to March 2023

Rank	Country	FDI Equity Flow During 2022-2023	% Share in FDI Equity Flow During 2022-2023
1	Computer Software & Hardware	74,718	20 %
2	Service Sector	69,852	19 %
3	Trading Sector	38,060	10 %
4	Non-Conventional Energy	19,977	5%
5	Drugs & Pharmaceuticals	16,654	4%

Source: DPIIT (https://dpiit.gov.in/sites/default/files/FOCUS_YEAR_MAR_23.pdf)

9.1 Challenges facing international investment

Foreign investment in a host country can have various impacts, and foreign investors often conduct research to identify obstacles that may negatively affect their investments. Companies are naturally averse to incurring losses, and understanding the challenges in the host country is crucial for making informed investment decisions (Boopath, D., 2013). Several reasons may dissuade foreign companies from investing in a particular host country, ranging from regulatory hurdles and economic instability to political uncertainty and inadequate infrastructure. Identifying and addressing these challenges is essential for fostering a conducive environment that attracts and retains foreign investment.

- *Rate of Interest / Foreign Exchange Rate:* Differences in interest rates between countries play a crucial role in foreign capital movements. Capital tends to flow from low-interest-rate countries to those with higher rates. The movement of foreign investment is particularly slow in the presence of an unstable exchange rate and the anticipation of a future decline.
- *Speculation:* Short-term capital movements can be influenced by speculation about expected changes in interest rates. Investment portfolios in the host country market are subject to speculation, and if the market is perceived as strong in speculation, foreign investors may reduce their investments, leading to a smaller unfamiliar speculation development in the host country.
- *Profitability:* Foreign capital flows in the private sector are heavily influenced by the desire of profit. In light of this, private investment flows to nations with relatively better rates of return.
- *Costs of Production:* Lower creation costs in outside nations act as an incentive for private capital movements. This can be categorized into two types of cost-saving investments – the first involves acquiring raw materials from abroad that are

essential for manufacturing and selling finished products, while the second pertains to reducing the costs of production, particularly labor, through substantial interests in extractive enterprises.

- *Economic Conditions:* Opportunities for confidential unfamiliar venture are exceptionally impacted by financial factors, such as the size of the population and the country's income level, which in turn affect market potential and infrastructural facilities.
- *Government Policies:* Investments from other countries may be influenced by a country's policies, particularly those that deal with collaboration, revenue, taxes, currency rates, tariffs, monetary incentives, and foreign investment.
- *Political Factors:* Political factors, including political stability, party organisation, and diplomatic connections with foreign nations, are also influential in shifting capital flows. Political influences on business practices, including changes in tax policies and industrial regulations, can either positively or adversely affect the flow of unfamiliar interest in a country.

The objective is to research how FDI affects the development of certain industries in India.

H0: Economic Growth Factors of FDI are not stationary

H1: Economic Growth Factors of FDI are stationary

Table 3: An augmented Dickey-Fuller Unit Root Test

Economic Growth Indicators	Level	1 st Difference	2 nd Difference
Indian Gross Domestic Product	0.0033*		
Indian Exports	0.08692	0.0000*	
Foreign Reserves	0.0000*		
Gross National Product	0.00692		
Human & National resources	0.09692	0.01292	0.0000*
Capital formation & social factors	0.07692	0.0000	
Technology development	0.00092	0.0000	

Source: E-views version 12 data combined with secondary sources

Interpretation: Table 1 shows that the sectorial investment components of foreign direct investment (FDI) were found to be significantly different at the 5% level when tested using the Augmented Dickey Fuller test. At the 5% level of significance for the first difference Indian Gross Domestic Product, Foreign Reserves, Gross National Product and Indian Export, Capital formation & social factors, Capital formation & social factors in 1st difference and finally Human & National resources is 2nd difference.

Table 4: Investment and GDP Estimates using Vector Auto Regression

Vector Auto regression Estimates		
Sample (adjusted): 2022- 2023		
Included observations: 12 after adjustments		
Standard errors in () & t-statistics in []		
	GDP	FDI
GDP (-1)	0.235641 (1.4564) [0.11238]	0.028841 (0.01553) [0.74587]
GDP (-2)	0.52456 (1.32152) [0.356212]	0.036522 (0.01566) [-0.574652]
FDI (-1)	0.164655 (7.44621) [-0.63672]	0.235842 (0.37644) [0.75768]
FDI (-2)	0.470517 (0.48322) [-0.15452]	-0.435456 (0.36584) [-1.75121]
C	1.040312 (6.70111) [1.54432]	7.671510 (2.35110) [3.66232]
R-squared	0.470552	0.438466
Adj. R-squared	0.321214	0.144896
Sum sq. resids	8.657865	1.026665
S.E equation	3.524897	1.204567
F-statistic	2.323129	1.481742
Log likelihood	-234.8436	-394.4568
Akaike AIC	56.15662	49.48665
Schwarz SC	56.48565	49.78446
Mean dependent	1.624561	7.214564
SD. dependent	4.284884	1.314545
Determinant resid covariance (dof adj.)		1.764699
Determinant resid covariance		6.007895
Log likelihood		-625.0456
Akaike information criterion		125.78569
Schwarz criterion		116.2446
Number of coefficients		10

Source: E-views version 12 data combined with secondary sources

Interpretation: Two endogenous factors, FDI and Gross domestic product, with two lags each, are displayed in the table. In the VAR, each equation is represented by a column, and each row contains the corresponding regressors. Their respective T-values are 0.11238 and 0.74587, and when we combine the regressors by variable, we find that a one-unit rise in GDP is 0.235641, leading to a 15.6% increase, and that foreign direct

investment (FDI) climbs to 2.2%. Their respective T-values are 0.356212 and -0.574652, which indicate that FDI is -0.036522 decreasing to 2.6% and GDP is 0.52456 increasing to 55.4%. With a rise in FDI to 1 unit, or 0.235842, GDP will fall to -0.164655, or 14.7%. Their respective T-values are 0.75768 and -0.63672. Foreign direct investment (FDI) rises by -0.435456 units, resulting in a drop of 43.5% and a drop in GDP to 47%. A T-value of -1.75121 and -0.15452 matches them.

H0: There is no Co-integration between FDI and GDP regarding Indian Economic Growth

H1: There is a Co-integration between FDI and GDP regarding Indian Economic Growth

Table 5: Johansen Integration Test for FDI and GDP

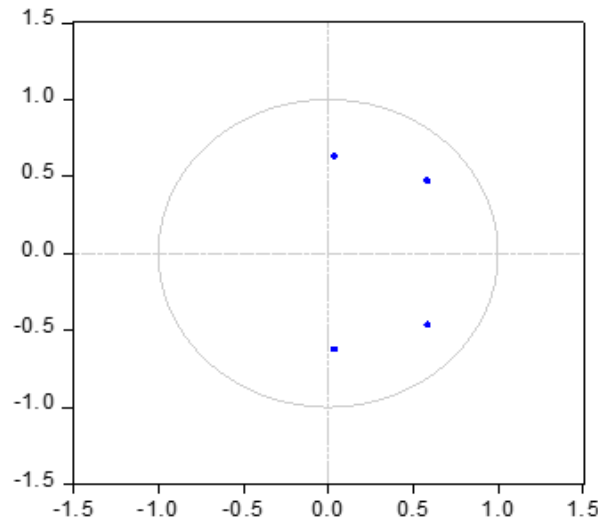
Sample: 2004 – 2018					
Included Observations:12					
Series: GDP FDI					
Lags Interval: 1 to 1					
Selected (0.05 level*) Number of Co-integrating Relations by Model					
Data Trend:	None	None	Linear	Linear	Quadratic
Test Type	No Intercept	Intercept	Intercept	Intercept	Intercept
	No Trend	No Trend	No Trend	Trend	Trend
Trace	1	2	1	1	1
Max-Eig	2	2	1	1	2
*Critical values based on MacKinnon-Haug-Michelis (1999)					
Information Criteria by Rank and Model					
Data Trend:	None	None	Linear	Linear	Quadratic
Rank or	No Intercept	Intercept	Intercept	Intercept	Intercept
No. of CEs	No Trend	No Trend	No Trend	Trend	Trend
Log Likelihood by Rank (rows) and Model (columns)					
0	-656.8033	-656.8033	-656.3349	-656.3349	-622.2853
1	-622.1647	-636.9757	-636.5615	-636.2033	-636.2895
2	-622.0524	-628.0543	-628.0543	-646.8449	-646.8449
Akaike Information Criteria by Rank (rows) and Model (columns)					
0	106.4672	106.4672	106.7225	106.7225	106.7142
1	106.6941	105.9960*	106.0936	106.2006	106.0483
2	107.3421	106.5091	106.5091	106.6408	106.6408
Schwarz Criteria by Rank (rows) and Model (columns)					
0	106.4562	106.4569	106.9649	106.9844	107.0375
1	107.0156	106.4516*	106.4977	106.6450	106.5332
2	107.9285	107.0456	107.4565	107.2874	107.2874

Source: Based on secondary data collected using E-views version 12.

Interpretation: The Johansen trial of co-incorporation table shows the Follow and Max-Eigen values used to find the order of integration. When the p-value is less than

0.05 ($0.0000 < 0.05$), it means that none of the variables are co-integrated. However, when looking at the table results, it becomes clear that there is something like one co-incorporating condition or mistake. This implies that the p-esteem is more noteworthy than 0.05 for both the follow and Max-Eigen values, dismissing the invalid speculation and tolerating the elective speculation, or at least, that the variables are co-integrating.

Figure 1: A Reverse Root Analysis of AR Features the Polynomial of Foreign Direct Investment and Gross Domestic Product



Interpretation: The known AR polynomial's inverse roots are shown in the following graphs. Since all of the roots are within the unit circle and have a modulus smaller than one, the predicted VAR is stable, as seen in Figure. Therefore, the data follows a normal distribution.

Interpretation: The Table 6 shows that FDI and exports are two endogenous variables with two lags each. In the VAR, each equation is represented by a column, and each row contains the corresponding regressors. Grouping the regressors by variable yields the following results: a 91% rise in exports and a 1% drop in foreign direct investment (FDI); a 33% fall in exports and a 0.1% increase in FDI; a T-value of 0.54562 and a -0.85789 for the regressors, respectively. If foreign direct investment (FDI) rises to 1 unit, or 0.342907, it will grow by 34%, but exports fall to -58.6456, or 68%. 1.264565 and -0.3945655 are their T-values. There is a 52% drop in FDI and a 24.9% drop in exports as a result of a -0.486656 rise with 2 units. The T-values for them are -2.46465 and -0.14150, respectively.

Table 6: Foreign Direct Investment and Export Models using Vector Auto Regression

Vector Auto regression Estimates		
Sample (adjusted): 2022- 2023		
Included observations: 12 after adjustments		
Standard errors in () & t-statistics in []		
	EXPORTS	FDI
EXPORTS (-1)	0.9146565 (1.71251) [0.54562]	-0.011732 (0.00199) [-0.85789]
EXPORTS (-2)	-0.365656 (1.67705) [-0.20187]	0.047950 (0.00195) [0.95762]
FDI (-1)	-58.64564 (232.957) [-0.394565]	0.342907 (0.27056) [1.26456]
FDI (-2)	-24.92719 (189.996) [-141501]	-0.486656 (0.22066) [-2.46465]
C	1.330113 (1.71313) [0.76346]	8.403510 (2.01410) [4.15656]
R-squared	0.664531	0.684915
Adj. R-squared	-0.154452	0.189156
Sum sq. resids	7.184595	8.694620
S.E equation	1.013613	1.184610
F-statistic	0.445124	1.487795
Log likelihood	-373.1497	-292.0522
Akaike AIC	53.07793	49.44499
Schwarz SC	53.21326	49.81546
Mean dependent	1.852513	7.214610
SD. dependent	9.421012	1.311610
Determinant resid covariance (dof adj.)		1.324846
Determinant resid covariance		4.497945
Log likelihood		-546.7641
Akaike information criterion		132.3602
Schwarz criterion		132.4852
Number of coefficients		10

Source: Compiled from E-views version 12 on secondary data

H0: There is no Co-integration between FDI and Exports regarding Indian Economic Growth

H1: There is a Co-integration between FDI and Exports regarding Indian Economic Growth

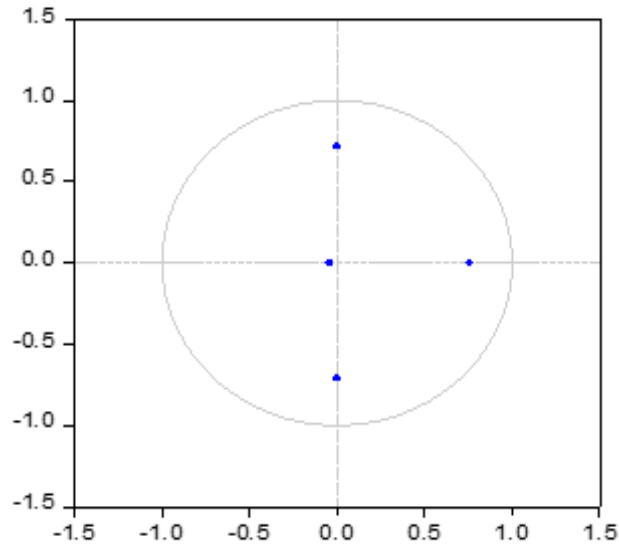
Table 7: Johansen Integration Test for FDI and Exports

Sample: 2022 – 2023					
Included Observations: 12					
Series: EXPORTS FDI					
Lags Interval: 1 to 1					
Selected (0.05 level*) Number of Co-integrating Relations by Model					
Data Trend:	None	None	Linear	Linear	Quadratic
Test Type	No Intercept	Intercept	Intercept	Intercept	Intercept
	No Trend	No Trend	No Trend	Trend	Trend
Trace	1	1	1	2	1
Max-Eig	1	1	1	2	2
*Critical values based on MacKinnon-Haug-Michelis (1999)					
Information Criteria by Rank and Model					
Data Trend:	None	None	Linear	Linear	Quadratic
Rank or	No Intercept	Intercept	Intercept	Intercept	Intercept
No. of CEs	No Trend	No Trend	No Trend	Trend	Trend
Log Likelihood by Rank (rows) and Model (columns)					
0	-674.3800	-674.3800	-673.7526	-673.7526	-671.9522
1	-673.0867	-665.8596	-665.7330	-665.7076	-664.2125
2	-673.0867	-664.7641	-664.7641	-662.9442	-662.9442
Akaike Information Criteria by Rank (rows) and Model (columns)					
0	113.0633	113.0633	113.2921	113.2921	113.3254
1	113.5144	112.4766*	112.6222	112.7846	112.7021
2	114.1811	113.1273	113.1273	113.1574	113.1574
Schwarz Criteria by Rank (rows) and Model (columns)					
0	113.2250	113.2250	113.5345	113.5345	113.6486
1	113.8377	112.8403*	113.0263	113.2291	113.1870
2	114.6660	113.6931	113.6931	113.8039	113.8039

Source: Created using E-views 12 and secondary sources of information

Interpretation: The Trace and Max-Eigen values, which are used to identify the request for joining in the Johansen trial of co-mix table, show that the factors are generally not co-coordinated, since the p-esteem is under 0.05 ($0.0000 < 0.05$). Thusly, the invalid speculation is dismissed. In view of the outcomes displayed in the table, apparently there is just a single co-incorporating condition or blunder. This implies that the invalid speculation can't be acknowledged and that the elective theory, which states that the variables are co-integrating, is accepted. The p-values for the trace and Max-Eigen values are greater than 0.05.

Figure 2: Roots of AR Features in the Other Direction Investment and Export Polynomial



Source: Using E-views version 12 and secondary sources, the author

Interpretation: The known AR polynomial's inverse roots are shown in the following graphs (Refer Figure 2). Since all of the roots are within the unit circle and have a modulus smaller than one, the predicted VAR is stable, as seen in Figure. Therefore, the data follows a normal distribution.

Interpretation: Foreign direct investment (FDI) and foreign reserve (FR) are two endogenous variables that have two lags, as shown in the Table 8. The VAR equations are organised in columns, and the regressors are organised in rows, in the table. By dividing the regressors into groups according to the variables of interest, we find that a 65% increase in foreign reserves and a 22% rise in foreign direct investment (FDI) result in T-values of 1.68054 and 1.54154, respectively. The T-values for the two factors are 0.34785 and - 1.46861, separately, and the foreign direct investment (FDI) rises by 0.292046 to 19% while the foreign reserve increase by 2 units is 0.071637, increasing the overall gain to 8.2%. 7.4 percent growth in FDI to 1 unit, or 0.074189, and a 34.1 percent decline in foreign exchange reserves, or -0.347982. The T-values for them are 0.17345 and -0.57842. Foreign direct investment (FDI) increased by 2 units is - 0.437107, resulting in a 43.7% decline and a 10.3% drop in foreign reserve. Together, they make up a T-value of -1.86965 and 0.37540.

Table 8: Estimates of Foreign Direct Investment and Foreign Reserve Using Vector Auto Regression

Vector Auto regression Estimates		
Sample (adjusted): 2022- 2023		
Included observations: 12 after adjustments		
Standard errors in () & t-statistics in []		
	Foreign Reserves	FDI
Foreign Reserves (-1)	0.681455	0.223421
	(0.45694)	(0.13542)
	(1.68054)	[1.54154]
Foreign Reserves (-2)	0.071637	-0.292046
	(0.36554)	(0.32145)
	[0.34785]	[-1.46861]
FDI (-1)	0.347982	0.074189
	(0.75952)	(0.32164)
	[-0.57842]	[0.17345]
FDI (-2)	0.103285	-0.437107
	(0.45585)	(0.35644)
	[0.37540]	[-1.86965]
C	1.154611	8.336710
	(5.29710)	(1.97910)
	[2.21212]	[4.28739]
R-squared	0.81456	0.774535
Adj. R-squared	0.705455	0.542270
Sum sq. resids	5.724521	7.944920
S.E equation	2.864910	1.077810
F-statistic	7.590809	2.384530
Log likelihood	-302.7052	-290.8695
Akaike AIC	51.28420	49.31042
Schwarz SC	51.48624	49.51246
Mean dependent	3.017911	7.216510
SD. dependent	5.274610	1.319610
Determinant resid covariance (dof adj.)		4.271340
Determinant resid covariance		1.451540
Log likelihood		-588.9121
Akaike information criterion		99.81868
Schwarz criterion		100.2228
Number of coefficients		10

Source: Information derived from secondary sources and E-views version 12

H0: There is no Co-integration between FDI and Foreign regarding Indian Economic Growth

H1: There is a Co-integration between FDI and Foreign regarding Indian Economic Growth

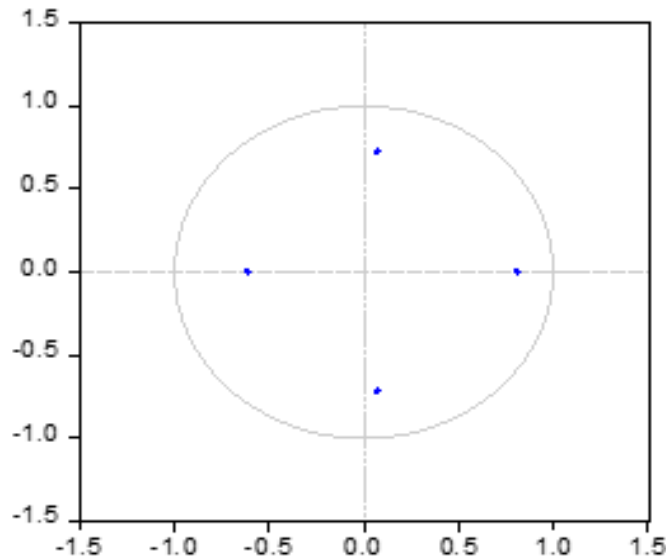
Table 9: Export and Foreign Direct Investment Johansen Integration Test

Sample: 2022 – 2023					
Included Observations: 12					
Series: FOREIGN RESERVES FDI					
Lags Interval: 1 to 1					
Selected (0.05 level*) Number of Co-integrating Relations by Model					
Data Trend:	None	None	Linear	Linear	Quadratic
Test Type	No Intercept	Intercept	Intercept	Intercept	Intercept
	No Trend	No Trend	No Trend	Trend	Trend
Trace	1	2	2	1	2
Max-Eig	1	2	2	1	2
*Critical values based on MacKinnon-Haug-Michelis (1999)					
Information Criteria by Rank and Model					
Data Trend:	None	None	Linear	Linear	Quadratic
Rank or	No Intercept	Intercept	Intercept	Intercept	Intercept
No. of CEs	No Trend	No Trend	No Trend	Trend	Trend
Log Likelihood by Rank (rows) and Model (columns)					
0	-606.4549	-606.4549	-603.7749	-603.7749	-602.5772
1	-597.3736	-594.1099	-591.9131	-591.9010	-590.7949
2	-597.0762	-588.9121	-588.9121	-585.9968	-585.9968
Akaike Information Criteria by Rank (rows) and Model (columns)					
0	101.7425	101.7425	101.6291	101.6291	101.7629
1	100.8956	100.5183	100.3189*	100.4835	100.4658
2	100.5127	100.4853	100.4853	100.3328	100.3328
Schwarz Criteria by Rank (rows) and Model (columns)					
0	101.9041	101.9041	101.8716	101.8716	102.0861
1	101.2189	100.8820	100.7229*	100.9280	100.9507
2	101.9976	101.0511	101.0511	100.9793	100.9793

Source: Created using E-views 12 and secondary sources of information

Interpretation: The Trace and Max-Eigen values may be seen in the Johansen test of co-integration table, which helps to establish the order of integration. Results from the tests indicate that there is no co-integration of the variables, since the p-value is less than 0.05 ($0.0000 < 0.05$). With p-values larger than 0.05 for both the trace and Max-Eigen values, the findings demonstrate that there is a maximum of one co-integrating equation or mistake. This indicates that the variables are co-integrating, which is the alternative hypothesis, and rejects the null hypothesis.

Figure 3: Roots of AR Features in the Other Direction Formula for Foreign Direct Investment and Reserves



Source: Created using E-views 12 and secondary sources of information

Interpretation: The known AR polynomial's inverse roots are shown in the following graphs. Since all of the roots are within the unit circle and have a modulus smaller than one, the predicted VAR is stable, as seen in Figure. Therefore, the data follows a normal distribution.

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CHAPTER 5

Future Trends in Training and Development: Innovations in Learning Technologies and Methods

Kinjal Patel and Rinki Mishra***

ABSTRACT

Continuous learning is necessary to increase organizational agility, enabling staff to quickly grasp novel situations and successfully react to them. As new technologies are introduced and embraced, there is a growing demand for strong foundational training. Businesses may improve the effectiveness of their training programs and get closer to their goals by bringing innovations in learning technologies and methods and also by putting their employees first and making the best possible use of each experience they have gained. The utilization of cloud-based systems, mobile learning technologies, gamification of the training process, information systems for intellectual teaching, immersive learning, virtual and augmented reality, Some of the cutting edge methods in the field of training and development include AI-powered personalization, microlearning, social learning, mobile learning, data-driven learning, remote and hybrid learning, video-based learning, integration of neuroscience and cognitive science, block chain credentialing, etc. The study outcome would be that any firm that boasts a comprehensive and flexible employee training and development program is best positioned for success in helping its employees thrive in the abilities required to excel in their specific roles. Modern Training and Development trends can enhance organizational competitiveness by ensuring their workforce is equipped with the necessary skills and knowledge for success.

Keywords: Training and Development, Technologies, Methods, Future Trends in Industries.

1.0 Introduction

As organizations strive to adapt to an ever-evolving global landscape, the importance of continuous learning and development becomes increasingly evident.

**Corresponding author; Research Scholar, Parul University, Vadodara, Gujarat, India
(E-mail: kinjalhp13@gmail.com)*

***Supervisor & Assistant Professor, Faculty of Management Studies, Parul University,
Vadodara, Gujarat, India (E-mail: rinki.mishra26545@paruluniversity.ac.in)*

Organizations are recognizing the crucial role of training and development in maintaining a competitive edge. This paper aims to analyze the future trends in training and development, with a focus on the innovative learning technologies and methods that are shaping the landscape.

The rapid pace of technological advancement and the dynamic nature of the business environment necessitate a proactive approach to employee training and development. This paper investigates the future of training and development, emphasizing the role of innovative learning technologies and methods in fostering a skilled and adaptive workforce. Because of technological breakthroughs that enable synchronous and asynchronous connection with peers globally, the world is experiencing both a decreasing and an expanding dimension.

Meanwhile, the information explosion broadens our vision, prompting a shift in training to meet this global communication and information explosion. One method is to bring training closer to people's employment by implementing just-in-time and just-what-is-needed interventions. This method addresses key business challenges while making better use of time and resources. The number of individuals using Facebook, Twitter, and numerous other programs is rising, particularly among youth. It makes sense that trainers would want to figure out how to use these tools to engage people since that is where they live, share, and learn.

There will be a continued increase in skill requirements as a result of accelerated technological change, an increase in workforce education and diversity, a continued reorganization of the business environment as a result of corporate restructuring, a significant change in the size and composition of corporate training departments, and a radical transformation of training delivery as a result of technological innovations. The future will also bring new ways for training departments to deliver services, a greater emphasis among training professionals on interventions in performance improvement, the proliferation of integrated high-performance work systems, the transformation of companies into learning organizations, and a greater organizational emphasis on human performance management.

Education is key to sustainable development. New technologies in training are transforming not just our methodology but also our ideals, perceptions, and goals for training. A comprehensive review of existing literature reveals the historical developments in training and development. The evolution from traditional classroom-based training to online learning has set the stage for further innovations. However, there is a gap in understanding how emerging technologies and methods are influencing the future of learning.

2.0 Literature Review

The future trends of Training and Development depends on Learning Technologies & Innovative Learning Methods. Several literature reviews have been done to understand the concept.

2.1 Artificial Intelligence (AI) and Machine Learning

Maity (2019) did study on identifying opportunities for artificial intelligence in the evolution of training and development practices. This paper explores the potential of artificial intelligence (AI) in training and development processes. Interviews with 27 HR and training professionals from eight organizations in the FMCG, oil and natural gas, and clothing and apparel industries revealed that 92.6% of respondents believe their organization requires knowledge management practices, 40.7 percent require continuous training content, and 63% require personalized learning. The study also found that 51.9 percent prefer on-the-go learning tools, and 33.33 percent believe an intuitive e-learning interface would be useful. The findings have led to the foundation of an SIP model, which can guide AI systems in training and development practices. The paper aims to explore AI's impact on training and development practices and drive its use across industries.

Smith *et al.* (2017) did study on a developmental approach to machine learning. They mentioned that the Visual learning relies on algorithms and training material, with infant- and toddler-egocentric vision being a unique training set. Toddlers experience skewed distributions with repeated occurrences of a few things, and their views are experienced in a specific order. This biased visual experience allows human learners to recognize both pervasively present and rarely encountered entities. Researchers of human and machine learning are likely to advance by considering real-world statistics for learning, thereby enhancing the learning process.

AI and machine learning technologies are revolutionizing training programs by personalizing content, predicting learning needs, and providing real-time feedback. This section explores the potential of AI in creating adaptive learning environments tailored to individual employee needs.

2.2 Extended Reality (Virtual, Augmented and Mixed Reality (VR/AR))

Milgram *et al.* (1994) wrote paper on a taxonomy of mixed reality visual displays. They stated that mixed reality is a fusion of the physical and digital worlds that enables natural and intuitive 3D human, computer, and environmental interactions. Advances in computer vision, graphical processing, display technologies, input methods,

and cloud computing have all contributed to this new reality. Paul Milgram and Fumio Kishino introduced “mixed reality” in their paper in 1994.

Kaplan *et al.* (2021) did study on the effects of virtual reality, augmented reality, and mixed reality as training enhancement methods: A meta-analysis. The meta-analysis examines the effectiveness of extended reality (XR)-based training compared to traditional methods. It examines the literature on training transfer from virtual, augmented, and mixed reality (MR) and determines if XR-based training is as effective as traditional methods. The study found that XR training does not significantly differ from non-simulated, control environments and is equally effective in enhancing performance. XR is as effective as commonly accepted methods in various fields, especially when traditional methods are impossible due to danger or cost. The value of XR lies in providing training in situations that exclude traditional methods.

2.3 Gamification

Gamification is the practice of introducing game aspects into non-game environments in order to engage and inspire learners. This section investigates how gamified training programs can improve employee involvement, motivation, and skill learning. Armstrong *et al.* (2018) wrote paper on gamification of employee training and development. Their paper discusses the growing use of gamification in employee training and its potential to improve web-based training. It explains its role in training, reviews research on its effectiveness in training design, and provides a formal process for scientifically supported gamification of web-based training. Their research aims to address the research-practice gap and provide a clear roadmap for training design.

Larson (2020) did literature review on serious games and gamification in the corporate training environment. He found out that gamification is the use of video games to enhance real-world activities by leveraging psychological predispositions to engage in gaming. Serious games, designed for a primary purpose beyond entertainment, increase motivation and engagement. In the workplace, gamification benefits companies by enhancing workforce recruitment, retention, program adoption, and work performance. However, many companies are hesitant due to challenges within organizational hierarchies, demographics, ethics, and a history of failed attempts. This paper reviews research on serious games and gamification in the workplace.

2.4 Mobile learning

Butler *et al.* (2021) created a contextual framework on the use of mobile learning technologies for corporate training and development. This chapter reviews mobile learning and its use in business training and development. It uses semi-structured

interviews and an online survey to gather opinions on the costs and benefits of m-learning applications. Younger participants are more likely to embrace these technologies, using various mobile devices for engagement. The study identifies contextual factors such as app usefulness, individual learning styles, time, spatial issues, integration with other learning approaches, and cost and accessibility. They mentioned that future research should explore m-learning technologies in businesses and training organizations.

2.5 Data driven learning

Jensen *et al.* (2018) wrote paper on data-driven training development: deriving performance constraints from operational examples. Their paper presents a data-driven machine learning approach for modeling constraints in satellite planning. It uses an authoring tool and a simulation-based training environment to create a 7-day schedule of satellite contacts while meeting specialized constraints. The training aims to assess planners' decisions in simulation-based scenarios and provide feedback. The authoring tool processes operational source data, producing derived constraints. The paper discusses its applicability and limitations in more general cases.

2.6 Microlearning

Microlearning involves delivering content in small, easily digestible units, making learning more accessible and efficient. The paper examines the benefits of microlearning, including increased retention rates and the ability to integrate learning into employees' daily workflows.

Dolasinski *et al.* (2020) did study on Microlearning: A New Learning Model. They mentioned that the traditional processes are changing as a result of changes in the modern workplace. One such process is how millennial and following generations entering the workforce consume learning. Their article's goal was to present a novel learning model that combines performance workflow and micro learning. Micro learning is a method of learning that focuses on a single idea while utilizing multisensory and multimodality in a limited amount of time. It is simple to implement into the task workflow. The model is discussed, as well as future research and implications.

Khan (2019) did study on Microlearning: Quick and meaningful snippets for training solutions. He mentioned that the advances in information technology and societal changes are transforming training paradigms. Training "snippets" are cost-effective programs that provide quick and meaningful training. They can be classified into informational and instructional snippets, which are learning objects used to teach something. Both types of snippets serve as reinforcing agents for the training world.

Snippets can be used as stand-alone solutions or add-ons to existing training solutions. The Flexible Learning Framework can be used to develop effective strategies for training delivery and high return on investment. The paper uses a realistic and pragmatic design approach to review all phases of the training snippets development process, addressing critical issues and providing recommendations for resource allocation. Well-designed meaningful, low-cost, reinforcing snippets contribute to successful behavior change and performance improvement for trainees.

2.7 Social learning

The rise of social media has given rise to social learning, where employees collaborate and learn from each other. This section explores the role of social learning platforms and communities in creating a collaborative learning culture within organizations.

Akers *et al.* (2015) wrote a book on Social learning theory in which he mentions that Social learning involves a change in understanding that occurs within individuals, extends beyond them to wider social units or communities, and occurs through social interactions between actors within a social network. Understanding social learning can improve our ability to critically evaluate outcomes and understand the processes through which it occurs, potentially facilitating the desired outcomes of social learning processes.

Conte *et al.* (2001) wrote book on Intelligent Social Learning. They stated that the Social learning results from one or other of a number of social phenomena, the most important of which are social facilitation and imitation.

2.8 Personalized learning paths

Tailoring learning paths to individual employee needs is becoming more feasible with advancements in technology. This section explores the benefits of personalized learning, including increased engagement, retention, and skill development.

Chen (2008) did study on Intelligent web-based learning system with personalized learning path guidance Personalized curriculum sequencing is crucial for web-based learning systems as no fixed paths are suitable for all learners. However, most personalized e-learning systems neglect to consider learner ability and difficulty level when performing personalized services. Concept continuity of learning paths is also important, as it enhances the linked strength between learning concepts. Inappropriate courseware can lead to cognitive overload and reduced learning performance. Their paper assesses the effectiveness of a genetic-based personalized e-learning system, which generates appropriate learning paths based on incorrect testing responses of individual learners. The system can conduct personalized curriculum sequencing while considering

courseware difficulty level and concept continuity, supporting web-based learning. Experimental results show that applying this system is superior to freely browsing learning due to its high-quality and concise learning paths for individual learners.

Bukralia *et al.* (2015) mentioned that learning materials, including text resources such as simple web pages and multimedia resources such as movies, have exploded in recent years due to the rapid growth of information and communication technologies. Online learners generate a vast amount of data about their learning habits, which has big data qualities and is useful for discovering information from learning patterns.

2.9 Remote and hybrid learning

Suravi (2023) wrote paper on training and development in the hybrid workplace. Her paper explores modern training and development innovations, focusing on the ADDIE Model and Kirkpatrick Model of training evaluation. It presents new approaches to training and development in the context of the hybrid work model, utilizing the ADDIE Model and the Kirkpatrick Model. Technological advancements have made these new approaches necessary and feasible. As companies transition to the hybrid work model, human resource management practices need to be transformed, including training and development, to ensure its effectiveness. The paper analyzes innovations in training and development practices and discusses new approaches while applying existing models to adapt to the changes associated with the hybrid work model.

2.10 Video-based learning

Sablic *et al.* (2021) did literature review on Video-based learning (VBL)—past, present and future. They mentioned that the use of video technology in education has grown significantly due to the widespread use of portable devices, the rise of internet users, and massive online courses. Online learning videos are increasingly accepted for both students and teachers, serving as a powerful reflection tool and significant for professional development.

2.11 Neuroscience and cognitive science integration

Lim *et al.* (2019) did study on Neuroscientism, the neuroscience of learning: An integrative review and implications for learning and development in the workplace. Their study reviews 93 studies on neuroscience and brain-based learning published between 1995 and 2017, focusing on the impact of neuroscience on human resource development (HRD). It discusses the brain's structure, functions, memory and cognition, neural transmitters' effects, and the neuroscience of learning. The study also illustrates brain-based learning styles and discusses various neuroscientific learning principles and

models for practical planning and HRD activities. It concludes with neuroscientism principles compared to traditional learning theories and includes several brain-based learning cases from workplace settings.

Training and development approaches are being influenced by a better understanding of how the brain absorbs information and remembers knowledge. This information is being used to create more effective training programs.

2.12 Blockchain for credentialing

Blockchain technology is being investigated for safe and verifiable credentialing of abilities and credentials, which could be especially beneficial in confirming skills obtained through training programs.

Jirgensons *et al.* (2018) did study on Blockchain and the future of digital learning credential assessment and management. They mentioned that. Blockchain technology has revolutionized educational systems by providing permanent, transparent, and sustainable assessment and management tools for learner credentials. These credentials allow users to personalize education and document both formal and informal learning. Initially, digital badges like Mozilla's open digital badges became the global standard, but they can become invalid if issuers cease hosting them. Blockchain technology has created permanent, secure, and sustainable infrastructure for learning records, such as Bitcoin-based Blockcerts and Ethereum's Smart Contracts to document Microcredentials (Badges). Most EU nations are experimenting with educational blockchain, providing learners with a sustainable record of achievements and reducing administrative costs and bureaucracy.

3.0 Implications for Organizations

3.1 Skill gaps and continuous learning

The abilities necessary evolve along with the nature. This section discusses how organizations can use innovative learning technologies and methods to identify and address skill gaps, fostering a culture of continuous learning and development.

Enders *et al.* (2019) did research on Future Skills: Six Approaches to Close the Skill Gap. They found out that in five years, Germany is expected to face a shortage of 700,000 people with technological skills and a skills gap of 2.4 million with cross-disciplinary skills. These figures are alarming given the importance of technological and cross-disciplinary skills in preparing for the rapidly changing workplace and ensuring continued participation in society. The education system faces challenges such as lack of transparency in future skills training, lack of content in schools and universities, and no

systematic further training. To bridge the future skills gap, Germany can implement six concrete approaches: creating transparency through an online platform, integrating future skills teaching concepts in lessons, and offering financial incentives for businesses to introduce more training. The Stifterverband für die Deutsche Wissenschaft, a German non-governmental organization, has developed various papers on future skills.

3.2 Employee engagement and retention

The integration of cutting-edge learning technologies and methods positively influences employee engagement and retention. The paper examines strategies for leveraging these innovations to create a more satisfied and committed workforce.

Burnett *et al.* (2021) did study on the future of employee engagement: Real-time monitoring and digital tools for engaging a workforce. They mentioned that organizations have unprecedented opportunities to measure and evaluate workforce effectiveness and efficiency. Leading companies have leveraged new technologies to track productivity, sales, customer satisfaction, work flows, quality, and workplace interactions in real-time. The tools for analyzing this data have also advanced, with statistical modeling, machine learning technology, and artificial intelligence applications. However, most companies still evaluate employee engagement using traditional survey techniques. It is time to rethink how engagement is measured and how digital tools can be applied to improve productivity, retention, and satisfaction. Research topics are proposed to address this trend and the impact of technological advances on measuring engagement and applying human resource management practices to improve engagement.

4.0 Objectives

The primary objectives of this systematic review are:

- To identify and synthesize existing literature on innovations in learning technologies and methods within training and development.
- To analyze the current state of research on future trends in training and development.
- To provide insights into the potential impact of emerging technologies on training and development practices.

5.0 Research Methodology

This systematic review aims to examine and synthesize the existing literature on future trends in training and development, specifically focusing on innovations in

learning technologies and methods. By employing rigorous research methods, this review aims to comprehensively understand the current state and potential trajectories in the field. A systematic search will be conducted across multiple databases, including PubMed, IEEE Xplore, Scopus, and Google Scholar, to ensure a thorough exploration of the literature. The systematic review aims to provide actionable training and development insights for practitioners and researchers by synthesizing current knowledge on innovative learning technologies and methods. By adhering to this systematic research methodology, the review endeavors to contribute valuable insights into the dynamic landscape of future trends in training and development, specifically focusing on innovations in learning technologies and methods.

6.0 Findings

Training and Development is continually evolving, and innovations in learning technologies and methods significantly shape its future. Here are some future trends in Training and Development related to innovations in learning technologies and methods:

1. *Immersive Learning:* Virtual Reality (VR) and Augmented Reality (AR) are increasingly being used to create immersive learning experiences. These technologies provide a more engaging and interactive way for learners to acquire new skills and knowledge. VR and AR technologies offer immersive learning experiences, allowing employees to practice skills in realistic scenarios. The paper delves into the applications of VR/AR in training, from simulating complex tasks to enhancing on-the-job performance.
2. *AI-Powered Personalization:* Artificial Intelligence (AI) is being used to create personalized learning paths for individuals. AI algorithms can analyze learners' strengths and weaknesses and tailor content to meet their specific needs, making training more efficient and effective.
3. *Microlearning:* Short, bite-sized lessons or microlearning modules are becoming popular. They are designed for quick consumption and can be accessed on various devices, making it convenient for learners to engage with training materials during spare moments.
4. *Gamification:* Gamifying the learning experience by incorporating game elements, such as points, badges, and leaderboards, can boost engagement and motivation among learners. Gamification is likely to play a more prominent role in training and development.
5. *Social Learning:* Collaborative and social learning platforms enable employees to share knowledge and learn from their peers. This trend is expected to grow as

organizations recognize the value of collective learning and knowledge sharing.

6. *Mobile Learning:* Mobile devices are increasingly the primary mode of accessing information. As such, mobile learning apps and platforms are becoming more prevalent, enabling employees to learn on the go.
7. *Data-Driven Learning:* Learning analytics and data-driven insights are helping organizations assess the effectiveness of their training programs. This data can be used to refine and personalize training methods and content.
8. *Remote and Hybrid Learning:* The COVID-19 pandemic accelerated the adoption of remote and online learning. Even as in-person training returns, remote and hybrid learning options are likely to remain integral in the future.
9. *Video-Based Learning:* Video is a highly effective medium for conveying information. Video-based learning, including live and on-demand video content, is expected to gain even more prominence in training and development.
10. *Neuroscience and Cognitive Science Integration:* A better understanding of how the brain processes information and retains knowledge is influencing training and development methods. This knowledge is being used to design more effective training programs.
11. *Blockchain for Credentialing:* Blockchain technology is being explored for secure and verifiable credentialing of skills and certifications, which can be particularly useful in verifying the skills acquired through training programs.
12. *Accessibility and Inclusivity:* Training methods are becoming more inclusive and accessible to learners with disabilities. Innovations in assistive technologies and inclusive design principles are shaping the future of training and development.
13. *Ethical and Inclusive AI:* As AI plays a larger role in learning technologies, there's an increasing focus on ensuring that AI systems are ethical and do not reinforce biases. Ethical AI principles are being integrated into training programs.

Future Trends in Learning Technologies: AI (Artificial Intelligence) is revolutionizing training by providing personalized experiences, adaptive assessments, and AI-driven content recommendations. VR/AR technologies offer immersive learning experiences, enhancing practical skill development in industries like healthcare, manufacturing, and aviation, and allowing trainees to simulate real-world scenarios.

Future Trends in Learning Methods: The future of training involves personalized and adaptive learning, which uses data analytics to modify learning paths for optimal engagement and knowledge retention. Gamification, which incorporates game elements, enhances motivation and engagement through leaderboards, badges, and rewards.

Integration of Learning Technologies and Methods: Successful integration requires a strategic approach. Combining AI with personalized learning paths or incorporating VR into gamified scenarios enhances the overall learning experience. Challenges include cost considerations, technical infrastructure, and resistance to change.

Implications for Training and Development Professionals: As technology reshapes the training landscape, professionals need to acquire new skills. The role of trainers evolves from content delivery to facilitation, personalization, and technology management.

7.0 Discussions

Despite the benefits, challenges such as data privacy concerns, accessibility issues, and the digital divide need careful consideration. While innovative learning technologies offer tremendous potential, organizations must address technological barriers and ensure accessibility for all employees. Employee resistance to new learning methods can impede the success of training initiatives. The paper explores strategies for managing resistance and fostering a culture that embraces continuous learning. Ethical considerations surrounding AI-driven decision-making in training also require attention. The trends discussed above are not mutually exclusive and often complement one another. The future of Training and Development will likely involve a blend of these innovations to create effective, engaging, and personalized learning experiences for individuals and organizations.

8.0 Conclusion

This research paper explores the future trends in training and development, specifically focusing on innovations in learning technologies and methods. With the rapid advancements in technology, the landscape of training and development is evolving, presenting new opportunities and challenges. This paper reviews the literature, examines emerging technologies, and discusses their integration with innovative methods to provide insights into the future of learning. In conclusion, the future of training and development lies in the seamless integration of innovative learning technologies and methods. Organizations that embrace these trends will not only stay competitive but also foster a culture of continuous learning and development.

Organizations can position themselves to adapt to the evolving demands of the modern workplace and cultivate a workforce equipped with the skills needed for success. These trends are not mutually exclusive and often complement one another. The future

of Training and Development will likely involve a blend of these innovations to create effective, engaging, and personalized learning experiences for individuals and organizations.

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CHAPTER 6

The Link between Performance Appraisal and Employee Well-being and Mental Health

Manish Goswami and Rinki Mishra***

ABSTRACT

Performance appraisal is a very important process for any organization as an organized activity for the success of any organization. The success of any organization also depends on its employees, their performance, well-being and their mental health. In general, PA is used for salary increase, promotion, feedback, training and development, etc. At the same time, looking at employee well-being and good mental health has become very important. Various researches demonstrated the relations between performance appraisals, employee well-being and mental health. Performance appraisals can affect an employee's confidence and self-esteem and affect their overall performance and well-being. Employees who receive negative performance reviews may feel demotivated, stressed, and anxious. On the other hand, positive feedback can increase their motivation, self-confidence and sense of self-worth. A performance appraisal system with clear expectations of an individual's performance leads to expected results and better performance, resulting in employee well-being and positive mental health. The objective of this exploratory study is for understanding and learning the relations between performance appraisal, employee well-being and mental health. Every organization and its management must provide constructive and supportive feedback during performance appraisals to promote employee well-being, mental health and improved performance.

Keywords: Performance Appraisal, Well-being, Mental Health, Performance Evaluation, Motivation.

1.0 Introduction

Performance appraisal is a very important organized process for any organization which is mainly done for training and development, salary increase,

**Research Scholar, Parul University, Vadodara, Gujarat, India*

(E-mail: goswami_manishp@yahoo.co.in)

***Corresponding author; Supervisor & Assistant Professor, Faculty of Management Studies, Parul University, Vadodara, Gujarat, India (E-mail: rinki.mishra26545@paruluniversity.ac.in)*

promotion etc. Performance appraisal plays a vital role in the overall well-being of employees as it directly affects job satisfaction and stress levels. This linkage is key in understanding how appraisal processes affect not only professional growth, but also the holistic health of individuals within an organization. This study aims to explore the link between performance appraisal and employee health, highlighting the potential impact on well-being.

The term “well-being” has been in use since the last three centuries. It can be defined as a state where a person is healthy or successful, feels good, lives safely and healthily. A healthy business directly demonstrate the good health and well-being of an enriched employee, which brings higher productivity (Institute of Directors, 2006). The Chartered Institute of Personnel and Development (CIPD) shows that the main area of focus for organizational growth is to improve the workplace through intervention policies in the area of employee well-being and health. Our legislation provides the Occupational Safety and Health Act 1974 which ensures the welfare of employees. Well-being can be defined using different determinants: (i) performance indicator and (ii) cultural well-being. The performance indicator focuses on a process-oriented approach, which says that the higher the performance, the higher the well-being, it is a structured flow, while the “happiness” of employees also plays a vital role in measuring employee well-being, because a good organizational culture keeps employees more satisfied and happier. Giving the end result as a high comfort quotient. Organizations must work on a clear definition of employee performance and happiness, because if they effectively increase any of these factors, they will surely have higher employee well-being.

The traditional performance appraisal model has been criticized for its stressful nature, which contributes to increased anxiety and work-related stress among employees. Fear of negative evaluation or job insecurity can lead to increased levels of stress, which negatively affects both mental and physical health. Organizations need to recognize the potential harm caused by such stressors and consider how appraisal processes can be modified to promote a healthier work environment.

Additionally, performance appraisals can influence perceptions of fairness and justice within the organization. Unfair evaluations can lead to gradients, frustration and low morale among employees. These negative emotions can manifest in various health problems such as insomnia, increased blood pressure and even more serious conditions over a period of time. Therefore, a fair and transparent performance appraisal system is essential to maintain employee well-being.

On the plus side, a well-designed performance appraisal system can serve as a motivational tool that positively affects employee engagement and job satisfaction. Recognizing and rewarding employees for their achievements can boost morale and

contribute to a positive work environment. Increased job satisfaction is in turn associated with better mental and general well-being. In addition, feedback provided during performance appraisal discussions can be a tool for employee development. Constructive feedback promotes professional growth, improved skills and increased job competence. As employees feel more competent in their roles, they are likely to experience a sense of achievement and fulfilment, which positively affects their mental well-being.

However, the effectiveness of performance appraisals in promoting employee well-being depend on a variety of factors, including the frequency and nature of feedback, management support, and the overall organizational culture. A supportive and communicative management approach can mitigate the potential negative effects of performance appraisals on employee health by encouraging open dialogue and effective problem solving.

In conclusion, the connection between performance appraisal and employee health and well-being is complex and multifaceted. While traditional appraisal models can contribute to stress and negative health outcomes, a well-designed and fair performance appraisal system can positively impact employee motivation, job satisfaction and professional development. Organizations must recognize the link between performance appraisal practices and employee well-being and strive to create systems that promote a healthy work environment and contribute to personal and professional growth.

2.0 Literature Review

Dhir & Chakraborty (2023) studied the question Does the perceived effectiveness of the HR department matter in influencing employee satisfaction and performance? The aim of the study is for understanding the role of perception of HR capabilities, HR service quality along with HR incentives which in turn provide satisfaction with HR practices and influence employee performance. The study of 155 managers was done using the questionnaire method. The results suggested that employers have to perform healthy perceptions by supporting quality HR strategies, and quality strategies will certainly increase employee performance.

Choube *et al.* conducted a review study on organizational effort and organizational performance expectations using employee well-being. The main objectives of his study are (1) To investigate what employee well-being and performance are and whether they are related or not, and (2) Factors affecting employee well-being and performance. His descriptive type study with secondary data found that employee performance and well-being are directly related to supportive determinants such as job

security, job pressure, anxiety etc. Mental or psychological well-being shows personal perception i.e. own thoughts, perceptions and emotions. The employer has taken various measures for the welfare and health of the employees. Harshitha & Arul (2021) conducted their study on the impact of employee well-being on organizational performance in the workplace. The objective of the study is to assess the impact of employee well-being on organizational performance in the context of the manufacturing sector. This empirical research study with 100 samples found that the effectiveness of employee well-being is important for motivating employee performance within an organization. Diamantidis & Chatzoglou (2018) conducted their study on Factors Affecting Employee Performance: An Empirical Approach. The aim of the study is to investigate the interrelationship between firm/environmental factors, work-related factors and employee-related factors and their impact on EP (Employee Performance). Their results indicate that work environment and management have the greatest impact on job performance, while adaptability and intrinsic motivation directly affect job performance.

Anitha (2014) conducted her study on Determinants of employee engagement and their impact on employee performance. The aim of the study was to identify key determinants and predictors of employee engagement. A casual survey with questionnaire techniques among 383 respondents found that the variables that had a major impact were the work environment and the relationship between the team and co-workers. Employee engagement has a significant impact on employee performance

Goetzel *et al.* (2014) studied the question whether the program for supporting health at workplace work. Baptiste (2008) conducted his study on tightening the link between employee well-being and performance: A new dimension for human resource management. The objective of the study is to examine the effects of human resource management practices on employee well-being and performance. Faragher *et al.* (2005). Conducted a study on investigating the relationship between job satisfaction and health: a meta-analysis. A systematic review and meta-analysis of 267 individuals was conducted to assess the research evidence linking self-report measures of job satisfaction with measures of physical and mental health.

3.0 Objectives of the Study

1. To investigate the link between performance appraisal and employee well-being.
2. To study the factors influencing the performance and well-being of employees.
3. To study the various measures taken to maintain and improve employee performance, health and well-being.
4. The determinants of employee engagement and their influence on employee performance.

4.0 Research Methodology and Data Collection

This is a secondary data-driven exploratory research study to understand the relationship between employee well-being and performance. The samples were collected from various journals and published articles from Google Scholar, Research gate, Shodh Ganga, Shodh Gangotri and various websites from internet. A simple random sampling technique was adopted to select the various research papers.

5.0 Observations and Findings

In any organization, if employers focus on improving employee well-being, this will be closely linked to employee performance outcomes and directly related to organizational performance. Employee well-being and performance are directly linked to support determinants such as job security, job stress, anxiety and lean manufacturing and provide better customer service, which in turn increases organizational performance.

There are six broad categories of well-being that are directly or indirectly linked to organizational performance. These well-beings are of mental or psychological, social, physical, spiritual and personal in nature. All these types of physical, mental, social and personal well-being are more likely to relate to employee well-being at work. It is further divided into three broad categories: hedonic, eudaemonic and evaluative, which are also part of subjective well-being.

The well-being of employees and the performance of the organization is directly and indirectly affected by various psychological and social psychological factors - It is made up of all groups (physical and mental factors). They are stress, diseases, immune system, genetics and nutrition with physical well-being at work, where emotions and self-esteem are of psychological factors, where social psychological factors are of social support, social status, economic status and employment.

Employers provide various benefits such as insurance benefits, incentive programs, health check-up programs, innovative measures to increase work performance, promotion of a healthy and positive work culture, social gatherings, work from home and various training and development programs to help employees maintain and improve their performance, health and well-being

In the heightened state of competition between firms and their need and rapidly changing operating conditions, there are various factors such as environmental (training culture, management support, environmental dynamics and organizational climate), work-related (job climate, work autonomy, work communication) and employee-related (intrinsic motivation, skill flexibility, skill level, engagement) have interrelationship

between one another and have significant effect on EP. Also, management support has the strongest effect (expressed and implied) on work performance, while adaptability and intrinsic motivation directly affect work performance.

Employee satisfaction is a prominent factor for companies for their employee retention. Companies have started addressing more on employee's benefits for retaining them. In order to keep the employees satisfied and to improve the level of productivity in their workplace, measures have been taken for the employees to ensure their well-being. Activities associated with various sectors, welfare facilities such as health, safety, children's education, accommodation, travel and recreational have been ensured. Wellbeing activities help to understand the condition of the workers in the workplace and help the business to check whether the existing systems are providing enough facilities to the employees or not.

Various HRM strategies have been implemented for a significant change on employee well-being and that have positive influence instead of negative influence. Additionally, it can be stated that the constant output of the research and the relational behaviour of management has introduced a support and confidence building and the well-being of employees. The fundamental of relationships with employer, employer Support and trust were found to predict job wellness at work. Management's resolution to adopt a business case is likely to be more complementary to conventional methods to improve employee well-being, attitudes and productivity that can improve the effectiveness of organizational decision-making. Ongoing procedures such as job security, mentoring, clarity of work outcomes and training and development should be operational to ensure employee well-being and health for a positive outcome. HR must be competent enough to have high HR initiatives for providing required and awaited HR practices. That will lead to satisfaction of employees and their output.

Other variables that have a big impact on the work environment are the relationship between the employee and their co-workers. Employee engagement has a considerable effect on their work output. The level of job satisfaction is also an important parameter that will influence the health of employees. Organisations have initiated the stress management practices for identifying and eliminating work practices those are creating most job dissatisfaction. As a part of improving employee health, Medical Professionals have been appointed for counselling employees who have been negatively diagnosed. The medical professionals help them critically evaluate their work with psychological problems—and find ways to gain increased satisfaction with the important facets of employee's life.

Employers are looking for a strategy that “works”, that takes into account their goals and organizational culture to facilitate success. Employers who choose to adopt

health promotion programs used proven and promising practices to increase the likelihood of positive outcomes.

6.0 Suggestions

The results show that affective commitment mediates the relationship between psychological well-being (hedonic and eudaimonic) and employee performance. Furthermore, perceived job security increases the combination of psychological well-being (hedonic and eudaimonic) and affective commitment.

7.0 Conclusion

The employee well-being has been defined and explored extensively in last three centuries. The types and factors affecting well-being have been multiple in nature and number. However, Employer can influence this well-being by providing various types of facilities in organization that will be a certain positive link between employee well-being and organizational performance.

Employer shall have to provide benefits to their employee like insurance benefits, incentive programs to motivate their wellness at work. Where they can also make health checkups and screening program for employee to support their physical well-being at work. Also use new measures to increase worker efficiency by various schemes (i.e cycle-to-work), promoting healthy lifestyles program and health fairs. Employer can also organize social get together, staff parties to give positive well-being to the worker at work, while training linked performance appraisal also help employer to achieve employee's positive well-being at work.

In the work environment, management support has the strongest impact (direct and indirect) on job performance that motivates directly to perform better. Employee wellness activities are essential to maintain strength and enable both mentally and physically. Improvement of working culture is advisable for improving the effectiveness of employee wellness measures such as rest rooms, spittoons, facilities like child education, canteen, drinking water, travel, transport, accommodation and recreational. This will in turn build the morale and enhance employee performance. Employee wellness measures help employees achieve both personal and institutional objectives, so employees can maintain professional life as well as social life without any considerable constraints and stress levels are also comfortably maintained.

Well-planned and well-implemented programs observed on result-based principles can attain positive health and increased profits. Employers should try to create

a favorable perspective by creating quality services in the HR area and quality services will definitely increase employee output and performance.

Medical healthcare regulations shall be collaborated with mental health practitioners to device further frameworks for the well-being of their employees' and performance and organization's productivity. Organizations shall have to focus on presenting a great environment for employees to work and promote programs that will enhance peer relationships. A healthy working atmosphere will reflect on the social impact of employees in turn, Considerable attention requires to be paid to the context in which the determinants are addressed

8.0 Case Study: Employee Well-being improves the performance - SAP

SAP is one of Germany's most successful companies founded in 1972, has become a multinational software company in 180 countries and has more than four million customers. Its fundamental contribution to its business achievement is its dedication to employee wellness. They proved that investing in employee wellness can improve performance and work output.

9.0 Corporate Strategy

- Employee's health is considered as main business approach.
- Considers improving the health and quality of life of employees being a key factor that enables business.
- Top leadership observes employee wellness as a critically important factor which is intended, evaluated and enhanced as it participates in SAPs performance and returns.
- They not only assume that the employee's wellness is key for increasing employee's satisfaction and health but also consider the physical and mental fitness of their team is prime important.
- If people neglect their health, eventually everything else suffers, and they wish all at SAP having their ideal job. They wish having their people satisfied and encourage them to follow exciting careers. The employees who operate this company are considered as the most important asset of it.

10.0 Programs Initiated

10.1 Employee-focused programs

- Supportive programs for workplace environment, governance and wellness.

- Approaches health is a whole, work place health facilities, various onsite health programs and services at work place includes medical and psychological services also for crisis management and health training for post illness joining.
- Promotes a positive work environment by various medical and well-being awareness programs, also promotes successful case studies of employees and presenting local SAP practices globally.
- Supports parents through day care programs and child care facilities at various locations, offers children's conferences and parent coaching courses. Paid family leave of 6 weeks, limited work hours for initial 4 weeks after maternity during joining the work.
- Various positive working programs for maintaining work stress and positive relation between work and life,
- Application "SAP Dinner to Go" gives flexible dinner support by conveniently ordering healthy, instant, packed lunch / dinner that they can have post canteen hours too.
- Consider mental health with utmost importance. Round the clock support for positive mental health.
- Employee Assistance Program is associable for all the employees and their family members.
- Operates various program for peace of mind and emotional intelligence

10.2 Wellness and participation

- They continuously monitor and strives at the first place of the well-being of the employees for building a strong and higher profitable company.
- Their annual Business Health Culture Index (BHCI) operates for the employees feeling about their well-being and evaluate business output and the well-being results is increased employee output and engagement.
- They surveyed for the rating of health and well-being of employees. In 2014, they extended the study to evaluate the relation between employee engagement, employee retention and operating profit and the way SAP's work culture presents to the achievement of vision and corporate objectives.
- Digital employee study in various different categories. Form "I am proud to work for SAP," "Compared to others of my age, I am in good health." More than 70 % of employees have participated in this study that is around 72000 employees.

11.0 Results

- In 2019 they won the award “Best Places to Work” and the “Number One Best Place to work” in Germany.
- Only in 2018, SAP has won 175 awards including various employee awards worldwide.
- Also, in 2018 they increased their Business Health Culture Index at 78 % from 69% from 2013 by their wellness efforts. By each 1% upgrade in the index impacting their operating profit of \$90-\$100 million (EU).
- Created increased employee engagement and trust in management and increased presence of employees in work place.
- The, employees who took part in a mindfulness program experienced increased work satisfaction, increased mental clarity and increased creativity.

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CHAPTER 7

Digitization and Gamification of Business Management Teaching Pedagogy: An In-depth Case Study of Simulation of the Stock Market

*Chitra A. Kundu**, *Hiren Harsora*** and *Karminder Ghuman****

ABSTRACT

Business and management education, which is largely delivered through in-class conceptual knowledge sharing, lacks experiential learning. Simulation of stock market through the stock market simulator can provide business students with an opportunity to engage with the business world in a simulated environment without risk of losing real money. The present study, through an in-depth case study examines the role played by the stock market simulation solution “B-School Bulls” in transforming the pedagogy at management institutes. For undertaking this empirical study, data was collected from select management institutions where this simulation has been adopted as a pedagogical tool. The findings highlighted how the implementation of this intervention influenced the teaching-learning process, as well as provided an opportunity for the application of conceptual knowledge taught to them in the classroom for enhancing the learning and employability of the students. It demonstrates how the gamification of stock market can enable students to learn decision-making and the art of risk management that too by using virtual money. This study also makes a theoretical contribution by making propositions regarding the role of simulation and gamification in adding value to the teaching-learning process at management institutes.

Keywords: Gamification, Experiential Learning, Digitization, Stock Market Simulator.

1.0 Introduction

Educators often believe that aligning instructional methods with students’ distinct cognitive characteristics, such as “learning styles” or “multiple intelligences” typologies, enhances their learning outcomes (Moizer *et al.*, 2009). Simulations, incorporating role-play, digital visual representations, gaming, computer models, decision-making, etc. are perceived as more effective in addressing these aspects compared to traditional teaching approaches.

**Research Scholar, Parul University, Vadodara, Gujarat, India*

***Corresponding author; Assistant Professor, Parul University, Vadodara, Gujarat, India
(E-mail: hiren.harsora26878@paruluniversity.ac.in)*

****Associate Professor, LM Thapar School of Management, Derabassi, India*

The widely held belief is that simulations contribute towards learning by enhancing students' motivation by presenting information in a manner that captivates their interest, a crucial factor in the learning process (Lei, 2010). Originally employed in political science to comprehend intricate social processes, simulations quickly expanded to encompass the teaching of political science and have since been applied across various academic disciplines (Keller *et al.*, 2010; Koh *et al.*, 2010).

Although it's a general belief that simulations because of their multi-sensory experiential learning pedagogy would be useful in augmenting student learning, it is relatively new to the Indian higher education system. Hence, their adoption in the Indian context is at a stage of infancy. In this background, it's important to examine how a computer-based simulation offering gamification of the stock market can enrich the students' learning of decision-making and risk management for enhancing their employability through skill development. The present study through an in-depth case study examines the role played by the stock market simulation solution "B-School Bulls" developed by a government of India-approved startup in transforming the pedagogy at management institutes.

For undertaking this empirical study, data was collected from select management institutions where this simulation has been adopted as a pedagogical tool. The findings highlighted how the implementation of this intervention influenced the teaching-learning process, as well as provided an opportunity for the application of conceptual knowledge to enhance the learning and employability of the students. It demonstrates how the gamification of the stock market can enable students to apply the conceptual knowledge taught to them in the classroom to make buying and selling decisions as well as learn the art of risk management that too by using virtual money.

Towards the end, based on the findings of the case study, this study makes a theoretical contribution by making a proposition regarding the role of simulation, digitization, and gamification in adding value to business and management education and the overall teaching-learning process at the management institutes. This proposition can form the basis for future research studies that can empirically test these propositions as hypotheses through quantitative research studies by collecting data from faculty and students who have experienced this or such like simulation.

2.0 Review of Literature

Kolb's (1984) theory emphasizes that learning is facilitated when students are actively engaged in a concrete experience; they observe and reflect on their behaviour, form abstract generalisations to understand overarching principles and test these

generalisations. Traditional instruction, where students passively receive information and apply it after a delay, may not make the relevance and incentives for learning apparent throughout the process. Simulations offer the potential to overcome the limitation of traditional lecture-based instruction pedagogy by boosting both extrinsic and intrinsic motivation in students due to active engagement, prompt feedback, challenging yet achievable goals, uncertain outcomes, and the generation of feelings of autonomy, accomplishment, relevance, relatedness to others, and pleasure among participants (Carnes, 2011). The use of games and simulations is perceived as advantageous because it enhances learners' motivation, with games-based learning content (de Freitas, 2006).

In certain simulations, students interact with a computer-based, mathematically driven representation of reality, which serves as a platform for student decision-making (Williams & Williams, 2010). Simulations enhance student motivation and the learning environment and contribute towards substantive learning about external phenomena (context knowledge) as well as the self (affective knowledge). Simulations create a potentially enriching learning environment, allowing students to practice and actively develop various skills and knowledge, leading to creative outputs and perspectives on complex subjects. However, the effectiveness of simulations for students depends on educators identifying learning objectives, choosing appropriate pedagogy, and assessing the achievement of outcomes (Gilchrist & Zald, 2008).

3.0 Methodology

This article is based on a unique and in-depth case study of a stock market simulator (www.bschoollbulls.com) developed for management institutions offering MBA, BBA, and BCom programmes. The findings discussed in the case study are based on the adoption of this simulator solution by select institutions like IBS, Dehradun; Axis Colleges, Kanpur; Baba Farid Group of Institutions, Bathinda for the employability enhancement of business and management graduates. The qualitative study is based on the responses and experiences of the students, faculty and the simulation company regarding the simulator solution. It first describes the simulation and its context, process, and then the desired outcomes. Based on that it makes some propositions, which can be empirically examined in future studies.

4.0 Contextual Background: Why the need for this Simulation

Business administration education originated in Western nations, such as the USA, during the peak of the Industrial Revolution, attracting individuals with significant

work experience, which later became a prerequisite for admission to the MBA program. These institutions equip these students who possess prior work experience, with advanced knowledge that is essential for efficiently managing intricate business operations. Consequently, graduates seamlessly transitioned from classrooms to workplaces, bringing practical insights and cutting-edge conceptual knowledge.

In contrast, the majority of MBA students in India lack prior work experience. MBA students at the majority of institutions except the top 50 institutes in the country are not reading business newspapers regularly and often lack knowledge about the corporate world. There is not only a lack of active interaction with industry, but a good number of management and commerce teachers are without industry experience. It has also been observed that students are not studying the case studies provided to them by the faculty properly. To provide exposure to the corporate world the curriculum mandates a brief 2-month industry internship. However, the short duration and the absence of prior corporate exposure often leave students struggling to grasp business complexities during internships. Because of the disparity between theoretical knowledge acquired in classrooms and its practical application, companies usually do not perceive significant value from these internships. Consequently, this lack of hands-on experience results in students being unprepared for the dynamic corporate world upon graduation, impacting their career prospects.

As a result, students who are freshers at the time of admission gain very little business-related experience during their MBA, which results in inadequate candidature, and they find it difficult to get good Jobs. At the time of their passing out, there are very few business-related achievements in student's resumes because one thing that's missing from business schools is business and B-School Bulls is on a mission to bring business to the B-Schools.

The employment scenario for MBA graduates in India reflects this mismatch. A report from Sunstone Eduversity indicates that a staggering 93% of MBA students in India face challenges in securing suitable employment. For the past few years, India has witnessed an ever-increasing employability gap. Although there is no dearth of B – Schools offering management courses, the employability of Indian Youth continues to decrease. As per the 2021, India Skills Report, only 45.9% of the Indian youth are seen as employable. This alarming statistic underscores the necessity to reconsider how business administration education is approached and delivered in India. The desire to get high scores has inhibited institutions from providing industry-oriented education, thus rendering students unable to secure their dream jobs. Bridging the gap between academia and industry is crucial to making graduates more job-ready and effective contributors to the business world.

5.0 Simulation-based Experiential Learning: A Potential Saviour

Experiential learning through the stock market simulator is the process of learning by doing by engaging students in hands-on experiences and reflection so that they are better able to connect theories and knowledge learned in the classroom to real-world situations. It is a transformative approach that has the potential to revolutionize the Indian management education landscape and can play a pivotal role in increasing employability. By fostering a dynamic and interactive educational environment, experiential learning offers a range of benefits that are crucial in shaping Indian management education:

1. *Bridging the Gap between Theory and Practice:* Experiential learning allows students to apply theoretical concepts in real-world business scenarios. This bridge between classroom learning and practical application enhances their understanding of complex management principles.
2. *Enhancing Problem-Solving Skills:* Through experiential learning, students are encouraged to tackle real challenges. This process sharpens their problem-solving abilities and equips them with the critical thinking skills necessary for the business world.
3. *Nurturing Entrepreneurial Spirit:* Experiential learning can cultivate an entrepreneurial mindset, encouraging students to explore innovative solutions and seize opportunities.
4. *Increasing Employability:* By providing students with hands-on experience and practical knowledge, experiential learning makes them more attractive to employers. This, in turn, enhances their employability and job readiness.
5. *Encouraging Industry-Academia Collaboration:* Experiential learning encourages closer ties between educational institutions and industries. Such collaboration not only keeps the curriculum relevant but also opens doors to internships, and placements.

In essence, the integration of experiential learning in Indian management education has the potential to transform students into well-rounded, industry-ready professionals. Simulations can be a vital tool to provide experiential learning because of enhanced student engagement.

5.1 Challenges @ simulation

As simulations require students to make decisions based on a given scenario in a simulated environment, there are no major negative consequences of recommendations made by them. However, the following major drawbacks or challenges associated with

incorporating simulation tools into business management education, act as roadblocks in their wider adoption as a pedagogical tool:

1. *Complexity*: Simulations can be complex to implement, and they may require a certain level of expertise to operate. This complexity can be a barrier for both educators and students, especially if they are not familiar with the simulation software or the underlying business concepts.
2. *Limited realism*: Simulations may not perfectly replicate the complexity and unpredictability of real-world business scenarios. This limitation could result in students making decisions based on simplified models that do not fully capture the intricacies of the business environment.
3. *Cost*: Implementing simulation tools can be expensive as creating realistic and effective simulations may require significant financial investment in terms of software development, licensing, and ongoing maintenance.
4. *Resource intensity*: Simulations can be resource-intensive, requiring substantial time and effort to set up and manage. Faculty members may need to invest considerable time in preparing and running simulations, which can be challenging given other responsibilities they may have.
5. *Learning curve*: Students may face a learning curve when using simulation tools, detracting from time that could be spent on other aspects of the curriculum. If the learning curve is steep, it may impact the overall effectiveness of the educational experience.

For any simulation to be effective needs to respond to these challenges to gain acceptance and deliver desired results. Stock market simulation can be a panacea for delivering high-quality business and management education because of its realism. Unlike other simulations which are developed based on hypothetically created scenarios that fail to capture the complete reality; stock market simulations use real and live situations and student can see the validation or rejection of their investment thesis based on how the stock market behaved in comparison to what they expected. They can even clearly see the degree of deviance from what they expected and also get information from third-party sources regarding the underlying causes for a certain movement of stock prices in a particular direction.

6.0 B-School Bulls: A Case Study

6.1 About B-School Bulls

B-School Bulls is a FinTech and EdTech Startup established with a mission to bring Business to Business Schools. It aims to excite and enable business and

management graduates to develop a deeper engagement with the business world and economy through learning about the stock market. Its vision is to engage 1,00,000 students with the stock market by the year 2025. It has signed a MoU with 15 MBA institutes and universities to provide experiential learning to their students. BBX Infotech has already organized national-level virtual stock market competitions where more than 6000 students from more than 1,000 institutes registered for participation. BBX Infotech has also collaborated with leading brands such as ICICI Securities, Upstox, 5-paisa Capital Limited, etc. to develop engagement of the students with stock market in a virtual environment.

6.2 Takeaways and benefits of the simulator

The simulator offers the following benefits for MBA, BBA, BCom students: Development of stock market-related knowledge and skills, development of a better understanding of the business world, develops decision-making skills, students learn the art of risk management, develop better understanding and applications of concepts taught in the classroom, and builds profile and resume and enhances their employability. Benefits MBA, BBA, BCom Students by Stock Market Simulator in terms of employability:

- *Practical learning:* Hands-on experience in buying and selling virtual stocks at a real price in a simulated environment offers a valuable practical skill for a career in finance, investment banking, or trading.
- *Analytical abilities:* Access to a wide range of financial reports, including SWOT analysis, and historical data, which students can use to develop analytical skills that are in high demand in the job market.
- *Market knowledge:* With data feeds from stock exchanges and news updates on the global economy, simulator can help students stay current on the latest market trends, which is essential in the constantly evolving field of finance.
- *Effective communication:* Students can improve their ability to communicate complex financial information in a clear and concise manner, a skill that is critical for success in any finance-related role.

For the faculty of MBA, BBA, BCom institutes the simulator offers the following benefits: Mapping the stock market simulator to Accounting, Securities Analysis Portfolio Management, and other courses as a simulation for deepening student learning through experiential learning on the simulation platform, providing assignments to students on current socio-economic situation to be undertaken on the simulator in the form of decision-making with regard to those contextual policies or macroeconomic business environment constituents, assess students for their assignments/project

submissions based on their performance and reasoning while making buying and selling decisions.

6.3 Mapping of courses to simulator: Experiential learning

Faculty members at the institutions that has adopted the www.bschoollbulls.com simulator map their courses to provide practical assignments to their students in the following manner:

- Financial Accounting: Analysis of Balance Sheet, application of various accounting ratios. Analysis of balance sheet, application of various accounting ratios.
- Management Accounting, Financial Management: Interpreting company financial health.
- Securities Analysis & Portfolio Management: Applying the learning of theories in the classroom for making purchase and selling decisions.
- Macro Economics: Examining the impact of policy decision on market value of different securities in the stock market.
- Corporate Valuation & Financial Modelling: Determining fair value of equities and taking position in those equities and analysing their performance over a period of time.
- Corporate Governance & Business Ethics: Understanding the impact of non-compliance and unethical behaviour on stock prices.

Faculty members have been providing their students with the following practical assignments linked to the stock market while teaching the courses given below, which encourage students to apply their knowledge of the classroom, the corporate world, and the macro-economic environment to make decisions in a virtual environment to buy and sell shares through the simulator:

6.3.1 Advanced financial management

1. Impact of Free cash flow of different companies in an industry/sector on its stock price immediately after the declaration of quarterly results. Students can be asked to take positions of buying and selling based on CFO press briefings and company results posted on the NSE website.
2. Impact of change in Capital Structure on stock prices of different companies in a sector/industry on its stock price based on declaration of a company regarding debt reduction/management: A Comparative Analysis.
3. Role of change in approach towards Dividend declaration and retained earnings on stock prices of different companies in a sector/industry. Students can be asked to

take a position of buying and selling based on the CFO press briefing and company results posted on the NSE website.

6.3.2 Macroeconomics and business environment

1. Impact of a latest macro-economic and business environment that happens in December 2023 (To be chosen by the faculty based on what happens around that time) on change of stock prices of a related industry before and after of the event. Students can be asked to take a position on stocks of related companies before the event. Assignment can be given 10 days before that event is scheduled to happen.
2. Impact of money supply through latest monetary policy in 2023 on change of stock prices of banking and finance stocks before and after the declaration by RBI Governor.
3. Impact of latest Fiscal policy in 2023 on change of stock prices of banking and finance stocks.
4. Impact of Geo-politics: Israel-Hamas and Russia Ukraine conflicts on stock prices of companies in Industries using petro-chemicals as raw material.
5. Change in stock prices in infrastructure, banking, and insurance industry after the declaration of budget in 2023.

6.3.3 Human resource management

Impact of leadership change on change in stock prices of a company. <https://www.forbesindia.com/article/leadership-awards-2022/how-sandeep-bakhshi-has-quietly-but-firmly-turned-around-icici-bank/74677/1>.

6.3.4 Legal environment of business

Demonstrating the impact of legal violation and legal complaint on the stock price of a company and to take a position in company stock through stock market simulator to demonstrate how that legal issue impacted its share price in one month.

6.3.5 Advanced marketing management

Taking an example of a company that implemented a strategic decision to increase market share, demonstrate how the stock price of the company changed before and after the decision. <https://www.financialexpress.com/business/express-mobility-bajaj-autos-premium-drive-boosts-market-share-profit-2742980/>

Impact of a company's marketing related decision in recent times on its price in stock market in a period of one month. <https://www.tataconsumer.com/iar-2022-23/strengthen-and-accelerate-core-business.html>.

6.3.6 Business analytics

Applying business analytics to predict stock market trends through in-depth data analytics which can uncover previous and current stock market movements and trends and can help predict future trends to gauge the rise and fall in share prices in the near future. Students do predictive analytics and take positions in stock market simulator and demonstrate the evidence over a selected period of time. If trend is not as per prediction, reasoning can be provided why the predicted trend could not actually happen.

6.3.7 Operations management

Impact of operations management systems and practices on firm value on stock market, and their relation to pair trade profits by evaluating relative operational performance between firms from pair trade returns, using pair trades data (weekly stock price) and operational management event data for a particular period of time. Faculty members evaluate the assignment by assessing the student portfolio and reasoning provided by them which they record in the simulator for their buy and sell decisions.

7.0 Propositions

Based on the applications of this simulator the study makes the following propositions, which can be tested by scholars through empirical studies in the future:

1. *Proposition 1:* Application of classroom teaching through securities sale purchase decisions on a stock market simulation platform can enhance learning of business and management concepts.
2. *Proposition 2:* Engagement of business and management students with the stock market simulation platform can enhance the learning of business and management students about the corporate world.
3. *Proposition 3:* Engagement of business and management students with stock market simulation platforms can enhance their decision-making skills.
4. *Proposition 4:* Engagement of business and management students with stock market simulation platforms can enhance their risk management skills.
5. *Proposition 5:* Application of classroom teaching through securities sale purchase decisions on a stock market simulation platform can enhance the employability of business and management students.

8.0 Conclusion

Conventional teaching typically employs direct guidance, reading, and passive learning, while simulated teaching strategies prioritize interactive and experiential

methods, emphasizing active participation and hands-on experiences. When executed effectively, a well-designed teaching strategy can offer a dynamic and compelling learning encounter, closing the divide between theoretical understanding and practical application. This approach equips students with the skills needed to tackle real-world challenges beyond the confines of the classroom.

This study based on the exploratory qualitative study of stock market simulation at select management institutes not only documents the application of this simulation but also makes propositions, which can be tested in future research through empirical quantitative studies.

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CHAPTER 8

Consumer Perception and Digital Payments: Recent Trends in India

*Aashka Thakkar**, *Priyanka Patel*** and *Aayushi Dholawala***

ABSTRACT

This research seeks to investigate the factors that influence consumer knowledge and adoption of digital payments in India. The primary goal is to understand adoption patterns and drivers in the fast changing digital payment market. To achieve these objectives, a mixed methods research methodology was employed, which included surveys and in-depth interviews with customers from various demographic categories. According to the findings, convenience, security, trust, and awareness all have a substantial impact on customer adoption of digital payment systems. Furthermore, demographic variables such as age, income, and education level influence views and acceptance levels. The study's practical implications emphasize the importance of payment service providers and policymakers taking these key factors into account in order to drive digital payment adoption. Understanding the subtleties of customer behavior and preferences allows stakeholders to build effective strategies to increase the adoption of digital payments in India. This report adds to the current literature by giving insight into the complex dynamics of digital payments acceptance in India, as well as a thorough understanding of the variables influencing the specific challenges and opportunities of this quickly rising market.

Keywords: Investors Perception, Digital Payment, Digital Wallets, Cyber Security.

1.0 Introduction

India's financial landscape has shifted dramatically in recent years, with increasing adoption of digital payments altering the way transactions are conducted. The fast spread of smart phones, combined with government efforts like Digital India and demonetization, has pushed the country toward a cashless economy.

**Corresponding author; Academic Head, Faculty of Management Studies, Parul University, Vadodara, Gujarat, India (E-mail: aashka.thakkar@paruluniversity.ac.in)*

***Student, Faculty of Management Studies, Parul University, Vadodara, Gujarat, India (E-mail: priyankap072001@gmail.com)*

As a result, it is vital to understand the elements that influence investor's awareness and adoption of digital payments. This article investigates the complexity of digital payments acceptance in India, with the goal of putting light on the key drivers and adoption patterns driving this change. The convenience and efficiency of digital payments have expedited the global switch to them. As a result, there is a need to investigate how ease, security, trust, and perception influence the adoption of digital payment systems in a country where cash transactions occur.

Demographic characteristics like as age, income, and education level complicate the picture because they are proven to influence consumer perception and conduct. To achieve this purpose, this article examines the relationship between these demographic characteristics and digital payment acceptance patterns. This study also tries to determine how user experience affects investor impression. The seamless and straightforward design of digital payment platforms has a substantial impact on overall user satisfaction, including that of investors.

A positive user experience, defined by user-friendly interfaces, swift transaction processing, and a clear payment process, builds trust and dependability. Investors are more likely to evaluate digital payment systems positively when they find the platforms simple to use and free of complications. A poor user experience, which includes problems, delays, or confusing instructions, can lead to irritation and decrease investor trust.

2.0 Literature Review

Shinki (2022) the study made an effort to look at how different digital payment methods have evolved historically as well as how COVID-19 has affected Indian digital payment systems. According to the report, digital payments in India saw a robust growth of 26.2% in terms of volume during 2020–21, on top of the 44.2% increase that year. Prakash (2022) the survey investigated customer attitudes toward digital payments.

The majority of respondents to the survey indicated that they were aware of digital payment options. They said they were relieved that they didn't have to wait in line at banks and that these systems were an essential part of life. Due to their safety and lack of transaction costs, digital payments have been significantly impacted by the Demonetizations, according to the report. (Ch and others, 2022).

The goal of initiatives like the digital India movement and increased internet usage is to make India a more digital society with a higher percentage of cashless transactions. The nation's digital payment system has benefited from a number of initiatives, and initiatives like BHIM and UPI are helping to accelerate the adoption of

digital payments. In order to comprehend the adoption of mobile payment systems in Jordan, Al-Okaily *et al.* (2022) have developed a conceptual model based on the UTAUT2 expanded with awareness, security, and privacy as independent variables and the mediating function of trust. (Trinh & To, 2021). Theoretically, behavioral intents to employ mobile payment technologies were understood using an enhanced version of the TAM with perceived fun and trust. (Shree & others, 2021) A person's attitude toward digital tools influences not just how he uses them but also how much he trusts the payment system and the financial industry as a whole.

Based on the UTAUT and the technological, pedagogical, and content knowledge model, Anthony *et al.* (2021) have created a model to explore the elements that affect lecturers' behavioral intention and actual use of blended learning. In his 2019 study, "Adoption of Digital Payment System in the Era of Demonetization," Shivathanu B. focused on how people used or accepted digital payment systems during the demonetization period. Its foundation was a conceptual framework with a 766-person sample size. The analysis of the data revealed that innovation resistance and behavioral intentions affected actual usage.

3.0 Objectives of the Study

- To look into and examine the main elements that affect how Indian investors view and accept digital payment systems.
- To investigate how Indian consumers perceive and use digital payment technology in relation to socio- demographic variables including age, income, and education.
- To evaluate the obstacles and worries, such as security, accessibility, and awareness-related ones, that impedes the broad adoption of digital payments in India.

4.0 Research Hypothesis

H0: There is no significant impact of demographic factors on investor's perception towards digital payments.

H1: There is significant impact of demographic factors on investor's perception towards digital payments.

H0: There is no significant relationship between the challenges experienced by users on their perception towards digital payment in India.

H2: There is significant relationship between the challenges experienced by users on their perception towards digital payment in India.

5.0 Research Methodology

This study's research approach was Analytical Analysis. A survey of investors in India's digital payment business will be used to acquire quantitative data. The online survey will be used to gather information on investors' demographics, investment experience, and attitudes towards digital payments.

Research Design: The research design for studying investors' perceptions of digital payments in India will be descriptive and inferential.

Sources of data: The data being collected will be quantitative. Quantitative data is gathered by a survey using a questionnaire.

Data Collection Method: Quantitative data will be acquired through a poll of investors in India's digital payments sector. The survey will be created to gather information on the following variables:

- Demographic information (age, gender, education level, income, etc.)
- Investment experience, including number of years and types of investments.
- Perceptions of digital payments, including benefits, risks, and growth potential.

Data Collection Tool: Since the information gathered is quantitative, a questionnaire is utilized to gather quantitative data. Through this questionnaire, demographic data, investment experience, and opinions of various individuals regarding digital payments are collected.

Sampling Method: The sampling method used in this study are-

- Stratified sampling: Based on pertinent factors including age, income, region, and investment portfolio, the investor community is segmented into strata.

Simple Random Sampling: A sort of probability sampling known as "simple random sampling" involves the researcher choosing a selection of participants at random from a population. Every person in the population is equally likely to be chosen. The random sampling approach is used to choose participants within each stratum.

6.0 Data analysis and interpretation

Data Interpretation: The respondent profile shown in Table 1 is representative of the population that uses digital payments on a regular basis. Male respondents make up the majority (57.05%), and of those between the ages of 18 and 24 (53.21%), either 32.05% or students (57.69%) are employed. For educated people that use digital mode, this is the perfect profile.

Table 1: Respondents Demographic Profile

Variable	Characteristics	Frequency	Percentage
Age Group	Below 18 Years	17	10.88
	18-24 years	83	53.21
	25-34 years	24	15.38
	35-44 years	13	8.33
	45-54 years	11	7.05
	55-64 years	3	1.92
	65 years & above	5	3.21
Gender	Male	89	57.05
	Female	66	42.31
	Non Binary	1	0.64
Education Level	High School Diploma or Equivalent	25	16.02
	Bachelor's Degree	46	29.48
	Master's Degree	85	54.48
Occupation	Student	90	57.69
	Employed	50	32.05
	Retired	04	2.56
	Homemaker	12	7.69
Monthly Income	Below 30000	87	55.76
	30,000 - 60,000	18	11.53
	60000- 90000	28	17.94
	90000-120000	15	9.61
	Above 1200000	8	5.12

Source: From collected data through Google form

Table 2: How did You Learn about Digital Payment Methods?

How did you learn about digital payment methods?	Frequency	Percentage
Friends/family	57	36.53
Advertising	29	18.58
Social media	59	37.82
Government campaigns	6	3.84
Financial institutions	5	3.20
Other (please specify)	0	0
Total	156	

Source: From collected data through Google form

Data Interpretation: Of the 156 respondents, 59 reported having learnt about digital payments from social media, while 57 reported having learned about them from friends and family. This suggests that social media and the respondents’ personal connections were significant factors in the use of digital payments.

Table 3: Do You Believe that more Education and Awareness Campaigns about Digital Payments are Needed?

Do you believe that more education and awareness campaigns about digital payments are needed?	Frequency	Percentage
Yes	149	95.51
No	7	4.49
Total	156	

Source: From collected data through Google form

Data Interpretation: Of the 156 respondents, 149 said that more education about digital payments is necessary. This suggests that most people in India are still unaware of the existence of digital payments.

Table 4: Do You Currently use Digital Payment Methods

Do you currently use digital payment methods (e.g., mobile wallets, UPI, online banking) for making transactions?	Frequency	Percentage
Yes	146	93.58
No	10	6.41
Total	156	

Source: From collected data through Google form

Data Interpretation: 146 out of 156 respondents presently use digital payment methods, indicating that the majority of people rely on these methods for everyday transactions.

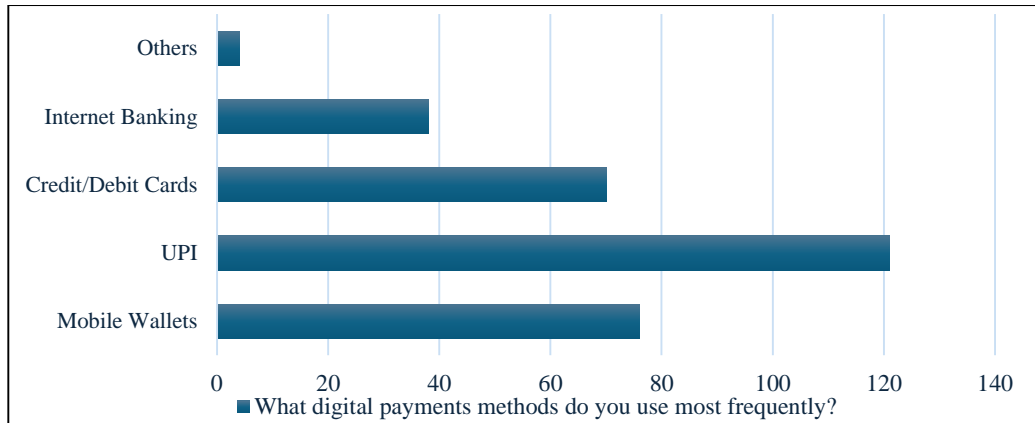
Table 5: How often do You use Digital Payment Methods?

How often do you use digital payment methods?	Frequency	Percentage
Daily	121	77.56
Weekly	17	10.90
Monthly	5	3.21
Rarely	5	3.20
Never	8	5.12

Source: From collected data through Google form

Data Interpretation: Of the 156 respondents, 121 use digital payments on a regular basis, meaning that 77.56% of the population, or the majority, rely on these methods for their everyday purchases.

Figure 1: What Digital Payment Methods Do You use Most Frequently?



Source: From collected data through Google form

Data Interpretation: The graphical presentation indicates that UPI is the most popular digital payment method, with 77.6% of all respondents using it more frequently than credit/debit cards, internet banking, and mobile wallets.

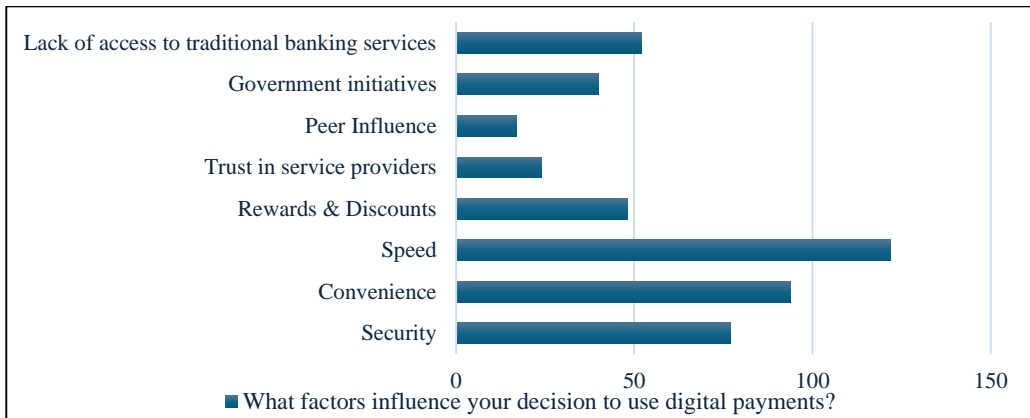
Table 6: On a Scale of 1 to 5, where 1 is “Strongly Disagree” and 5 is “Strongly Agree,” Please rate the Following Statements

Statements	Frequency				
	Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
Digital payments are secure.	22	15	33	61	25
Digital payments are convenient.	7	29	25	29	66
Digital payments are easy to use.	15	16	42	46	40
Digital payments are faster than cash transactions.	15	19	37	44	41
Digital payments are more reliable than cash.	11	28	33	33	51
I trust digital payment service providers.	16	24	41	33	42

Source: From collected data through Google form

Data Interpretation: The majority of respondents concur that digital payments are more dependable than cash transactions and are safer, more practical, and simpler to use.

Figure 2: What Factors Influence Your Decision to Use Digital Payments?



Source: From collected data through Google form

Data Interpretation: The graphical representation makes it clear that the main elements influencing people’s decisions to use digital payments are speed, convenience, and security.

Table 7: What Challenges or Concerns, if any, Do You Face when using Digital Payments?

(1 = Not a Challenge, 2 = Slightly Challenging, 3 = Moderately Challenging, 4 = Challenging, 5 = A Significant Challenge)					
Challenges	Frequency				
	1	2	3	4	5
Limited Acceptance	30	22	48	44	12
Technical Issues (e.g., app crashes, slow processing)	12	34	35	28	47
Connectivity Issues (e.g., poor network coverage)	18	25	39	49	25
Lack of Digital Literacy	13	38	38	32	35
Privacy Concerns	23	24	42	45	22
Complex User Interfaces	25	29	42	33	27
Fear of Fraud or Scams	15	27	45	38	31
Incompatibility with Older Devices	17	23	51	36	29
Dependence on Mobile Phones	17	29	42	41	27
Limited Accessibility for differently-abled Individuals	17	25	43	37	34

Source: From collected data through Google form

Data Interpretation: The information gathered indicates that the main difficulties faced by investors adopting digital payments are related to technology, connectivity, and privacy.

7.0 Hypothesis Testing

7.1 Testing of significance

To investigate if there is a significant difference between investors' perceptions of digital payments in India and demographic characteristics, the following null hypothesis is formulated and evaluated using ANOVA at the 5% significance level. The following table displays the findings:

H0: There is no significant difference between demographic variables and investor's perception towards digital payments.

H1: There is significant difference between demographic variables and investor's perception towards digital payments.

Variables		DF	F- Value	P- Value	Result
Perception Score (Age)	Between Groups	6	13.351	6.708	Not Significant
	Within Groups	49			
	Total				
Perception Score (Gender)	Between Groups	2	10.771	0.000603	Significant
	Within Groups	21			
	Total				
Perception Score (Occupation)	Between Groups	3	12.168	0.000028	Significant
	Within Groups	28			
	Total				
Perception Score (Educational Qualification)	Between Groups	2	8.801	0.0017	Significant
	Within Groups	21			
	Total				
Perception Score (Monthly Income)	Between Groups	4	12.029	2.9709	Not Significant
	Within Groups	35			
	Total				

7.2 Result

Reject null hypothesis: The probability value (or “p” value) for the following demographic factors—gender, occupation, and educational attainment—is less than 0.05, according to the above table. As a result, the null hypotheses are disproved, and it is determined that investors' perceptions of digital payments and the demographic factors

of gender, employment, and educational attainment differ significantly. Moreover, it demonstrates that the age and monthly income sections have probability values (p-values) greater than 0.05. As a result, the null hypothesis is accepted, and it is determined that investors’ perceptions of digital payments and the demographic factors of age and monthly income do not differ significantly.

H0- There is no significant relationship between the challenges experienced by users on their perception towards digital payment in India.

H2- There is significant relationship between the challenges experienced by users on their perception towards digital payment in India.

Variables		DF	F- Value	P- Value	Result
Challenges experienced by users	Between Groups	2	9.848	0.0006	Significant
	Within Groups	27			
	Total	29			

7.3 Result

Reject Null Hypothesis: The above table indicates that there is a significant correlation between the difficulties faced by users and investors’ perceptions of digital payments in India. As a result, the null hypotheses are rejected. The probability value, or “p” value, is less than 0.05.

8.0 Results and Findings

- Investors that consider technology improvements to be strong, intuitive, and creative are more likely to view digital payments favourably.
- The majority of respondents believe that India has to educate its citizens more and more about digital payments.
- Of all respondents, about 77% use digital payments on a daily basis.
- The majority of Indians use mobile wallets, UPI, and internet banking, among other digital payment systems.
- The majority of respondents said that social media, advertising, and friends and family encouraged them to utilize digital payments.
- Of all respondents, approximately 93% use internet banking, UPI, and mobile wallets to complete transactions.
- The majority of respondents said that using digital payment systems eliminates the need to wait in line at banks or to pay utility bills, saving them time and energy on their travels.

- The majority of respondents concur that using digital payments is more dependable, speedier, easier to use, and secure than using cash.
- One important component that influenced the respondents' perceptions was found to be security. The confidence that investors have in digital payment systems is greatly impacted by the incorporation of strong security features.
- The respondents cited slow processing, app crashes, and other technological problems as their top challenges.
- The study's research approach has been suggested, and the data indicates that investors' perceptions of digital payments differ significantly from their demographic characteristics. The rate of adoption of digital payments is positively and significantly impacted by gender, occupation, and educational attainment.
- The study's findings demonstrate a strong correlation between investors' perceptions of digital payments and the difficulties they confront.

9.0 Conclusion

In summary, our research examined the variables affecting investors' opinions on digital payments in India's changing environment. After a thorough examination of the information and answers provided by investors, we were able to pinpoint a number of important variables influencing their opinions. First, it was found that digital payment services' accessibility and ease of use were important factors. Platforms with user-friendly interfaces, smooth transactions, and broad acceptability were strongly preferred by investors.

Second, the perception of digital payment systems' reliability and security was crucial. When investors were guaranteed strong security protocols and transaction transparency, they were more inclined to accept digital payments. Furthermore, the significance of governmental regulations and policies cannot be overstated. It was discovered that investor confidence was positively impacted by clear and encouraging rules, which created a favourable atmosphere for the implementation of digital payments. The report also emphasized how investor perceptions are affected by technology breakthroughs. Technological advancements like blockchain, AI, and biometric verification were well received, suggesting a relationship between investor confidence and technological competence.

According to our research, in order to draw and keep investors, digital payment companies should put an emphasis on improving user experience, strengthening security protocols, and coordinating with advantageous legal frameworks. On the other hand,

progressive laws and incentives should be used by policymakers to maintain a positive ecosystem. To sum up, for stakeholders hoping to negotiate the ever-changing digital payments ecosystem and take advantage of the increasing interest from investors in India, comprehending and addressing these factors would be essential.

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CHAPTER 9

Diffusion of Digital Technology: Are Capabilities, Incentives, or both at Play?

*Susanta Kumar Satapathy**

ABSTRACT

This paper involves information on advanced innovation utilization covering 25 businesses in 24 European nations and Turkey over the 2010-16 period to investigate the covariates of industry-level computerized reception by firms across two wide arrangements of advancements - distributed computing and back and front office reconciliation. The emphasis is on factors that possibly influence firms' abilities and impetuses to embrace - including the accessibility of empowering foundations (like fast broadband web), administrative quality and laborers abilities, as well as item, work and monetary market settings. Involving a distinction in-contrast approach we show that some of these elements connect with innovation reception in monetarily sizeable ways. Dispersion of rapid broadband web corresponds decidedly with reception. This paper presents a scope of strategies to upgrade reception of computerized innovations and firm efficiency. It measures illustratively the impact of strategy changes by consolidating the consequences of two late OECD investigations on the drivers of reception and their efficiency benefits. Expanding admittance to fast web, redesigning specialized and administrative abilities and carrying out item and work market changes to work with the redistribution of assets in the economy are viewed as the primary variables supporting the productive reception of a choice of computerized innovations.

Keywords: Digital Technology, Industry-level, Cloud Computing, Back Office Integration, Difference-in-difference Approach, Diffusion, ICT Skills, Venture Capital, Firm Productivity, Policy Changes.

1.0 Introduction

Advanced innovations are changing how organizations plan and put together globally. They not just empower cost decrease in organizations crossing public limits yet additionally empower novel sorts of items and plans of action.

**Sr. Manager, Department of Tendering and Business Development, MBH Power Limited, Vadodra, Gujarat, India (E-mail: susantakumarsatapathy@gmail.com)*

However, hindrances to cross-line organizations continue or even reappear, with the end goal that the investigation of global business stays significant in the advanced age, yet may need to move center. We contend that organizations working globally foster advanced business procedures that are related with their internationalization techniques. In doing as such, they need to represent contrasts across public settings including casual establishments, formal organizations, and asset blessings. We offer a calculated structure connecting outer and inner forerunners to computerized business and internationalization systems. We center specifically around three computerized systems: possessing advanced stages, partaking in advanced stages, and changing customary organizations for the computerized world. On this premise, we examine the commitments of the papers in this extraordinary issue and close by framing a plan for future exploration.

The quick improvement of data and correspondence advances throughout recent years has harmonized with a summed up log jam in total efficiency development, the supposed current efficiency conundrum (Acemoglu *et al.*, 2013; Brynjolfsson *et al.*, 2017). Deficient innovation dispersion, with slow poke firms progressively falling behind, was distinguished as one expected clarification of this Catch 22 (Andrews *et al.*, 2015, 2016). For example, while many firms currently approach broadband organizations, the dispersion of further developed advanced instruments and applications is not even close to finish and varies essentially across nations (McKinsey Worldwide Establishment, 2018). Hence, understanding the drivers of innovation adoption is significant.

Inadequate dissemination of new advances has been cited as one potential justification for frail efficiency execution throughout the course of recent many years (Andrews *et al.*, 2016). This paper utilizes a clever informational index of computerized innovation utilization covering 25 businesses in 25 European nations over the 2010-16 period to investigate the drivers of advanced reception across two wide arrangements of advanced advances by firms, distributed computing and back or front office mix. The attention is on underlying and strategy factors influencing firms' abilities and motivators to embrace - including the accessibility of empowering foundations (like rapid broadband web), administrative quality and labourers abilities, and item, work and monetary market settings.

We distinguish the impacts of underlying and strategy factors in view of the distinction in-contrast approach spearheaded by Rajan & Zingales (1998) and show that some of these elements are measurably and financially huge for innovation reception. In particular, we find solid help for the speculation that low administrative quality, absence of ICT abilities and poor matching of labourers to occupations control advanced innovation reception and thus the pace of dissemination. Comparatively our proof

recommends that arrangements influencing market motivators are significant for reception, particularly those pertinent for market access, rivalry and productive redistribution of work and capital. At last, we show that there are significant complementarities between the two arrangements of elements, with market motivations supporting the beneficial outcomes of improvements in firm abilities on reception of computerized advancements.

2.0 Literature Review

We find it valuable to recognize human resources capacities and market motivators for two fundamental reasons. In the first place, there are both hypothetical bits of knowledge and starting proof that computerized advances are firmly reciprocal with different intangibles (Brynjolfsson *et al.*, 2017), including labourers' abilities or administrative ability. In this way, factors connected with capacities are probably going to assume a particular part for reception. Second, arrangements influencing human resources capacities and market motivations are altogether different, with the previous for the most part connected with instruction and preparing approaches and the last option intently relying upon market guidelines, again proposing the need to independently treat the two arrangements of variables.

All the more explicitly, we test whether cross-country contrasts in computerized reception rates at the business level (estimated as the portion of firms taking on unambiguous advanced advances) originate from contrasts in capacities and impetuses to embrace new advances. We measure capacities at the nation or industry level as the correlative human resources speculations expected for fruitful reception - administrative ability and abilities.

Past exploration featured that the efficiency of ICT venture is helped by associative interest in authoritative capital or other information based resources (see Brynjolfsson and Hitt, 2000, Aral *et al.*, 2012 and Basu *et al.*, 2004, for the US; and Blossom *et al.*, 2012a, and Corrado *et al.*, 2016, for the EU), yet our paper is quick to relate such speculation straightforwardly to reception rates. Comparative with past examination, we likewise center on a scope of explicit data and correspondence innovations and grow the idea of intangibles to cover the dispersion of current administrative practices and labourers' computerized abilities unequivocally. To be sure, building capacities inside firms requires raising specialist inspiration and admittance to a skilled labour force, with two vital components for computerized reception: the general degree of ICT capability in the stirring age populace and the take up of explicit ICT preparing (at work or during position changes; see Bugamelli & Pagano, 2004).

In favor of market impetuses, a modest bunch of experimental examinations have related work market adaptability and cutthroat tensions with total ICT speculation (Blast and Marquez, 2004; Conway *et al.*, 2006), a connection that is likewise examined by Andrews and de Serres (2012) and Bartelsman (2013). In any case, our paper goes above and beyond by unequivocally testing the relationship of strategies that influence market access, employing and terminating and the accessibility of funding with reception of explicit computerized advancements. We anticipate major areas of strength for that tensions should animate advanced trial and error while making it challenging for mechanically in reverse firms to stay on the lookout, accordingly expanding industry-level computerized reception rates. Likewise, we expect an adaptable work market to work with the change of the workforce that is important to carry out the new creation techniques driven by digitalisation, with comparable to ramifications for computerized reception.

While capacities and impetuses are significant for reception at large, their impact can be anticipated to shift across computerized innovations, proposing that a granular methodology disaggregating ICT into single advancements is valuable. For example, low administrative hindrances to showcase passage can be a more grounded driver for reception of distributed computing than of different innovations in light of the fact that, by considering “scale without mass” impacts, distributed computing innovation decreases the essential venture (for example in servers and particular abilities) of youthful creative firms. On the other hand, high work market rigidities could be a more serious obstacle to reception of innovations, for example, front or administrative center programming that require a revamping of creation, with the connected reshuffling of occupations and undertakings.

Consequently the focal point of this study is on two arrangements of center computerized advancements, in particular distributed computing (standard and complex purposes, like bookkeeping programming applications or figuring power) and back or front office coordination - as carried out by means of Big business Asset Arranging (ERP) and Client Relationship The executives (CRM) programming. While our source information - the Eurostat People group Study on ICT Use and Web based business in Ventures - incorporates a lot more extensive arrangement of computerized innovations, we focus in on distributed computing, ERP and CRM for three principal reasons. In the first place, we believe them to be the probably going to be reciprocal to human resources abilities and impacted by market motivating forces. Second, they have an undeniable bearing on efficiency outcomes.

Third, they are those for which industry reception rates are accessible for an adequate number of businesses, nations and years in the Eurostat data set. To be sure, a

few advancements remembered for the Eurostat dataset that could likewise be pertinent, like utilization of huge information or robots, have extremely unfortunate nation, industry and time inclusion. Most of the other accessible advancements are chiefly of the web based business assortment, like web-based buys, and are probably not going to require significant correlative elusive speculations.

With regards to past research (Fabling & Grimes, 2016; DeStefano *et al.*, 2018), we think about broadband foundation as integral to the reception of additional modern computerized applications, comprising the foundation of an advanced economy. In this way, we deliberately control for the accessibility of fast broadband web as an empowering agent of advanced innovation reception. We avoid relating unequivocally broadband take up to human resources abilities and market motivators as, in numerous nations, admittance to this framework relies essentially upon both interest and supply factors, with the last option being vigorously affected by open arrangements (for example endowments or provincial arranging targets).

3.0 Research Methodology

We investigate the impacts of human resources capacities and market impetuses on advanced innovation dissemination by taking advantage of the possibility that these variables are probably going to be more important for reception in a ventures - due to the intrinsic mechanical or market qualities of the business - a methodology in the soul of Rajan & Zingales (1998). For example, we expect that absence of administrative ability and labourers' abilities is especially restricting in information concentrated enterprises (as estimated by the portion of tertiary-taught labour force) and prohibitive employing and terminating rules (or admittance to business sectors) is particularly restricting in ventures portrayed by a high work (or firm) turnover. The subsequent gauges chiefly highlight the differential connection between capacities or motivators and computerized reception in enterprises that are pretty much information concentrated or inclined to turnover, however we additionally make an interpretation of them into possible normal consequences for far reaching reception rates utilizing the methodology spearheaded by Guiso *et al.* (2004).

Our outcomes loan expansive help to the possibility that industry-level computerized reception rates are unequivocally connected with current administrative practices, computerized schooling and preparing of labourers and a business climate working with admittance to business sectors and labour force change: to put it plainly, factors that lift firms' capacities or hone their motivations to embrace. The connection between administrative practices and advanced education is major areas of strength for

especially reception of distributed computing and client relationship the board innovations. Strategies that upgrade work market adaptability and serious tensions (estimated individually by the OECD signs of item market guideline and business security regulation) have a more unobtrusive yet at the same time sizeable relationship with reception of most computerized innovations.

Generally, the greatness of the additions in reception rates suggested by a change from most terrible to best practice in our illustrative factors range from around 3 to 11 rate focuses (contingent upon the variable and on the innovation considered) with gains being significantly bigger for factors proxying for administrative ability. Be that as it may, since most computerized advances are unequivocally reciprocal (Wieder *et al.*, 2006; Aral *et al.*, 2006; Engelstätter, 2009; Bartelsman *et al.*, 2017), the reception of one innovation could likewise invigorate the reception of a more extensive arrangement of innovations.

Past examination has found a vigorous connection between the reception of similar scope of advances thought about in this paper and efficiency (Lady *et al.*, 2019), with the potential efficiency impacts more grounded without any ability deficiencies. Our evaluations in this way divulge a possibly significant channel through which public strategies pointed toward upgrading both human resources capacities and market impetuses could assist with shutting the rising hole among wilderness and loafer firms, with possibly tremendous impacts on total efficiency improvements.

4.0 Data Analysis/Findings

Observational examination in this space has either adopted a full scale strategy, taking into account the determinants of total ICT venture (Guerrieri *et al.*, 2011; Cetto and Lopez, 2011), or has zeroed in barely on the reception of explicit advanced advances, generally at the single nation or single industry level (see, for example, the review in Oliveira and Martins, 2011). However, ongoing discoveries propose that drivers of reception can contrast across data and correspondence innovations (De Stefano *et al.*, 2017) and that complementarities among various innovations can be critical (Bartelsman *et al.*, 2017). A disaggregate approach covering mutually a scope of computerized innovations hence appears to be ideal. Also, zeroing in on single nations or enterprises makes it hard to represent factors affecting reception that change gradually over the long haul, like human resources or the business climate. Thus, taking advantage of cross country and cross-industry variety can be a significant wellspring of recognizable proof for making sense of contrasts in innovation reception.

Against this foundation, this paper makes two fundamental commitments. In the first place, it centers around reception of a few distinct computerized innovations, including distributed computing and back and front-office joining programming, in this manner recognizing expected contrasts in the drivers of reception across individual advanced advances. Second, it utilizes a clever worldwide and between industry dataset on reception rates to investigate the pretended by contrasts in expertise gifts, cutthroat tensions and market rigidities for the capacities and motivators that organizations need to embrace every one of these advances. Our information are a cross-segment of 24 European nations and Turkey and 25 assembling and administrations enterprises north of 2010-2016. As far as anyone is concerned, this is the main experimental review to cover such a wide arrangement of nations, enterprises and innovations adding to two floods of examination, the connection between human resources and reception from one perspective and the connection between market motivations and reception on the other.

We find it valuable to recognize human resources capacities and market impetuses for two principal reasons. In the first place, there are both hypothetical experiences and starting proof that advanced innovations are unequivocally corresponding with different intangibles (Brynjolfsson *et al.*, 2017), including labourers' abilities or administrative ability. Subsequently, factors connected with capacities are probably going to assume a particular part for reception. Second, arrangements influencing human resources abilities and market motivations are altogether different, with the previous for the most part connected with schooling and preparing strategies and the last option intently relying upon market guidelines, again recommending the need to independently treat the two arrangements of variables.

All the more explicitly, we test whether cross-country contrasts in computerized reception rates at the business level (estimated as the portion of firms taking on unambiguous advanced advancements) originate from contrasts in abilities and motivations to embrace new innovations. We measure abilities at the nation or industry level as the integral human resources speculations expected for effective reception - administrative ability and abilities. Past exploration featured that the efficiency of ICT venture is helped by accompanying interest in hierarchical capital or other information based resources (see Brynjolfsson and Hitt, 2000, Aral *et al.*, 2012 and Basu *et al.*, 2004, for the US; and Blossom *et al.*, 2012a, and Corrado *et al.*, 2016, for the EU), yet our paper is quick to relate such speculation straightforwardly to reception rates. Comparative with past examination, we likewise center around a scope of explicit data and correspondence innovations and extend the thought of intangibles to cover the dissemination of present day administrative practices and labourers' computerized abilities unequivocally. For sure, building capacities inside firms requires raising

labourer inspiration and admittance to a skilled labour force, with two vital components for computerized reception: the general degree of ICT capability in the stirring age populace and the take up of explicit ICT preparing (at work or during position changes; see Bugamelli & Pagano, 2004).

5.0 Conclusion/Discussion

Digitalization changes numerous key and functional parts of IB at the biological system, firm, group and individual level. This presentation could address a portion of the many issues emerging. We found that hypotheses of IB can make sense of significant parts of advanced procedures, however researchers face difficulties in deciphering and operationalizing key hypothetical ideas in the computerized economy. Frequently significant level conceptual ideas apply. However, to improve how we might interpret real business challenges, operationalization is critical, and these operationalizations might need to be not quite the same as for conventional organizations, as we talked about strikingly for the proper establishments. In addition, with regards to making sense of new plans of action and their effect on firms, contest, and society all the more by and large various kinds of examination questions and new hypotheses might be called for.

Past organizations in a smaller sense, a considerable lot of the difficulties examined in this paper likewise apply to not-revenue driven associations like non-legislative associations and multilateral associations, as represented by Tatarinov *et al.* (2023). Advanced advances give open doors to social orders to address - in a joint effort with organizations - the stupendous difficulties worldwide society faces, for example, destitution, pandemics and environmental change. Hence, as a last note, we urge IB researchers to relate how they might interpret IB and computerized innovations to foster new ways to deal with tackling cultural difficulties.

The outcomes are hearty to a broad number of checks (for example for overlooked factors, endogeneity and anomaly impact). In any case, they ought to be deciphered with some mindfulness as the absence of adequate time-series inclusion of proportions of computerized innovation dispersion obliges the examination to be cross-sectional (over a normal of the 2010-2016 period), suggesting a recognizable proof technique that depends on country-industry changeability across a moderately little example.

The following area examines how human resources abilities and market motivators can impact the take up of computerized advances, depicts the intermediaries for computerized reception, human resources capacities and market impetuses that we use in the examination and records the cross country and cross-industry changeability in

the information. Area 3 depicts the experimental methodology and the primary outcomes. Segment 4 reports the after effects of our awareness and heartiness checks. The finishing up area talks about the outcomes and their suggestions for strategy and future exploration.

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CHAPTER 10

Data Privacy and HRM: Navigating Ethical Considerations in the Digital Age

Ishani Dwivedi, Bijal Shah** and Jeegnesh Trivedi****

ABSTRACT

In the digital age, the intersection of data privacy and Human Resource Management (HRM) poses significant ethical challenges. This research delves into the complexities of data privacy in HRM, shedding light on emerging issues and opportunities as businesses increasingly adopt digital technologies for workforce management. The evolution of this theme is explored, from its legislative and ethical foundations to contemporary regulatory frameworks like the General Data Protection Regulation (GDPR), Personal Data Protection Bill, and CCPA (California Consumer Privacy Act). Additionally, the study scrutinizes the impact of advanced technologies such as artificial intelligence and big data analytics on human resource management, highlighting the ethical dilemmas arising from data privacy in this era of digital transformation. The study delves into HRM concerns like employee surveillance, background checks, and the use of social media data in decision-making, elucidating the ethical challenges faced by HR practitioners. Moreover, it explores best practices and solutions for managing the risks associated with these issues. The research advocates for the development of a comprehensive ethical framework incorporating values such as openness, consent, and responsibility into HR data practices. It stresses the importance of ongoing training for HR personnel to navigate the intricate ethical landscape of the digital era. Ultimately, this study aims to enhance awareness of the ethical issues surrounding data privacy in HRM, emphasizing the critical balance between data-driven decision-making and individual privacy. It provides practical steps and guidance for HR departments to align their practices with ethical principles and legal requirements in today's digital landscape.

Keywords: Data Privacy, Ethical Considerations, Digital Age.

1.0 Introduction

In the evolving landscape of Human Resource Management (HRM), the integration of digital technologies has not only transformed traditional processes but has

**Student, Faculty of Management Studies, Parul University, Vadodara, Gujarat, India*

***Corresponding author; Assistant Professor, Faculty of Management Studies, Parul University, Vadodara, Gujarat, India (E-mail: bijalben.shah@paruluniversity.ac.in)*

****Associate Professor, Narayana Business School, India*

also introduced a delicate interplay between efficiency and ethical considerations. As organizations maneuver through the digital realm to streamline HRM practices, safeguarding employee data emerges as a critical concern. In the contemporary business milieu, securing employee data plays a pivotal role for organizations aiming to comply with global privacy laws. HR departments, akin to virtuoso conductors, bear the weighty responsibility of ethically stewarding sensitive employee information. This responsibility is underscored by historical events, such as the Snapchat data breach of 2016, which had far-reaching consequences for the company's reputation. This research embarks on an exploration, navigating the intricate intersection of data privacy and HRM, focusing on the ethical considerations inherent in the collection, storage, and utilization of personal data in the workplace. The overarching purpose is to unravel the nuances of the digital age's impact on HRM practices, unveiling the ethical imperatives organizations must gracefully navigate.

1.1 Navigating employee data protection

In the ballad of employee data protection, a nuanced understanding of the landscape becomes a necessity for organizations aspiring to align with global privacy laws. This research orchestrates a serenade to dispel common misconceptions held by employers about the use and guardianship of personal data. From the belief that data processing can occur without notifying employees to the misconception that laws from distant lands hold no sway, organizations find themselves entangled in an intricate waltz of ethical dilemmas. The research paper, a lyrical composition, offers insights akin to modern privacy regulations, unveiling the crescendo of an employer's obligations throughout the employee lifecycle. From recruitment to the final curtain call of employment, it illuminates the ethereal considerations that must underpin HRM practices.

1.2 Global perspectives on data privacy laws

In this poetic voyage, the manuscript immerses itself in the sonorous realms of global privacy laws, each a distinct movement in the symphony of employee data protection. The General Data Protection Regulation (GDPR) in the European Union, the California Consumer Privacy Act (CCPA) in the United States, the Lei Geral de Proteção de Dados (LGPD) in Brazil, and the New Zealand Privacy Act 2020 all play notes in this cosmic orchestration. Each law, a poetic stanza, presents its unique obligations and consequences, urging organizations to compose their HRM practices accordingly. From the staccato of transparency requirements to the legato of restrictions on overseas data transfers, the research paper unfolds the poetic nuances of global privacy laws.

1.3 The HR employee obligation lifecycle

A pivotal movement in this poetic symphony is the HR Employee Obligation Lifecycle—a minuet where HR departments gracefully pirouette through their obligations from recruitment to the twilight of employment. The manuscript, a poetic libretto, scrutinizes each note, providing a melodic understanding of the ethical considerations that must waltz through HR practices. From the gentle cadence of informing job applicants about data collection to the harmonic balance of data processing during employment, the lifecycle approach weaves the ethereal commitment demanded by HR departments. In the realm where organizations waltz with the intricacies of digitization in HRM, this research aims to serve as an opulent ballroom—a guiding compass, offering insights into the artistry of ethical considerations and best practices. By exploring the ballet of data privacy and HRM in the digital age, organizations can fortify their HR practices, ensure compliance with global privacy laws, and maintain the trust and privacy of their workforce with the finesse of a timeless dance.

2.0 Background

In the dynamic corporate landscape, the infusion of digital technologies into Human Resource Management (HRM) has redefined conventional practices, fostering a harmonious blend of human-centric approaches and advanced technology. Propelled by global expansion, tech-savvy workforces, and evolving work environments, HRM now demands agility, empowerment, and the seamless integration of data-driven decision-making. This transformative journey extends across every facet of HR, necessitating shifts in mindset, operational models, and workplace culture.

While promising efficiency and innovation, the digital evolution introduces challenges in data security, digital ethics, and the preservation of authentic human interactions. The journey of HRM digitization, initiated in the 1980s, has progressed from paper to computer-based systems and evolved into comprehensive platforms like HRMS. Presently, the focus has shifted to cloud-based solutions, AI, and mobile HR applications, aligning with prevailing trends in remote work. In India, this digital transformation reflects a rapid adaptation that combines traditional HR values with modern tools. Looking ahead, technologies such as blockchain, predictive analytics, AI, and IoT are poised to reshape HR practices.

2.1 Introduction to digitization in human resources

In the contemporary corporate milieu, the digitization of HR services is not only crucial but transformative for optimizing the workforce. HR functions, evolving with

technological advances and global trends, have undergone a paradigm shift, ushering in efficiency and productivity at reduced costs.

2.2 Impact of digitization on HR services and processes

HR digitization, surpassing 10%, plays a pivotal role in cost reduction and operational efficiency. Beyond the quantitative benefits, it enhances targeted recruitment, elevates employee productivity, and fosters customer satisfaction through real-time solutions. Notably, the paper will delve into the ethical considerations intertwined with these technological advancements.

2.3 Advantages of digitization of HRM processes

Digitization affords agility in adapting to market conditions, minimizes paperwork, enhances data accuracy, and streamlines communication. While exploring these advantages, the paper will emphasize the ethical dimensions, highlighting responsible data handling and transparency.

2.4 Downsides of digitization of HRM processes

Despite the evident benefits, skepticism prevails concerning the accuracy of digital data, and a lack of awareness hinders the full utilization of technology. The potential risks of automation and job losses will be explored, with a keen focus on their ethical implications. The paper will underscore the importance of maintaining personal interactions amidst the digital transformation.

3.0 Data Privacy in HRM

3.1 Types of personal data collected in HRM processes

In the Indian recruitment landscape, organizations routinely gather diverse personal data during the hiring process to assess candidates and make informed decisions. Adherence to data protection laws is imperative, requiring responsible handling of various categories of personal data, such as:

- A. *Contact Information*
 - a. Full name
 - b. Address
 - c. Phone number
 - d. Email address
- B. *Professional Information*
 - a. Resume/Curriculum Vitae (CV)

- b. Cover letter
- c. Employment history
- d. Educational background
- e. Certifications and qualifications
- f. Skills and competencies
- C. *Identification Information*
 - a. Aadhaar card number (or other government-issued identification)
 - b. Passport details
 - c. PAN card details
- D. *Demographic Information*
 - a. Date of birth
 - b. Gender
 - c. Nationality
- E. *Photographs*
 - a. Passport-sized photographs for identification purposes
- F. *Reference Information*
 - a. Contact details of references provided by the candidate
- G. *Interview and Assessment Data*
 - a. Interview notes and feedback
 - b. Assessment results, including any tests or evaluations conducted during the hiring process
- H. *Background verification data*
 - a. Details provided for background checks, such as criminal records if applicable
- I. *Communication Records*
 - a. Email correspondence
 - b. Communication records from interviews and interactions
- J. *Social Media Profiles*
 - a. Information publicly available on professional networking sites (LinkedIn) or other relevant platforms

3.2 Important considerations for organizations

Organizations must adopt a transparent approach to the personal data collected, obtaining explicit consent from candidates and adhering to data protection regulations like the Personal Data Protection Bill in India. Implementing stringent measures ensures the security and confidentiality of collected personal data throughout the recruitment process.

3.3 Potential risks and concerns

The loss or leakage of sensitive employee information can have severe consequences, including:

- Identity theft and fraud: Misuse of identification information.
- Privacy Violation: Unauthorized access or disclosure violating personal privacy.
- Data Breach Consequences: Reputational damage and erosion of trust.
- Financial Loss: Regulatory fines and legal actions for violating data protection laws.
- Discrimination and bias: Misuse of demographic information leading to biased hiring decisions.
- Security Clearance Risks: Compromised integrity in roles requiring a high level of trust.
- Competitive Advantage Loss: Leaked assessment results providing insights into organizational strategies.
- Misuse of Reference Information: Exploitation of reference contact details by unauthorized individuals.
- Legal Consequences: Legal actions for failure to safeguard sensitive information.
- Employee Trust and Morale: Impact on the overall morale and satisfaction of existing employees.
- Social Engineering Risks: Exploitation of communication records and social media profiles for further data breaches.

3.4 Mitigation strategies

Mitigating these risks involves implementing robust cybersecurity measures, encryption techniques, access controls, and employee training programs. Adherence to data protection laws, regular security audits, transparency with employees about data handling practices, and prompt notification in case of a data breach are crucial elements of effective risk management.

4.0 Legal Frameworks: Navigating Data Privacy and HRM in the Digital Age

In the intricate landscape of Human Resource Management (HRM), the influence of legal frameworks on data protection is paramount, shaping ethical considerations. This section delves into key international and regional regulations, shedding light on their profound impact on HRM practices and the ethical challenges they present.

4.1 Global human resource management data protection considerations

A. European Union General Data Protection Regulation (GDPR)

- At the forefront of global data protection laws, the GDPR sets stringent requirements for HRM practices within the European Union. Noteworthy provisions include:
- Consent Requirement: Explicit consent must be obtained from employees before processing personal data, except when another legal basis is present.
- Transparency: Mandates transparent practices in data handling, requiring clear communication on data collection, usage, and storage.
- Data Minimization: Obliges employers to collect only necessary data for specific purposes, minimizing data processing.
- Storage Limitation: HR departments must adhere to strict timelines for retaining employee data.
- Data Security Measures: Employers must implement robust measures to protect employee data against unauthorized access.

B. United States Data Privacy Laws for Employee Data

- In the absence of a federal law, U.S. HR data compliance relies on a patchwork of federal and state laws. Pertinent regulations include:
- Fair Credit Reporting Act (FCRA): Governs the use of consumer reports, including background checks.
- Health Insurance Portability and Accountability Act (HIPAA): Applies to the healthcare industry, regulating the confidentiality of health information.
- California Consumer Privacy Act (CCPA): Grants California residents rights over their personal information.

C. China Personal Information Protection Law (PIPL) and Cybersecurity Law

- China's data privacy landscape is shaped by the PIPL and Cybersecurity Law, impacting HR data protection.
- PIPL: Comprehensive guidelines for processing personal information, extending its relevance to HR data management.
- Cybersecurity Law: Enforces measures to secure information systems, mandating protection for employee data.

D. Singapore Personal Data Protection Act (PDPA)

- Singapore's PDPA imposes obligations on organizations collecting and processing personal data.
- Consent: Similar to GDPR, organizations must obtain consent for data processing.

- Technical and Organizational Measures: Requires organizations to implement measures ensuring the security of personal data.
- E. *India Information Technology Act (IT Act) and Personal Data Protection Bill of 2022*
- India's data privacy framework comprises the IT Act and the forthcoming PDP Bill.
 - Consent Requirement: Explicit consent is mandated for data processing.
 - Data Protection Measures: Organizations must implement measures to safeguard personal data.
- F. *United Arab Emirates Federal Decree No. 45 of 2021 (PPDL)*
- The PPDL in the UAE outlines key provisions.
 - Consent: Employers must obtain consent for processing personal data.
 - Data Security Measures: PPDL mandates the implementation of security measures to protect employee data.

4.2 Navigating the impact of privacy laws on HR data management

These legal frameworks substantially impact HR data management, introducing elements that redefine ethical considerations.

Increased Transparency: Privacy laws worldwide demand heightened transparency in HR practices, necessitating clear communication about data collection, processing, and storage. This fosters trust and aligns with ethical standards.

Stringent Requirements: The evolving legal landscape introduces stringent requirements, especially regarding obtaining consent. This underscores the ethical imperative of respecting individuals' autonomy over their data.

Data Minimization: The principle of data minimization, a core tenet of privacy laws, reinforces ethical data handling. HR departments are compelled to collect only essential data, discouraging arbitrary demands for information.

Data Portability and Right to Erase: Privacy laws empower employees with data rights, such as data portability and the right to request data deletion. This not only respects individual privacy but also aligns with the ethical considerations of empowering individuals over their data.

A comprehensive understanding of data privacy laws across regions is crucial for HR practitioners navigating the intricacies of global HR data protection.

5.0 Ethical Considerations

In the rapidly evolving landscape of Human Resource Management (HRM)

within the Digital Age, ethical dimensions of data privacy stand at the forefront of concerns. New information technologies empower corporations to amass and analyze unprecedented volumes of unstructured data, presenting significant benefits but also posing intricate ethical questions.

5.1 Use of employee data for decision-making

One of the foremost ethical implications is the use of employee data for decision-making. HR analytics involves drawing insights from employee data to enhance decision-making processes, introducing a potential conflict between benefits gained and the sacrifice of employee privacy for corporate gains.

5.2 Key ethical considerations

Transparency and consent emerge as crucial touchstones in navigating this ethical landscape. Justice Potter Stewart's assertion, "Ethics is knowing the difference between what you have the right to do and what is right to do," rings true in the context of HRM in the Digital Age. The following key ethical considerations illuminate the complex trade-offs involved:

- A. *Employee Network Analysis*: Corporations leverage employee data to map relationships, aiding in sales and business development. Ethical conflicts may arise when sensitive personal relationships are unveiled, questioning the propriety of such data storage.
- B. *Predicting Employee Departures*: Identifying flight risks is common, but extensive analysis can create an unsettling sense of surveillance among employees, posing ethical challenges.
- C. *Instant Replay for Escalated Incidents*: Complete data utilization during escalated incidents is essential but treads on the fine line of infringing on employee privacy.
- D. *Guiding Principles for Ethical HR Analytics*: Understanding Privacy Culture, seeking guidance from Information Governance (IG) committees, implementing best practices, and encouraging feedback and whistleblowing are crucial for ethical HR analytics.

As technology propels us forward, the responsibility lies with individual managers, guided by legal frameworks and ethical considerations, to ensure the judicious and ethical use of employee data.

5.3 Security measures

As organizations embrace digital transformation, protecting Human Resource Management (HRM) data becomes paramount. This paper delves into ethical

considerations surrounding data privacy in HRM within the context of legal frameworks, emphasizing the importance of cybersecurity.

5.4 The crucial role of HR in cyber risk management

Brian Warszona's research highlights the evolving landscape where HR has become integral to organizational cyber risk management. The paper underscores the necessity of a strong partnership in enforcing data permissions, cybersecurity policies, and responding to cyber events.

- A. *Navigating Regulatory Compliance:* As organizations face an increasingly active regulatory environment, HR's role in privacy regulatory compliance is expanding. Emphasizing HR's involvement in training and privacy regulation compliance, the paper stresses the need for IT, HR, and C-suite alignment in creating robust data incident response plans.
- B. *Employee Data Controls and Access:* HR's have a crucial role in determining standards for access and controls around sensitive data, highlighting the significance of HR's involvement in the termination process.
- C. *Data Disclosures and Breaches:* Daniel Shore's insights shed light on the importance of HR in managing data disclosures and breaches. The paper emphasizes HR's role in coordinating breach notifications, assessing accountability, and guiding appropriate responses.
- D. *Fostering a Cybersecurity Culture:* HR's pivotal role in creating and maintaining a robust cybersecurity culture is explored. The paper discusses HR's involvement in cybersecurity training sessions, including guidance on recognizing and handling common scenarios.
- E. *Challenges and Solutions for Protecting HRIS:* The paper addresses the critical importance of HR professionals in protecting HRIS, emphasizing training, investing in secure HRM systems, collaborating with IT, and managing remote employees.

6.0 Employee Perspectives on Data Privacy in HRM: Navigating the Ethical Landscape in the Digital Age

In the rapidly evolving landscape of Human Resource Management (HRM), the integration of data-driven business models (DDBMs) and Enterprise Security Software (ESS) has become a cornerstone for value realization from data. While organizations venture into this digital realm, the perspectives of essential stakeholders, the employees, are often overlooked. Understanding employee perspectives is crucial for the successful implementation of DDBMs and ESS, as employees play a decisive role in influencing

the value realization of these models (Förster *et al.*, 2022). This paper delves into the ethical considerations surrounding data privacy from the standpoint of employees in the digital age of HRM and the use of ESS.

6.1 Importance of employee perspectives

Employees represent a diverse stakeholder group, contributing knowledge, resources, and capabilities to the functionality of DDBMs and ESS. Their active engagement significantly shapes the value realization process (Wiener *et al.*, 2020). Failure to consider their perspectives may lead to a significant shortfall in the expected value realization from data utilization. Thus, acknowledging the unique views, concerns, and expectations of employees is paramount for organizations aspiring to master value realization from data within DDBMs and ESS (Förster *et al.*, 2022).

6.2 Challenges in value realization

Despite the proliferation of DDBMs and ESS in various industries, organizations often struggle to fully leverage their data resources, resulting in a lag in expected value realization (Court, 2015). The limited consideration of stakeholders, particularly employees, is identified as a significant obstacle (Wiener *et al.*, 2020). Acknowledging employees as a vital stakeholder group and understanding their perspectives becomes imperative in addressing this challenge.

6.3 Theoretical framework

This research adopts the stakeholder theory (Freeman, 1984) as a theoretical lens to explore employee perspectives on value realization from data within DDBMs and ESS. The Q-methodology (Stephenson, 1936, 1953) is applied to unveil the subjective inner essences of these perspectives. Eight distinct perspectives, including data advocacy, data caution, and data practical, are identified among 70 employees in a German automotive manufacturer (Förster *et al.*, 2022). These perspectives provide a foundational understanding of how employees view and appraise value realization from data.

6.4 Privacy concerns in the workplace

Privacy is a pivotal concern for employees in the workplace, accentuated by regulatory and technological trends (Bhave, Teo, & Dalal, 2019). The review by Bhave *et al.* (2019) integrates viewpoints from various disciplines to delineate the privacy contexts of information privacy and work environment privacy. The competing expectations between employees and employers regarding personal information and access create a contentious terrain that requires careful navigation.

6.5 The intersection of data usage and privacy

The emergence of smart-building technology and the increased focus on data-driven approaches in the workplace, particularly in the post-COVID era, necessitate a delicate balance between data usage and privacy (Dar & Wani, 2023). Remote temperature measurement, hand-washing monitoring, and physical distancing tracking are among the novel applications enabled by this technology. However, ensuring the privacy of the gathered data becomes an ethical imperative.

6.6 Ensuring privacy: A way forward

To foster trust and transparency, businesses must adhere to data protection principles through a privacy impact assessment. Key considerations include lawfulness, fairness, and transparency in data processing; purpose limitation to ensure data is used for stated health reasons; data minimization to collect only necessary information; and accurate and up-to-date data to prevent misinformation. Storage limitations and confidentiality measures should be in place to safeguard personal data.

In navigating the ethical landscape of data privacy in HRM's digital age and the use of ESS, understanding and respecting employee perspectives are fundamental. Organizations must recognize the diverse viewpoints within their workforce and adopt ethical frameworks that prioritize transparency, fairness, and data protection. As the integration of DDBMs and ESS continues to shape HRM practices, considering the ethical implications from an employee standpoint will be instrumental in achieving sustainable and responsible value realization from data. The insights gleaned from this research contribute to the ongoing discourse on ethical considerations in the digital age, guiding employers, DDBM and ESS developers, and policymakers toward responsible practices in HRM.

7.0 Case Studies

7.1 Pegasus airlines unintentional data exposure

In June 2022, Pegasus Airlines experienced a data leak due to an employee misconfiguring security settings, leading to the exposure of 23 million files. The incident included flight charts, navigation materials, and personal information, underscoring the critical importance of proper security controls and employee training. This case highlights the ethical considerations in HRM concerning unintentional data exposure. The misconfiguration incident emphasizes the necessity of ongoing employee training, specifically in the realm of data privacy.

HRM's role is pivotal in ensuring that employees handling sensitive information receive adequate training to prevent unintentional data breaches, aligning with the research focus on ethical considerations in the digital age.

7.2 Mailchimp unauthorized access through social engineering

In January 2023, Mailchimp faced an unauthorized access incident where an intruder compromised 133 accounts through social engineering. Although the company claimed no sensitive data was stolen, the breach emphasized the need for robust access management and continuous user training to mitigate insider threats. This case underscores the ethical responsibility of organizations to safeguard employee and customer data. HRM's critical role in ensuring employees are well-trained in cybersecurity practices to prevent social engineering attacks aligns with the research focus on ethical considerations in HRM. The incident further emphasizes the importance of limiting user access post-employment, connecting with HRM's responsibility in access management.

7.3 Cisco voice phishing and ransomware

In May 2022, Cisco encountered a sophisticated voice phishing attack, resulting in an attacker gaining access to internal systems. While Cisco's security team successfully removed the attacker, leaked files were later posted online by a ransomware gang. The Cisco case emphasizes the ethical challenges related to the protection of employee data and sensitive business information. It accentuates the collaboration required between HRM and IT to implement effective security measures, including regular training to recognize phishing attempts. This aligns with the research focus on ethical considerations in HRM, particularly in the context of data privacy in the digital age.

7.4 British airways data breach

The British Airways data breach case involved significant fines due to inadequate security measures. The incident sheds light on the ethical obligations of organizations concerning data security. This case emphasizes HRM's crucial role in advocating for and implementing robust security measures. It aligns with the ethical responsibility of HRM to safeguard personal data, showcasing the importance of HRM in responding effectively to data breaches. The analysis connects with the research focus on ethical considerations in HRM amidst evolving data privacy landscapes in the digital age.

7.5 Fast food employee steals payment card details (Taco Bell)

The Taco Bell case raises ethical concerns about the integrity of the workforce, emphasizing the need for measures to detect and prevent internal theft. HRM plays a significant role in employee vetting and continuous monitoring to maintain ethical standards and protect customer data. This case directly addresses internal threats to data privacy within HRM. It emphasizes the ethical responsibility of organizations, including fast-food chains, to ensure measures are in place to detect and prevent internal theft. HRM's role in employee vetting and continuous monitoring aligns with ethical considerations in maintaining data privacy standards.

7.6 Marriott data leak due to compromised third-party app

The Marriott data breach underscores the ethical responsibility of organizations to thoroughly vet third-party applications. HRM should be involved in assessing the cybersecurity practices of third-party vendors, highlighting the need for organizations to prioritize the security of customer data and ensure ethical practices in third-party partnerships. This case emphasizes the ethical considerations in HRM related to third-party partnerships and data privacy. HRM's involvement in assessing third-party cybersecurity practices is crucial, highlighting the need for ethical practices in vendor management to secure organizational assets.

8.0 Recommendations

In light of the increasing digitization of our world and the consequent surge in data collection by companies, the need to safeguard data, especially pertaining to customers and employees, has become paramount. This research paper explores the ethical considerations in Human Resource Management (HRM) within the digital age, with a particular focus on employee data breaches. In response to the identified challenges, the following recommendations are proposed:

8.1 Propose ethical guidelines for HRM in the digital age

To navigate the ethical complexities of handling sensitive employee data in the digital age, it is crucial to establish clear and comprehensive ethical guidelines for HRM. These guidelines should encompass the responsible collection, storage, and processing of employee data, emphasizing transparency, fairness, and accountability. Additionally, HR professionals should undergo regular training sessions to stay informed about evolving ethical standards in the digital landscape.

8.2 Strategies for organizations to enhance data privacy while maintaining effective HRM practices

Balancing data privacy with effective HRM practices requires a strategic approach. Organizations should consider the following strategies:

- A. *Employee Training and Awareness Programs:* Implement comprehensive training programs that educate employees about cybersecurity best practices. Topics should include creating strong passwords, identifying phishing scams, and securely accessing sensitive information. By increasing employee awareness, the likelihood of employee negligence leading to data breaches can be reduced.
- B. *Strong Password Policies and Two-Factor Authentication:* Enforce strong password policies that mandate the use of complex passwords that are changed regularly. Implementing two-factor authentication adds an extra layer of security, reducing the risk of unauthorized access to sensitive information.
- C. *Monitoring and Access Control:* Regularly monitor employee activity and implement access control measures. Ensure that employees only have access to data necessary for their roles, minimizing the risk of accidental or intentional data breaches.
- D. *Regular Software Updates and Patches:* Mitigate the risk of data breaches by regularly updating software and implementing security patches. Outdated software can expose vulnerabilities that hackers may exploit.
- E. *Incident Response Plan and Regular Drills:* Develop and regularly update an incident response plan outlining the steps to take in the event of a data breach. Conducting regular drills ensures that employees are well-prepared to respond effectively.
- F. *Identity Theft Protection Services:* In addition to preventive strategies, organizations can consider providing identity theft protection services to employees. Companies such as Aura and Identity Guard offer comprehensive solutions, including credit monitoring, dark web monitoring, and alerts for suspicious activities. Choosing a service provider should involve a careful evaluation of features, pricing, and alignment with specific organizational needs.

8.3 HR takes lead in employee data protection

Recognizing the critical role of HR in data protection, organizations should empower HR professionals to take the lead in implementing measures to safeguard employee and customer information. This involves setting up access controls, promoting a culture of data security, and actively engaging in policy formulation and execution. As organizations continue to navigate the challenges posed by the digital age, a proactive

and ethical approach to HRM is essential. By adopting the recommended strategies and guidelines, companies can enhance data privacy while maintaining effective HRM practices, ultimately safeguarding the trust of employees and customers in the digital era.

8.4 Recommendations for ethical considerations in the digital age of HRM

In light of the evolving landscape of data privacy and HR management, it is crucial for organizations to establish ethical guidelines and strategies. The following recommendations aim to guide HR professionals in navigating the ethical considerations associated with data privacy in the digital age:

A. Develop Comprehensive Ethical Guidelines

- Create a set of ethical guidelines specifically tailored for HR professionals in the digital age.
- Address the responsible collection, storage, and processing of employee data, emphasizing transparency and fairness.

B. Implement Continuous Cybersecurity Training

- Establish ongoing training programs to educate HR professionals about emerging cybersecurity threats.
- Emphasize the importance of choosing secure cloud services with robust data protection measures.

C. Regularly update privacy Policies

- Ensure that privacy policies are regularly reviewed and updated to align with the latest data protection laws and compliance regulations.
- Clearly communicate changes in policies to all staff, emphasizing their rights and the purpose of data processing.

D. Document and Justify Data Processing

- Mandate the documentation of the reasons for processing personal information to ensure transparency.
- Encourage HR professionals to assess and justify the necessity of data processing for each specific purpose.

E. Empower employees through awareness

- Foster an environment where employees are aware of their data protection rights.
- Emphasize the right to access, rectify, and erase personal data, and ensure that HR professionals facilitate these rights.

F. Restrict Access to Personal Information

- Implement strict access controls to ensure that only individuals who require personal information for their roles have access.

- Regularly review and update access permissions based on changing job responsibilities.

G. Adhere to Timely Document Deletion

- Enforce policies for the timely deletion of personal data, especially when it is no longer necessary for business practices.
- Comply with legal requirements regarding the retention period for different types of data.

H. Evaluate the Necessity of Employee Monitoring

- Assess the necessity and acceptability of employee monitoring practices such as email monitoring and CCTV.
- Communicate to employees the extent and purpose of any monitoring activities.

I. Challenge Common Misconceptions

- Dispel misconceptions related to data protection laws, such as the obligation to notify employees and the applicability of GDPR outside the EU.
- Ensure HR professionals have a nuanced understanding of the legal landscape.

J. Establish a Culture of Data Protection

- Instill a culture within the organization that values and prioritizes data protection.
- Encourage a proactive approach to data privacy, involving employees in the collective responsibility for safeguarding sensitive information.

The recommendations provided above are intended to guide HR professionals in the ethical management of data in the digital age. By implementing these strategies, organizations can strike a balance between effective HRM practices and safeguarding data privacy, thereby mitigating risks and ensuring compliance with global privacy laws.

9.0 Conclusion

In conclusion, the exploration of data privacy and its intersection with Human Resource Management (HRM) in the digital age underscores the critical need for ethical considerations. The comprehensive analysis has delved into the types of personal data collected, important organizational considerations, potential risks, legal frameworks, and the ethical dimensions associated with HR analytics. The mitigation strategies proposed, anchored in robust cybersecurity measures and adherence to data protection laws, offer a pragmatic approach to safeguarding sensitive information. The examination of global data protection laws, including the GDPR, U.S. regulations, Chinese laws, Singapore's PDPA, India's IT Act and upcoming PDP Bill, and the UAE's PPDL, provides a

nuanced understanding of the intricate legal landscape shaping HR data management. These legal frameworks emphasize transparency, consent, data minimization, and individual rights, reflecting the growing global consensus on ethical data handling. The ethical considerations surrounding HR analytics illuminate the complex trade-offs involved in using employee data for decision-making. Transparency, consent, and the adoption of guiding principles for ethical HR analytics emerge as pivotal touchstones in navigating this landscape.

The discussion on security measures, the role of HR in cyber risk management, and the analysis of case studies underscore the dynamic challenges organizations face in protecting HRM data and the need for proactive measures. The employee perspectives presented contribute a crucial dimension to the discourse, emphasizing the significance of acknowledging diverse views, concerns, and expectations. The theoretical framework, privacy concerns in the workplace, and the balance between data usage and privacy provide valuable insights for organizations seeking responsible value realization from data within DDBMs and ESS. The case studies, ranging from unintentional data exposure to unauthorized access and phishing attacks, highlight real-world scenarios where ethical lapses or vulnerabilities in HRM practices led to data breaches. These cases underscore the ethical responsibility of organizations and the pivotal role of HRM in preventing, responding to, and mitigating data breaches.

The recommendations put forth provide a strategic roadmap for organizations to enhance data privacy in HRM while maintaining effective practices. Proposing ethical guidelines, emphasizing employee training, implementing strong password policies, and fostering a cybersecurity culture reflect a proactive approach to ethical HRM in the digital age. In essence, as organizations navigate the complexities of the digital era, the ethical considerations in HRM serve as a compass for responsible data handling. By prioritizing transparency, fairness, and accountability, organizations can not only comply with legal requirements but also foster a culture that values data protection, ultimately safeguarding the trust of employees and customers. The insights presented in this comprehensive exploration contribute to the ongoing dialogue on ethical considerations in HRM within the ever-evolving landscape of data privacy.

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About the Book

In an era where digital technology is at the forefront of business innovation and evolution, “Digital Transformations in Contemporary Business: Trends, Technologies, and Strategies” provides an essential compendium for understanding the dynamic landscape of modern business practices. This book delves into the critical aspects of digital transformation, offering readers a comprehensive overview of current trends, cutting-edge technologies, and effective strategies for leveraging these advancements in various business contexts.

The book is meticulously divided into insightful chapters that explore a wide range of topics essential for navigating the digital age. Among these are corporate governance, which examines the role of digital tools in enhancing transparency and accountability within organizations, and online consumer behavior, which provides insights into how businesses can adapt to changing consumer preferences in the digital marketplace. Additionally, the economic impacts on foreign direct investment are analyzed, highlighting how digital advancements influence global business strategies and investment flows.

Furthermore, the book explores the role of digital technologies in enhancing business processes and employee well-being. It provides a thorough examination of how digital tools can improve corporate performance, outreach efforts, and training methodologies, thus fostering a more efficient and engaged workforce. The integration of digital technologies in business operations is discussed, emphasizing the benefits of adopting innovative solutions to stay competitive.

By presenting a holistic view of digital transformation, this book serves as an invaluable resource for academics, professionals, and business leaders aiming to stay ahead in a rapidly evolving digital world. Its in-depth analysis and practical insights make it a crucial guide for anyone looking to understand and implement digital strategies effectively in their business practices. The book not only highlights the importance of digital transformation but also provides actionable strategies to navigate this complex and ever-changing landscape.

About the Editors



Dr. Bijal Zaveri, Dean of Faculty of Management Studies at Parul University, has 17 years of teaching experience and a Ph.D. in Online Marketing. She specializes in Marketing and E-commerce, has published extensively, presented at 40 conferences, and authored a book on E-marketing. Dr. Zaveri supervises Ph.D. scholars, serves on the IGI Global International Journal of Marketing editorial board. Dr. Zaveri has also been a review committee member and session chair for various conferences.



Dr. Tejal Shah, a Ph.D. holder from Sardar Patel University, has taught at Parul University since 2011. She specializes in Finance and Computer Science, with 15 research papers published in areas like Fintech and Blockchain. She has four years of industry experience with Deloitte Touche Tohmatsu India Private Limited and Reliance General Insurance Company Limited and supervises six Ph.D. scholars. Dr. Shah supervises six Ph.D. scholars and has guided numerous postgraduate students.



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Block A, Pocket 4, No. 17, 1st Floor,
Sector - 15, Rohini, Delhi - 110089, INDIA
Mobile: +91 9873434091, 8826623730, Tel.: +91-11-42631517
E-mail: editorial@journalpressindia.com
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