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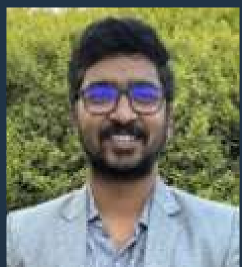

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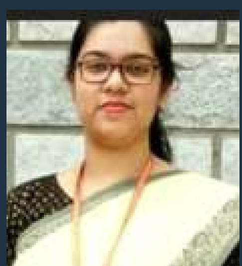

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Navigating the Future: Innovations in Commerce and Management

Subramanyam
Naresh | Konyn

NAVIGATING THE FUTURE:
Innovations in Commerce and Management

Dr. M Subramanyam | Prof. Naresh Babu KS
Prof. Konyn Tuba Lappay

Bharti Publications

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Preface

In today's fast-paced and ever-changing business landscape, the ability `to navigate the future is essential for success. "Navigating the Future: Innovations in Commerce and Management" explores the dynamic world of commerce and management, offering insights into the latest innovations and trends shaping the way organizations operate and thrive.

This book brings together a collection of perspectives from industry experts, thought leaders, and Academicians who are at the forefront of driving innovation in commerce and management. Through their diverse viewpoints and experiences, readers will gain valuable insights into the strategies, technologies, and practices that are reshaping the business world.

From digital transformation and e-commerce to sustainable practices and global market trends, "Navigating the Future" provides a comprehensive overview of the key issues facing businesses today. Whether you are a seasoned executive, a budding entrepreneur, or a student of business, this book will equip you with the knowledge and tools needed to navigate the complexities of the modern business environment.

This book acts as a reference manual for all the students who are pursuing in their graduate and post graduate level and also for research scholars.

Dr. M Subramanyam

Prof. Naresh Babu KS

Prof. Konyn Tuba Lappay

Acknowledgement

The present edited book is the outcome of not only the strenuous work undertaken by us but also the result of the invaluable help and support received from several Scholars, Experts and institutions. Hence, it is our bounded responsibility to place on record our deep sense of gratitude to all of them. We are humbly acknowledging as the authors of this edited book.

We place on record our deep sense of gratitude and appreciation for the help and encouragement provided by a host of well-wishers at various stages of the completion of this edited book. In particular, we would like to thank the following officials and scholarly Professors at our university.

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- Dr. N Ramesh, Vice-Chacellor(i/c), REVA University.
- Dr. Shubha A, Pro-Vice Chancellor (AGTP), REVA University Bengaluru
- Dr. R C Biradar, Pro Vice-Chancellor, REVA University, Bengaluru
- Dr. Sanjay Chitnis, Pro Vice-Chancellor, REVA University, Bengaluru
- Dr. B.P. Divakar, Dean, Science and Innovation Board, REVA University.

Final word of thanks goes to all our family and friends who had provided great moral support to complete this edited book within time of its plan.

Dr. M Subramanyam

Prof. Naresh Babu KS

Prof. Konyn Tuba Lappay

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Abstract

Liquidity risk management in commercial banks in Uzbekistan involves assessing and monitoring the ability of banks to meet their short-term obligations without incurring significant losses. Banks typically manage liquidity risk through various strategies, including maintaining adequate reserves, diversifying funding sources, and closely monitoring cash flows and market conditions. Regulatory requirements and central bank oversight also play a crucial role in ensuring banks' liquidity adequacy and stability within the Uzbekistan banking system. Banks in Uzbekistan would likely employ various strategies, such as stress testing, asset-liability management, and maintaining diversified funding sources, to mitigate liquidity risks and ensure stability in their operations. Regulations and guidelines from the Central Bank of Uzbekistan would also play a significant role in shaping liquidity risk management practices within the banking sector.

Out of 32 commercial banks in Uzbekistan, 9 fully state-owned banks, 05 Private banks, 22 banks in the form of a joint-stock company (08 of which have state participation), and 07 banks with foreign capital by the end of February 2024. The overall economic environment, including factors like GDP growth, inflation rates, and currency stability, can impact the liquidity position of banks. Stable economic conditions often contribute to better liquidity management.

In this paper, a modest attempt has been made to study the theoretical and methodological framework of liquidity risk management in commercial banks in Uzbekistan. In view of this, the study is concentrated on Risk-free asset ratio; Provision coverage ratio; Changes of deposit ratio; Borrowing fund-deposit ratio; and efficiency of commercial banks during the period from 2020-2021 to 2023-2024.

Keywords: *Liquidity, Risk Management, Commercial Banks, Risk-free Asset ratio, Fund-Deposit ratio*

INTRODUCTION

Banks are integral to the functioning and prosperity of Uzbekistan's economy, supporting economic growth, financial stability, social development, and government initiatives. Their role as financial intermediaries, providers of financial services, promoters of financial inclusion, and guardians of financial stability underscores their importance in driving economic progress and improving the welfare of individuals and communities in Uzbekistan.

Commercial banks in Uzbekistan play a central role in driving economic activity, facilitating financial transactions, promoting savings and investment, and contributing to the overall prosperity and development of the country's economy. Their effective functioning and prudent management are essential for sustaining economic growth, fostering financial inclusion, and enhancing the resilience of the financial system.

Liquidity risk management is a critical aspect of banking operations, including in Uzbekistan, where commercial banks face various challenges and opportunities in managing their liquidity positions. Effective liquidity risk management ensures that banks have sufficient funds to meet their obligations as they come due, thereby safeguarding financial stability and maintaining depositor confidence.

Liquidity risk management is essential for commercial banks in Uzbekistan to maintain financial stability, build customer and market confidence, comply with regulatory requirements, mitigate risks, preserve reputation, ensure operational continuity, and support economic growth. By implementing robust liquidity risk management practices, banks can enhance their resilience to liquidity shocks and contribute to the stability and prosperity of the financial system and the economy as a whole.

ABOUT THE PAPER

Out of 32 commercial banks in Uzbekistan, 9 fully state-owned banks, 05 Private banks, 22 banks in the form of a joint-stock company (08 of which have state participation), and 07 banks with foreign capital by the end of February 2024. The overall economic environment, including factors like GDP growth, inflation rates, and currency stability, can impact the liquidity position of banks. Stable economic conditions often contribute to better liquidity management.

The data has collected from various secondary sources. The researcher has studied various researcher studies but there has not been covered at micro and macro level studies in the country. Hence, it is a dire need to study and interpret the commercial banks in the Uzbekistan. In this paper, a modest attempt has been made to study the theoretical and methodological framework of liquidity risk management in commercial banks in Uzbekistan. In view of this, the study is concentrated on Risk-free asset ratio; Provision coverage ratio; Changes of deposit ratio; Borrowing fund-deposit ratio; and efficiency of commercial banks during the period from 2020-2021 to 2023-2024.

BANKS IN UZBEKISTAN – AN HISTORICAL PERSPECTIVE

The history of banking in Uzbekistan can be traced back to the early 20th century when the region was part of the Russian Empire. However, the modern banking system in Uzbekistan emerged after the country gained independence following the collapse of the Soviet Union in 1991. During the Soviet era, Uzbekistan, like other republics, operated under a centrally planned economic system where banking functions were primarily controlled by the state. The State Bank of the USSR, known as Gosbank, played a significant role in regulating financial activities within the country.

After independence, Uzbekistan underwent a period of transition from a centrally planned to a market-based economy. As part of this transition, the country embarked on reforms to liberalize its financial sector and establish a modern banking system. This included the creation of new financial institutions and the privatization of state-owned banks. In the early years of independence, the banking sector in Uzbekistan faced numerous challenges, including inadequate infrastructure, lack of expertise, and limited access to international financial markets. However, the government implemented various reforms aimed at modernizing the sector and attracting foreign investment.

One of the key milestones in the development of Uzbekistan's banking sector was the establishment of the Central Bank of the Republic of Uzbekistan in 1995. The Central Bank serves as the country's primary monetary authority, responsible for formulating and implementing monetary policy, regulating financial institutions, and maintaining the stability of the national currency. Over the years, Uzbekistan has continued to implement reforms to strengthen its banking sector and promote financial stability. These reforms have included measures to enhance regulatory oversight, improve transparency and governance, and promote the development of financial markets.

Today, Uzbekistan's banking sector comprises a mix of state-owned and private banks, offering a wide range of financial services to individuals, businesses, and government entities. While the sector has made significant progress since independence, challenges remain, including the need to enhance financial inclusion, deepen capital markets, and address issues related to non-performing loans. The organized banking system in Uzbekistan can be broadly classified into three categories: (i) State-Owned Banks; (ii) Private Banks; (iii) Foreign-Owned Banks; (iv) Commercial Banks; and (v) Development Banks.

State-Owned Banks: Historically, Uzbekistan's banking sector has been dominated by state-owned banks. These banks were established during the Soviet era and continue to play a significant role in the country's banking system. Examples include the National Bank of Uzbekistan (O◎zbekiston Milliy Banki) and Asaka Bank.

Private Banks: With economic reforms in the 1990s and 2000s, private commercial banks began to emerge in Uzbekistan. These banks are owned and operated by private investors and typically offer a range of banking services to individuals, businesses, and other clients. Examples include Kapitalbank, Hamkorbank, and Aloqabank.

Foreign-Owned Banks: Uzbekistan has seen some foreign investment in its banking sector, leading to the establishment of foreign-owned banks. These banks bring international expertise and capital into the country's banking system. However, their presence is relatively limited compared to state-owned and private banks.

Commercial Banks: The majority of banks in Uzbekistan are commercial banks, which provide a wide range of financial services, including deposit-taking, lending, trade finance, and other banking products and services.

Development Banks: In addition to commercial banks, Uzbekistan has development banks that focus on financing projects and initiatives aimed at promoting economic development, infrastructure investment, and industrial growth. For example, the Fund for Reconstruction and Development of Uzbekistan (FRDU) provides long-term financing for strategic projects in various sectors of the economy.

Overall, the historical perspective of banks in Uzbekistan reflects the country's transition from a centrally planned to a market-based economy and its ongoing efforts to modernize and strengthen its financial sector in the context of broader economic reforms.

STRUCTURE OF BASEL COMMITTEE ON BANKING SUPERVISION REFORMS - BASEL III

In order to help the banks to recognize the different kinds of risks take adequate steps to overcome the under capitalization of banks assets and lessen the credit and operational risks faced by banks. Banks, of International Settlement (BIS) set up Basel Committee on banking supervision in 1988, which issued guidelines for updating risk management practices in banks. These guidelines brought about standardization and universalization among the global banking committee for risk management and seek to protect the interest of the depositors / shareholders of the bank. As per the guidelines issued, capital adequacy was considered panacea for risk management and all banks were advised to have Capital Adequacy Ratio (CAR) atleast 8 per cent. CAR is the ratio of capital to risk weighted assets and it provides the cushion to the depositors in case of bankruptcy. This accord is based on three pillars, viz. Pillar I: Minimum Capital Requirement, Pillar II: Supervisory Review, Pillar III: Market Discipline.

This involves incorporating the key components of Basel III, such as higher capital requirements, liquidity standards, leverage ratio, and enhanced risk management practices, into their regulatory frameworks. Regulators in Uzbekistan would conduct an assessment and gap analysis to evaluate the country's existing banking regulations and identify areas where they need to be strengthened or revised to align with Basel III requirements. This may involve assessing capital adequacy, liquidity risk management practices, and compliance with Basel III standards. Based on the assessment, Uzbekistan's regulatory authorities would introduce legislative and regulatory changes to implement Basel III requirements. This may involve drafting new banking laws, issuing regulatory guidelines, and amending existing regulations to reflect Basel III standards. The Structure of Basel Committee on Banking Supervision reforms - Basel III accord is indicated in Fig.1.

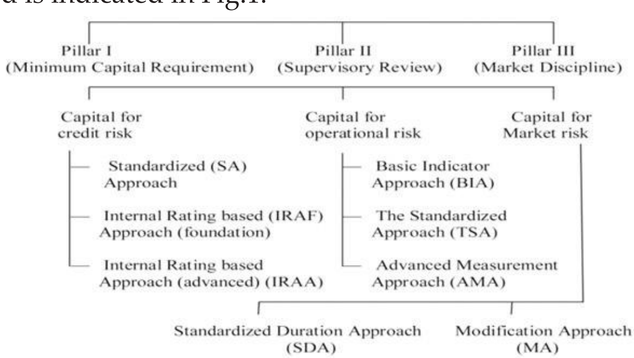

Fig. 1 Structure of Basel III Accord

The Basel III Accord is a framework that sets international standards for bank capital adequacy, liquidity, and stress testing. It was published in 2010 and was scheduled to be implemented between 2013 and 2015, but was delayed until 2022 and then again to 2023 due to the COVID-19 pandemic. The new standards that came into effect in January 2023 are sometimes known as Basel IV.

The Basel III accord, developed by the Basel Committee on Banking Supervision, is a comprehensive set of regulatory reforms aimed at strengthening the global banking system's resilience, improving risk management practices, and enhancing financial stability. The structure of Basel III includes several key components and regulatory requirements:

1. **Capital Adequacy Requirements:** Basel III introduced higher minimum capital requirements for banks to enhance their resilience to financial shocks and mitigate the risk of insolvency. It includes:
   - **Common Equity Tier 1 (CET1) capital:** The highest quality capital, primarily consisting of common shares and retained earnings.
   - **Additional Tier 1 (AT1) capital:** Subordinated instruments that provide loss-absorption capacity.
   - **Tier 2 capital:** Supplementary capital instruments that contribute to the bank's loss-absorbing capacity.
2. **Leverage Ratio:** Basel III introduced a leverage ratio to complement the risk-based capital requirements. The leverage ratio measures a bank's Tier 1 capital relative to its total exposure, providing a simple measure of leverage risk.
3. **Liquidity Standards:** Basel III introduced liquidity standards to address liquidity risk and ensure banks maintain sufficient liquidity buffers to withstand stress scenarios. The liquidity standards include two key ratios:
   - **Liquidity Coverage Ratio (LCR):** Requires banks to hold sufficient high-quality liquid assets to cover their short-term liquidity needs under stress conditions.
   - **Net Stable Funding Ratio (NSFR):** Promotes more stable funding profiles by requiring banks to maintain

a stable funding base relative to the liquidity of their assets and activities over a one-year horizon.

4. **Counterparty Credit Risk:** Basel III introduced reforms to strengthen the regulation of counterparty credit risk, particularly in the derivatives markets. It includes requirements for banks to hold additional capital against exposures to over-the-counter (OTC) derivatives counterparties and central counterparties (CCPs).
5. **Capital Buffers:** Basel III introduced capital buffers to provide additional loss-absorbing capacity during periods of stress. These include:
   - **Capital Conservation Buffer:** Requires banks to maintain a buffer of CET1 capital above regulatory minimums to avoid restrictions on capital distributions.
   - **Countercyclical Capital Buffer:** Allows regulators to require banks to build up additional capital during periods of excessive credit growth to mitigate systemic risks.
6. **Enhanced Risk Management and Disclosure Requirements:** Basel III includes enhancements to risk management practices and disclosure requirements to improve transparency, market discipline, and the effectiveness of risk management.

The Basel III accord represents a significant overhaul of the regulatory framework for banks, with a focus on strengthening capital adequacy, liquidity risk management, and risk governance. It aims to promote a more resilient and stable banking system capable of withstanding financial shocks and contributing to sustainable economic growth. Overall, the implementation of Basel III in Uzbekistan reflects the country's commitment to enhancing the stability, resilience, and efficiency of its banking system in line with international standards and best practices. Continued efforts in regulatory reforms, supervision, capacity building, and international cooperation are essential for successful implementation and alignment with global banking standards.

RISK GOVERNANCE STRUCTURE IN THE BANKS OF UZBEKISTAN

An independent Risk Governance Structure, in line with international best practices, has been put in place, in the context of separation of duties and ensuring independence of Risk Measurement, Monitoring and Control functions. This framework visualizes empowerment of Business Units at the operating level, with technology being the key driver, enabling identification and management of risk at the place of origination. The risk governance structure in banks in Uzbekistan typically follows regulatory guidelines set forth by the Central Bank of Uzbekistan (CBU) and may vary depending on the size, complexity, and ownership structure of the bank. Fig.1 demonstrates the risk governance structure in the Commercial Banks of Uzbekistan.

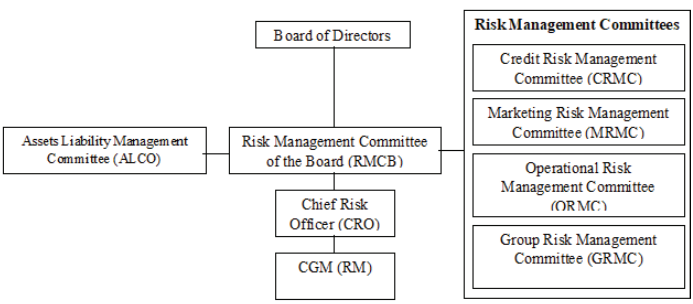

Fig. 2 Risk Governance structure in the Commercial Banks of Uzbekistan

Credit Risk Management

The Bank has strong credit appraisal and risk Assessment practices in place. The Bank uses various internal Credit Risk Assessment Models for assessing credit risk under different exposure segments. Internal ratings of the bank are subject to comprehensive rating validation framework. Credit risk is inherent to the business of lending funds to the operations linked closely to market risk variables. The objective of credit risk management is to minimize the risk and maximize bank's risk adjusted rate of return by assuming and maintaining credit exposure within the acceptable parameters. The management of credit risk includes a) Measurement through credit rating/

scoring, b) Quantification through estimate of expected loan losses, c) Pricing on a scientific basis and d) Controlling through effective Loan Review Mechanism and Portfolio Management.

Market Risk Management

Market Risk is the possibility of loss a Bank may suffer on account of changes in values of its trading portfolio due to change in market variables such as exchange rates, interest rates, equity price, etc. The Market Risk management process at the Bank consists of identification, and measurement of risks, control measures, monitoring and reporting systems. The following types of market risks are: Interest Rate Risk; Liquidity Risk; Currency or forex Risk; and Country Risk.

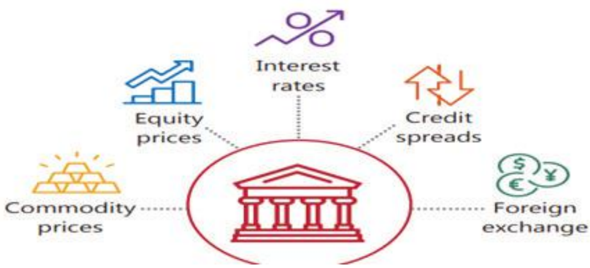

Fig. 3 Drivers of Market Risk

Source: https://www.bis.org/bcbs/publ/d457_inbrief.pdf

Market risks are controlled thought various risks limits such as Net Overnight Open position, modified Duration, Stop loss, Management Action Trigger, Cut Loss Trigger, Concentration and Exposure Limits etc mentioned in the respective policies. Presently, market risk capital is computed under Standardized Measurement Method (SMM). The Bank has decided to migrate to advanced approaches under Basel-M for market risk i.e. Internal Models Approach (IMA) and submitted its Letter of Intent to the Reserve Bank of India. The IMA is a Value at Risk (VaR) based tool for monitoring of Bank's trading portfolio. The VaR methodology is supplemented by conducting stress testing of the trading portfolio at quarterly intervals. The Bank is currently conducting parallel run of SMM and IMA methodologies.

The main objectives of the Bank's Operational Risk Management are to continuously review systems and control mechanisms, create awareness of operational risk throughout the Bank, assign risk ownership, align risk management activities with business strategy and ensure compliance with regulatory requirements, which are the key elements of the Operational Risk Management Policy of the Bank. Important policies, manuals and framework documents in line with RBI guidelines on Operational Risk Management Framework (ORMF) and Operational Risk Measurement System (ORMS) for migration to Advanced Measurement Approach (AMA) are in place. The following types of operational risks are:

(i) Strategic Risk

(ii) Political Risk

OPERATIONAL RISK MANAGEMENT

Always banks live with the risks arising out of human error, financial fraud and natural disasters. The recent happenings such as WTC tragedy, Barings debacle etc. has highlighted the potential losses on account of operational risk. Exponential growth in the use of technology and increase in global financial inter-linkages are the two primary changes that contributed to such risks. Operational risk, though defined as any risk that is not categorized as market or credit risk, is the risk of loss arising from inadequate or failed internal processes, people and systems or from external events.

Operational risk involves breakdown in internal controls and corporate governance leading to error, fraud, performance failure, compromise on the interest of the bank resulting in financial loss. Putting in place proper corporate governance practices by itself would serve as an effective risk management tool. Bank should strive to promote a shared understanding of operational risk within the organization, especially since operational risk is often intertwined with market or credit risk and it is difficult to isolate.

Group Risk Management

Group Risk Management aims to put in place standardised risk management processes in Group entities. The Group Internal Capital Adequacy Assessment Process (Group ICAAP) assesses relevant risks and mitigation measures for capital assessment, including under stressed conditions. A Group ICAAP Policy to ensure uniformity in ICAAP exercises of Group entities is in place. A quarterly analysis of risk-based parameters for Credit Risk, Market Risk, Operational Risk, Concentration Risk, Liquidity Risk and Contagion Risk is presented to Group Risk Management Committee/ Risk Management Committee of the Board.

The following outlines of the typical risk governance structure in banks in Uzbekistan:

1. **Regulatory Framework:** he Central Bank of Uzbekistan (CBU) serves as the primary regulatory authority responsible for overseeing the banking sector and ensuring compliance with applicable laws, regulations, and prudential standards. The CBU establishes regulatory requirements related to risk management and governance, conducts inspections, and provides guidance to banks on risk management practices.
2. **Board of Directors**: The Board of Directors of each bank is responsible for setting the overall risk appetite and overseeing the bank's risk management framework. It approves risk management policies, strategies, and significant risk-related decisions. The board composition typically includes independent directors with expertise in risk management and financial oversight.
3. **Risk Management Committee (RMC):** Many banks have a dedicated Risk Management Committee composed of board members and senior executives. The RMC assists the board in overseeing the bank's risk management activities, including identifying, assessing, and mitigating various types of risks. It reviews risk reports, key risk indicators, and risk management practices.
4. **Chief Risk Officer (CRO):** Banks appoint a Chief Risk Officer or a similar high-level executive responsible for leading the risk management function. The CRO oversees

the implementation of the bank's risk management policies, procedures, and controls. They report directly to the board or senior management and provide regular updates on the bank's risk profile.

5. **Risk Management Function:** Banks establish a dedicated risk management function responsible for executing the bank's risk management framework. This function assesses credit risk, market risk, liquidity risk, operational risk, and compliance risk. It develops risk models, methodologies, and monitoring tools to identify and manage risks effectively.
6. **Internal Audit:** Internal audit plays a critical role in evaluating the adequacy and effectiveness of the bank's risk management processes and controls. Internal auditors independently assess risk management practices, identify areas of improvement, and ensure compliance with regulatory requirements and internal policies. They report findings to the board or an audit committee.
7. **Compliance Function:** Banks maintain a compliance function responsible for ensuring adherence to regulatory requirements, industry standards, and internal policies. The compliance function monitors regulatory developments, conducts compliance reviews, and provides guidance on compliance matters. It helps mitigate legal and regulatory risks and promotes a culture of integrity and ethical conduct within the bank.
8. **Risk Monitoring and Reporting:** Banks establish robust mechanisms for monitoring and reporting risks across the organization. This includes regular risk assessments, stress testing, scenario analysis, and the development of risk dashboards and reports for senior management and the board. Timely and accurate risk reporting enables informed decision-making and proactive risk management.

Overall, the risk governance structure in banks in Uzbekistan aims to promote sound risk management practices, ensure compliance with regulatory requirements, and safeguard the stability and integrity of the banking system. Continuous monitoring, evaluation, and enhancement of risk management processes are essential to effectively manage risks in a dynamic and evolving environment.

LIQUIDITY RISK MANAGEMENT PRACTICIES - A BIRD'S EYE VIEW

It's essential to note that specific practices may vary based on the size, complexity, and risk profile of individual banks in Uzbekistan, as well as any unique regulatory requirements imposed by the Central Bank. For the most accurate information on liquidity risk management practices of commercial banks in Uzbekistan, consulting industry reports, regulatory publications, or directly contacting banks or regulatory authorities in the country would be advisable.

Table 1 Liquidity Risk Measures

S. No.	Name of the Indicator	Formula	Effect
1.	Risk-free Asset Ratio	$\frac{\text{Cash} - \text{in} - \text{Hand Deposits} + \text{Govt. Bonds}}{\text{Total Assets}}$	Positive
2.	Provision Coverage Ratio	$\frac{\text{Loan Loss Reserve}}{\text{Non} - \text{Performing Loans}}$	Positive
3.	Changes of Deposit Ratio	$\frac{\text{Closing Deposits Period} - \text{Opening Deposits Period}}{\text{Closing Deposits Period}}$	Negative
4.	Borrowing Fund-Deposit Ratio	$\frac{\text{Borrowed Funds from other Banks}}{\text{Deposits}}$	Negative
5.	Liquidity Ratio	$\frac{\text{Liquidity Assets}}{\text{Liquidity Liabilities}}$	Positive
6.	Deposit-Credit Ratio	$\frac{\text{Credits}}{\text{Deposits}}$	Negative

I. Risk-Free Asset Ratios

The term "risk-free asset ratio" is not a standard measure in banking terminology or regulatory frameworks. However, banks do hold assets that are considered low-risk or risk-free as part of their liquidity management and risk mitigation strategies. These assets typically include cash reserves, government securities, and other highly liquid and creditworthy instruments. While there isn't a specific ratio named "risk-free asset ratio," banks may calculate various liquidity and risk metrics to assess their exposure to risk-free or low-risk assets relative to their overall balance sheet. These metrics can provide insights into the bank's liquidity position, funding stability, and ability to withstand financial stress.

Here are some common metrics related to risk-free or low-risk assets that banks may calculate:

1. Liquidity coverage ratio (LCR)

The Liquidity Coverage Ratio aims to ensure that banks maintain a sufficient buffer of liquid assets to cover their short-term liquidity needs, even in adverse market conditions. By requiring banks to hold a certain level of HQLA relative to their cash outflows, regulators aim to enhance the resilience of the banking sector and reduce the likelihood of liquidity crises. The LCR is a regulatory requirement that measures a bank's ability to withstand short-term liquidity stress scenarios. It was introduced as part of the Basel III framework to ensure that banks maintain an adequate level of high-quality liquid assets (HQLA) to cover their net cash outflows over a 30-day stress period.

The calculation of the LCR involves comparing a bank's stock of HQLA to its total net cash outflows over a 30-day stress period. The ratio is expressed as a percentage, with higher percentages indicating a stronger liquidity position. The minimum required LCR under Basel III is 100%, meaning that a bank's stock of HQLA should be equal to or greater than its net cash outflows over the stress period.

2. Net stable funding ratio (NSFR)

The NSFR is another regulatory requirement introduced as part of the Basel III framework to strengthen the stability of banks' funding profiles over a longer time horizon, typically one year. The NSFR aims to ensure that banks maintain a stable funding structure that can support their assets and activities over the long term, even during periods of market stress. The NSFR compares a bank's available stable funding (ASF) to its required stable funding (RSF). The ratio is expressed as a percentage, with higher percentages indicating a more stable funding profile. The minimum required NSFR under Basel III is 100%, meaning that a bank's available stable funding should be equal to or greater than its required stable funding.

Here's an overview of the components involved in the NSFR calculation:

Available Stable Funding (ASF): ASF represents the portion of a bank's funding sources that are expected to be stable over a one-year horizon. These funding sources are considered less likely to be withdrawn or become unavailable during times of stress. Examples of ASF include retail deposits, long-term wholesale funding, certain types of capital, and stable non-maturity deposits.

Required Stable Funding (RSF): RSF represents the amount of stable funding required to support a bank's assets and activities over a one-year horizon. It is calculated by assigning various weightings to a bank's assets and off-balance sheet exposures based on their liquidity characteristics and expected funding requirements. Higher weightings are assigned to less liquid assets and off-balance sheet exposures, reflecting the potential funding risks associated with these assets.

The NSFR aims to promote a more sustainable funding structure within banks by encouraging them to rely less on short-term or volatile funding sources and instead rely more on stable and longer-term funding sources. By aligning the maturity and liquidity profiles of banks' assets and liabilities, the NSFR helps enhance the resilience of the banking sector and reduce the likelihood of liquidity and funding crises. As with the Liquidity Coverage Ratio (LCR), the implementation and requirements of the Net Stable Funding Ratio (NSFR) in Uzbekistan would typically be determined by the regulatory authorities, such as the Central Bank of Uzbekistan, as part of the country's banking regulations.

3. Loan-to-deposit ratio (LTD)

The Loan-to-Deposit Ratio (LTD ratio) is a financial metric used to measure a bank's reliance on deposits as a source of funding for its lending activities. It compares the total amount of loans extended by a bank to its customers to the total amount of deposits it holds. The ratio is expressed as a percentage.

The formula to calculate the Loan-to-Deposit Ratio is:

$$\text{Loan to Deposit Ratio} = \frac{\text{Total Loans}}{\text{Total Deposits}} \times 100\%$$

In other words, the LTD ratio indicates the proportion of a bank's deposits that have been loaned out to borrowers. A higher LTD ratio suggests that the bank is more aggressive in its lending activities and relies heavily on customer deposits to fund those loans. Conversely, a lower LTD ratio indicates that the bank has a more conservative approach to lending and may have a larger proportion of its deposits held in liquid assets or invested in other securities.

In Uzbekistan, as in many other countries, regulators may monitor and regulate the Loan-to-Deposit Ratio as part of their oversight of the banking sector to mitigate risks and safeguard the interests of depositors and the stability of the financial system.

4. Cash Reserve Ratio (CRR)

The CRR is a regulatory requirement that mandates banks to hold a certain percentage of their deposits as reserves with the central bank. While not directly related to risk-free assets, the CRR ensures that banks maintain a minimum level of liquid assets to support their deposit liabilities.

These ratios provide insights into the liquidity and risk profile of the bank's balance sheet and help ensure compliance with regulatory requirements related to liquidity and capital adequacy.

II. Borrower-Based Instruments

Borrower-based instruments, also known as borrower-based measures (BBMs), are regulatory tools implemented by financial authorities to address risks associated with borrower behavior, credit quality, and lending practices. These instruments are designed to enhance the resilience of financial institutions and mitigate systemic risks within the banking sector. Here are some common borrower-based instruments:

Loan-to-Value (LTV) Ratio: The LTV ratio restricts the amount of money that can be lent relative to the appraised value of the collateral provided by the borrower. Higher LTV ratios imply greater risk for lenders, as borrowers have less equity at stake. By setting maximum LTV limits, regulators aim to reduce the likelihood of loan defaults and mitigate losses in the event of a downturn in property prices.

Debt-to-Income (DTI) Ratio: The DTI ratio compares a borrower's total debt obligations to their income. Regulators may impose maximum DTI limits to ensure that borrowers do not become overleveraged and are capable of servicing their debt obligations. This helps mitigate the risk of loan defaults and financial distress among borrowers.

Loan Maturity Restrictions: Borrower-based instruments may include restrictions on loan maturity, limiting the length of time over which loans can be extended. Shorter loan maturities reduce the risk of default and improve the liquidity of banks' loan portfolios. Regulators may impose maximum maturity limits to prevent banks from making long-term commitments that could expose them to undue risk.

Creditworthiness Assessment Requirements: Financial institutions are often required to conduct thorough assessments of borrowers' creditworthiness before extending credit. This includes evaluating borrowers' credit histories, income levels, employment stability, and other factors relevant to their ability to repay loans. Stringent creditworthiness assessment requirements help ensure that loans are granted to borrowers who are likely to repay them, reducing the risk of defaults and credit losses.

Caps on Unsecured Lending: Regulators may impose limits on the amount of unsecured lending that banks can undertake. Unsecured loans are not backed by collateral and pose higher risks to lenders in the event of default. By setting caps on unsecured lending, regulators aim to limit the exposure of banks to potential credit losses and promote responsible lending practices.

Underwriting Standards: Borrower-based instruments may also include requirements for banks to adhere to prudent underwriting standards when extending credit. This involves assessing the quality of loans, verifying borrower information, and ensuring that loans are granted based on sound lending criteria. By enforcing rigorous underwriting standards, regulators aim to minimize the risk of loan defaults and promote financial stability within the banking sector.

Table 2 Liquidity Dynamics of the Banking Sector

Measures	2019	2020	2021	2022	2023
Highly **Liquid Assets**, billions of UZS	27129	38,576	62,117	110,921	87,955
Ratio of highly **Liquid Assets to Total Assets**, in %	9.3	11.4	15.0	20.8	13.9
Liquidity Coverage Ratio (minimum: 100 percent)	182.4	224.1	173.8	230.1	154.4
Net stable Funding Ratio (minimum: 100 percent)	107.2	108.0	114.0	114.9	112.1
Immediate Liquidity Ratio (minimum: 25 percent)	41.0	60.6	97.9	116.3	81.9

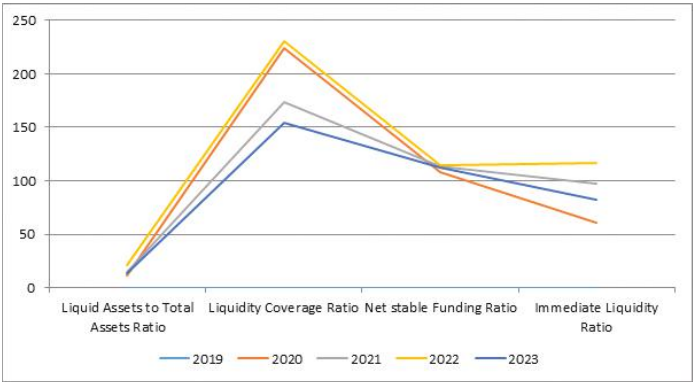

Fig. 4 Liquidity dynamics of the banking sector

Overall, borrower-based instruments play a crucial role in enhancing the quality of credit portfolios, reducing credit risk, and safeguarding the stability of the financial system. By imposing restrictions and requirements on borrower behavior and lending practices, regulators aim to promote responsible lending practices, protect consumers, and mitigate systemic risks within the banking sector.

II. Management of Loans and Non-Performing Loans (NPAs) – An Analysis

Payment of interest in time was taken as the criteria for treating a loan as performing or non-performing. All those assets which generate periodical income are called as Performing Assets (PA), while all those assets which do not generate periodical income are called as Non-Performing Assets (NPAs). If the customers do not repay principal amount and interest for a certain period of time then such loans become non-performing assets.

The Provision Coverage Ratio (PCR) is a financial metric used to assess the adequacy of a bank's provisions for loan losses in relation to its non-performing loans (NPLs). It measures the extent to which a bank has set aside funds to cover potential losses arising from loans that are not expected to be fully repaid. A higher provision coverage ratio indicates a greater level of prudence in setting aside funds for potential loan losses.

The Provision Coverage Ratio is calculated as follows:

$$\text{PCR} = \frac{\text{Provisions for Loans Losses}}{\text{Non-Performing Loans}} \times 100\%$$

Where:

Provisions for Loan Losses: The total amount of funds set aside by the bank to cover potential losses on loans. These provisions are typically based on the bank's assessment of the credit quality of its loan portfolio and the likelihood of default by borrowers.

Non-Performing Loans (NPLs): The total value of loans that are classified as non-performing, meaning that the borrower has failed to make scheduled loan payments for a specified period, typically 90 days or more.

Table 3 Loans and NPL of Commercial Banks During the Period from 2019 to 2023

(Billions of UZS)

Year	Loans	Non-Performing Loans (NPL)	Share of non-performing loans to total loans
2019	280,728	5,785	2.2
2020	270,716.5	6,518.2	2.4
2021	320,812.5	18,392.1	5.7
2022	382,078.1	15,344.1	4.0
2023	465,493.4	17,631.4	3.8

Source: *Compiled from the annual records of the Central Bank of Uzbekistan.*

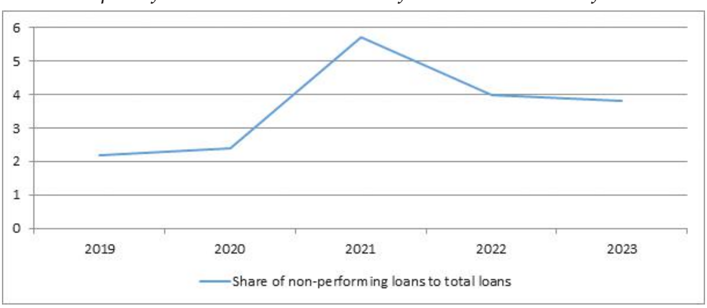

Fig. 5 Share of non-performing loans to total loans

A higher Provision Coverage Ratio indicates that the bank has set aside a larger proportion of provisions relative to its non-performing loans, suggesting a more conservative approach to managing credit risk and potential loan losses. Conversely, a lower PCR may indicate that the bank has set aside fewer provisions to cover potential loan losses, which could signal higher credit risk and potentially inadequate provisioning. The Provision Coverage Ratio is an important measure of a bank's financial health and risk management practices. A high PCR indicates that the bank has taken proactive steps to mitigate credit risk and protect its capital adequacy, enhancing its ability to absorb potential losses from non-performing loans. Regulatory authorities and investors often monitor the PCR as part of their assessment of a bank's asset quality, risk profile, and financial stability.

It's important to note that different regulatory jurisdictions may have varying requirements or guidelines for the calculation and interpretation of the Provision Coverage Ratio. Additionally, banks may apply judgment and discretion in determining the level of provisions based on factors such as the economic environment, industry trends, and the specific characteristics of their loan portfolio.

III. Changes of Deposit Ratio

The term "deposit ratio" can refer to different financial metrics depending on the context. One common interpretation is the ratio of deposits to total assets, which measures the proportion of a bank's assets funded by deposits. Another interpretation is the ratio of deposits to loans, which measures the extent to which a bank relies on deposits to fund its lending activities. Changes in the deposit ratio can reflect shifts in a bank's funding mix, liquidity position, and lending activities. Here's how changes in both interpretations of the deposit ratio can be analyzed:

Deposit-to-Total Assets Ratio

- **Increase in Deposit Ratio:** An increase in the deposit ratio indicates that a larger proportion of a bank's assets are funded by deposits. This could result from an influx of customer deposits into the bank, possibly due to higher interest rates offered on deposits, effective marketing campaigns, or increased confidence in the bank's stability.
- **Decrease in Deposit Ratio:** Conversely, a decrease in the deposit ratio suggests that a smaller proportion of a bank's assets are funded by deposits. This could occur if the bank relies more on alternative funding sources such as wholesale funding or capital markets, or if there is a decline in customer deposits due to factors such as economic uncertainty or competition from other financial institutions.

Deposit-to-Loan Ratio

- Increase in Deposit Ratio: An increase in the deposit-to-loan ratio indicates that a higher proportion of a bank's lending activities are funded by customer deposits. This could reflect an increase in deposit inflows relative to lending activity, possibly due to improved deposit mobilization efforts, attractive deposit products, or reduced demand for loans.

- Decrease in Deposit Ratio: Conversely, a decrease in the deposit-to-loan ratio suggests that a smaller proportion of a bank's lending activities are funded by customer deposits. This could result from increased lending activity outpacing deposit growth, leading the bank to rely more on other funding sources such as wholesale funding, interbank borrowing, or securitization.

The deposit ratio is calculated as follows:

$$\text{Deposit Ratio} = \frac{\text{Total Deposits}}{\text{Total Assets}} \times 100\%$$

Where:

- Total Deposits: The total amount of deposits held by the bank, including both retail and wholesale deposits from individuals, businesses, and other institutions.
- Total Assets: The total value of all assets held by the bank, including loans, securities, cash reserves, and other investments.

Overall, changes in the deposit ratio can provide insights into a bank's funding dynamics, liquidity management practices, and overall financial health. Banks closely monitor their deposit ratios and adjust their strategies accordingly to ensure they have a stable and diversified funding base to support their operations and growth objectives. In analyzing changes in the deposit ratio, it's important to consider the broader economic and market conditions, regulatory environment, and bank-specific factors influencing deposit behavior and funding dynamics. Banks closely monitor their deposit ratios as part of their liquidity management and funding strategy to ensure they maintain a stable and sustainable funding base to support their lending and operational activities.

IV. Borrowing Fund-Deposit Ratio

The Borrowing Fund-Deposit Ratio (BFDR) is a financial metric used to assess the extent to which a bank relies on borrowed funds relative to its deposits for financing its operations and lending activities. It compares the total amount of borrowed funds (such as interbank borrowings, wholesale funding, or debt securities) to the total amount of deposits held by the bank.

The Borrowing Fund-Deposit Ratio is calculated as follows:

$$\text{BFDR} = \frac{\text{Borrowed Funds}}{\text{Deposits}} \times 100\%$$

Where:

- **Borrowed Funds:** The total amount of funds borrowed by the bank from external sources, including other financial institutions, capital markets, or other sources of financing.
- **Deposits:** The total amount of deposits held by the bank from customers, including retail and wholesale deposits.

A higher BFDR indicates that the bank relies more heavily on borrowed funds as a source of financing, while a lower BFDR suggests that the bank relies more on deposits for funding its operations and lending activities.

Interpretation of the Borrowing Fund-Deposit Ratio

- **High BFDR:** A high BFDR may indicate that the bank has a higher dependency on external borrowings to finance its activities. While borrowing funds can provide flexibility and leverage for the bank, it also exposes the bank to risks associated with changes in interest rates, market conditions, and creditworthiness of counterparties.
- **Low BFDR:** A low BFDR suggests that the bank relies more on deposits as a stable and reliable source of funding. Banks with lower BFDRs may have a stronger funding base, higher liquidity, and better ability to withstand funding shocks or market disruptions.

Banks closely monitor their Borrowing Fund-Deposit Ratio as part of their risk management and liquidity management practices. Regulators and investors also assess this ratio to evaluate the bank's funding structure, liquidity risk, and overall financial health. Maintaining a balanced and diversified funding base, with an appropriate mix of deposits and borrowed funds, is essential for banks to support their lending activities and ensure stability in their operations.

SUMMING UP

Overall, effective liquidity risk management is essential for ensuring the stability and resilience of commercial banks in Uzbekistan. By implementing robust liquidity risk management frameworks, diversifying funding sources, and proactively managing liquidity positions, banks can enhance their ability to withstand liquidity shocks and maintain financial stability in the face of changing market conditions. In summary, while commercial banks in Uzbekistan face various challenges, they also have significant opportunities to drive growth, innovation, and financial inclusion. Adapting to changing market dynamics, embracing digital transformation, enhancing risk management capabilities, and leveraging emerging opportunities will be key to the success of commercial banks in Uzbekistan.

REFERENCES

1. Ahmed, H., and Khan, T. (2007). Risk Management in Islamic Banking, in Handbook of Islamic Banking, Hassan, M. K. and Lewis, K. L., Eds., Edward Elgar Publishing Inc.
2. Ahmed, O. B. (2001). Islamic Financial Instruments to Manage Short Term Excess Liquidity, Research Paper No.41, Islamic Research and Training Institute (IRTI) of Islamic Development Bank (IDB), Saudi Arabia.
3. Basel Committee [on Banking Supervision, The], 2010, Basel III: International Framework for Liquidity Risk Measurement, Standards and Monitoring
4. BCBS. (2005). International Convergence of Capital Measurement and Capital Standards, Basel Committee on Banking Supervision, Press & Communications CH-4002 Basel, Switzerland.
5. Bessie, J. "Risk Management in Banking", Chic ester: John Wiley & Sons. p. 821, 2010.
6. Chai QY (2011) Future development of China's regulation on liquidity risk from Basel III. J Chifeng Univ 5:16–24
7. DB. (2011). Doha Bank Report, Available online at: http://www.dohabank.com.qa.
8. Diamond, D.W., Rajan, R.G., 2001. Liquidity risk, liquidity creation, and financial fragility: a theory of banking. J. Polit. Economy 109 (2), 287–327.

9. Dr. SutardjoTui, Dr. Afriyani, Effect of Liquidity And Company Size on Profitability And Company Value in Industry Banking In Indonesia Stock ExchangeQuest Journals Journal of Research in Business and Management Volume 7 ~ Issue 6 (2019) pp: 28-38 ISSN(Online):2347-3002 www.questjournals.org
10. Gatev, E., Strahan, P.E., 2006. Banks' advantage in hedging liquidity risk: theory and evidence from the commercial paper market. J. Finance 61 (2), 867–892
11. Goldsmith-Pinkham, P., Yorulmazer, T., 2010. Liquidity, bank runs and bailouts: spillover effects during the Northern Rock episode. J. Fin. Services Res. 37 (2–3), 83–98
12. International Monetary Fund, Staff Guidance Note on Macroprudential Policy—Detailed Guidance on Instruments, December 2014, p. 33. https://www.imf.org/external/np/pp/eng/2014/110614a.pdf
13. Iqbal, Z., and Mirakhor, A. (2007). An Introduction to Islamic Finance: Theory and Practices. Singapore: John Wiley & Son Pte, Ltd.
14. Isern, J., Ritchie, A., Crenn, T., and Brown M. (2003). Review of Commercial Banks and Other Formal Financial Institution Participation in Microfinance.
15. Khemraj, T. (2007). What Does Excess Bank Liquidity about the Loan Market in Less Developed Countries?. Desa Working Paper No.60, Department of Economics and Social Affairs, United Nations.
16. Lev Ratnovski1, "Liquidity and Transparency in Bank Risk Management", IMF Working Paper January 2013
17. Li RH (2011) The international experiences on liquidity risk management and the suggestions for China. Investment Res 4:11–18
18. Liu L (2011) The existing problems of liquidity risk management of China's commercial banks and its suggestions. Inf Econ Technol 11:36–43
19. Liu Y, Gong CL (2010) Liquidity risk rating for commercial banks and its empirical study. Syst Eng 28(12):10–17
20. Moraine Mohr Griffin, "Liquidity Risk Management And Financial Performance In Malaysia: Empirical Evidence From Islamic Banks", Aceh International Journal of Social Sciences, 1 (2): 68-75 August 2012
21. Pierre-Marie, B. (2003). Commercial Banks and Microfinance: Strategic Choices or Temporary Distraction, The Case of Sogesol, AFRICAP Seminar, Dakar, Senegal.

22. Thabit, Thabit H., and Mardini, Mazen M. (2015). The Relationship between Commercial Banks and Microfinance Institutions for Sustainable Development - Case of Iraq, 14th Scientific Conference, Al-Mansour University College, Baghdad, Iraq.
23. Thabit, Thabit H., and Raewf, Manaf B. (2017). Applications of Fuzzy Logic in Finance Studies, LAP- Lambert Academic Publisher, Germany.
24. XiaolongDuanResearch on Liquidity Risk Management of Commercial banks under the impact of Fed rate hikeSHS Web of Conferences 170, 03015 (2023) https://doi.org/10.1051/shsconf/202317003015 CDEMS 202

2 Factors Influencing Social Entrepreneurship Concerning India

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Abstract

The present study aims to identify and understand the factors influencing the decision to start a social impact business in social entrepreneurship. The investigative Method used to conduct quantitative research by using a questionnaire to collect data from 110 students at both bachelor & Master program levels at the School of Commerce and Management Studies, University of REVA. The results indicate two major categories of factors that influence the motivation of social entrepreneurship in the investigated area, namely, those with positive influences (Knowledge of social entrepreneurship, awareness of social problems solved through entrepreneurial activities, Support from the Government Support) and those with negative influences(Financial risk, fear of failure, lack of experience and exposure of social-related projects).

Keywords: *Social startups, Social Entrepreneurship, Impact.*

1. BACKGROUND OF SOCIAL ENTREPRENEURSHIP

Social enterprises have experienced rapid growth over the past decade and are increasingly attracting attention from many sectors. Social entrepreneurship must start with the word entrepreneurship. The word social simply modifies entrepreneurship. The most useful and informative way to define social entrepreneurship is to establish its relevance to entrepreneurship. Social enterprise concept.There are associations devoted to studying and implementing social entrepreneurship (e.g.Ashoka, Schwab Foundation, etc) Social entrepreneurship has evolved a lot in a very short period and is accompanied by government institutions, organizations, and NPOs.This paper has tried to provide a framework to fit a venture into social entrepreneurship which of course cannot be limited but ideally, there is a need to research forming a theoretical system. For social entrepreneurship, recognizing the opportunity is the basic foundation that starts entrepreneurial behavior and further broadens social, cultural, and environmental goals. Non-profits non-governmental organizations, foundations, and individuals play the role of promoting, funding, and advising them (Gandhi et al.

2018) Entrepreneurship has been an exact area within economic theory since Schumpeter published his seminal work in 1911 (Swedberg 2000), but social entrepreneurship was not a core element in such general entrepreneurship theory and was hardly allocated with or even mentioned in texts or review articles on entrepreneurship. Steyart and Hjorth (2006) stress that research on and development of social entrepreneurship was undertaken, until recent years, by scholars and experts who typically did not belong to the field of entrepreneurship. Lepoutre et al (2011) point to the fact that research in the field is characterized by case studies and success stories, and lacks a theoretical base and therefore generalizability. Although there are differences between the concepts of “social enterprise”, “social enterprise” and “social entrepreneur” (Defourny and Nyssens 2008), the growing interest in this field is related closely with the fact that social enterprise is the fastest growing sector. types of organizations in the United States (Austin et al.2003), and indeed universities and business schools around the world are now participating in many social enterprise and social enterprise training programs. Therefore, this field is attracting increasing attention from scholars and practitioners in the region (Hulgård 2010). has become entrenched in the vocabulary used to talk about business.

A report by Swissnex India titled “Social Entrepreneurship in India – Exploring Unlimited Opportunities” (2015) highlights that "social entrepreneurship, in terms of operations and leadership, can applies as much to nonprofit organizations as to for-profit social enterprises, although in terms of operations and legal entities they are very different. The social enterprise models in India are for-profit, non-profit and hybrid social enterprise models, which will be discussed in detail in the following sections. In addition to the models mentioned above, other ways to create impact in India are philanthropy and corporate social responsibility.India regularly receives global philanthropy. Recently, local contributions from wealthy individuals with short- and long-term perspectives have increased. A new generation of high net worth individuals in the corporate sector are considering investing philanthropic dollars in the form of grants and impact investing.Currently, strategic philanthropy in India is still in its infancy (SWISSNEX REPORT 2015).

Definition of Social Entrepreneurship

Year	Author	Definition
1980	Bill Drayton	"Social entrepreneurs are the essential corrective force. They are system-changing entrepreneurs. And from deep within them and therefore their work, are committed to the good of all"
2000	Flower	"Social Entrepreneurship is the creation of viable, social-economic structures, relations, organizations, and practices that yield and sustain social benefits
2009	Zahra, Gedajlovic Neubaum and Shulman	"Social Entrepreneurship encompasses the activities and processes undertaken to discover, define, and exploit opportunities to enhance social wealth by creating new ventures or innovatively managing existing organizations.
2010	Kerlin	An SE is an institute that trades private gain and also generates positive social and environmental consequences

Source:Ashok .org

Social Entrepreneurship Ecosystem in India

The social enterprise ecosystem includes social enterprises and support systems. Social enterprises/entrepreneurs operate in many different fields such as agriculture, education, health, labor and employment, support systems include impact investors, consultants, training organizations and the media. Academic/ research institutions, etc.

Agriculture and Dairy	Ecofarmes, Zameen, Under the Mango Tree, Digital Green, Drip Tech, Jain Irrigation Systems Ltd Gram Mooligai, etc.
Communications and IT	Awaaz.de, Uniphore, Aaum analytics, Most Fit, Comat, and Women's Organisations for socio-cultural awareness. Etc.
Differently Abled	Mirakle Couriers, Inventions Lab Engineering, Inclusive Planet .com Jaipur Foot and EnAble India, etc.
Clean energy	Sustaintech, servals Automation, First Energy, Selco, Thrive-One Child One Light, Husk power systems, Caktilika, Nuru Energy, Delight Design, and Prakti Design, etc..
Education	Educational Initiatives, Eureka Child Foundation, Indus Academy, Empathy Learning System Pvt Ltd. Swayam Ahikshan Prayog, Pratham, Hippocampus Learning Centers Arvind Gupta Toys, etc.
Waste management	Conserve India, Waste ventures, Eco wise, Daily Dump, Saahas, and Ecosphere.
Health care	E-health point, Lifespring hospital, mDhil.com, Healthy Mother, Vaatsalya. Glocal Health Care. Bell Well Hospitals etc,
Livelihood	Source for change, Rickshaw Bank project, Desi Crew, Rural shores, Enable –India, SammaaN Foundation, Village BPO I Create, etc.
Microfinance	Maan Deshi Mahila Sahakari bank, Rangde, Spandan Sphoorthy Financial, Shri kshetra Dharmasthala Rural Development Project, Bharatiya Samrudhi Finance, Grameen Financila services etc.

Handicraft	Mother Earth, Villcart, Rope, Shipo, Kala Raksha, Indus Tree Crafts Foundation, Rangesutra etc.
Water and sanitation	Sarvajal, Water health, Wello water, Nano Ganesh, Zimba, Life straw etc.

Source: IITM Centre for social innovation and entrepreneurship.

SOCIAL ENTREPRENEURSHIP AND THE 2030 AGENDA:

Social enterprises are receiving increasing attention as a means to address important sustainable development challenges in developed and developing countries (Seelos, Ganly, & Mair, 2006).As emphasized in Sustainable Development Goal 17, which aims to strengthen the means of implementation and revitalize the global partnership for sustainable development, a multi-stakeholder approach delivers economic results, socially and environmentally better than if a single organization operates alone (Tinsley and Agapitaova) . , 2018). Target encourages and promotes "effective public, private-public and civil society partnerships, building ocollaborative experience and resource strategies". Within this framework, social enterprises offer international organizations and national governments an additional partner to strengthen efforts to achieve Agenda 2030. Recent estimates indicate that Implementation of the 2030 Agenda requires significantly higher levels of financing than initially expected. Current assessments show that financing needs for the Sustainable Development Goals total around $6 trillion annually or $90 trillion over 15 years(United Nations 2017) Evidence shows that social entrepreneurship can contribute to sustainable and inclusive job creation and overall local development (OECD, 2018b). Recent estimates indicate that in 2016, social enterprises benefited 871 million people in nine countries in Europe and Central Asia, providing services and products worth €6 billion and creating employment, particularly among the most marginalized social groups (SEFORÏS, 2016). Social enterprises in Australia have already generated 2-3 percent of GDP, creating jobs for 200,000 people, and there are indications that these figures may rise to 4 percent of GDP and 500,000 jobs within the next 10 years (Smith, 2017).Current Scenario of Social Entrepreneurship in India Social enterprises are predominantly for-profit, small, and growing businesses that engage with low-income populations to address access and affordability challenges in critical needs sectors.They play an important role in catalyzing development at the base of the pyramid and for underserved populations in India. Although social enterprises do not have a legal definition in the Indian regulatory framework, they form a subset of the micro, small and medium enterprises (MSME) category. Estimates from a study conducted by British Council, Ennovent and Aspen Development Network of entrepreneurs in 2016 on for-profit and non-profit social enterprises in India indicate the presence of nearly 2 million such businesses across the country. (British Council 2016). Social entrepreneurs mainly focus on social problems that have existed for many years and act as catalysts for social problems. In India, social enterprises tend to focus on seven high-impact sectors: agriculture, water, sanitation, clean energy, health, education and financial inclusion. Each of these sectors is essential for low-income communities in India, as more than 50% of India's population depends on agriculture, a very expensive and inefficient industry (Raghava etl.2004).As an emerging economy, India today has many social entrepreneurs. We need a revolution from people of different walks of life in building and implementing effective, innovative, and sustainable solutions to battle social and environmental dares. These solutions include services and products for profit or as non-profit initiatives. India needs numerous social entrepreneurs with innovative solutions to society's most pressing social difficulties in the areas of sanitation, education, water conservation, gender bias, primary health, female foeticide, carbon emissions, and other environmental complications. These problems are persistent and need urgent resolutions. Usually, people leave the societal needs to the government or the business sectors. Nevertheless, social entrepreneurs tend to identify areas that are not working efficiently in the current system and try to solve the problem by changing it, spreading awareness about the solution, and influencing people to be part of the change.

Current Scenario of Social Entrepreneurship in India

Social enterprises are primarily small, for-profit, growing businesses that engage low-income populations to address accessibility and affordability challenges across sectors. have important needs. They play a key role in driving development at the base of the pyramid and for underserved populations in India. Although social enterprises do not have a legal definition in the Indian regulatory framework, they form a subset of the micro, small and medium enterprises (MSME) category. Estimates from a study conducted by British Council, Ennovent, and Aspen Development Network of entrepreneurs in 2016 on for-profit and non-profit social enterprises in India indicate the presence of nearly 2 million such businesses across the country. (British Council 2016). Social entrepreneurs mainly focus on social problems that have existed for many years and act as catalysts for social problems. In India, social enterprises tend to focus on seven high-impact sectors: agriculture, water, sanitation, clean energy, health, education and financial inclusion. Each of these sectors is essential for low-income communities in India, as more than 50% of India's population depends on agriculture, a very expensive and inefficient industry (Raghava etl.2004). As an emerging economy, India today has many social entrepreneurs. We need a revolution from people of diverse backgrounds to build and implement effective, innovative and sustainable solutions to combat social and environmental challenges. These solutions include services and products that are for-profit or take the form of non-profit initiatives. India needs more social entrepreneurs coming up with innovative solutions to society's most pressing social challenges in the areas of sanitation, education, water conservation, gender bias, health basics, female feticide, carbon emissions and other environmental issues. These problems persist and require urgent solutions. Usually, people follow the social needs of the government or economic sectors. However, social entrepreneurs tend to identify areas of ineffectiveness in the current system and try to solve the problem by changing it, publicizing the solution and inspiring people participate in change. Take the example of Dr. Govindappa Venkataswamy's Aravind Eye Hospital. This country's economic model is highly social but sustainable. It runs on its revenue. The founder's mission was to eradicate blindness amongst the poor in India, especially in rural India living with a minimum daily wage and who can't afford medical treatment. Aravind Eye Hospitals provides large-volume, high-quality and affordable care. 50% of its patients receive services either free or at steeply subsidized rates, yet the organization remains financially self-sustainable. Much importance is given to equity—ensuring that all patients are accorded the same high-quality care and service, regardless of their economic status. The heart of the model lies in economies of scale.

Shirish Apte succeeded in reviving the traditional water supply system in Maharashtra, caught between the Malguzars (local zamindars or landlords) and the state government; Malguzari tank was abandoned many years ago. Apte decided to change the situation and since 2008 he has succeeded in rejuvenating these tanks. His efforts and hard work helped the district administration restore 21 more such tanks. This project has helped many locals find jobs, irrigation output has increased in the area, farmers have reduced the use of fertilizers on farms and most importantly you can now witness a magnificent sight when many animals come to quench their thirst. longing for these tanks. A social entrepreneur may also seek to address this imbalance in availability, the root causes of these social problems, or the social stigma associated with lower castes and poverty. The main goal of a social entrepreneur is not to make a profit but to make large-scale improvements in society. Near Mangalore, Karnataka, is an inspiring example of Rajesh Naik's efforts to transform 120 acres of barren land into a verdant farm through his persistent efforts to create a 2-acre lake. acres and 50 feet deep, something that has yet to be achieved. not only transformed the surrounding area but also helped improve the water table in the surrounding villages, in addition to contributing to the development of organic farms and self-sufficient dairy cows. It took a lot of time and financial resources to create a lake that gradually filled with water and today produces about 40,000 liters of water used to irrigate the entire farm.This not only helps create and grow greenery in the area but also helps increase the water table in the areas surrounding the farm. Contemporary economists and management writers such as Jean-Baptiste Say, Joseph Schumpeter, Peter Drucker and Howard Stevenson have defined entrepreneurship somewhat differently but with the same view that entrepreneurs are Individuals create value, are innovators, are agents of change.

in society, etc. Social entrepreneurs closely resemble all of these definitions created by different economists. The only difference is that a social entrepreneur is an entrepreneur with a "social mission"; For a social entrepreneur, the social mission is a central and clear theme.This affects how they perceive and evaluate opportunities. In India, social entrepreneurs face important issues like businesses need a solid and solid business plan to help them achieve their goals.

Key Policies Impacting Social Enterprises in India

Policy Name	Ministry/ Department	Description
Startup India	Ministry of Commerce and Industry	The scheme aims to benefit several Indian startups through support services including IPR support, self-certification, and tax exemptions. The website also provides useful information such as a list of incubators, a list of facilitators for patents and trademarks, a list of SEBI registered funds, and a list of central and state government clearances that an enterprise needs to have. As of August 2018, there have been 197,967 registrations for the learning and development module, and 129 startups have been funded as part of this scheme.
Scheme of Support for Entrepreneurial and Managerial Development of SMEs: Through Incubators	Ministry of Micro, Small and Medium Enterprises	The main objective of the scheme is to promote emerging technological and knowledge-based innovative enterprises that need business development and consulting support from professionals beyond the traditional activities of MSMEs

Technology Incubation and Development of Entrepreneurs (TIDE)	Ministry of Electronics and Information Technology	TIDE assists institutions of higher learning to strengthen their technology incubation centers and enable young entrepreneurs to develop technologies and set up technology companies. TIDE incubation centers network with angel investors and venture capitalists, who provide mentoring and financial support to startups and enable enterprises to graduate to the next level

Source: Indian Landscape Report 2016

The government has also allowed businesses to support social activities under corporate social responsibility (CSR). Under CSR regulations, companies can make financial contributions to technology incubators located in academic institutions approved by the central government as part of their CSR activities. In response, some companies have channeled their capital into these activities. For example, Mahindra & Mahindra Financial Solutions has funded Sustain Earth (INR 2 million/€25,000), FlyBird (INR 5 million/€62,500) and Mphasis-funded Skill Train, both through Villgro. Bajaj Electrics sponsored Energy Solar and Take Solutions supported Bodhi Health Education Services (INR 7.5 million/€93,750), both through CIIE. CSR funds are also used to support specific incubator initiatives. For example, Microsoft, Capital First, PayU, ICICI Bank and Amazon have backed Empower, a technology accelerator launched by Zone Startups for women entrepreneurs in India. Similarly, Pfizer and the Foundation for Innovation and Technology Transfer (FITT), IIT Delhi's incubator, are jointly creating healthcare-focused accelerators to reward innovators. Pfizer provided a grant of up to INR 5 million (€62,500) to each winner (Government of India 2018).

MATERIAL AND METHODS

A qualitative research model was applied to analyze the factors influencing social entrepreneurship. Qualitative research for the questionnaire survey was conducted from November to February 2023, using paper questionnaires distributed to final-year students of Master of Business Administration, Master of Commerce, and Bachelor of Commerce. Bachelor of Commerce, Bachelor of Business Administration in Commerce and Bachelor of Business Administration majoring in entrepreneurship. The questionnaire consisted of a series of 20 questions divided into 5 sections. A total of 140 questions were distributed during the sessions and the number of valid questions obtained was 110 (79.6%). The first part of the questionnaire included the respondents' demographic profile: age, gender, education level, family occupation and family income.

The second part of the questionnaire assesses entrepreneurial intentions.

(a) I plan to open my business in the next three years

(b) Fear of failure prevents me from establishing my own business

(c) I have a great idea but I do not have financial support from my family, friends, and statutory bodies in my country.

(d) There is a need for stability and study income is more important to me than the potential to gain more from my own business.

(e) I feel I still need to strengthen my skills to start my business

The third part contains the evaluation questions of social entrepreneurial intentions:

1. I know the concept of social entrepreneurship
2. I noticed many social enterprises are solving many pressing Problems which my country facing.
3. If I get a chance to work for society through social enterprises.
4. I have already been involved in Social projects/organizations involved in social causes.
5. If I start my own business in the future, I will implement the social responsibility component.

The fourth part contains questions evaluating the respondent's perception of the effectiveness of Social enterprises/NGOs in solving social problems.

1. Private Social entrepreneurship initiatives can solve the problems in the social problems in the region more effectively than the state

2. I feel NGOs and other social-based organizations have played an important role in solving social problems in recent years.
3. Social entrepreneurship is more prevalent in high-income countries.
4. The social entrepreneurship ecosystem is poor in India.

Questions on respondent identification are closed, with multiple responses, and those measuring entrepreneurial intentions use the Likert Scale in five steps (Strongly disagree, Disagree, Neutral, Agree, and strongly agree.).

RESULT AND DISCUSSIONS

The results obtained from the survey have been analyzed with the Survey tool. Centralization of the results obtained after completing the questionnaires is presented in

Demographic Profile of the Respondents

Table 1 Gender of the Respondents

Sl. No	Parameter	Frequency	Percentage
1	Male	60	54.55
2	Female	50	45.45
Total		110	100

The data in Table 1 reveals the gender distribution of respondents in a study on factors influencing social entrepreneurship in India. Among 110 respondents, 60 (54.55%) are male, and 50 (45.45%) are female. This suggests that both genders are fairly represented in the study, enabling a more comprehensive analysis of factors affecting social entrepreneurship.

Table 2 Education Level of the Respondents

Sl. No	Parameter	Frequency	Percentage
1	BCOM	28	25.45
2	MCOM	14	12.73
3.	BBA	40	36.36
4	MBA	20	18.18
5	Ph.D. in Social Science	8	7.27
Total		110	100

Table 2 presents data on the education levels of respondents in a study on factors influencing social entrepreneurship in India. The findings reveal a diverse educational background among the 110 participants. The majority have a Bachelor's in Business Administration (BBA) at 36.36%, followed by a Bachelor of Commerce (BCOM) at 25.45%. Master of Business Administration (MBA) accounts for 18.18%, while 12.73% hold a Master's in Commerce (MCOM), and 7.27% have a Ph.D. in Social Science. This diverse educational profile suggests that the research considers a wide range of educational perspectives when examining social entrepreneurship factors in India, contributing to a comprehensive analysis.

Table 3 Family Occupation

Sl. No	Parameter	Frequency	Percentage
1	Government Employee	14	12.73
2	Own Business	27	24.55
3	Pvt Sector Employee	46	41.82
4	Agriculture	15	13.64
Total		110	100

Table 3 provides insights into the family occupations of respondents in a study on factors influencing social entrepreneurship in India. The data illustrates a varied occupational background within the sample of 110 individuals. The highest percentage, 41.82%, represents those employed in the private sector, followed by individuals engaged in their businesses at 24.55%. Government employees and those involved in agriculture make up 12.73% and 13.64%, respectively. This diversity in family occupations suggests that the research encompasses perspectives from different socioeconomic backgrounds, enriching the examination of factors influencing social entrepreneurship in India by considering various family occupational contexts.

Table 4 Family Income

Sl. No	Parameter	Frequency	Percentage
1	Up to 1 lakh	23	20.91
2	1 lakh to 5 lakh	30	27.27

3	5 lakh to 10 lakh	49	44.55
4	More than 10 Lakh	8	7.27
Total		110	100

Table 4 displays the distribution of family income among respondents in a study focused on factors influencing social entrepreneurship in India. The data reveals a broad range of family income levels within the sample of 110 participants. The largest group falls in the 5 lakh to 10 lakh category, making up 44.55% of respondents. 27.27% have an income between 1 lakh to 5 lakh, while 20.91% have income up to 1 lakh. A smaller proportion, 7.27%, reports a family income of more than 10 lakh. This wide income variation suggests that the research considers social entrepreneurship factors across different economic strata in India, contributing to a comprehensive analysis.

Table 5 Entrepreneurial Intention

Sl. No	Parameter	Frequency	Percentage
1	I plan to open my business in the next three years	27	24.55
2	Fear of failure prevents me from establishing my own business	26	23.64
3	I have a great idea but I do not have financial support from my family, friends, and statutory bodies in my country.	24	21.82
4	There is a need for stability and study income is more important to me than the potential to gain more from my own business.	18	16.36
If I start my own business in the future, I will implement the social responsibility component		25	22.73
Total		110	100

Table 5 provides valuable insights into the entrepreneurial intentions of respondents in the context of factors influencing social entrepreneurship in India. The data reveals a range of attitudes and considerations among the 110 participants. Notably, 24.55% expressed an intention to start their own business within the next three years, while 23.64% are held back by a fear of failure. A significant proportion, 21.82%, notes a lack of financial support as a barrier to their entrepreneurial aspirations. On the other hand, 16.36% prioritize stable and steady income over potential business gains. Encouragingly, 22.73% expressed a willingness to incorporate social responsibility in their future business ventures. These findings highlight the complex interplay of factors shaping entrepreneurial intentions and underline the need for targeted support and policies to foster social entrepreneurship in India.

Table 6 Social Entrepreneurial Intention

Sl. No	Parameter	Frequency	Percentage
1	If I start my own business in the future, I will implement the social responsibility component	25	22.73
2	I know the concept of social entrepreneurship	37	33.64
3	I noticed many social enterprises are solving many pressing Problems which my country facing.	28	25.45
4	If I get a chance to work for society through social enterprises.	4	3.64
5	I have already been involved in Social projects/ organizations involved in social causes.	16	14.55
Total		110	100

Table 6 sheds light on the social entrepreneurial intentions and awareness among the 110 respondents in the context of factors influencing social entrepreneurship in India. The data reveals diverse attitudes and levels of knowledge. Notably, 22.73% expressed a willingness to incorporate social responsibility in their future businesses. A significant 33.64% are familiar with the concept of social entrepreneurship. Furthermore, 25.45% have noticed the positive impact of social enterprises in addressing critical issues in their country. Only 3.64% explicitly state a willingness to work for society through social enterprises if given the opportunity, while 14.55% have already been involved in social projects or organizations dedicated to social causes. These findings underline the importance of awareness and education in fostering social entrepreneurship and encouraging individuals to engage in socially responsible ventures.

Table 7 NGO/Social Enterprise Intention

Sl. No	Parameter	Frequency	Percentage
1	Private Social entrepreneurship initiatives can solve the problems in the social problems in the region more effectively than the state	28	25.45
2	I feel NGOs and other social-based organizations have played an important role in solving social problems in recent years.	18	16.36
3	Social entrepreneurship is more prevalent in high-income countries.	40	36.36
4	The social entrepreneurship ecosystem is poor in India.	24	21.82
Total		110	100

Source: Author.

Table 7 offers insights into respondents' perceptions and intentions regarding NGOs and social enterprises in the context of addressing social issues in India. Among the 110 participants, 25.45% believe that private social entrepreneurship initiatives are more effective in solving regional social problems than the state. 16.36% feel that NGOs and similar organizations have played a significant role in recent years. A substantial 36.36% believe that social entrepreneurship is more prevalent in high-income countries, while 21.82% perceive a poor social entrepreneurship ecosystem in India. These findings underscore varying attitudes and perspectives about the role of NGOs and social enterprises in addressing social issues and highlight the need for further development and awareness in this field within India.

CONCLUSIONS

Social entrepreneurship must be seen as one of a wide range of development strategies, and it comes with several caveats. Indeed, "successful entrepreneurship is rare, with the vast majority of entrepreneurs failing to provide the major innovations or creative destruction that can drive economic growth" (Azoulay and others, 2018, p. 2). It follows that promoting social entrepreneurship, and especially youth social entrepreneurship, is not a simple endeavor. With the appropriate support, social entrepreneurship may be a viable option for many youths, but it is not a panacea for the development and employment challenges young people face. the data presented in Tables 1 to 7 provides a comprehensive overview of various factors influencing social entrepreneurship in India. The findings reveal a balanced gender representation, diverse educational backgrounds, family occupations, and income levels among the 110 respondents, allowing for a holistic analysis of these factors. In terms of entrepreneurial intention, there is a mix of motivations and barriers, with a significant proportion expressing a willingness to incorporate social responsibility in their future businesses. Additionally, respondents hold diverse views on the role of private social entrepreneurship initiatives, NGOs, and the state in addressing social issues. These insights highlight the complexity of the social entrepreneurship landscape in India and emphasize the need for targeted policies and awareness-building efforts to foster this sector effectively.

REFERENCES

1. Austin, J., Stevenson, H., & Wei-Skillern, J. (2006). Social and commercial entrepreneurship: Same, different, or both? Entrepreneurship Theory and Practice, 30(1), 1-22.
2. British Council (2016): Social Value Economy. A Survey of the Social Enterprise Landscape in India. British Council Report. Retrieved from: https://www.britishcouncil.in/sites/default/files/british_council_se_landscape_in_india_-_report.pdf
3. Defour ny, J. (2009). Concepts and r s of social enterprise: a European perspec ve. Second Research Coll oquium on Social Entrepreneurship, June 23 -26, 2009 , Duke University, Du rham, NC, USA.

4. Drayton, W. (1980). Economic law enforcement. *Harv. Envtl. L. Rev.*, *4*, 1.
5. Gandhi, Tanvi; Raina, Rishav (2018). Social entrepreneurship: the need, relevance, facets and constraints. Journal of Global Entrepreneurship Research, 8(1), 9–. doi:10.1186/s40497-018-0094-6
6. Government of India, Ministry of Electronics and Information Technology (2018). Technology Incubation and Development of Entrepreneurs (TIDE). Retrieved from: http://meity.gov.in/content/technology-incubation-and-development-entrepreneurs
7. Hulgård, L. (2010) Discourses of social entrepreneurship – variations of the same theme?
8. Included in the opening remarks of Peter Thomson, President of the General Assembly of the United Nations, at the High-Level SDG Action Event: SDG Financing Lab (see United Nations, General Assembly, 2017).
9. Lepoutre, J., Justo, R., Terjesen, S. and Bosma, N. S. (2011). Designing a Global Standardized Methodology for Measuring Social Entrepreneurship Activity: The Global Entrepreneurship Monitor Social Entrepreneurship Study, Small Business Economics, forthcoming.
10. Ministry of Micro, Small & Medium Enterprises (2018). Annual Report 2018. Retrieved from: https://msmegov.in/relatedlinks/annualreport-ministry-micro-small-and-medium-enterprises
11. Raghava, Sharad T.C.A. (2014). India's agricultural yield suffers from low productivity." LiveMint. HT Media Ltd.
12. Report on "Social Entrepreneurship in India-Unlocking the unlimited opportunities", by Swissnex India, 2015. Derived from https://www.kti.admin.ch/.../FINAL%20Social%20Entrepreneurship%20Report.../FIN.
13. Seelos, Christian & Ganly, Kate & Mair, Johanna. (2006). Seelos, Ch., Ganly, K., Mair, J. (2006) Social entrepreneurs directly contribute to global development goals, in Mair, J., Robinson, J., and Hockerts, K. (eds.) Social Entrepreneurship, Palgrave Macmillan.. 10.1057/9780230625655_15.
14. Stewart, C. & Hjorth, D. (2006) (eds.) Entrepreneurship as Social Change, Cheltenham: Edward Elgar
15. Swedberg, R. (2000) Entrepreneurship. The Social Science View. Oxford University Press.

3 Contemporary ESG Practices in India: Hurdles and The Furtherance

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Abstract

ESG-Environmental, Social and Governance Practices has become a vital in the present contemporary world which reflecting in an improving awareness about socially responsible investment and the sustainability business practices. In India, with respect to this context, this research paper aims at providing the comprehensive analysis of the current ESG Practices and regulations and the challenges faced while implementation by Indian companies to incorporate the ESG Practices into their operations. The present paper has explored the different regulatory frameworks, the challenges faced and the impact of the integration on companies as well as on society. By examining the efforts towards ESG by several Companies, this paper seeks to provide the insights into the scenario of ESG adoption by the Indian companies and its challenges for India's corporate perspective.

Keywords: *ESG, Socially Responsible Investment, Regulatory Framework*

INTRODUCTION

Sustainable investing is the investment practice of making the decisions based on environmental, social, and governance factors, at the side of traditional financial metrics. It strives to generate long term financial returns while chip in to constructive environmental and social outcomes. Sustainable investing has its source in religious and ethical investing practices that come from centuries. Modern sustainable investing emerged during 1960s and 1970s, roused by growing social and environmental awareness. The demand for sustainable investment options are strived by the growing awareness of climate changes, societal issues and corporate governance misconduct.

The Indian economy has moved from unorganized to organized, from cash to digital and from import based to domestic manufacturing due to paradigm shift in business.

ESG- Environment, social and governance investing has slowly started gaining popularity across the globe as several investment funds how started adopting this model in recent years. Although ESG investing is a relatively new concept for Indian investors. Approximately 3000 ESG plants are available globally for investments. There has been many sustainable challenges observed from couple of years such as risk for risk of flood, the risk of sea levels come on privacy risks, data security concerns, demographic transitions, legislative changes etcetera. These in turn bring out new risk factors to investors.

Indeed, Corporate Social Responsibility (CSR) has been a significant focus in India, It has become mandatory particularly after the introduction of companies Act 2013. Sec 135 under this law compelled companies to allocate a portion of its resources towards projects that have a constructive impact on the social and environmental aspects of the companies. CSR initiatives in India have addressed various issues ranging from education and healthcare to environmental conservation and community development.

On the other hand, Environmental, Social, and Governance (ESG) criteria have gained prominence globally, including in India, over the past few years. ESG goes beyond traditional CSR by considering not only social and environmental factors but also governance practices within an organisation. It provides a framework for evaluating an organisation’s sustainability performance and risk management practices, thereby enabling conscious investors to make informed decisions.

While CSR focuses more on philanthropy and corporate impart, ESG encompasses a broader set of considerations that reflects a company's overall sustainability and ethical practices. Both CSR and ESG initiatives align with India's Sustainable Development Goals (SDGs) by promoting responsible business practices and contributing to the country's social, economic, and environmental development.

The integration of ESG considerations into investment decisions not only fosters sustainable business practices but also enhances transparency, accountability, and long-term value creation for corporations. In this way, both CSR and ESG play crucial roles in advancing India's journey towards achieving its SDGs and fostering sustainable development.

Sustainable investment, also known as Socially Responsible Investment (SRI), has gained prominence globally, driven by various factors such as corporate frauds, financial crises, environmental concerns, and investor awareness. In India, ESG funds have witnessed significant growth, with an asset size exceeding Rs. 12,300 crores in the year 2021-22. Regulatory bodies like the Indian National Stock Exchange (NSE) have introduced frameworks like NSE Prime, which encourages companies to exceed regulatory requirements in terms of corporate governance standards. Integrating ESG factors into asset pricing and risk modelling poses challenges as traditional models like the Capital Asset Pricing Model and Arbitrage Pricing Theory may not fully account for ESG risks. Additionally, quantifying ESG indicators and incorporating them into fixed-income securities remains a challenge. Companies with strong ESG credentials have demonstrated better performance during crises like pandemic and the global financial crisis during 2007-2009, leading to improved recognition of the importance of ESG integration in asset pricing model. The UNPRI has reported significant growth in ESG assets globally, with a rise in the number of ESG Exchange Traded Funds (ETFs) and increased inflows into ESG mutual fund schemes. While ESG investing in India is still in its early stages compared to global trends, the NIFTYESG100 index has outperformed the NIFTY100 index. Pension funds are also incorporating ESG factors as they recognize the potential for long-term risk-adjusted returns and the importance of sustainable investment strategies.

LITERATURE REVIEW

Sustainable investing, also known by various names such as ethical investing, green investing, impact investing, mission-related investing, value-based investing, or sustainable, responsible investing, is a rapidly growing approach to investment. It involves considering environmental, social, and corporate governance (ESG) criteria when analyzing investments and constructing portfolios across different asset classes. The goal is to generate competitive financial returns while also making a positive and sustainable societal impact.

Giolberg (2009)-There are different motivations behind corporations incorporating good ESG practices into their business policies. Some do it based on their personal beliefs and values, while others see it as a way to create a positive brand image or align with profitability goals. There is increasing international pressure from the "epistemic CSR community," including regulators, social activists, non-governmental organizations, academia, and think tanks, for businesses to contribute to society.

Artiach et al., (2010)- Empirical evidence suggests that corporate social responsibility (CSR) has a positive relationship with financial performance and generates intangible benefits. Studies have examined investors' attitudes toward social investing, dividing them into two categories. The first group seeks to maximize financial performance while contributing to the environment and society, willing to accept market-rate returns from socially responsible investments. The second group prioritizes impact over financial returns, willing to accept lower-than-market returns to maximize social and environmental impact.

Boulatoff & Boyer (2009)- Due to increased concern for environmental protection, corporations and governments have made environmental protection an integral part of their investment decision-making, according to the author. The authors argue that investors prefer to invest in socially responsible stocks or portfolios for the following reasons. Investors want to invest in socially responsible companies for ethical reasons. The second reason is that the pure return profile causes concern. Third, they hope to raise public awareness by favouring socially responsible businesses. Fourth, investors expect to improve their reputation by investing in socially responsible companies.

Ritika Seth et al., (2021), This paper takes a comprehensive approach in examining ESG Investing and Sustainable Finance, placing a specific emphasis on the ESG Rating instrument. Its primary aim is to explore the concept, significance, scope, components, limitations, and future prospects of ESG Investing within the Indian context. Given the increasing adverse effects of climatic conditions globally, with their unpredictable nature, there is a growing imperative to adapt and globally mitigate these impacts. The study not only aims to unravel the intricacies of ESG Investing but also seeks to trace the evolution of finance as it incorporates sustainable practices. An integral aspect of the investigation involves understanding how Environmental, Social, and Governance considerations are influencing businesses and shaping the dynamics of the financial market. This research offers a critical evaluation of ESG Investing and Sustainable Finance, shedding light on its implications and potential future avenues, particularly within the unique context of India.

Amit Kumar Singh1 and Sheetal Maurya (2021) - Analysis of Historical Trend and Determinants of ESG Index Performance in India, this paper provides several findings on the historical trend and determinants of ESG index performance in India. One of the main findings is that ESG index performance in India is positively correlated with GDP growth and market capitalization. The paper also finds that the sectoral composition of the index has a significant impact on its performance, with the IT and healthcare sectors showing strong positive correlations with ESG index performance.

OBJECTIVE

To know Regulatory frameworks and Sector wise distribution of selected ESG Funds in India.

ESG REGULATORY FRAMEWORK IN INDIA

In India, There are Existing laws to address concerns as stated earlier and responsible for the aspects related to Environmental, social and governance issues with in a companies they are

Environment Protection Act-1986, Factories Act-1948 and Prevention of Money Laundering Act-2002 but there is no unified legislation dedicated only to ESG has led to fragmented oversight and inconsistent enforcement, foiling the widespread adoption of sustainable business practices across the companies.

With the Implementation of ESG regulations, the companies have a structured framework delineating guidelines concerning ESG reporting and disclosures. The ESG Regulations framework is aiming to simplify the Procedures of ESG reporting and enabling the prospective investors for comparing ESG performances with the companies. These framework includes the Standards and guidelines for ESG reporting and ESG disclosures together, with the requirements for companies to implement ESG policies and the protocols. The Prominent initiatives and the frameworks in this context are Sustainability Accounting Standards Board (SASB), Global Reporting Initiatives (GRI) and Task Force on Climate-related Financial Disclosures (TCFD).

ESG REGULATIONS IN INDIA AND ROLE OF SECURITIES EXCHANGE BOARD OF INDIA

The Securities and Exchange Board of India (SEBI) is the regulator of the Indian securities market. It has been actively promoting ESG practices and investing in India through various initiatives. In India, Due the increase in awareness of ESG risks and opportunities available for prospective investors and gaining focus on corporate sustainability and the push towards sustainable investment practices leads to propulsion in ESG Regulations.

In 2012, SEBI has released a guidance note on ESG disclosures, referring that companies listed on Indian stock exchanges should include their ESG performance in their annual reports. This directive was further rectified in 2015 to incorporate specific reporting obligations, like detailing water consumption, energy usage, and greenhouse gas emissions. Eventually, SEBI has regularly issued circulars and guidelines concerning ESG disclosure, prompting numerous companies to commence reporting on their ESG scores. In 2020, The Securities and Exchange Board of India took a major step for promoting ESG investment indices in India by mandating the top 1,000 listed companies to disclose their ESG related data in their annual reports from the Fiscal year 2021-22 onwards. Carbon Emissions, Water usage, waste management, Diversity, labour practices, employee health and product safety, board composition, shareholder's right and the business ethics and transparency has become the major requirements to be published in the annual reports of the companies.

ESG REGULATIONS AND INDIAN BANKING SECTOR

The regulatory authority for the Indian banking sector is Reserve Bank of India, which is actively motivating the ESG investments. During 2020, the RBI has issued a circular instructing banks to disclose the ESG related details in its annual reports. This disclosure encompasses the policies governing climate issues, sustainable finance and social responsibility. And in continuation it stipulates the banj must report their financing towards social and green projects.

In June 2022, The Regulatory authority of India has mandated that all the Urban Cooperative Banks, Scheduled Commercial Banks and Non-Banking Financial Institutions, whose assets are exceeding Rs.5,000 Crores must implement the Task force on climate related financial disclosures framework for disclosures relating to sustainability and Climate issues.

DISPUTES WITH IMPLEMENTATION OF ESG PRACTICES IN INDIA

In India, the implementation of ESG practices has faced a few challenges, major challenges are listed under:

One major obstacle is the lack of standardized and comparable ESG reporting. At Present there is no constituent framework for ESG reporting in India. The companies have their own way of setting the ESG metrics and the reporting formats. In continuation to this there is a lack of awareness among the companies regarding the ESG reporting. Most of the companies in India had less experience in ESG reporting and it may lack the necessary procedures and systems to gather the ESG data accurately. These challenges are for smaller companies, and which may encounter obstacles in resources and the expertise to inculcate the ESG Practices.

The next obstacle stems from the constrained regulatory framework. As India has most of the ESG regulations are in place, where these are lacking the depth of addressing all the dimensions of socially responsible and sustainable business practices. To overcome these challenges requires a concrete effort between the regulators, companies, and investors to booster ESG compliance and increase the culture of responsible investment and sustainable practices.

The inculcation of Environment, social and Governance Practices and regulations represents a significant move towards nurturing a sustainable and responsible future. This kind of regulations provides an structured framework for the companies to evaluate and disclose their ESG ratings, empowering the prospective investors to decide about the capital allocation.

A GLANCE OF NIFTY100 ESG INDICES:

National Stock Exchange Indices Limited was formerly known as India Index Services and Products Limited (IISL), a NSE provides a different indices and index related services and products for the Indian Capital Markets.

Environmental, Social and Governance based investment strategy has fostered popularity among the investors across the globe. The most important drive behind ESG based investing lies in generating the higher risk adjusted returns from environment friendly, socially responsible and ethical companies. The construct of NIFTY100 ESG indices results in similar sector portfolio of parent index i.e NIFTY 100 but with the stock level tilt. This may result in the portfolio with higher weightage towards companies with better performance of ESG indices.

This paper tries to present a brief picture on the sector wise distribution in a tabular format and charts:

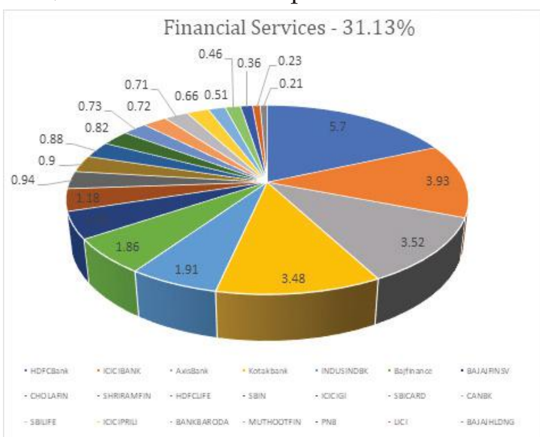
(Based on Highest Proportion)

Sector 01 Financial Services

Sector Name	*Financial Services*
Total Weightage	*31.13%*
Companies	**Weightage**
HDFCBANK	5.7
ICICIBANK	3.93
AXISBANK	3.52
KOTAKBANK	3.48
INDUSINDBK	1.91
BAJFINANCE	1.86
BAJAJFINSV	1.42
CHOLAFIN	1.18
SHRIRAMFIN	0.94
HDFCLIFE	0.9
SBIN	0.88
ICICIGI	0.82
SBICARD	0.73
CANBK	0.72
SBILIFE	0.71
ICICIPRILI	0.66
BANKBARODA	0.51
MUTHOOTFIN	0.46
PNB	0.36
LICI	0.23
BAJAJHLDNG	0.21

Source: Nifty100 ESG Sector Leaders-retrieved on 09.01.2024

The above table presents a diversified allocation within the Financial Services sector (As it parts 31.13%), reflecting a balanced exposure to various segments of the financial industry. The analysis of this breakdown helps investors better understand the composition and relative importance of different companies within the financial sector. The sector allocation is diversified across various financial institutions such as banks, insurance companies and financial services providers. According to the table shows HDFCBANK is Leading the sector with a weightage of 5.7% and Some companies, like BAJFINANCE, BAJAJFINSV and CHOLAFIN though with lower weightages compared to the top banks, still holds notable positions within the sector.

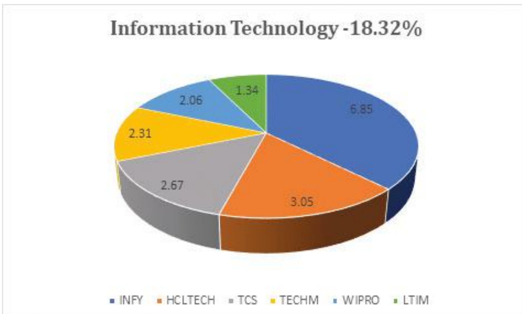


Sector 02 Information Technology

Sector Name	*Information Technology*
Total Weightage	*18.32%*
Companies	**Weightage**
INFY	6.85
HCLTECH	3.05
TCS	2.67
TECHM	2.31
WIPRO	2.06
LTIM	1.34

Source: Nifty100 ESG Sector Leaders-retrieved on 09.01.2024

The table highlights a significant allocation to the Information Technology sector within the index. The analysis of company weightages provides insights into the composition and relative importance of different IT services companies, reflecting a balanced exposure to the sector's key players. These companies represent a mix of IT services, consulting, and outsourcing firms, providing a broad exposure to the IT sector. Infosys and HCL technologies are topping the table as both the companies has 50% of the total weightage in the IT Sector.

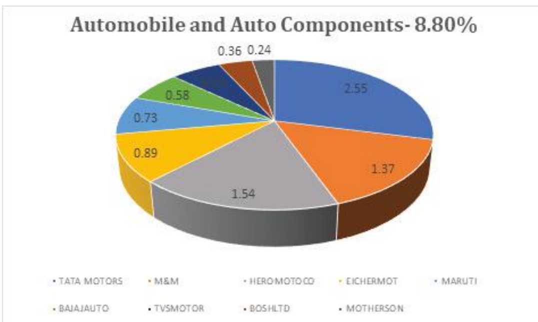


Sector 03 Information Technology

Sector Name	*Automobile and Auto Components*
Total Weightage	*8.80%*
Companies	**Weightage**
TATA MOTORS	2.55
M&M	1.37
HEROMOTOCO	1.54
EICHERMOT	0.89
MARUTI	0.73
BAJAJAUTO	0.58
TVSMOTOR	0.54
BOSHLTD	0.36
MOTHERSON	0.24

Source: Nifty100 ESG Sector Leaders-retrieved on 09.01.2024

The table indicates a balanced exposure to the Automobile and Auto Components within the index. The analysis of company weightages provides insights into the composition and relative importance of different players within the automotive industry, reflecting a diversified approach to investing in this sector. TATA Motors are leading the sector with a weightage of 2.55%, it holds a significant position within the portfolio, likely due to its presence in both commercial and passenger vehicle segments. The above listed companies represent different segments of the automotive market, such as premium motorcycles, passenger cars and commercial vehicles. Also the Factors such as domestic demand, export potential, technological advancements and regulatory environment may influence the performance of companies within the sector of Automobile and Auto components.

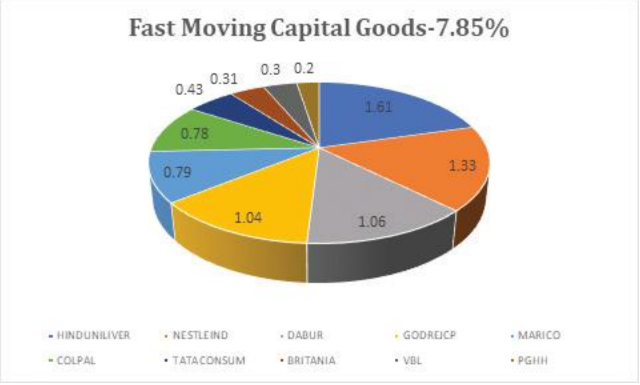


Sector 04 Fast Moving Capital Goods

Sector Name	*Fast Moving Capital Goods*
Total Weightage	*7.85%*
Companies	**Weightage**
HINDUNILIVER	1.61
NESTLEIND	1.33
DABUR	1.06
GODREJCP	1.04
MARICO	0.79
COLPAL	0.78
TATACONSUM	0.43
BRITANIA	0.31
VBL	0.3
PGHH	0.2

Source: Nifty100 ESG Sector Leaders-retrieved on 09.01.2024

The Above table signifies a balanced exposure to the Fast Moving Capital Goods sector within the index. The analysis of company weightages provides insights into the composition and relative importance of different FMCG companies, reflecting a diversified approach to investing in this sector. The sector allocation is diversified across various FMCG companies, encompassing a range of consumer products such as food, beverages, personal care, and home care. Hindustan Unilever with 1.61% and Nestle India following closely with1.33% as both the companies have a diversified product portfolio. It may be noted that due to Brand strength and the market occupancy the Varun Beverages Limited and Procter & Gamble Hygiene and Health Care placed at the least in the table with 0.30% and 0.20%.

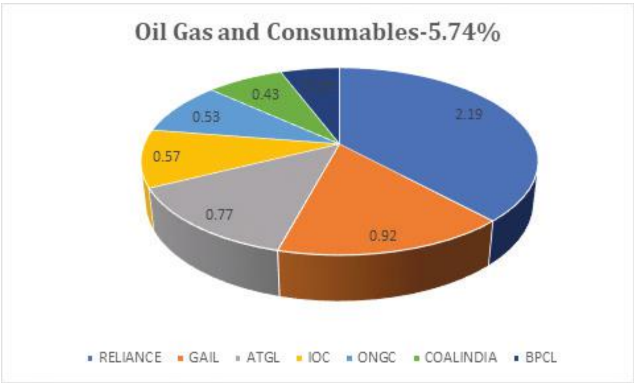


Sector 05 Oil Gas and Consumables

Sector Name	*Oil Gas and Consumables*
Total Weightage	*5.74%*
Companies	**Weightage**
RELIANCE	2.19
GAIL	0.92
ATGL	0.77
IOC	0.57
ONGC	0.53
COALINDIA	0.43
BPCL	0.33

Source: Nifty100 ESG Sector Leaders-retrieved on 09.01.2024

The table suggests that the investment strategy encompasses a diversified approach to this sector. By allocating weightages across various companies, the portfolio aims to capture opportunities and manage risks associated with different segments of the oil, gas, and consumables industry. Reliance Industries Limited is topping the table with 2.19% and holds a significant position also shows the dominance in the Oil and Gas industry in India.



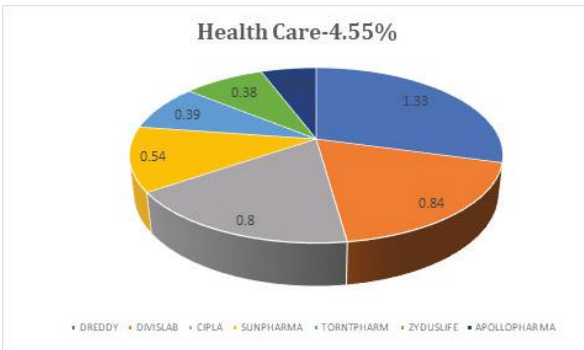
Sector 06 Health Care

Sector Name	*Health Care*
Total Weightage	*4.55%*
Companies	**Weightage**
DREDDY	1.33
DIVISLAB	0.84
CIPLA	0.8
SUNPHARMA	0.54
TORNTPHARM	0.39
ZYDUSLIFE	0.38
APOLLOPHARMA	0.26

Source: Nifty100 ESG Sector Leaders-retrieved on 09.01.2024

The table shows a balanced exposure to the Health Care sector within the portfolio, with a mix of pharmaceutical companies and healthcare service providers. The presence of companies like Dr. Reddy's (1.33%), Cipla (.80%), and Sun Pharma (0.54%) reflects a focus on pharmaceutical manufacturing, while companies like

Apollo Hospitals represent the healthcare services segment. The Health Care sector allocation appears to be diversified across various sub-sectors, including pharmaceuticals, biotechnology, and healthcare services. The weightages suggests a mix of established pharmaceutical companies and healthcare service providers aiming to capture opportunities across the healthcare value chain.

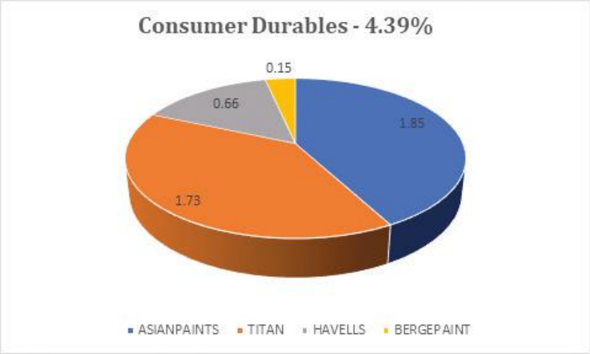


Sector 07 Consumer Durables

Sector Name	*Consumer Durables*
Total Weightage	*4.39%*
Companies	Weightage
ASIANPAINTS	1.85
TITAN	1.73
HAVELLS	0.66
BERGEPAINT	0.15

Source: Nifty100 ESG Sector Leaders-retrieved on 09.01.2024

The provided table suggested a balanced exposure to the Consumer Durables sector within the index, with a focus on companies manufacturing products ranging from paints and watches to electrical equipment. The Consumer Durables sector allocation appears to be focused on companies involved in manufacturing products that cater to consumers' long-term needs and preference. Asian Paints (1.85%) is a major player in the decorative paints industry, with a strong market presence and brand recognition.

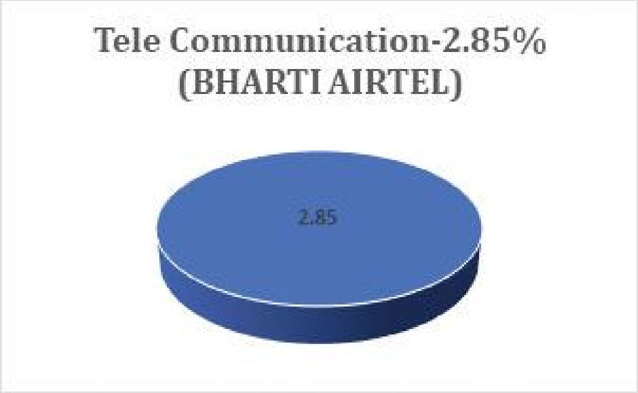


Sector 08 Tele Communication

Sector Name	*Tele Communication*
Total Weightage	*2.85%*
Companies	**Weightage**
BHARTIAIRTEL	2.85

Source: Nifty100 ESG Sector Leaders-retrieved on 09.01.2024

The table presents data on the Telecommunication sector within a portfolio or index, with Bharti Airtel being the sole company listed with its corresponding weightage (2.85%). This concentration on a single company implies that the portfolio is heavily influenced by the performance of Bharti Airtel and its operations in the telecommunications industry.

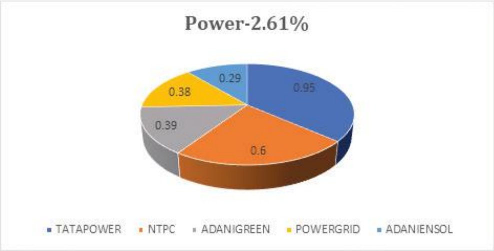


Sector 09 Power

Sector Name	*Power*
Total Weightage	*2.61%*
Companies	**Weightage**
TATAPOWER	0.95
NTPC	0.6
ADANIGREEN	0.39
POWERGRID	0.38
ADANIENSOL	0.29

Source: Nifty100 ESG Sector Leaders-retrieved on 09.01.2024

The provided table outlines the Power sector within a portfolio or index, including the weightages of various companies. The Power sector allocation appears to be diversified across various segments, including thermal, renewable, and transmission infrastructure. Tata Power (0.95%) and NTPC (0.60%) emerge as the top contributors to the sector, representing both conventional and renewable energy generation

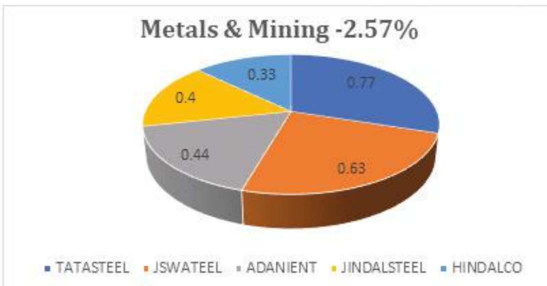


Sector 10 Metals & Mining

Sector Name	*Metals & Mining*
Total Weightage	*2.57%*
Companies	**Weightage**
TATASTEEL	0.77
JSWATEEL	0.63
ADANIENT	0.44
JINDALSTEEL	0.4
HINDALCO	0.33

Source: Nifty100 ESG Sector Leaders-retrieved on 09.01.2024

The table provides data on the Metals & Mining sector within a index, including the weightages of various companies. The Metals & Mining sector allocation appears to be diversified across various sub-sectors, including steel, aluminium and mining. Tata Steel and JSW Steel emerge as the top contributors to the sector, representing the steel industry's significance within the portfolio.

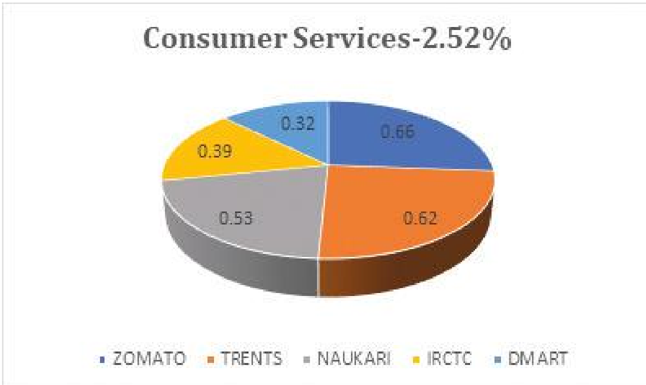


Sector 11 Consumer Services

Sector Name	*Consumer Services*
Total Weightage	*2.52%*
Companies	**Weightage**
ZOMATO	0.66
TRENTS	0.62
NAUKARI	0.53
IRCTC	0.39
DMART	0.32

Source: Nifty100 ESG Sector Leaders-retrieved on 09.01.2024

The above table indicates a diversified exposure to the Consumer Services sector within the portfolio or index, with a mix of companies engaged in online services, retail, and travel-related businesses. Zomato (0.66%) emerges as the top contributor to the sector and Trents follows with .062%, reflecting the growing significance of online food delivery and the digitalization of the food service industry.

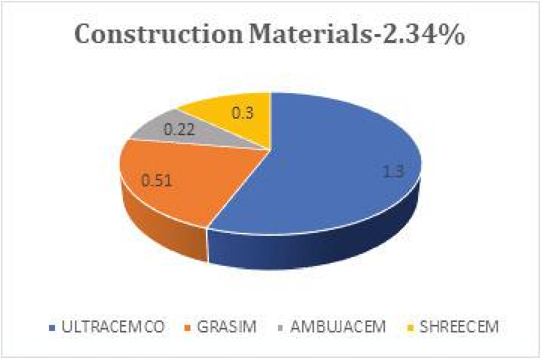


Sector 12 Construction Materials

Sector Name	*Construction Materials*
Total Weightage	*2.34%*
Companies	**Weightage**
ULTRACEMCO	1.3
GRASIM	0.51
AMBUJACEM	0.22
SHREECEM	0.3

Source: Nifty100 ESG Sector Leaders-retrieved on 09.01.2024

The Construction Materials sector allocation appears to be concentrated on companies engaged in cement manufacturing, reflecting the importance of this segment in construction activities. UltraTech Cement emerges as the top contributor with 1.3% to the sector, reflecting its dominance in the cement industry and its influence on the sector's performance within the portfolio. The presence of companies like Grasim, Ambuja Cements, and Shree Cement underscores the portfolio's exposure to leading players in the cement manufacturing segment, reflecting confidence in the growth prospects of the construction materials industry.

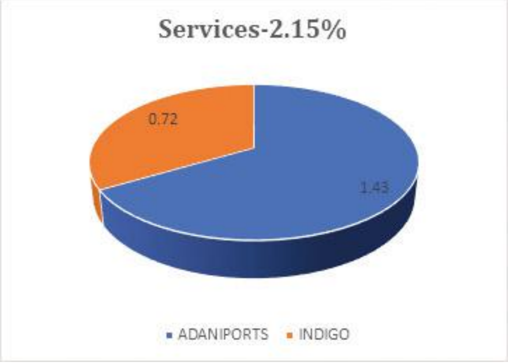


Sector 13 Services

Sector Name	*Services*
Total Weightage	*2.15%*
Companies	**Weightage**
ADANIPORTS	1.43
INDIGO	0.72

Source: Nifty100 ESG Sector Leaders-retrieved on 09.01.2024

The Services sector allocation appears to be diversified across companies engaged in different service-based industries. Adani Ports (1.43%) emerges as the top contributor to the sector, reflecting its dominance in the ports and logistics industry and its influence on the sector's performance within the portfolio. The presence of IndiGo (.72%) underscores the portfolio's exposure to the aviation sector, reflecting confidence in the growth prospects of the airline industry.

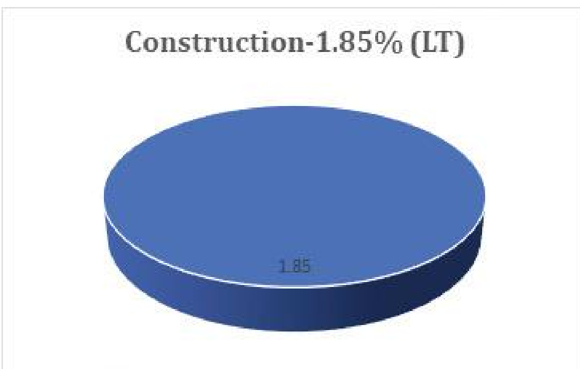


Sector 14 Construction

Sector Name	*Construction*
Total Weightage	*1.85%*
Companies	**Weightage**
LT	1.85

Source: Nifty100 ESG Sector Leaders-retrieved on 09.01.2024

LT holds the entire weightage of 1.85% within the Construction sector. Larsen & Toubro is a major multinational conglomerate in India, with diversified interests across various sectors, including engineering, construction, manufacturing, and technology services.

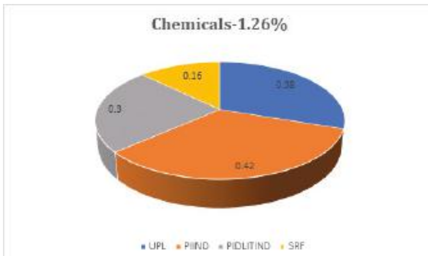


Sector 15 Chemicals

Sector Name	*Chemicals*
Total Weightage	*1.26%*
Companies	**Weightage**
UPL	0.38
PIIND	0.42
PIDLITIND	0.3
SRF	0.16

Source: Nifty100 ESG Sector Leaders-retrieved on 09.01.2024

The Chemicals sector holds a total weightage of 1.26% within the portfolio, indicating a relatively small allocation to companies within this sector compared to others. PI (042%) Industries and UPL (0.38%) emerge as the top contributors to the sector, reflecting their prominence in the agrochemicals segment and their influence on the sector's performance within the portfolio. The presence of Pidilite Industries (0.30%)highlights the portfolio's exposure to specialty chemicals used in construction, consumer products, and industrial applications.

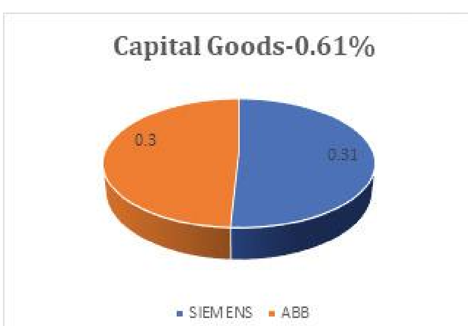


Sector 16 Capital Goods

Sector Name	*Capital Goods*
Total Weightage	*0.61%*
Companies	**Weightage**
SIEMENS	0.31
ABB	0.3

Source: Nifty100 ESG Sector Leaders-retrieved on 09.01.2024

The Capital Goods sector allocation appears to be focused on companies engaged in providing advanced technology solutions and equipment for industrial and infrastructure development. Siemens (0.31%) and ABB (0.30%) are both global leaders in their respective fields, with a strong reputation for innovation, quality, and reliability in delivering capital equipment and solutions to their customers.

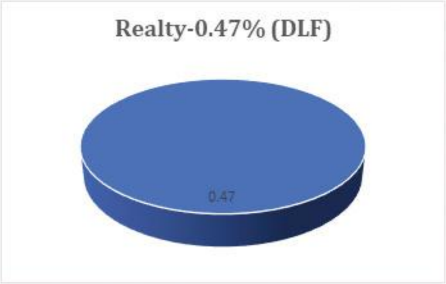


Sector 17 Realty

Sector Name	*Realty*
Total Weightage	*0.47%*
Companies	**Weightage**
DLF	0.47

Source: Nifty100 ESG Sector Leaders-retrieved on 09.01.2024

DLF's (0.47) significant weightage implies its paramount importance within the Realty sector in the portfolio. Investors should consider factors such as the real estate market dynamics, demand-supply trends, regulatory environment, and macroeconomic conditions when assessing DLF's outlook.



Way Forward: The way forward for contemporary ESG practices in India involves overcoming several hurdles while furthering the adoption and implementation of sustainable practices. Here are some key points to consider:

- Increasing awareness and education about ESG principles among businesses, investors, and the general public is crucial. This can be done through training programs, workshops, and awareness campaigns.
- Strengthening the regulatory framework related to ESG practices can help drive compliance and accountability. The government can introduce more stringent regulations and reporting requirements for companies.
- Encouraging companies to integrate ESG considerations into their core business strategy can lead to long-term sustainable growth. This involves aligning ESG goals with overall business objectives.

- Providing incentives and easier access to capital for companies that demonstrate strong ESG performance can encourage more businesses to adopt sustainable practices.
- Engaging with stakeholders, including employees, customers, suppliers, and local communities, is essential for understanding their ESG expectations and concerns. This can help in building trust and long-term relationships.
- Improving ESG reporting standards and ensuring transparency in disclosures can enhance credibility and trust among investors and other stakeholders.
- Building the capacity of companies to implement ESG practices effectively through training, guidance, and support can help overcome implementation challenges.
- Collaborating with industry associations, NGOs, government bodies, and other stakeholders can facilitate knowledge sharing and best practices in ESG implementation.
- Leveraging technology and innovation can help companies track, measure, and improve their ESG performance more efficiently.
- Ensuring that ESG practices promote inclusive growth and address social inequalities is essential for sustainable development.

REFERENCES

1. ESG Journey Just Beginning, but Leaders Have a Clear Competitive Advantage, https://www.protiviti.com/sg-en/blogs/esg-journey-just-beginning-leaders-have-clear-competitive-advantage..
2. Upper layer NBFCs to set aside 0.25-2% of loan as provisions, https://www.livemint.com/industry/banking/upper-layer-nbfcs-to-set-aside-0-25-2-of-a-loan-as-provisions-says-rbi-11654525788584.html.
3. Agrawal, Sanjaoy K," Corporate Social Responsibility in India "(2008) Response Business Book from Sage, Sage Publications, New Delhi.
4. Arora, B., and Puranik, R: A Review Of Corporate Social Responsibility In India. Journal of the Society for International Development, 2004.
5. Boffo, R., and R. Patalano (2020), "ESG Investing: Practices, Progress and Challenges", OECD Paris, www.oecd.org/finance/ESG-Investing-Practices-

6. Progress-and-Challenges.pdf. Ghosh, S., Nath, S., A. Ranjan. (2021). Green Finance
7. in India: Progress and Challenges. RBI Bulletin, 61-72.
8. Task Force on Climate Related Financial Disclosures. (2021). Guidance on Metrics, Targets, and Transition Plans.
9. Torre, M. L., Leo, S., & Panetta, I. C. (2021). Banks and Environmental, Social & Governance Drivers: Follow the market or the authorities. Corporate Social Responsibility & Environment Management, 1620-1634.
10. Ghosh, S., Kundu, S., & Dilip, A. (2021). Green Swans and their Economic Impact on Indian Coastal States. RBI Occasional Papers, 1-50.
11. Ghosh, S., Nath, S., A. Ranjan. (2021). Green Finance in India: Progress and Challenges. RBI Bulletin, 61-72.
12. Ghosh, S., Nath, S., Narayanan, A., & Das, S. (2022). Green Transition Risks to Indian Banks. RBI Bulletin, 63-74.
13. A.V. Banerjee, A.F. Newman (1993)"Occupational choice and the process of development". Journal of Political Economy, 101, pp. 274-298 http://dx.doi.org/10.1086/261876
14. Arner, D.W., Buckley, R.P., Zetzsche,(2020) D.A. et al. Sustainability, FinTech and Financial Inclusion. Eur Bus Org Law Rev 21, 7–35. https://doi.org/10.1007/s40804-020-00183-y.
15. 3 Badar Alam Iqbal, Shaista Samia,(2017) "Role of banks in financial inclusion in India", Elsevier,
16. Accounting and Administration, Vol 62. No. 2.Pages 299-714 DOI: 10.1016/j.cya.2017.01.007.
17. Schuller, M., Brosens, T., & Kosonen, S. P. (2022). Bank Pulse: Perfecting ESG disclosures via the banking book taxonomy alignment ratio. ING Economic and Financial Analysis.
18. Donovan K (2012). Mobile money for financial inclusion. World Bank, (Ed. Information and Communications for Development 2012: Maximizing Mobile. The world Bank, Washington DC
19. Fernando **Úbeda**, Alvaro Mendez, Francisco Javier Forcadell, (2023) The sustainable practices of multinational banks as drivers of financial inclusion in developing countries, Finance Research letters, Volume 51, 103278, ISSN 1544-6123,https://doi.org/10.1016/j.frl.2022.103278. (https://www.sciencedirect.com/science/article/pii/S1544612322004664)

News and Blogs

1. rbi.org.in.
2. https://www.vuram.com/blog/esg-in-banking-and-financial-sector/.
3. https://www.elsevier.es/es-revista-contaduria-administracion-87-articulo-role-banks-in-financial-inclusion-S0186104217300104#bib0005
4. https://esgdata.worldbank.org/?lang=en
5. Rise of the ESG Regulations, Dr Mukesh Kwatra, Founder of Smiling Tree, https://timesofindia.indiatimes.com/blogs/voices/rise-of-the-esg-regulations.
6. RBI Report-Report of the Survey on Climate Risk and Sustainable Finance dated 27.07.2022
7. Mongabay Series: Climate Connections, Environomy by Kundan Pandey on 19th August 2022

4 Blockchain Integration in Supply Chain Management: Innovations and Future Strategies

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Abstract

The integration of blockchain technology into supply chain management (SCM) has emerged as a transformative solution, addressing many traditional challenges such as lack of transparency, susceptibility to fraud, and operational inefficiencies. Blockchain, a decentralized and immutable ledger, offers enhanced traceability, security, and automation through features like real-time tracking, smart contracts, and improved data integration. This chapter explores the innovations brought by blockchain in SCM, highlighting key applications such as food safety in collaboration with IBM and Walmart, global shipping with Maersk and IBM's TradeLens, and diamond tracking by De Beers. Additionally, it discusses future strategic directions including scalability, regulatory compliance, integration with emerging technologies, and the necessity of education and training. By embracing blockchain, organizations can build more resilient and efficient supply chains, ultimately providing greater value to stakeholders. The future of SCM lies in leveraging blockchain to navigate the complexities of modern supply chains, positioning businesses for competitive advantage.

Keywords: *Blockchain Technology, Supply Chain Management, Data Integration*

INTRODUCTION

Blockchain in supply chain management stands as an innovation that has impacted the ability of organizations to function over the recent months. Blockchain is a distributed platform, which can enhance supply chain operations by presenting high levels of openness, protection and the rate of procurement, which can overcome numerous conventional supply chain issues. As a starting point, this chapter discusses what innovation is and the specific developments introduced by blockchain technology, the Supply chain application of blockchain technology, and perspectives on future advancements.

THE EVOLUTION OF SUPPLY CHAIN MANAGEMENT

Supply chain management (SCM) can be regarded as a subject that has undergone dynamic and continuous changes for the last few decades, mainly due to factors that include globalisation, technological innovations and growth in consumer requirements. Historical SCM applications as we know are excellent but have their own prospects like anonymity, fraudulent activities, and time-consuming since they rely on basic manual forms.

TRADITIONAL CHALLENGES IN SUPPLY CHAIN MANAGEMENT

- ***Lack of Transparency:*** Tracking of products as they move within and through supply networks is often very difficult in classic supply chains. That there is a lack of general awareness around track and trace means there are problems such as counterfeiting, fraud and so on and inefficiencies arise.
- ***Fraud and Counterfeiting:*** Essentially, they are used in the production of counterfeits, especially high-value items. Pertaining to the traditional systems they are unable to deliver data records that are secure and similarly, cannot ensure that they cannot be altered.
- ***Inefficiencies and Delays:*** The use of various advisors and manual workflows promotes additional expenses, slow execution of operations, and inaccuracies in paperwork.

- ***Data Silos:*** Data resides in silos within separate systems, decreasing cooperation of data within the supply chain and providing a time-consuming, slow process.

BLOCKCHAIN: A SOLUTION TO TRADITIONAL SCM CHALLENGES

Enter blockchain technology that solves all these by introducing an open and very secure system that records each and every transaction that goes on in the chain.

Key Features of Blockchain in SCM

- ***Transparency and Traceability:*** Traditional applications for tracking goods up to the point of delivery were also evident since blockchain provides all related parties with a variant view of data to track the supplies to the target point.
- ***Security and Immutability:*** Immutable entries on the blockchain imply that detailed transactions cannot be changed or erased thus minimizing the probability of deceit and forgery.
- ***Efficiency and Automation:*** On the principles of blockchain, smart contracts can function as self-executing programs in various sectors, decreasing the role of intermediaries and increasing the efficiency of exchanges.
- ***Data Integration:*** Blockchain can enable data to be collected from different entities, and share the data pools to enable every party to interpret the data retrieved.

INNOVATIONS IN BLOCKCHAIN-ENABLED SUPPLY CHAIN MANAGEMENT

Real-Time Tracking and Monitoring

Thus, the use of Blockchain technology provides a possibility for tracking the products at each stage of the supply chain implementation. For example in the food industry, blockchain can be seen as a means of tracing the flow of a given product from the farm all the way to the consumer to ascertain its efficiency and origin.

Smart Contracts

Smart contracts are programs that can self-execute again, based on the code that is written into the contract. These are the kinds of recipes that contain sets of instructions that automatically trigger certain forms of action when certain conditions are met, which means that there is less intermediation and the probability of human error is minimized.

Enhanced Security

Blockchain on the other hand ensures that each transaction is encrypted and each transaction points to the next one hence making it almost impossible for hackers to tinker with the information. Such a high level of security is useful in fields that require handling of high-value goods.

Improved Collaboration

As a distributed ledger, blockchain accelerates consensus of facts and improves partner trust in the supply chain. This makes the relationships transparent and in cases of disagreements eliminates instances that can reach the court of law.

CASE STUDIES OF BLOCKCHAIN INTEGRATION IN SCM

1. Walmart and IBM: Food Safety

Walmart, along with IBM, utilisesblockchain technology to expedite the realm of food safety. The very fact that they know where the contamination occurred should make it possible for them to deal with it before it endangers consumers' lives.

2. Maersk and IBM: Global Shipping

The giants Maersk and IBM have teamed up to create an open and inclusive blockchain-based platform for the maritime industry called TradeLens. TradeLens brings innovation and clarity to a shipping process that has previously suffered from opacity and fragmentation by offering real-time data to any party that approaches it.

3. De Beers: Diamond Tracking

The prominent global player, De Beers, employs the concept of blockchain to trace the diamonds from the point of extraction up to the chain stores. This in stages the diamonds to discourage the use of conflict diamonds in the market and support the IDJP.

FUTURE STRATEGIES FOR BLOCKCHAIN IN SUPPLY CHAIN MANAGEMENT

Scalability and Interoperability

In the current form of blockchain, this technology can only be adopted in SCM if the blockchain is capable of being scaled and integrated with the current technologies. The development that is yet to be experienced should therefore concentrate on growing the complexity of the blockchain networks as well as compatibility with other systems.

Regulatory Compliance

They must also ensure that they are updated in line with the emerging technologies so as to suit the emerging needs and come up with the right measures against the new problems that are arising out of the new technology. This means that for the required standards to be acceptable, organizations must engage the regulators in order to have the required standard set in a bid to enhance the safety and efficiency of the use of blockchain.

Integration with Emerging Technologies

It is followed by Section 5, which discusses how blockchain could be integrated with other advanced technologies such as IoT and AI in supporting supply chain operations. Smart devices, often referred to as IoT devices, can offer real-time data whereas Artificial Intelligence may then analyse this data and make suggestions to enhance a given procedure and/or identify future trends.

Education and Training

It is crucial for organizations to expend resources towards employee training and development in order to achieve the strategies' objectives. Such knowledge must be essential to estimate the role of blockchain techniques and their impact on SCM further advancements.

CONCLUSION

The supply chain is considered one of the major beneficiaries of blockchain technology, giving it a level of innovation when it comes to the transparency, security and efficiency of supply chain data. The technology is still developing and it will progress, which means that there is the possibility of creating much more effective solutions and approaches. The incorporation of blockchain will also equip organizations with the necessary pull to manage the highly flexible new-generation supply chain and establish a commendable competitive edge within the marketplaces.Through the application of blockchain, organizations can create a stronger supply chain that can be more trustworthy and less susceptible to issues such as fraud and inefficiency, keeping customers and shareholders satisfied. The digital transformation of supply chain management is a reality and blockchain is the technology of the future, thus early adoption must be now.

REFERENCES

1. Kamath, R. (2018). Food Traceability on Blockchain: Walmart's Pork and Mango Pilots with IBM.The Journal of the British Blockchain Association, 1(1). https://jbba.scholasticahq.com/article/3104
2. Hackius, N., & Petersen, M. (2017). Blockchain in Logistics and Supply Chain: Trick or Treat? In Proceedings of the Hamburg International Conference of Logistics (HICL)(pp. 3-18). https://hicl.org/publications/2017/blockchain-in-logistics
3. Staples, M., Chen, S., Falamaki, S., Ponomarev, A., Rimba, P., Tran, A. B., & Zhu, L. (2017).Risks and Opportunities for Systems Using Blockchain and Smart Contracts. Data61, CSIRO. https://www.data61.csiro.au/en/Our-Research/Our-Work/Blockchain
4. Drescher, D. (2017).Blockchain Basics: A Non-Technical Introduction in 25 Steps. Apress. https://www.apress.com/gp/book/9781484226032
5. Kim, H. M., & Laskowski, M. (2018). Toward an Ontology-Driven Blockchain Design for Supply-Chain Provenance. Intelligent Systems in Accounting, Finance and Management, 25(1), 18-27. https://onlinelibrary.wiley.com/doi/abs/10.1002/isaf.1424

5

Exploring the Transforming Landscape of Corporate Social Responsibility (CSR) for It's Stakeholder in the Post-Pandemic Era: A Conceptual Framework

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Abstract

Corporate Social Responsibility (CSR) has become gradually vital for industries, encompassing efforts to promote societal, environmental, and economic well-being. However, the pandemic has triggered significant changes in the CSR landscape, requiring businesses to review their approaches. This study explores these changes and their implications, aiming to identify key obstacles, opportunities, and strategies characterizing CSR activities in the post- pandemic era. Through a qualitative research approach involving literature review and case study analysis, the study investigates shifts in CSR initiatives and stakeholder dynamics post- pandemic. Thematic analysis of literature and case studies reveals the importance of proactive CSR actions during crises, stakeholder engagement, and the role of CSR in fostering resilience and trust. Findings highlight the need for businesses to adapt CSR strategies to address emerging societal needs while navigating the complexities of the post-pandemic environment.

Keywords: *Corporate Social Responsibility (CSR), Crisis management, Economic Well-being Post Pandemic, Stakeholder engagement,*

INTRODUCTION

A company's efforts and actions to promote societal, environmental, and economic well-being are referred to as "Corporate Social Responsibility," or CRS. It entails incorporating ethical, social, and environmental considerations into stakeholder interactions and business operations.

A broad variety of endeavours are included in the concept of Corporate Social Responsibility (CSR), such as community involvement, diversity and inclusion programs, ethical labour practices, environmental sustainability initiatives, and outreach to the public. Through the resolution of social and environmental issues and the creation of long-term business benefits, such as improved stakeholder trust, employee satisfaction, and brand reputation, CRS seeks tocreate shared value for society and the organization. But following the pandemic, there is a strong need for businesses to reconsider and possibly modify their approach to corporate socialresponsibility (CSR) for a number of reasons.

STATEMENT OF THE PROBLEM

In the wake of the worldwide pandemic, the field of Corporate Social Responsibility (CSR) is experiencing profound changes. Not only has the pandemic altered societal norms and expectations, but it has also had an impact on how businesses interact with partners. If companies want to adjust and prosper in the post-pandemic era, they must comprehend these changes and their ramifications. In spite of this, it is necessary to identify the main obstacles, openings, and tactics that characterize CSR activities in this new environment given the complexity of the changing dynamics of CSR.

OBJECTIVE OF THE STUDY

1. To determine how CSR initiatives are changing in response to the post-pandemic socialand economic environment.
2. To investigate how stakeholders have changed in terms of influencing CSR expectations and agendas since the pandemic.

RESEARCH METHODOLOGY

The study will use a qualitative research approach, including literature review and case study analytic methodologies. Qualitative research approaches are ideal for investigating complex phenomena such as changes in Corporate Social Responsibility (CSR) initiatives following pandemic and determining the underlying causes of these changes.

DATA COLLECTION

Literature study: A thorough literature study will be done to uncover relevant research on CSR efforts before to and following pandemic. Academic databases such as PubMed, Scopus, and Google Scholar will be searched for terms relating to CSR, pandemic, and corporate reaction to crises. The review will cover peer-reviewed journal articles, conference papers, and academic publications.

Case Studies: Case studies of businesses that have modified their CSR strategy in response to the pandemic will be chosen for examination. Data will be gathered from publicly available sources, including corporate reports, press announcements, and news stories. Key informationon changes in CSR priorities, stakeholder involvement, and CSR initiative outcomes will be gathered and analysed.

Data Analysis

Literature Review: A thematic analysis will be performed to identify major themes and trends in the literature on CSR initiatives before and after pandemic. The literature will be analysed for themes such as shifts in CSR priorities, stakeholder participation, and effect evaluation.

Case Study Analysis: Selected case studies of organisations that have altered their CSR strategies in response to pandemic will be analysed using qualitative content analysis. The case study data will be used to identify and interpret themes such as changes in CSR priorities, stakeholder engagement tactics, and perceived efficacy of CSR activities.

The literature research and case study analysis will be combined to offer a complete understanding of the changes in CSR initiatives following pandemic. Triangulation of data sources will be used to improve the reliability and validity of the conclusions. Themes and patterns uncovered from both data sets will be compared and contrasted in order to find similarities and contrasts.

LIMITATIONS

Potential limitations of the study include dependability of publicly available data for case study analysis. Furthermore, the availability of relevant scholarly literature on CSR practices following pademic may limit the breadth of the literature study.

Using a qualitative research approach and including literature review and case study analysis methodologies, this study intends to give useful insights into the changes in CSR tactics post-pandemic and contribute to the current knowledge on CSR and crisis management.

LITERATURE REVIEW

1. (Iram Hasan, 2024) This paper analyzes the relevance of corporate social responsibility (CSR) during the COVID-19 pandemic. Using a directed content analysis approach, the authors evaluate CSR initiatives globally and conduct a systematic literature review. The findings suggest that corporations worldwide are implementing CSR measures for stakeholder engagement, with positive outcomes expected. The paper concludes by suggesting effective CSR during crises like COVID-19 encourages stakeholder partnerships and competitive advantage.
2. (Dariusz Tworzydło, 2022)The article highlights the importance of a company's external and internal environment, ethics, human resources, and organizational culture for its competitive advantage. The SARS-COV-2 pandemic has heightened interest in crisis management competencies and changed society's image, including public relations. The article uses data from three independent research projects in Poland, focusing on crisis management, public relations services, and CSR training and personal development. The common thread across all projects is the

implementation ofCSR campaigns by PR specialists

3. (Aimei Yang, 2022)The study explores how U.S. Fortune 500 companies discussed their COVID-19 pandemic CSR actions on Facebook and how the public responded. It found that external stakeholder proactive CSR was associated with better behavioral engagement, positive emotional engagement, and less negative emotions. The findings suggest organizations should prioritize proactive approaches during crises.
4. (Agus F. Abdillah, 14-15 September 2021) The COVID-19 pandemic has significantly impacted a company's sustainability, leading to a study exploring the impact of Corporate Social Responsibility (CSR) on stakeholders. The research, conducted using a component-based approach and questionnaires distributed to 27 companies listed on the Indonesia Stock Exchange, found that CSR had a positive effect on Quality of Stakeholder Relations (QSR) and mediates the relationship between CSR and CS. However, the study only focused on the financial context of the company and its customers, and further research is suggested to explore the relationship between CSR, QSR, and CS in broader contexts, such as ESG and SDG metrics for different industriesand countries.
5. (Sherwin Govender, 2022)This research study aimed to analyze stakeholder communication texts to understand how organisational sensemaking during crisis situations like the COVID-19 pandemic influences companies' social responsibility orientation. Data was collected from public social responsibility statements of 10 financial services companies before and after the pandemic. The results showedincreased affiliation with stakeholders but reduced transparency, which affects authenticity and reputation in corporate social responsibility (CSR) sensemaking and orientation. The study suggests that corporate decision-makers and communication experts should consider the relationship between CSR sensemaking and stakeholder communication as interconnected processes. The study also provides a method for measuring CSR orientation, allowing organizations to assess their current and shifts due to crisis situations, ensuring alignment with intentions.

CASE STUDY ANALYSIS

1. Unilever, a global consumer goods company, has adjusted its CSR activities in responseto the pandemic. The company has shifted its focus to supporting communities,employees, and stakeholders. It has provided financial assistance, hygiene products, and food donations to vulnerable populations, particularly in developing countries withlimited healthcare and sanitation access. Unilever has also prioritized employee well- being by implementing remote work arrangements, enhanced health protocols, and mental health resources. The company has also provided financial assistance to employees facing financial hardship. Despite the challenges, Unilever has remained committed to its sustainability goals, focusing on reducing environmental impact, promoting responsible sourcing, and supporting smallholder farmers and suppliers. The company has also launched initiatives to address emerging social issues like food insecurity and inequality.
2. Cisco had been involved in CSR efforts centred on education, digital inclusion, and environmental sustainability, employing technology for social benefit.

   Post-pandemic Adaptation: Recognizing the aggravation of the digital divide during theepidemic, Cisco accelerated its efforts to overcome this gap. It began projects to give internet access, gadgets, and digital skills training to impoverished communities, students, and healthcare institutions. Cisco also worked with governments and charitable organisations to remove systemic obstacles to digital participation, with the goal of building a more egalitarian and resilient society in the aftermath of the epidemic.
3. Microsoft Remote Work Support: Pre-pandemic CSR Strategy: Microsoft had been focused on CSR activities in education, accessibility, and sustainability through programmes such as YouthSpark and AI for Accessibility.

   Post-pandemic Adaptation: In response to the broad transition to remote work and learning during the pandemic, Microsoft adjusted its CSR operations to assist individuals and organisations in navigating these hurdles. It increased its digital skills training programmes to better support remote workers and students, including resources and tools for online collaboration, productivity, and cybersecurity. Microsoft also made funds and technology contributions to organisations and schools to help with remote learning and bridge the digital divide, guaranteeing fair access to education andopportunities in the new normal.

4. Pepsico's Community Relief Efforts: Prior to pandemic, PepsiCo's CSR strategy focused on environmental sustainability, nutrition, and community development, including programmes such as Performance with Purpose.

   Post-pandemic Adaptation: During the pandemic, PepsiCo intensified its community relief efforts to support those impacted by COVID-19. It donated millions of dollars to organizations providing food assistance, healthcare, and economic relief to frontline workers, vulnerable populations, and communities in need. PepsiCo also launched initiatives to address food insecurity, such as distributing meals and essential supplies to families facing hardship, demonstrating its commitment to corporate citizenship and social responsibility in times of crisis.

5. Amazon's Covid-Response Fund: Amazon's pre-pandemic CSR strategy centred on environmental sustainability, worker development, and community participation, including programmes such as Amazon Smile and Amazon Future Engineer.

   Post-pandemic Adaptation: In response to the epidemic, Amazon launched the Amazon Relief Fund to assist workers and partners who were affected by COVID-19. The fund provided financial support to hourly workers, delivery drivers, and small companies who were struggling financially because to the epidemic. Amazon also prioritised employee safety and health by introducing new safety measures, providing personal protective equipment (PPE), and investing in COVID-19 testing and immunisation programmes. These initiatives demonstrated Amazon's dedication to assisting its clients and communities during a difficult time, while also reaffirming its CSR principles of empathy, responsibility, and resilience.

6. Walmart's Priority on Health and Safety: Pre-pandemic CSR Strategy: Walmart had been participating in CSR efforts focused on sustainability, economic opportunity, and community participation, such as Project Gigaton and Walmart Foundation awards. Post-pandemic Adaptation: During the epidemic, Walmart prioritised health and safety as part of its CSR strategy, introducing safeguards to protect customers, staff, and communities. It invested in improved cleaning methods, plexiglass barriers, and PPE for frontline personnel. Walmart also increased access to healthcare services by providing COVID-19 testing, immunisations, and telemedicine consultations in its pharmacies and clinics. These measures highlighted Walmart's commitment to corporate citizenship and public health, while also adjusting its CSR activities to meetchanging challenges and requirements in the post-pandemic age.

   These case studies show how organisations from many industries have altered their CSR strategies in response to the COVID-19 epidemic, displaying adaptability, creativity, and a dedication to tackling urgent issues while pursuing long-term sustainable objectives.

ANALYSIS

The literature analysis and case studies give insight on the changing environment of corporate social responsibility (CSR) in the wake of the pandemic outbreak.

The pandemic has prompted businesses to reassess and adapt their CSR strategies to address emerging societal needs and challenges. Key themes that emerge from the literature include the relevance of CSR during crises, the importance of stakeholder engagement, and the role of proactive approaches in CSR initiatives.

Studies like those by Iram Hasan and Aimei Yang emphasize the significance of CSR in fostering stakeholder engagement and positive outcomes, particularly during times of crisis. They highlight the value of proactive CSR actions in building trust, enhancing reputation, and addressing societal needs effectively. Additionally, research by Agus F. Abdillah underscores the positive impact of CSR on stakeholder relations and the mediating role it plays in fostering corporate sustainability.

The case studies provide concrete examples of how companies across various industries have adapted their CSR activities in response to the pandemic. For instance, Unilever's shift towards supporting communities and employees demonstrates a strategic realignment of CSR priorities to address immediate social and economic challenges. Similarly, Cisco's initiatives to bridge the digital divide and Microsoft's support for remote work reflect a proactive approach to addressing emerging needs in a rapidly changing environment.

FINDINGS

The pandemic has catalysed changes in CSR strategies, prompting businesses to prioritize initiatives that address immediate societal needs and challenges.

Proactive CSR actions during crises are associated with positive outcomes, including enhanced stakeholder engagement, improved reputation, and long-term business benefits. Stakeholder engagement and transparency are key factors driving effective CSR responses to the pandemic, emphasizing the importance of collaboration and communication with diverse stakeholders.

CSR initiatives play a critical role in fostering resilience, sustainability, and stakeholder trust in the face of crisis situations, highlighting their strategic importance for businesses in navigating turbulent times.

CONCLUSION

In conclusion, the pandemic has presented unprecedented challenges for businesses, but it has also underscored the importance of Corporate Social Responsibility as a strategic imperative. Companies that have adapted their CSR strategies to address emerging societalneeds and challenges have not only demonstrated resilience but have also fostered long- term value creation and stakeholder trust. Moving forward, businesses must continue to prioritize CSR initiatives that promote sustainability, equity, and resilience, while also remaining responsive to evolving stakeholder expectations and global challenges. By embracing a proactive and inclusive approach to CSR, organizations can position themselves for sustainable growth and positive social impact in the post-pandemic era.

REFERENCES

1. (n.d.). Retrieved from https://newsroom.cisco.com/c/r/newsroom/en/us/a/y2020/m06/cisco-s- country-digital-acceleration-fast-global-responses-to-a-deadly-pandemic.html
2. (n.d.). Retrieved from https://www.govtech.com/education/k-12/how-cisco-helped-k-12-districts-tackle-the-digital-divide
3. (n.d.). Retrieved from https://www.goodera.com/blog/csr-and-covid-impact
4. (n.d.). Retrieved from https://blogs.microsoft.com/blog/2020/06/30/microsoft-launches- initiative-to-help-25-million-people-worldwide-acquire-the-digital-skills-needed-in-a- covid-19-economy/
5. (n.d.). Retrieved from https://csrbox.org/Impact/description/Impact-stories_full_Amazon- India%E2%80%99s-COVID-Response-Supports-500+-Hospitals;-Recognized-with- CSR-Impact-Award_533
6. Agus F. Abdillah, S. P. (14-15 September 2021). CSR During Pandemic COVID-19: Why Quality of Stakeholder Relationships Matters to Company's Business Sustainability?*Proceedings of the 6th International Conference on Social and Political Enquiries*,.
7. Aimei Yang, J. S. (2022). U.S. Fortune 500's stakeholders engagement during the COVID-19pandemic: Evidence for proactive approaches: Evidence for proactive approaches.
8. *Public Relations Review*.
9. Dariusz Tworzydło, S. G.-B. (2022). Changes in the demand for CSR activities and stakeholder engagement based on research conducted among public relations specialists in Poland, with consideration of the SARS-COV-2 pandemic. *Corporate Social Responsibility and Environmental Management 29.1*, 135-145.
10. Iram Hasan, S. S. (2024). "CSR initiatives and stakeholder engagement amidst COVID-19 pandemic: insights using content analysis and literature review." . *Social Responsibility Journal 20.3 (2024): 503-537.*
11. Sherwin Govender, S. G. (2022). Sensemaking and corporate social responsibility: Implications for stakeholder communication amid the COVID-19 pandemic. *SouthAfrican Journal of Business Management* .
12. *Unilever*. (n.d.). Retrieved from https://www.unilever.com/news/press-and-media/press- releases/2020/helping-to-protect-lives-and-livelihoods-from-the-covid-19-pandemic/

6 A Study on the Adoption of Unified Payments Interface (UPI) in India's Financial Landscape

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Abstract

Unified Payments Interface has significantly accelerated India's economy by promoting financial inclusion, smoothing digital transactions, and reducing the dependence on physical cash. The widespread adoption of UPI has encouraged innovation in the fintech sector, driving economic growth and employment opportunities. By offering a convenient and cost-effective payment solution, UPI has empowered small businesses and entrepreneurs to participate more actively in the formal economy. Its role in promoting a cashless society aligns with the government's vision of a digital and financially inclusive India. UPI has also contributed to reducing black money and corruption by promoting traceable and accountable transactions. In general, UPI's impact on the Indian economy is profound, fostering a more robust and resilient financial ecosystem. The main aim of this paper is to identify what are the factors that contributed to the successful adoption of the UPI system in India and discuss statistics concerning growth in UPI payments.

Keywords: *Unified Payments Interface, Financial Inclusion, Internet, National Payments Corporation of India.*

BACKGROUND OF UPI

Before 2016, India used several options to transfer money between banks. The traditional forms included IMPS, RTGS, and NEFT. With the overabundance of systems, rules, and growing paperwork, there was a need for a unified system that could mechanize and standardize India's payment platforms. In 2016, the National Payments Corporation of India set out with a mandate to revolutionize the face of India's payment systems. It developed the Unified Payments Interface (UPI). The aim was to simplify and provide a single interface across all NPCI systems, thereby creating interoperability and a superior customer experience. on 11th April 2016, the pilot program was launched, with 21 member banks, by Dr. Raghuram G. Rajan, Governor, RBI, in Mumbai. From 25th August 2016, several banks started to upload their UPI-enabled apps to the Google Play store.

With over a billion transactions every month UPI is now one of the most preferred payment solutions in India. UPI's fundamental function is to support easy and secure money transfers between bank accounts. It does this by adding multiple bank accounts into a single mobile application, allowing for seamless fund transfers and merchant payments from one place. It also facilitates 'peer-to-peer' and 'peer-to-merchant' collection requests, which can be scheduled and fulfilled as specified. Payments can be completed using a UPI ID, account number, mobile number, and an Indian Financial System Code (IFSC). Payment security adheres to the applicable RBI guidelines.

SIGNIFICANCE OF STUDY

Unified Payments Interface (UPI) has emerged as a game-changer in the financial sector, especially in India, by transforming the way transactions are conducted. Reducing cash dependency is another significant impact of UPI. By promoting digital payments UPI supports every business to expand their customer base by facilitating seamless transactions, even in remote areas, thus driving growth and inclusivity. It also helps in curbing the shadow economy and enhances the traceability of financial transactions. This shift towards a cashless economy supports better economic regulation and monitoring, contributing to a more transparent financial system. In this context, the researcher finds greater importance in understanding factors that contributed to the successful adoption of UPI systems and their growth in India.

OBJECTIVES OF THE STUDY

- To study the factors that contributed to the successful adoption of the UPI system in India
- To study the growth in UPI transactions in terms of value and volume during financial years 2016-17 to 2023-24

METHODOLOGY

The research paper's main focus is to study an analytical view of how the UPI system has been adopted and its growth in India. To study the growth in UPI transactions, from 2016-17 to 2023-24 financial years data is used. The researcher utilizes secondary data only, which is gathered from the websites like National Payments Corporation of India (NPCI), The World Economic Forum, and other financial websites and also referred different books, journals, and various newspapers**.**

FACTORS CONTRIBUTED TO THE SUCCESSFUL ADOPTION OF THE UPI SYSTEM IN INDIA

The Unified Payments Interface (UPI) in India has witnessed substantial adoption due to a combination of several factors. The following are the key contributors:

1. Government Support and Policy Initiatives

- **Pradhan Mantri Jan Dhan Yojana:** As a part of financial inclusion honourable Prime Minister Narendra Modi has launched Pradhan Mantri Jan Dhan Yojana on 24 August 2014. PMJDY's main aim is to provide affordable financial services like bank accounts, insurance, pensions, etc to all sections of society in India. Because of this program a significant number of bank accounts opened, it helped in UPI adoption later.
- **Digital India Campaign:** On 1 July 2015 the Government of India launched the Digital India campaign aimed at promoting digital transactions and reducing cash dependency played a vital role in UPI's adoption.

- **Demonetization:** Demonetization was one of the main contributors to adopting the UPI System. The 2016 demonetization of high-value currency notes forced many citizens to explore digital payment alternatives, leading to a surge in UPI usage.
- **Regulatory System:** Supportive regulatory policies by the Reserve Bank of India (RBI) and the National Payments Corporation of India (NPCI) facilitated the development and implementation of UPI.

2. Technological Infrastructure

- **Smartphone Penetration:** Over the past decade, smartphones have become increasingly affordable and accessible, leading to a surge in the number of users globally. In many countries, including India. Due to this rapid increase in smartphone users provided a large base for UPI adoption.
- **Cheaper Internet:** In 2016 Jio entered into the telecommunication sector with a penetration pricing strategy and it changed the entire Internet user base in India. It enhanced internet connectivity across urban and rural areas and facilitated the use of UPI for digital transactions.
- **Interoperability:** UPI's interoperability allows seamless transactions across different banks and payment platforms, enhancing its usability.

3. Ease of Use

- **User-Friendly Interface:** Unified Payments Interface provides a simple and effective user interface, making it easy for people of all age groups to use.
- **Quick Transactions:** The ability to transfer money instantly with minimal steps has made UPI a preferred option for digital payments. Within a few seconds, the amount will be sent to the respected vendor's or person's bank account after payment has initiated.
- **One-Click Payments:** Features like "Pay to Contact" or using virtual payment addresses (VPAs) simplify the payment process, contributing to its popularity.

4. Wide Acceptance and Integration

- **COVID-19 Disruption:** COVID-19 not only makes people more about health-conscious but also disrupts the way people do their transactions, during the pandemic most of the work shifted from offline to online mode. It induced citizens to accept and embrace digital transactions.
- **Merchant Adoption:** UPI has become a flexible payment option due to its extensive acceptance by both online and offline shops, right now every roadside vendor also allows UPI transactions and gets payment confirmation with the assistance of Paytm sound boxes.
- **Integration with Apps:** UPI integration with several popular apps like PhonePe, Google Pay, Paytm, and other fintech apps has significantly boosted its adoption.
- **Incentives and Discounts:** Promotional offers, cashback,coupons and discounts for using UPI have attracted many users to adopt this payment method.
- **Free of Charge:** Making payments using UPI typically has no transaction fees, it's an attractive option compared to other conventional banking methods that may incur fees.

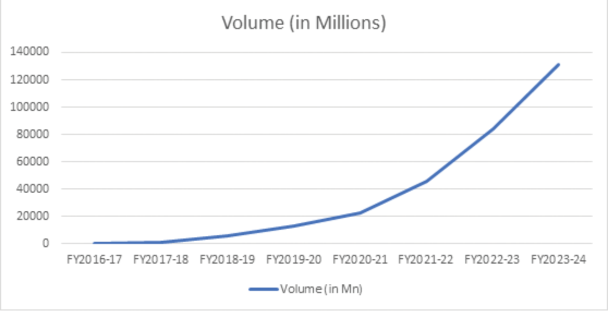
5. Security Features

- **Two-Factor Authentication:** UPI transactions require two-factor authentication, which ensures a high level of security and builds trust among users.
- **Fraud Detection Mechanisms:** Continuous monitoring and advanced fraud detection mechanisms have helped in maintaining the integrity of UPI transactions.
- **End-to-end Encryption:** All UPI transactions are protected with end-to-end encryption, ensuring that the data transmitted between the sender and receiver is secure and cannot be intercepted by unauthorized parties.

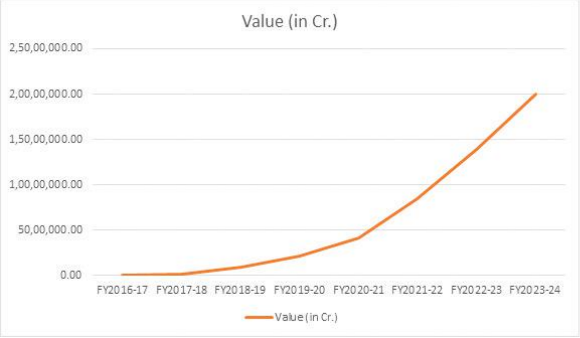
GROWTH IN UPI TRANSACTIONS IN TERMS OF VOLUME AND VALUE FROM 2016-17 TO 2023-24

Table 1

YEAR	Volume (in Mn)	Value (in Cr.)
FY2016-17	17.86	6,952.14
FY2017-18	904.87	1,09,831.80
FY2018-19	5,391.52	8,76,970.72
FY2019-20	12,518.61	21,31,730.14
FY2020-21	22,330.65	41,03,653.58
FY2021-22	45,967.53	84,17,572.48
FY2022-23	83,751.14	1,39,20,675.21
FY2023-24	1,31,164.71	1,99,86,697.12



Line Graph 1



Line Graph 2

ANALYSIS OF THE DATA

Table 1 represents the volume and value of UPI's transactions during 2016-17 to 2023-24. From the above data, it is evident that the number of UPI transactions grew exponentially during the study period. In the year 2016-17, volumes stood at 17.86 million and it increased to 1,31,164.71 million in 2023-24. Meanwhile, the value of transactions increased from 6,952.14 crores to 1,99,86,697.12 crores in the same period. From line charts 1&2, it's clear that during the first three years both volume and value grew at a very slow rate, it might be due to skepticism about the adoption of new technology, as we know during the early stages most people try to resist while adopting innovations. The financial year 2018-19 witnessed there was an inflection in the curve and an increase in growth of UPI transactions observed in the line chart, which means that from 2018-19 onwards more people are getting awareness and accepting UPI transactions. There has been exponential growth in terms of volume and value from 2021-22 onwards, it concluded that a huge number of citizens are integrating the UPI system into their daily lives. Recently many countries have integrated with Indian UPI payment systems including France, the UAE, Singapore, the Maldives, Bhutan, Sri Lanka, and Nepal. This means that Indians can now make payments via UPI in these countries. Finally, using UPI has undoubtedly changed the way people do their business, and not only that it also helped every entrepreneur, business, and person to grow their businesses, as a whole it created more employment opportunities and accelerated the economic growth rate in India.

CONCLUSION

The introduction of the Unified Payments Interface (UPI) has had a profound and transformative impact on India's financial landscape. By enabling real-time, seamless transactions, UPI has democratized access to digital payments, promoting financial inclusion across diverse socio-economic strata. The system's interoperability and ease of use have significantly reduced the reliance on cash, fostering a more digitized economy and contributing to economic growth. Furthermore, UPI has spurred innovation in the fintech sector, leading to the development of various financial services and products tailored to consumer and entrepreneurial needs. The dramatic increase in transaction volumes since its launch underscores its growing acceptance and trust among users. Its success has set a benchmark for digital payment systems globally. While UPI offers numerous benefits, it has some drawbacks. Security concerns, such as fraud and phishing, pose risks to users. Technical issues and dependency on a stable internet connection can disrupt transactions. Limited digital literacy and privacy concerns also hinder its widespread adoption. In conclusion, As UPI continues to evolve with new features and security enhancements, it is poised to further revolutionize the financial ecosystem.

REFERENCES

1. **Urja Samwani and Dr. Kamini Khanna (2023)** "THE GROWTH OF DIGITAL PAYMENTS IN INDIA - A CASE STUDY OF UPI" Rabindra Bharati University Journal of Economies, Vol.: XXVII, No.2, 2023
2. https://www.npci.org.in/what-we-do/upi/product-statistics
3. https://www.weforum.org/agenda/2023/06/india-unified-payment-interface-impact/
4. https://wire19.com/digital-payments-landscape-in-india-in-2024-and-beyond/
5. https://www.india-briefing.com/news/global-acceptance-of-india-unified-payments-interface-upi-tracker-26183.html/
6. https://www.nic.in/blogs/digital-payments-driving-the-growth-of-digital-economy/
7. https://www.statista.com/statistics/1225935/india-value-of-upi-transactions/

7 A Study on Green Finance Awareness Among Postgraduate Students

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Abstract

The purpose of this study is to examine the importance of Green finance and its implications in the corporate fields in India. Green Finance is an investment made by the company for the environmental purpose of saving Mother Earth. Green Finance refers to financial services and goods created specifically to assist ecologically friendly enterprises and campaigns. It includes a broad range of initiatives intended to encourage ecologically sustainable investments and lessen the environmental impact of economic activity. The primary objective of green finance is to direct funds toward endeavors that advance environmental sustainability and yield profits for investors. Essentially to solve global issues like biodiversity loss, resource depletion, and climate change because it incorporates environmental factors into financial decision-making.

Due to the environmental challenges, the sustainable development has become necessary. This abstract delves into the complex world of green finance, covering a range of financial products like carbon markets, sustainable investment funds, and green bonds. Using theoretical frameworks and actual data, this abstract clarifies the prospects, problems, and driving forces behind the green finance paradigm. Green finance has the potential to guide world economies toward a sustainable and inclusive future through cooperative efforts among governments, financial institutions, and stakeholders. A study has been done among postgraduate students to find out awareness about Green Finance and to find out what students think it implies for Indian corporations.

Keywords: *Environmental sustainability, Climate change mitigation, Renewable energy, Green bonds, Sustainable investments, Biodiversity conservation.*

INTRODUCTION

Financial endeavors that support climate change mitigation and environmental sustainability are referred to as "green finance." It includes a range of financial tools, goods, and services designed to assist enterprises and initiatives that have a beneficial environmental impact. Greenfinance's main goal is to direct funding toward programs and projects that aid in the shift to a low-carbon, resource-efficient, and sustainable economy.

DEFINITION OF GREEN FINANCE

The term "Green Finance" defines financing instruments, services, and products that are specially made to assist ecologically friendly projects and undertakings. Green Financing is also known as "Sustainable Investing" and "Responsible Investing". It refers to the incorporation of environmental, social, and governance [ESG] considerations into investment decisions. It includes a variety of initiatives and financial actions intended to support the shiftof organizations to an ecologically friendly, low-carbon, and climate-resilient economy. Thesecould include energy-efficient and renewable energy projects, carbon credits, green bonds, sustainable infrastructure development, and other financial tools designed to support the conservation and preservation of the environment. The main objective of green finance is to direct funds toward projects that advance the sustainability agenda overall, produce beneficialenvironmental effects, and yield financial rewards. Due to the environmental damage concerns, the solution to is considered to be as green finance. Green finance is a strategic idea for the corporate sector to encourage lower carbon emissions and to increase a healthy environment. The primary goals of green finance are to manage the present and future environmental concerns as well as to improve and preserve the environment. Products and services that will attract capital to the green industry sectors are included in the category of green finance. The industries that concentrate on producing, storing, distributing, and transporting renewable energy, recycling, preventing pollution, and conserving water and forests are the most prevalentgreen industry sectors.

According to the United Nations Environment Programme, the goal of green funding is to enhance the amount of money flowing to sustainable development from the public, private, and not-for-profit sectors through banking, micro-credit, insurance, and investment. Effectively managing social and environmental risks, seizing opportunities that offer a reasonable rate of return together with environmental benefits, and delivering more responsibility are all crucial components of this. Increases in investment in clean and green technologies, financing for sustainable natural resource-based green economies and climate-smart blue economies, harmonizing public financial incentives, increasing green financing from various sectors, aligning public sector financing decision-making with the environmental dimension of the Sustainable Development Goals, increasing use of green bonds, and so on are some ways to promote green financing.

HISTORY OF GREEN FINANCE

The history of green finance in India is marked by various initiatives and developments aimed at promoting sustainable and environmentally friendly investments. The word "green finance" gained prominence in the early 2000s as concerns about climate change and environmental sustainability grew on a worldwide scale. Although the term's exact origins are to governments, financial institutions, and international organizations began to emphasize the need for financial mechanisms to support environmentally friendly projects and initiatives around the middle of the 2000s, which is when the term began to gain broader usage. The phrase "green finance" was developed to represent efforts to direct funding toward initiatives that both produced financial returns and had a good environmental impact as public awareness on environmental issues had increased. Since then, governments, financial institutions, investors, and companiesall around the world have made it a major subject of interest.

The initiative of green finance in India was started by the Indian financial sector especially thebanking sector as a corporate social responsibility, sustainable development, and non-financial which also mentioned the importance of global warming and climate change in context with sustainable development.

In 2007 the Reserve Bank of India (RBI) issued a notification stating the importance of banksand the need to make efforts to achieve sustainable development. The World Bank's first green bond was issued in November 2008, and it served as the model for sustainable capital market financing. The green bond model is now being used for bonds that aim to raise $1.2 trillion bythe end of 2020 to fund all 17 Sustainable Development Goals [SDG]. The policy initiatives ofGreen Finance are the National Action Plan on Climate Change (NAPCC) and Renewable Energy Targets. In 2015, the Indian government announced plans to establish green banks to finance renewable energy and energy efficiency projects. These banks are designed to providededicated funding. The issuance of green bonds started gaining traction in India. These bondsfinanced projects with environmental benefits, such as renewable energy, clean transportation,and sustainable water management. In 2017, India's Securities and Exchange Board (SEBI) issued guidelines for green bonds to standardize issuance and increase transparency.

India attracted significant investments in renewable energy projects, including solar and wind power. These investments were supported by government incentives, favourable policies, andinitiatives like the International Solar Alliance (ISA).

Indian companies began incorporating sustainability into their business strategies, driven by consumer demand, regulatory pressure, and the need to mitigate risks associated with climate change. Many companies started issuing green bonds and adopting sustainable practices.

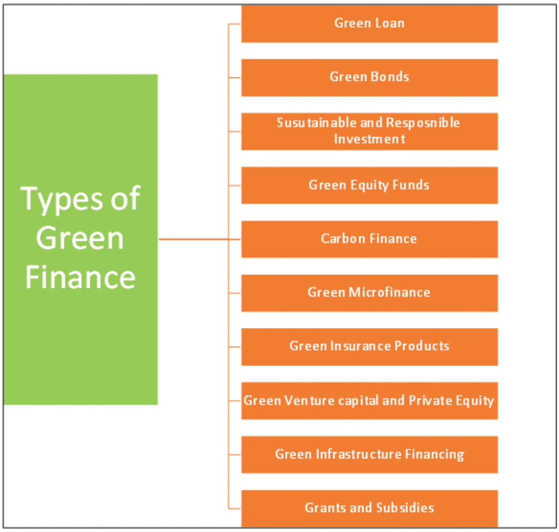
The Indian companies have collaborated with international organizations focused on green finance, such as the Green Climate

Fund (GCF) and the United Nations Framework Convention on Climate Change (UNFCCC). These collaborations have facilitated access to funding and technical assistance for green projects.

Overall, the history of green finance in India reflects a growing recognition of the importanceof sustainability and environmental stewardship in economic development, supported by policy interventions, regulatory frameworks, and private sector initiatives.

TYPES OF GREEN FINANCE:

The typical forms of green finance are the following financial tools and systems intended to assist ecologically friendly endeavors and enterprises.



1. Green Loan

Green loans are financial instruments designed especially for environmentally beneficial initiatives. They can take the form of project finance agreements, revolving credit facilities, or term loans.

2. Green Bonds

Green bonds are debt securities with the main purpose of financing or refinancing environmentally beneficial green initiatives. Green buildings, clean transportation, sustainable agriculture, energy efficiency, and renewable energy are a few examples ofthese initiatives.

3. Sustainable and Responsible Investment

Environmental, social, and governance (ESG) considerations are incorporated into investing decisions through Socially Responsible Investing (SRI). It encompasses tactics like impact investing, SRI, and theme investing with an emphasis on environmental sustainability.

3. Green Equity Funds

Green equity funds make investments in businesses that use sustainable practices or are engaged in finding solutions for environmental problems. These funds concentrate on industries like waste management, clean tech, sustainable agriculture, or renewable energy.

4. Carbon Finance

Financial transactions aiming at offsetting carbon footprints or reducing greenhouse gas emissions are referred to as carbon finance. This covers investments in emission reduction programs, carbon offset schemes, and carbon trading.

5. Green Microfinance

Small-scale loans for environmentally beneficial projects, such waste management programs, renewable energy installations, clean water access, or sustainable agricultural methods, are given to people or communities by green microfinance.

6. Green Insurance Products

Green insurance products provide protection against environmental hazards or losses resulting from the effects of climate change. This could involve environmental liability insurance, weather-related hazards, or insurance for renewable energy installations.

7. Green Venture Capital and Private Equity

Private equity and venture capital firms may specialize in providing starting finance to companies that are developing novel green technology or environmentally conscious business models.

8. Green Infrastructure Financing

Green Infrastructure Financing includes funding infrastructure initiatives that support environmental sustainability, like green buildings, water and wastewater treatment facilities, renewable energy infrastructure, and public transit networks

9. Grants and Subsidies

To promote green projects, research and development, capacity-building, and technology adoption in industries like renewable energy and environmental conservation, governments, international organizations, and philanthropic foundationsmay offer grants or subsidies.

These are merely a few instances of the various forms of green finance that are offered. As stakeholders look for innovative approaches to raise money for ecologically friendly initiatives and deal with urgent global issues like biodiversity loss and climate change,the area is still developing.

CHALLENGES AND OPPORTUNITIES

Determining the obstacles to increasing investments in green finance. An examination of structural barriers and market failures that prevent the widespread adoption of green finance Opportunities for cooperation, innovation, and policy change to address issues and hasten the shift to a sustainable financial system.

FUTURE DIRECTIONS AND RECOMMENDATIONS

Future advancements and trends influencing green finance. Recommendations for policies aimed at improving the efficiency and influence of green finance programs. Research priorities and gaps to expand knowledge and comprehension of green financing

RESEARCH METHODOLOGY

A small study was conducted among PG students to find out the "Awareness about GreenFinance".

Population: 180 PG studentsSample Unit: PG student

Sampling Technique: Simple Random Sampling Technique Sample Size: 90

Sources of Data: primary data

Methods of Collecting data: Structured Google Forms

DATA ANALYSIS

Table 1 Gender

Gender	No of Respondents	Percentage
Male	35	38.9%
Female	55	61.1%
Total	**90**	**100%**

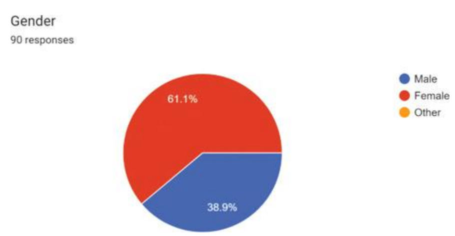


Table 2 Age

Age Group	No. of Respondents	Percentage
22-24	66	73.3%
24-26	14	15.6%
26-28	10	11.1%
Total	**90**	**100%**

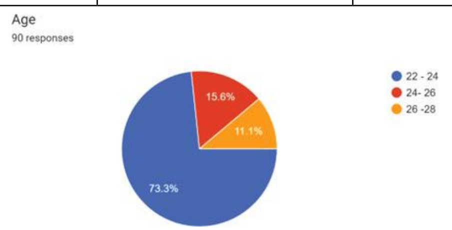


Table 3 Source of Income

Response	No of Respondents	Percentage
Part – Time Earnings	38	42.2%
Pocket Money	11	12.2%
No Earnings	41	45.6%
Total	**90**	**100%**

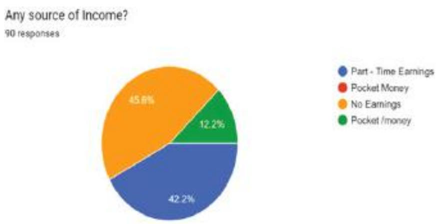


Table 4 Awareness about Green Finance

Response	No. of Respondents	Percentage
Yes	69	76.7%
No	21	23.3%
Total	90	100%

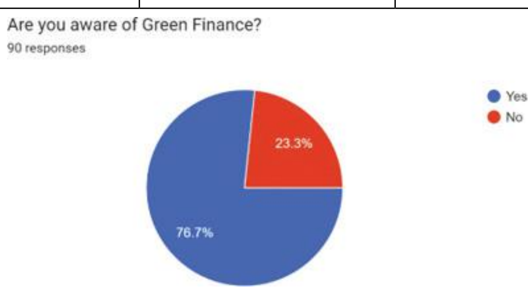


Table 5 Familiarity with the Concept of Green Finance

Response	No of Respondents	Percentage
Very Familiar	28	31.1%
Some What Familiar	40	44.4%
Not Very Familiar	13	14.4%
Not at all Familiar	09	10%
Total	**90**	**100%**

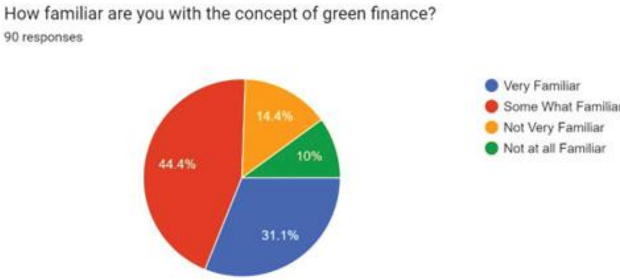


Table 6 Motivation of Interest in Green Finance Response

Response	No. of Respondents	Percentage
Environmental Concerns	50	55.6%
Financial Returns	21	23.3%
Regulatory Incentives	01	1.1%
Social Responsibility	17	18.9%
Other	01	1.1%
Total	90	100%

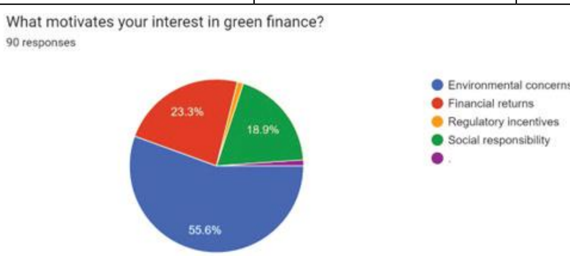


Table 7 Source to Rely to Learn About Green Finance

Response	No of Respondents	Percentage
News articles	27	30%
Social media	35	38.9%
Academic journals	14	15.6%
Financial institutions	09	10%
Government publications	04	4.4%
Rural economy and rural environment	01	1.1%
Total	**100**	**100%**

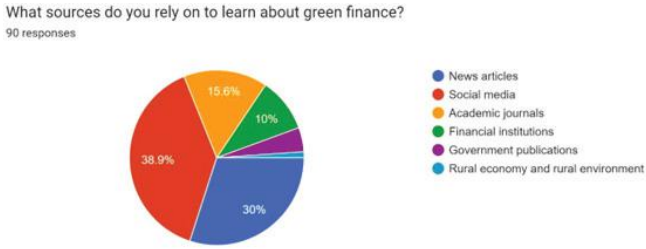


Table 8 Green Finance Initiatives Are Important for Addressing Environmental Challenges

Response	No of Respondents	Percentage
Yes	82	91.1%
No	08	8.9%
Total	**90**	**100%**

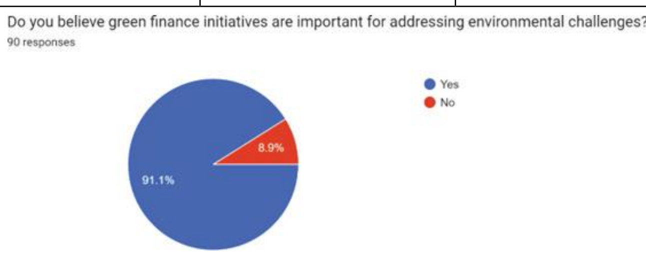


Table 9 Perceive the Financial Performance of Green Investment Compared to TraditionalInvestment

Response	No of Respondents	Percentage
Better	88	97.8%
Worse	02	2.2%
Total	**90**	**100%**

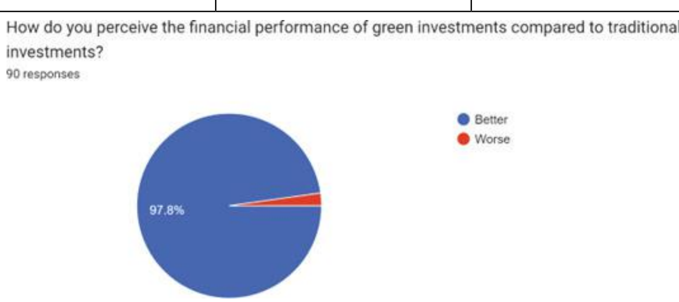


Table 10 Willingness to invest in Green Financial Products

Response	No of Respondents	Percentage
Yes	70	77.8%
No	20	22.2%
Total	90	100%

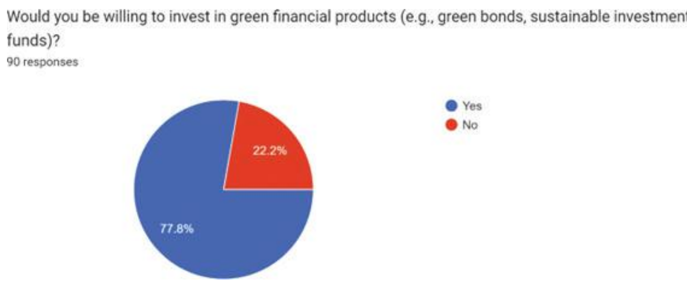


Table 11 Aspect of Green Finance Interested

Response	No of Respondents	Percentage
Green bonds and Financial Instruments	45	50%
Suitable Investment Funds	22	24.4%
Climate Finance and Carbon Markets	11	12.2%
Green Loans and financing mechanisms	10	11.1%
Other	09	2.3%
Total	**90**	**100%**

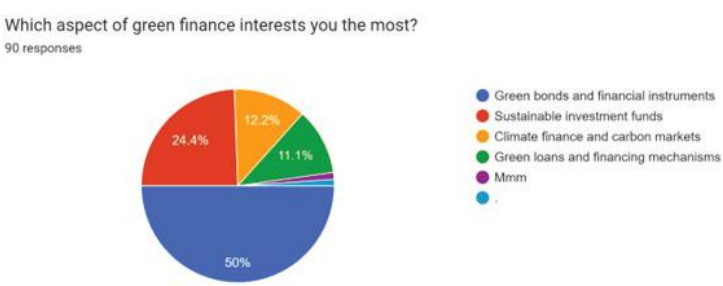


Table 12 Role of Green Finance in Addressing Climate Change

Response	No. of Respondents	Percentage
Essential for Driving Climate action	55	61.1%
Important but not a panacea	21	23.3%
Uncertain Impact	07	7.8%
Irrelevant	07	7.8%
Total	**90**	**100%**

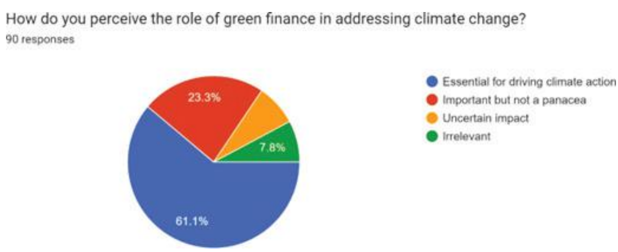


Table 13 Which Green Finance Instruments Scale Up Investment in Suitable Project

Response	No. of Respondents	Percentage
Green bonds	40	44.4%
Sustainable investment funds	30	33.3%
Carbon Markets	09	10%
Green Loans	11	12.2%
Total	**90**	**100%**

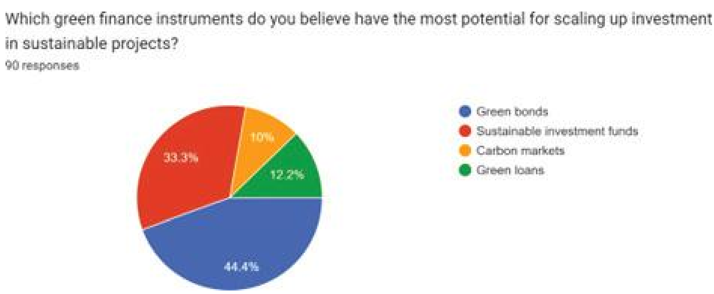


Table 14 Challenges Perceive in the Adoption of Green Finance

Response	No. of Respondents	Percentage
Lack of awareness and education	47	52.2%
Regulatory barriers	13	14.4%
Limited financial incentives	21	23.3%
Market barriers and inertia	08	8.9%
Others	01	1.1%
Total	**90**	**100%**

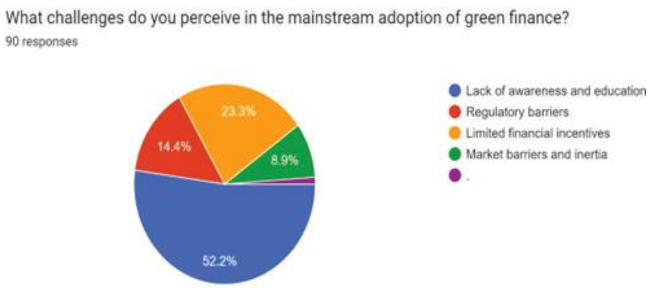


Table 15 Governments Incentivize in Green Finance

Response	No. of Respondents	Percentage
Tax incentives for green investments	42	46.7%
Subsidies for renewable energy projects	21	23.3%
Mandatory disclosure of environmental risks	15	16.7%
Green procurement policies	12	13.3%
Total	90	100%

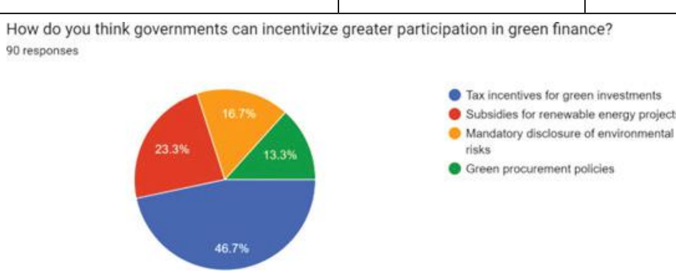


Table 16 Industry or Sectors Benefit Most from Increased Investment in Green Finance

Response	No. of Respondents	Percentage
Energy and utilities	43	47.8%
Transportation	13	14.4%
Agriculture and forestry	31	34.4%
Real estate and construction	03	3.3%
Total	**100**	**100%**

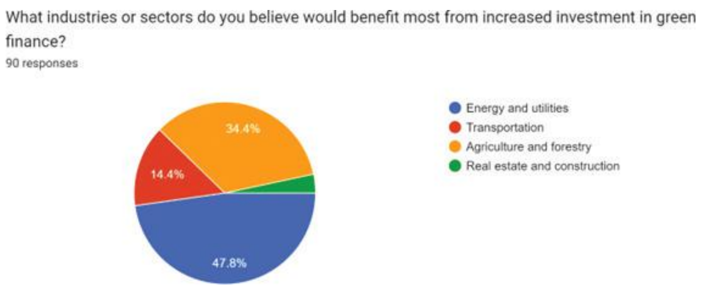
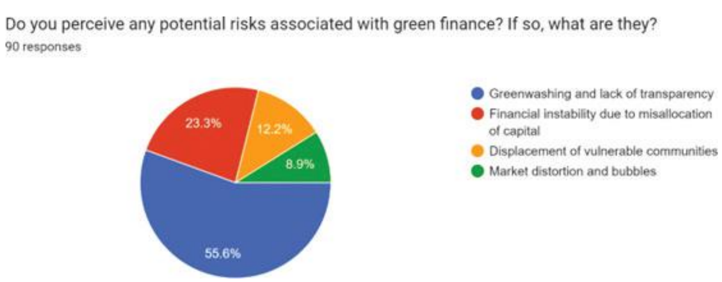


Table 17 Potential Risks Associated with Green Finance

Response	No. of Respondents	Percentage
Green washing and lack of transparency	50	55.6%
Financial instability due to misallocation of capital	21	23.3%
Displacement of vulnerable communities	11	12.2%
Market distortion and bubbles	08	8.9%
Total	90	100%



FINDINGS

The findings from the research study on green finance reveals majority of PG students are well aware of the Green Finance concept and are willing to investment and be part of environmentalawareness and also thought of a growing global momentum towards sustainable investment practices, driven by increasing awareness of environmental issues and the imperative for businesses to adopt responsible financial strategies. The evolution of green finance is highlighted in the literature review, along with its guiding principles, financial tools, and incorporation of environmental, social, and governance (ESG) considerations. The most recenttrends point to a rise in the issue of green bonds, investments in renewable energy, and the creation of novel financial products with sustainability goals in mind. But there are still issues,such as the need for more accountability and transparency, inconsistent regulations, and a lackof defined measures for assessing environmental effect. Green finance gives an idea of investing in environmentally friendly instruments and also in environmental saviour investments. Investment in these bonds helps to nurture nature. Now a days, it has been a trend and new ideal going for environmentally friendly products and investments. However, these obstacles, case studies demonstrate the possibility for scalable solutions by highlightingprosperous green finance initiatives and their favourable financial and environmental results. The results highlight how important it is for stakeholders—financial institutions, investors, businesses, and policymakers—to push green finance agendas and open doors for sustainable development.

CONCLUSION

In conclusion, green finance is a beacon of hope for solving the major environmental problems of today's world. Its guiding principles offer viable avenues for resilience and economic growth in addition to being in line with sustainability objectives. Green finance reduces climate change, promotes innovation, generates employment, and establishes more sustainable economies by directing funds toward eco-friendly initiatives and technology. Adopting green finance is an essential step in ensuring a more affluent and sustainable future for future generations as we manage the complexity of a world that is changing quickly. To accelerate theshift to a low-carbon, resilient, and inclusive global economy, stakeholders from all sectors must work together and make a commitment to incorporating green finance concepts into theirplans, policies, and practices.

REFERENCES

Review of Literature

1. Green Finance research around the world: *PK Ozilli, International Journal of Green Economics, 2022*. This paper has reviewed existing research on green finance. And hasidentified strategies to increase green financing, to make green investments profitable, usage of technology and policy to promote green financing, the role of regulators and financial institutions including the challenges faced by green finance.
2. Green Finance: A mini – Review: *K AI Sheryani, H Nobaneee, Available at SSRN 3538696, 2020*. Sheryani and Nobanee have done a mini-review of 25 peer-reviewed journal articles to state that many different sectors are adopting sustainability to make sure they are compliant with environmental regulations. Green lenders are supporting such organizations but research and modeling are not considered part of green projects.
3. Evolution of green finance and its enablers: A bibliometric analysis. *S Bhatnagar, D Sharma* - Renewable and Sustainable Energy Reviews, 2022. Bhatnagar and Sharma have surveyed Scopus academic literature to study the growth and academic evolutionof GF concept. They identified enablers of GF as the development of the regulatory structure, making investment environment conducive, capacity building, technological advancements, increase in institutional engagements, and a supportive politicalenvironment.
4. The reference link for the image mentioned above at the top of the paper is taken fromthe website: *https://thoibaotaichinhvietnam.vn/green-finance-contributes-significantly-to-sustainable-development-136264.html*.
5. Green finance research around the world: a review of literature from *Peterson K. Ozili, Scholar* is a research paper published on ResearchGate website.
6. Emerging Research Trends in Green Finance*: A Bibliometric Overview by Sagarika Mohanty, Sudhansu Sekhar Nanda, Tushar Soubhari, Vishnu N S, Sthitipragyan Biswaland Shalini Patnaik*

8 A Comprehensive Review of India's Digital Economy: Growth Drivers and Future Prospects

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Abstract

The digital economy represents the global economic activities, business transactions, and professional interactions that are facilitated by information and communication technologies (ICT). It can be briefly described as an economy driven by digital technologies. The digital economy encompasses an economy that relies on digital technology. The evolution, integration, and advancement of ICT are transforming our society and economy. In the context of the digital economy, India appears to have a comparative advantage in ICT for potential growth.

India's digital economy is expected to play a significant role in its overall economic growth, with the country's digitalization pace being high in recent years.

According to the European Commission, India experienced the fastest rate of digitalization among major economies between 2011 and 2019. The size of India's digital economy was estimated at US$200 billion in 2019 and is expected to reach US$500 billion by 2025. However, with policy initiatives, it could potentially grow up to US$1 trillion.

India is expected to become one of the world's greatest economies by the middle of the century, with digitization playing a vital role in this growth story.

Keywords: *Digital economy, Digital India, Digital payments, E-commerce*

INTRODUCTION

Digital Economy refers to an economy that is based on digital technologies. The digital economy is also sometimes called the Internet Economy or Web Economy. 'Digital India' initiative was launched in 2015 to improve online infrastructure, increase internet accessibility, and empower citizens with digital services. The digital economy in India has grown significantly.

India has the second fastest digital adoption and by 2025 it is expected to grow to 1 trillion digital economy to realize the government has taken a series of pro-growth reforms in the past few years moving towards an upward digital economy, empowering digital economy. Prime Minister Modi launch of Digital India has played a primitive role in this direction and objective of this program is to connect the rural India with high-speed Internet connectivity and provide digital literacy. It has already provided inclusive growth in the field of manufacture, electronic services and job offers and many education and other sectors are being at an advantage by connecting with digital economy, platforms like UPI are making it easier for people to transform money.

Digital India, including the demonetization of high-value currency in 2016 and the promotion of digital transactions, has significantly reduced counterfeit money from Pakistan and Bangladesh. New currency notes with advanced security features have made it harder for counterfeiters to operate effectively. Despite remaining challenges, these initiatives have curbed the circulation of fake currency within India. The increased use of digital payment methods, such as mobile wallets and online banking, has also made it easier to track transactions and identify suspicious activity.

The digital economy has revolutionized key sectors in India. From financial services and e-commerce to healthcare, education, transportation, and government services, digital technologies like mobile banking, online platforms, telemedicine, and e-governance have enhanced efficiency, accessibility, and transparency. Industries like media, manufacturing, and agriculture have also benefited from IoT, AI, and online market linkages, driving growth and innovation while transforming traditional practices. The introduction of the digital rupee is a crucial milestone in the "Digital India" revolution. It was implemented on April 1 of the fiscal year 2022–2023.

LITERATURE REVIEW

According to growth projections, India's GDP is expected to reach US$26 trillion by 2047, the year of the nation's 100th anniversary of independence. With this accomplishment, India's per capita income is predicted to rise to $15,000, putting it in the category of developed economies. The Government of India's Minister of Railways and Information Technology, Sri Ashwini Vaishnaw, presented the study "India@100: Realizing the Potential of a US$26 Trillion Economy". This development trajectory is anticipated to be significantly influenced by digitalization.

According to the research paper by Dr. Sumanta Bhattacharya, Bhavneet Kaur Sachdev

In July 2015, digital India program was launched under the Ministry of Communication and Information Technology working on 3 key areas : Digital infrastructure as a utility to every citizen , governance and services , empowerment of citizens , significant progress has been made in this field more than 12,000 rural post office branches have been linked digitally , India post payments bank has taken banking at doorstep of every citizen under matched network , today there are 1,13,000 access points for IPPB , increase in electronic transactions related to e-governance significantly in order to strengthen structure , optical fiber connecting 1.25 lakh Gram Panchayats under Bharat Net with rapid expansion in network of common services centres which act as services for delivery of electronic services in INDIA. DigiGaon or Digital Villages where citizens can avail various e-services from the state government and private players, DigiGaon promote rural entrepreneurship, build rural capacities, livelihoods through community participations and collective action, they are equipped with soar lighting facilities, LED assembly unit, sanitary napkin production unit, Wi-Fi Choupal.

According to the article by D.K. Srivastava Chief Policy Advisor, EY India

The rapid growth of India's digital economy, characterized by significant expansion in digital payments and the increased contribution of digital sectors to Gross Value Added (GVA), underscores the transformative impact of digitalization. Over the period from 2014 to 2019, India's core digital economy grew from 5.4% to 8.5% of GVA, reflecting a robust 15.6% growth rate in US dollar terms, surpassing overall economic growth by 2.4 times. Notably, digitally dependent sectors constituted 22.4% of the economy in 2019, highlighting the pervasive influence of digital technologies across industries. However, despite this growth, employment in digital sectors remains relatively limited, with around 4.9 million workers employed in the core digital economy by 2019-20, predominantly in computer programming consultancy and telecommunications services.

The "Digital India" initiative, launched in 2015, has been instrumental in driving digital transformation by enhancing infrastructure, expanding internet access, and delivering digital services to empower citizens. Achievements like digital connectivity for rural post offices, expansion of Common Services Centres (CSCs), and initiatives such as Unified Payments Interface (UPI) and Open Network of Digital Commerce (ONDC) have facilitated digital transactions and connectivity nationwide. Education emerges as a critical enabler for digitalization, necessitating investments in technical skills to cultivate a skilled workforce for the digital economy's sustained growth. Looking forward, India's digital economy, leveraging technologies like 5G and semiconductor industries, is poised to propel overall economic growth and innovation. India's leadership in digital payments underscores its position as a global frontrunner in digital transformation, with digitalization expected to drive inclusive growth and job creation in the foreseeable future.

OBJECTIVES

- To evaluate the Impact of the "Digital India" Initiative
- To analyse Key Drivers and Trends in India's Digital Economy
- To assess the Impact and Evolution of India's Digital Economy

RESEARCH METHODOLOGY

- Methodology used for this paper is secondary method and the data collected from various secondary resources such as journals, articles, websites etc.…

Digital economy is not just an Indian concept, many countries across the globe are shifting towards digital economy, as we know that digital economy is the future and a globe phenomenon, there are 2 main importance things that need to keep in mind the budget and the data security, privacy. India has done a lot in digital economy, budget will keep on changing, government is very keen to project this digital economy.

Drivers of Digital Economy

Government initiatives

The Pradhan Mantri Gramin Digital Saksharta Abhiyan has been launched to educate people digitally, with the goal of reaching 40% of rural households by including one person from each eligible house. As of 2023, the Pradhan Mantri Gramin Digital Saksharta Abhiyan has achieved substantial headway toward its target of digitally educating 6 crore individuals in rural areas.

Digital India and Digital Economy aim to turn villages into self-sufficient components through Common Service Centres, providing digital infrastructure for financial, healthcare, and fund assistance services, enhancing digital literacy and empowering citizens.

The government has also introduced Digi lockers to share documents electronically, and programs such as Digital India, Startup India, Make in India, and Skill India strive to improve digital infrastructure, boost startups and entrepreneurship, and increase digital literacy across the country. The digital economy in India has boosted startup growth by lowering entry barriers, enabling e-commerce opportunities, improving access to funding, fostering a skilled talent pool, and benefiting from supportive government policies like Startup India and Digital India. This environment has catalyzed innovation and entrepreneurship across diverse sectors, driving the rise of startups in India.

Smart phone penetration

According to the Ministry of Information and Broadcasting, India will have more than 1.2 billion mobile phone users and 600 million smart phone users in 2022.The number of smartphone users in India is expected to reach more than one billion by 2024.

The broad availability of mobile technology has substantially increased the reach of digital services and e-commerce platforms.

Internet penetration

In 2023, the internet penetration rate in India's digital economy stood at 48.7%, with 692.0 million internet users. This figure represents a significant increase from previous years, indicating the growing importance of digital technologies in India's economy.

Increased internet coverage, particularly in rural regions, has been critical to the digital economy's growth. Initiatives such as Bharat Net, which aims to bring broadband connectivity to rural areas, are increasing internet access and promoting digital inclusion.

Digital payments revolution

Government measures such as BHIM, UPI, and demonetization have accelerated India's digital payment growth. Measures such as digital payment dashboards, BHIM referral bonuses, rebate schemes, and awareness campaigns encourage digital transactions.

In 2023, UPI transactions increased to 8,375 crores from 92 crore in FY 2017-18, representing a 147% compound annual growth rate (CAGR). UPI transactions accounted for 62% of all digital payments in FY 2022-23. UPI has emerged as a key player in India's digital payment ecosystem. The adoption of digital payment platforms like Paytm, Phone Pe, Google Pay, and others has transformed the way people transact, boosting e-commerce and online services. In India, digital payments have gained popularity among both small street vendors and big shops. For instance, PhonePe is a widely used digital payment platform that has made transactions seamless and convenient for many businesses. Small street vendors in local areas are increasingly adopting digital payment methods, including PhonePe, to facilitate transactions. The government prioritizes digital payments to connect all segments of society and promote digital India. The goal is to offer secure, affordable, and convenient digital payment options to all citizens.

E commerce

Due to rising internet penetration, smartphone usage, and shifting consumer preferences, the e-commerce industry in India has grown rapidly. To meet the needs of an increasing number of online buyers, businesses like Flipkart, Amazon India, and others have increased their reach and product offers.

Trends

AI (Artificial intelligence)

Prioritizing AI adoption is critical for driving Digital India and increasing GDP, employing both supervised and unsupervised learning systems. AI enables human-like thinking and improves healthcare by recognizing speech, voice, and picture data for rehabilitation and senior care. Establishing AI research facilities for genomes, drug development, and precision medicine needs government support.

Digital usage, including mHealth applications and internet services, is expected to drive economic development, reaching $50-55 billion by 2025. Mobile technology will be vital, with internet penetration expected to grow 4.5 times by 2030. The National e-Governance Plan intends to make all government services available online, while AI and machine learning supplement the workforce, increasing efficiency alongside human intervention.

Blockchain

Blockchain technology, which enables secure distributed information exchange, has applications in fields such as payments, finance, and software. Global spending on blockchain is expected to reach $23.3 billion in 2024, up from $9.7 billion in 2022 (IDC). Blockchain lowers costs with faster, safer transactions in India's digital economy by improving efficiency, security, and transparency. It enhances supply chain traceability and permits safe digital identity management. Future uses for smart contracts include health records and intelligent buildings. Smart contracts automate procedures while encouraging creativity and trust.

AA (Account Aggregator)

In India, a ground-breaking framework known as the Account Aggregator (AA) architecture was created to provide people authority over their financial information while facilitating the easy and safe exchange of that information between various financial institutions. This architecture, which is licensed by the Reserve Bank of India (RBI), is made up of a network of organizations called Account Aggregators that enable the consent-based sharing of financial data. By encouraging financial inclusion, data empowerment, creative financial services, and effective risk management, the Account Aggregator architecture is essential to the development of India's digital economy. It is a big step in the direction of making India's financial system more open, effective, and inclusive.

Internet of things (Iot)

The digital economy in India is significantly evolving with IoT. IoT enables predictive maintenance in manufacturing through smart factories and enhances public safety and energy management in smart cities. Agriculture benefits from data-driven insights, improving crop productivity. Healthcare uses IoT for personalized treatment and remote monitoring. Supply chain optimization, retail, and digital payments thrive with IoT. Startups leverage IoT for job creation.

Overall, IoT fosters intelligent, networked systems transforming India's economy. Additionally, IoT autonomously collects big data, providing valuable consumer behavior insights and optimizing business operations for increased productivity and engagement.

Cloud computing

Cloud computing is frequently used for data storage and administration due to its purported security benefits and cost reductions. It enables scalability and flexibility while lowering hardware and maintenance expenses. Moving infrastructure to the cloud improves security and facilitates disaster recovery.

Companies are now looking into multi-cloud possibilities to prevent vendor lock-ins and gain a competitive advantage by leveraging unique offerings from several providers in AI, machine learning, and analytics. The finest examples include e commerce, education, and government services such as Aadhaar, e governance, etc.

Data security and cyber protection

Data security and cyber protection will be critical for the digital economy in 2024, as it relies more on digital platforms and data-driven business models. AI-powered cybersecurity for real-time threat identification, Zero Trust models to validate every access request, and privacy-preserving technologies such as encryption and secure computing are among the latest trends.

Investment in cybersecurity skill development and collaboration are critical for dealing with shifting threats. Prioritizing data security allows enterprises to foster trust, preserve assets, and contribute to a more secure digital economy.

Opportunities

Factors propelling the digital momentum

Countries have recognized and emphasized their own sources of digital momentum in 2023. While developing economies have built institutions and infrastructure to facilitate digital growth, developed economies have prioritized innovation with an emphasis on research and development. In addition, there is a growing trend of regional cooperation, when nations join forces to exchange resources, expertise, and best practices in the digital sphere.

Public policy

The value of public-private partnerships in promoting innovation in the digital economy is being more acknowledged by governments and international organizations. More nations have enacted laws in 2023 to promote the development of digital skills and literacy, especially in educational institutions. In order to facilitate a seamless transition, there is also an increasing focus on integrating automation, data, and newtechnology.

Digital technology will alter the way work is performed: The influence of digital technology on the workforce has increased. Automation, big data, and artificial intelligence have impacted approximately 55% of the global economy, automating over 1.1 billion jobs and $16.4 trillion in salaries. Allowing humans to concentrate on the more complicated, creative, or strategic parts of their work.

Market dominance by digital players

With Apple, Alphabet, Microsoft, Amazon, and Facebook holding their top positions. However, China's Alibaba has risen to sixth place, pushing Tencent out of the top seven. Newcomers such as Byte Dance (TikTok's parent firm) and Shopify have emerged as major contenders.

DIGITAL CLIMATE FINANCE INITIATIVE

In order to promote clean growth, India is building a digital public infrastructure for climate financing. The objective of this program is to provide accountability and transparency by streamlining funding flows for climate projects. The digital network will monitor climate funding to make sure money goes to the right people. It backs India's resolve to fulfil its Nationally Determined Contributions (NDCs) under the Paris Agreement and take action on climate change globally. By drawing foreign capital to climate-friendly initiatives, the infrastructure will promote sustainable growth and innovation. India's leadership in sustainable development and climate-smart governance is emphasized by this partnership with Niti Aayog, which also solidifies India's standing as a global leader in clean energy.

CONCLUSION

Since India's digital economy is growing quickly, the country's IT industry will be impacted by all worldwide technological developments. As smart and immersive technologies proliferate, they will contribute positively to increased corporate productivity. Examples of these technologies include AI, ML, AR (Augmented Reality), and IoT. Together, the public and private sectors need to find solutions to these issues so that the Internet remains a secure place for users without obstructing its growth for commercial purposes. In the next 30 to 40 years, the digital revolution—often referred to as "The Internet Economy" or the Internet of Everything (IoE)—is predicted to provide new employment and prospects for market expansion. It is also predicted to become the greatest commercial opportunity in human history. Emerging and new digital technologies are transforming business and industry practices. In many cases, the market is adapting to the digital transition successfully. As a society and an economy, we must be prepared to adapt to change and seize the chances presented by the digital economy.

With the usage of various applications, the digital economy has made life incredibly simple and inexpensive. Its platform has also assisted people in transitioning to a more environmentally friendly way of living. India's experience with digital living demonstrates the extent to which the country has been successful in advancing the digital economy and DigitalIndia.

REFERENCES

1. Can India be Successful in Achieving a Digital Economy and its vision of Digital India: A Case Study Article · January 2022 -Ce Dr Sumanta Bhattacharya,
2. Bhavneet Kaur Sachde
3. cega.berkeley.edu
4. centerforfinancialinclusion.org
5. datareportal.com
6. Digital Economy In India For Inclusive Growth: Opportunities And Challenges For Development Article · December 2022 - Pappu Rajan
7. EY India -By D. K. Srivastava Chief Policy Advisor
8. hindustantimes.com
9. livemint.com
10. m.economictimes.com
11. Ministry of Information & Broadcasting
12. nytimes.com
13. statista.com
14. thebanker.com
15. timesofindia.indiatimes.com
16. Trends, opportunities and challenges in digital economy of India, IJRAR 2022
17. - Dr. J. Muni Narendra, Dr. K. Bala Subramanyam
18. washingtonpost.com

9 Dry Promotions Demotivate Workers to Work Harder and Achieve Career Advancement: A Concrete Framework

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Abstract

When it comes to handling the opportunities and problems that arise from dry promotions, the human resources department is in the forefront. HR specialists can be crucial in ensuring that these promotions are advantageous to the corporation as well as the individual by utilizing Human Capital Management solutions effectively.

Every worker is excited for a promotion since it means they will get paid more or has more responsibility in their position. Promotions are given by employers to staff members who exceed performance standards, take on more responsibilities, and develop professionally. Prior to entering any organisation, it is vital to learn about the process of being promoted.

For many organizations, determining whether employees might be eligible for a promotion is a crucial step in the salary review process. However, many workers have received "quiet promotions" without receiving any raises. Thus, a novel phenomenon has surfaced: Quiet promotions, sometimes known as dry promotions, occur when a company increases a worker's responsibilities without also raising their salary or changing their title.

The purpose of this study is to better understand the significance of dry promotion and to locate the obstacles employers and employees encounter in achieving organizational objectives and job satisfaction.

Keywords: *Dry promotion, HR specialists, Challenges, obstacles.*

INTRODUCTION

In order to ensure that dry promotions do not lead to increased attrition or "quiet quitting," HR plays a critical role in assisting firms in understanding the dangers involved.

HR is responsible for outlining the concerns and the policy. "It can be a disaster if HR is not involved in the planning and communication."

HR can utilize a range of instruments, including as anonymous surveys, stay interviews, and career chats, to find out how employees feel about no-raise promotions. Then, HR can use the findings to assist managers in comprehending and putting the policy into practice.

"Workers must comprehend the benefits to them. Knowing what drives your staff can help you collaborate with managers to create talking points that are specific to each person and their interests. "The key is to approach problems creatively. HR may assist managers in exploring additional methods to inspire employees and make them feel important."

An official document that covers each employee's development and career advancement is called a promotion policy. A promotion policy's main goals are to make duties clear, guarantee compensation adjustments, and provide details about a job title that is associated with a certain job category.

PROBLEM OF THE STUDY

This intriguing study sheds light on a topic that many employers are already aware of, which is career growth and promotion with fair compensation. It is important for you to be aware that improper execution of this phase can result in talent leaving the organization, thus the researchers' suggestion of a "quiet thriving" strategy in the workplace is an intriguing one.

Promotions for employees are correlated with their performance inside the company. These expenses result in demotivation within the organization from dry promotion. The expenses associated with lost production and managerial times, as well as lost intellectual capital, also exist. High Dry promotion may have an adverse effect on the organization's competitive edge and reputation in addition to its monetary measurability expenses. A dry promotion that results in an employee loss can increase job stress, weaken morale, and demotivate the remaining staff members. The loss of a key employee can cause corporate strategy planning to be disrupted by dry promotion. Additionally, it may lower customer service, employee loyalty, and have psychological consequences on staff members.

Objective of the Study

This study attempts to examine the influence of staff promotion on employees' performance.

- Find out if workers plan to report for duty after receiving a dry promotion.
- Find out if employees have glitches with the promotion policy.
- Determine if workers who are happy with their promotion will plan to quit or stay.

Scope of the Study

The study examined the influence of staff promotion on employee's performance intention in organization. The study adopts a survey research design through the secondary data based on the research articles from 2020 to 2024.

Limitations of the Research

Low sample size: The sample size of the research articles was constrained.

LITERATURE REVIEW

- In the article "Organizations should avoid "Dry Promotions" or "Quiet Promotions" for their employees, but rather "Quiet Thriving" in the workplace" by Nicolas BEHBAHANI December 2023Quiet or Dry promotions are not the exact response for any compensation appraisal. 68% of employees takes up extra responsibility with a hope that they will be promoted with extra remuneration.
- According to Brooks E. Scott, 2023 "Quiet thriving: What it is and how to build a thriving workforce" Employees that experience greater fulfilment are more engaged and

committed to their work. Employers should be happy about this since studies have shown that employees who are highly and lowly engaged produce varied business results.

- Bhaimiya, Sawdah. (July 9, 2023). "Stop quiet quitting and start 'quiet thriving' to build resilience and help find joy in your job, experts say". Business Insider. Retrieved July 10, 2023. As a result, some employees are quietly abandoning their jobs to work as little as possible, while others are grumpy and stay to vent their displeasure. However, experts like Alderman say that's not the approach you should be concentrating on. For workers to weather a challenging economic climate, she contends that "quiet quitting is disempowering" and that they must adopt a resilient mindset.
- "The Benefits of Employee Engagement". (June 20, 2013). Gallup. Retrieved July 10, 2023. "Measurement is one thing, what you measure is another." "You can measure a lot of things that have nothing to do with performance and that don't help a company implement a system that allows managers to create change."
- Stevens, Paris. (July 19, 2021). "The 2021 Workplace Friendship & Happiness Survey". Wildgoose. Retrieved July 10, 2023. The percentage of workers without pals at work increased to 40% in 2021 from 37% in 2017, a little but noteworthy 3% increase. Approximately 15% of respondents stated that they would prefer a coworker, compared to 10% in 2017. This implies that while the pandemic pulls people apart, people are experiencing the absence of work friends more acutely.
- Atefe Reisi, Serajoddin Mohebbi Jan 1, 2024 Optimal Model for Appointment and Promotion in Public Banks (Case Study: Refah Bank of Tehran Province) The goal of the study was to provide the best possible model for managers' hiring and advancement at Refah Bank in Tehran Province. Methodology: Thematic analysis was used in the qualitative section of this applied study, and inferential statistics was used in the quantitative section. The research was carried out using a mixed-methods framework.

- Yong Yang Yong Yang, Susu Wang Susu Wang Apr 30, 2024 Research on countermeasures for the promotion of employees' digital innovation capability against the background of enterprise digital transformation An examination reveals that the company lacks employee incentives, a variety of training techniques, well-organized organizational administration, and a positive work environment. Based on the aforementioned findings, we examine and evaluate four areas: corporate climate, organizational management, employee training, and incentive structure. We also suggest corrective actions to improve employees' capacity for digital innovation in order to better empower both the workforce and the company.
- Albert Yansen1 , STIE Bhakti Pembangunan, Jakarta Analysis of Job Promotion, Upward-downward Communication, and Work Environment on Employee Job Satisfaction The findings of the study indicated that work environment, advancement, and job communication all directly and favorably impacted job satisfaction (both individually and collectively). Employee work environments are positively impacted by job promotions and communication. The study concludes that, by acting as a mediating variable in the workplace, communication and job promotion have an indirect impact on job satisfaction.
- Bayu Eko Pandu WinotoP P, SuratiP P, Sri WahyulinaP August 2021 The Effect Of Promotion, Transfer, And Demotion On Work Motivation And Personnel Performance Of West Nusa Tenggara Regional Police The purpose of this study is to examine the impact of work motivation on employee performance as well as the effects of promotions, transfers, and demotions on the work motivation of West Nusa Tenggara Regional Police personnel. Causal associative research is the term for this kind of study. The census method is the means of gathering statistics.
- Ratemo Veronica, Bula Hannah, Makhamara Felistus 2021 Job promotion and employee performance in kenya forestry research institute headquarter in muguga, kiambu county The foundation of the investigation was expectation theory. Descriptive research design and positivist philosophy

were employed in the study. The Kenya Forestry Research Institute served as the analytical unit. The 178 employees of the Kenya Forestry Research Institute in Muguga were the target population.

THEORETICAL FRAMEWORK OF THE RESEARCH

Promotions to higher positions are crucial because they encourage workers to stay with a company. Promotions are usually for life, but occasionally, a business could offer short promotions in accordance with certain conditions. A job promotion has motivating value since it raises an employee's standing and authority inside the company.

Superlative Applies for Implementing Dry Promotions

- For dry promotions to be successful and accepted by employees, they must be implemented with careful consideration of the implications for employee morale and company culture.
- Open Communication: It's critical that staff members comprehend the implications of the dry promotion for their roles and duties. Appropriate expectations are created and possible discontent is decreased with clear communication.
- Sufficient Support and Resources: It's critical to give staff members the tools and training they need to be successful in their new positions. In addition to fostering their personal development, this support guarantees that the organization will profit from their expanded roles and skill set.
- Recognition and Alternative Rewards: Finding alternative means of recognizing and rewarding staff members becomes essential when salary increases are not an option. Alternatives could include more vacation days, adaptable work schedules, or recognition of their accomplishments in public.
- Ongoing Career Opportunities: Offering continuous learning and development opportunities can compensate for the lack of immediate financial rewards, helping employees to see dry promotions as a step towards greater career achievements.

Types of Job Promotions Are

1. Horizontal promotion: Horizontal promotion is when an employee gets promoted in the same category or department. A junior accountant promoted to a senior accountant is an example.
2. Vertical promotion: Vertical promotion is the upward movement of employees that results in a change in skills, responsibilities, and experience. For instance, a marketing supervisor may receive a promotion to a marketing manager position.
3. Dry promotion: A dry promotion is when a company promotes an employee without increasing the salary. The employees' job responsibilities and status increase in a dry promotion, but they do not receive any monetary benefits.

A few methods of deciding job promotions are.

- Seniority-based promotion
- Performance-based promotion

The ultimate purpose of a promotion policy is to clarify the responsibilities, ensure pay adjustments and give information about a job title related to a specific job category. A job promotion policy can include:

- The method used for assessing employees
- Training and development program required before promotion
- Promotion procedure
- The skill set that matches the requirement of the new role
- Experience required for the new role
- Weightage of the seniority and merit-based promotion

METHODOLOGY

Descriptive research method was used in this research work. It entails collection of data or information from specific articles. Descriptive research method is used because the goal was to sample the opinions of the authors on issues concerning the research.

SUMMARY OF FINDINGS AND SUGGESTIONS

Choosing a theoretical framework, creating a conceptual framework, and doing a literature review are three of the most challenging aspects of a research study. Understanding the pertinent research, locating a theoretical framework that offers crucial insights into the investigation, and developing a conceptual framework that arranges the findings all require time. As the study progresses, there is frequently a continuous back and forth between these components during the research process. A solid study that advances the area can be produced with continued improvement of the literature evaluation, theoretical framework clarity, and conceptual framework articulation.

Ways to Overcome the Difficulties of Dry Promotion

Systems for human capital management, or HCM, provide a range of resources that HR practitioners can use to successfully manage these obstacles. Here's how businesses can successfully handle dry promotions by utilizing HCM systems:

Open Communication Using Platforms for HCM

The management of dry promotions requires transparency. HCM systems can help with this by offering forums where transparent information regarding the promotion process and its results can be disseminated. HR can disseminate thorough explanations of the new roles' requirements, expectations, and the reasons why some financial compensations are currently impractical through the system. This lessens the possibility of unhappiness and aids in setting reasonable expectations.

Keeping an eye on employee feedback and sentiment

The capacity of HCM systems to effectively collect and evaluate employee input is one of their most important characteristics. HR teams can find out how workers feel about lackluster promotions and the workplace in general by using questionnaires, feedback tools, and sentiment analysis built into the HCM system. This continuous input is essential for making necessary strategy adjustments and quickly resolving any issues to avoid turnover or disengagement.

Encouraging Professional Growth and Education

By giving access to training and development opportunities, HCM systems can assist companies in supporting workers who obtain uninteresting promotions. These programs are able to recognize employees' skill gaps and suggest training programs or courses that might be helpful for them as they take on additional responsibilities. Employee performance improves as a result, and their career gains significance, which increases the feeling that the promotion was beneficial even though there was no financial compensation.

Recognizing and Offering Rewards for Non-Monetarily

HCM systems can assist with various forms of recognition, even while salary increases are not a component of dry promotions. These could be in the shape of gifts, additional time off, or public acknowledgement of their work at meetings or in company publications. These prizes can boost morale and be monitored and controlled via the HCM system to ensure consistency and fairness.

Creating Individual Development Plans: By using the data and tools in HCM systems, HR professionals may create unique development plans for each person who receives a dry promotion. These plans may contain benchmarks that align with the goals of the organization and the individual's professional aspirations in addition to the anticipated career path for the newly created role. With this kind of planning, employees are able to see above the immediate financial benefits of their new roles and consider the long-term benefits.

Examining the Effect on Employee attrition and Engagement: HR can benefit from analytics provided by HCM systems to comprehend how dry promotions affect overall employee engagement and attrition. HR can more effectively determine whether dry promotions are having a negative effect and modify their strategy by looking at trends and patterns. This could entail raising other forms of pay or benefits or changing the requirements for dry promotions.

Managing dry promotions effectively requires thoughtful strategies that address the potential drawbacks while maximizing the benefits. HCM systems offer a range of tools that can support

HR professionals in making dry promotions a positive aspect of career development, rather than a detriment to employee morale. By leveraging the power of HCM systems, companies can ensure that their use of dry promotions contributes positively to their organizational goals and employee satisfaction.

Fostering a Supportive Workplace Culture

Ultimately, the success of dry promotions is heavily dependent on the overall culture of the organization. A culture that values transparency, recognizes effort, and is committed to employee development can make dry promotions a useful tool for both employee and organizational growth.

CONCLUSION

Since dry promotion is a key idea in human resource management, the primary goal of employee appraisals in the workplace is to inspire and push employees to strive more to meet organizational goals. Reviews of compensation and performance evaluations are related to employee engagement, which helps them perform better. Dry promotions are acceptable in situations when there is little funding and it is impossible to compensate personnel; otherwise, there would be significant problems in explaining why the business is employing dry promotions.

REFERENCES

1. Bayu Kko Pandu Winoto, S. ,. (2021). The Effect Of Promotion, Transfer, And Demotion On Work Motivation And Personnel Performance Of West Nusa Tenggara Regional Police. *IJISET*.
2. Behbahani, N. (2023, 12 15). Organizations should avoid “Dry Promotions” or “Quiet Promotions” for their employees, but rather “Quiet Thriving” in the workplace.
3. Bhaimiya, S. (2023 , July 9). Stop quiet quitting and start ‘quiet thriving’ to build resilience and help find joy in your job, experts say.
4. Mishra, V. V. (2024, May 2). The Impact of Dry Promotions on Employees.
5. Yansen, A., Supriyati, Y., & Kadir, K. (2021). The Effect of Job Promotion and Communication on Employee Job Satisfaction: A Case Study at PT. Holcim Indonesia, Tbk. *Organizational Cultures*, *21*(1), 109.

6. Cavalcanti, C., & Leibbrandt, A. (2015). Dry promotions and community participation: Evidence from a natural field experiment in Brazilian fishing villages. *Journal of Economic Behavior & Organization*, *119*, 457-465.

7. Kube, S., Maréchal, M. A., & Puppe, C. (2013). Do wage cuts damage work morale? Evidence from a natural field experiment. *Journal of the European Economic Association*, *11*(4), 853-870.

10 Redefining Customer Relationships: E-CRM Trends and Insights from the Indian Banking Sector (2015-2023)

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Abstract

In today's intensely competitive business landscape, customer relationship management (CRM) has emerged as a pivotal tool for Indian commercial banks to gain a competitive advantage. With the rapid switching of customers, CRM, particularly in its electronic form (e-CRM), has become essential for the survival and growth of banks in India. This paper aims to review the existing literature on e-CRM adoption within the Indian banking sector. Drawing upon a systematic analysis of 27 relevant papers published between 2015 and 2023, sourced from reputable publishers, this review synthesizes insights into the various facets of e-CRM in the Indian banking context. Through inclusion and exclusion criteria, this paper critically evaluates the state of e-CRM adoption, identifies key implementation challenges, and highlights emerging trends shaping the future of e-CRM in Indian banks.

Keywords: *Customer relationship management (CRM), e-CRM, competitive edge, Indian banking system*

1. INTRODUCTION

In the recent years it is been observed that customer relationship management (CRM) services are offered through multiple channels. e-CRM (electronic customer relationship management) relates to performing customer relationship activity by communicating to customers via the web. "e-CRM can be regarded as a subset of CRM, meaning that e-CRM is one channel through which a company can deploy its CRM strategy"(Martínez-Ruiz et al., 2010).

"e-CRM is defined as customer relationship management techniques adopted by online enterprises in the electronic commerce" (Kim, Zhao, & Yang, 2010). It is been believed that to gain customer loyalty, developing a long term relationship with the customers is an important aspect of the business process.

"e-CRM is the e-Business initiatives of a firm concerned with attracting, maintaining, and enhancing the relationship between the firm and the customers it serves" (Reilly & Paper, 2010).

The basic objectives of e-CRM (K et al., 2014) include, (i) Providing good customer service, (ii)Finding new customers, (iii) Enhancing the customer loyalty and thereby retention, (iv) Support system for marketing staff to close deal faster, (v) Simplifying the marketing process and communication, (vi) Reducing the operating costs and (vii) Increasing profitability with goodwill.

As it is defined, e-CRM systems are specialized web-based CRM systems that use a web-site as the main interaction channel for businesses to simulate an old fashioned one-to-one direct relationship with customers. With the dynamic changes of business environment through digital revolution, customer relationship management prospective has changed dramatically. Using the web as the main channel, electronic customer relationship management (e-CRM) applications have evolved quickly from a novel idea to a strategic imperative for businesses.

Creating long term relationships with valued customer is usually viewed as the key to profitability in an increasingly dynamic market. e-CRM is one of the primary strategic initiatives in industry today as it has become the major paradigm of relationship marketing in the e-world (Chen & Chen, 2004).

The purpose of the review is to understand the latest research done in the area of e-CRM in Indian banking systems, to understand the level of implementation of e-CRM in Indian banking system and their acceptance by employees and customers, and to gain an insight into the latest trends in e-CRM.

The fallowing sections of the paper will highlight on existing literature reviews on e-CRM in the Indian banking industry related to the purpose of study of this paper. The research methodology and findings of the review with suggestions will be discussed in the subsequent sections.

2. LITERATURE REVIEW

Previous literature reviews in the field of e-CRM offer valuable insights into understanding e-CRM across various domains. Despite its recognized importance as a business tool, customer relationship management (CRM) lacks a universally accepted definition (Ngai, 2005). Academic reviews of CRM have aimed to categorize existing literature into distinct segments, with scholars discussing e-CRM/CRM from multiple perspectives including management, marketing, e-business, knowledge management, information systems, and as a technological entity (N.C. Romano & Fjermestad, 2002).

The research areas within e-CRM have been delineated into five major non-mutually exclusive categories: e-CRM Markets, e-CRM Business models, e-CRM Technology, e-CRM Human factors, and e-CRM Knowledge management (N.C. Romano & Fjermestad, 2002). Efforts to identify emerging areas in e-CRM led to the integration of these five research areas into a conceptual framework, aiding in theory development (Romano & Fjermestad, 2003).

Existing literature suggests that CRM can be classified into five broad categories and 34 subcategories, with a predominant focus on IT and IS, while fewer papers address sales-related topics (Ngai, 2005). Moreover, there is a dearth of research on customer privacy concerns. Despite the growing interest in CRM research, there has been limited investigation and classification of e-CRM academic papers, which are crucial for understanding popular research subjects and preferred areas of study (Kevork & Vrechopoulos, 2008).

Research summaries on the application of data mining techniques in the CRM domain highlight a predominant focus on customer retention, one-to-one marketing, and loyalty programs, with limited attention given to resolving customer complaints through complaint management (Ngai et al., 2009). Furthermore, the adoption of CRM technology in a multichannel environment has been reviewed, emphasizing the dominance of marketing domain studies and empirical research under CRM and e-CRM categories, indicating the maturity of these fields (Awasthi & Sangle, 2012).

CRM is perceived as a process aimed at delivering optimal customer value and satisfaction, thereby enhancing business relationships. Various techniques, including eCRM, knowledge management, data mining, data quality, and social CRM, are instrumental in addressing new challenges in the CRM domain (Soltani & Navimipour, 2016). Implementation of e-CRM systems underscores the significance of strategy, which enhances customer relationship quality, trust, satisfaction, loyalty, retention, and recommendation, emphasizing the importance of aligning technology with customer strategy and organizational changes.

The current research focuses on classifying e-CRM research in the Indian banking system across multiple perspectives, domains, and research areas, recognizing the diverse facets of e-CRM adoption and implementation.

Problem Statement: To understand the role of e-CRM in Indian banking system, the present study tries to investigate the fallowing aspect.

- To review the literature on adaption of e-CRM in Indian banking system
- To analyze the different dimensions of e-CRM research carried out in Indian banking system
- To evaluate the major perspectives of e-CRM research in Indian banking system
- To find out the latest trends of e-CRM research in Indian banking system

3. METHODOLOGY

3.1 Data Collection

The research articles for the study are sourced by using different databases. Google scholar is used as the search engine to search the research articles published in reputed journals. Keywords like e-CRM, Internet based CRM, ICT enabled CRM, Digital CRM, and Indian banks are used to search for relevant articles in the Journals. Reputed databases, publishers and journals like Emeraldinsight, Inderscienceonline, EBCSO, Elsevier, Springer, Wiley Online Library, ProQuest, Taylor Francis, Sage, IGI Global, ieeeexplore, Research gate, CEEOL, Academia, Semantic scholar etc and journal articles related to e-CRM in the Indian banking system are considered for the research.

3.2 Selection of Articles

Going through the above mentioned databases, 35 relevant papers were considered with mentioned keywords and publishers in Indian context. Out of that 08 papers were deleted for as they were theoretical paper. An inclusion and exclusion criterion is fallowed to delete the irrelevant papers. The criteria included going through the abstract and retaining the papers which majorly focused on e-CRM, digital CRM, internet-based CRM and ICT enabled CRM as research objectives or purpose of study or primary focus of the study. 27 empirical studies were found in Indian banking context related to e-CRM, digital CRM, internet based CRM and ICT enabled CRM as research objectives or purpose of study or primary focus of the study in between the year 2015-2023.

4. RESULTS AND DISCUSSION

The distribution of selected articles by different dimensions of e-CRM research carried out in Indian banking contexts are mentioned herein. The articles are analyzed on the basis of Year of Publication, Publisher, Bank Sector, Study Location, Sampling Size, Sampling Techniques and Statistical tools. Major antecedents used in the study are also mentioned in the fallowing section.

4.1 Distribution by Year

The figure 4.1 displays the distribution of articles published in different years from 2015 to 2023. Out of the 27 articles selected, 8 (29.62.36%) articles were published in 2022, followed by 5 (18.51%) articles in 2020. Moreover, 3 (11.11%) articles were published in both 2019 and 2021. The data emphasizes notable publication trends over the specified timeframe. It's observed from the figure that year 2022 had a maximum number of publications in the e-CRM domain for Indian banking context.

Figure 4.1 Distribution of Articles by Year

4.2 Distribution by Publishers/ Journals

Among the 27 articles examined in the study, ResearchGate published the most with 6 articles (22.22%). Emerald Insight published 3 articles (11.11%), while Ideal Journal of Management & IT, Inderscienceonline, and IGI Global each contributed 2 articles (7.41%) respectively. This data provides insight into the distribution of articles across different publishers. Figure 4.2 showcases the distribution of articles among various publishers.

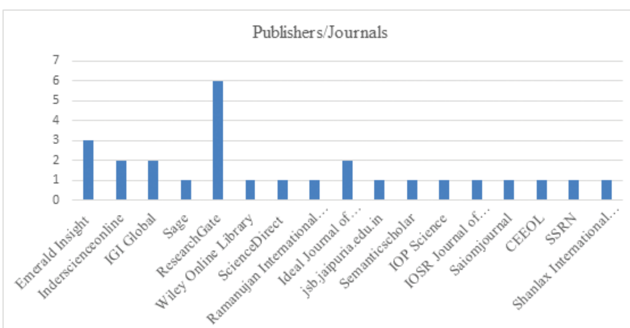


Figure 4.2 Distribution of Articles by Publishers/ Journals

4.3 Distribution by Banks Sector

Figure 4.3 illustrates the distribution of articles based on type of banks considered in each of these studies. Out of the 27 articles analyzed, the majority, 20 (74.07%), focused on both public and private sector banks. Additionally, 4 (14.81%) studies were exclusively centered on private sector banks, while 3 (11.11%) studies solely examined public sector banks.

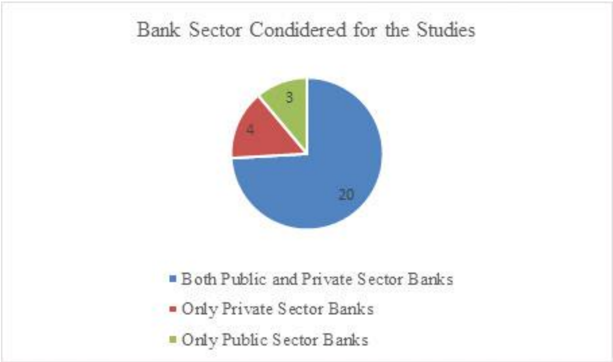


Figure 4.3 Distribution of Articles by Bank Sector Considered for the Studies

4.4 Distribution by Study Location

Figure 4.4 presents the distribution of articles based on different study locations considered in each of these studies. Among the 27 studies analyzed, Delhi emerged with the highest concentration, accounting for 11 occurrences (40.74%). Following Delhi, Kerala had 4 occurrences (14.81%), while Chandigarh appeared thrice (11.11% each). This data provides insights into the distribution of data across these specific locations.

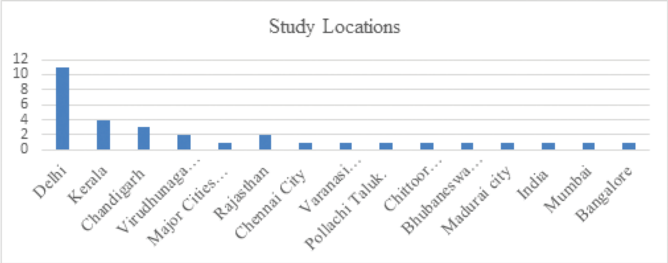
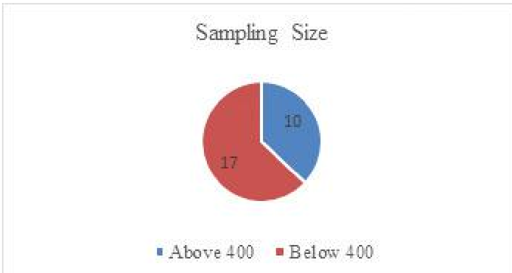


Figure 4.4 Distributions of Articles by Study Locations

4.5 Distribution by Sampling Size

Figure 4.5 illustrates sampling sizes considered in the mentioned studies. Out of the 27 observations, 10 sampling sizes were above 400, while 17 are below 400. The maximum sampling size observed is 836, occurring three times, and the minimum sampling size is 82. This data provides insights into the distribution of sampling sizes and highlights the range within the dataset.

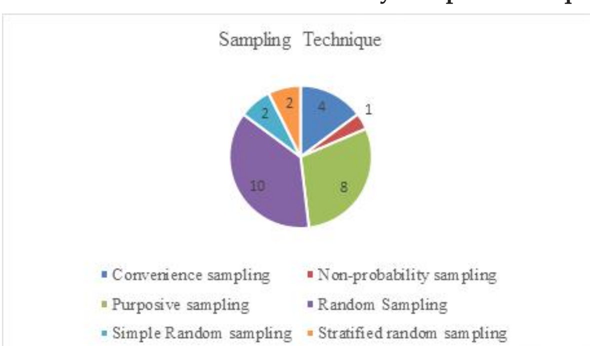
Table 4.5 Distribution of Articles by Sample Size



4.6 Distribution by Sampling Techniques

Among the considered articles, Random Sampling stands out with 10 occurrences, followed by Purposive sampling with 8 occurrences. Additionally, Convenience sampling is observed 4 times, while both Simple Random sampling and stratified random sampling each appear twice and non-probability sampling occurs only once. This data provides insights into the prevalence of different sampling methods within the observed studies. Figure 4.6 presents the distribution of sampling methods within the dataset.

Table 4.6 Distribution of Articles by Sample Techniques



4.7 Statistical Tests

Different types of statistical tests are employed in the analyzed studies. Among these tests, SEM (Structural Equation Modeling) emerges as the majorly utilized test, alongside other notable tests such as ANOVA (Analysis of Variance), T-test, F-test, Exploratory Factor Analysis, Confirmatory Factor Analysis, Chi-square test, Multiple Linear Regression Analysis, Correlation Analysis, Descriptive statistics, Reliability Analysis, Fried Man Rank test and Factorial-test. These tests represent the primary analytical methodologies applied in the dataset.

4.8 Major Variables

From the considered studies majorly used variables encompass a wide array of constructs, including Perceived ease of use, Perceived usefulness, SERVQUAL, Internet banking use, Age, Education, Gender, Customer satisfaction, Perceived risk, Attitude towards self-service technology (SST), Intention to use SST, e-CRM use, e-CRM competitive advantage, e-CRM performance, Bank employee opinion, Tangibility, Assurance, Reliability, Responsiveness, Empathy, CRM technology capability, Customer orientation, Co-creation, Relationship quality, outcome, e-service quality, Employee service quality, Information trust, and Behavioral intention towards using e-CRM. These variables reflect diverse aspects of customer behavior, perceptions and experiences in the context of electronic customer relationship management (e-CRM) practices.

5. DISCUSSION

The overall analysis of the distribution of selected articles within the area of e-CRM research in Indian banking contexts offers valuable insights into the body of literature. A clearer picture of the goals and areas of concentration within this domain is revealed when considering a number of different dimensions, including Year of Publication, Publisher, Bank Sector, Study Location, Sampling Size, Sampling Techniques, and Statistical Tools.

The distribution by year shows that there were a lot of research papers published in 2020 and 2022. Further, ResearchGate, Emerald Insight, and Ideal Journal of Management & IT have emerged as key platforms for sharing research findings in this domain.

In terms of bank sector the majority of studies focused on both public and private sector banks, indicating the importance of exploring e-CRM dynamics in the broader banking ecosystem. As technology continues to reshape the banking landscape, this inclusive approach not only provides insights into the current state of e-CRM practices but also serves as a foundation for anticipating future trends and opportunities. Furthermore, as the banking sector continues to adopt digitalization, it is becoming more and more important to understand the dynamics of e-CRM in both public and private sector banks in order to develop future plans. Through acknowledging the distinct advantages and obstacles encountered by each sector, stakeholders can work together to more efficiently utilize new technology and advances.

Major research studies on e-CRM have mostly focused on urban areas like Delhi, Chandigarh, and some parts of Kerala. Nonetheless, there is a great chance for researchers to investigate how well e-CRM is implemented in rural regions. This is especially important considering the speed at which the banking industry is expanding into rural areas. Therefore, it is essential that researchers expand their studies to include rural settings in addition to metropolitan cities.

Sampling size and techniques vary, with random sampling being the predominant method employed. This indicates a preference for robust sampling methodologies aimed at ensuring representative data collection. Additionally, statistical tools such as SEM (Structural Equation Modeling) are majorly utilized, highlighting a sophisticated analytical approach to understanding complex relationships within the e-CRM domain. Incorporating standard sample sizes can enhance the effectiveness and wider acceptance of research findings within the academic and professional communities. When researchers adhere to established standards for sample sizes, it ensures greater reliability and validity of the study outcomes. Moreover, employing larger sample sizes increases the likelihood of producing results that can be generalized to the broader population.

Furthermore, the analysis of major variables like Perceived Ease of Use (Kaushik& Rahman, 2015; George,2018; Mokha, 2021), Perceived Usefulness (Kaushik& Rahman, 2015; George,2018; Mokha, 2021), Need of Interaction (Kaushik& Rahman, 2015), Perceived Risk (Kaushik& Rahman, 2015), Attitude (Kaushik& Rahman, 2015; Mokha, 2021), Intention to use (Kaushik& Rahman,2015;Mokha,2021),Gender (K,2015;Joju& Manoj,2019; Veni, &Gayathri, 2020), Education (K, 2015; Singh & Kasliwal, 2019; Veni, &Gayathri, 2020),Age (Singh & Kasliwal, 2019; Veni, &Gayathri, 2020; Mokgha, 2021), e-CRM competitive advantage (Kaur & Kaur, 2016), e-CRM performance (Kaur & Kaur, 2016; Vidya & Shanthi, 2021), Bank employee opinion (Marimuthu et al., 2016), SERVQUAL (Joju et al., 2017; George,2018; Joju& Manoj, 2019; Singh & Kasliwal, 2019;Vidya & Shanthi, 2021), CRM Technology Capability, Customer Orientation, Co Creation (Dubey & Sangle, 2018), Relationship quality and Outcome (Dubey & Sangle, 2018; Shastri et al., 2020), Customer Satisfaction (Mokha & Kumar 2020; Sharma et al., 2020;Vidya & Shanthi, 2021; Kumar et al., 2021; Mokha, 2021; Shukla, 2022; Hota, 2022; Asha & Vetrickarthick, 2022; Kumar & Mokha, 2022), Customer Loyalty (Kumar et al., 2021; Shukla, 2022; Rao & Reddy, 2022; Mokha & Kumar, 2022;Kumar & Mokha, 2022), Customer perception (Veni, &Gayathri, 2020;Asha & Vetrickarthick, 2022), Information Trust (Vidya & Shanthi, 2021) and Customer Experience (Kumar et al., 2021;Mokha & Kumar, 2022) reveals a multifaceted exploration. It is also observed that the earlier researchers have examined diverse dimensions of e-CRM practices, aiming to interpret key drivers and outcomes. Although several studies have integrated theories into their research on e-CRM, there are still options in terms of utilizing a wider range of theoretical frameworks. It is possible to enhance the examination of variables inside the e-CRM construct by including novel theories like the push-pull model or migration theory. Through the integration of these ideas, researchers can reveal novel aspects of e-CRM study, providing innovative viewpoints and insights.

Certain variables such as customer satisfaction, SERVQUAL and Customer Loyalty appear to receive relatively more attention and variables like Perceived Risk, Information Trust and Customer Perception has received less attention suggesting potential areas for further exploration and research emphasis. Major studies are customer centric and more focus should be given on conducting studies with the opinion of bank employees.

This detailed study explains about how e-CRM research in Indian banking taking different dimensions over the years. It shows that there are many different areas to look at, and it explains us how important it is to use careful methods when studying this important area. By looking at various aspects of e-CRM, like what customers think and do, and how technology is used, researchers can get more insight about this domain. This study helps guide future research, showing researchers what areas to focus on for more helpful studies. Overall, it shows that e-CRM research is always changing and has a big impact on banking in India.

CONCLUSION

With the rapid switching of customers, CRM, particularly in its electronic form (e-CRM), has become essential for the survival and growth of banks in India. This paper reviewed the existing literature on e-CRM adoption within the Indian banking sector, focusing on the publication trend, banking sectors, Study location, Sampling size and technique and statistical tests. Drawing upon a comprehensive analysis of 27 relevant papers published between 2015 and 2023, sourced from 12 reputable publishers, this review synthesizes insights into the various facets of e-CRM in the Indian banking context. The overall analysis of the distribution of selected articles within the area of e-CRM research in Indian banking contexts offers valuable insights into the body of literature and suggests directions for the future study trends.

REFERENCES

1. Agarwal, M. S., & Gupta, H. (2023).Analysis the Main Dimensions that Affect E-Customer Relationship Management Adoption in the Indian Banking Industry.Journal of the Oriental Institute.72 (5), 151-158
2. Asha, N., & Vetrickarthick, R.(2022).A Study on Application of E-CRM in Retail Banking.Sai Om Journal of Commerce & Management, 1(1), 11-18
3. Awasthi, P., & Sangle, P. S. (2012). Adoption of CRM technology in multichannel environment: A review (2006-2010). *Business Process Management Journal*, *18*(3), 445–471. https://doi.org/10.1108/14637151211232641

4. Chen, Q., & Chen, H. (2004). Exploring the success factors of e-CRM strategies in practice. *Database Marketing & Customer Strategy Management*, *11*(4), 333–343.
5. Deepa, M. (2021). Benefits of e-CRM Services among Private Banking Customers-A Study with Special Reference to Pollachi Taluk. ComFin Research, 9(2), 47-49.
6. Dubey, N. K., & Sangle, P. (2018). Customer perception of CRM implementation in banking context: Scale development and validation. *Journal of Advances in Management Research*. https://doi.org/10.1108/JAMR-12-2017-0118
7. George, A. (2018). Perceptions of Internet banking users — a structural equation modelling (SEM) approach. *IIMB Management Review*, *30*(4), 357–368. https://doi.org/10.1016/j.iimb.2018.05.007
8. Hota, S. L. (2022). Customers Perception on E-CRM Technology: A Comparative Study. ECS Transactions, 107(1), 10171.
9. Joju, J., Shanmugam, V., & K, M. P. (2017). Financial Technology and Service Quality in Banks Some Empirical Evidence from the Old Private Sector Banks Based in Kerala , India. *International Journal of Applied Business and Economic Research*, *September*.
10. Joju, J., & Manoj, P. K. (2019). Banking Technology and Service Quality: Evidence from Private Sector Banks in Kerala. International Journal of Recent Technology and Engineering, 8(4), 12098-12103.
11. K, M. P. (2015). Customer Relationship Management (CRM) In Banks In The ICT Era : An Empirical Study Of Customer Acceptance. *International Journal of Information Technology & Computer Sciences Perspectives © Pezzottaite Journals*, *4*(October), 1545–1550.
12. K, M. P., Joju, J., & Vasantha. (2014). Impact of E-Crm on Commercial Banking : an Empirical Investigation With Reference To Private Sector Banks in Kerala. *Pezzottaite Journals*, *3*(3), 1120–1125.
13. Kaur, J., & Kaur, B. (2016). The Influence of e-CRM Competitive Advantage on e-CRM Performance in the Indian Banking Industry. *Strategic Change*, *25*(5), 537–550. https://doi.org/10.1002/jsc
14. Kaushik, A. K., & Rahman, Z. (2015). Innovation adoption across self-service banking technologies in India. *International Journal of Bank Marketing*, *33*(2), 96–121. https://doi.org/http://dx.doi.org/10.1108/MRR-09-2015-0216
15. Kevork, E. K., & Vrechopoulos, A. P. (2008). Research insights in electronic customer relationship management (e-CRM): a review of the literature (2000–2006). *International Journal of Electronic Customer Relationship Management*, *2*(4), 376–417. https://doi.org/10.1504/IJECRM.2008.021106

16. Kim, C., Zhao, W., & Yang, K. H. (2010). An Integrated Model for E-CRM in Internet Shopping: Evaluating the Relationship between Perceived Value, Satisfaction and Trust. In *Encyclopedia of E-Business Development and Management in the Global Economy* (pp. 751-743). IGI Global.
17. Kumar, P., & Mokha, A. K. (2020). A study on relationship between electronic customer relationship management (E-CRM) and customer loyalty in the banking industry. Ramanujan International Journal of Business and Research, 5, 211-226.
18. Kumar, P., Mokha, A. K., & Pattnaik, S. C. (2021). Electronic customer relationship management (E-CRM), customer experience and customer satisfaction: evidence from the banking industry. Benchmarking: An International Journal, 29(2), 551-572.
19. Kumar, P., & Mokha, A. K. (2022). Electronic customer relationship management (E-CRM) and customer loyalty: The mediating role of customer satisfaction in the banking industry. International Journal of E-Business Research (IJEBR), 18(1), 1-22.
20. Marimuthu, S., Lakshmanan, R., & Veluchamy, S. (2016). Analysis of E-CRM Services of Banks : from the View of Bankers. *Annals of Danubius University. Economics*, *12*(6), 134–159.
21. Martínez-Ruiz, M. P., Llamas-Alonso, M. R., & Jiménez-Zarco, A. I. (2010). E-CRM: A key issue in today's competitive environment. *Encyclopedia of E-Business Development and Management in the Global Economy*, *2*, 436–444. https://doi.org/10.4018/978-1-61520-611-7.ch043
22. Mokha, A. K., & Kumar, P. (2020). Determinants of E-CRM in influencing customer satisfaction in the banking industry. OJAS, January-June, 2-9.
23. Mokha, A. K., & Kumar, P. (2021). Using the Technology Acceptance Model (TAM) in understanding customers' behavioural intention to use E-CRM: evidence from the banking industry. Vision, 09722629211060565.
24. Mokha, A. K. (2021). Role of E-CRM in Fighting COVID-19 Crisis: Possible Implications from the Banking Industry. From the Editor-in-Chief, 2.
25. Mokha, A. K., & Kumar, P. (2022). Examining the interconnections between E-CRM, customer experience, customer satisfaction and customer loyalty: A mediation approach. Journal of Electronic Commerce in Organizations (JECO), 20(1), 1-21.

26. Ngai, E. W. T. (2005). Customer relationship management research (1992-2002): An academic literature review and classification. *Marketing Intelligence and Planning*, *23*(6), 582–605. https://doi.org/10.1108/02634500510624147
27. Ngai, E. W. T., Xiu, L., & Chau, D. C. K. (2009). Application of data mining techniques in customer relationship management: A literature review and classification. *Expert Systems with Applications*, *36*(2 PART 2), 2592–2602. https://doi.org/10.1016/j.eswa.2008.02.021
28. O'Reilly, Kelley. "Customer Relationship Management (CRM): A Dichotomy of Online and Offline Activities." In *Encyclopedia of E-Business Development and Management in the Global Economy*, pp. 504-513. IGI Global, 2010.
29. Rao, P. B., & Reddy, M. V. B. Electronic-Customer Relationship Management in Banking Sector with Special Reference to Chittoor District.
30. Romano, N. C., & Fjermestad, J. (2003). Electronic Commerce Customer Relationship Management: A Research Agenda. *Information Technology and Management*, *4*, 233–258.
31. Sharma, R., Shastri, S., & Rathore, J. S. (2020). Exploring E-CRM in Indian banking sector. International Journal of Public Sector Performance Management, 6(5), 653-663.
32. Shastri, S., Sharma, R., & Sethi, V. (2020). An empirical study on influence of e-CRM towards customer loyalty in banking sector. International Journal of Public Sector Performance Management, 6(5), 642-652.
33. Shukla, S. ANALYZING CUSTOMER ENGAGEMENT THROUGH E-CRM: THE ROLE OF RELATIONSHIP MARKETING IN THE ERA OF DIGITAL BANKING IN VARANASI BANKS.
34. Singh, J., & Kasliwal, N. (2019). The effect of age as a moderator on the usage of E-CRM practices in public and private sector banks. Ideal Journal of Management & IT, 10, 69-76.
35. Singh, J., & Kasliwal, N. (2019). Moderating role of education level on the service quality perceived by consumers related to E-CRM practices in private and public sector banks. IME Journal, 13(1), 89-95.
36. Soltani, Z., & Navimipour, N. J. (2016). Customer relationship management mechanisms: A systematic review of the state of the art literature and recommendations for future research. *Computers in Human Behavior*, *61*, 667–688. https://doi.org/10.1016/j.chb.2016.03.008

37. Veni, D. K. P., & Gayathri, V. (2020). A study on customer relationship management practices followed by state bank of india branches with special reference to virudhunagar. Shanlax International Journal of Management, 3(04).

38. Vidya, M., & Shanthi, R. (2021). Analyzing electronic customer relationship management (e-CRM) performance of public sector banks in Chennai City. Psychology and Education Journal, 58(1), 2215-2227.

ANNEXURE

Distribution by Year

Table 1 Distribution of Articles by Years

Sl No	Year	Article	Author	Publisher
1.	2015	Innovation adoption across self-service banking technologies in India	Arun Kumar Kaushik, Zillur Rahman	Emerald Insight
2.		Customer Relationship Management(CRM) In Banks In The ICT Era : An Empirical Study Of Customer Acceptance	Manoj P K	Research-Gate
3.	2016	The Influence of e-CRM Competitive Advantage on e-CRM Performance in the Indian Banking Industry	Jasveen Kaur, Baljit Kaur	Wiley Online Library
4.		Analysis of E-CRM Services of Banks : from the View of Bankers	Selvakumar Marimuthu, Ramar Lakshmanan, Sathyalakshmi Veluchamy	CEEOL
5.	2017	Financial Technology and Service Quality in Banks Some Empirical Evidence from the Old Private Sector Banks Based in Kerala , India	Joju Jacob Vasantha S Manoj P K	Research-Gate

6.	2018	Customer perception of CRM implementation in banking context: Scale development and validation	Neeraj Kumar Dubey, Purnima Sangle	Emerald
7.		Perceptions of Internet banking users — a structural equation modelling (SEM) approach	Ajimon George	ScienceDirect
8.	2019	The effect of age as a moderator on the usage of E-CRM practices in public and private sector banks	Jagriti Singh, Anjali Verma	Ideal Journal of Management & IT
9.		Moderating role of education level on the service quality perceived by consumers related to E-CRM practices in private and public sector banks.	Jagriti Singh, Neeti Kasliwal,	Indian Journals
10.		Banking Technology and Service Quality: Evidence from Private Sector Banks in Kerala	Jacob Joju, Manoj PK	Researchgate
11.	2020	Exploring E-CRM in Indian banking sector.	Ridhima Sharma, Siddharth Shastri, Jitendra Singh Rathore	Inderscienceonline
12.		A study on relationship between electronic customer relationship management (E-CRM) and customer loyalty in the banking industry	Pushpender Kumar, Anupreet Kaur Mokha	Ramanujan International Journal of Business and Research
13.		Determinants of E-CRM in influencing customer satisfaction in the banking industry	Anupreet Kaur Mokha, Pushpender Kumar	OJAS

14.		An empirical study on influence of e-CRM towards customer loyalty in banking sector.	Siddharth Shastri, Ridhima Sharma, Vaishali Sethi	Inderscienceonline
15.		A study on customer relationship management practices followed by state bank of India branches with special reference to virudhunagar.	K.Pushpa Veni, V. Gayathri	Shanlax International Journal of Management
16.	2021	Analyzing electronic customer relationship management (e-CRM) performance of public sector banks in Chennai City	Vidya M, Shanthi R	Semanticscholar
17.		Using the Technology Acceptance Model (TAM) in understanding customers' behavioural intention to use E-CRM: evidence from the banking industry	Anupreet Kaur Mokha, Pushpender Kumar	Sage
18.		Role of E-CRM in Fighting COVID-19 Crisis: Possible Implications from the Banking Industry	Anupreet Kaur Mokha,	ResearchGate
19.	2022	Analyzing Customer Engagement through E-CRM: The Role of Relationship Marketing in the Era of Digital Banking in Varanasi Banks.	Shefali Shukla	Researchgate
20.		Benefits of e-CRM Services among Private Banking Customers-A Study with Special Reference to Pollachi Taluk.	Deepa M	SSRN

21.		Electronic-Customer Relationship Management in Banking Sector with Special Reference to Chittoor District.	Patcha.Bhujanga Rao, .M.Vijaya Bhaskar Reddy	Academia
22.		Electronic customer relationship management (E-CRM), customer experience and customer satisfaction: evidence from the banking industry	Pushpender Kumar, Anupreet Kaur Mokha, Subash Chandra Pattnaik	Emerald
23.		Examining the interconnections between E-CRM, customer experience, customer satisfaction and customer loyalty: A mediation approach.	Anupreet Kaur Mokha, Pushpender Kumar	IGI Global
24.		Customers Perception on E-CRM Technology: A Comparative Study	Sweta Leena Hota	IOP Science
25.		A Study on Application of E-CRM in Retail Banking	N Asha R.Vetrickarthick	Saiomjournal
26.		Electronic Customer Relationship Management (E-CRM) and Customer Loyalty: The Mediating Role of Customer Satisfaction in the Banking Industry	Pushpender Kumar, Anupreet Kaur Mokha	International Journal of E-Business Research
27.	2023	Analysis the Main Dimensions that Affect E-Customer Relationship Management Adoption in the Indian Banking Industry.	Shipra Agarwal, Himanshu Gupta	Researchgate

Distribution by Publisher

Table 2 Distribution of Articles by Publishers

Sl. No	Publisher	Journal	Article Name	Author Name
1.	Emerald Insight	International Journal of Bank Marketing	Innovation adoption across self-service banking technologies in India	Arun Kumar Kaushik, Zillur Rahman
2.		Journal of Advances in Management Research	Customer perception of CRM implementation in banking context: Scale development and validation	Neeraj Kumar Dubey, Purnima Sangle
3.		Benchmarking: An International Journal	Electronic customer relationship management (E-CRM), customer experience and customer satisfaction: evidence from the banking industry	Kumar, P., Mokha, A. K., Pattnaik, S. C.
4.	Inderscienceonline	International Journal of Public Sector Performance Management	Exploring E-CRM in Indian banking sector.	Ridhima Sharma, Siddharth Shastri Jitendra Singh Rathore
5.		International Journal of Public Sector Performance Management	An empirical study on influence of e-CRM towards customer loyalty in banking sector.	Siddharth Shastri, Ridhima Sharma, Vaishali Sethi

6.	IGI Global	International Journal of E-Business Research	Electronic Customer Relationship Management (E-CRM) and Customer Loyalty: The Mediating Role of Customer Satisfaction in the Banking Industry	Pushpender Kumar, Anupreet Kaur Mokha
7.		Journal of Electronic Commerce in Organizations (JECO)	Examining the interconnections between E-CRM, customer experience, customer satisfaction and customer loyalty: A mediation approach.	Anupreet Kaur Mokha, Pushpender Kumar
8.	Sage	Vision.	Using the Technology Acceptance Model (TAM) in understanding customers' behavioural intention to use E-CRM: evidence from the banking industry	Mokha, A. K., Kumar, P.
9.	Research-Gate	International Journal of Information Technology & Computer Sciences Perspectives © Pezzottaite Journals	Customer Relationship Management(CRM) In Banks In The ICT Era : An Empirical Study Of Customer Acceptance	K, Manoj P

10.		International Journal of Recent Technology and Engineering. Researchgate	Banking Technology and Service Quality: Evidence from Private Sector Banks in Kerala	Joju, J., Manoj, P. K.
11.		International Journal of Applied Business and Economic Research	Financial Technology and Service Quality in Banks Some Empirical Evidence from the Old Private Sector Banks Based in Kerala , India	Joju Jacob, Vasantha S, Manoj P K
12.		OJAS	Role of E-CRM in Fighting COVID-19 Crisis: Possible Implications from the Banking Industry	Anupreet Kaur Mokha
13.		Inspira-Journal of Commerce, Economics & Computer Science	Analyzing Customer Engagement through E-CRM: The Role of Relationship Marketing in the Era of Digital Banking in Varanasi Banks.	Shukla, S.
14.		Journal of the Oriental Institute	Analysis the Main Dimensions that Affect E-Customer Relationship Management Adoption in the Indian Banking Industry.	Shipra Agarwal, Himanshu Gupta

15.	Wiley Online Library	Strategic Change	The Influence of e-CRM Competitive Advantage on e-CRM Performance in the Indian Banking Industry	Kaur, Jasveen Kaur, Baljit
16.	ScienceDirect	IIMB Management Review	Perceptions of Internet banking users — a structural equation modelling (SEM) approach	George, Ajimon
17.	Ramanujan International Journal of Business and Research	Ramanujan International Journal of Business and Research	A study on relationship between electronic customer relationship management (E-CRM) and customer loyalty in the banking industry	Pushpender Kumar, Anupreet Kaur Mokha
18.	Ideal Journal of Management & IT	Ideal Journal of Management & IT	Moderating role of education level on the service quality perceived by consumers related to E-CRM practices in private and public sector banks.	Singh, J., Kasliwal, N.
19.		Ideal Journal of Management & IT	The effect of age as a moderator on the usage of E-CRM practices in public and private sector banks	Singh, J., Kasliwal, N.

20.	jsb.jaipuria.edu.in	OJAS	Determinants of E-CRM in influencing customer satisfaction in the banking industry	Anupreet Kaur Mokha, Pushpender Kumar
21.	Semantic-scholar	Psychology and Education Journal	Analyzing electronic customer relationship management (e-CRM) performance of public sector banks in Chennai City	Vidya, M., Shanthi, R
22.	IOP Science	ECS Transactions	Customers Perception on E-CRM Technology: A Comparative Study	Sweta Leena Hota
23.	IOSR Journal of Business and Management (IOSR-JBM)	IOSR Journal of Business and Management (IOSR-JBM)	Electronic-Customer Relationship Management in Banking Sector with Special Reference to Chittoor District.	Rao, P. B., Reddy, M. V. B.
24.	CEEOL	ACTA UNIVERSITATIS DANUBIUS	Analysis of E-CRM Services of Banks : from the View of Bankers	Selvakumar Marimuthu, Ramar Lakshmanan, Sathyalakshmi Veluchamy
25.	Saiomjournal	Saiomjournal	A Study on Application of E-CRM in Retail Banking	N Asha, R Vetrickarthick
26.	SSRN	ComFin	Benefits of e-CRM Services among Private Banking Customers-A Study with Special Reference to Pollachi Taluk.	Deepa, M.

27.	Shanlax International Journal of Management	Shanlax International Journal of Management	A study on customer relationship management practices followed by state bank of India branches with special reference to virudhunagar.	Veni, D. K. P., Gayathri, V.

Distribution by Other Aspects

Table 3 Distribution of Articles by Other Aspects

Sl No	Bank sector	Study Location	Sample Size	Sampling Technique	Variables
1.	Both Public and Private Sector	Delhi, Mumbai, Chandigarh, and Bangalore	619	Random Sampling	Ease of use, Perceived usefulness , Need of Interaction, Perceived Risk , Attitude towards SST, Intention to use SST
2.	Both Public and Private Sector	Kerala	150	Random Sampling	E-CRM use, Gender & Education
3.	Both Public and Private Sector	Chandigarh and Delhi NCT	275	Purposive Sampling	e-CRM competitive advantage & e-CRM performance
4.	Both Public and Private Sector	Virudhunagar District	83	Purposive Sampling	Bank employee opinion & e-CRM service

5.	Private Sector	Kerala	100	Random Sampling	Tangibility, Assurance,Reliability , Responsiveness , Empathy & e-CRM
6.	Both Public and Private Sector	Major Cities in India	324	Random Sampling	CRM technology capability, Customer orientation, Co-creation, Relationship quality and outcome
7.	Both Public and Private Sector	Kerala	406	Simple random sampling and convenience sampling	perceived ease of use, perceived usefulness, SERVQUAL , Internet Banking use
8.	Both Public and Private Sector	Rajasthan	463	Purposive-sampling	Age and the quality of E-CRM practices
9.	Both Public and Private Sector	Rajasthan	463	Purposive-sampling	Education and SERVQUAL related to e-CRM practices
10.	Private sector bank	Kerala	400,	Random sampling	Gender and SERVQUAL related to e-CRM practices

11.	Both Public and Private Sector	New Delhi	363	Random sampling	E-CRM core services , quality service , website quality and security ,customer satisfaction , corporate strategy ,trustworthiness
12.	Both Public and Private Sector	Delhi NCR	300	Random sampling	ECRM (measured by customized products/ services, transaction security/ privacy, alternative payment methods, problem-solving, online feedback, and FAQs) on customer loyalty
13.	Both Public and Private Sector	Delhi NCR	200	Convenience sampling	E-CRM dimensions (Customized products/ services Transaction security/ privacy Alternative payment methods Problem solving Online feedback Frequently asked questions) & Customer satisfaction

14.	Axis Bank	New Delhi	363	Random sampling	promotional initiatives of e-CRM, Allegiance and relationship quality
15.	State Bank Of India	Virudhnagar	100	Simple Random sampling	demographic profile of customers, customer awareness on CRM policies, customer perception on CRM practices, and role of E-CRM measures Iin customer satisfaction
16.	Public Sector bank	Chennai City	150	Non-probability sampling	e-Service Quality , Employees Service Quality , Information Trust , Customer Satisfaction , e-CRM Performance
17.	Both Public and Private Sector	Delhi NCR	300	Purposive sampling technique	E-CRM , perceived usefulness ,perceived ease of use, , attitude towards using E-CRM, , behavioral intention of customers towards using E-CRM

18.	Both Public and Private Sector	Delhi NCR	750	Conve-nience sampling	Usage of digital payments channels, Adoption of Digital Payments according to Age Group, Use of Physical and Digital touch points for banking customers, Changing consumer behavior
19.	Both Public and Private Sector	Varanasi district	82	Conve-nience sampling	E-CRM ser-vices ,online customer satisfaction, online cus-tomer loyalty
20.	Private Sec-tor Bank	Pollachi Taluk.	120	Conve-nience sampling	Benefits enjoyed by the custom-ers while using e-CRM services
21.	Both Public and Private Sector	Chittoor District	120	Stratified random sampling	e-CRM and e-customer e-loyalty (electronic loyalty)
22.	Both Public and Private Sector	Delhi,	836	Purposive sampling technique	e-CRM, Customer Experience, Customer satisfaction

23.	Both Public and Private Sector	Delhi,	836	Purposive sampling technique	(E-CRM), customer loyalty , customer experience and customer satisfaction
24.	Both Public and Private Sector	Bhubaneswar city of Odisha	592	Rrandom sampling	ECRM techniques & customer satisfaction
25.	Public sector bank	Madurai city	150	Random sampling	ECRM, Customer perception, customer satisfaction
26.	Both Public and Private Sector	Delhi,	836	Purposive sampling technique	E-CRM) , Customer Loyalty, Customer Satisfaction
27.	Both Public and Private Sector	India	177	Stratified random sampling	e-CRM Dimensions

11 Testing Weak form Market Efficiency in Crytocurrency Market

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Abstract

The study examines weak form market efficiency of cryptocurrency market considering 3 top cryptocurrenies based on market capitalization namely Bitcoin, Ethereum and Tether.

Various statistical tools are conducted like, to test the normality of the data Jarque bera test was conducted and results shows data is not normally distributed, Hence non- parametric test i.e., Run test seems to be appropriate to test the randomness of the price series and from the results it is evident that bitcoin and ethereum market is weak form market efficient as the prices are random and it is difficult for the investors to predict the future prices based on past prices. Whereas this is not the same for Tether market as it is inefficient. Before conducting run test a series of test were conducted such as Augmented Dickey-Fuller test to check the stationarity in data and it is evident from the results that prices for bitcoin and ethereum are not stationary meaning prices cannot be forecasted whereas tether market prices possess stationarity. Autocorrelation test suggest that prices of tether market are fairly correlated at all the lags which again supports non-randomness in data and stationarity. Predictability is possible for tether market prices as the market is inefficient and due to this reason ARCH Test is conducted to predict the conditional volatility.

Keywords: *Cryptocurrency, Weak form Market Efficiency, Augmented Dickey Fuller Test, Auto-Correlation, Run test, ARCH Model*

1. INTRODUCTION

A market is said to be efficient when the prices reflect all the relevant information (**Fama,1970)**, The efficient market hypothesis (EMH) asserts that financial markets are efficient (**Martin Sewell, 2011)**. The efficient market hypothesis or random walk theory gives a statement that the share prices are able to reflect all the pertinent information i.e. the share prices in any event get adjusted with recent information preliminary to any reaction of the investor. With reference to this theory, it states if any investor is able to predict the share prices, then it means the markets are not efficient. This is the reason as to why the stocks are traded in fair value in the stock exchanges and investors will not be able to predict and make such decisions in buying the securities (**Chaudhary, 2020)**

In the present financial market's scenario, cryptocurrencies especially Bitcoin is the most important example that have been gaining attention by theorists, analysts, traders and regulators. Additionally, they have recently been used as a new class of financial assets due to their recent exponential growth in value, which coincides with greater media and financial literature attention**. (Aylin Aslana,b, Ahmet Sensoy,2019).**

Identifying weak form efficiency of the cryptocurrency market is important because Cryptocurrency is an unprecedented form of financial asset. Unlike an underlying assets like shares or debentures cryptocurrencies do not pay any dividends or interest and do not have any balance sheets and cash flows to know its financial performance. Therefore, Stock price fair value models such as dividend discount model and capital asset pricing model are not applicable to estimate fair value of cryptocurrency. As a result, it makes sense for investors to rely on estimates of the cryptocurrency's fair value that are based on historical returns and noteworthy occurrences like the listing of Bitcoin futures on the Chicago Board Options Exchange (CBOE). **(Ryang, Kyu Park, Mackenzie, 2019)**

2. LITERATURE REVIEW

Efficiency of the cryptocurrency market as a whole through market portfolios. The findings of a battery of reliable experiments indicate that the digital currency market is weak-form inefficient **(David et.al 2019**). There is a strong relationship between liquidity and volatility among cryptocurrencies (**Wang Chun Wei, 2018**) In particular, high-frequency traders who use algorithmic trading strategies can generate abnormal profits in the selected cryptocurrencies by trading on 1 min or 60 min basis. On the other hand, sophisticated traders

placing orders within 5- or 10 min scales are less likely to beat the market. In addition to this, to protect unsophisticated traders and to prevent adverse consequences of long memory patterns on them, financial market regulators may consider analyzing these markets at different frequencies and introduce regulations to improve efficiency levels (**Aylin Aslana,b, Ahmet Sensoy,2019).**

Weak-form efficiency that shows whether prices reflect the information contained in the past series of prices has been tested in the great majority of the thirty-eight studies under scrutiny. The largest number of academic papers examined advocate that the EMH does not hold for crytocurrency (**Nikolaos A. Kyriazis, 2019).** The Bitcoin is incredibly inefficient. Since it is an emerging market-like investment asset that is very young and yet in its infancy, therefore the inefficiency finding is not surprising. As more investors research and trade Bitcoin, it will eventually become more efficient (**Andrew Urquhart,2016).** Cryptocurrency commodities' price formation does not exhibit any clear pattern. Although Engel's ARCH test rejects the null that variance is not conditionally heteroskedastic, **(Ryang, Kyu Park, Mackenzie, 2019)**

Although a considerable amount of research is carried out on EMH and weak form market efficiency of stock market. Testing the weak form market efficiency of cryptocurrency is also conducted but every study states that cryptocurrency is weak form inefficient, This study is an attempt to contribute to the existing literature and to evaluate the whether, with the passage of time cryptocurrency is still inefficient or not.

3. METHODOLOGY

The study intends to know the weak form market efficiency of cryptocurrency market and if the market is inefficient then to predict the volatility of prices using ARCH test. In order to know the randomness of data, a series of test is carried which is explained below and top 3 cryptocurrencies namely Bitcoin, Ethereum and Tether are considered for the study based on their market capitalization. The period of the study is for 10 years starting from 2010 to 2020. The study is based on market price, the data is collected from investing.com website.

3.1 Test For Normality

Jarque-Bera test: This test matches the skewness and kurtosis of data to see if it matches a normal distributions

3.2 Augmented Dickey-Fuller Test

This test is used to determine whether a time series possess a unit root. A unit root is necessary condition to check random walk (Cumhur Buguka, B. Wade Brorsen, 2003)

The ADF test model used is with constant and no trend

$$\Delta y_t = \alpha + \gamma y_{t-1} + \sum_{s=1}^{m} a_s \Delta y_{t-s} + v_t$$

where Δ represents first differences and Yi is the log of the price index. The length of k is selected with the Akaike Information Criterion (AIC) and should be large enough to achieve a

white noise structure in v_t . The ADF test statistic is the ratio of the estimated b to its calculated standard error obtained from an OLS regression. The null hypothesis is that b equals 0. The null hypothesis is rejected if the pseudo t statistic is larger than the critical value. The test statistic does not have a t distribution and a table of significance levels hasbeen provided by MacKinnon (1991) **(Cumhur Buguka, B. Wade Brorsen, 2003)**

3.3 Autocorrelation Test

Correlogram is a commonly used tool for checking randomness in a data set. If random, autocorreation should be near zero for any all time-lag separations. If non-random, then one or more of the autocorrelations will be significantly non-zero.

The autocorrelation **(Box and Jenkins, 1970)** function is used detect non-randomness in data and identify an appropriate time series model if the data are not random. the lag *k* autocorrelation function is defined as

$$rk = \frac{\sum N - ki = 1(Y_i - Y^-)(Y_i + k - Y)}{\sum Ni = 1(Y_i - Y^-)2}$$

Where, rk is the autocorrelation co-efficient and N is the number of observation, K is the lag of the period, Statistically, the hypothesis of weak-form efficiency should be rejected if price changes are correlated and rk is significantly different from zero **(Gimba, Victor K. (2012)**

3.4 Runs Test: A statistical test used to determine randomness in the data series which depends on the number and nature of runs exist in the data. A run can be well-defined as a sequence of consecutive price changes with the same sign. Therefore, price changes of stocks can be classified into three kinds of run: upward run (prices go up), downward run (prices go down) and flat run (prices do not change) ,**Gimba, Victor K. (2012)**

The null hypothesis in this test assumes that samples are random, Relevant test statistics calculated as :

$$Z = \frac{r - \mu r}{\sigma r}, \text{ where } \mu r = \frac{2n1n2}{n1 + n2} + 1 \text{ and}$$

$$\sigma r = \sqrt{2n1n2 \frac{2n1n2 - n1 - n2}{(n1 + n2)^2 (n1 + n2 - 1)}}$$

R represents number of runs and n1, n2 represents number occurrence.

4. EMPIRICAL RESULTS & INFERENCES:

Table 4.1 Descriptive Statistics of crypto currencies

Sample	N	Mean	Median	S.D	Skewness	Kurtosis
Bitcoin	3821	3028.6	484.60	4431.3	1.7160	3.2352
Ethereum	1758	249.12	201.09	229.23	1.5430	2.9350
Tether	1357	0.99960	1.0006	0.011748	-3.3572	21.192

From the above table it could be inferred that the average price for Bitcoin is comparatively higher than other two crypto currencies, similarly the positional average is also greater for Bitcoin compared to other two samples. Sufficient amount of deviation from mean and median could be observed which is captured by standard deviation and the direction of variation is measured by skewness which is not equal to zero in all the three types of crypto currencies which means that distribution is asymmetrical. The extent to which the distribution is flat or peak is measured through kurtosis, For Bitcoin the distribution follows a normal curve as the value is 3, whereas for the Ethereum the curve is slightly flat and for tether the curve is peaked, this could be measured through the kurtosis value.

4.2 Jarque-Bera Test

H_0 = The data is normally distributed (Skewness = 0 & Kurtosis = 0)

H_1 = The data does not come from a normal distribution (Skewness ≠ 0 & Kurtosis ≠ 0)

Table 4.3 Normality Test using Jarque-Bera test

Crypto currency	Frequency	Test Statistics (JB)	p- value	Null Hypothesis
Bitcoin	Daily	3541.63	0	Reject
Ethereum	Daily	1328.61,	3.13123e-289	Reject
Tether	Daily	27941.9	0	Reject

Tested at 5% significance level.

Since the Shapiro Wilk Test contains a weakness of not accurately measuring the normality in case of larger observation, The Jarque- Bera Test is carried which is a goodness –of –fit test for normal distribution. In order to obey that the data has normality, the p value must be more than the chosen alpha level that is significance level of 0.05, But here we tend to reject the null hypothesis and accept the alternative hypothesis as the p- value is less than 0.05 and Hence there is an evidence that the prices of all the three crypto currencies for the period of ten years are not normally distributed. This is also confirmed from descriptive statistics in the Table 1.

4.3 Augmented Dickey-Fuller Test

H_0 = The test has unit root

H_a= the data series are stationary

Table 4.4 ADF

Cryptocurrency	Frequency	Test Statistics with constant (lags)	P value	Null Hypothesis
Bitcoin	Daily	2.31913	1	Accept
Ethereum	Daily	-1.79012	0.3859	Accept
Tether	Daily	-7.51019	1.286e-011	Reject

When ADF test(with constant) assuming 29 lags iterations for Bitcoin and Ehereum and 24 lag iteraton for Tether is carried out, then the data series suggest that for Bitcoin and Ethereum data series does not possess stationarity as the p value is more than 0.05. For Tether the data series possess stationarity as the p value is less than 0.05. Hence at 5% significance level the null hypothesis (a=1) is rejected and it can be inferred that prices of Tether are predictable and can be modeled or forecasted.

4.4 Autocorrelation Test

H_0 = There is no significant autocorrelation

H_1 = There is a significant autocorrelation

Table 4.5 Autocorrelation function and Partial Auto-correlation function for bitcoin_Prices

***, **, * indicate significance at the 1%, 5%, 10% levels

using standard error 1/T^0.5

LAG	ACF		PACF		Q-stat.	[p-value]
1	0.9939	***	0.9939	***	3777.6002	[0.000]
2	0.9879	***	0.0049		7510.7939	[0.000]
3	0.9819	***	-0.0050		11199.6442	[0.000]
4	0.9764	***	0.0341	**	14847.7768	[0.000]
5	0.9709	***	0.0071		18456.2499	[0.000]
6	0.9655	***	0.0021		22025.7036	[0.000]
7	0.9601	***	0.0005		25556.5035	[0.000]
8	0.9554	***	0.0503	***	29053.4904	[0.000]
9	0.9509	***	0.0208		32518.7547	[0.000]
10	0.9466	***	0.0080		35953.2908	[0.000]
11	0.9417	***	-0.0396	**	39353.6057	[0.000]
12	0.9373	***	0.0313	*	42722.6133	[0.000]
13	0.9325	***	-0.0280	*	46058.0263	[0.000]
14	0.9276	***	-0.0139		49359.2523	[0.000]
15	0.9229	***	0.0244		52628.3841	[0.000]

Significant autocorrelation can be observed at 1st lag (r= 0.9939 and Q statistics = 3777.6 and 8th lag (r=0.05 and Q statistics= 29053.4). Prediction of the present value can be done based on 1st lag to a certain extent since the correlation value is really low. Supporting randomness again even though the stationarity is there.

Table 4.6 Autocorrelation Function and Partial Auto-correlation Function for Autocorrelation Function for Ethereum_Prices

***, **, * indicate significance at the 1%, 5%, 10% levels
using standard error 1/T^0.5

LAG	ACF		PACF		Q-stat.	[p-value]
1	0.9944	***	0.9944	***	1741.1755	[0.000]
2	0.9884	***	-0.0334		3462.4201	[0.000]
3	0.9825	***	0.0115		5164.3680	[0.000]
4	0.9766	***	-0.0150		6846.6823	[0.000]
5	0.9715	***	0.0782	***	8512.5625	[0.000]
6	0.9662	***	-0.0327		10161.1404	[0.000]
7	0.9600	***	-0.0741	***	11789.6259	[0.000]
8	0.9539	***	0.0032		13398.2964	[0.000]
9	0.9483	***	0.0564	**	14989.2893	[0.000]
10	0.9433	***	0.0341		16564.2781	[0.000]
11	0.9388	***	0.0321		18125.0898	[0.000]
12	0.9337	***	-0.0525	**	19669.9070	[0.000]
13	0.9288	***	0.0337		21199.5028	[0.000]
14	0.9242	***	0.0246		22714.9516	[0.000]
15	0.9194	***	-0.0250		24215.6060	[0.000]

Significant autocorrelation can be observed at 1st lag (r= 0.9944 and Q statistics = 1741.17 and 5th lag (r=0.0782 and Q statistics=8512.56) and 7th lag (r=-0.0741 and Q statistics = 11789.62) Prediction of the present value can be done based on 1st lag, 5th lag and 7th lag to a certain extent since the correlation value is really low. Supporting randomness again even though the stationarity is there.

Table 4.7 Autocorrelation function and Partial Auto-correlation function Autocorrelation function for Tether_Prices

Autocorrelation function for tether

***, **, * indicate significance at the 1%, 5%, 10% levels

using standard error 1/T^0.5

LAG	ACF		PACF		Q-stat.	[p-value]
1	0.8903	***	0.8903	***	1077.8674	[0.000]
2	0.8469	***	0.2621	***	2054.0821	[0.000]

3	0.8026	***	0.0669 **	2931.4805	[0.000]
4	0.7701	***	0.0657 **	3739.8998	[0.000]
5	0.7474	***	0.0795 ***	4501.8744	[0.000]
6	0.7169	***	0.0008	5203.4939	[0.000]
7	0.6633	***	-0.1332 ***	5804.5977	[0.000]
8	0.6163	***	-0.0658 **	6323.8719	[0.000]
9	0.5600	***	-0.0963 ***	6752.8279	[0.000]
10	0.5306	***	0.0497 *	7138.2477	[0.000]
11	0.4903	***	-0.0290	7467.6407	[0.000]
12	0.4514	***	-0.0226	7747.0444	[0.000]
13	0.4153	***	0.0138	7983.7285	[0.000]
14	0.3790	***	0.0074	8180.9522	[0.000]
15	0.3578	***	0.0691 **	8356.8888	[0.000]

Significant autocorrelation can be observed at 1st lag (r=0.8903 and Q statistics = 1077.8, 2nd lag (r=0.2621 and Q statistics=2054.08), 3rd lag, 5th lag, 7th lag, 8th lag, 10th lag and 15th lags. Prediction of values is based on this lags which also supports non-randomness of tether prices.

4.8 Run Test

H_0 = Daily Prices are random

H_a= Daily Prices are not random

Cryptocurrency	Frequency	Number of Runs	Test Statistics	P value	Null Hypothesis
Bitcoin	Daily	1848	-2.0389	0.054601	Accept
Ethereum	Daily	950	1.53346	0.125162	Accept
Tether	Daily	760	4.40094	1.07783e-005	Reject

The null hypothesis for Bitcoin is accepted at 0.05 level of significance. It implies that the daily prices of Bitcoin appear to be random.

The null hypothesis for Erhereum is accepted at 0.05 level of significance. It implies that the daily prices of Erhereum appear to be random.

The null hypothesis for Tether is rejected at 0.05 level of significance. It implies that the daily prices of Tether does not appear to be random.

When the test statistics are taken into consideration, they are neither very high nor very low, which signifies the existence of a very low correlation.

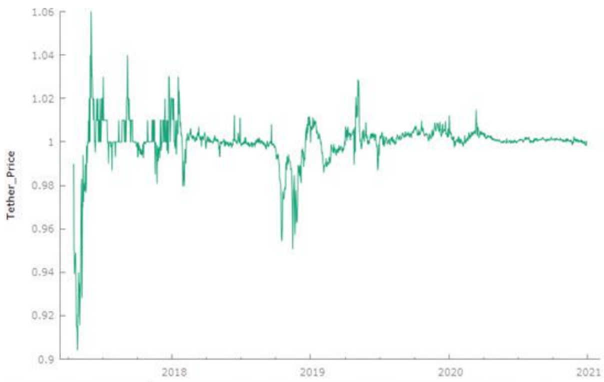

Figure 4.1 Time Series Plot

4.9 ARCH TEST FOR TETHER PRICE

Test for ARCH of order 7

	coefficient	std. error	t-ratio	p-value	
alpha(0)	9.35836e-06	7.92636e-06	1.181	0.2379	
alpha(1)	0.657679	0.0263469	24.96	2.79e-113	***
alpha(2)	0.280705	0.0312883	8.972	9.61e-019	***
alpha(3)	−0.190886	0.0320074	−5.964	3.15e-09	***
alpha(4)	0.0583544	0.0320380	1.821	0.0688	*
alpha(5)	0.122857	0.0315979	3.888	0.0001	***
alpha(6)	0.225850	0.0306581	7.367	3.04e-013	***
alpha(7)	−0.249272	0.0253982	−9.815	5.25e-022	***

Null hypothesis: no ARCH effect is present

Test statistic: LM = 1089.04

with p-value = P(Chi-square(7) > 1089.04) = 6.88663e-231

In order to conduct autoregressive conditional heteroscedasticity, Stationarity Test, Time Series and Ordinary Least Square Model is carried out.

It could be observed from Time series plot that tether cryptocurrency is experiencing volatility in their prices. That is high changes are followed by high changes and low changes are followed by low changes which means there is volatility clustering. Secondly stationarity of data is also checked refer (Table 4.4) stating for tether prices confirms stationarity, and the Ordinary lease square Model is carried out in order to conduct ARCH Test. The ordinary lease square models also supports ARCH test (with statistical test 313 and p value= 0.0000). The ARCH Model rejects the null hypothesis stating there is a presence of ARCH effect which means prices for future may follow the previous prices.

5. CONCLUSIONS

The major findings of the study is, crytocurrency market with reference to bitcoin and ethereum is becoming weak form efficient and it is advisable for the investors to not to make investments in these market by merely using technical analysis. Since the market is growing efficient past prices may not be the criteria to decide on investments, Although fundamental analysis would be difficult for crytocurrency market as there is no balancesheet but they can consider other factors as number of active address on a block chain, Transaction count and transaction value can be some of the parameters to decide on investments in bitcoin and ethereum market. Whereas Tether market is still observed to be market inefficient and this is very evident that investors can predict the future market prices based on previous price and ARCH test also proves that future volatility will follow current volatility, hence there is possibility for the investors to make abnormal profit in Tether market if investments are made at present.

Further study can be conducted on whether the cryptocurrency market is adaptive market hypothesis.

REFERENCES

1. https://in.investing.com/crypto/bitcoin/historical-dat
2. Wei, W. C. (2018). Liquidity and market efficiency in cryptocurrencies. *Economics Letters*, *168*, 21–24. https://doi.org/10.1016/j.econlet.2018.04.003
3. Gimba, V. K. (2012). Testing the weak-form efficiency market hypothesis: Evidence from Nigerian stock market. *CBN Journal of Applied Statistics*, *3*(1), 117-136.
4. Buguk, C., & Brorsen, B. W. (2003). Testing weak-form market efficiency: Evidence from the Istanbul Stock Exchange. *International review of financial analysis*, *12*(5), 579-590.
5. Mobarek, A., & Keasey, K. (2000, May). Weak-form market efficiency of an emerging Market: Evidence from Dhaka Stock Market of Bangladesh. In *ENBS Conference held on Oslo* (pp. 1-30). Aslan, A., & Sensoy, A. (2020). Intraday efficiency-frequency nexus in the cryptocurrency markets. *Finance Research Letters*, *35*(September). https://doi.org/10.1016/j.frl.2019.09.013
6. Kyriazis. (2019). A Survey on Efficiency and Profitable Trading Opportunities in Cryptocurrency Markets. *Journal of Risk and Financial Management*, *12*(2), 67. https://doi.org/10.3390/jrfm12020067
7. Urquhart, A. (2016). The inefficiency of Bitcoin. *Economics Letters*, *148*, 80–82. https://doi.org/10.1016/j.econlet.2016.09.019
8. Ryang, K., & Park, M. (2019). *Cryptocurrency Market and Weak Form Efficiency*. *July*.
9. Hu, Y., Valera, H. G. A., & Oxley, L. (2019). Market efficiency of the top market-cap cryptocurrencies: Further evidence from a panel framework. *Finance Research Letters*, *31*(February), 138–145. https://doi.org/10.1016/j.frl.2019.04.012
10. Vidal-Tomás, D., Ibáñez, A. M., & Farinós, J. E. (2019). Weak efficiency of the cryptocurrency market: a market portfolio approach. *Applied Economics Letters*, *26*(19), 1627–1633. https://doi.org/10.1080/13504851.2019.1591583
11. Buguk, C., & Brorsen, B. W. (2003). Testing weak-form market efficiency: Evidence from the Istanbul Stock Exchange. *International Review of Financial Analysis*, *12*(5), 579–590. https://doi.org/10.1016/S1057-5219(03)00065-6
12. Vidal-Tomás, D., Ibáñez, A. M., & Farinós, J. E. (2019). Weak efficiency of the cryptocurrency market: a market portfolio approach. *Applied Economics Letters*, *26*(19), 1627–1633. https://doi.org/10.1080/13504851.2019.1591583

13. Mobarek, A., & Fiorante, A. (2014). The prospects of BRIC countries: Testing weak-form market efficiency. *Research in International Business and Finance*, *30*(1), 217–232. https://doi.org/10.1016/j.ribaf.2013.06.004
14. Urquhart, A., & Mcgroarty, F. (2016). PT. In *International Review of Financial Analysis*. Elsevier B.V. https://doi.org/10.1016/j.irfa.2016.06.011
15. Urquhart, A., & Mcgroarty, F. (2016). PT. In *International Review of Financial Analysis*.
16. Elsevier B.V. https://doi.org/10.1016/j.irfa.2016.06.011
17. Urquhart, A., & Hudson, R. (2013). International Review of Financial Analysis Ef fi cient or adaptive markets ? Evidence from major stock markets using very long run historic data. *International Review of Financial Analysis*, *28*, 130–142. https://doi.org/10.1016/j.irfa.2013.03.005
18. *Dimri Varun*. (2020). *International Research Journal of Management Sociology & Humanities,* A Study on the Weak Form Efficiency of Chemicals sector in BSE 11(1), 64–73.
19. *Chaudhary Robin (2020*. *International Research Journal of Management Sociology & Humanities,* A study on the Weak Form Efficiency of Automotive sector in NSE, *ISSN 2277 – 9809.*
20. U. Mukhopadhyay, A. Skjellum, O. Hambolu, J. Oakley, L. Yu and R. Brooks, "A brief survey of Cryptocurrency systems," 2016 14th Annual Conference on Privacy, Security and Trust (PST), 2016, pp. 745-752, doi: 10.1109/PST.2016.7906988.
21. Chen, C. P., & Metghalchi, M. (2012). Weak-form market efficiency: Evidence from the Brazilian stock market. *International Journal of Economics and Finance*, *4*(7), 22-32.
22. Mollah, A. S. (2007). Testing weak-form market efficiency in emerging market: evidence from Botswana Stock Exchange. *International Journal of Theoretical and Applied Finance*, *10*(06), 1077-1094.
23. Mishra, P. K. (2011). Weak form market efficiency: Evidence from emerging and developed world. *The Journal of Commerce*, *3*(2), 26.
24. Gupta, R., & Basu, P. K. (2007). Weak form efficiency in Indian stock markets. *International Business & Economics Research Journal (IBER)*, *6*(3).
25. Köchling, G., Müller, J., & Posch, P. N. (2019). Price delay and market frictions in cryptocurrency markets. *Economics Letters*, *174*, 39-41.
26. Kyriazis, N. A. (2019). A survey on efficiency and profitable trading opportunities in cryptocurrency markets. *Journal of Risk and Financial Management*, *12*(2), 67.

27. Kang, H. J., Lee, S. G., & Park, S. Y. (2021). Information Efficiency in the Cryptocurrency Market: The Efficient-Market Hypothesis. *Journal of Computer Information Systems*, 1-10.

28. Zhang, W., Wang, P., Li, X., & Shen, D. (2018). The inefficiency of cryptocurrency and its cross-correlation with Dow Jones Industrial Average. *Physica A: Statistical Mechanics and its Applications*, *510*, 658-670.

29. Mensi, W., Lee, Y. J., Al-Yahyaee, K. H., Sensoy, A., & Yoon, S. M. (2019). Intraday downward/upward multifractality and long memory in Bitcoin and Ethereum markets: An asymmetric multifractal detrended fluctuation analysis. *Finance Research Letters*, *31*, 19-25.

30. Grobys, K., Ahmed, S., & Sapkota, N. (2020). Technical trading rules in the cryptocurrency market. *Finance Research Letters*, *32*, 101396.

31. Chu, J., Zhang, Y., & Chan, S. (2019). The adaptive market hypothesis in the high frequency cryptocurrency market. *International Review of Financial Analysis*, *64*, 221-231.

12

Awareness and Impact of Women Empowerment Schemes With Special Reference to Tamil Nadu

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Abstract

Globally, women continue to face discrimination and exploitation. Social institutions, cultural norms, and value systems have a major part in shaping women's roles and social situations in Tamil Nadu. The Indian Constitution guarantees equality to women belonging to Scheduled castes and prohibits discrimination in any form. Economic independence, which is the state of having access to and control over resources for production, is the foundation of and support for the empowering process. It also contains several gender budgeting and component plans that reinforce one another. Women's organisations in India are changing the social landscape for women. The present study is to assess the awareness and benefits accrued of central govt and state government of Tamilnadu schemes on women. For the same, as many 100+ samples were collected from different parts of tamilnadu using structured questionnaire. Percentage analysis, Correlation, ANOVA *was worked out to draw meaningful inferences. The study discovered a statistically significant association between the central government's schemes and those of the government of Tamilnadu, as well as between the schemes' beneficiaries. Based on ANOVA, there is no statistically significant variation in the awareness of different schemes, central schemes, beneficiaries, and government of Tamilnadu schemes across the groups or within the groupings. However, the standard of living for women has significantly improved as a result of various government programmes, incentives, and schemes at the federal and state levels. However, these programmes and schemes are not well known, nor do the recipients know what benefits they may be eligible for or how much of a benefit they may receive.*

Keywords: *Women empowerment, Bachao Beti Padhao (BBBP), One Stop Centre (OSC), Universalization of Women Helpline, Child Protection Services Scheme, Scheme for Adolescent Girls (SAG), Swadhar Greh Scheme, Ujjawala Scheme*

I. INTRODUCTION

Empower Women, Empower the World!

India is poised for expansion, with women making up 48.4% of the population (men make up 51.6%). Women also contribute significantly to the country's economy. Indian women continue to struggle against gender inequity and patriarchy. When it comes to the Indian labour market, women's inclusion is also crucial. Rural women still have to struggle for their freedom, basic comforts, and equal opportunity, even if metropolitan women are competing for top positions and decision-making authority in the business world. In India, the adult male population has a literacy rate of 80.95%, while the female population has a dismal low of 62.84%. In rural India, women typically rely on their husbands for financial assistance and lack financial freedom for the bulk of their lives. They also lack access to basic formal education. In addition, Indian rural women have higher rates of spousal violence and abuse than their metropolitan counterparts.

Giving women the chance to participate in economic and social life across all sectors is essential for achieving the fifth Sustainable Development Goal (SDG 5), which prioritises gender equality and the empowerment of all women and girls by 2030, as well as for strengthening economies in the wake of the Covid-19 pandemic. This is particularly important in India, where there are still strong social norms and attitudes regarding women's roles and choices, along with high rates of spousal violence 29.3% of married women between the ages of 18 and 49, according to the most recent National Family Health Survey (NFHS-5) for the years 2019–21 and other domestic abuse. In addition to providing a wealth of health measurements, the NFHS-5 dataset highlights government initiatives important to a respectable standard of living in India.

India's History of Women's Empowerment

Women's empowerment has a long history in India. Prominent figures in the history of social reform in India, like Swami Vivekananda, Raja Ram Mohan Roy, Acharya Vinobha Bhave, and Ishwar Chandra Vidyasagar, dedicated their lives to improving the lot of women in their country and banning practices such as child marriage and sati. The Indian National Congress, one of the country's first political parties, issued a statement advocating for women's political rights in 1917.

The Indian constitution was well-integrated when it came into force in 1950, with a focus on women's emancipation. A few examples of these include Article 14's guarantee of women's equality, Article 15(1)'s prohibition of gender discrimination, and Article 15(3)'s power for the state to enact affirmative action policies that assist women. The few specific laws dealing to women's rights that the Indian Parliament has adopted are the Maternity Benefit Act of 1961, the Equal Remuneration Act of 1976, and the Sexual Harassment of Women at Workplace (Prevention and Protection Act) of 2013. In addition, a national policy for women's empowerment was introduced by the Indian government in 2001. Improving the legal framework with the ultimate goal of eliminating all types of discrimination against women was one of its numerous objectives. But India still has a long way to go before women can live as freely and use their fundamental rights as men. Gender inequality persists in India's urban and rural areas, despite the country's constitution guaranteeing equal rights to men and women.

Women Empowerment through Various Schemes Union Government

The Indian government has put in place a number of programmes to give women more influence through initiatives in the fields of politics, economics, education, and society. These include the National Social Assistance Programme (NSAP), Samagra Shiksha, the Pradhan Mantri Awas Yojana, the Babu Jagjivan Ram Chhatrawas Yojna, the Scheme of National Overseas Scholarship, and the Swacch Vidyalaya Mission. Through Women Industrial Training Institutes, National Vocational Training Institutes, and Regional Vocational Training Institutes, the government offers training to improve the employability of female workers. The goal of the Skill India Mission is to improve economic productivity by increasing women's participation in inclusive skill development. The POSHAN Abhiyaan, Anganwadi Services Scheme, Pradhan Mantri Matru Vandana Yojana (PMMVY), Beti Bachao Beti Padhao (BBBP), One Stop Centre (OSC), Universalization of Women Helpline, Child Protection Services Scheme, Scheme for Adolescent Girls (SAG), Swadhar Greh Scheme, Ujjawala Scheme, and Working Women Hostel are just a few of the initiatives the Ministry of Women and Child Development (MWCD) has implemented to empower women and girls in the nation. The Emergency Response Support System (ERSS), Safe City Projects, Sexual Assault Evidence Collection (SAEC) Kits, State of the Art DNA Laboratory, assistance to 24 States/UTs, Fast Track Special Courts, Anti Human Trafficking Units, Women Help Desks at Police Stations, Investigation Tracking System for Sexual Offences, and a National Database of Sexual Offenders are just a few of the programmes and schemes that the Central Government has put into place under the Nirbhaya Fund. The Bureau of Police Research and Development (BPR&D) has also started a number of projects, such as programmes for medical, prosecution, and investigation officers to enhance their knowledge and abilities. The National Institute of Mental Health and Neuro Sciences (NIMHANS) and the Ministry of Women and Child Development (MWCD) have teamed to offer training to One Stop Centre (OSC) employees throughout India. The 'Stree Manoraksha' project seeks to assist women who are victims of abuse and hardship.

More than 2.6 crore pregnant and nursing women are receiving assistance from the initiatives, which also include improving the sex ratio at birth, increasing the number of girls enrolled in primary and secondary education, operationalizing 708 OSCs, WHL in 34 states and UTs, functionalizing 107 Ujjawala homes, Swadhar Greh, 450 Working Women Hostels, and implementing gender budgeting in 41 Ministries and Departments. Women's position has improved, according to the National Family Health Survey-5 (NFHS-5), with more of them having bank accounts, owning mobile phones, and taking part in important household decisions. A comprehensive programme for women's empowerment called "Mission Shakti" was recently introduced by the Ministry.

II. LITERATURE SURVEY

The goal of Ruchira Sen's (2008) study was to use education to empower women and girls. The study is predicated on data gathered from numerous articles, the Mid Term Appraisal of the Tenth Five Year Plan, and the Right to Information Act. The study looks at the level of local involvement, aims and objectives, and implementation strategies of the schemes. It also discusses the causes of gender bias and factors that increase girls' school participation. The paper suggests a two-pronged strategy involving a publicity campaign to promote the benefits of educating girls and the formation of parent associations to ensure better teaching standards and service delivery. It emphasizes the importance of addressing the high opportunity costs of girls' education and involving the community in mobilizing parents. The paper concludes with recommendations for more efficient implementation and the need for regular evaluation and criticism of the schemes. The following schemes have implemented to uplift women in Indian society. A number of programmes have been put in place by the Ministries of Women and Child Development and Human Resource Development (MHRD) to empower women and girls via education. These include the Kishori Shakti Yojana, the Mahila Samakhya Programme, the Balika Samriddhi Yojana, the Integrated Child Development Services (ICDS), the Kasturba Gandhi Balika Vidyalayas (KGBVs), the Sarva Shiksha Abhiyan (SSA), which offers universal elementary education, and the Education

Guarantee Scheme, which provides vocational and non-formal education to out-of-school children. These programmes seek to close the gender gap in education and advance women's and girls' educational empowerment. The funding pattern for Centrally Sponsored Schemes for girls and women is complex, with a significant allocation of funds to the SSA and a complex process of fund disbursement.

The goal of the Kasturba Gandhi Balika Vidyalaya (KGBV) and Sarva Shiksha Abhiyan (SSA) programmes is to empower women and girls via education. The SSA wants every child to be enrolled in the schooling system by 2003 and complete five years of schooling by 2007, bridging the gap between out-of-school children and mainstream education. It also focuses on establishing Non-Formal Schools that provide bridge courses and vocational training. The implementation strategies involve local participation, establishing functional facilities, and organizing gender sensitizing activities for teachers.

The KGBV scheme focuses on providing quality education to girls from disadvantaged backgrounds. It aims to improve the educational and socio-economic status of girls, reduce the opportunity cost of girls' education, and increase the benefits of schooling. The scheme establishes residential schools in areas with a high concentration of girls from marginalized communities, providing free education, boarding, and lodging facilities. It also focuses on life skills education, vocational training, and health services.

S. Parsuraman and Medha Somaiya(2016) studied Economic Empowerment of Women Promoting Skills Development in Slum Areas, study aimed at assessing the implementation of skill development programs for slum women. The study aims to identify gaps in employability, assess policies, map needs, and suggest remedies for financial and social empowerment. It also focuses on state-run programs and best practices. The Ministry of Women and Child Development has approved the EEWSD Study, which focuses on gender, food security, poverty reduction, and sustainable growth in order to eliminate barriers to women's economic empowerment.A study conducted in ten Indian cities—Ahmedabad, Bhubaneswar, Chennai, Delhi Metro Region, Guwahati, Hyderabad, Kolkata, Jaipur, Lucknow, and Mumbai—among 1004 women aged 15 to 35 identified best practices and developed a hybrid model for skill training in slums. The study revealed a shift in aspiration for future training among women, with a decrease in demand for traditional trades like beauty care and tailoring. The study also found that women interested in self-employment often integrated soft skills training into their training, such as computer operations. The age group of 15-19 was less likely to complete skills training. The job experience of women affected their desire for technical education; those who had never worked before training felt that having access to vocational education would elevate their social and economic standing. The study also emphasised how peers can serve as incentives for skill development. The survey also discovered that women's financial decision-making was not entirely their own. The survey also made clear how the skills training module has to be modified, as only 11% of women expressing dissatisfaction with the current training program. The study recommended that, training trainees should receive handholding for two to three years post-training. Financial inclusion policies should be integrated with skill development programs for easier access to credit. A functional placement cell can improve women's participation and job security. Regular interactive sessions with urban poor can involve women in household decisions. Mandatory soft skills training can enhance self-confidence. Regular audits and third-party monitoring are necessary for quality training dissemination.

Malipatil K.S. and Rashmi Rani Agnihotri H.R. (2017) highlighted the importance of women's empowerment in India, highlighting the inherent superiority complex, high levels of household duties, and cultural preference for boys over girls in education and a healthy diet. Solutions to women's empowerment include mass communication, awareness of responsibilities, compiling national data, and educating society about gender equality and children's rights.

According to Neha Kumar et al. (2018), there is a clear and positive association between SHG membership and a number of measures of political involvement in India. Members of Self-Help Groups (SHGs) have a higher probability of having cast ballots in the previous election, both because they felt it was their right to do so and on their own initiative. These women are also more likely to trust that the gramme panchayat would act they are more likely to attend the gramme sabha as SHG members and to respond suitably to recommendations made by women and/ or the SHG. This final score shows both trust and confidence in the combined strength of women. SHG members are more likely than other members to be familiar with the housing plan (IAY) and the workfare scheme (MGNREGA) when it comes to their understanding of various entitlement schemes. We discover that SHG members are more likely to use some entitlement systems, notably MGNREGA, AAY, and IAY, even though their awareness of these schemes is equivalent to that of non-members. This implies that SHG members' collective strength, personal empowerment through mobility, or involvement in social audits with the SHG may enable them to apply their knowledge more effectively. Our findings also suggest that belonging to a self-help group (SHG) has a favourable effect on numerous social network outcomes. Members of Self-Help Groups (SHGs) are more likely to be acquainted with, socialise with, and converse with other women in their village about matters of importance such as health and nutrition. Based on our findings, women in Self-Help Groups (SHGs) were somewhat more likely to be able to borrow money from a nearby village, suggesting that social networks had an impact outside of their immediate community. SHG members are also more likely to be comfortable and confident while dealing with individuals outside of their homes, as seen by the fact that they are less likely to ask their husbands or other household members for permission to attend a village function. The findings are consistent with an expanding body of qualitative research on the function of SHGs in Indian government, participatory democracy, and collective social behaviour (Rao & Sanyal, 2010; Sanyal, Rao, & Prabhakar, 2015; Sanyal, Rao, and Majumdar 2015). SHG members have larger social networks and are more active in their local democratic government. One can experience associational living by joining a SHG, and this can boost confidence.

Sanyal, Rao & Prabhakar, 2015 examined 255 gramme sabha transcripts and discovered that women affiliated with microcredit SHGs participate in meetings more effectively than women who don't talk as much or bring up as many issues. Instead, they are able to frame the issue in terms of public goods, provide context for the issue, and demonstrate awareness of the accountability of panchayat and government officials. Based on our data, it appears that SHG women who take up themes on which they have common ground may have a better understanding and use of public entitlement schemes. This is in line with the findings of Sanyal, Rao, and Prabhakar (2015), who found that female SHG members who participate in gramme sabhas construct their narratives around common problems. Overall, our findings show that SHGs have the ability to empower women on an individual and group level, which may help improve public entitlement scheme governance, accountability, and understanding.

Over the past few decades, women's empowerment has gained significant attention everywhere, especially in India. Throughout history, prejudice against women and gender inequality have also persisted worldwide. The pursuit of gender equality by women is therefore a universal phenomenon. A vital tool for empowering women in the nation is skill and entrepreneurship, which raises family, economic, financial, and social status. It is reasonable to conclude from the research above that entrepreneurship promotes gender equality and raises women's standing in the family, community, and country as a whole. Skill development programmes and women's entrepreneurship schemes in India are still remarkably underdeveloped, despite the fact that the Maharashtra state government and MCGM have developed and implemented a number of supportive measures. The only municipal corporations in Maharashtra with separate budgets for gender to various skill and entrepreneurial projects are Mumbai and Pune Municipal Corporations. In order to ensure that women directly benefit from the scheme and that it is implemented more quickly, it is crucial to create specific programmes for the women's self-help groups at the municipal level. Since the state plan has been implemented more widely, it has a lesser influence than the programmes of the Mumbai Municipal Corporation. Because the majority of women-owned businesses are located in the unregistered sector, they are not eligible to receive government support. An evaluation of the effects of current programmes and policies may provide novel ways to support women entrepreneurs. Understanding the dynamics of women's entrepreneurship is a vast and complex topic that calls for extensive and comprehensive study efforts.

The study "Achieving Gender Equality through Women Empowerment in India in the Context of Sustainable Development" was conducted by Padmaja Tamuli and Kaushik Mishra (2023). Half of humanity's potential is attributed to women and girls, who make up 50% of the world's population, according to UN statistics. The fifth Sustainable Development Goal pertains to the achievement of gender parity and the empowerment of women. The literature that is currently available, however, suggests that a sizable gender gap acts as a barrier to sustainable development. According to the report, women cannot meaningfully participate in the political, social, economic, or environmental spheres until they have equal authority and status. Furthermore, acknowledging the efforts of men alone would not be sufficient to create sustained growth. In order to maximise the potential of the entire nation to achieve sustainable development, this study aims to call attention to policy makers and encourage them to commit to and strive towards women's empowerment. The subject of women's empowerment has been the subject of global discussion in recent decades. With one of the fastest growing economies and a large population, India has a lot riding on its ability to meet the SDGs by 2030. Gender inequality is one of the biggest obstacles facing India. According to studies, gender discrimination must be experienced by all Indian children from a young age, regardless of where they live. Every girl and boy has experienced discrimination, whether it is in their homes or communities, in textbooks, cartoon movies, mainstream films or television shows, or even among the carers. Even if women's education and basic health indices have improved significantly over the past ten years, policymakers must recognise that these factors cannot empower women on their own. Political and socioeconomic liberties are also essential for women to realise their full potential. Women, by nature nurturers, have the power to shape children's perspectives, make decisions at home, and motivate others around them to uphold morality, societal norms, and best practices. For every civilization to flourish, women's participation in politics is essential. Additionally, as development projects spread throughout the nation, natural resources are being used more voraciously than before, which has led to an increase in the scope and intensity of ecological movements in India since independence. Additionally, women have historically had a stronger bond with nature and have been instrumental in environmental conservation in India. Women need to be increasingly inspired to participate in and take leadership roles in both grassroots and policy-making initiatives.

In their 2023 study, Monika Agarwal and Perminder Jit Kour investigate how certain Science and Engineering Research Board (SERB) programmes affect the status of Indian women in the field of research and development. According to the research, women are equally represented in graduate and postgraduate programmes as male candidates, but their employment rate in universities and other higher education institutions is declining. The government has started a number of initiatives to assist scientific and technological research, including grants, scholarships, and programmes. The study also emphasises how important it is for institutions to help women scientists become more capable of doing cutting-edge technology research. The report makes recommendations for fields in which female researchers ought to be supported in their efforts to use science and technology to solve societal issues. The report also emphasises how important it is to address the gender gap in STEM programmes, PhD and postdoctoral programmes, faculty, and leadership roles.

Rahul Ramesh Bogam and associates (2023) looked into in the rural Mahabubnagar area of Telangana, India, elderly peasants are using social assistance programmes more frequently and are becoming more aware of them. Demographic shifts have led to an increase in India's elderly population. The economy becomes more and more important to older people's daily requirements. India's government uses social welfare schemes to help the economy. On the other hand, the main cause of the projects' low utilisation is a lack of knowledge. The goal of the current study was to investigate older individuals' awareness of social welfare programmes and their use of them, as well as the impact of educational interventions on this knowledge. An interventional study based in the community, carried out from July to December of 2022. In a rural block in Telangana State, India, a group of 839 seniors received a structured "TIV intervention" that included a "training module," "interactive sessions," and a "Village Health Meeting." Professionals in community health eagerly attended the workshops on sensitization. Trained social workers conducted face-to-face interviews with participants to complete pre- and post-intervention questionnaires. The TIV intervention significantly increased awareness and utilisation of social assistance schemes ($P < 0.001$, SD = 3.01 vs 1.21). Males, literates, socioeconomic groups 1 and 2, and people aged 60 to 70 had much higher levels of awareness of the schemes. Simple, cost-effective interventions can significantly increase knowledge and utilisation of social security services among the elderly. 'Traditional Village Meetings' might serve as an opportunity to educate community members about social welfare systems.

Rajeshwari M. Shettar's 2015 study on Women Empowerment in India reveals that despite government efforts, women still face challenges such as social evils and unequal gender norms. Access to education, employment, and changes in social structure are key enabling factors for women's empowerment. Despite globalization and liberalization, there is still a significant gap between those protected and those not, exacerbated by poverty and illiteracy. Ensuring women's health and safety is the first step towards empowerment. Improving women's economic and social status is necessary for women's empowerment. Enacting explicit social and economic policies can promote women's holistic development and help them realize their potential as strong, independent human beings. Empowering women is crucial for creating a sustainable planet. The report, produced by the The 2017 G20 Roadmap for Digitalization: Policies for a Digital Future is something that the Australian government hopes to promote, especially the portion that deals with promoting women's fair participation in the digital economy. In addition to the 2018 Argentinian G20 Presidency's endeavour to discuss policies, measures, and national practices that have bridged the digital gender divide, it identifies and analyses the factors at the core of the split. The paper draws attention to the growing gender gap in the digital sphere, highlighting the barriers that prevent women and girls from taking advantage of the opportunities presented by the digital transformation. These include cost, lack of education, innate biases, and socio-cultural norms. In order to address persistent structural biases and preconceptions that contribute to discrimination and violence against women, the research also emphasises the necessity of governmental measures. The paper has a strong emphasis on eradicating gender stereotypes, increasing awareness, and facilitating improved, safer, and more accessible use of digital resources. With fewer women in poor nations owning smartphones and having access to mobile internet, the gender gap in digital technology is growing. The gender disparity in Internet usage between developed and developing nations is the primary cause of this discrepancy. Digital platforms, digital financial services, mobile phones, and the internet provide women with leapfrog chances. These technologies can help close the gap by giving women access to general information, increased money, and work opportunities. Women currently tend to utilise fewer services than males and are less confident while using the internet, thus in order to close this gap, they need to use digital tools more frequently. In order to guarantee that people acquire the fundamental skills required for active engagement in the labour market and society, compulsory schooling is essential. Future expectations that are gender-specific must shift, and it is crucial to support female role models in STEM disciplines. Women are underrepresented in engineering, manufacturing, and construction (ICT) graduation programmes, and their average numeracy skills are lower than those of male graduates in these fields. For women and girls, increasing knowledge of educational options is crucial, and decreasing barriers to adult education is crucial for all workers, including women. The quality of a job must be matched by increased participation in the labour market, including through digital platforms. Policies that provide women with advanced numerical skills, management, communication, and self-organization skills, as well as those that encourage more women to enrol in STEM-related programmes and apprenticeships, can help close the gender pay gap. The number of women engaging in creative endeavours is rising, but because of sociocultural prejudices, the rate of increase is sluggish. Particularly in ICTs, the percentage of women participating in patenting activities has increased more quickly than the average of all patent applications. But before women are involved in half of all patented inventions inside the five major IP offices, it will take until 2080. Due to the greater influence and broader technological reach of women-only groups, diversity adds value to social and economic growth. The world of software is dominated by men, with women holding comparatively less significance. There is still a persistent gender disparity in entrepreneurship and venture capital investment, with males almost twice as likely to work for themselves and own companies that employ people. It is possible to make progress since venture capital firms that have at least one female partner are more likely to fund businesses led by female executives. In the G20 economies, further measures promoting gender equality are required.

Swarooprani. K (2023) studied Contribution of Government of India in Women Empowerment. “If you educate a man, you educate an individual, but if you educate a woman, you educate a family,” as Mahatma Gandhi so eloquently stated. Thus, learning is additionally one of the main demands on women for their advancement and empowerment in society. Alternative media can serve as a bridge or platform to break through barriers to vital information and communication, but education is a prerequisite for all people. Women, especially those at the grassroots level, are frequently naive and naïve, and they hardly ever speak out against the brutality inflicted upon them. Alternative media can help the release by highlighting their predicament and guiding them towards their intrinsic and extrinsic rights. Examples of these media include development journalism, alternative newspapers, and society radio.

On the basis of the literature survey no study is carried out to gauge the level of awareness, beneficiaries and its impact of standard of livings. The following study is a sincere attempt towards in that direction.

Objectives of the Study

- To assess the awareness of various schemes for women empowerment,
- To examine the Awareness, beneficiaries of Central Schemes and impact on standard of livings,
- To find the Awareness, beneficiaries of Govt of Tamilnadu schemes and impact on standard of livings.

Limitation

The study is a confined the Chennai region only, the other regions may have different level of awareness and conception on central schemes, Govt of tamilnadu schemes and varying levels of beneficiaries.

III. GOVERNMENT OF TAMILNADU INITIATIVES

Here are few noted initiatives of Govt. of Tamil Nadu

Entrepreneur Development Programme: The cornerstone to development, particularly for women, is economic empowerment. Without a job, property, education, or skill set, women are viewed as consumers rather than creators. The government of Tamil Nadu has developed a programme to teach five lakh women in entrepreneurial skills for self-employment in five years, involving several government departments, with the goal of rescuing women from the aforementioned circumstances and their cycle of poverty. The Government of Tamil Nadu has announced the launch of the Entrepreneur Development Programme, a programme designed to provide women with the entrepreneurial skills necessary to start their own businesses and generate money through self-employment, in an effort to empower women economically. The programme also intends to increase marketing assistance and financial connection. Slum Clearance Board of Tamil Nadu has establishments.

Pudhu Vaazhvu Project: 755 women were served by this programme, which was implemented in Nagercoil at a cost of Rs. 75 lakhs. This initiative is carried out in partnership with eminent non-governmental and community-based This project, known as "Pudhu Vaazhvu," was introduced in the state in November 2005 with assistance from the World Bank. After changing its name to "Vazhndhu Kaattuvom" in 2006, the Pudhu Vaazhvu Project (PVP) has now reverted to its previous name of "Pudhu Vaazhvu." 5.8 lakh families will benefit from the project, which is being carried out in 16 districts at a total cost of Rs. 717 crores through September 2014. Now that it has extra funding, the Project is operating in ten more Districts for a three-year term ending in September 2014, benefiting 3.8 lakh target poor households with an expenditure of Rs. 950 crores. The project's Community Driven Development (CDD) methodology aims to empower rural impoverished communities the poorest of the poor by supporting powerful Community-Based Organisations (CBOs), which will give the rural poor a powerful voice.

Tamil Nadu State Women's Commission: The government created the State Commission for Women on March 19, 1993, with the intention of addressing issues pertaining to women's status and welfare. The Commission also provides recommendations to the Government for appropriate action. The Commission will now have more authority and a formal constitution thanks to a decision made by the government. In light of this, the Tamil Nadu State Commission for Women Act, 2008 was passed. This Act became operative on 30-17-2018 after being published in the Government Gazette on 2705-2008.

Moovalur Ammaiyar Ninaivu Ramamirtham Thirumanya Nidhi Uthavi Thittam

During the mid-1900s, M. R. Ammaiyar was a well-known social reformer in Tamil Nadu. She participated actively in the Dravida Kazhagam. Under the initiative, girls from low-income families receive Rs. 20,000 in support at the time of marriage (of families below poverty line). The bride had to have shown up for the 10th grade exam. When it comes to Scheduled Tribes, the bride must to have completed her fifth-grade education. Income each year shouldn't be more than Rs. 12,000. The bride need to have reached her 18th birthday. This programme is only available to a household with one daughter.

Maniammaiyar Memorial E.V.R. widow Daughter's Matrimony Support Programme: Under the initiative, a sum of Rs. 20,000 is given at the time of marriage to poor moms who are widows in order to aid them financially in getting their daughters married. Wedlock's whose annual income does not surpass Rs. 24,000 are eligible for marriage support. Daughter must be at least eighteen years old, and only one widow's daughter may be eligible for help under the programme.

Ninaivu Anjugam Ammaiyar Kalappu Thirumanya Udhavi Nidhi Thittam: The Tamil Nadu government has announced this initiative to encourage inter-caste marriages and thereby foster untouchability among the society. An incentive of Rs. 20,000 is given for the marriage of a SC or ST to a bride or groom from a different group belonging to a different stratum. The incentive sanction application must be presented within two years of marriage. In Tamilnadu, 265 people benefited from the programme in 2017–18. The Dr. Muthulakshmi Reddy Ninaivu Inter-caste Marriage Assistance Scheme is the new name for the programme. The Tamil Nadu government began this programme in 1989, and it was carried out anytime the DMK held state authority.

IV. METHODOLOGY AND DATA ANALYSIS

Data on awareness of the implementation of various schemes by the national and state governments of Tamil Nadu, as well as the beneficiaries of the schemes, was gathered through the use of a structured questionnaire in a descriptive analytical study. Using SPSS, percentage analysis, correlation, and ANOVA are performed in order to derive significant conclusions.

A] **Percentage Analysis**: Percentage analysis gives a glimpse of the data analysis.

Table No 1

Marital Status	Age				Total
	20-30 years	31-40 years	41-50 years	51-60 years	
Single	66	2	0	1	69
Married	8	14	7	4	33
Divorsed	0	0	1	0	1
Total	74	16	8	5	103

Source: Computed

Most of the women participated in the survey are single who are with in the age group of 20-30 years. Majorly college going students. Married group constitute 33 participants of the survey.

Table No 2

Marital Status	Religion			Total
	Hindu	Muslim	Christian	
Single	42	18	9	69
Married	11	21	1	33
Divorsed	1	0	0	1
Total	54	39	10	103

Source: Computed

As per the table, most of the participants belongs to hindu community followed by Muslims and Christian.

Table No 3

Marital Status	Caste					Total
	General	OBC	MBC	SC	ST	
Single	22	17	22	7	1	69
Married	7	13	10	1	2	33
Divorsed	1	0	0	0	0	1
Total	30	30	32	8	3	103

Source: Computed

On the basis of caste dynamics almost 32 participants are from Most backward classes out of the 103 participants who are participated in the survey followed by General category 30 and Other backward classes 30 participants.

Table No 4

Marital Status	Highest Qualification					Total
	10th Standard	+2/ HSC/ PUC	Graduate	Post Gradu-ate	Post Gradu-ate and Above	
Single	3	22	23	18	3	69
Married	4	3	12	10	4	33

Divorsed	0	0	0	1	0	1
Total	7	25	35	29	7	103

Source: Computed

Almost 35 participants are Graduates followed by 29 are postgraduates and 25 are +2 , 7 are highly qualified with qualification above post graduate and above, another 7 are 10^{th} qualified.

Table No 5

Marital Status	Are you aware of the Different Schemes, Scholarships, Fellowships available for Women Empowerment?			Total
	Yes	No	Maybe	
Single	41	10	18	69
Married	17	7	9	33
Divorsed	0	1	0	1
Total	58	18	27	103

Source: Computed

As per the survey Majority of the participants are aware of the Schemes offered by Governments (58), another 18 participants are unaware of the schemes and 27 participants opined that there may be existence of such schemes.

Table No 6

Marital Status	Mention the details of Schemes which you are aware of ?														Total
	Sukanya Samridhi Yojana	Universalisation of Women Helpline	Working Women Hostel	Swadhar Gresh Scheme	Pratyaksh Hanstantrit Labh Scheme (PAHAL)	None	Beti Padavo Beti Bachavo	Ujjwala Yojana	PMGEP	POSHAN Abhiyan	Pradhana Mantri Matru Vandana Yojana (PMMVY)	One stop Centre	Anganwadi services scheme	Schemes for Adolescent Girls (SAG)	
Single	7	5	3	0	2	5	18	2	6	1	12	2	4	2	69
Married	4	2	2	1	1	1	8	4	3	2	1	1	3	0	33
Divorsed	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	12	7	5	1	3	6	26	6	9	3	13	3	7	2	103

Source: Computed

As per the survey Beti padavo Beti bachavo(26) is the most popular Central government Scheme followed by Pradhan Mantri matru vanadana Yojana (13)and Sukanya samridhi yojana(12).Schemes for Adolescents Girls (2) and Swadhar Gresh Scheme (1) are the least known schemes.

Table No 7

Marital Status	Are you beneficiary of any of the scheme of Govt of India ?														Total
	Sukanya Samridhi Yojana	Universalisation of Women Helpline	Working Women Hostel	Swadhar Gresh Scheme	Pratyaksh Hanstantrit Labh Scheme (PAHAL)	None	Beti Padavo Beti Bachavo	Ujjwala Yojana	PMGEP	POSHAN Abhiyan	Pradhana Mantri Matru Van-dana Yojana (PMMVY)	One stop Centre	Anganwadi services scheme	Schemes for Adolescent Girls (SAG)	
Single	8	1	9	1	0	7	18	4	3	6	7	4	0	1	69
Married	5	0	0	0	1	3	8	7	2	2	0	0	4	1	33
Divorsed	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	14	1	9	1	1	10	26	11	5	8	7	4	4	2	103

Source: Computed

As per the above table Beti padavo Beti Bachavo beneficiaries are found to be more confiming the hypothesis that more awareness leads to more utilisation of the scheme followed by sukanya samridhi yojana, Ujjwala yojana, working women hostel etc., another 10 participants say they are not the beneficiaries of none of the schemes.

Table No 8

Marital Status	Mention the Schemes of Govt of Tamilnadu which you are aware of						Total
	DR. DHAR-MAMBAL AM-MAIYAR NINAIVU WIDOW REMAR-RIAGE ASSIS-TANCE SCHEME	E.V.R. MANIAM-MAIYAR NINA-IVU MARRIAGE ASSISTANCE SCHEME FOR DAUGHTERS OF POOR WIDOWS	ANNAI THER-ASA NINAIVU MARRIAGE ASSISTANCE SCHEME FOR ORPHAN GIRLS	DR. MUTHU-LAKSHMI REDDY NINAIVU INTER-CASTE MARRIAGE ASSISTANCE SCHEME	SATHIYA-VANIMUTHU AMMAIYAR NINAIVU FREE SUPPLY OF SEWING MACHINE SCHEME	None	
Single	11	16	20	14	5	3	69
Married	7	9	6	6	4	1	33
Divorsed	1	0	0	0	0	0	1
Total	19	25	26	20	9	4	103

Source: Computed

at the state level annai therasa ninaivu marriage assistance scheme for orphan girls (26)is the most popular scheme is the state of tamilnadu followed by e.v.r. maniammaiyar ninaivu marriage assistance scheme for daughters of poor widows(25) and dr. muthulakshmi reddy ninaivu inter-caste marriage assistance scheme.

Table No 9

Marital Status	Are you the beneficiary of any of the Scheme mentioned below						Total
	DR. DHAR-MAMBAL AM-MAIYAR NINAIVU WIDOW REMAR-RIAGE AS-SISTANCE SCHEME	E.V.R. MANIAM-MAIYAR NINAIVU MAR-RIAGE AS-SISTANCE SCHEME FOR DAUGH-TERS OF POOR WIDOWS	ANNAI THER-ASA NINAIVU MARRIAGE ASSISTANCE SCHEME FOR ORPHAN GIRLS	DR. MUTHU-LAKSHMI RED-DY NINAIVU INTER-CASTE MARRIAGE ASSISTANCE SCHEME	SATHIYA-VANIMUTHU AMMAIYAR NINAIVU FREE SUPPLY OF SEWING MACHINE SCHEME	None	
Single	10	25	21	4	2	7	69
Married	2	12	5	2	10	2	33
Divorsed	1	0	0	0	0	0	1
Total	13	37	26	6	12	9	103

Source: Computed

As compare the awareness beneficiaries are more of the schemes like their other family members were benefited out the schemes. Where e.v.r. maniammaiyar ninaivu marriage assistance scheme for daughters of poor widows is having high number of beneficiaries followed by annai therasa ninaivu marriage assistance scheme for orphan girls. Another 9 participants say they are not benefited out the schemes.

Table No 10

Marital Status	Do you agree with the statement 'the schemes of Govt of India has changed your Standard of living'					Total
	a) Strongly agree	b) Agree	c) Neutral	d) Disagree	e) Strongly disagree	
Single	8	13	35	11	2	69
Married	3	8	16	1	5	33
Divorsed	0	0	0	1	0	1
Total	11	21	51	13	7	103

Source: Computed

When it comes to upliftment of women through the central schemes majority of the respondents are neutral (51) in their opinion only 21 participants agree and another 11 are strongly agree, about 20 participants are disagree.

Table No 11

Marital Status	Do you agree with the statement 'the schemes of Govt of Tamilnadu has changed your Standard of living'					Total
	a) Strongly agree	b) Agree	c) Neutral	d) Disagree	e) Strongly disagree	
Single	8	10	39	9	3	69
Married	3	5	15	5	5	33
Divorsed	0	0	0	1	0	1
Total	11	15	54	15	8	103

Source: Computed

When it comes to upliftment of women through the State schemes majority of the respondents are neutral (54) in their opinion only 15 participants agree and another 11 are strongly agree, about 23 participants are disagree. Confirming that Central are state Schemes are not up to their level of satisfaction. May be due to lack of awareness of the schemes beneficiaries are less.

[B] Correlation

Correlations					
		Mention the details of Schemes which you are aware of ?	Are you beneficiary of any of the scheme of Govt of India ?	Mention the Schemes of Govt of Tamilnadu which you are aware of	Are you the beneficiary of any of the Scheme mentioned below
Mention the details of Schemes which you are aware of ?	Pearson Correlation	1	.433**	.260**	.206*
	Sig. (2-tailed)		.000	.008	.037
Are you beneficiary of any of the scheme of Govt of India ?	Pearson Correlation	.433**	1	.338**	.531**
	Sig. (2-tailed)	.000		.000	.000
Mention the Schemes of Govt of Tamilnadu which you are aware of	Pearson Correlation	.260**	.338**	1	.285**
	Sig. (2-tailed)	.008	.000		.004

Are you the beneficiary of any of the Scheme mentioned below	Pearson Correlation	.206*	.531**	.285**	1
	Sig. (2-tailed)	.037	.000	.004	

Source: Computed

As per the correlation analysis there is perfect correlation exist between the awareness of central and state government schemes and beneficiaries of the respective schemes.

1. Schemes of the central government to beneficiaries of the schemes the correlation found to be 0.43, Schemes of Govt of tamilnadu to Central govt (0.26), Beneficiaries of Schemes of tamilnadu govt to central govt (0.20) and it is statistically significant (P-Value less than the critical value i.e. 0.05).
2. Beneficiaries of Central government to Schemes of Govt of India (0.43), Schemes of Govt of tamilnadu (0.33), Beneficiaries of Schemes of tamilnadu (0.53) it is statistically significant (P-Value less than the critical value i.e. 0.05).

[C] Reliability Testing

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.653	.695	7 Are you aware of the Different Schemes, Scholarships, Fellowships available for Women Empowerment?

		Mention the details of Schemes which you are aware of ? Are you beneficiary of any of the scheme of Govt of India ? Mention the Schemes of Govt of Tamilnadu which you are aware of Are you the beneficiary of any of the Scheme mentioned below Do you agree with the statement 'the schemes of Govt of India has changed your Standard of living' Do you agree with the statement 'the schemes of Govt of Tamilnadu has changed your Standard of living'

Source: Computed

As per the reliability testing the chosen 7 questions are found to be statistically significant with the cronbach's alpha value 0.65 i.e 65% its found to be reliable.

ANOVA with Friedman's Test						
		Sum of Squares	Df	Mean Square	Friedman's Chi-Square	Sig
Between People		1819.551	102	17.839		
Within People	Between Items	1185.784a	6	197.631	147.448	.000
	Residual	3784.216	612	6.183		
	Total	4970.000	618	8.042		
Total		6789.551	720	9.430		

Source: Computed

Hotelling's T-Squared Test				
Hotelling's T-Squared	**F**	**df1**	**df2**	**Sig**
232.730	36.887	6	97	.000

Source: Computed

Analysis of Variance with Friedman's test too found to be significant in the choosen variables of awareness of the central and state government schemes and its beneficiaries and the Hotelling's T-Squared Test to confirms on the basis of F-Value and P-Value which is less than the critical value (0.05).

[D] ANOVA [Analysis of Variance]

H0- There is no significant difference between groups and within the groups of highest qualification, awareness of various schemes, Awareness of Central Schemes , beneficiaries and Awareness of Govt of Tamilnadu schemes and impact on standard of livings.

H1- There is no significant difference between groups and within the groups of highest qualification, awareness of various schemes, Awareness of Central Schemes , beneficiaries and Awareness of Govt of Tamilnadu schemes and impact on standard of livings.

ANOVA						
Particulars		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Are you aware of the Different Schemes, Scholarships, Fellowships available for Women Empowerment?	Between Groups	1.360	2	.680	.915	.404
	Within Groups	74.310	100	.743		
	Total	75.670	102			
Mention the details of Schemes which you are aware of?	Between Groups	5.918	2	2.959	.469	.627
	Within Groups	631.577	100	6.316		
	Total	637.495	102			
Are you beneficiary of any of the scheme of Govt of India?	Between Groups	26.579	2	13.290	1.143	.323
	Within Groups	1163.129	100	11.631		
	Total	1189.709	102			

Mention the Schemes of Govt of Tamilnadu which you are aware of	Between Groups	4.440	2	2.220	2.241	.112
	Within Groups	99.074	100	.991		
	Total	103.515	102			
Do you agree with the statement 'the schemes of Govt of Tamilnadu has changed your Standard of living'	Between Groups	12.159	2	6.079	6.503	.002
	Within Groups	93.492	100	.935		
	Total	105.650	102			

Source: computed

The aforementioned table shows that analysis of variance (ANOVA) is used to compare the five selected variables across and within groups, such as highest qualification (P-Value: 0.002), awareness of the various programmes (0.40), and scholarships and fellowships for women's empowerment. Awareness about the central schemes(0.62) and its beneficiaries(0.32), similarly awareness about the schemes of tamilnadu(0.11) and impact of schemes on standard of livings(0.002). Here it is made us to accept the null and reject to alternative hypothesis in case of awareness about the various schemes, Awareness about the central schemes and its beneficiaries, awareness about the schemes of tamilnadu. Null hypothesis is rejected in case of impact of standard of livings of the women where alternative hypothesis is accepted saying that there is significant impact of other factors which positively influence on women empowerment it may be schemes of Govt of Tamilnadu despite a low level of awareness about schemes. So, both the central and state government should take initiatives through communication and visual media to bring awareness about the schemes for women. Atleast at school and colleges there must be awareness on schemes

CONCLUSION

The study found that there is correlation exist in between Schemes of the central government to beneficiaries of the schemes, Schemes of Govt of tamilnadu and Beneficiaries of Schemes of tamilnadu it is statistically significant. On the basis of

ANOVA, there is no significant difference between groups and within the groups on awareness of various schemes, Awareness of Central Schemes, beneficiaries and Awareness of Govt of Tamilnadu schemes. But there is significant improvement in the standard of livings of women due to schemes and programmes and incentives through various schemes of Central and state government, where there is no proper awareness about the schemes, its eligibility criteria and amount of benefit which they may receive out of the schemes.

REFERENCES

1. Agnihotri H.R. (2017). A STUDY ON IMPORTANCE OF WOMEN EMPOWERMENT IN INDIA. *International Journal of Current Advanced Research*, *6*(6), 4337–4340.
2. Agarwal, M., & Kaur, P. J. (2023, October 30). Impact of Selected Schemes of SERB: Empowering Indian Women in R&D Spectrum. *ACS Omega*, *8*(45), 42006–42013. https://doi.org/10.1021/acsomega.3c03826
3. Bogam, R. R., Chavan, V. M., & Rani, C. U. (2023, September). Awareness and utilization of social welfare schemes among elderly villagers of Mahabubnagar rural region in Telangana State of India – An interventional study approach. *Journal of Family Medicine and Primary Care*, *12*(9), 2058–2063. https://doi.org/10.4103/jfmpc.jfmpc_753_23
4. Costa, J. C., Saad, G. E., Hellwig, F., Maia, M. F. S., & Barros, A. J. D. (2023, September 14). Measures of women's empowerment based on individual-level data: a literature review with a focus on the methodological approaches. *Frontiers in Sociology*, *8*. https://doi.org/10.3389/fsoc.2023.1231790
5. et al. (2018). GOVERNMENT INITIATIVES FOR WOMEN EMPOWERMENT. *Proceedings of DGHE, Haryana Approved National Seminar on Gender Sensitive Issues and Women Empowerment*, *1*(1), 36–47.
6. (2018). Social Networks, Mobility, and Political Participation The Potential for Women's Self-help Groups to Improve Access and Use of Public Entitlement Schemes in India. *IFPRI Discussion Paper 01751*, *1*(1), 1–53.
7. (2020). A study on impact of Government Policies in Rural Women Empowerment. *International Journal of Creative Research Thoughts*, *8*(2), 11–18.

8. (2022). Women Empowerment In Current Scenario: A Critical Review. *Journal of Pharmaceuticals Negative Results*, *13*(9), 1472–1480.
9. (2021). A STUDY ON WOMEN EMPOWERMENT SCHEMES IN INDIA. *International Journal of Scientific Development and Research*, *6*(2), 305–321.
10. (2019). IMPACT ANALYSIS OF WELFARE SCHEMES OF WOMEN'S EMPOWERMENT: WITH REFERENCE TO RMK, STEP AND E-HAAT. *Journal of Management*, *6*(2), 146–153.
11. Niyaz, Abhinandan Kulal, Mahammad Thauseef, P., & Abdul Jaleel, (2021). Impact of Government Welfare Schemes on Empowerment of Minority Women in Karnataka. International Journal of Management, Technology, and Social Sciences (IJMTS), 6(2), 191-203. DOI: https://doi.org/10.5281/zenodo.5727654
12. Kumar, N., Raghunathan, K., Arrieta, A., Jilani, A., Chakrabarti, S., Menon, P., & Quisumbing, A. R. (2019, February). Social networks, mobility, and political participation: The potential for women's self-help groups to improve access and use of public entitlement schemes in India. *World Development*, *114*, 28–41. https://doi.org/10.1016/j.worlddev.2018.09.023
13. Kumari, S., & Siotra, V. (2023, March 28). Indian females in the twenty-first century: how they have fared? An analysis using geospatial techniques. *GeoJournal*, *88*(4), 4279–4295. https://doi.org/10.1007/s10708-023-10865-y
14. Dr. D. Ashok, Dr. V. Selvam and Dr. Indra Devi, Measuring Women Awareness and Access to Various Schemes to Promote Women Entrepreneurship, International Journal of Mechanical Engineering and Technology, 9(5), 2018, pp. 506–513
15. (2015). A Study on Issues and Challenges of Women Empowerment in India . *Journal of Business and Management (IOSR-JBM*, *17*(4), 13–19.
16. (2016). Economic Empowerment of Women Promoting Skills Development in Slum Areas. *Freelancers*, *1*(1), 1–41.
17. (2015). Education for Women's Empowerment: An Evaluation of the Government run Schemes to educate the girl child. *CCS Working Paper No. 183 Summer Research Internship Programme 2007-08 Centre for Civil Society*, *1*(1), 1–41.
18. Dr. Swarooprani. K. (2023, March 5). Contribution of Government of India In Women Empowerment. *International Journal of Scientific Research in Science and Technology*, 270–273. https://doi.org/10.32628/ijsrst52310241
19. (2020). Women Empowerment in India: A Critical Analysis. *Tathapi (UGC Care Journal)*, *19*(44), 227–253.

20. Tamuli, P., & Mishra, D. K. (2023, August 4). Achieving Gender Equality through Women Empowerment in India: A Study in the Context of Sustainable Development. *Journal of Women Empowerment and Studies*, *35*, 29–39. https://doi.org/10.55529/jwes.35.29.39

21. *Women's Empowerment in India*. (2019, March 20). https://femaleonezero.com/society/women-empowerment-in-india#:~:text=The%20literacy%20rate%20of%20the,the%20majority%20of%20their%20lifespan

22. *A Portrait of Women's Empowerment in India | DMEO | Development Monitoring and Evaluation Office | Attached office under NITI Aayog*. (n.d.). https://dmeo.gov.in/article/portrait-womens-empowerment-india

23. *GOI initiatives for Women Empowerment*. (n.d.). https://pib.gov.in/PressReleasePage.aspx?PRID=1845382

13 RBI Regulatory Actions on IIFL and JM Financial Crisis

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Abstract

The Reserve Bank of India (RBI) exercised its role as the regulator of Banking and Non-Banking Services in India in early 2024. Restriction of business functions of erring Non-Banking Finance Companies (NBFC) is a common practice of regulators to avoid the potential collateral damage of the company to the economy. This study uses a case study approach to examine and appreciate the importance of RBI in imposing restrictions by examining it with a special focus on IIFL and JM Financial. Lessons from this case study can help business management students from the Finance and Business Strategy domains better understand the crisis unfolding and the reasons that propelled the regulatory action.

Keywords: *Gold loan, non-compliance, nbfc, share price, violations, banking regulator, corporate governance, financial performance*

INTRODUCTION

The Reserve Bank of India (RBI) is the regulatory body that acts as a gatekeeper of corporate governance in the country. The central bank controls all the real issues identified with currency, foreign exchange reserves, and other matters related to financial stability in India. It has the power to take regulatory actions like bans and restrictions on concerns relating to compliance, risk management, and governance, all for the welfare of end users- the investors.

There have been many instances where it has been observed that the regulator has restricted some banking and non-banking institutions for non-compliance issues. This paper emphasizes the limits RBI imposes on NBFCs like IIFL and JM Financial relating to Non-compliance and the reasons behind it. It also discusses the aftermath of the RBI restrictions on the stocks of such companies.

THE PROTAGONIST

RBI is the protagonist in this case. RBI is the Indian banking and financial services regulatory body. It is constituted under the RBI Act 1934. It regulates and supervises the functioning of banking and non-banking institutions. It also looks over the issuance of directions on the acceptance of deposits and surveillance of the sector through off-site and on-site investigations.

On the one hand, handling regulatory changes is the most challenging transition in working for a financial institution. On the other hand, it is also seen as a positive indication of innovation in financial solutions. The key parameters RBI uses to assess the health of banks and NBFCs are the Capital Adequacy Ratio (CAR), Return on Assets (ROA), and Non-Performing Assets (NPA) levels.

On March 4, 2024, RBI exercised its powers under section 45L(1)(b) by releasing a press release stating action against IIFL Finance Ltd and directing the company to desist itself, with immediate effect, from sanctioning gold loans or assigning/securitizing/selling any of its gold loans. The company was, however, allowed to continue to service its existing gold loans through the existing gold loan portfolio through the usual collection and recovery processes. The next day, on March 5, the regulator asked the non-banking financial company JM Financial to stop giving loans against shares and debentures for subscribing to initial public offerings. It barred JM Financial from acting as a lead manager for any public debt issue. However, the company can service its existing loan accounts through the usual collection and recovery process.

NATURE OF WORK HANDLED BY THE COMPANIES

Both IIFL and JM Financial are prominent Non-Banking finance companies (NBFCs) operating in India. They have a notable presence and impact in the financial sector, making them the relevant subjects for study. Studying these companies can provide valuable insights into NBFCs' challenges and the consequences of regulatory non-compliance.

IIFL Finance Limited is one of India's leading players in providing financial services to both retail and corporate clients. It provides a diverse range of services like Asset management, Wealth management, Broking, Financial advisory, Investment banking, Advisory Services, Project financing, Equity, Mutual funds, Commodity, Currency, Derivatives, Fixed-income instruments, Initial Public Offering (IPO), and SME Exchange services. The subsidiaries of IIFL are- IIFL Home Finance Limited, IIFL Samasta Finance Limited, and IIFL Open Fintech Private Limited. It is headquartered in Mumbai and was founded by Nirmal Jain in October 1995. It was previously known as Probity Research & Services Private Limited and later changed its name to Probity Research & Services Limited in 2000. In November 2011, it was renamed India Infoline Finance Limited. The company has more than 2600 branches across 500 cities in India. IIFL has been recognized for its services, receiving accolades such as:

- Best Private Banking Services Overall in India by Euromoney in 2017
- Best Private Bank in India by Global Finance Best Private Bank Awards in 2017.
- AA Positive rating by CRISIL (as on Dec 31, 2023)

Some of the loans provided by IIFL are Home loans (34%), Gold loans(32%), Digital loans (4%), loans against property(10%), microfinance (15%), and developer and construction finance(4%) and Capital market finance (1%)

Gold Loans are the second highest of the Assets under management (AUM) of the company and constitute an essential part of the company's revenues. The Lender offers instant funds against the physical gold of its clients to meet their emergency financial requirements. The borrowers must repay the principal amount and the interest over the loan term to return the pledged gold articles. The repayment tenure of such a loan varies from three months to one year. The company holds on to the asset/ gold until the loan is fully cleared. When the loan goes for default, the pledged gold can be auctioned to recover the losses.

JM Financial Products Ltd. ("JMFPL") is the Non-Banking Finance Company (NBFC) of the JM Financial Group. It is a non-deposit accepting non-banking finance company registered with the Reserve Bank of India. On March 5, 2024, the Reserve Bank of India (RBI) barred JM Financial Products Ltd (JMFPL) from providing loans against shares and debentures, including the sanction and disbursal of loans against Initial Public Offering (IPO) of shares. The RBI also barred JMFPL from acting as a lead manager for any public issue of debt securities.

JM Financial (JMFL) is an Indian financial services group headquartered in Mumbai with branches across India. It offers various services, including investment banking, wealth management, institutional broking, asset management, and more. It has been actively involved in various financial activities in India and had a strong presence overseas.

THE ALLEGATIONS

Violations by IIFL Finance

1. IIFL Finance has not adhered to the standard auction process, which can imply issues like lack of transparency, regulatory non-compliance, risk of undervaluation, and legal challenges
2. Significant deficiencies were found regarding the assessment of gold pledged as collateral. The company had allowed borrowers to obtain loans where the amount lent exceeds the value of the collateral pledged against the loan as per the established Loan-To-Value Ratio.
3. Loan-to-value ratio- The Loan-to-Value ratio is a financial metric, typically expressed as a percentage, and is used by lenders to assess a loan's risk by comparing the loan amount to the appraised value of the collateral/Asset.

4. The Reserve Bank of India (RBI) has set the maximum gold loan-to-value (LTV) ratio at 75% of the gold's market value (here, Market value acts as a margin of safety). This means that the loan amount cannot exceed 75% of the value of the pledged collateral.
5. Cash collection from the borrowers was more than the statutory limit.
6. The company was unclear about the fees being charged for the services offered. This created confusion among the consumers regarding the hidden costs.

Violations by JM Financials

RBI has found three major areas of regulatory breach by JM Financials. These include poor underwriting standards where the company was found acting both as a lender and a borrower. Secondly, the company was helping a group of bidders bid for various IPs. Third, the company was operating the demat accounts of its customers using a power of attorney and a master agreement. After the RBI, the Securities and Exchanges Board of India (SEBI) was the other regulator that alleged discrepancies in the role of JM Financials. SEBI has issued an ad interim financial or temporary order and asked the NBFC to report in about six months.

SEBI alleges that JM Financial was acting as the lead manager for two of its arms- the JM Financial Products and JM Financial Brokers. It lured investors to invest in their gold loans, and the retail subscription for this debt issue was unnaturally high. In return, the company assured the investors to help exit from the stock at a profit on the listing day through JM financial products. Thousands of retail investors were financially supported to subscribe to the IPO, saying they would get high returns. SEBI also found the loan documents being mentioned with future dates, raising concerns regarding the documentation's authenticity.

CASE QUESTIONS

The following questions are suggested for the administering faculty for classroom questions on the case study.

1. How does the Reserve Bank penalize NBFCs for violating the provisions of the RBI Act or its directives?
2. What were the observed effects on stock prices following the announcement of RBI regulations?
3. Cite some more examples of the NBFCs on which RBI has taken prior actions.
4. Could you elaborate on the initiatives implemented by the RBI to educate the public on the importance of careful investing?
5. What criteria determine which NBFCs are classified as systemically important by the Reserve Bank of India?

LITERATURE REVIEW

In their research, S. Baranidharan, S. Rajamohan, and A. Sathish highlighted the need for disclosure of information, transparency, and investor protection in the Indian stock market. The study's findings contribute to understanding the linkages between finance companies and stock market indices.

Research Gap

The literature review shows that little to no studies were done regarding the impact on IIFL and JM financial stock prices before and after the RBI ban; hence, a clear research void needs to be filled.

RESEARCH METHODOLOGY

Research Objectives

1. To study the crisis that IIFL and JM Financial faced after RBI regulations
2. To analyse the various actions taken by RBI concerning the regulation of the NBFCs
3. To study the reasons that led to regulatory actions

Research Design

This study is based on the cause-effect phenomenon of the crisis in this organization. It will measure the impact analysis on the various associated stakeholders, such as customers, present and potential investors, regulatory bodies' decision-makers, and the economy as a whole.

Data Collection

The data has been collected basically by exploring the various secondary sources by surfing the website of the bank, business newspapers such as the Economic Times, Business Standard, Financial Express, Business Line, and a few other magazines, and other related web information from the period ranging January 2024 to May 2024.

DISCUSSION

The stock price of JM Financial and IIFL fell over after the Reserve Bank of India announced that it would conduct a special audit of both these companies. This may also cause reputational damage for non-banking financial institutions, which may have to renew investments to build trust in their brand again. The chart below shows a track of the stock prices of both companies changing at random days before and after the announcement. It is clearly observed that the regulating agency has highly impacted the stock price index in the last three months.

These NBFCs often rely heavily on bank cash disbursements, and the new rules may temporarily impact their operations and asset under management growth.

Where RBI's directive on cash disbursement of loans may pose challenges for NBFCs that focus on small-ticket loans in rural areas, such as microfinance institutions (MFIs) and gold loan providers, NBFCs that have already transitioned to digital disbursements through investments in technology and processes are likely to experience minimal impact. Gold financiers will need to implement operational changes following the recent directive. On May 3, 2024, RBI issued a draft guideline proposing stricter rules for financing the construction phase projects. The banking regulator has suggested that lenders set aside up to 5% of loans as provisions or buffers instead of prevailing 0.4%. RBI has instructed NBFCs to strictly follow the provisions of the Income Tax Act regarding the cash disbursement of loans. Specifically, NBFCs cannot disburse loans exceeding Rs. 20,000 in cash. This directive was issued to discourage cash transactions by the central bank. Figures 1 and 2 show the impact of the regulatory bank on IIFL Finance and JM Financial.

Figure 1: Stock price of IIFL Finance reflecting the impact of the regulatory ban by RBI

Source: Valueresearchonline.com

Figure 2 Stock price of JM Financial reflecting the impact of the regulatory ban by RBI

Source: Valueresearchonline.com

Interpretation

The graphs in Figures 1 and 2 clearly state the impact of regulatory bans on the share prices of the NBFCs. Before the RBI circular(before March 5), the prices of IIFL and JM Financial stocks were on the higher side, and after the circular, the share prices dipped drastically. It is stable but on the lower side.

Findings from the Study

1. The inspection of the company books by RBI revealed serious deviations in assaying and certifying purity and net weight of the gold at the time of loan sanction and at the time of auction upon default.
2. The central bank also investigated breaches in the loan-to-value ratio
3. The quality of the credit process was not up to the value of the collaterals collected for the gold loan
4. JM Financial was found violating the underwriting standards for providing loans on shares and debentures
5. The Central bank does not want a crisis like IL&FS and DHFL to happen again.
6. The stock prices before the RBI ban showed a slow upward rise, but after the notification by the regulator, the stock prices dipped to almost half of pre-ban prices.
7. There is a need for robust risk management and corporate governance practices in NBFCs

The Reserve Bank can penalize NBFCs for violating the provisions of the RBI Act or the directions or orders issued by RBI under RBI Act.

The penal action can also result in RBI canceling the Certificate of Registration issued to the NBFC, prohibiting them from accepting deposits, alienating their assets, or filing a winding-up petition. If the depositor has complained to the Company Law Board (CLB), which has ordered repayment, and the NBFC has not complied with the CLB order, RBI can initiate prosecution of the NBFC, including criminal action and winding up of the company.

Limitations of the Study

The study was conducted purely on secondary data. Hence, there is a scope to study the same aspect with primary data for more accurate interpretation. As it is clear that only two NBFCs are studied here, there is always a scope to study all Banks and all the NBFCs on which the impact of regulations can be observed. The above study is done on the data collected from Jan 2024 to May 2024, allowing other researchers to study the period longer or shorter than this.

CONCLUSION

The study states that RBI is constantly monitoring how financial institutions operate. The NBFCs on which RBI has taken regulatory actions faced reputational damage. The case study observed a decline in stock prices following the announcement of RBI regulations. This reduces the Customer confidence levels in the economy, especially within the NBFCs. In the case of non-compliance, RBI can also initiate prosecution of the NBFC, including criminal action and winding up of the company. As part of its public policy measure, the Reserve Bank of India has been taking several initiatives to create awareness among the general public on the need to be careful while investing their savings. The initiatives can be like cautionary notices in print media, distributing informative and educative brochures/pamphlets, and close interaction with the public during awareness/ outreach programs, town hall events, and participation in State government-sponsored trade fairs and exhibitions.

REFERENCES

1. Singh, Charan and Pattanayak, Deepanshu and Dixit, Divyesh and Antony, Kiran and Agarwala, Mohit and Kant, Ravi and Mukunda, S and Nayak, Siddharth and Makked, Suryaansh and Singh, Tamanna and Mathur, Vipul. 2016. "Frauds in the Indian Banking Industry." IIM Bangalore Research Paper No. 505. March 2. Accessed October 2, 2020. https://www.iimb.ac.in/sites/default/files/2018-07/WP_No._505.pdf.
2. https://economictimes.indiatimes.com/industry/banking/finance/rbi-to-conduct-special-audit-for-regulatory-breaches-by-iifl-finance-jm-financial-products/articleshow/108748575.cms?from=mdr
3. https://www.cnbctv18.com/market/iifl-finance-jm-financial-share-price-rbi-bids-special-audit-gold-loans-ipo-leverage-19360721.htm
4. https://www.ijlmh.com/wp-content/uploads/2019/03/A-Study-on-Role-of-RBI-in-Regulating-Banks.pdf
5. RBI on IIFL Finance, JM Financial: Actions to ensure ethical business practice, analysts say March 6 2024, Ankit Gohel

6. https://www.moneylife.in/article/sebi-and-rbi-act-swiftly-to-control-bull-market-excesses/73658.html
7. https://www.legalcrystal.com/act/21198/reserve-bank-of-india-act-1934-2-of-1934-preamble-1 www.ijlmh.com ©2018 IJLMH | Volume 1, Issue 5 | ISSN: 2581-5369 International Journal of Law Management & Humanities Page 5
8. The Ketan Parekh fraud and supervisory lapses of the Reserve Bank of India (RBI): a case study Saptarshi Ghosh, Mahmood Bagheri 2006
9. A regulatory innovation framework-How regulatory change leads to innovation outcomes for FinTechs((Åke Freij)
10. (Impact of Bank Competition on Financial Stability-a Study on Indian Banks, 2023)
11. Impact of bank competition on financial stability-a study on Indian banks. (2023). https://doi.org/10.1108/CR-07-2022-0102
12. Large NBFCs can become banks: RBI. (n.d.). https://timesofindia.indiatimes.com/business/india-business/large-nbfcs-can-become-banks-rbi/articleshow/79089941.cms
13. Press release by RBI on March 5 2024 titled "Action against JM Financial Products Limited under section 45L(1)(b) of the Reserve Bank Of India Act,1934"
14. Press release by RBI on March 4 2024 titled "Action against IIFL Finance Limited under section 45L(1)(b) of the Reserve Bank Of India Act,1934"

14 The Role of Crowdfunding in Entrepreneurial Finance in India

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Abstract

This study seeks to examine the relatively new trend in alternative financing; namely, Crowdfunding and its role in funding start ups and new enterprises. Crowdfunding is the financing of a project by a group of individuals (collectively, "the crowd") instead of professional "accredited" entities or individuals such as banks, venture capitalists or business angels.

INTRODUCTION

Entrepreneurship is the engine of growth for an economy. As enterprising individuals from places such as Silicon Valley or Boston or New York seek access to capital, they often turn to established sources such as venture capital firms, angel investors, high interest debt products, and friends and family. However, access to venture capital firms and angel investors often depends on who one knows and one's location, rather than the potential or quality of one's innovation. Banks may require a co-signer or collateral before offering loans to entrepreneurs; moreover, such loans are deemed risky by banks and carry high rates of interest. Also, not everyone will have the financial backing of friends and family to fund their ventures. In other words, traditional sources of finance have embedded mechanisms that often stifle creativity and innovation.

With the growth of the Internet and web 2.0, we have witnessed the participation of masses of individuals (crowds) in several processes that were previously exclusive in nature, reserved for a select few. For example, product reviews are no longer the privilege of expert reviewers and consumer reports; anyone with a computer and Internet connection can now offer their opinion. Threadless allows anyone to try their hand at designing T-shirts, and Netflix extended an open invitation to the public to propose improvements to their content recommendation system. Applying the same concept to entrepreneurial finance, crowdfunding has given rise to a new business phenomenon, enabling entrepreneurs to source capital from any individual with both the means and the interest.

THE CROWDFUNDING PROCESS

A typical crowdfunding process starts when the project sponsor posts the description of the project for which funding is sought. This is referred to as the “pitch”. The pitch contains textual and visual descriptions. It also contains information about the sponsors of the project, the planned duration of fundraising, the amount of money required (referred to as the “threshold”) and any incentives offered to the contributors. Once the pitch is live on the crowdfunding website, contributors offer money until the pitch reaches its expiration date. Once the amount of money raised surpasses the threshold, it is paid to the project sponsors minus the platform’s administrative fee (typically 4-5%). While the sponsors typically receive nothing if the contributions do not reach the threshold, some crowdfunding platforms do allow the sponsors to keep any amount raised (e.g. flexible fundraising campaigns at IndieGoGo.com). Once the money is raised, the project sponsors are expected to spend the funds in accordance with the activities outlined in the project pitch and deliver rewards or repayment to the contributors in a timely fashion (in the case of reward- and loan-based crowdfunding). Usually, the sponsors post regular updates to the crowdfunding platform, detailing the progress of the project to keep investors informed.

PROS AND CONS OF CROWDFUNDING

The main benefit of crowdfunding is that it exposes an idea to a wide variety of potential contributors across the world. Therefore,’ success need not be restricted by the people they know (friends and family or venture capitalists), but only by their own innovativeness. Thus, crowdfunding takes a big step towards "democratising" entrepreneurial finance by letting people vote with their money on which ideas deserve funding and which ones do not. This in effect, lowers the barriers to entry for new startups. Additionally, crowdfunding exposes an idea before a wide audience who give feedback in the formative stages of a product. Such feedback can be invaluable for guiding the development of a new product. Most types of crowdfunding enable project sponsors to retain equity and control over their projects, in contrast to venture capital financing where the owners sell stake in the company. Crowdfunding can also generate viral marketing where users can share project details with others, sometimes generating strong word of mouth. A consequence of this word of mouth is that some crowdfunded projects raise more money than expected; for example, in the Revolights example mentioned earlier, the founders raised more than US$200,000 in spite of asking for less than US$45,000. At the same time, crowdfunding has its own peculiar challenges. The main concern is that project sponsors need to tailor their pitch specifically for social media in order to create a successfully funded campaign. They have to pay attention to the pitch wording, quality of the video and try to get some high profile endorsements. The other drawback of crowdfunding is that ideas have to be put in the public domain early, and there is a possibility that someone else may copy the idea. Also, the diverse stakeholders may have conflicting expectations about the project and it may be difficult for the sponsors to manage all these expectations. The viral nature of crowdfunded projects has another potential downside in that the negative feedback from not meeting contributors' expectations may get amplified, which can damage he sponsors' reputation and prevent them from raising funds in the future

CURRENT STATE OF CROWDFUNDING

Crowdfunding is growing in importance as a fundraising mechanism in microfinance, charitable giving and entrepreneurial finance. The financial crisis of 2008 and the associated shortage of funding for new ventures provided an impetus to crowdfunding. A recent report by Massolution (2012) suggests that, as of 2012, more than one million projects have been funded on crowdfunding websites worldwide, with more than US$1.5 billion raised. The total number of such markets worldwide is estimated at 536 in December 2012. This report also suggests that the funds raised have been growing at a compound annual growth rate (CAGR) of about 63%, and the number of crowdfunding marketplaces have been growing at a CAGR of 49%. Crowdfunding has received prominence in the United States with the JumpStart Our Business Startups (JOBS) Act signed by President Barack Obama in 2012, which legalises the sale of certain types of equity through crowdfunding markets. A recent report by the World Bank (2013) suggests that the developing world has the potential to leapfrog the developed world in terms of leveraging crowdfunding to stimulate innovation and create new jobs. Some of the projects highlighted in the report include a highly efficient stove in Kenya, flywheel storage for wind/solar energy in Haiti and a solar charger for cell phones in Africa. The report estimates that crowdfunding in developing countries will grow to US$95 billion within the next 20 years.

STATE OF EQUITY-BASED CROWDFUNDING

State of the different types of crowdfunding, equity based crowdfunding has received special attention due to certain unique characteristics. Equity-based crowdfunding enables contributors to acquire a stake in the company they are funding, thus providing them with the potential to earn windfall returns if the new venture is successful. On the other hand, the contributors can lose their entire investment if the venture fails. The fact that most crowdfunded ventures may be at the idea stage without a product or prototype further exacerbates the risk. Equity-based crowdfunding is legal in certain European countries such as the United Kingdom and the Netherlands. In the United States, the Securities and Exchange Commission (SEC) has proposed a set of guidelines that will provide a framework to operationalise equity based crowdfunding. The guidelines are expected to go into effect in early 2014.

The main risk in equity-based crowdfunding can be classified into three types – investor protection, due diligence and investor rights. Investor protection refers to issues such as what disclosures should be provided to investors, restrictions on marketing of crowdfunded securities, ensuring that investors buy no more shares than allowed by law and protecting the privacy of investor information. Due diligence refers to such issues as what audit standards project sponsors should adhere to, the inability of the crowd to value crowdfunded investments, provision of eBay style reputation mechanisms, and laws governing third-party certification agencies such as Crowdcheck. Finally, the issues pertaining to investor rights are whether the stake in crowdfunded projects can be traded and whether investors should have voting rights.

CROWDFUNDING IN INDIA

Crowdfunding is taking hold in India with donation based crowdfunding and microfinance constituting the bulk of the crowdfunded marketplace. Platforms such as Wishberry, IgniteIntent, Ketto, Start51, Milaap and Rang De have been launched in the last few years. Notable examples of crowdfunding include the movie “I Am,” which, according to a March 2012 article in The Times of India, raised close to Rs 10 million over a nine-month period. Crowdfunding holds promise in India due to the new rule in the Companies Act 2013 requiring certain companies to spend 2% of their three-year average profit on corporate social responsibility, a requirement that may promote funding for crowdfunding projects. However, equity-based crowdfunding is not yet legal in India. The key question surrounding equity-based crowdfunding in India is whether it would be akin to a public offering under section 67 of the Companies Act. This is more likely to happen if the offer to buy shares is made to more than 50 individuals, which will surely be the case with equity-based crowdfunding. A public offering attracts scrutiny and disclosure norms that many ventures (and startups in particular) in the very early stages cannot afford. Another question that arises is whether the crowdfunding platforms themselves have to register as broker-dealers with the Securities and Exchange Board of India (SEBI). Therefore, it is imperative that the Indian legal system enacts changes similar to those in the United States to enable equity-based crowdfunding. In addition to the legal barriers, the concept of giving money to finance strangers' businesses is alien to Indian culture. Moreover, there is likely to be scepticism and concerns regarding fraud.

Crowdfunding in Practice – Insights from Academic Research

Crowdfunding is a complex phenomenon and combines features of several web technologies, such as e-commerce (because crowdfunding involves the exchange of products and money), social media (because crowdfunding involves aspects of viral marketing and electronic word of mouth), and two sided markets (as crowdfunding platforms entertain both a demand side, i.e. funders, and a supply side, i.e. entrepreneurs). As a result, crowdfunding provides a rich set of data pertaining to the amounts and timing of contributions, browsing behaviour, consumers' social networks, affinity networks, referrals, demographics of consumers, comments, geographical locations, reviews, ratings, characteristics of entrepreneurs, and repeat contribution activity, among many others. Many academic researchers are leveraging this data to uncover insights on consumer behaviour in crowdfunded markets to inform firms on more efficient design of these markets and regulatory bodies on drafting effective policies for crowdfunding. Below, we summarise research findings on two key aspects of crowdfunding – successful fundraising and marketplace design (Burtch et al., 2013a; Burtch et al., 2013b; Liu et al., 2012; Lorenz et al., 2011; Mollick, 2013; Woolley et al., 2010; Zhang and Liu, 2012, and Agarwal et al. 2011).

CONCLUSION

In summary, crowdfunding has emerged as a novel way to democratise fundraising by small businesses and entrepreneurial ventures. While the developed world (such as the United States and Western Europe) is witnessing the rise of crowdfunding for entrepreneurial ventures, the developing world is seeing more crowdfunding for social projects and microfinancing small businesses. In effect, it provides an effective mechanism for moving capital from surplus to where it is deficit and creating economic and social opportunities for a wide population. For example, most projects on Kiva.com are located in developing countries in Africa and South America, but most of the project sponsors are located in Europe and the United States. Countries such as India not only need to provide incentives for high-quality projects to be launched on crowdfunding, but also effect social change by fostering trust and launching efforts to encourage people to contribute on these markets.

REFERENCES

1. Burkett, E., (2011), "Crowdfunding exemption—online investment crowdfunding and US secrutiies regulation", A. Transactions: Tennessee Journal of Business Law, Vol. 63.
2. Burtch, G., Ghose, A., and Wattal, S., (2011), « An empirical examination of the antecedents and consequences of investment patterns in crowd-funded markets », SSRN Electronic Journal.
3. Ferrary, M., Granovetter, M., (2009), "The role of venture capital firms in Silicon Valley's complex innovation network", Economy and Society.
4. Gompers, P., Lerner, J., (2004), "The Venture Capital Cycle", MIT Press.
5. Gorman, M., Sahlman, W.A., (1989), "What do venture capitalists do?" Journal of Business Venturing Vol. 4, pp. 231–248.
6. Ibrahim N., and Verliyantina, (2012), «The Model of Crowdfunding to Support Small and Micro Businesses in Indonesia Through a Web-based platform», Procedia Economics and Finance, Vol. 4, pp. 390 - 397.
7. Kleemann, Frank, G. Gunter Voss and Kerstin Rieder, (2008), "Un(der)paid Innovators: The Commercial Utilization of Consumer Work through Crowdsourcing", Science, Technology & Innovation Studies, Vol. 4 (1), pp.5-26.
8. Lin, M., Viswanathan, S., (2013), "Home Bias in Online Investments: An Empirical Study of an Online Crowd Funding Market", SSRN Electronic Journal.
9. Mollick E., (2014), The dynamics of crowdfunding: An exploratory study, Journal of Business Venturing, Vol. 29, pp. 1-16.
10. Schwienbacher, A., and Larralde, B., (2010), "Crowdfunding of small entrepreneurial ventures", SSRN Electronic Journal.
11. World Bank, (2013), "Crowdfunding's Potential for the Developing World", infoDev, Finance and Private Sector Development Department, Washington.
12. Agrawal, A., Catalini, C., Goldfarb, A., (2010), The geography of crowdfunding , SSRN Electronic Journal.

15 Patient's Expectations: A Study in Selected Hospital

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Abstract

Healthcare providers are shifting more and more towards marketing their services as the healthcare industry becomes a buyer's market. This calls for a marketing information system that gives hospital executives reliable, timely, and need-based information. A patient expectation survey is a useful tool for hospital management nowadays as it provides insight into what patients genuinely want from the hospital. There is a greater possibility of patient satisfaction when the findings of these patient expectation surveys are used to plan healthcare services. Studying patient expectations and actual performance, then analysing the discrepancy between the two, were the goals. Since the gap was frequently examined, the patients' expectations were satisfied at the majority of the counters they visited while they were outpatients because there was frequently very little difference found between the patient's expectations and the actual performance. In certain instances, such as the doctor's and support staff's attitude, the promptness of service at the pharmacy and billing counters, and the availability of the medications at the pharmacy, there was no difference found between the actual performance and the expectations of the patients. This indicates that the patients were extremely satisfied with these hospital treatments because the actual performance surpassed their expectations

Keywords: *Patient expectation, satisfaction, hospital services, hospital administrators*

1. INTRODUCTION

The consumer is increasingly at the centre of the healthcare industry. Healthcare organisations need to establish and keep patient loyalty by exceeding patient expectations in addition to providing high-quality care in an era where customers can shop around for the best deal. The quality of patient treatment has a growing impact on how profitable healthcare providers are.

1. In order to provide patient-centered care, meet patients' needs, and manage improper expectations when needed, a thorough grasp of patients' expectations is crucial.
2. Setting and meeting patient expectations is a worthwhile objective in and of itself, as well as a useful marketing strategy. The World Health Organisation noted in 2000 that reaction In order to improve health outcomes, patient expectations are a crucial indicator of how well the health system is performing. This is because happy patients are more likely to make use of essential services. The degree to which a customer's expectations of a service align with their impressions of the actual service received is the key indicator of perceived service quality. Four potential causes of any discrepancy between customer expectations and perceptions were identified by Parasuraman et al. These include management's inability to comprehend customer expectations, translate management's perceptions of customer expectations into the service specification, follow the specification, and, finally, manage customer expectations appropriately. These researchers maintained that knowing what customers anticipate and keeping an eye on changes. Any examination of service improvement should begin with an understanding of the expectations and perceptions of the customer throughout time, as they are crucial to the provision of high-quality services.

For hospital executives, marketing research is just as important as fast, precise, and sufficient information is a must before judgements about hospital service delivery are made in terms of marketing. A Patient Expectations Survey is one of the market research tools that is useful in resolving this problem (PES). This could be the hospital's first marketing campaign for a new facility, or it could be a continuous effort to address an issue the hospital is currently facing. One possible addition to the hospital's Customer Relationship Management (CRM) programme is a poll on patient expectations.

A consumer model, such as the Expectancy Disconfirmation Model from marketing theories, can be used to healthcare if patients are seen as consumers. offer. It is assumed that when patients come to a hospital, they have certain expectations. These assumptions are the result of past encounters, word-of-mouth recommendations, information from outside sources, or cultural context.

Satisfying patients' expectations for care results in higher satisfaction, which is linked to better adherence to prescription guidelines, a decrease in "doctor shopping," and a decreased propensity to file malpractice claims. Only by learning and comprehending what the patient expects from them can doctors live up to those expectations. This may also be incorporated into the hospital's Customer Relationship Management (CRM) initiatives.

2. LITERATURE REVIEW

1. Bryan and colleagues, [9] and Smith and associate [10] have speculated that patient expectation of care they receive has an important impact on satisfaction. Patients with inappropriately high expectations maybe dissatisfied with optimal care and those with inappropriately low expectations maybe satisfied with deficit care
2. Mckinley et al, [11] found that comparative/normative expectations (what patients expect as a result of their own or others experiences) could well influence satisfaction levels
3. According to Oliver [17] patient (customer) expectation have a bearing on patient satisfaction as shown by the disconfirmation paradigm. He says that measurement of patient satisfaction is done after the main event of patient-physician interaction has taken place. It allows change/modification of situation/service delivery afterwards. It is contended that patient expectation survey is a beneficial tool for hospitals to determine the expectation of their patients' expectations in advance and plan services in such a way that it increases the chances of patient satisfaction

4. Dawn et al. [20] reviewed literature on patients' expectations between 1966 and 2002 and reported that the most commonly addressed areas of expectations were medical information, medication/ prescriptions, counselling/psychological support, diagnostic testing, referral, physical examination, health advice, outcome of treatment, therapeutic listening and waiting time. Further interviews with a small sample of 48 parents of child ophthalmology patients identified 35 different expectations, classified into six categories: communication, interpersonal manner, doctor's skill, examination and testing, logistics and various other themes. The factors most often identified as the most important by respondents were clinical competence, interaction, education/training, explanation in clear language, information about diagnosis and a personal connection

The current research focuses on the different models and measures to assess expectations with respect to being treated , reliable care , responsiveness and participative in decision making

3. STATEMENT OF THE PROBLEM

The number of private hospitals has increased dramatically. Players in a metropolis like Bengaluru are in fierce competition with one another. It is a difficult effort for the private health care sectors to maintain their market share and obtain a competitive advantage over rivals. The Private health care sectors have to devise marketing strategies for their effective performance in order to meet the patients expectation . Hence the study is taken up to understand the patient expectation and perception towards the hospitals.

3.1 Objectives of the Study

1. To assess patient expectations and the actual performance (perception) of various out-patient services of the hospital
2. To assess the effectiveness of Service quality policies adopted by Private hospitals
3. To analyse the gap so that necessary measures may be taken to improve patient satisfaction.

3.2 Limitations of the Study

1. The study did not classify the patients according to the clinical department they were visiting and compare their expectations separately.
2. This can be considered in future studies as understanding the expectations of patients in the individual department can help in understanding gaps and planning suitable strategies for satisfaction of those patients.

4. RESEARCH METHODOLOGY

The study was carried out in a teaching hospital for tertiary care using a descriptive research approach. Based on Krejcie RV and Morgan DW, data was gathered from a sample of 50 return outpatients, with permitted error limits of 5% and 80% power. A questionnaire comprising questions for patients intended to investigate their expectations for hospital services was one of the data collection tools chosen. Three portions comprised the questions: the first part asked respondents' demographic questions. Subsequently, questions concerning the actual performance (perception) of the chosen hospital with reference to the services rendered at every counter were included. These included outpatient visits from the enquiry desk, registration, the clinical departments in question, laboratory/radio diagnostic services, billing, and, lastly, the pharmacy department above the counters.

5. RESULTS AND DISCUSSION

The study's findings include a survey that asked patients about their expectations and their perceptions of the actual performance (or lack thereof) of hospital services at various hospital counters. The different counters for outpatient visits included the registration desk, the clinical departments in question, the lab and radiology diagnostic services, billing, and, lastly, the pharmacy.

Table 1 Expectation and Perception - Enquiry/ Help Desk

	Actual performance (%)	Expectations (%)	P value
Attitude/behaviour of staff			
Polite, caring and respectful	31 (62)	35(69)	p>0.05, NS
Polite and caring	13 (26)	8(15)	
Impolite and uncaring	06 (12)	-	
Just polite	-	04(8)	
Existing behaviour is good	-	04 (8)	
Promptness in communication of required information			
Fast and clear	20 (72)	46 (92)	P<0.001, HS
Clear but moderate speed of delivery of information	28(27)	-	
Slow and unclear	02(1)	-	
Should be clear and speed of delivery of information doesn't matter	-	-	
Existing system is good	-	04 (8)	
TOTAL	**50 (100%)**	**50 (100%)**	

Majority of the patients (62%) were of the opinion that the staffs were polite, caring and respectful. Most of the patients (69%) expect the attitude/behaviour of the staff to be polite, caring and respectful. It is noted that there is a gap of 7% (which is statistically not significant as p>0.05) between the actual performance and patient expectations. Since the gap is negligible, it implies that the expectations of the patients have been completely met thus resulting in the patients being highly satisfied.

72% of the revisit outpatients reported that the promptness in communication at the enquiry desk was fast and clear; 92% of the revisit outpatients expected the delivery of the required information at the enquiry desk to be fast and clear. It is noted that a gap of 20% (which is highly significant as p<0.001) exists between the actual performance and patient expectations. A minor gap exists implying that the hospital must train and encourage the staff at the enquiry/help desk to improve their promptness in communication of the required information

Table 2 Expectation and Perception - Diagnostic services

	Actual performance	Expectations	P value
Waiting time at the laboratory/ radio-diagnostic services			
5-10 min	25 (50)	33 (66)	p>0.05, NS
11-15 min	10(20)	10 (19)	
16-20 min	09 (17)	4 (9)	
21-25 min	06 (13)	3 (6)	
Behaviour/attitude of the staff			
Polite, caring and respectful	33 (66)	35(70)	p>0.05, NS
Polite and caring	14 (28)	7 (13)	
Impolite and uncaring	3(7)	-	
Just polite	-	03 (6)	
Existing behaviour is good	-	05 (12)	
TOTAL	**50 (100)**	**50(100)**	

50% of the total patient respondents felt the waiting time to be 5-10minutes. Half of the total patient respondents (66%) expect it to be between 5-10minutes at these departments.. The gap here between performance and expectation is 16% (which is statistically not significant as p>0.05). It is noted that the gap is minor, thus implying that the patients' expectation have not been completely, but have been almost met, thus leading to patient satisfaction.

66% of the patients opined that the behaviour of the staff at the laboratory/radio diagnostic departments is polite, caring and respectful whereas 70% of the patients expect the behaviour of the staff to be the same. A gap of 4% (which is statistically not significant as p>0.05) is noted, which is negligible

CONCLUSION

A proactive marketing strategy aimed at increasing the likelihood of patient satisfaction is the patient expectation survey. This survey will establish a foundation of evidence and promote the prudent use of limited resources. To ensure a higher possibility of patient satisfaction, it would also be advantageous to employ a patient expectation survey to plan outpatient services and sensitise clinicians about expectations of patients. It has also been discovered that this strategy works well for reaching big markets at a low cost. Additionally, this would be a great step in positioning the hospital as a responsive institution. A research conducted with return patients in the outpatient department of a chosen hospital to evaluate patient expectations and the hospital's actual performance found that the discrepancies between the patient's expectations and the actual performance. The hospital management needs to focus on these areas in order to develop methods that will increase patient satisfaction

REFERENCES

1. Burger Jeff. Why Hospitals Must Surpass Patient Expectations. Business journal. May 1, 2014
2. Cooke Timothy, Denise Watt, MD; William Wertzler, Hude Quan. Patient expectations of emergency department care:phase II – a cross-sectional survey. Can J Emerg Med 2006;8(3):148-57
3. Desmond J. Managing patient expectations. The Healthcare Collaborator 2003;3(1):9- 16.
4. Grady ML, Makulowich G. Physician understanding of patient expectations is critical to patient satisfaction. Agency for Healthcare Research and Quality: Research Activities 2001;252:9.

16 UPI Impact on Indian Candy Industry Sales and Innovative Survival Strategies

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Abstract

Based on the impact of digitization of financial services in India, primarily through UPI (unified payments interface) on the candy manufacturing industry as the main research background, this paper focuses on the analysis of innovative survival strategies adopted by market players. It explores the transformative impact of UPI on sales dynamics in the Indian candy market, which has traditionally relied on cash payments. Through case studies and information available through secondary data sources primarily on the internet, the study elucidates key insights into adaptability of businesses amidst technological disruptions and forceful changes in human behaviour caused by the pandemic. In addition, the paper highlights the importance of direct selling efforts and marketing strategies in managing market volatility and recommends a proactive approach to revenue generation. It highlights successful examples such as Pulse and Kopiko, illustrating how innovative product offerings and promotional tactics have helped companies not only survive but thrive in the face of industry challenges. In essence this research paper contributes to a deeper understanding of the interplay between technological disruption, market dynamics, and innovation required for survival within the Indian candy industry.

Keywords: *Candy manufacturing, UPI disruption, Innovation in survival strategies, consumer taste and preferences.*

1. INTRODUCTION

The advent of digital payment systems has transformed global financial transactions and ease of doing business, especially in India. Widespread adoption of UPI has facilitated seamless online transactions, benefiting businesses of all sizes by removing the complexity associated with cash payments. While many industries have grown due to increased customer satisfaction and loyalty through digital payments, India's manufacturing industry has been hit hard by the UPI crisis. After India's economic reforms in 1991, multinational companies such as Mondelez, Nestlé and Perfetti Van Melle dominated the manufacturing market, displacing local companies that struggled to compete in areas such as marketing, product quality and supply chain management.

From 1991 to 2024 the size of this industry has grown enormously. As of 2022 the size of confectionary market was valued at INR 338.2 billion. This market is segmented with different types of products holding different percentage of market share. The category of hard-boiled sweets (like Kismi, Alpenliebe, Kopiko etc.) own 20% of the market share, gums & jellies (like centre fresh, boomer, etc.) own 20% of the market share, mints (like mentos, ice breakers etc.) own 15% of the market share and the rest is distributed among chocolate bars, caramels & toffees, medicated candies, and cooking chocolate bars.

The dominant segments of the Indian confectionery market are hard cooked candies and gums and jellies, which account for a significant market share. However, many manufacturers in these sectors will face a significant decline in sales of more than 50% by 2023. This decline may be due to the expansion of the UPI system, which was launched in 2016, and the better way to pay quickly, the Indian way. With 300 million UPI users and 500 million merchants currently using the system, it has transformed financial transactions from large purchases to small transactions like a cup of tea, impacting traditional cash sales in the confectionery industry.Through third party application providers like Google Pay, PhonePe, Amazon Pay, and Paytm in partnership with banking partners, transferring & receiving money has become contactless, safe, and most importantly enabled the growth of many small-scale businesses in India.

UPI has effectively solved the problem of insufficient loose change during transactions, especially for small businesses and roadside outlets in India. This problem was exacerbated after demonetisation when the central bank removed certain currencies from circulation. In the past, customers often struggled to find lower denominations or were forced to abandon purchases due to lack of change, which negatively affected businesses. However, with the widespread adoption of digital payments enabled by UPI, both customers and sellers now have a convenient solution at their disposal that eliminates the need for physical cash payment and ensures smoother business for all parties involved.

Before the advent of digital payment systems in India, shopkeepers took up the challenge of providing exact change by offering candies instead of coins or small denominations. These candies were usually priced at INR 1, 2 or 5, making it easy for sellers to return odd ones. This arrangement proved to be a win-win, maintaining candy sales while the merchants were able to keep a profit margin on each package sold. This was a classic case of category substitution that was applied by knowingly or unknowingly by many small mom and pop stores present at the corner of every street in India. In 2010, confectionery sales increased significantly, and major players such as Mondelez, Mars, Nestle, Parle and ITC grew in revenue. At that time, selling 2 Rs worth of candies to 200 customers on an average generated a total revenue of 1 NR 400, which benefited the manufacturers, sellers, and customers alike. However, until 2024, the landscape of the confectionery industry will remain unchanged, except for the Unified Payments Interface (UPI).

2. HOW UPI AFFECTED THE INDIAN CANDY INDUSTRY

According to Marketing leads from the leading confectionary companies the candy industry flourished in India between the 1990s till mid-2000s when branded toffees were sold at 50p – Re 1 per piece and local candies were even available at 10p – 50 p per piece. During the PCO era, candies and confectionaries thrived, contributing 12% to total tonnage and 7% of turnover. However, their sales plummeted by almost half in the post-PCO era. PCOs indirectly boosted candy sales by facilitating the tradition of giving candies as change due to the need for loose cash for phone calls. With the decline of PCOs and the rise of mobile phones, candy sales dwindled further, and the emergence of UPI payment systems ultimately led to the downfall of the candy industry.

The rise of UPI payment systems in India has changed consumer spending habits. While purchasing candy was a joyous occasion, especially for kids of the 90s and 2000s, it's now becoming a diminishing trend. Mom-and-pop stores and retailers used to prominently display various candy brands, enticing occasional purchases. However, today's younger generation prioritizes larger utility items over candy, shifting away from traditional sweets. This changing preference, coupled with a decline in candy purchases, has led to retailers reducing their confectionary inventory to avoid wastage.

How the Pandemic Worsened This Situation

In 2016, the presentation of UPI in India started changed responses among the open. Whereas numerous easily transitioned to cashless installments, others, counting Gen X, infant boomers, and millennials, delayed due to mechanical newness. The concept of transacting without physical currency posed a challenge for these groups. In any case, the onset of COVID-19 on January 27, 2020, incited broad selection of contactless installments, changing recognitions, and quickening the move towards advanced transactions. The COVID-19 widespread quickened the move towards contactless installments as buyers looked for to play down physical contact with difficult cash, dreading infection transmission. This incited the RBI to advocate for decreased cash utilization, driving to a critical increment in advanced exchanges.

Over 80 million Indian adults made their first digital merchant payment after the pandemic's onset, solidifying India's global leadership in digital payments, according to the World Bank. This worsened the sales of candy manufacturers in India, as the Covid-19 pandemic was the last nail in their coffin.

3. OTHER REASONS THAT AFFECTED SALES IN THE CANDY MARKET

UPI and digital payment systems are probably the most prominent reason responsible for killing the candy businesses in India. But there are also several other reasons that were equally responsible for such drastic decline. Some of them include

OTT Platforms Replacing Traditional TV

In today's day and age OTT platforms have made their way into everybody's home. The combined operating revenue of the four private direct-to-home (DTH) companies—Tata Play, Bharti Airtel-owned Bharti Telemedia, Dish TV, and Sun Direct—declined nearly 10% to Rs 11,072 crore in FY23, compared to Rs 12,284 crore the previous fiscal year, according to data obtained from the four firm's regulatory filings. OTT platforms offer ease of accessibility, cost effectiveness, wide variety of content along with uninterrupted ad free viewing. From the audience point of view this might be very beneficial, but for businesses that are dependent on TV medium for low- cost advertising this is a very big disadvantage. Candy manufacturing businesses were one of the many businesses that were dependent on mass media advertising to increase sales. An Indian chocolate brand named "Melody" used the tagline "How did Melody become so chocolatey?" while creating memorable ads through catchy ad campaigns. "Mango bite" another brand of candies owned by Parle, known for their sweet and sour taste experienced boost in sales due to their ad campaign which consisted of a boy asking for a photocopy of a mango and the xerox machine gave out "Kaccha mango bite" toffees in return. The ad caught the attention of target consumers instantly. This ad also conveyed to customers that "Kaccha mango bite" would give the taste of mangoes even better than mangoes. But all of this was possible because consumers would actually watch advertisements instead of choosing to skip them. Candymakers, who jostle for domination in a low-margin, high-volume sector, relied on TV ads to reach audiences. But streaming is forcing them to spend more on digital marketing.

Changing Consumer Taste and Preferences

The new generation of consumers is health conscious and is more focused on leading a healthy lifestyle. The first step towards a healthy lifestyle is cutting down on sugar intake as excess sugar consumption leads to diabetes and obesity which is the number one reason behind health complications at a young age. This change in approach towards eating habits has affected the sales in the candy industry. From young adults to even kids everybody is becoming progressively aware and making shifts towards purchasing healthier options like granola bars and sugar free chocolates to satisfy their sugar cravings. The lowest calorie chocolate and lowest fat content was Gems that contains 60.1 gm of sugar per 100 gm of product. As per the recommendations of the World Health Organization (WHO), an average adult should not consume more than 50 grams of sugar per day, and children should not consume more than 30 to 42 grams of sugar per day. So as it evident, the sugar content in candies is way above the recommended limit, that has led to consumers reading packet labels before purchasing. More over these candies include other ingredients like hydrogenated fats, and artificial flavours that are harmful to the human body.

Shortage of Raw Materials Needed for Manufacturing

The main ingredient required to manufacture confectionaries is sugar. But due to extreme climatic fluctuations in many of the major sugar manufacturing countries around the world, there is shortage on supply of sugar and allied components. Countries like Thailand, India, USA, Europe etc. are suffering from floods, drought, and harsh weather conditions . Another major raw material used by many candy manufacturers is cocoa beans. Eclairs a variant from the house of Mondelez India is a hard-boiled candy with an outer layering of chocolate made from cocoa beans. The major exporters of cocoa include Ghana and Ecuador, and currently both the nations are facing recessionary economic cycles that is affecting farming, production, and supply. Without the availability of such crucial raw materials Indian candy manufacturers are on the look out for alternatives to sustain their business, as without supply and sharply declining demand surviving in an overall diminishing market is quite difficult.

Stricter Regulatory Compliance and Quality Control

India's food regulator FSSAI has asked the chocolate industry to follow a new set of quality norms from next year to ensure that the best quality product is made available to the customer. Candy manufacturing requires fewer raw materials, and hence its cost of production is also considerably low. So it's easy for manufacturers to use low quality raw materials instead of food grade ingredients in production to lower cost and multiply profit margins. In a shocking incident in Indore, a factory was caught mixing non-edible items like talcum powder in candies and lollipops meant for children. Following the raid, the FDA seized over 9000 kg candies and lollipops which included 4,200 kg of lollipops and 5,600 kg of candies. This incident highlights the need for stricter norms for candy manufacturers. While bigger brands can afford advanced automated production systems, smaller ones often resort to manual production, risking hygiene and safety standards. Even cottage industries making candies at home face scrutiny despite promising quality.

As it is evident, along with UPI many other factors are contributing towards killing candy business in India. The market is heavily competitive, but the demand for candies and toffees is declining day by day. Going by this trend, the most logical advice anyone would give to such candy manufacturers is to quit the market, to stop incurring further losses. However rather than just quitting, some candy manufacturers have displayed strength and pliancy by executing innovative survival strategies. Innovation not just in terms of product, but also in their approach towards marketing and strategic decision making. Through a series of case studies, we will take a look at how these brands have set an example of adaptability during times of turbulent market conditions.

4. INNOVATIVE SURVIVAL STRATEGIES ADOPTED BY INDIAN CANDY MANUFACTURERS

A. Pulse Candy Case Study

Innovation in product creates long-term growth and customer satisfaction for the company. The introduction of new flavours and innovation are two of the key growth drivers for the hard-boiled candy (HBC) category. Pulse candy with its peak fruity flavour and tangy burst is disrupting the Indian confectionary market by attracting Indian consumers. It was created after extensive sampling exercise with raw mango flavoured HBC with a tart salty centre. By innovating in marketing techniques, Pulse candy has left its competitors behind. The brand has understood that this market can only be captured by thinking out of the box and engaging with consumers in unconventional ways.

Company profile

DS Group owners of Pulse candy have been in business since 1929 and have been involved in various sectors such as Food & Beverage, Hospitality, Agro Forestry, Tobacco, Packaging and Mouth fresheners. In February 2015, the DS Group, the manufacturer of brands such as Rajanigandha, Pan Masala, Tulsi, Tobacco and Catch, entered into the candy segment with 'Pulse'. After successful test marketing, the DS Group took the initiative to a full launch. In April 2015, they decided to test market Pulse in only three northern states (Gujarat, Rajasthan, and Delhi) as an initiative which resulted in all previous records being broken in the Indian confectionery segment.

Today, the Pulse brand of HBC (raw mango) with a tangy twist is valued at INR 326 crore (4.68 crore US$) in 2016-17. Pulse is closely followed by Indonesian coffee- flavoured brand, Kopiko, valued at around Rs 306 crore (4.39 crore US$). The most remarkable achievement of the brand was there was very little to no formal advertising. The DS group believed that advertising will not bring them sales, but it will only act as an enhancement. Pulse candy is available in five unique flavours such as raw mango, pineapple, guava, orange, and litchi . In an industry where people used to prefer flavour over the brand, Pulse candy changed the perception of many. It took the category from impulse-driven to Pulse-driven as was evident from the fact that the brand generated revenue of ₹ 100 crores in the first eight months. When many people thought that the candy was just 'hype' and would dwindle gradually, it proved everybody wrong by clocking Rs 300 crores in sales in year 2017, and surpassing giants like Oreo and Mars Bar.

Innovations Implemented by Pulse in the Indian Market

(i) Product innovation

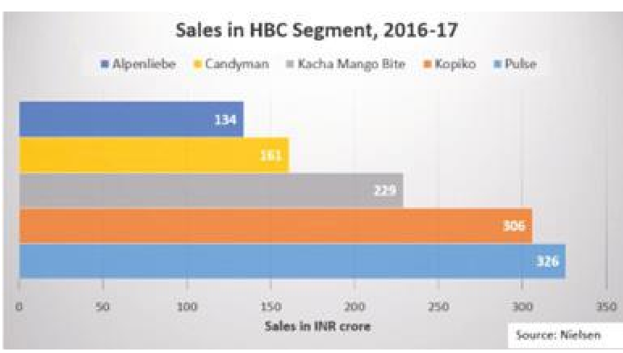
A major reason why Pulse candies earned success as a brand within such a short period of time was because of its product innovation. In a product category like candies and toffees, innovation had to be experimenting with something was known to Indian consumers and also something they had never tasted before. "Kaccha Mango Bite" was Pulse candies predecessor in the market, as they had experimented with raw mango flavour in a candy form. The experiment was a huge success as it was widely appreciated by Indian consumers who have a liking for anything sweet and sour in taste. Pulse candies took the same innovation a step further by adding a special powder in the centre similar to an Indian spice mix. This differentiation reminded loyal consumers of "Kaccha mango bite" the age-old taste while also building Pulse candy's brand loyalty. This kind of innovation is also known as "incremental innovation."

Apart from improving on an existing flavour, Pulse also innovated by launching new flavours that were never experimented by another competitor in the Indian market. Common flavours like raw mango, caramel, and orange were the only options available. However, major players such as Mondelez, Parle, ITC, and Nestle neglected to create candy flavours suited to traditional Indian tastes. Tamarind, a flavour with strong emotional ties for many Indian consumers, was notably absent from their offerings. Pulse manufacturers recognized this gap early on, capitalizing on their first-mover advantage. They swiftly introduced unique flavours like litchi, pineapple, guava, and tamarind shortly after their launch. This disrupted the candy market like never before, as for the first-time candies were not being sold in exchange for loose cash, but customers would actually walk into a store asking for these candies. This is how brands are innovating by understanding and catering to the unmet needs of their target audience. Pulse's innovation was not just about introducing new flavours, but also about recognizing and capitalizing on the emotional connection that Indian consumers had with traditional flavours. This is a classic example of demand-driven innovation where the company creates a product that the market didn't know it needed until it was introduced.

(ii) Customers as brand ambassadors

Just like oxygen supports different organs to function in a human body, marketing supports a brand to increase its sales or revenue. Every company whether it is into manufacturing or services relies heavily on the skills of its marketing team to ensure their products or services reach the target consumers. It's a common belief that a bad product can also be sold with good marketing, which is why brands incur huge marketing costs. However there have been instances where a brand has achieved exponential sales numbers with negligible marketing costs. One such brand is Pulse candies owned by DS group.

In this digital era, there is still the existence of one category of advertising that truly stands out – Word of Mouth, and Pulse candy has proved that no form of marketing beats product marketing, and this candy has surpassed all competition and beaten all the records by crossing the 100-crore mark in just 8 months. This figure equals the record for heavily advertised Cole Zero, Coca Cola's diet drink .With Pulse candy, consumers unintentionally became passionate brand ambassadors, promoting the product via genuine word-of-mouth recommendations driven by its unique flavour profile. Because of the candy's distinctive tangy-sweet combination, consumers were prompted to share their joy with friends, family, and social circles, as it created a memorable sensory experience. This phenomenon is a prime example of the "viral marketing" or "buzz marketing" approach to strategic decision-making. In order to create excitement and interest in a good or service, this strategy makes use of already-existing social networks and interpersonal communication. Through word-of-mouth marketing, Pulse candy swiftly gained prominence, leveraging satisfied customers to boost sales and brand recognition, consequently reflecting in increased revenue and market share.



Pulse plans to target international consumers through a Rs 8 crore marketing campaign across various platforms, marking their first significant investment in marketing since their launch. The DS Group remains confident in Pulse's success, as they prepare to expand globally, believing that relying solely on word-of-mouth strategy won't suffice in international markets, with competitors yet to pose a substantial challenge.

B. Kopiko Candy Case Study

Introduction

In 2008, Mayora India, a subsidiary of global food and beverage company Mayora, was established. Mayora is known for its popular confectionery brand Kopiko, the world's leading coffee candy and the second largest confectionery brand in India. Despite India's preference for traditional fruit flavours in sweets, Kopiko stands out as the only successful coffee-flavoured candy, as the country's coffee is primarily associated with beverages. To succeed, Kopiko had to carefully handle all aspects of marketing, including product, price, placement, and promotion, in a highly competitive environment.

Innovations implemented by Kopiko in the Indian market

(i) Product differentiation

Kopiko Candy's success in the Indian market is based on a strong product differentiation strategy. Kopiko created a rich coffee flavour in its sweets that was different from the traditional sweet flavours. This interesting highlight has offered to both coffee partners and gutsy customers searching for unused taste encounters. Also, Kopiko expanded its item extend with offerings like Kopiko Coffee Sweet, Kopiko Cappuccino Sweet, and Kopiko Latté Sweet, catering to different tastes. Their commitment to high-quality fixings, exacting generation measures, and buyer believe fortified Kopiko's esteem suggestion.

(ii) Inventive marketing

The leading coffee confectionery brand Kopiko has produced an innovative marketing strategy in India, especially by partnering with popular Korean dramas like Vincenzo and Hometown Cha-Cha-Cha . Kopiko's collaborations with popular Korean dramas accelerated its entry into the Indian market, attracting a younger audience in particular. In addition to strategic advertising campaigns with the slogan "Coffee in your pocket", Kopiko used social media platforms such as Facebook and Instagram to increase consumer engagement, strengthen its position and succeed in the competitive Indian market.

Originally an Indonesian sweet, Kopiko has become a global sensation, capturing the hearts and tastes of coffee lovers all over India. Kopiko's success shows how important it is to know the needs, wants of consumers, and respond to them with high-quality products that suit their tastes at a reasonable price.

CONCLUSION

This paper mainly introduces the strategies adapted by a declining candy market for survival, while putting emphasis on UPI as a technological disruption, and its effect on the candy market which was dependent on loose cash economy for sales. The main learning outcomes from this research paper are

(i) Change is the only thing constant, and every market is susceptible to change. This may be change in consumer taste and preferences or introduction of new technology

(ii) Technology can turn out to be a big advantage or it can also end up killing your business. Therefore businesses must learn to adapt to changing trends in technology or any of its forms.

(iii) Sales should be generated through direct efforts like marketing and promotions and not by depending on other factors that drive sales for the business. This will make businesses resilient to market volatility.

(iv) Innovation is vital for survival in turbulent markets. Brands like Pulse and Kopiko, despite being newer players, became market leaders by relying on innovative product and promotion strategies, outpacing larger competitors in a short span.

In conclusion, candy manufacturing brands in India face challenges in today's market. The rise of UPI signifies a shift in the country's financial ecosystem. While change brings both positives and negatives, traditional industries like candy manufacturing may suffer. However, prioritizing innovation and customer satisfaction over mere sales can pave the way for survival and growth despite adverse conditions.

REFERENCES

1. Agarwal, V. (n.d.). India confectionery market 2023-2028: Size, share C growth. Retrieved from https://www.linkedin.com/pulse/india-confectionery-market-2023-2028-size- share-growth-vihaan-agarwal/
2. Daily Signal. (n.d.). Indian toffee is in a sticky situation. Retrieved from https://daily.thesignal.co/p/indian-toffee-is-in-a-sticky-situation
3. DSIM Blog. (n.d.). Case study: How Pulse Candy made it a success and reached Rs 100 crore in just 8 months. Retrieved from https://dsim.in/blog/case-study-how-pulse- candy-made-it-a-success-and-reached-rs-100-crore-in-just-8-months/
4. Economic Times. (n.d.). DTH industry revenue falls 10% to Rs 11,000 crore in FY23. Retrieved from https://economictimes.indiatimes.com/industry/media/entertainment/media/dth- industry-revenue-falls-10-to-rs-11000-crore-in-fy23/articleshow/105432390.cms?from=mdr
5. Economic Times. (n.d.). Pulse hit Rs 100 crore sales in eight months with no advertising, so why is it going in for a TV campaign now? Retrieved from https://economictimes.indiatimes.com/pulse-hit-rs-100-crore-sales-in-eight-months- with-no-advertising-so-why-is-it-going-in-for-a-tv-campaign-now/articleshow/58126522.cms?from=mdr
6. Fox Weather. (n.d.). Sugar shortage threatening Halloween candy prices. Retrieved from https://www.foxweather.com/lifestyle/sugar-shortage-threatening-halloween-candy- prices
7. IMARC Group. (n.d.). India confectionery market. Retrieved from https://www.imarcgroup.com/india-confectionery-market
8. India.com. (n.d.). Over 9000 kg of lollipop candies adulterated with talcum powder seized, case filed under food safety act. Retrieved from https://www.india.com/viral/over-9000-kg-of-lollipop-candies-adulterated-with-talcum- powder-seized-case-filed-under-food-safety-act-4328886/
9. Jewelbabu007. (n.d.). How India's UPI affected candy industries. Retrieved from https://medium.com/@jewelbabu007/how-indias-upi-affected-candy-industries- e7ca56ddb350
10. ResearchGate. (n.d.). Kopiko product placement in Korean drama on brand awareness. Retrieved from https://www.researchgate.net/publication/373250772_Kopiko_Product_Placement_in_ Korean_Drama_on_Brand_Awareness
11. ResearchGate. (n.d.). Pulse Candy: Rightly caught the pulse of customers in HBC segment. Retrieved from https://www.researchgate.net/publication/334670046_Pulse_Candy_Rightly_caught_th e_Pulse_of_Customers_in_HBC_segment

12. Shorts by GrowthX. (n.d.). Breaking: UPI is killing India's candy. Retrieved from https://shorts.growthx.club/p/breaking-upi-is-killing-indias-candy
13. Times of India. (n.d.). The rise of UPI: Transforming the way Indians transact. Retrieved from https://timesofindia.indiatimes.com/blogs/voices/the-rise-of-upi-transforming- the-way-indians-transact/
14. ZeeBiz. (n.d.). UPI alone is not behind the fall in candy sales in India. Retrieved from https://www.zeebiz.com/india/news-upi-alone-is-not-behind-the-fall-in-candy-sales- in-india-205446

17 Green Finance Revolution and Its Impact on Sustainability

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Abstract

Green Finance refers to financial activities and investments that promote environmentally sustainable economic growth and development. It is a key component of the transition to a more sustainable economy, as it enables the allocation of capital that contributes to reducing climate change and mitigating other impacts on the environment. The objective of this paper is to examine, explore and provide recommendations for policy makers, investors, and other stakeholders to promote the growth and effectiveness of green finance and to accelerate the transition towards a more sustainable and resilient economy. Based on a qualitative methodology, the study report used secondary data. The outcome demonstrates the substantial influence of green financing on sustainability, as it facilitates the quick shift to a low-carbon economy and lowers environmental hazards. In turn, this leads to the creation of new jobs and economic prospects as green finance supports the development of sustainable technology and infrastructure. In general, the expansion of green finance is necessary to meet both the Indian Sustainable Development Goals and the climate change targets since it directs funds toward projects that promote a more sustainable future.

Keywords: *Green Finance, Climate Change, Sustainability, Investment Decision Making.*

INTRODUCTION

Green finance has emerged as a critical tool in the global effort to promote sustainable economic development and combat climate change. The concept of green finance refers to the use of financial instruments and investments to support environmentally sustainable activities, such as renewable energy projects and infrastructure development. The impact of green finance on sustainability is significant, as it enables the allocation of capital towards activities that contribute to mitigating climate change and reducing other environmental impacts. In order to expedite the shift to a low-carbon economy and encourage responsible, long-term investment plans, the rise of green finance is crucial to meeting both the climate change and the Indian Sustainable Development Goals. In this environment, it's critical to comprehend the fundamentals of green finance, how it affects sustainability, and the prospects and potential pitfalls of putting it into practice.

OBJECTIVES OF THE STUDY

The objectives of this paper on green finance and its impact on sustainability are:

1. To provide an overview of the concept of green finance and its key components, including green bonds, sustainability-linked loans, renewable energy project finance, and sustainable investment funds.
2. To examine the impact of green finance on sustainability, including its contribution to mitigating climate change, reducing environmental risks, and promoting sustainable economic growth
3. To explore the potential challenges and opportunities associated with the implementation of green finance, including regulatory frameworks, market development, and financial innovation.
4. To Promote the growth and effectiveness of green finance, and to accelerate the transition towards a more sustainable and resilient economy.

LITERATURE REVIEW

Green finance has emerged as a key strategy for promoting sustainable economic growth and reducing the environmental impact of economic activity. The following review of the literature examines the key components of green finance, its impact on sustainability, and the potential challenges and opportunities associated with its implementation.

Green finance encompasses a range of financial instruments and activities that promote environmentally sustainable economic growth. One such instrument is green bonds, which are fixed-income securities that finance environmentally sustainable projects and activities (Jing & Chen, 2018). Another important component of green finance is sustainability-linked loans, which are loans that are tied to sustainability performance indicators (Scholtens& Veld, 2020). Renewable energy project finance is another important area of green finance, as it provides financing for renewable energy projects such as solar and wind power (Soubra& Ng, 2017).

The impact of green finance on sustainability is significant. By enabling the allocation of capital towards environmentally sustainable projects, green finance helps to reduce the environmental impact of economic activity and promote sustainable economic growth (Holland, 2019). Moreover, by promoting responsible and long-term investment strategies, green finance can help to create more stable and resilient financial markets (Meng et al., 2019). Green finance can also contribute to the achievement of the United Nations Sustainable Development Goals, particularly those related to clean energy, sustainable infrastructure, and climate action (Hsu et al., 2018).

Despite its potential benefits, the implementation of green finance also presents challenges and opportunities. One major challenge is the lack of regulatory frameworks and standards for green finance, which can make it difficult to assess the environmental impact and credibility of green finance instruments (Scholtens& Veld, 2020). Another challenge is the need for financial innovation to develop new green finance instruments and products (Holland, 2019). Opportunities for the growth of green finance include the increasing demand for sustainable investments and the potential for collaboration between public and private sectors to finance sustainable projects (Soubra& Ng, 2017).

Cheng, X., Tan, L., & Huang, Y. (2021). study examines the relationship between green finance and corporate sustainable performance, and finds that innovation plays a mediating role in this relationship. The authors argue that green finance can encourage innovation in sustainable technologies and practices, leading to improved environmental performance.

Dhiman, V., Singh, R., & Anand, A. (2019). This review article provides a comprehensive overview of green finance, including its various components, policies, and practices. The authors argue that green finance is critical to achieving sustainability goals, and that it can help to address challenges such as climate change, resource depletion, and environmental pollution.

Gao, J., Zhang, Q., & Song, M. (2019). This study examines the impact of green finance on the environmental performance of Chinese firms, and finds a positive relationship between the two. The authors argue that green finance can encourage firms to adopt more sustainable practices, leading to improved environmental performance and reduced environmental risk.

Sharma, R., & Mishra, A. K. (2021). This article reviews the regulatory and policy frameworks for green finance, and argues that such frameworks are critical to the institutionalization of green finance and its effectiveness in promoting sustainable development. The authors examine case studies from different countries to identify best practices in green finance regulation and policy.

Al-Louzi, O. A., &Busler, M. (2021). This article examines the status of green finance and sustainability in the Middle East region, with a focus on Saudi Arabia, Qatar, and the United Arab Emirates. Theauthors argue that there is significant potential for green finance to promote sustainable development in the region, but that there are also challenges such as a lack of awareness, regulatory frameworks, and financial infrastructure.

El-Katiri, L. (2020). study explores the role of Islamic finance in promoting sustainable development in the Middle East and North Africa (MENA) region. The author argues that Islamic finance, with its emphasis on ethical and social responsibility, can be an important tool for promoting sustainability in the MENA region. The study also identifies challenges such as the lack of standardization and harmonization in the Islamic finance industry.

International Renewable Energy Agency. (2021). Report provides an analysis of the renewable energy market in the Gulf Cooperation Council (GCC) countries, which include Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. The report highlights the potential for renewable energy to support sustainable development in the region, and examines policies and initiatives aimed at promoting renewable energy deployment.

Saeed, S. (2019). This study examines the opportunities and challenges of green finance in the GCC countries, with a focus on Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. The author argues that green finance can play a key role in supporting sustainable development in the region, but thatthere are challenges such as the lack of regulatory frameworks, financial infrastructure, and public awareness. The study also identifies potential solutions to address these challenges.

Al-Sari, M. I., & Al-Badi, A. H. (2020). Examines the potential of green finance in the Gulf Cooperation Council (GCC) countries, with a focus on Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. The authors argue that green finance can play a key role in promoting sustainable development in the region, and identify opportunities for green financing in sectors such as renewable energy, energy efficiency, and sustainable transport.

Al-Shaer, H., & Fakhruddin, H. (2020). Studies the role of green finance in promoting sustainable development in the United Arab Emirates (UAE), and identifies opportunities and challenges in the context of the UAE's economic and financial landscape. The authors argue that green finance can support the UAE's efforts to diversify its economy and reduce its dependence on fossil fuels, and highlight the potential of green bonds and sukuk in financing sustainable development projects.

Elbousty, Y., &Boubakri, N. (2021). This study examines the impact of green financing on corporate performance in the Middle East and North Africa (MENA) region, and finds a positive relationship between the two. The authors argue that green financing can enhance corporate environmental and social responsibility, leading to improved financial performance and market reputation.

United Nations Environment Programme. (2019). Report explores the potential of Islamic finance in supporting sustainable development, with a focus on the Middle East and North

Africa (MENA) region. The report highlights the alignment of Islamic finance principles with sustainable development goals, and identifies policy measures and financial instruments that can promote the growth of Islamic finance for sustainable development in the MENA region.

Al Hinai, N. (2020). This article examines the potential of sustainable finance in Oman, with a focus on Islamic finance as a key driver of sustainable development in the country. The author argues that Islamic finance can promote ethical and socially responsible investment, and identifies opportunities and challenges for the development of sustainable finance in Oman.

Al-Zadjali, S., & Al-Hinai, K. (2020). Study assesses the readiness of Omani banks for sustainable banking, and examines the factors that influence their adoption of sustainable practices. The authors find that Omani banks are moderately ready for sustainable banking, and identify challenges such as a lack of awareness, regulatory frameworks, and customer demand. The study also identifies potential solutions to address these challenges, such as capacity building and collaboration among stakeholders.

Advantages of Green Finance for Businesses

1. Access to capital: Green finance allows businesses to access capital from a growing pool of investors who are interested in sustainable investment opportunities.
2. Lower cost of capital: By incorporating environmental, social, and governance (ESG) factors into their operations and reporting, businesses can improve their risk profile and potentially lower their cost of capital.
3. Improved reputation: Implementing sustainable practices can enhance a business's reputation and brand, which can help to attract customers, investors, and employees.
4. Compliance with regulations: Many countries are implementing regulations aimed at reducing greenhouse gas emissions and promoting sustainable practices. By complying with these regulations, businesses can avoid fines and penalties, as well as improve their environmental performance.

Limitations of Green Finance for Businesses

1. High upfront costs: Implementing sustainable practices can require significant upfront investment, which can be a barrier for small and medium-sized businesses with limited resources.
2. Uncertain returns: The benefits of green finance, such as improved reputation and lower cost of capital, are difficult to quantify and may not be realized immediately. This can make it difficult for businesses to justify the upfront costs of sustainability initiatives.
3. Limited availability of financing: While the green finance market is growing, it is still relatively small and may not be accessible to all businesses, particularly those in emerging markets.

Data Analysis

Various Secondary information available on the topic. Here are some secondary data sources on the topic of green finance and sustainability.

1. According to the Global Sustainable Investment Review 2020, the global sustainable investing market was worth $31 trillion in 2019, up from $22.8 trillion in 2016. It includes data on the size and growth of the sustainable investing market, as well as regional breakdowns and case studies.
2. As per the report of United Nations Environment Programme. (2020). The Global Trends in RenewableEnergy Investment 2020 report by the United Nations Environment Programme found that global investment in renewable energy totaled $282.2 billion in 2019, up from $274.8 billion in 2018.
3. Arabesque. (2020). The State of ESG Data and Analysis 2020. report provides an overview of the state of ESG data and analysis, including trends and developments in the availability and use of ESG data and metricsby investors and companies. It includes data on the growth of ESG investing, as well as case studies and best practices. The Arabesque report found that 85% of S&P 500 companies published sustainability reports in 2019,up from 20% in 2011

4. International Energy Agency. (2020). Energy Technology Perspectives 2020. report provides data and analysis on global trends in energy technology, including the deployment of renewable energy technologies, energy efficiency, and energy storage. It includes data on technology costs, policy frameworks, and market outlooks, as well as regional breakdowns and case studies. report states that solar and wind power are now the cheapest sources of new electricity generation in most of the world.
5. Bloomberg NEF. (2021). New Energy Outlook 2021. report provides data and analysis on global trends in energy transition, including the deployment of renewable energy technologies, electrification, and decarbonization. It includes data on technology costs, policy frameworks, and market outlooks, as well as regional breakdowns and case studies. The report says the share of renewable energy in global power generationis expected to increase from 29% in 2020 to 56% in 2050. The report also projects that the cost of renewable energy will continue to decline, with solar and wind power becoming the cheapest sources of new electricity generation in most of the world by 2030.

Recommendations and Suggestions

Based on the data and literature reviewed, here are some recommendations and suggestions for businesses looking to leverage green finance to enhance their sustainability efforts:

1. Implement sustainability initiatives: To attract green finance, businesses should implement sustainability initiatives such as reducing greenhouse gas emissions, increasing energy efficiency, and sourcing renewable energy. These initiatives can help to improve a business's reputation and potentially lower its cost of capital.
2. Monitor and report sustainability performance: Businesses should track their sustainability performance and report it transparently to stakeholders. This can help to build trust with investors and customers, as well as demonstrate compliance with regulations.
3. Engage with sustainable investors: Businesses should engage with sustainable investors and understand their

specific criteria for investment. This can help to tailor a business's sustainability strategy and reporting to meet the needs of these investors.

4. Explore green bonds: Businesses can explore the use of green bonds, which are debt instruments that are specifically designed to fund sustainable projects. Green bonds can provide a lower cost of capital than traditional debt, and can also help to demonstrate a business's commitment to sustainability.
5. Collaborate with peers: Businesses can collaborate with their peers to share best practices and knowledge on sustainability initiatives. This can help to accelerate the adoption of sustainable practices, as well as improve a business's sustainability performance.
6. Invest in research and development: To continue to drive down the cost of renewable energy and other sustainable technologies, businesses should invest in research and development. This can help to identify new opportunities for sustainable innovation, as well as reduce the upfront costs of sustainability initiatives.

By implementing these recommendations and suggestions, businesses can not only enhance their sustainability performance, but also potentially access a growing pool of sustainable investment capital.

CONCLUSION

In conclusion, green finance has emerged as an important tool for promoting sustainability and combating climate change. Businesses that embrace sustainable practices and reporting can access a growing pool of green finance, which can provide benefits such as lower cost of capital, improved reputation, and access to new markets.

While there are still limitations to green finance, including high upfront costs and limited availability of financing, the trend towards sustainability is likely to continue as more countries and investors prioritize ESG factors in their decision-making.

To succeed in the current business landscape, it is important for businesses to incorporate sustainability into their strategy, operations, and reporting. By doing so, businesses can not only contribute to a more sustainable future, but also potentially unlock new opportunities for growth and innovation. With the right approach and mindset, green finance can be a powerful tool for businesses to achieve their sustainability goals and drive positive impact.

REFERENCES

1. Aggarwal Gaurav, Noman F(2013), “Foreign Direct Investment in Indian Retail Sector” Journal of Management Research and Review Vol. 3/ Issue 8/ Article No. 19/3342-3352/ISSN No. 2249-7196
2. Aggarwal Gaurav, Saksena S, Kaur S. (2010). “Financial Inclusion: Old Wine in New Bottle”. International Journal of Commerce & Management, Vol. 1/ Issue 6/ Article No. 13/ 87-89 ISSN No. 0976-2183.
3. Al Hinai, N. (2020). Sustainable finance in Oman: The case of Islamic finance. Sustainability Accounting, Management and Policy Journal, 11(6), 1116-1137.
4. Al-Louzi, O. A., &Busler, M. (2021). Green finance and sustainability in the Middle East. Journal of Environmental Management, 283, 111959.
5. Al-Sari, M. I., & Al-Badi, A. H. (2020). The potential of green finance in the Gulf Cooperation Council (GCC) countries. Renewable and Sustainable Energy Reviews, 118, 109526.
6. Al-Shaer, H., & Fakhruddin, H. (2020). Green finance and sustainable development: A case study of the UAE. Sustainable Cities and Society, 54, 101974.
7. Al-Zadjali, S., & Al-Hinai, K. (2020). Assessing the readiness of Omani banks for sustainable banking: An empirical analysis. Journal of Financial Regulation and Compliance, 28(4), 526-541.
8. Arora R, Aggarwal Gaurav (2012), “Environmental Accounting and It’s Endeavour in India” International Journal of Management Research and Review/ Vol. 2/ Issue 8/ ISSN No. 2249-7196/pp. 1361-1368
9. Cheng, X., Tan, L., & Huang, Y. (2021). Green finance and corporate sustainable performance: The mediating effect of innovation. Journal of Cleaner Production, 279, 123614.
10. Dhiman, V., Singh, R., & Anand, A. (2019). Green finance: A comprehensive review of concepts, policies, and practices. Journal ofCleaner Production, 232, 1268-1280.

11. Elbousty, Y., &Boubakri, N. (2021). The impact of green financing on corporate performance: Evidence from the Middle East and North Africa region. The Quarterly Review of Economics and Finance, 79, 1-14.
12. El-Katiri, L. (2020). Islamic finance and sustainable development in the Middle East and North Africa. Energy Research & Social Science, 63, 101413.
13. Gao, J., Zhang, Q., & Song, M. (2019). Green finance and environmental performance: Evidence from China. Journal of Cleaner Production, 235, 1220-1230.
14. Holland, A. (2019). Green finance: Can it help combat climate change? Investment Executive, 26(3), 16-18.
15. Hsu, J., Wang, Y., & Hsu, M. (2018). Green finance and sustainable development: An empirical study. Journal of Cleaner Production, 198, 1438-1452.
16. International Renewable Energy Agency. (2021). Renewable Energy Market Analysis: The GCC Region. Abu Dhabi, UAE: International Renewable Energy Agency.
17. Jing, L., & Chen, H. (2018). The driving factors of green bond issuance: Evidence from China. Journal of Cleaner Production, 191, 1-10.

18 Role of Women in Agriculture Sector

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Abstract

The following paper aims to shed light on the significant role women play in the agriculture sector, specifically in India. As a developing and predominantly agrarian economy, India relies heavily on its agricultural practices. Approximately 70% of the country's population resides in rural areas, with 60% of households involved in farming as their main source of income. Agriculture serves as a vital engine for fiscal development and poverty reduction, particularly for the impoverished. This article will address the importance of women as major producers of food in developing countries and explore the challenges they face in obtaining equal access to productive resources. In agricultural development and allied activities, such as main crop production, livestock production, horticulture, and post-harvesting operations, women have proven to be vital contributors. However, despite their invaluable contributions, there exists a significant gender disparity. According to statistics, only about 78% of economically active women in rural areas of India are engaged in agriculture, compared to nearly 63% of men. Remarkably, approximately 70% of farm work is performed by women, emphasizing their indispensable role. It is crucial to recognize and address the obstacles faced by women in terms of limited access to productive resources, which undermines their role as active and productive members in the agriculture sector. By acknowledging and rectifying this disparity, we can harness the immense potential of females in farming and unlock further opportunities for growth and poverty alleviation. Overall, this paper highlights the extremely significant involvement of females in cultivation and sheds light on the challenges they face due to unequal access to productive resources.

Keywords: *Agriculture, Women, Economic sustainable,*

1. INTRODUCTION

The role of females in agriculture is crucial yet often underrepresented in discussions about global food security and rural development. Women contribute significantly to agricultural labour, both paid and unpaid, and play a dynamic role in food production, processing, and marketing. Despite their substantial involvement, women frequently face limitations in terms of access to resources, land rights, and decision-making power. This paper aims to explore the multifaceted role of females in the agriculture sector, examining the challenges they face and the potential strategies for enhancing their contributions to sustainable agricultural development.

In nations where agriculture is the primary means of subsistence for the impoverished, it has been acknowledged by the global development community as a catalyst for economic growth and the alleviation of poverty. However, the underperformance of the agricultural sector in many developing nations can be attributed, at least in part, to the fact that women, who play vital roles in agriculture and the rural economy as laborers, farmers, and entrepreneurs, almost universally face more severe barriers than men to accessing productive resources. The perseverance and abundance of expertise possessed by rural women support the agricultural and rural economies. Their responsibilities transcend the boundaries of traditional gender roles and encompass a wide range of tasks. From cultivating and harvesting agricultural crops to tending animals and processing food, women demonstrate their proficiency in multiple domains. Additionally, they actively seek employment in farming or other rural enterprises, partake in trade and marketing, collect essential resources such as fuel and water, and diligently care for their families while maintaining their homes.

II. ROLE OF FEMALE FARMERS IN AGRICULTURE SECTOR

Female farmers play an important and crucial role in agriculture expansion and connected fields. The nature and extent of ladies' contribution in farming varies largely from district to district. But regardless of these disparities, females are actively involved in various agricultural activities. Women contribute to agriculture through multiple roles as cultivators, entrepreneurs, and laborers. Women comprise 33% of the cultivation labour force and 48% of the self-employed farmers in India. Agriculture fields including the main crop production, livestock production, viticulture, postharvest operations, agro/ social forestry, fisheries, etc. It is a fact long taken for granted but also long ignored.

LITERATURE REVIEW

Numerous revisions have highlighted the pivotal role women play in agriculture.

According to FAO (2011), women constitute about 43% of the universal agricultural labour force [1].

Agarwal (2012) emphasizes that women's contributions extend beyond fieldwork to encompass seed preservation, livestock care, and post-harvest processing [2].

However, as noted by **Meinzen-Dick et al. (2014),** women frequently have fewer access to essential possessions such as land, credit, and education, which hampers their productivity and limits their contributions to agricultural development [3].

Additionally, cultural and societal norms often dictate the extent and recognition of women's parts in agriculture, as explored by **Sachs (2019)** [4]**.**

In an experimental study conducted by **Vetrivel, R. Manigandan (2013)** titled "An empirical study of agricultural labour in India," it is revealed that women make up nearly half of the global agricultural workforce. Their significant contributions span across various aspects, from production and sales to food preparation. Despite historical underestimation, women have been actively engaged as paid workers or as unpaid family members in the agricultural sector of developing nations. However, they continue to face persistent gender inequalities. This article sheds light on the crucial role women play in agriculture, emphasizing the need to address and overcome gender disparities [5].

In this article, we will analyse the involvement of females in agricultural production on Sagar Island, located in West Bengal, India. The research conducted by **Manas Mandal in 2013** sheds light on the range of duties women perform both at the farm and at home. Regardless of employed extended hours than men, women face the unfortunate reality of receiving lower wages and being subject to exploitation by landlords. This article aims to highlight the discrimination and subjugation experienced by female laborers in the agriculture sector [6].

In his work "Female Agricultural Workers in Assam: A Case Study of Darrang district," **Chandrama Goswami (2013)** concluded that impoverished women make a greater financial contribution to their families by working as laborers despite unfavourable working conditions and lower pay. Females were not permitted to hold land, and they also had no claim to their profits. Because farm job is impermanent and may be obtained without formal education or training, women accept to work there. Additionally, it was demonstrated that although females make up a larger proportion of the cultivated labor force than males, they are paid less for it. [7].

After analysing women's contribution in cultivation, **Ghosh (2014)** calculated that women make up 45.3% of the farming labor force, yet the majority of them continue to work invisibly. The study came to the inference that females are becoming more and more involved in agriculture, and that they are now familiar as agricultural laborers. However, discrimination based on salary and employment position persists. [8].

According to research by **Kanagarathinam (2014)**, 52% of unorganized workers work in agriculture and related industries. Rural populations like small-scale subsistence farmers, tenants and sharecroppers, the jobless, and the landless are negatively impacted by agricultural labor. They receive extremely low and erratic pay, wage discrimination based on gender, no public holidays, and non-standard work hours every day. Furthermore, they have concerns with harassment, inhumane working conditions, seasonal unemployment, and a loss of respect. [9].

According to a **2015** study by **Swamikannan and Jeyalakshmi** regarding women working in the Indian agricultural sector, the percentage of women who participate in the workforce has significantly decreased over the ancient few spans, indicating a shift in the labor force from agrarian to non-agrarian activities because female employees are discouraged by wage disparities among masculine and feminine workers for the similar kind of effort [10]

III. SCOPE OF THE STUDY

The scope of the study is to investigate the character of females in the farming sector, with a particular focus on how Women's can enhance the outcome of the agricultural activities. The study aims to scrutinize the impression of women towards cultivation and to explore the various ways in which females can be used in the ground of agronomy.

IV. RESEARCH METHODOLOGY

This study adopts a mixed-methods approach, merging quantifiable data analysis with qualitative research. This method of research is greatest appropriate for this study as it will provide a complete examination of the topic, including a comprehensive evaluation of the advantages and disadvantages of women role in agriculture sector.

Data Collection

Primary data will be collected through surveys and interviews with female agricultural workers, complemented by secondary data from governmental and non-governmental reports. The qualitative component will involve case studies and ethnographic research to gain deeper insights into women's experiences in agriculture.

Data Analysis

Once, the data are collected, next we have to figure out the collected data. Without data, it is impossible to make planning. Data are obtained on number of parameters such as production, yield, area, rainfall, price, stock over a lengthy period of time and are called **time series data**.

Exploratory Data Analysis [Gomez and Gomez (1984)] will be used to analyse the collected data, we analyse the collected data pictorially by using some of the exploratory techniques such as bar chart, circle graph, pie diagram, line diagram and other pictorial form of representation of data. These techniques help one to identify whether right dataset is obtained or not. This analysis technique will assist in organising the data and highlighting key areas of discussion connected to the role of feminine farmers in agricultural sector.

Limitations

The limitations of this study include the potential for bias in the sources used, the limited scope of secondary data, and the lack of primary data collection. Furthermore, the generalizability of the findings may be limited owed to the specific context and nature of the study.

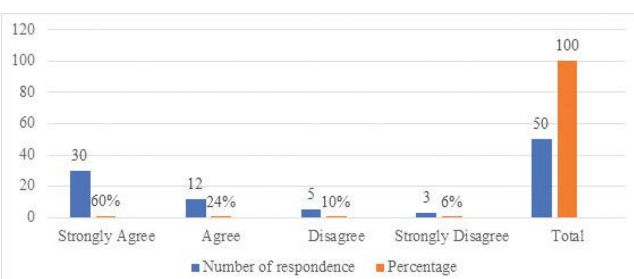
V. OBJECTIVES

- To analyse the level of females' participation in various aspects of agriculture.
- To recognize the key challenges tackled by females in the farming sector.
- To propose strategies that enhance the role and contributions of females in agriculture.

VI. DATA ANALYSIS AND INTERPRETATION

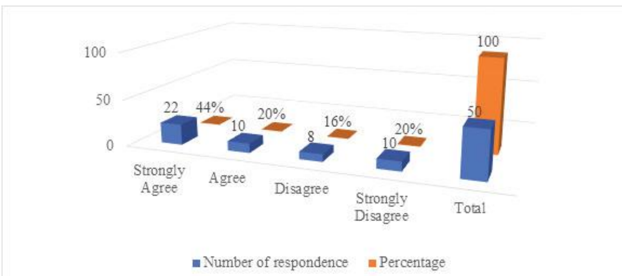
1. Women Being More Impact on Agriculture.

Items	Number of respondence	Percentage
Strongly Agree	30	60%
Agree	12	24%
Disagree	05	10%
Strongly Disagree	03	6%
Total	50	100



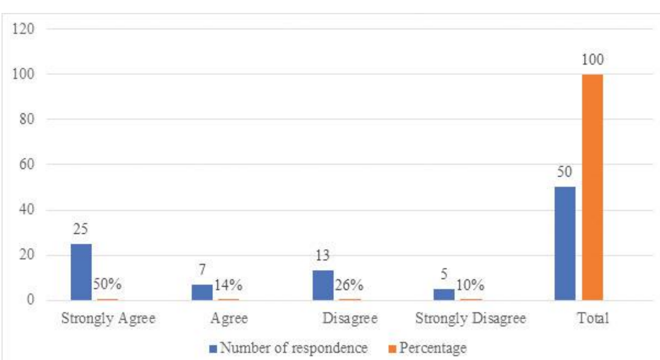
2. 60% of Women Are Contribution in Agriculture Sector

Items	Number of respondence	Percentage
Strongly Agree	22	44%
Agree	10	20%
Disagree	08	16%
Strongly Disagree	10	20%
Total	50	100



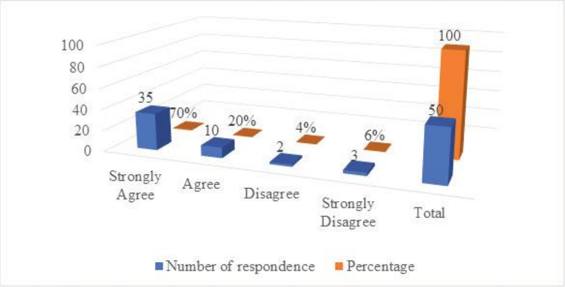
3. Women Are Dramatically Changed Agriculture Sector

Items	Number of respondence	Percentage
Strongly Agree	25	50%
Agree	07	14%
Disagree	13	26%
Strongly Disagree	05	10%
Total	50	100



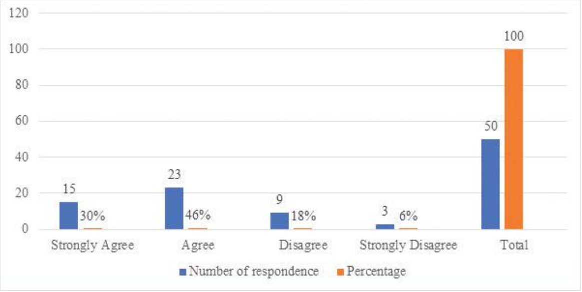
4. Women Farmers Facing Challenges in Agriculture Sector

Items	Number of respondence	Percentage
Strongly Agree	35	70%
Agree	10	20%
Disagree	02	4%
Strongly Disagree	03	6%
Total	50	100



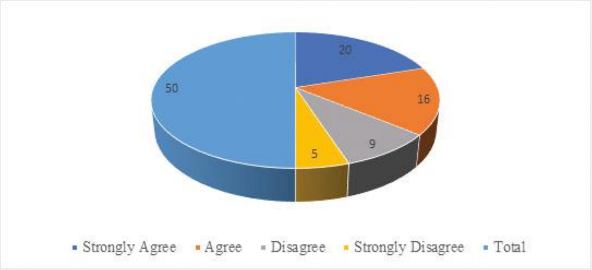
5. Women Farmers Are Increasing Economic Development in India

Items	Number of respondence	Percentage
Strongly Agree	15	30%
Agree	23	46%
Disagree	09	18%
Strongly Disa-gree	03	6%
Total	50	100



6. Government Supporting to Women's in Agriculture Sector

Items	Number of respondence	Percentage
Strongly Agree	20	40%
Agree	16	32%
Disagree	09	18%
Strongly Disagree	05	10%
Total	50	100



From the above collected data it is understood that women play a very significant role in Agriculture sector. The government will give the financial assistance for the growth of Agriculture sector and this would attract the youths to more being actively engaged in Agriculture sector. 60% of responders strongly agreed that women's being more impact on Agriculture sector and 44% of responders will strongly agree that 60% of Women's are contribution in Agriculture Sector, this is because the Government will support the women's for actively participate in Agriculture Sector. 50% of responders will agreed strongly that women are dramatically changed the Agriculture Sector for this there is growth in the Agriculture Sector. 70% of responders strongly agreed that women farmers are facing challenges in Agriculture Sector. 46% of responders agreed that women farmers are increasing the economic development of the country, this is because the Agriculture Sector was contributed by 60% of women. They are actively engaged in Agriculture Sector and increase the status of Agriculture Sector and thereby increase in economic development in India. Only 40% of responders strongly agreed that the government will supporting to women farmers like by providing funds and establishing some Agricultural Schemes.

VII. FINDINGS

1. The study reveals that women are extensively involved in all aspects of agriculture, from planting to harvesting and marketing.
2. However, they face challenges such as limited access to land ownership, agricultural inputs, and credit facilities.
3. Women are also underrepresented in agricultural training and extension services.
4. Despite these challenges, women have shown resilience and innovation in agricultural practices, often adopting sustainable and climate-resilient farming methods.
5. Lack of support from the Government for women farmers.

VIII. SUGGESTIONS

1. Implement policy reforms to ensure women's equal rights to land and resources.
2. Develop gender-sensitive agricultural training and extension programmes.
3. Promote women's participation in agricultural decision-making processes at all levels.
4. Facilitate access to markets and credit for women farmers.
5. Encourage community-based initiatives that recognize and support women's roles in agriculture.

CONCLUSION

Women play a critical role in agriculture, contributing significantly to food security and rural economies. Recognizing and supporting their contributions is essential for sustainable agricultural development. Addressing the challenges faced by women in agriculture requires a multifaceted approach involving policy reforms, capacity building, and societal change. Empowering women in agriculture not only benefits them but also has broader implications for economic development and sustainability.

REFERENCES

1. FAO. (2011). The State of Food and Agriculture 2010-2011: Women in Agriculture.
2. Agarwal, B. (2012). Food Security, Productivity, and Gender Inequality. Journal of Agricultural Economics, 63(1), 1-22.
3. Meinzen-Dick, R., et al. (2014). The Gender Gap in Agriculture: Multiple Indicators and Multiple Causes. Journal of Development Studies, 50(5), 682-697.
4. Sachs, C. (2019). Gendered Fields: Rural Women, Agriculture, and Environment. Rural Sociology, 84(4), 565-592.
5. Vetrival V., Manigandan R. (2013). "Am empirical study of agricultural labour in India." Journal of exclusive management science, Vol. 2, Issue 12.
6. Mandal M. (2013). "The Role of Rural Women in Agriculture Sector of Sagar Island, West Bengal, India." The International Journal of Engineering & Science, vol. 2, Issue 2, pp 81-86.
7. Goswami Chandrama (2013). "Female agricultural workers in Assam: A case study of Darrang District." International Journal of Scientific and Research Publications, vol. 3, Issue 2, pp 1-5.
8. Ghosh M. & Ghosh A. (2014). "Analysis of women participation in Indian Agriculture." IOSR Journal of humanities and social science, Vol. 19, Issue 5, Ver, IV, pp 01-06.
9. Kanagarathinam M. (2014). "Problems of unorganized (agricultural) workers in Coimbatore." International journal of HRM & Research, vol. 4, Issue. 6, pp 87-90, Dec 2014.
10. Swamikannan D. & Jeyalakshmi C. (2015). "Women labour in Agriculture in India: some Facets." International Journal of business and economics research, vol. 1, No. 1, Nov. 2015, pp 22-28.

19 Green Banking Initiatives: Exploring Trends, Factors, and Prospects in Housing Loans

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Abstract

This study intends to identify the various factors contributing customer's purchase intentions towards green housing and the role of banks in supporting such purchases by providing loans and financial assistance aiming to encourage green housing. The keywords for the literature search include green banks, green housing purchase intentions, green loans, and factors influencing green purchase intentions. The paper draws from a range of published sources, both quantitative and qualitative, to develop a conceptual framework. The study examines the relationship between the price of the house and income level, availability of green loans, place of residence, reputation and status quo, neighbourhood and cultural assimilation, transportation cost in relation to income, less maintenance cost, energy efficiency, environmental concern, attitude towards green housing, perceived risk as significant factors influencing purchase intention of green housing. More precisely, this study explores the role of green banking in offering green loans for sustainable homes. The study further attempts to develop a financial model & conceptual framework, although empirical evidence is needed to explain the proposed associations.

Keyword: *Sustainable Factors, Green Banking, Green Housing, Green Housing Purchase Intentions, Green Loans.*

INTRODUCTION

At the 21st Session of the Conference of the Parties (COP21) to the UN Framework Convention on Climate Change (UNFCCC), world leaders worked out an agreement with the goal of stabilising the climate and averting the worst impacts of climate change. In 2015, the estimated damage caused by a single typhoon was 11 billion pesos. It is obvious that all parties involved will have to contribute to keeping the environment from further deteriorating as losses increased and environmental issues became key factors. This encompasses not just companies, governments, and customers, but also the crucial role played by financial institutions like banks. As a result, the need for banks to implement green banking efforts is equally crucial because the success or failure of these initiatives will determine how much they can contribute to the advancement of environmentally friendly projects ***(Gutierrez, 2016)***.

Some of the factors influencing banks' interest to embrace green banking are profit earning capacity, management commitment and support, corporate social responsibility, central bank regulations, customer pressure, and social competition.

Profit earning capacity suggests that the perceived financial benefits or profitability associated by adopting green banking practices influences bankers wish to embrace environmentally friendly initiatives ***(Mir & Bhat 2022).*** Perception among bankers regarding the financial benefits associated with adopting green banking practices. It analyses that bankers consider implementing environmentally friendly initiatives which can lead to increased profits for the bank ***(Jamal, et al, 2020)***.

Management commitment and support being the other factor suggests the level of commitment and support from the management within the banking organizations are identified as a significant factor. This implies that when management is dedicated to and actively insists on the implementation of Green Banking, it positively affects bankers' behavioral intentions ***(Mir & Bhat 2022)***. This factor focuses on the level of commitment and support shown by the bank's management towards green banking initiatives. Its analysis to see if there is any involvement and reinforcement from the top management in promoting and implementing environmentally sustainable practices within the organization ***(Yunwen BAI,2011).***

Corporate Social Responsibility as the other factor indicates that bankers' intentions to adopt Green Banking are influenced by considerations related to Corporate Social Responsibility and the desire to boost the overall image of the bank in terms of socially and environmentally responsible ***(Mir & Bhat 2022)*** perception of bankers regarding the importance of corporate social responsibility and the enhancement of the bank's image through green banking practices. It assesses whether bankers believe that adopting environmentally friendly initiatives is essential for fulfilling the bank's social responsibilities and improving its reputation in the eyes of stakeholders ***(Jamal, et al, 2020).***

Central bank regulations suggest that the regulations and guidelines issued by the central bank plays a vital role in influencing banking or financial institutions to provide Green Banking practices. It says that the important driving force would be compliance with these regulations serves as a motivating factor ***(Yunwen BAI,2011).*** Regulatory guidelines and recommendations framed by the central bank, in this case, it is the State Bank of Pakistan (SBP), regarding green banking practices. It assesses the extent to which bankers perceive the regulations issued by the central bank as influential factors in shaping their behavioral intentions towards adopting green banking practices ***(Owais Shafique, et.al 2020).***

Customer Pressure underscores the impact of customer expectations and demands on bankers' intentions to provide Green Banking services. It suggests that the preferences of customers, particularly those aligned with environmentally friendly banking practices, play a role in shaping bankers' intentions towards embracing Green Banking (***Yunwen BAI,2011).*** Influence of customer demands and inclinations on bankers' intentions to adopt green banking practices. It tries to understand whether pressure from customers is due to changes in the market trends or exclusive demand created for implementing sustainable motives within the banking sector (***Owais Shafique, et.al 2020).***

Social Competition implies that the competitive landscape in the social and environmental responsibility domain influences bankers' behavioral intentions. It suggests that banks may feel impelled to adopt Green Banking practices to stay competitive in the context of social and environmental awareness (***Yunwen BAI,2011). T***he competitive landscape within the banking industry and the broader societal context regarding environmental awareness and sustainability. It analyses whether bankers perceive the actions and initiatives of competing banks, as well as broader social movements promoting environmental sustainability, as influential factors in driving their intentions to embrace green banking practices (***Owais Shafique, et.al 2020).*** As there is a growing need to focus on green environment and creating green economy requires financial assistance seeking help from banks or financial institution to fund and facilitate the ease of purchasing and constructing green buildings ***(Vanishvili & Katsadze, 2022)***. Thus, this paper highlights the reasons which would motivate the customers to opt for green or sustainable buildings and the mediating role of banks to facilitate this process.

Green finance remains a novel concept in Indian urban regions, with rural regions significantly trailing behind in its adoption. Additionally, green housing initiatives are still perceived as exclusive luxuries. This article describes the value of green banking services and products that financial institutions provide. The study highlights the challenges and perception of bankers towards green banking. There has been increasing awareness among consumers towards green purchase, particularly green housing, which has led to banks opting for green housing loans. In this regard, the authors tried to identify various sustainable factors leading to purchase intentions of consumers towards green housing.

STATEMENT OF THE PROBLEM

The research aims to investigate the trends, factors, and prospects surrounding green banking initiatives, particularly in the context of housing loans. With a growing emphasis on environmental sustainability, there is increasing interest in understanding how banks are integrating green practices into their lending operations, especially concerning housing loans.

This study seeks to address several key questions: What are the current trends in green banking initiatives related to housing loans? What factors influence banks' adoption of green practices in their lending activities? What are the prospects for the future of green housing loans within the banking sector? The research endeavours to offer insights into the dynamic environment of green finance in the home loan industry and its possible consequences for sustainable development by delving into these inquiries.

LITERATURE REVIEW

Definition of Green Banking

Green banking, according to ***Bangladesh Bank (2020)***, is a kind of banking that prioritises sustainable development (SD) and environmental preservation while considering all social and environmental factors.

According to ***Bai (2011)***, green banking is the practice of banking in an environmentally responsible manner as well as a collection of duties and procedures that demonstrate an environmentally conscious firm. Green banking, also referred to as moral financial services, is a general phrase for socially and environmentally conscious banking practices.

According to ***Dr. Broto Rauth Bhardwaj and Aarushi Malhotra (2013)***, "Green banking" refers to banking operations that are conducted in a way that helps to reduce overall carbon footprints, both external and internal. Initiatives that use green technology and reduce pollution should be funded by banks to contribute to the reduction of external carbon emissions.

Dr. K. Nithya Kala and Dr. K. Nithya Kala (2020) The term "green banking" describes a wide range of practices and regulations that provide banks with sustainability regarding the environment, society, and economy. Its main objective is to maximise efficiency and effectiveness while having as little or no negative environmental impact as possible in banking procedures, information technology use, and physical infrastructure.

According to Dr. Nannette Lindenberg (2014), "green finance comprises financing green financial system, financing green investments, and financing public green policies."

According to Urban and Wójcik (2019) and Yuan and Gallagher (2018), Financial resources must be allotted to corporate governance, social inclusion, renewable energy, green buildings, climate change mitigation, and environmental protection across all economic sectors, according to the "green" component of green finance.

Definition of Green Housing

According to Jaggi (2014), Green housing was another important initiative the State Bank of India started to support the development of a low-carbon society. It is now the bank's responsibility to finance individuals who are interested in green ventures. Green buildings are lessening their detrimental effects on the environment through better operation and design. The Indian organisations that have the authority to certify green buildings include TERIGRIHA from TERI-BCSD India, Indian Green Building Council (IGBC), and Leadership in Energy and Environmental Design (LEED) INDIA. The first Indian bank to enter this sector, SBI, has launched a new product called the "SBI Green Home Loan." The bank provides a home loan with no processing fees, a 5% margin concession, and an interest rate of 0.25%.

Given the current trends and growing worldwide desire for sustainable development, there has been a dramatic increasing interest in "green" financial mechanisms and the creation of a "green" economy. In recent years, there has been a global drive for ecological safety and preservation. The "green" economy is widely perceived as one that seeks to significantly lessen environmental risks while maintaining social justice and improving living standards through encouraging a positive relationship between environmental, social, and economic growth. ***(Gulzhan et al., 2023)***.

The transition to a green economy requires several resources, including financial resources. This change contributes to the evolution of the global financial system, the creation of new institutional frameworks, the change in the financial architecture, the redirection of financial flows, the launch of novel financial instruments, the creation of a regulatory framework, prudential regulation, and a new culture of financial institution management. ***(Vanishvili & Katsadze, 2022)***.

The phrase "greening the financial system" refers to these changes. The financial system's support for sustainable development can be very important to finance and should have a favorable impact on financial stability ***(Vanishvili & Katsadze, 2022)***. The worldwide agreement on environmental preservation, climate change action, and the achievement of the Sustainable Development Goals (SDGs) by 2030 has drawn attention to green finance in recent times (Amidjaya & Widagdo, 2019). Additional terms for green finance include "climate finance," "sustainable finance," "environmental finance," and "green investment." When it comes to green financial products, regulators and central banks usually focus on institutional players (banks, fund managers, pension funds, etc.). They essentially want institutional players to influence the behavior of other participants to strengthen the market (both supply and demand sides ***(Bethlendi, 2021)***.

Globally, there is currently a noticeable increase in demand for green financial services and products. In addition to banks, which have been pushing green banking as a relatively new idea in the banking industry in recent years, other financial institutions like asset management firms, insurance companies, and the like are also attempting to develop and incorporate "green" strategies into their operations ***(Raki, n.d.).*** Investigations into the perspectives of managers within public sector banks regarding various aspects of green banking, including financial products, paperless banking for carbon footprint reduction, energy-conscious practices, mass transportation utilisation, green building initiatives, and social responsibility services revealed that among these strategies, green building initiatives were accorded the highest priority in the pursuit of carbon footprint reduction within the realm of green banking ***(Bahl, Sarita 2012).*** Green buildings are defined as structures that, through their design, construction, or operation, mitigate or eliminate adverse effects on the climate and natural surroundings while potentially generating positive impacts. These buildings contribute to the conservation of vital natural resources and enhance overall quality of life ***(Darko, A. 2019)***.

GREEN HOUSING LOAN

A Green Housing Loan serves as a specialized financial instrument designed to support individuals in financing environmentally sustainable construction or renovation projects for their homes. This innovative financial product extends beyond traditional home loans by incentivizing borrowers to adopt eco-friendly practices. In addition to facilitating the construction or renovation of green buildings, these loans empower individuals to access funds specifically earmarked for installing energy-efficient appliances, solar panels, rainwater harvesting systems, and other environmentally conscious features. This holistic approach encourages a more sustainable and eco-friendlier lifestyle, contributing to the broader goal of fostering green practices in the realm of housing finance.

RESEARCH METHODOLOGY

The study is review and conceptual based in nature where research articles from various data base like Scopus, Emerald, Web of Science and Google Scholar were used by entering the key words like green banking, green housing, green home loans, affordable and sustainable housing, factors influencing purchase intentions towards green homes. The articles reviewed for the study where from 2000 to 2023. Furthermore, the authors categorized the articles based on factors causing purchase intentions towards green homes, mediating effect of green bank loans in financing purchase decisions of green houses. Then the authors performed a comprehensive analysis to determine the gaps and future scope of study.

THEORETICAL FRAMEWORK

As per recent studies, it is revealed that most customers have less awareness towards sustainable development ***(Olanrewaju et al, 2018).*** Including green housing becomes crucial as it will help individuals achieve a better quality of life, be socially and environmentally responsible, and provide economic benefits ***(Vehbi et al, 2010)***. Future generations' needs will also be satisfied by green housing, not just the demands of the current generation. ***(Adabre et al, 2010).***

Theory of reason action is an extension of theory pf planned behaviour which is one of the most used research models to predict purchase intentions**.** Ajzen introduced the Theory of Planned Behaviour (TPB) in 1985. According to the TPB framework, three variables—behavior attitude, subjective norm, and perceived behavioural control (PBC)—combine to generate a "behavioural intention," which then affects behaviour ***(Ajzen, 2002).*** In a study in Malaysia behavioural intentions towards green food was study where theory of planned behaviour was applied stating that customers awareness and attitude can lead to buying intentions towards green food ***(Yadav and Pathak, 2016)***. Thus, the same theory can form the base to determine individuals' behaviour towards green homes leading to purchase intentions and the awareness and attitude can be driving forces influencing the purchase.

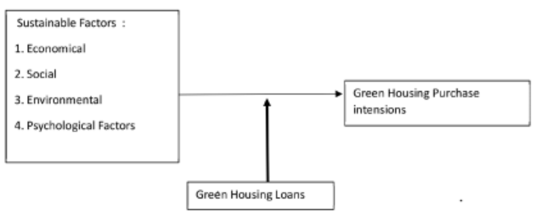

Fig No. 1 Conceptual Model.

Sources: Authors

Economic Sustainability Factors

The prices of sustainable buildings are more expensive than conventional buildings, but this can be considered an investment as the operational cost is lower, and homeowners can enjoy the benefits in the long term ***(Mulliner & Maliene, 2014).*** In the United States, the Low-Income Housing Tax Credit (LIHTC) programme has incorporated green building standards. Hence, various investors prefer green buildings due to lower income tax on such investments and zero interest on green loans offered for constructing sustainable buildings ***(Yeganeh et al, 2021).*** Individuals who focus on sustainability integrate this concept into transportation by choosing a house location near public transport or having electric vehicle charging stations ***(Williams and Dair, 2007; Spiegel and Meadows, 2010).*** One of the reasons that may motivate individuals to opt for sustainable housing could be lower electricity and water bills due to using renewable energy for power and water management systems ***(Olanrewaju et al, 2018)***

Social Sustainability Factors

Choosing a location for constructing sustainable houses could be influenced by various factors. These include proximity to public transport, resilience against the climatic changes such as floods and earthquakes, access to green spaces, ample availability of sunlight, and government support in the form of grants and tax concessions ***(Winston & Pareja, 2008)***. Additionally, reputation and status quo within a homeowner's personal network, as well as lifestyle choices, can be influential. If green living is seen as a positive and admirable choice among friends, family, or colleagues, homeowners may be more inclined to adopt sustainable practices ***(Burnett et al.,2008)***. In communities where there is a growing emphasis on sustainable living and green building standards, homeowners may feel compelled to follow suit. Adherence to local regulations and community standards regarding sustainable practices can enhance the reputation of individual homeowners. Positive media coverage and public perception of green living can further impact homeowners' choice ***(Spiegel and Meadows, 2010).*** Furthermore, incorporating community gardens or urban agriculture initiatives promotes shared activities and a connection to nature. Residents can collaborate in cultivating and maintaining these spaces, fostering a sense of ownership and community engagement ***(USGB, 2008).*** Sustainable buildings can also host educational programs on environmental sustainability, cultural awareness, and community engagement. These programs contribute to the overall well-being of residents and create opportunities for shared learning experiences ***(Ahn et al.,2011, Hamilton, 2015).***

Environmental Sustainability Factors

Consumers or individuals with a strong environmental consciousness prioritise purchasing or using products and services that bare eco-friendly and pose minimal harm to nature ***(Tan et al., 2017)***. This awareness extends to housing choices as well. Traditional low-cost housing construction methods often rely on materials and processes that contribute to deforestation and energy waste, such as burning bricks. In contrast, green buildings utilise renewable resources and sustainable practices, mitigating environmental impact ***(Hashmi et al., 2015)***. Individuals who are informed about these alternatives and prioritise environmental concerns are more likely to opt for green buildings over conventional ones.

Psychological Factors

Attitude as defined by ***(Ajzen, 1991),*** refers to an individual's favourable or unfavourable evaluation of a particular thing. Similarly, an individual's attitude towards green products and services can significantly influence their decision to purchase green buildings for housing ***(Liu et al. 2018).*** Perceived risk manifests in two main forms: financial risk and performance Risk. Financial risk pertains to the perceived expense associated with opting for green buildings. If individuals perceive green buildings as expensive, they may be less inclined to purchase them. Conversely, performance risk relates to dissatisfaction with the consumption or purchase of green products or services. This risk can inversely impact intentions to purchase green buildings ***(Kim and Lennon, 2000)***

Mediating effect of Green Housing loans to promote the purchase of green buildings

As nowadays, its alarming situation for banks and financial institutions to promote sustainability. Therefore, even they are obliged to offer green banking facility to customers. Green finance encourages capital investment by offering low-rate interest loans that will result in environmental benefits, integrates innovation in green industrial technologies, thereby causing improvements in energy consumption and its complementary benefits ***(Wang et al., 2021).*** Loan incentives provided by financial institutions can be very helpful in promoting green building buying intentions. As a study in Canada reveals that Low-interest loan incentives are utilized to make it possible to install energy-efficient equipment or renovate buildings. When interest rates are lower, more upgrades can be financially feasible than when they are higher ***(Kempa and Moslener, 2017).***

GREEN HOUSING LOAN – GLOBAL PERSPECTIVE

Across the globe, governments are increasingly implementing subsidized loan initiatives to address the energy efficiency financing gap ***(Berry, 1984; Guertler et al., 2013)***. Examples include the KfW's Energy-efficient Refurbishment Program in Germany, the Property Assessed Clean Energy Financing Program (PACE) in the United States ***(Rose and Wei, 2020),*** and France's Éco-Prêt à Taux Zéro, commonly referred to as a zero-interest green loan (ZIGL) program.

According to ***Eryzhenskiy, Giraudet, and Segú (2023)***, the success and failure of zero-interest green loan programs prompt questions regarding their justification and design. They specifically question whether private banks are the optimal entities for administering low-interest loans for energy efficiency investments, contrasting the French approach, which relies on banks' retail networks, with the German and U.S. strategies, which employ public lenders.

According to ***Komlóssy (2022),*** the Magyar Nemzeti Bank (MNB) has introduced a green toolkit strategy to support sustainable economic transformation and the attainment of climate objectives, while enhancing the climate consciousness of the financial sector. Considering that a third of the country's primary energy consumption comes from energy inefficient domestic housing stock, the MNB launched the Green Home Programme in recognition of the important role the housing loan market plays in promoting environmental sustainability. First introduced in October 2021 as a component of the Funding for Growth Scheme, this programme is in line with the Green Monetary Policy Toolkit Strategy and is one of the central bank's first steps towards developing a green housing credit market. The goal of the Green Home Programme is to mainstream environmental sustainability considerations within the domestic housing market and facilitate the adoption of green practices and technologies by offering low-interest central bank loans for the development and purchase of energy-efficient new homes.

GREEN HOUSING LOANS - INDIAN SCENARIO

A green home loan, also known as an Energy Efficient Mortgage (EEM), empowers homebuyers to acquire a residence while financing energy-efficient home enhancements, including renewable energy systems and energy-saving appliances, integrated into their mortgage payments. Fast forward two years, and the Green Housing Program is operating at full capacity, boasting a new array of green home loans in its portfolio. The company has adopted a comprehensive approach to foster the development of the green home ecosystem, encompassing capacity building, community outreach, stakeholder engagement, and the establishment of a value chain for green self-built homes. This paradigm shift has sparked a surge in demand for green home loans in India, signalling a collective effort beyond government intervention to mitigate carbon footprints and address environmental concerns.

Gutierrez (2016) proposed a green housing loan model aimed at encouraging banks to actively participate in environmental conservation efforts while motivating borrowers to contribute to the cause. Drawing upon a literature review through content analysis, the study developed a model for green housing loans. The research concluded that the adoption of such initiatives by more banks would not only expand their client base but also result in cost savings for borrowers, promoting energy efficiency, and reducing carbon emissions.

To promote environmental sustainability, the Ministry of Non-Renewable Resources in India, working with several nationalised and scheduled commercial banks, launched a green banking programme, according to *Bihari & Pandey (2015)*. Customers who are interested in buying solar equipment can take advantage of low-interest loans as part of this campaign, with interest rates as low as 4% annually. The State Bank of India (SBI) is credited with launching the Green Home Loan Scheme, which offers several incentives and supports ecologically friendly residential constructions. These loans, which offer several financial advantages like a 5 percent margin concession, a 0.25 percent interest rate concession, and the remission of processing fees, are given for projects that the Indian Green Building Council (IGBC) has assessed.

CONCLUSION

As sustainability is garnering a lot of attention these days, many industries are focusing on adopting this concept into their business. Likewise, individuals are also becoming environmental conscious and socially responsible for their actions. Considering such green initiatives in building housing is also crucial. Therefore, this study brings out the need for green housing and capturing the factors that will influence their decisions to but green houses. As in the study it is observed that economic, social, environmental and psychological factors can majorly influence one's purchase decisions on green housing and it is also observed that such concept is gaining importance in Indian context and global context as the green housing is an expensive thing to do due to use of renewable resources, setting up solar plants, water recycling and waste management set-up etc., Thus in order to facilitate such initiatives banks and financial institutions are providing loans which aims to fund such green houses and such financial assistance is key to encourage and promote purchase intentions of green houses for an sustainable future.

Future Scope of the Study

Future study can focus on understanding the impact of energy consumption, water usage, waste generation, and carbon emissions over the lifecycle of the building. Studies can also intend to develop financial models which can assist banks to offer loans at a rate of interest which is profitable to them and at the same time affordable and accessible to consumers. Research can also be undertaken to understand use of cost-effective technology adoption in building green houses such as smart building systems, renewable energy solutions, and green materials, into green housing projects funded by loans. Moreover, the proposed model can be further tested with empirical evidence.

REFERENCES

1. Adabre, M. A., & Chan, A. P. (2019). Critical success factors (CSFs) for sustainable affordable housing. *Building and Environment*, *156*, 203-214.
2. Ahn, Y. H., Pearce, A. R., Wang, Y., & Wang, G. (2011). Drivers and barriers of sustainable design and construction: The perception of green building experience. International Journal of Sustainable Building Technology and Urban Development, 4(1), 35–45. https://doi.org/10.1080/ 2093761X.2012.759887
3. Ajzen, I. (1991), "The theory of planned behavior", Organizational Behavior and Human Decision Processes, Vol. 50 No. 2, pp. 179-211
4. Alexander V. Gutierrez 2016 International Conference on Industrial Engineering, Management Science and Application (ICIMSA)
5. Amidjaya, P. G., & Widagdo, A. K. (2019). Sustainability reporting in Indonesian listed banks: Do corporate governance, ownership structure and digital banking matter? *Journal of Applied Accounting Research*, *21*(2), 231–247. https://doi.org/10.1108/JAAR-09-2018-0149
6. Bahl Sarita (2012). "Role of Green Banking in Sustainable Growth", International Journal of Marketing, Financial Services and Management Research, 1(2).
7. Bai, Y. (2011). Financing a Green Future: An examination of China's banking sector for green finance. IIIEE Master thesis.
8. Berry, L. (1984): "The role of financial incentives in utility-sponsored residential conservation programs: A review of customer surveys," Evaluation and Program Planning, 7, 131–141
9. Bethlendi, A. (2021). Household green finances: Demand in focus. *Pénzügyi Szemle = Public Finance Quarterly*, *66*(3), 311–336. https://doi.org/10.35551/PFQ_2021_3_1
10. Burnett, J., Chau, C. K., Lee, W. L., & Edmunds, K. (2008). Costs and financial benefits of undertaking green building assessments.
11. Darko, A., Chan, A. P., Huo, X., & Owusu-Manu, D. G. (2019). A scientometric analysis and visualization of global green building research. *Building and Environment*, *149*, 501-511.
12. Guertler, P., S. Royston, and W. Joanne (2013): "Financing energy efficiency in buildings: an international review of best practice and innovation," Tech.rep., retrieved from https://wec-policies.enerdata.net/Documents/cases-studies/Financing_energy_efficiency_buildings.pdf.

13. Gulzhan, A., Kerimkulova, D., Yessymkhanova, Z., Orazbayeva, A., & Alibekova, A. (2023). "Green" loan – a "green" financing instrument. *E3S Web of Conferences*, *402*, 08036. https://doi.org/10.1051/e3sconf/202340208036
14. Gutierrez, A. V. (2016). Green Banking: A Proposed Model for Green Housing Loan. *2016 International Conference on Industrial Engineering, Management Science and Application (ICIMSA)*, 1–4. https://doi.org/10.1109/ICIMSA.2016.7504011
15. Hamilton, A. B. (2015). USGBC Green Building Economic Impact Study. Available at https://www.boozallen.com/e/media/press-release/ study-finds-green-construction-is-major-us-economic-driver.html [Accessed on 23 October 2016
16. Hashemi, A., Cruickshank, H., & Cheshmehzangi, A. (2015). Environmental impacts and embodied energy of construction methods and materials in low-income tropical housing. *Sustainability*, *7*(6), 7866-7883.
17. Jamal, W. N., Shafique, O., Sarwar, S., & Khan, M. M. (2020). FACTORS AFFECTING BANKERS'BEHAVIORAL INTENTIONS TO ADOPT GREEN BANKING IN PAKISTAN: AN EMPIRICAL STUDY. *International Journal of Management Research and Emerging Sciences*, *10*(3).
18. Kempa, K., & Moslener, U. (2017). Climate policy with the chequebook—An economic analysis of climate investment support. *Economics of Energy & Environmental Policy*, *6*(1), 111-130.
19. Kim, M. and Lennon, S.J. (2000), "Television shopping for apparel in the United States: effects of perceived amount of information on perceived risks and purchase intentions", Family and Consumer Sciences Research Journal, Vol. 28 No. 3, pp. 301-330, doi: 10.1177/1077727X00283002
20. Laura Komlóssy – Sándor Winkler (2022) Monetary policy for sustainability, Book of studies of the Magyar Nemzeti Bank on the first year of the green monetary policy toolkit strategy © Magyar Nemzeti Bank, 2022 Editors: Norbert Kiss-Mihály and Pál Péter Kolozsi
21. Li, Y., Wang, G., & Zuo, J. (2021). Assessing green-building policies with structural consistency and behavioral coherence: A framework of effectiveness and efficiency. *Journal of Construction Engineering and Management*, *147*(11), 04021149.
22. Liu, Y., Hong, Z., Zhu, J., Yan, J., Qi, J.a. and Liu, P. (2018), "Promoting green residential buildings: Resident environment attitude, subjective knowledge and social trust matter", Energy Policy, Vol. 112, pp. 152-161.

23. Mir, A. A., & Bhat, A. A. (2022). Green banking and sustainability–a review. *Arab Gulf Journal of Scientific Research*, *40*(3), 247-263.
24. Mulliner, E., & Maliene, V. (2014). An analysis of professional perceptions of criteria contributing to sustainable housing affordability. *Sustainability*, *7*(1), 248-270.
25. Olanrewaju, A., Tan, S. Y., & Abdul-Aziz, A. R. (2018). Housing providers' insights on the benefits of sustainable affordable housing. *Sustainable Development*, *26*(6), 847-858.
26. Raki, S. (n.d.). *Green Banking—Green Financial Products with Special Emphasis on Retail Banking Products*.
27. Rose, A. and D. Wei (2020): "Impacts of the Property Assessed Clean Energy (PACE) program on the economy of California," Energy Policy, 137, 111087.
28. Shafique, O., & Majeed, A. (2020). Factors influencing bankers' intention to adopt green finance in Pakistan. *Review of Economics and Development Studies*, *6*(4), 773-785.
29. Spiegel, R., & Meadows, D. (2010). *Green building materials: a guide to product selection and specification*. John Wiley & Sons.
30. Success and Failure of a Zero-Interest Green Loan program: Evidence from France Ilya Eryzhenskiy* , Louis-Gaëtan Giraudet*†, Mariona Segú‡ August 4, 2023.
31. Suresh Chandra Bihari & Bhavana Pandey (2015) Green Banking in India, Journal of Economics and International Finance, Vol.7(1), pp.1-17,
32. Tan, C.S., Ooi, H.Y. and Goh, Y., N. (2017), "A moral extension of the theory of planned behavior to predict consumers' purchase intention for energy-efficient household appliances in Malaysia", Energy Policy, Vol. 107, pp. 459-471, available at:http://dx. doi.org/10.1016/j. enpol.2017.05.027
33. USGBC (US Green Building Council) (2008). LEED 2009 for New Construction and Major Renovations. Washington, DC: USGBC.
34. Vanishvili, M., & Katsadze, I. (2022). BANK FINANCING OF GREEN ECONOMY: REVIEW OF MODERN RESEARCH. *InterConf*, *18(95)*, 120–143. https://doi.org/10.51582/interconf.19-20.01.2022.011
35. Vehbi, B. O., Hoskara, E., & Hoskara, S. Ö. (2010). A theoretical approach for assessing sustainability in housing environments. *open house international*, *35*(1), 26-36.
36. Williams, K., & Dair, C. (2007). What is stopping sustainable building in England? Barriers experienced by stakeholders in delivering sustainable developments. *Sustainable development*, *15*(3), 135-147.

37. Winston, N., & Pareja Eastaway, M. (2008). Sustainable housing in the urban context: International sustainable development indicator sets and housing. *Social Indicators Research*, *87*, 211-221.

38. Yeganeh, A., McCoy, A. P., Reichard, G., Schenk, T., & Hankey, S. (2021). Green building and policy innovation in the US Low-Income Housing Tax Credit programme. *Building Research & Information*, *49*(5), 543-560.

20 Innovation Process in Small and Medium-Sized Enterprises - New Research Directions

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Abstract

The present article proposes new research avenues to improve a thorough understanding of the innovation process in small and medium-sized firms (SMEs) from a process-oriented viewpoint. First, we assess the advancements in traditional innovation research; second, we look into the unique conditions that affect innovation studies in SMEs; and third, we suggest new research possibilities based on the presented conceptual ideas. We claim that the common theoretical and methodological prejudices in the literature limit our understanding. We propose that normative-variance methods should be abandoned in order to acquire a more nuanced perspective and that innovation should be examined through the prism of strategic acts inside institutional processes and structures. Highlighting the dynamic aspect of the change process is the aim of this approach to enhance SMEs' understanding of innovation.

Keywords: *Innovation, Research, Directions, Development, SMEs*

INTRODUCTION

The promotion of innovation in small and medium-sized enterprises (SMEs) is essential for the development of the economy at the local, regional, and national levels in India. Since the 1990s, when economic liberalisation transformed the economy from one regulated by the state to one fueled by entrepreneurship, the significance of innovation has become increasingly apparent. This transition is emphasised by policy initiatives like Made in India and Start-up India programmes, which prioritise innovation as a critical factor in economic development.

Studies that concentrate on innovation inside Indian SMEs differ greatly from the overall literature on innovation, even though the importance of SMEs in fostering innovation is becoming more and more apparent. Though studies on SME innovation in India have not fully integrated the current developments in this sector, innovation research as a whole lacks a cohesive theoretical base (1, 2). Given that SMEs account for over 40% of India's workforce, 40% of exports, and 45% of the country's manufacturing output, this disparity is alarming (Ministry of Micro, Small and Medium Enterprises, 2021). Revision of current research views is theoretically and practically relevant, we argue, considering the current policy focus on improving SMEs' capacity for innovation in India's emerging economy.

To create a theoretical framework for understanding innovation in Indian SMEs, we expand on the concept of strategic choice described in previous studies. This method seeks to explain the complex dynamics of innovation in the Indian setting, including the mediating function of dominating institutions. Our methodology is consistent with institutional theory, which sees innovation as the outcome of dynamic interactions between actors' political endeavours to attain their objectives and the business environment. By (a) assessing current developments in innovation research; (b) examining the unique nature of innovation studies in Indian SMEs; and (c) putting out new research paths based on these conceptual insights, we want to deepen this process-oriented perspective. We want to contextualise current research and analyse the consequences of our proposed perspective within current theoretical tendencies by using an integrated approach.

NORMATIVE –VARIANCE APPROACHES TO INNOVATION FACE CHALLENGES

We still don't fully comprehend innovation, or the commercialization of ideas, despite the wealth of material that is currently available. In order to fill this void, especially when considering Indian SMEs, it is essential to examine the theoretical assumptions that form the basis of current research. There is a growing trend in innovation research to expand the range of explanations by studying the methods through which new ideas, products, and behaviours are created, developed, or transformed. These endeavours are based on conversations from the field of organisational studies, which highlight the importance of individual actions and the larger framework in driving social transformation and stability.

Knowledge trade was frequently viewed from earlier angles as just an economic transaction (30). But the emphasis has switched from "science-push" (19) or "market-pull" (18) models to process models, emphasizing the social shaping of innovation (20). This change contradicts earlier, conceptually and methodologically erroneous viewpoints that ignored the knowledge component of technology and concentrated on isolated incidents (22). In contrast, process methods investigate how technology mediates different aspects, such as processes and organizational structure (31).

The Diffusion of Innovations study by (34, 50, and 56) rejects objectified techniques. Rogers' paradigm, which was first centered on the supply side, assumed that innovation was a static, naturally helpful product with passive users. Subsequent updates emphasized the significance of micro-processes by incorporating analyses of user-driven re-invention and innovation generation (10).

These theoretical advances, linked to process approaches, give precedence to explanations that take the interplay of agency and structure into account. Static interpretations have given way to theories that investigate the connections between institutional structure impacts and strategic decisions (4, 6). The interactive and temporal contextualizes of the creativity process are currently being studied in research (24). The topics will be examined in the context of Indian SMEs in the following part, which will also suggest a process model based on these developments.

INNOVATION RESEARCH IN INDIAN SME'S

Our understanding of innovation in small and medium-sized enterprises (SMEs) is still lacking, despite a large amount of existing literature. This is especially true when it comes to the complex relationships between different levels of the organisation and the interplay between individual decision-making and the overall structure of the firm. Although certain studies, such as the one mentioned in reference 33, have addressed these issues, their overall impact on our comprehension of the innovation process in small and medium-sized enterprises (SMEs) has been insignificant. This highlights significant deficiencies in the theoretical and methodological foundations of a substantial section of this research, which often relies on normative-functional studies constructed using variance approaches.

Many studies have perpetuated an agency-structure duality by only considering entrepreneurial attributes or structural factors when evaluating innovation and the environment (9) (43). The majority of individuals have failed to observe that innovation is deeply ingrained within small and medium-sized enterprises (SMEs) (84, 91). Instead than focusing on predicting success through the identification of innovation.

These techniques, which consider innovation to be unchanging and neglect to analyse the development of significant advancements, frequently distort the process of innovation. Recent research on the implementation of continuous improvement strategies in small and medium-sized organisations (SMEs) has failed to consider the different degrees of acceptance within these businesses (12). This is a notable omission, as the degrees of adoption and the potential impact on performance might vary greatly (17).

Discussions often focus on factors that distinguish innovation within companies (67, 73, 78). According to this perspective, large businesses are seen as having resource advantages, while small businesses possess behavioral advantages, positioning them as opposites (73, 86). However, it is argued that while large and small businesses excel in different types of innovation, they play complementary roles in technological advancement.

To fully understand the role of SMEs, it is essential to consider the contextual features of the innovation process, including technology, industry, and the marketplace.

The current literature on innovation in Indian SMEs often underestimates the relationship between firm-level activities and the external environment. While it is recognized that innovative SMEs maintain extensive external networks with various businesses and organizations (71), there is limited discussion on how these relationships evolve. To address this gap, a comprehensive understanding of the complexities of networking and innovation is necessary. Evaluating the political dimensions of the innovation process is essential to move beyond simplistic depictions of innovation management in SMEs (1, 21).

Research on the management of innovation, such as the study of Ferranti Ltd.'s exploitation of SMEs (8), highlights the contentious nature of network interactions. Recognizing the importance of conflict and internal politics is crucial when adopting either organic or mechanistic frameworks (16). As innovation increasingly involves multiple actors, understanding the interplay between firm-level actions and broader processes becomes vital (12). Businesses now collaborate with academic institutions and other firms through innovation networks that span industries, countries, and regions (15, 60, 37).

SME practices are intricately mediated by their environments, as evidenced by examining the material and cognitive resources in their immediate surroundings (14). For instance, studies on contemporary supply chain management indicate that greater integration is crucial for SME survival (45). However, SME managers often lack the skills needed to operate within high-performing supply chains and struggle to assess available state support or their capacities (79, 95). Understanding the entrepreneur, the project, and the broader environment is essential (60, 58).

SMEs usually engage in types of selective collaboration within local networks mediated by institutions to compete in the market (24,74,). Strong ties might limit options and chances, therefore these networks can also provide difficulties (67,78, 80).

Subsequent research should focus on the relationship between management practices and the institutional embedding of a corporation. The section that follows presents a theoretical framework for comprehending innovation in Indian SMEs.

INNOVATIVE PATHS FOR STUDYING INNOVATION IN INDIAN SMES

This strategy applies to both technological innovation, which is influenced by robust institutional normative needs, as well as new services and activities (DiMaggio and Powell, 1983). Implementation is the process of giving these practices new interpretations and forms. This exemplifies the "cycle of discovery" put forth by (59,60), according to which structures arise through use in unusual situations, opening up opportunities for imaginative pairings and possibly a dominant design.

The "innovator's dilemma" of achieving a balance between stability and change is encapsulated in (83)'s analysis of innovation as a social process in which strategic decisions are influenced by both control and knowledge transfer (16). In evaluating the feasibility of new ideas, social networks are essential because they enable the organization to coordinate, learn, and reconfigure (92). This is stated by and (86). However, the adjustment to substantial changes may be more challenging due to the intimate relationships within these networks (92).

Applying current ideas of the innovation process, Rogers, Burns, and Stalker (82), claim that we can comprehend the intricacy of invention. Technical innovation involves the interdependence of the conception, distribution, and execution phases. (56). "Creation" is defined as an individualised process by which people use their knowledge to transform ideas into conceptions. Creating mutual understanding and building trust between companies requires effective networking techniques to be put into practice (71). Being a boundary-spanner and enabling the exchange of "know-how" between designers and clients, professional associations are crucial to proving the legitimacy of emerging technologies. Technology is included into the company by appropriation through a common strategy (62, 63).

Innovation, as per (83), is perceived as a dynamic process in which ongoing activity both directs and constrains change. Managing the unpredictable nature of innovation while preserving the stability of existing procedures presents a challenge for managers. Inner structuration concerns itself with the organizational structures and procedures that are already in place, while outer structuration is concerned with the opportunities and constraints that come from the external world (19).

When evaluating innovation in Indian SMEs, it is essential to consider economic, social, and relational factors. This includes the complex dynamics of specific innovation initiatives, the strategic behavior of individuals, and the interplay between motives and prior experiences within a given context. Institutional mechanisms, such as supply chains and educational institutions, as well as economic relationships, like those between suppliers and customers, play a crucial role. For example, prevalent obstacles include poor incentives for innovation in routine, low-value-added operations, and challenges in integrating supplier relationships. In low-value economies, where competitive advantage is often tied to the skill levels and competencies of the labor market, the influence of institutional frameworks is even more pronounced (96).

DISCUSSION

Adopting a process-oriented perspective goes beyond basic studies focusing solely on innovation projects in Indian SMEs and allows for comparative generalizations. Longitudinal research employing qualitative approaches is necessary to explore the innovation process and understand the socio-political mechanisms that facilitate innovation. Innovative SMEs demonstrate proficiency in dealing with uncertainty and navigating interactions with consumers and institutions by effectively identifying, interpreting, and leveraging knowledge across the entire organization.

To capture the interplay between strategy and institution, we propose a heuristic that underscores the link between a firm's processes and practices and its strategic intent. Understanding both proactive and reactive moments requires considering the temporal dimensions and appreciating the role of process in strategy and practices. Analyzing performance metrics offers insights into the relational, social, and economic aspects of creative activity in Indian SMEs.

CONCLUSION

Our present comprehension of innovation in small and medium-sized enterprises in India is somewhat inadequate. It is imperative to investigate the strong connections that exist within and between organisations in order to enhance this comprehension. Furthermore, a more profound comprehension requires the recognition of the reciprocal relationship between an agency and social processes. The strategic choice theory of social action, developed by Child, offers a paradigm for addressing the under-theorization of an agency and accommodating diverse perspectives in institutional literature. We emphasise the significance of acknowledging the diverse managerial "logics of action" within SMEs and the intricate interplay between internal and external structuration. The success of future endeavours is contingent upon the degree of integration into company culture, which necessitates the evaluation of managerial processes and their measurement. These recommendations establish the foundation for the concurrent evaluation of competence and appropriation levels. We can acquire a more comprehensive comprehension of the organisational innovation process within specific contexts by conducting similar studies across comparable SMEs. This method demonstrates how individuals are both empowered to interpret future behaviours and influenced by existing systems as active agents. These insights are essential for the advancement of our comprehension of innovation in India's small and medium-sized enterprises (SMEs).

REFERENCES

1. Performance Management 2/4, 276–292.
2. Barley, S.R., 1986. Technology as an occasion for structuring: evidence from observations of CT scanners and the social order of radiology departments. Administrative Science Quarterly 32, 78–108.
3. Barley, S.R., 1990. The alignment of technology and structure through roles and networks. Administrative Science Quarterly 31, 61–103.

4. Barley, S.R., Tolbert, P.S., 1997. Institutional links and structuration: studying the links between action and institution. Organization Studies 18/1, 93–117.
5. Barnett, E., Storey, J., 2000. Managers account for innovation processes in small and medium-sized enterprises. Journal of Small Business and Enterprise Development, 7/4.
6. Beckert, J., 1999. Agency, entrepreneurs, and institutional change. The role of strategic choice and institutionalized practices in organizations. Organization Studies 20/5, 777–799.
7. Berry, M., 1996. Technical entrepreneurship, strategic awareness, and corporate transformation in small high-tech firms. Technovation 16/9, 187–198.
8. Boag, D., Rinholm, B., 1989. New product management practices of small high technology firms. Journal of Product Innovation Management 6/2, 109–122.
9. Bowen, A., Rickets, M., 1992. Stimulating Innovation in Industry: the Challenges for the United Kingdom, NEDO, London.
10. Bracker, J., Keats, B., Pearson, J., 1988. Planning and financial performance among small firms in a growth company. Strategic
11. Management Journal 9/6, 591–603.
12. Burns, T., Stalker, G.M., 1961. The Management of Innovation, Tavistock, London.
13. Burrell, G., Morgan, B., 1979. Sociological Paradigms and Organizational Analysis, Heineman, London.
14. Carland, J.W., Carland, J.A., Aby, C., 1989. An assessment of the psychological determinants of planning in small business. International Small Business Journal 7/1, 23–34.
15. Chanaron, J-J., 1998. Managing Innovation in European Small and Medium-Sized Enterprises, Apeldoorn, Antwerpen.
16. Child, J., 1997. Strategic choice in the analysis of action, structure, organizations, and environment: retrospect and prospect. Organization Studies 18/1, 43–76.
17. Child, J., Smith, C., 1987. The context and process of organizational transformation—Cadbury limited in its sector. Journal of Management Studies 24/6, 565–593.
18. Clark, P.A., 1987. Anglo-American Innovation, Walter de Gruyter Berlin, New York.
19. Clark, P.A., 2000. Organisations in Action: competition between contexts, Routledge, London.

20. Clark, P.A., Staunton, N., 1989. Innovation in Technology and Organisation, Routledge, London. Learning, C.B.S., 2003. Companies: Innovative Potential of Welsh Manufacturing SMEs, Cardiff Business School, ISBN-0-902810-08-1.
21. Christensen, C., 1997. The Innovator's Dilemma, Harvard Business School, Cambridge.
22. Coombs, R., Harvey, M., 2001. Analysing Distributed Innovation Processes. Centre for Research on Innovation and Competition, May, No, 43.
23. Coombs, R., Richards, A., Savioti, P-P., Walsh, V., 1996. Technological Collaboration: The Dynamics of Co-operation in Industrial Innovation, Edward Elgar, Cheltenham.
24. Cobbenhagen, J., 2000. Successful innovation: towards a new theory for the management of SMEs, Edward Elgar, Cheltenham.
25. Dacin, T.M., Goodstein, J., Scott, W.R., 2002. Institutional theory and institutional change: introduction to the special research forum. Academy of Management Journal 45/1, 45–57.
26. Delmestri, G., 1997. Convergent organizational responses to globalization in the Italian and German machine-building industries. International Studies of Management and Organisation 27/3, 86–108.
27. DiMaggio, P.J., Powell, W.W., 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. American Sociological Review 48, 147–160.
28. Dodgson, M., Rothwell, R., 1991. Technology strategies in small firms. Journal of General Management 17/1, 45–55.
29. Drazin, R., Schoonhoven, C.B., 1996. Community population, and organization effects on innovation: a multilevel perspective. Academy of Management Journal 39/5, 1065–1083.
30. Edwards, T.J., 2000. Innovation and organizational change: developments towards an interactive process perspective. Technology Analysis and Strategic Management, 12/4.
31. Finegold, D., 1999. Creating self-sustaining high-skill ecosystems. Oxford Review of Economic Policy 15/1, 60–81.
32. Finegold, D., Soskice, D., 1988. The failure of training in Britain: analysis and prescription. Oxford Review of Economic Policy 4/3, 21–53.
33. Frybourg, M., 1997. Conflict and cooperation between a global market and local innovations. Innovation: the European Journal of Social Sciences 10/3, 217–230.

34. Giddens, A., (1995) The Constitution of Society, Cambridge, Polity Press. Granovetter, M., 1973. The strength of weak ties. American Journal of Sociology 78, 1360–1380.
35. Grint, K., Woolgar, S., 1997. The Machine at Work: Technology, Work and Organisation, Polity Press, Cambridge.
36. Hagedoorn, J., Schakenraad, J., 1992. Leading companies and networks of strategic alliances in information technologies. Research Policy 21/2, 163–190.
37. Hakansson, H., (1989) Corporate Technological Behaviour: Co-operation and Networks. London: Routledge.
38. Hoffman, K., Parejo, M., Bessant, J., Perren, L., 1998. Small firms R & D, technology and innovation in the UK: a literature review. Technovation 18/1, 39–55.
39. Hutton, W., 1995. The State Were In, Jonathan Cape, London.
40. Johannisson, B., Monsted, M., 1997. Contextualizing entrepreneurial networking. International Studies of Management and Organisation 27/3, 109–137.
41. Jones, O., Stevens, G., 1999. Evaluating failure in the innovation process: the micro-politics of new product development. R & D Management 29, 2.
42. T. Edwards et al. / Technovation 25 (2005) 1119–1127 1125 Jones, O., Tilley, F. (Eds.), 2003. Competitive Advantage in SMEs:
43. organizing for innovation and change, Wiley, Chichester.
44. Jones, O., Edwards, T.J., Beckinsale, M., 2000. Technology management in a mature firm: structuration theory and the innovation process. Technology Analysis and Strategic Management 12/2, 161–177.
45. Karpik, L., 1978. In: Karpik, L., (Ed.), Organisation and Environment: Theory Issues and Reality, Sage, Beverley Hills.
46. Keep, E., Mayhew, K., 1999. The assessment: knowledge skills, and competitiveness. Oxford Review of Economic Policy 15/1, 1–15.
47. Kostova, T., Roth, K., 2002. Adoption of an organizational practice by subsidiaries of multinational corporations: institutional and relational effects. Academy of Management Journal 45/1, 215–233.
48. Leonard-Barton, D., 1984. Interpersonal communication patterns among Swedish and Boston-area entrepreneurs. Research Policy 13/2, 101–114.
49. Macpherson, A., Wilson, A., 2003. Supply chain management: improving competitive advantage in SMEs. In: Jones, O., Tilley, F. (Eds.),

50. Competitive Advantage in SMEs: Organizing for Innovation and Change, Wiley, Chichester. Monkhouse, E., 1995. The role of competitive benchmarking in small to medium-sized enterprises. Benchmarking for Quality Management Technology 2, 41–50.
51. Motwani, J., Dandridge, T., Jiang, J., Soderquist, K., 1999. Managing innovation in French small and medium-sized enterprises. Journal of Small Business Management 37/2, 106–114.
52. Newell, S., Robertson, M., Scarbrough, H., Swan, J., 2002. Managing Knowledge Work, Palgrave, Hampshire.
53. Nohria, N., Eccles, R.G. (Eds.), 1992. Networks and Organisations, Structure, Form, and Action, Harvard Business School Press, Boston.
54. Nonaka, I., 1991. The knowledge-creating company. Harvard Business Review, November–December, 96–104.
55. Nooteboom, B., 1994. Innovation and diffusion in small firms: theory and evidence. Small Business Economics 6, 327–347.
56. Nooteboom, B., 2000. Learning and Innovation in Organisations and Economies, Oxford University Press, Oxford.
57. Oakey, R., 1993. Predatory networking: the role of small firms in the development of the British biotechnology industry. International Small Business Journal 11/4, 9–22.
58. Oakey, R., Cooper, S., 1991. The relationship between product technology and innovation performance in high technology small firms. Technovation 11/2, 79–91.
59. Paniccia, I., 1998. One, a hundred, thousands of industrial districts. Organizational variety in local networks of small and medium-sized enterprises. Organization Studies 19/4, 667–699.
60. Pittaway, L., Robertson, M., Munir, K., Denyer, D., Neely, A.D., 2003. Networking and Innovation in the UK: A Systematic Review of the Evidence, A Report for the DII.
61. Powell, W., Koput, K., Smith-Doerr, L., 1996. Interorganizational collaboration and the locus of innovation: Networks of learning in biotechnology. Administrative Science Quarterly 41/1, 116–145.
62. Preti, P., 1991. L'organizzazione della piccola impresa [The Organisation of SMEs], Milan, Egea.
63. Raco, M., 1999. Competition, collaboration and the new industrial districts: examining the institutional turn in local economic development, Urban Studies 36(5–6), 951–968. Radosevic, S., 1990. The role of small firms in technological development: an interpretative survey. International Journal of Technology Management 5/1, 89–99.

64. Riedle, K., 1989. Demand for R & D activities and the trade-off between in-house and external research: a viewpoint from industry concerning large companies and small and medium-sized enterprises. Technovation 9, 213–225.
65. Rinholm, B., Boag, D., 1987. Controlling new product development in the small technology-based firm. American Journal of Small Business 12/1, 12–19.
66. Robertson M, Scarborough H, Swan J., (1997), Knowledge, Networking and Innovation: A comparative study of the role of inter- and intraorganisational networks in innovation processes. A paper submitted to the 13th EGOS Colloquium, Organisational Responses to Radical Environmental Changes, Budapest, July 3–5.
67. Rogers, E.M., 1962. Diffusion of Innovations, Free Press, New York. Rogers, E.M., 1983. Diffusion of Innovations, Free Press, New York.
68. Rogers, E.M., 1995. Diffusion of Innovations, Free Press, New York.
69. Rothwell, R., 1985. Innovation and the Smaller Firm, First International Technical Innovation and Entrepreneurship Symposium, Utah Innovation Foundation, Salt Lake City.
70. Rothwell, R., 1989. Small firms, innovation, and industrial change. Small Business Economics 1/1, 51–64.
71. Rothwell, R., 1991. External networking and innovation in small and medium-sized manufacturing firms in Europe. Technovation 11/2, 93–112.
72. Rothwell, R., Dodgson, M., 1991. External linkages and innovation in small and medium-sized enterprises. R & D Management 21/2, 125–137.
73. SBS, 2001. Small and medium-sized enterprise (SME) statistics for the UK, Small Business Service, press release, 21 June.
74. Scarbrough, H., 1995. Black boxes. Hostages and Prisoners, Organization Studies 16(6), 991–1019.
75. Schmookler, J., 1966. Invention and Economic Growth, Harvard University, Boston.
76. Schumpeter, J.A., 1934. The Theory of Economic Development, Harvard. Shaw, E., 1998. Social networks: their impact on the innovative behavior of small service firms. International Journal of Innovation Management 2/2, 201–222.
77. Slappendel, C., 1996. Perspectives on innovation in organizations. Organization Studies 17/1, 107–129.

78. Smith, C., Meiksins, P., 1995. System, society and dominance effects in cross-national organizational analysis. Work, Employment and Society 9/2, 241–267.
79. Soeters, J., 1993. Managing Euro-regional networks. Organization Studies 14, 639–656. Tsoukas, H., 1996. The firm as a distributed knowledge system: a constructionist approach. Strategic Management Journal 17, 11–25.
80. Uzzi, B., 1997. Social structure and competition in inter-firm networks: the paradox of embeddedness. Administrative Science Quarterly 42, 35–67.
81. understanding innovation in small and medium-sized enterprises: a process manifest 2005, Tim Edwards*, Rick Delbridge, max Munday
82. Vossen, R.W., 1998. Research note—relative strengths and weaknesses of small firms in innovation. International Small Business Journal 16/3, 88–94.
83. Whitley, R., 2000. The institutional structuring of innovation strategies: business systems, firm types and patterns of technical change in different market economies. Organization Studies 21/5, 855–886.
84. Whitley, R., 2003. The institutional structuring of organizational capabilities: the role of authority sharing and organizational careers. Organization Studies 24/5, 667–696.
85. Whittington, R., 1988. Environmental structure and theories of strategic choice. Journal of Management Studies 25, 521–536.
86. Whittington, R., 1992. Putting Giddens into action: social systems and managerial agency. Journal of Management Studies 29, 693–712.
87. Williamson, O.E., 1975. Markets and Hierarchies: Analysis and Antitrust Implications, Free Press, New York.
88. Williamson, O.E., 1985. The Economic Institutions of Capitalism, Free Press, New York.
89. Williamson, O.E., 1986. Economic Organization: Firms, Markets and Policy Control, Wheatsheaf, Brighton.
90. Wolfe, R.A., 1994. Organizational innovation: review, critique, and suggested research directions. Journal of Management Studies 31, 405–431.