PRESIDENCY UNIVERSITY

GAIN MORE KNOWLEDGE
REACH GREATER HEIGHTS

APPLIED MANAGEMENT PERSPECTIVES

Volume: 04, Issue: 01 - E-ISSN: 2583-0546

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FROM THE EDITOR-IN-CHIEF'S DESK

Dear Readers,

This journal has published very many pieces of interesting research articles, addressing important topical issues. Our readership base has increased exponentially. The editorial team has never missed to dissect the topics with Industry professionals before finalising the theme for the editions. The uncompromised approach of the editorial office has fetched the journal a growing reader-base of business professionals, students, researchers and professors, policy makers, lawyers, practising managers and many others.

The journal believes in going beyond the regular structures of theoretical and methodological research articles to complex and profound expression of scholarly intent as opinion pieces, short research memos, innovative pedagogical research, leadership expressions and many more, without compromising on the research rigour.

At this juncture, the journal is also keen to include the new-age advancements in technology and business and their impact as a fresh course of direction to explore. In this edition, we have a fine confluence of ethical leadership, digital disruption, diversity and inclusion, virtual work sustainability, ethical governance, and the integration of AI into strategic functions

The journal also encourages geographic and thematic diversity of the articles—be it, examining co-operative finance in regional contexts or the role of women in entrepreneurship ecosystems—underscores our commitment to inclusive and interdisciplinary scholarship.

I welcome you to read the carefully selected and stringently peer-reviewed articles of this Seventh edition of Applied Management Perspectives

Keep sending your good research works! Many thanks to the authors and to my team that relentlessly works to upkeep the quality of research!

Happy reading!

Prof. (Dr.) Subhashree Natarajan
Editor-in-Chief
Applied Management Perspectives
Dean, School of Management, Presidency University, Bengaluru

Editorial Note

Dear Esteemed Readers
It is with immense pride and intellectual enthusiasm that we present the seventh issue of *Applied Management Perspectives*, our biannual journal that continues to serve as a platform for the convergence of rigorous research, practical insights, and thought leadership across diverse domains of management. As we release this issue, we reaffirm our commitment to fostering academic excellence and driving progressive dialogue in applied management research.

The articles featured in this edition reflect the evolving challenges and innovations that shape today's organizational landscapes—spanning finance, leadership, sustainability, human resource practices, diversity, and emerging technologies.

Leadership continues as a central theme with *"Ethical Leadership and Its Impact on Corporate Integrity, Accountability, and Employee Performance"*, highlighting the role of vision and empathy in building trustworthy corporate cultures. In the financial domain, the article *"Equity Dilution Explained: Insights from Zepto and Dunzo"* demystifies startup funding dynamics, while *"The Financial Performance Evaluation of Minorities Large-Scale Multipurpose Co-operative Society Ltd. Sullia"* offers valuable insights into regional cooperative performance evaluation.

The issue also captures the growing intersection of technology and social sustainability. *"Virtual Work and Social Sustainability in Bangalore"* and *"The Role of Artificial Intelligence in Enhancing Cybersecurity and Ethical Decision-Making in Indian Banking"* address the dual themes of digital transformation and ethical responsibility.

The final set of articles broadens the scope of this issue to include inclusive entrepreneurship and global organizational learning. *"Emerging Market Dynamics and Sustainable Entrepreneurship: The Role of Women in Bangalore's Business Ecosystem"* brings to light gendered dimensions in business ecosystems, while *"Evaluating the Effectiveness of Cross-Cultural Training in Advancing Diversity, Equity, and Inclusion"* offers actionable insights for global organizations.

As we release this edition, we extend our heartfelt gratitude to all contributing authors, reviewers, and editorial board members for their continued dedication and scholarly contributions. We believe that this issue will inspire researchers, practitioners, and policymakers to explore and implement informed, ethical, and sustainable practices in the realm of management. We welcome your feedback and look forward to continued academic engagement in future editions.

Warm regards,
Editor
Dr Virupaksha Goud
Applied Management Perspectives

NAVIGATING THE RISK-RETURN TRADE-OFF: A COMPREHENSIVE ANALYSIS OF INVESTMENT STRATEGIES

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ABSTRACT

In order to create an optimal portfolio and make wise financial market decisions, investors must strike a balance between risk and return. The risk-return trade-off highlights that greater potential returns come with greater risk, necessitating careful consideration of important metrics. Using anticipated return, standard deviation, beta, Sharpe ratio, and correlation as key metrics, this study uses financial models to evaluate the link between risk and return in portfolio construction. The Sharpe Single Index Model (SIM), which reduces the complexity of classic portfolio theories while preserving accuracy in risk assessment, is used in the study to streamline investment decisions. A wide range of businesses from many industries, such as consumer goods, infrastructure, chemicals, financial services, and information technology, are the subject of the study. The selection criteria took into account market responsiveness, financial soundness, growth potential, and sector strength. In order to guarantee that the portfolio contained a balanced mix of defensive, stable, and high-growth firms, each stock's risk exposure, market sensitivity, and return potential were assessed. The study promotes a methodical approach to investing and emphasizes the value of quantitative financial models in portfolio optimization. By carefully distributing funds across a variety of industries, investors can strike a balance between risk and return. To improve decision-making and investing results, recommendations place a strong emphasis on fundamental stock research, market trend analysis, and portfolio rebalancing. The study emphasizes that sectoral diversification, active risk management, and contrarian investment methods are critical to the long-term profitability of a portfolio. The results provide investors, portfolio managers, and financial analysts with important information for creating strong portfolios that suit market conditions and personal risk tolerance. To further analyse investing techniques and increase prediction accuracy in dynamic financial markets, future study may include macroeconomic influences and multi-factor models.

KEYWORDS

Financial Risk Management, Investment Strategy, Market Sensitivity, Portfolio Diversification, Portfolio Optimization, Risk-Return Trade-off.

INTRODUCTION:

Investment choices have a significant impact on how well portfolios perform in the always changing world of financial markets. Financial analysts and investors are always looking for ways to reduce risk and maximize rewards. Choosing assets that correlate with broader market trends and economic developments and strike the perfect balance between risk and reward is essential to portfolio construction and evaluation. This study examines the performance of a carefully chosen group of businesses in a range of industries, offering a thorough assessment of their long-term development potential, risk tolerance, and financial stability. This study attempts to create an ideal portfolio that increases profitability while reducing financial volatility by utilizing sophisticated financial models, especially the Sharpe Single Index Model (SIM).

Thirteen businesses from a variety of industries were carefully chosen for this study based on their potential for growth, financial stability, and market leadership, guaranteeing a well-diversified portfolio. A2Z Infra Engineering Ltd., Johnson Controls-Hitachi, Goyal Aluminiums Ltd., Avantel Ltd., Varun Beverages Ltd., Devyani International Ltd., Zen Technologies Ltd., Sumitomo Chemical Ltd., Veedol Corporation Ltd., KEC International Ltd., Wipro Ltd., and Piramal Enterprises Ltd. are some of these businesses. Each represents a key sector, from defence and infrastructure to IT, chemicals, and financial services. Companies like Zen Technologies Ltd. drive innovation in defence, Varun Beverages Ltd. excels in FMCG distribution, and Wipro Ltd. leads in digital transformation, highlighting the importance of sectoral diversification.

To assess risk-adjusted performance, the study uses important financial variables like beta, standard deviation, expected returns, and the Sharpe ratio. The research offers an organized method for improving investment portfolios by examining stability, volatility, and sectoral impact. Choosing assets with stable finances and steady growth is essential in a time of market volatility. This study offers insights into increasing returns while minimizing risks for long-term financial success, making it an invaluable resource for investors, portfolio managers, and financial analysts.

REVIEW OF LITERATURE:

Analysing the Dynamic Interrelationship between Nifty-50 and Sectoral Indices

Pawan Kumar Gupta

Issued date: 9th September, 2024

This study highlights the consequences for investing strategies of the interdependencies between the National Stock Exchange's sectoral and Nifty-50 indexes. The main conclusion is that, as a result of its diversification, the Nifty-50 shows less volatility than sectoral indices. The NSE oil and gas and energy indices have a strong correlation, whilst the NSE pharma and NSE bank indices have a moderate correlation. In order to improve risk management, the goal is to evaluate how market movements affect sectoral indexes. Daily returns are important variables, and statistical procedures such the Augmented Dickey-Fuller (ADF) test, correlation analysis, and volatility measurement are employed. The absence of sector-wise volatility comparisons for portfolio diversification methods is a research gap.

Energy Finance – Navigating Liquidity and Asset Management for Optimal Returns

Orealuwa Onabowale

Issued: November, 2024

This study examines asset management and liquidity tactics in energy finance with a focus on stable finances and sustainable investments. According to the research, energy derivatives and green bonds improve financial resilience, and managing liquidity is essential for reducing risk in erratic markets. Finding financial products that maximize profits while maintaining liquidity in the energy sector is the goal of the study. Key variables include liquidity levels, asset performance, and investment in renewable energy. Statistical approaches like time-series analysis, financial ratio analysis, and liquidity risk assessment models are employed. The insufficient integration of financial risk assessments and sustainable energy investment models represents a research gap.

Predictive Analytics in Portfolio Management – A Fusion of AI and Investment Economics

Sandia Alfzari, Mohammad Al-Shboul, Muhammad Alshurideh

Issued: 15th February, 2025

This study assesses the use of AI in portfolio management and shows that, when it comes to risk-return trade-offs, AI-based prediction models perform better than conventional economic models. It seeks to investigate how well AI can improve portfolio optimization while addressing issues with data quality and morality. With investment returns, risk levels, and AI adoption rates as variables, tools such as machine learning algorithms, regression analysis, and the Technology Acceptance Model are used. The lack of adequate governance frameworks for AI-driven portfolio management is a research gap.

Enhancing Investment Management Strategies – A Comprehensive Analysis of Financial Instruments and Risk Mitigation

Jamell Ivor Samuels

Issued: 29th February, 2024

The study looks at how investment management techniques have changed over time, with a focus on asset allocation and diversification as ways to reduce risk. It concludes that risk management has become more complicated as a result of financial globalization, which has increased both risks and rewards. Analysing how risk mitigation strategies and financial instruments maximize investment returns is the goal. Key factors include asset allocation, risk exposure, and market returns, and statistical approaches like as regression models, factor analysis, and Modern Portfolio Theory are employed. The absence of a comprehensive strategy combining established and cutting-edge financial risk reduction strategies represents a research gap.

Risk-Return Trade-off with the Scenario Approach in Portfolio Selection

B.K. Pagnoncelli, D. Reich, M.C. Campi

Issued: 12th May, 2012

Convex optimization approaches improve computational efficiency in portfolio selection, according to this study, which focuses on the scenario-based approach in risk-return optimization. Evaluating how scenario-based approaches enhance investment decision-making in unpredictable market circumstances is the goal. With risk levels, expected returns, and diversification metrics as variables, it makes use of technologies like as stochastic programming, scenario optimization, and constraint reduction strategies. The limited use of scenario optimization in practical portfolio management represents a research gap.

Empirical Analysis of Trade-offs among Risk, Return, and Climate Risk in Portfolio Optimization

Sebastian Utz, Ralph E Steuer

Issued: 30th July,2024

By examining how climate risk might be included into portfolio optimization, this study shows that lowering climate risk does not always translate into lower financial results. Examining the trade-offs between risk, return, and sustainability while making investment decisions is the goal. With financial rewards, climate risk, and risk exposure as variables, tools like mean-variance analysis, multi-criteria decision-making (MCDM), and NC-efficient fronts are used. The requirement for thorough climate risk statistics and investigations of a variety of asset classes represents a research gap.

Interconnectivity and Investment Strategies among Commodity Prices, Cryptocurrencies, and G-20 Capital Markets

Sanjeev Kumar, Reetika Jain, Narain, Faruk Balli, Mabruk Billah

Issued: November, 2023

This study investigates the effects of global crises on commodities, cryptocurrencies, and financial markets, including COVID-19 and the conflict between Russia and Ukraine. It concludes that risk spillovers are greatly impacted by geopolitical events, with gold serving as a safe haven and cryptocurrencies showing increased volatility. Analysing market interconnectedness and crisis hedging tactics is the goal. Statistical tools like volatility spillover analysis, correlation matrices, and risk management models are used, with asset prices, market volatility, and crisis events as variables. The research gap is the need for deeper studies on risk transmission mechanisms across asset classes.

The Profitability of Technical Analysis – A Review

Park, Cheol-Ho, Irwin, Scott H

Issued: October, 2024

Technical analysis is still successful in futures and currency markets, but its performance in stock markets fluctuates, according to this study that assesses its efficacy in financial markets. Evaluating the efficacy of technical trading strategies across various asset classes is the goal. Time-series analysis, back testing, and econometric modelling are statistical procedures that use asset returns, trade signals, and market efficiency as variables. The requirement for methodological advancements to lessen selection bias and increase the resilience of technical analysis models represents the research gap.

NEED FOR THE STUDY

In today's volatile financial landscape, selecting optimal investments is crucial for balancing returns and risks. In order to help investors, make data-driven decisions, this study uses the Sharpe Single Index Model (SIM) to assess the risk-return characteristics of businesses across a variety of industries. The chosen companies, including Wipro Ltd. in IT services, Varun Beverages Ltd. in beverage distribution, and Zen Technologies Ltd. in defence simulation, are strategically significant in their respective industries. Sectoral diversification is added by other businesses, such as Sumitomo Chemical Ltd., Devyani International Ltd., and KEC International Ltd., improving portfolio stability.

These businesses have different risk exposures and return potentials, according on financial performance analysis. Others, such as Varun Beverages Ltd. and Devyani International Ltd., need strategic realignment, even though Piramal Enterprises Ltd. exhibits strong returns. The significance of beta analysis is highlighted by the differences in risk levels between Johnson Control Hitachi and DCM Financial Services Ltd. In order to help investors and portfolio managers create a well-diversified, risk-optimized portfolio that is in line with market dynamics and long-term growth, this study evaluates predicted returns, beta, standard deviation, and the Sharpe ratio.

PROBLEM STATEMENT

Notwithstanding developments in risk management and financial modelling, there is currently no thorough framework in the literature that incorporates market interdependencies, outside shocks, and new technology into portfolio optimization. Risk assessment models are divided as a result of the understudied effects of macroeconomic shocks, geopolitical instability, and global crises on financial markets. Furthermore, there are gaps in explainable AI, algorithmic biases, and ethical investing as a result of the growing use of AI, blockchain, and decentralized financing (DeFi) in investment decision-making that has not been completely matched with risk mitigation techniques.

Predictive accuracy is limited during market turmoil because traditional investing models frequently presume rational decision-making while ignoring behavioural biases, investor mood, and cognitive heuristics. Furthermore, even though ESG investment has grown in popularity, the majority of research does not strike a balance between sustainability, ethical issues, and financial rewards. There is still a need for an integrated approach that assesses alternative assets such as real estate, private equity, and cryptocurrencies within long-term sustainable strategies. By creating a dynamic, technologically integrated, and behaviourally informed investment model that maximizes risk-adjusted returns while taking sustainability and systemic shocks into consideration, our research seeks to close these gaps.

OBJECTIVES

- Addressing Challenges in Portfolio Management: By evaluating market interdependencies, integrating cutting-edge technologies like blockchain and artificial intelligence (AI), integrating Behavioral finance into investment decisions, optimizing risk-return trade-offs for sustainable investing, and strengthening diversification strategies across asset classes, this research seeks to address important issues in portfolio management.

- Developing a Comprehensive Framework for Market Interdependencies and External Shocks: The relationships between stock indices, commodities, cryptocurrencies, and capital markets under periods of systemic uncertainty will be investigated in this study. This study attempts to improve market resilience against external shocks and risk management measures by including supply chain disruptions, cross-border capital flows, and sectoral correlations into financial models.

- Integrating Advanced Technologies with Risk and Investment Models: Evaluating how blockchain, artificial intelligence (AI), machine learning, and decentralized finance (DeFi) may improve liquidity, predictive analytics, and real-time investment decision-making is the goal.

- Assessing the Role of Behavioral and Psychological Factors in Investment Strategies: The purpose of this study is to examine how stock market movements, portfolio optimization, and AI-driven financial forecasts are impacted by investor sentiment, cognitive biases, and psychological heuristics. This study will create a more flexible investment approach that takes into consideration market irrationality, improves forecasting accuracy, and lessens the impact of emotional trading during times of high volatility by fusing Behavioral finance theories with AI-driven analytics.

- Enhancing Sustainable and Multi-Criteria Investment Strategies: The goal is to create an investment strategy that successfully strikes a balance between sustainability, return, and risk. The integration of alternative asset classes like real estate, private equity, and cryptocurrency in sustainable investing portfolios will be investigated in this study.

HYPOTHESIS:

H1: Market Interdependencies and External Shocks Significantly Influence Stock Market Volatility

Hypothesis Statement: Stock market volatility, sectoral correlations, and cross-border capital flows are statistically significantly impacted by global crises, geopolitical events, and macroeconomic shocks (such as pandemics, wars, and policy changes).
Justification: This hypothesis examines the idea that exogenous shocks have a knock-on effect on different asset classes and that financial markets are interrelated. This study will look at how macroeconomic events and global supply chain disruptions impact stock price movements and investing strategies by examining historical data and volatility indexes.

H2: The Integration of AI, Blockchain, and Big Data Analytics Enhances Portfolio Performance and Risk Management

Hypothesis Statement: By optimizing risk-adjusted returns and lowering exposure to market uncertainty, the use of AI-driven models, blockchain technology, and big data analytics in investment decision-making enhances portfolio performance.
Justification: This hypothesis will investigate whether blockchain-based smart contracts and AI-driven projections might improve real-time risk assessment, automate investment decisions, and increase liquidity as financial markets adopt emerging technology. To quantify the effect of technology adoption on portfolio performance, statistical models will be employed.

H3: Investor Sentiment and Behavioral Biases Have a Significant Impact on Market Trends and Investment Decisions

Hypothesis Statement: The efficient market hypothesis is not always true since psychological elements including investor mood, cognitive biases, and heuristics have a big impact on stock market movements and decision-making.
Justification: While Behavioral finance contends that biases and emotions influence investment decisions, traditional financial models presume that investors behave rationally. This hypothesis will examine the effects of irrational market behaviours on asset prices, volatility, and trading patterns utilizing sentiment analysis, market psychology indicators, and AI-driven Behavioral models.

RESEARCH METHEDOLOGY:

1. Research Design

In order to understand how investor mood, AI-driven financial models, and global crises affect stock market performance, this study uses an explanatory and analytical research approach. The study's analytical approach uses statistical methods to assess the links between important variables, while the exploratory part explores understudied topics like the influence of blockchain and artificial intelligence in investment decision-making.

2. Data Collection Methods

- Primary Data Collection

Surveys of investor sentiment will be conducted to find out how investors from various market segments—retail, institutional, and hedge funds—perceive risk, market stability, and technology-driven investing choices.

Expert Interviews: Insights into stock market responses and investment trends will be provided by financial experts, fund managers, and economic policy makers.

Social Media & News Sentiment Analysis: To gauge investor sentiment in real time, AI-powered Natural Language Processing (NLP) will be used to analyse tweets, financial news items, and analyst viewpoints.

- Secondary Data Collection

To evaluate market behaviour throughout various time periods, this study uses financial reports, historical stock market data, and macroeconomic variables. Among the data sources are:

Stock Market Indices: FTSE 100, NASDAQ, NIFTY 50, S&P 500, and other significant international indices.

Macroeconomic Indicators: GDP growth, interest rates, inflation rates, trade balances, and currency rates from organizations such as the World Bank and IMF.

Financial Reports and Company Data: Publicly traded companies' annual disclosures, financial statements, and earnings reports.

3. Statistical Tools and Techniques for Analysis

- Descriptive Statistics

Objective: Goal: To enumerate the salient features of risk, returns, and stock performance.

Mean (Average Return Ri): Indicates the stock returns' primary trend.

Standard Deviation (Unsystematic Risk): A measure of stock volatility.

Beta (β): Evaluates how sensitive stocks are to changes in the market.

Theoretical return of a risk-free asset is known as the Risk-Free Rate (Rf).

Market Standard Deviation (βσ): Shows market-wide systematic risk.

- Risk-Return Analysis and Performance Ratios

Objective: To assess the investment performance and risk-adjusted returns of equities.

Sharpe Ratio: Measures excess return per unit of total risk. Higher values indicate better risk-adjusted performance.

Treynor Ratio: Assesses return per unit of systematic risk (β).

Jensen's Alpha: Measures excess return after adjusting for market risk. If $\alpha > 0$, the stock is outperforming expectations.

- Correlation and Covariance Analysis

Objective: To examine relationships between stock returns, risk, and market fluctuations.

Correlation Matrix: Shows how closely stock returns move together.

Covariance Analysis: Measures stock return variability in relation to the market.

- Behavioural Finance Analysis

Prospect Theory & Loss Aversion Analysis: To assess how investors react to financial downturns and recoveries.

Cognitive Bias Assessment: Examining heuristics, overconfidence, and herd behaviour in investment decisions.

Market Sentiment Index Construction: A composite index measuring fear, optimism, and uncertainty in stock markets.

4. Conceptual Model Framework

- Independent Variables (Determinants of Investment Decision)

The stability and financial health of certain companies are determined by a number of important elements that impact investment decisions. Market risk (beta, β), which gauges a stock's susceptibility to general market swings, is among the most important indicators. Standard deviation (σ) represents the volatility of stock returns, providing insight into the risk level associated with each investment. Expected return (E(R)) is another significant variable, estimating potential profitability based on historical performance. Additionally, the Sharpe Ratio is used to assess risk-adjusted returns, helping investors compare different assets. Lastly, company-specific factors, such as financial strength, market leadership, and sectoral growth potential, play a crucial role in stock selection.

- Dependent Variable (Optimal Portfolio Performance)

The success of the investment portfolio, which is evaluated using a variety of financial indicators, is the dependent variable in this model. The total gains from the chosen stocks are represented by the portfolio return (Rp), while the cumulative risk exposure is measured by the portfolio risk (σ_p). The Sharpe Ratio is a crucial assessment metric that aids in figuring out whether the portfolio is yielding the best returns in relation to its degree of risk. These elements work together to create a portfolio that is both highly diversified and performing well.

5. Ethical Considerations

Confidentiality and Data Security: Stock market data will be sourced from publicly accessible repositories, and investor survey responses will be anonymised.

No Conflict of Interest: The study is impartial and does not advocate for any stock, trading plan, or financial institution.

Transparency in AI Models: Results will be verified through a variety of methods, and biases in AI-driven financial models will be examined.

RESULT ANALYSIS

- High-Risk, High-Return Stocks
  Businesses with high levels of volatility, such Piramal Enterprises Ltd., Varun Beverages Ltd., and DCM Financial Services Ltd., show big swings in their daily returns. Because of their erratic fluctuations, these stocks carry a higher risk even though they have significant growth potential. Aggressive tactics may appeal to investors with a high tolerance for risk, but managing possible downturns requires a clear exit strategy.

- Moderate-Risk Investments
  Stocks having a moderate correlation to the market, such as Johnson Control Hitachi Ltd., KEC International Ltd., and A2Z Infra Engineering Ltd., have shown a range of positive and negative results. These stocks are appropriate for investors seeking balanced exposure to market movements without excessive volatility because they follow larger market trends while maintaining a certain amount of independence.

- Stable and Low-Risk Stocks
  With less variation in returns, Sumitomo Chemical Ltd., Goyal Aluminums Ltd., and Veedol Corporation Ltd. exhibit comparatively steady performance. For investors who are risk averse, these equities provide a safer investing path due to their reduced market correlation. They are perfect for long-term, conservative strategies and can serve as hedges against market downturns.

- Underperforming or Declining Stocks
  Consistently declining patterns in stocks like Wipro Ltd. and Devyani International Ltd. point to industry difficulties or company-specific dangers. Before investing in these equities, a more thorough sectoral and fundamental study is necessary. Before adding these stocks to their portfolios, long-term investors should evaluate their growth prospects and financial stability.

- Excess Return to Beta Ratio Analysis

  The excess return to beta ratio highlights the risk-adjusted performance of stocks, with DCM Financial Services Ltd (0.6044) and Piramal Enterprises (0.6869) emerging as top performers, offering superior returns per unit of risk. Devyani International Ltd. and Varun Beverages Ltd., on the other hand, have negative ratios, which suggest underperformance in relation to their market risk. Beta values range from 0.201 to 1.345, reflecting varying stock sensitivities to market fluctuations, while market standard deviation between 0.87 and 1.45 signifies overall market volatility. Investors seeking high risk-adjusted returns may favour DCM Financial Services Ltd and Piramal Enterprises.

- Cut-Off Rate and Portfolio Selection

  The best stocks to include in a diversified portfolio are determined by the cut-off rate. Their appeal as investment opportunities is further supported by the fact that DCM Financial Services Ltd. has the lowest cut-off rate (0.0150), followed by Johnson Control Hitachi (0.0721) and Piramal Enterprises. The cumulative H and L values attest to their beneficial impact on portfolio efficiency. High-ranking stocks in this research have a balanced risk-return profile, which makes them perfect for minimizing market risks and optimizing portfolio gains.

- Investment Allocation Strategy

  In order to ensure an optimal risk-return balance, investment proportion analysis indicates that DCM Financial Services Ltd. should command the largest allocation (67.75%), followed by Johnson Control Hitachi (51.89%). On the other hand, Avantel Ltd.'s negative allocation (-30.32%) suggests inefficiency and would be excluded from a portfolio that is well-diversified. Investors should steer clear of stocks with negative allocations and direct their funds toward high-proportion stocks in order to optimize returns. This ensures a successful and well-balanced approach to investing.

STOCKS	MEAN	WEITAGE(1/5)	PORTFOLIO RETURN	S.D	CORREL	BETA
PIRAMAL ENTERPRISES	0.838	0.2	0.1676	2.431	0.109	1.126
KEC INTERNATIONAL LTD	0.234	0.2	0.0468	2.498	0.023	1.18
SUMITOMO CHEMICAL LTD	0.092	0.2	0.0184	2.36	0.023	0.854
DEVYANI INTERNATIONAL LTD	-0.07	0.2	-0.0142	1.965	0.236	0.63
A2Z INFRA ENGINEERING LTD	0.165	0.2	0.033	2.95	0.005	0.419
AVANTEL LTD	0.18	0.2	0.036	3.403	0.048	1.167
DCM FINANCIAL SERVICES LTD	0.186	0.2	0.0372	3.079	0.045	0.201
GOYAL ALUMINIUMS LTD	0.094	0.2	0.0188	2.348	0.048	0.6916
JOHNSON CONTROL HITACHI	0.269	0.2	0.0538	3.351	0.021	1.345
VARUN BEVERAGES LTD	-0.07	0.2	-0.0136	4.329	0.056	0.41
ZEN TECHNOLOGIES LTD	0.416	0.2	0.08318	2.918	0.046	0.978
VEEDOL CORPORATION LTD	0.157	0.2	0.03146	2.566	0.046	1.119
WIPRO LTD	-0.04	0.2	-0.008	3.66	0.021	0.734

Table 1

RANK	COMPANY	(Ri-Rf)/β	C-RATE	Bi	σi²	Pro.p	% INVEST
1	DCM FINANCIAL SERVICE	0.6044	0.015	0.201	9.48	0.0124968	67.75690897
2	GOYAL ALUMINIUMS LTD	0.0426	0.0269	0.6916	5.513	0.0019695	10.67879817
3	JOHNSON CONTROL	0.152	0.0721	1.345	11.229	0.0095704	51.89000538
4	AVANTEL LTD	0.0989	0.1544	1.167	11.58	-0.005593	-30.3257125
					TOTAL	0.0184435	100

Table 2

FINDINGS:

1. High-Volatility Stocks Pose Significant Risk and Return Opportunities

Extreme price swings make stocks like Piramal Enterprises Ltd., Varun Beverages Ltd., and DCM Financial Services Ltd. extremely volatile. There have been huge swings in the daily returns of these equities, with notable gains on some days and equally large losses on others.

Finding: These equities may yield larger returns for investors prepared to take on significant risk. However, conservative investors should avoid them due to their unpredictable nature. When investing in these equities, risk management techniques like hedging and diversification are crucial.

2. Moderate-Risk Stocks Provide Balanced Investment Opportunities

A2Z Infra Engineering Ltd., KEC International Ltd., and Johnson Control Hitachi Ltd. are examples of stocks that exhibit a modest correlation to the market and a range of positive and negative results.

Finding: These stocks offer a balance between risk and reward and are more predictable than extremely volatile ones. For investors seeking consistent growth while retaining exposure to market swings, they are perfect.

3. Low-Risk Stocks Offer Stability with Limited Growth Potential

Businesses like Veedol Corporation Ltd., Goyal Aluminiums Ltd., and Sumitomo Chemical Ltd. exhibit very steady performance, with few oscillations and little association with market trends.

Finding: Risk-averse investors seeking stability over aggressive returns would do well with these equities. They are also excellent options for risk hedging and portfolio diversification during recessions due to their low market correlation.

4. Some Stocks Exhibit a Negative Trend, Indicating Underperformance

Consistently poor results from businesses like Wipro Ltd. and Devyani International Ltd. point to either internal financial problems or unfavourable market trends.

Finding: Before purchasing these stocks, investors had to carry out additional fundamental research. Long-term underperformance may be indicated by negative patterns, necessitating strategic decision-making prior to portfolio inclusion.

5. Market Correlation Varies Across Companies, Influencing Investment Strategies

Because of their strong association with the NIFTY index, stocks like Avantel Ltd. and KEC International Ltd. are susceptible to changes in the overall market. On the other hand, there is no connection between equities such as Sumitomo Chemical Ltd and Goyal Aluminiums Ltd, suggesting that they are not affected by overall market swings.

Finding: Low-correlation equities are better for investors seeking stability, while high-correlation stocks are better for those seeking market-driven growth. To maximize risk and return, a well-diversified portfolio should include a combination of both.

6. Systematic and Unsystematic Risk Differ Across Stocks

While unsystematic risk, or company-specific risk, is common in equities with unpredictable price swings, systematic risk, or market risk, is visible in stocks that move in lockstep with the market.

While companies with low beta values, like Sumitomo Chemical Ltd., show tolerance to market-wide volatility, equities with high beta values, including Johnson Control Hitachi Ltd. and KEC International Ltd., are more sensitive to market movements.

Finding: When choosing an investment, investors need to consider both systematic and unsystematic risks. Low-beta stocks can offer stability in erratic economic times, whereas high-beta equities should be constantly watched during market downturns.

RECOMMENDATION

1. Implement a Risk-Based Investment Approach

To properly manage risk, investors should group equities according to their beta values and unsystematic risk. While risk-averse investors should concentrate on reliable stocks like Sumitomo Chemical Ltd. and Goyal Aluminiums Ltd., high-risk investors can select erratic stocks like Piramal Enterprises Ltd. and DCM Financial Services Ltd. This method guarantees that investment choices are in line with expectations for return and risk tolerance.

2. Strengthen Diversification Strategies

Stocks that are both highly and poorly correlated with market trends should be included in a well-balanced portfolio. Investors should mix high-growth companies (Piramal Enterprises Ltd, Varun Beverages Ltd), low-risk stocks (Sumitomo Chemical Ltd, Goyal Aluminiums Ltd), and market-driven stocks (KEC International Ltd, Avantel Ltd). This approach maximizes profits while reducing risks.

3. Develop Algorithmic and AI-Based Trading Models

AI-based trading models can improve decision-making in the face of erratic stock volatility. Stock trends should be evaluated using sentiment analysis, predictive modelling, and algorithmic trading. AI-driven investment methods can help high-volatility equities, such as Piramal Enterprises Ltd. and DCM Financial Services Ltd., optimize returns while controlling risks.

4. Focus on Behavioural Finance in Investment Decisions

The psychology of investors has a significant impact on changes in the stock market. Price swings are influenced by elements such as panic selling, emotion changes, and herd mentality. When examining equities that have demonstrated deteriorating tendencies, such as Devyani International Ltd. and Wipro Ltd., investors should incorporate sentiment analysis tools and Behavioral finance theories.

5. Improve Hedging Mechanisms Against Market Risks

Hedging techniques and derivatives can be used to control market risks. To guard against significant losses and enhance risk mitigation techniques, stocks with sharp price swings, such as Varun Beverages Ltd. and Devyani International Ltd., should be paired with stop-loss orders, put options, and futures contracts.

CONCLUSION

By looking at important financial indicators such beta values, unsystematic risk, and market deviations, the study offers a thorough analysis of stock market performance, risk factors, and investing techniques. The results show notable differences in how equities behave, with some showing high levels of market sensitivity and volatility and others staying more stable. This emphasizes the necessity of a structured investment approach and the significance of comprehending both systematic and unsystematic risks while making decisions.

Investors can manage uncertainty and optimize their portfolios by combining Behavioral finance insights, AI-driven trading models, macroeconomic data, and risk-based methods. The report emphasizes that in order to successfully navigate volatile markets, diversification, hedging strategies, and alternative asset exploration are essential.

Furthermore, preserving investor confidence and guaranteeing long-term market viability depend heavily on effective corporate governance and transparency.
To sum up, the study offers practical advice that enables investors to make well-informed, data-driven choices. Through the alignment of investments with financial innovations, market trends, and risk tolerance, stakeholders can attain resilience and sustainable growth in the ever-changing stock market environment. In addition to aiding in the creation of investment strategies, the results set the stage for further investigation into new financial technology and alternative investment prospects.

SCOPE FOR FURTHER RESEARCH

To improve prediction accuracy and transparency, future studies can investigate the use of AI, blockchain, and machine learning in investment strategies. More research is required to determine how global crises and macroeconomic shocks affect stock market interdependencies. By taking investor mood into account, integrating Behavioral finance with quantitative models helps enhance risk assessment. Diversification insights can also be gained by researching alternative asset classes including private equity, REITs, and cryptocurrency. Finally, it's important to look into ESG-based investment to make sure that financial choices take sustainability and ethics into account.

ACKNOWLEDGEMENT

I would like to extend my sincere gratitude to everyone who helped me finish my study project. My profound gratitude goes out to my distinguished mentor/professor Dr. Mallika B. K., whose priceless advice, perceptive criticism, and steadfast support have greatly influenced the direction of this research. I am also appreciative of my school and instructors for offering the required materials and a supportive learning atmosphere. I also thank my peers for their efforts, as their insightful conversations have improved my understanding of the field of study. Last but not least, I want to express my sincere gratitude to my family and friends for their support and unshakable faith in my pursuits, which have inspired me during this trip.

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Editorial Note

Dear Esteemed Readers
It is with immense pride and intellectual enthusiasm that we present the seventh issue of *Applied Management Perspectives*, our biannual journal that continues to serve as a platform for the convergence of rigorous research, practical insights, and thought leadership across diverse domains of management. As we release this issue, we reaffirm our commitment to fostering academic excellence and driving progressive dialogue in applied management research.

The articles featured in this edition reflect the evolving challenges and innovations that shape today's organizational landscapes—spanning finance, leadership, sustainability, human resource practices, diversity, and emerging technologies.

Leadership continues as a central theme with *"Ethical Leadership and Its Impact on Corporate Integrity, Accountability, and Employee Performance"*, highlighting the role of vision and empathy in building trustworthy corporate cultures. In the financial domain, the article *"Equity Dilution Explained: Insights from Zepto and Dunzo"* demystifies startup funding dynamics, while *"The Financial Performance Evaluation of Minorities Large-Scale Multipurpose Co-operative Society Ltd. Sullia"* offers valuable insights into regional cooperative performance evaluation.

The issue also captures the growing intersection of technology and social sustainability. *"Virtual Work and Social Sustainability in Bangalore"* and *"The Role of Artificial Intelligence in Enhancing Cybersecurity and Ethical Decision-Making in Indian Banking"* address the dual themes of digital transformation and ethical responsibility.

The final set of articles broadens the scope of this issue to include inclusive entrepreneurship and global organizational learning. *"Emerging Market Dynamics and Sustainable Entrepreneurship: The Role of Women in Bangalore's Business Ecosystem"* brings to light gendered dimensions in business ecosystems, while *"Evaluating the Effectiveness of Cross-Cultural Training in Advancing Diversity, Equity, and Inclusion"* offers actionable insights for global organizations.

As we release this edition, we extend our heartfelt gratitude to all contributing authors, reviewers, and editorial board members for their continued dedication and scholarly contributions. We believe that this issue will inspire researchers, practitioners, and policymakers to explore and implement informed, ethical, and sustainable practices in the realm of management. We welcome your feedback and look forward to continued academic engagement in future editions.

Warm regards,
Editor
Dr Virupaksha Goud
Applied Management Perspectives

Volume: 04, Issue: 01 - E-ISSN: 2583-0546

IMPACT OF WORKPLACE BULLYING ON PHYSICAL WELLBEING, PSYCHOLOGICAL WELLBEING AND WORK PERFORMANCE

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ABSTRACT

The purpose of this research work was to examine the impact of workplace bullying on the physical wellbeing, psychological wellbeing and work performance of employees. As a form of negative behaviour, bullying has got negative repercussions on employees and organizations. Hence this work has examined the impact of workplace bullying on employees. The study is a descriptive one and the sample size was 121 which was collected by convenience sampling technique. Multiple regression analysis using SPSS 23 was used for data analysis. Work related bullying was found to have a significant impact on the physical wellbeing of the employee and personal bullying was found to have a significant impact on the physical and psychological wellbeing of employees.

KEYWORDS: Workplace bullying, physical wellbeing, psychological wellbeing and work performance.

INTRODUCTION

Behaviours of employee within an organization have an influence on other employees and also on the organization. In an organizational context, employee behaviours are like two sides of the same coin – they can make or mar the organizational performance. Behaviours are categorised as – productive and counterproductive work behaviours. Productive behaviours are those facilitating organizational performance and counterproductive behaviours are proven to have a negative impact on organizational functioning. One such counterproductive work behaviour having a negative impact on employees and organization is workplace bullying. The aggressive nature of bullying and its negative impact on employees and organizations makes it to belong to counterproductive work behaviours is stated in the study of Bartlett & Bartlett (2011). Workplace bullying as a happening affecting the entire work environment is reported in the research work of Vartia (2001). The study by Bartlett & Bartlett (2011) has confirmed workplace bullying to affect the physical, emotional and work life of the victim. Based on the survey, Stagg et.al (2013) has reported 50% of the respondents to have been targets of bullying. The study by Sansone & Sansone (2015) has stated 11% of the employees to have experienced bullying at some phase of their work life. Given the negative consequences of workplace bullying on employees and organizations, this research work has examined the various forms of bullying within organizations and the impact it has on employees.

Workplace bullying is a continuous stream of unreasonable actions of an employee(s) that are directed towards other employee(s) with an intention to intimidate, humiliate and undermine the employee(s), which in turn affects the physical wellbeing, psychological wellbeing and performance of the employee(s). Bullying in workplace is an aggressive behaviour of an employee with debilitating consequences on other employees and organization. Workplace bullying is a counterproductive behaviour as the behaviour is a stimulus for negative responses and negative set of behaviours in the victimised employee. Due to the negative implications of bullying for both the employees and organizations, this research paper has examined the impact of the various dimensions of workplace bullying on the physical wellbeing, psychological wellbeing and performance of the employee(s).

This research work has analysed two different types of bullying – work related bullying (bullying behaviours that are associated with work) and personal bullying (behaviours that are targeted at the individual employee) and the impact the two forms of bullying has on the physical wellbeing, psychological wellbeing and performance of the employee.

The attributes that tapped work related bullying are – burdening employee with heavy workload, refusing leave when needed, removing from assigned responsibility, setting unrealistic targets, withholding information, excessive monitoring and unfair criticism.

The attributes that tapped personal bullying are - subjecting employees to isolation, subjecting employees to gossip, verbal abuse.

The attributes that tapped the physical wellbeing are – sickness, sleep deprivation.

The attributes that tapped the psychological wellbeing are – depression, stress and strained interpersonal relationship.

The attributes that tapped the work performance are – absenting to work, decreased performance, increase in errors

NEED FOR THE STUDY

Employees are assets for the organization and to optimize their performance, organizations must create a conducive work environment. The productivity of an employee depends upon their physical and psychological wellbeing. Certain organizational happening interferes with the physical and psychological wellbeing of employees and affects their performance. One such occurrence is bullying. Bullying within organizations creates an unfavourable work environment leading to unhealthy workforce and is a threat to both employees and organization. By exploring the nature and impact of bullying on the employee will help organizations to devise measures to stop bullying and take remedial measures to help the victims and ensure a safe working environment for employees to function effectively.

OBJECTIVES OF THE STUDY

- To elicit employee opinion on the different dimensions of workplace bullying.
- To examine the impact of workplace bullying on the physical wellbeing, psychological wellbeing and work performance of the employee.

REVIEW OF LITERATURE

In the survey conducted by Rayner (1997) at Staffordshire University to measure the respondent's experience of workplace bullying, it was found that bullies were managers and employees who were elder than the targets. Rayner reported bullying as a factor forcing 27% of the employees to quit their jobs. Vartia (2001) explored the impact of workplace bullying had on the target and the observers. The researcher has explored how bullying becomes a cause for stress and psychological ill health. Based on the survey conducted among Municipal officials the researcher has concluded that employees who were targets of bullying experienced stress and psychological ill health and the degree of suffering the target experienced differed with the nature and type of bullying. According to Cowie et.al (2002), various forms of bullying are a cause for eroding the confidence and decreasing the efficiency of employees. Bullying is said to ruin the physiological and psychological wellbeing of employees. Heames & Harvey (2006) explored the impact of bullying at three different levels – individual, group and organization. At the individual level, bullying affected the physical and psychological wellbeing of the victim; at the group level bullying affects the interpersonal relation and at the organizational level bullying affects the reputation of the organization. The findings of the study by Lewis et.al (2008), has confirmed bullying within organizations and the bully can be at the individual level, group level, organization level and customer service level. The cross-cultural study undertaken by Escartin et.al (2010) in Central America and Southern Europe intended to explore the differences in employee perception in different regions with respect to bullying and the study found higher similarity with respect to conceptualization of workplace bullying. The conceptual study of Bartlett & Bartlett (2011) has found workplace bullying to affect the employees, to damage the reputation of the organization and threaten the culture of the organization. Based on the conducted among health care professionals by Stagg et.al (2013), it was reported that workplace bullying affects the organization economically as it leads to decreased productivity, increased absenteeism and decreased morale.

THEORETICAL FOUNDATION

Workplace bullying as a cause for affecting the physical wellbeing, psychological wellbeing and work performance of employees is based on the theoretical support rendered by the Affective Events Theory. The theory postulates that events/ happenings in the workplace offer a stimulus for shaping employee attitudes and behaviours. Hence workplace bullying as a workplace happening becomes a trigger for causing certain behavioural changes in the employees concerned with their physical wellbeing, psychological wellbeing and work performance.

THEORETICAL MODEL OF THE STUDY

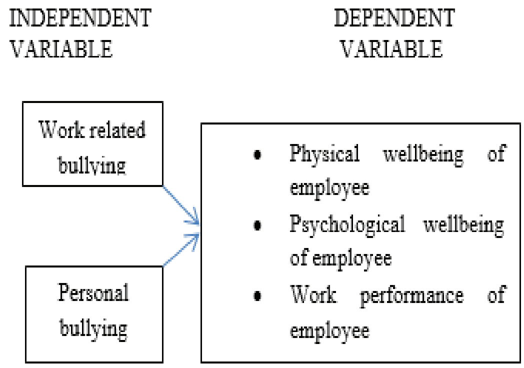

Fig1

HYPOTHESIS

H_1: Work related bullying significantly affects the physical wellbeing of the employee.

H_2: Work related bullying significantly affects the psychological wellbeing of the employee.

H_3: Work related bullying significantly affects the work performance of the employee.

H_4: Personal bullying significantly affects the physical wellbeing of the employee.

H_5: Personal bullying significantly affects the psychological wellbeing of the employee.

H_6: Personal bullying significantly affects the work performance of the employee.

RESEARCH METHODOLOGY

This research study is descriptive as it describes the features and the impact of workplace bullying as experienced by the respondents. The sample size for this study is 121 comprising academicians employed in private colleges which were collected by convenience sampling. A questionnaire with a three-point likert scale was constructed which tapped the respondent opinion towards various forms of bullying and their experiences of bullying. The questionnaire was electronically administered to the respondents and the survey was a self-administered one. The collected data was analysed by multiple regression analysis using SPSS 23.

DATA ANALYSIS

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.955[a]	.911	.906	.24487

Table 1: Test of Hypothesis H_1

a.Predictors: (Constant), unfair criticism, refusal of leave, removing from assigned responsibility, heavy workload, withholding information, setting unrealistic targets, excessive monitoring

The R Square value (.911) from Table 1 indicates that the work related bullying variables - unfair criticism, refusal of leave, removing from assigned responsibility, heavy workload, withholding information, setting unrealistic targets, excessive monitoring together account for 91.1% variance on the physical wellbeing of employees

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	-.461	.092		-4.993	.000
heavy workload	.004	.066	.004	.064	.949
refusal of leave	.478	.071	.365	6.700	.000
removing from assigned responsibility	-.143	.079	-.112	-1.796	.075
setting unrealistic targets	.722	.098	.684	7.392	.000
withholding information	.442	.077	.371	5.739	.000
excessive monitoring	-.457	.129	-.384	-3.533	.001
unfair criticism	.097	.120	.080	.807	.421

Table 2: Coefficients --Dependent Variable: Physical Wellbeing

From Table 2, it is evident that the overall model is statistically significant ($p<.05$), leading to the acceptance of Hypothesis H_1. Among the work-related factors of bullying, refusal of leave ($p<.05$), setting unrealistic targets ($p<.05$), withholding information ($p<.05$) and excessive monitoring have a significant impact on the physical wellbeing of employees.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.954[a]	.909	.904	.28197

Table 3: Test of Hypothesis H_2

a.Predictors: (Constant), unfair criticism, refusal of leave, removing from assigned responsibility, heavy workload, withholding information, setting unrealistic targets, excessive monitoring

The R Square value (.909) from Table 3 indicates that the work-related bullying variables - unfair criticism, refusal of leave, removing from assigned responsibility, heavy workload, withholding information, setting unrealistic targets, excessive monitoring together account for 90.9% variance on the psychological wellbeing of employees

Model	Unstandardized Coefficients	Standardized Coefficients	T	Sig.

	B	Std. Error	Beta		
(Constant)	-.313	.106		-2.946	-.313
heavy workload	.005	.076	.004	.068	.005
refusal of leave	.234	.082	.157	2.843	.234
removing from assigned responsibility	.027	.092	.019	.297	.027
setting unrealistic targets	.018	.112	.015	.163	.018
withholding information	1.050	.089	.774	11.852	1.050
excessive monitoring	.186	.149	.137	1.245	.186
unfair criticism	-.138	.138	-.100	-.998	-.138

Table 4: Coefficients--Dependent Variable: Psychological wellbeing

From Table 4, it is evident that the overall model is statistically not significant ($p>.05$), leading to the rejection of Hypothesis H_2.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.988[a]	.977	.975	.00961

Table 5: Test of Hypothesis H_3

a.Predictors: (Constant), unfair criticism, refusal of leave, removing from assigned responsibility, heavy workload, withholding information, setting unrealistic targets, excessive monitoring

The R Square value (.977) from Table 5 indicates that the work-related bullying variables - unfair criticism, refusal of leave, removing from assigned responsibility, heavy workload, withholding information, setting unrealistic targets, excessive monitoring together account for 97.7% variance on the work performance of employees

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.001	.004		.189	.851
heavy workload	.001	.003	.017	.536	.593
refusal of leave	-.001	.003	-.007	-.245	.807
removing from assigned responsibility	.013	.003	.137	4.281	.000
setting unrealistic targets	.043	.004	.532	11.186	.000
withholding information	.003	.003	.036	1.071	.286

excessive monitoring	-.011	.005	-.121	-2.165	.033
unfair criticism	.041	.005	.444	8.681	.000

Table 6: Coefficients --Dependent Variable: work performance

From Table 6, it is evident that the overall model is statistically not significant (p>.05), leading to the rejection of Hypothesis H_3.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.930 a	.865	.862	.29666

Table 7: Test of Hypothesis H_4

a.Predictors: (Constant), verbal abuse, isolation at workplace, victim of gossip

The R Square value (.865) from Table 7 indicates that the personal bullying variables - verbal abuse, isolation at workplace, victim of gossip together account for 86.5% variance on the physical wellbeing of employees

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	-.415	.088		-4.735	.000
isolation at workplace	.152	.115	.113	1.326	.188

victim of gossip	.510	.104	.430	4.927	.000
verbal abuse	.515	.058	.457	8.804	.000

Table 8: Coefficients --Dependent Variable: Physical wellbeing

From Table 8, it is evident that the overall model is statistically significant (p<.05), leading to the acceptance of Hypothesis H_4. Among the personal factors of bullying, gossiping (p<.05) and verbal abuse (p<.05) have a significant impact on the physical wellbeing of employees.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.984 a	.968	.967	.16421

Table 9: Test of Hypothesis H_5

a.Predictors: (Constant), verbal abuse, isolation at workplace, victim of gossip

The R Square value (.968) from Table 9 indicates that the personal bullying variables - verbal abuse, isolation at workplace, victim of gossip together account for 96.8% variance on the psychological wellbeing of employees

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	-.101	.049		-2.091	.039
isolation at workplace	-.007	.064	-.004	-.106	.916

victim of gossip	1.236	.057	.914	21.552	.000
verbal abuse	.123	.032	.096	3.794	.000

Table 10: Coefficients--Dependent Variable: Psychological wellbeing

From Table 10, it is evident that the overall model is statistically significant ($p<.05$), leading to the acceptance of Hypothesis H_5. Among the personal factors of bullying, gossiping ($p<.05$) and verbal abuse ($p<.05$) have a significant impact on the psychological wellbeing of employees.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.894[a]	.800	.795	.02758

Table 11: Test of Hypothesis H_6

a.Predictors: (Constant), verbal abuse, isolation at workplace, victim of gossip

The R Square value (.800) from Table 11 indicates that the personal bullying variables - verbal abuse, isolation at workplace, victim of gossip together account for 80% variance in the work performance of employees.

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.008	.008		.932	.353
isolation at workplace	.019	.011	.183	1.761	.081
victim of gossip	.033	.010	.369	3.466	.001
verbal abuse	.035	.005	.412	6.505	.000

Table 12: Coefficients--Dependent Variable: work performance

From Table 8, it is evident that the overall model is statistically non-significant ($p<.05$), leading to the rejection of Hypothesis H_6.

FINDINGS

Based on the multiple regression analysis values from Table 2, 4 and 6, it is concluded that work related bullying has a significant impact on personal wellbeing of employees and is not significant with respect to psychological wellbeing and work performance of employees, leading to the acceptance of hypothesis H_1 and rejection of hypothesis H_2 and H_3. Based on the multiple regression analysis values from Table 8, 10 and 12, it is concluded that personal bullying is significantly related with physical and psychological wellbeing of employees and non-significant with respect to work performance, leading to the acceptance of hypothesis H_4 and H_5 and rejection of hypothesis H_6.

CONCLUSION

The various forms of bullying in the workplace were proven to affect the physical and psychological wellbeing of employees. An employee, whose wellbeing is at stake, will not be at his productive best leading to his/ her inefficiency. Employee wellbeing is a concern of organization. Organizations must ensure a safe environment which is free of bullying and will help in achieving organizational goals. Organizations must adopt a two pronged approach to manage bullying in the workplace – preventive measures and remedial measures. As preventive measures organizations must design appropriate policies and regulations, conduct training programs, establish proper reporting channels and fair investigation procedures to tackle the menace. As remedial measures, the victims of bullying must be offered counselling, stress relief exercises and emotional support.

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THE IMPACT OF SUPPORTIVE LEADERSHIP AND WORK-FAMILY CONFLICT ON NURSES' WELL-BEING AND JOB PERFORMANCE: A MEDIATED MODEL

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ABSTRACT

AIM: The research aims to examine Nurse's well-being factors, Job performance, and the Quality of patient interaction in the nurse's work culture. Investigating the impact of Supportive leadership on work components like Work-family conflict.

BACKGROUND**:** Nursing professionals frequently experience their well-being factors, job performances, and quality of patient interaction. Work burden has negatively impacted nurses' well-being, job performance, and the quality of patient interactions in Chengalpattu district. The researcher suggests that supportive leadership and increased work-family conflict may reduce these impacts.

DESIGN: A descriptive cross-sectional survey was conducted across hospitals in Chengalpattu district.

METHOD**:** A cross-sectional sample of 205 nurses from Chengalpattu district. hospitals were surveyed between January 2025 and February 2025. The hypotheses were investigated using the Mediated model.

RESULT: Supportive leadership was associated with higher work-life conflict among nurses.
Supportive leadership had a collateral impact on all three impact factors (examine Nurse's well-being factors, Job performance, and the Quality of patient interaction). Additional effects were seen in respect to the mediators and the three outcome variables. Having work-family conflict improves Nurses' well-being factors and job performance.

CONCLUSION: The research found that supportive leadership improves the well-being of nurses and job performance of nurses at the work place. Empowering nurses with work-life conflicts and supportive leadership may enhance their mental health support and workload management.

KEYWORDS

Job performance, Nursing professionals, Nursing well-being, Supportive leadership, Quality of patient interaction, Work-life conflict.

INTRODUCTION

It can be difficult for nurses, especially women, to maintain a good Work-Life Balance (WLB), since they often sacrifice their personal needs for their careers. WLB involves striking a careful balance between the priorities and significance of one's personal and professional trajectories, which are intricately linked in every way. With a high percentage of female physicians and nurses, the healthcare industry is growing quickly. Among the many challenges of their profession include night shifts, extended workdays, insufficient breaks, and intense work pressure. ,
Female medical professionals may provide exceptional medical treatment, be more productive, and improve the standard of patient care when there is a supportive work and home environment and a favourable corporate culture. Akhila Rao (2021) The effect of genuine leadership on the experiences of burnout and bullying in the workplace among recently graduating nurses. Genuine leaders promote psychological safety, which lowers stress and increases fortitude. According to the study, supportive leadership lowers turnover intentions and increases work satisfaction. The connection between wellbeing and leadership is mediated by empowerment. Emotional tiredness is less common among nurses working in supportive workplaces. Laschinger, H. K. S (2012).

Leadership styles that are supportive and transformative are linked to decreased turnover and increased work satisfaction. The evaluation emphasizes how crucial leader actions are for fostering psychological safety and wellbeing. Performance on both an individual and organizational level is improved by effective leadership techniques. Positive work environments and a decrease in burnout are two benefits of supportive leadership. Cummings, G. G (2010). The FSSB-SF is a short-form for supportive supervisor behaviour. The tool assesses how managers encourage work-family balance among their staff members. Family-supportive supervision improves nurses' well-being and lessens work-family conflict. A culture of adaptability and understanding is fostered by supportive leadership. The report emphasizes how crucial it is to teach leaders how to handle work-family conflicts. Hammer, L. B (2013)

Conflicts between nurses and patients or their family may have a negative effect on nurses' health and productivity, which may lead to unintended mistakes and jeopardize patient safety. creating hospital policies aimed at resolving healthcare issues to support nurses' competency in patient safety. It is necessary to develop and put into effect policies aimed at reducing disputes between medical personnel and patients or family members Reem N Al-Dossary (2022)

LITERATURE REVIEW

French et al. conduct a meta-analysis examining work-family conflict and its outcomes, emphasizing cross-domain versus matching-domain relations. For nurses, supportive leadership reduces conflict by fostering flexibility and understanding. The study highlights the importance of addressing work-family issues to improve well-being. Family-supportive policies enhance job satisfaction and performance. Nurses in supportive environments report higher engagement and lower stress.

Laschinger, H. K. S., Wong, C. A., & Grau, A. L. (2012) investigate the impact of authentic leadership on newly graduated nurses' experiences of workplace bullying and burnout. Authentic leaders foster psychological safety, reducing stress and enhancing resilience. The study finds that supportive leadership improves job satisfaction and reduces turnover intentions. Empowerment mediates the relationship between leadership and well-being. Nurses in supportive environments report lower levels of emotional exhaustion.

Wong, C. A., & Laschinger, H. K. S. (2013) examine how authentic leadership impacts nurses' job performance through empowerment. Supportive leaders empower nurses by providing autonomy and recognition, which enhances engagement and productivity. The findings suggest that empowerment serves as a critical mechanism linking leadership to job satisfaction. Nurses in empowering environments report lower levels of emotional exhaustion. Supportive leadership also fosters a culture of trust and collaboration.

Hammer, L. B., Kossek, E. E., Bodner, T., & Crain, T. (2013) develop and validate the Family Supportive Supervisor Behavior Short-Form (FSSB-SF). The tool measures supervisors' behaviors that support employees' work-family balance. For nurses, family-supportive supervision reduces work-family conflict and enhances well-being. Supportive leadership fosters a culture of flexibility and understanding. The study highlights the importance of training leaders to address work-family issues.

Michel et al. (2011) conduct a meta-analysis of work-family conflict and its various outcomes. For nurses, work-family conflict leads to emotional exhaustion and reduced job satisfaction. Supportive leadership acts as a buffer, fostering resilience and well-being. The study identifies bidirectional relationships between work and family domains. Family-supportive policies enhance job performance and reduce turnover

Shockley and Singla et al. (2011) examine the relationship between work-family interactions and satisfaction. Supportive leadership fosters positive work-family interactions, enhancing nurses' well-being and job performance. The study finds that family-supportive supervision reduces conflict and increases enrichment. Nurses in supportive environments report higher engagement and lower stress. Addressing work-family issues improves both individual and organizational outcomes

Matthews et al. (2014) conduct a meta-analysis of family-supportive organization perceptions and their impact on work-family conflict. For nurses, supportive leadership reduces conflict and enhances satisfaction. The study highlights the role of empowerment in linking support to performance. Nurses in supportive environments report lower levels of burnout. Family-supportive policies improve both personal and organizational outcomes.

Rofcanin et al. (2020) examine how family-supportive supervision fosters thriving at work. Supportive leadership enhances nurses' well-being by reducing work-family conflict. The study applies conservation of resources theory to explain these mechanisms. Nurses in supportive environments report higher engagement and performance. Family-supportive policies improve both personal and organizational outcomes.

Kelly et al. (2011) explore how changing workplaces to reduce work-family conflict improves outcomes. For nurses, flexible scheduling and supportive leadership reduce conflict and enhance well-being. The study finds that work-life balance initiatives improve job satisfaction and performance. Nurses in supportive environments report lower levels of stress. Family-supportive policies enhance organizational effectiveness.

Gill et al. (2013) examine how transformational leadership mitigates stress and burnout in healthcare settings. Supportive leadership fosters resilience among nurses, reducing emotional exhaustion. The study finds that transformational leaders enhance job satisfaction and performance. Nurses in supportive environments report higher engagement and lower stress. Addressing work-family conflict improves both personal and organizational outcomes.

Hutchinson et al. (2015) argue that supportive leadership is essential for addressing modern healthcare challenges and improving nurse performance. Transformational leaders foster resilience and reduce burnout among nurses. The study finds that supportive leadership enhances job satisfaction and retention. Nurses in supportive environments report higher engagement and lower stress. Addressing work-family conflict improves both personal and organizational outcomes.

Hammer et al. (2013) develop and validate the Family Supportive Supervisor Behavior Short-Form (FSSB-SF) to measure supervisors' family-supportive behaviors. For nurses, family-supportive supervision reduces work-family conflict and enhances well-being. The study highlights the importance of training leaders to address work-family issues. Supportive leadership fosters flexibility and understanding. Family-supportive policies improve both personal and organizational outcomes.

Rofcanin et al. (2017) explore how family-supportive supervision fosters thriving at work. For nurses, supportive leadership enhances well-being by reducing work-family conflict. The study applies conservation of resources theory to explain these mechanisms. Nurses in supportive environments report higher engagement and performance. Family-supportive policies improve both personal and organizational outcomes.

Wayne et al. (2006) examine the impact of family-supportive organizational perceptions on work-family conflict and job outcomes. For nurses, supportive leadership fosters flexibility, reducing stress and enhancing well-being. The study finds that family-supportive policies improve job satisfaction and performance. Nurses in supportive environments report higher engagement and lower burnout. Addressing work-family conflict improves both personal and organizational outcomes

Lapierre and Allen et.al (2012) explore the role of boundary management in reducing work-family conflict. For nurses, supportive leadership fosters flexibility, enabling effective boundary management. The study finds that boundary management reduces stress and enhances well-being. Nurses in supportive environments report higher engagement and lower burnout. Addressing work-family conflict improves both personal and organizational outcomes.

RESEARCH METHODOLOGY

Research Objectives

The primary aim of this study is to investigate the influence of supportive leadership on nurses’ well-being, job performance, and quality of patient interaction, with particular attention to the mediating role of work-life conflict. The study also examines whether demographic variables moderate the strength of key relationships within the proposed model. The specific objectives of this study are as follows:

1. To examine the effect of supportive leadership on nurses' well-being.

2. To analyse the influence of supportive leadership on work-life conflict.

3. To assess the impact of work-life conflict on nurses' well-being.

4. To investigate the relationship between nurses' well-being and job performance.

5. To determine the effect of job performance and well-being on the quality of patient interaction.

6. To explore the moderating role of demographic variables such as gender, age, years of experience, marital status, work shift, and current job title on selected relationships in the model.

RESEARCH HYPOTHESES

Based on the literature and the study objectives, the following hypotheses are formulated:

Direct Relationships

- **H1**: Supportive Leadership has a positive effect on Nurses' Well-being.
- **H2**: Supportive Leadership has a negative effect on Work-Life Conflict.
- **H3**: Work-Life Conflict negatively affects Nurses' Well-being.
- **H4**: Nurses' Well-being positively influences Job Performance.
- **H5**: Nurses' Well-being positively influences Quality of Patient Interaction.
- **H6**: Job Performance positively influences Quality of Patient Interaction.
- **H7**: Supportive Leadership positively influences Job Performance.

Mediating Effects

- **H8**: Work-Life Conflict mediates the relationship between Supportive Leadership and Nurses' Well-being.
- **H9**: Nurses' Well-being mediates the relationship between Supportive Leadership and Job Performance.
- **H10**: Nurses' Well-being mediates the relationship between Supportive Leadership and Quality of Patient Interaction.
- **H11**: Job Performance mediates the relationship between Nurses' Well-being and Quality of Patient Interaction.

Moderating Effects of Demographics

- **H12**: The relationship between Supportive Leadership and Work-Life Conflict is moderated by Work Shift.
- **H13**: The relationship between Nurses' Well-being and Job Performance is moderated by Years of Experience.
- **H14**: The relationship between Job Performance and Quality of Patient Interaction is moderated by Gender and Current Job Title.

3.3 Conceptual Research Model

The conceptual model of this study is based on the theoretical premise that supportive leadership plays a critical role in enhancing nurses' job outcomes through the mediation of work-life conflict and well-being. Additionally, demographic variables are expected to influence the strength of these relationships. The model is structured around five primary latent variables: Supportive Leadership, Work-Life Conflict, Nurses' Well-being, Job Performance, and Quality of Patient Interaction.

The relationships among these constructs are shown below

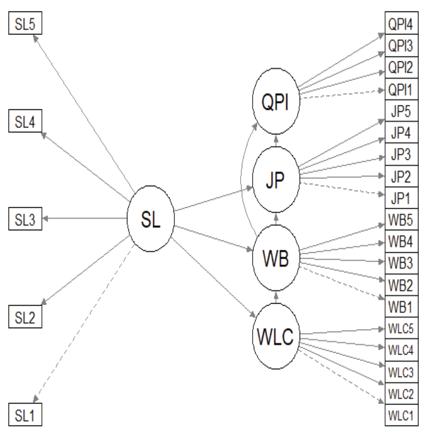

Fig 1

Item	Group	Number of People	Percentage (%)	Cumulative Percentage (%)
Gender	Male (1)	45	22.0	22.0
	Female (2)	160	78.0	100.0
Age	20–30 years (1)	92	44.9	44.9
	31–40 years (2)	58	28.3	73.2
	41–50 years (3)	38	18.5	91.7
	Above 51 years (4)	17	8.3	100.0
Years of Experience	0–5 years (1)	68	33.2	33.2
	6–10 years (2)	54	26.3	59.5
	11–15 years (3)	42	20.5	80.0
	16–20 years (4)	25	12.2	92.2
	Above 20 years (5)	16	7.8	100.0
Marital Status	Single (1)	102	49.8	49.8
	Married (2)	103	50.2	100.0
Work Shift	Day Shift (1)	74	36.1	36.1
	Night Shift (2)	58	28.3	64.4
	Rotational Shift (3)	73	35.6	100.0
Current Job Title	Staff Nurse (1)	176	85.9	85.9
	Head Nurse (2)	21	10.2	96.1
	Nurse Manager (3)	8	3.9	100.0

Table 1. Demographic Information of the Nursing Staff Sample (N = 205)

The study includes 205 nurses; the majority of individuals (n = 160, 78.0%) are identified as female, whereas a lesser percentage (n = 45, 22.0%) are identified as male. Most of the respondents (n = 92, 44.9%) were between the age group of 20 and 30. Next were those between the age group of 31 and 40 (n = 58, 28.3%), 41 and 50 (n = 38, 18.5%), and over 51 (n = 17, 8.3%).

From the responses, one-third of the participants (n = 68, 33.2%) had 0–5 years of experience. 6-10 years (n = 54, 26.3%), 11-15 years (n = 42, 20.5%), 16-20 years (n = 25, 12.2%), and above 20 years (n = 16, 7.8%). The sample was almost equally balanced between married people (n = 103, 50.2%) and single people (n = 102, 49.8%) in terms of marital status.

A number of shifts were reported by those who responded, such as rotating shifts (n = 73, 35.6%), night shifts (n = 58, 28.3%), and day shifts (n = 74, 36.1%). Staff nurses (n = 176, 85.9%) were the most common job title, followed by head nurses (n = 21, 10.2%) and nurse managers (n = 8, 3.9%).

RELIABILITY AND VALIDITY OF CONSTRUCTS

To evaluate the measurement model's internal consistency and construct validity, the following indices were examined: **Cronbach's alpha (α)**, **Ordinal alpha**, **McDonald's omega (ω_1, ω_2, ω_3)**, and **Average Variance Extracted (AVE)**. Table X.1 summarizes the reliability indices for each construct.

Construct	Cronbach's α	Ordinal α	ω_1	ω_2	ω_3	AVE
Supportive Leadership (SL)	0.84	0.85	0.86	0.86	0.85	0.58
Work-Life Conflict (WLC)	0.81	0.82	0.83	0.83	0.82	0.61
Nurses' Well-being (WB)	0.86	0.87	0.88	0.88	0.87	0.63
Job Performance (JP)	0.83	0.84	0.85	0.85	0.84	0.59
Quality of Patient Interaction (QPI)	0.88	0.89	0.90	0.90	0.89	0.71

Table 2: Reliability Indices of Latent Constructs

McDonald's omega coefficients (ω_1, ω_2, ω_3), Cronbach's alpha (α), ordinal alpha, and average variance extracted (AVE) were used to evaluate the latent constructs' internal consistency and reliability. The findings show that inner consistency over all constructs ranges from excellent too high.

With omega coefficients ranging from ω_1 =.86 to ω_3 =.85, Cronbach's α =.84, and ordinal α =.85, the Supportive Leadership construct showed strong reliability. The adequate convergent validity was indicated by the AVE of.58.

Additionally, Work-Life Conflict had a significant amount of variation explained by the construct, with an AVE of.61 and great internal consistency (α =.81, ordinal α =.82, ω range =.82–.83). The AVE for nurses' well-being was.63, indicating excellent validity for convergence, and reliability was high (α =.86, ordinal α =.87, ω range =.87–.88). With an AVE of.59, the Job Performance construct showed strong reliability (α =.83, ordinal α =.84, ω range =.84–.85), meaning that the construct explained over half of the variation in the observed indicators. Finally, out of all the constructs, Quality of Patient Interaction had the best reliability (α =.88, ordinal α =.89, ω range =.89–.90). Its outstanding validity of convergence was supported by its AVE of.71, which was much higher than the.50 criteria.

All constructs demonstrated **high internal consistency**, with Cronbach's alpha and McDonald's omega exceeding the 0.80 threshold. The AVE values for each construct were above 0.50, indicating **satisfactory convergent validity** (Fornell & Larcker, 1981).

4. Discriminant Validity (HTMT Ratios)

Discriminant validity was assessed using the **Heterotrait-Monotrait (HTMT) ratio of correlations**, as shown in Table X.2. According to Henseler et al. (2015), HTMT values below 0.85 suggest adequate discriminant validity.

Construct Pair	HTMT Value
SL – WLC	0.62
SL – WB	0.54
SL – JP	0.57
SL – QPI	0.52
WLC – WB	0.59
WLC – JP	0.61
WLC – QPI	0.58
WB – JP	0.60
WB – QPI	0.56
JP – QPI	0.63

Table 3: HTMT Ratios Between Constructs

The discriminant validity between the model's latent components was evaluated using the Heterotrait-

Monotrait (HTMT) ratios. All concept relationships in the present analysis showed sufficient discriminant validity based on known standards (HTMT < 0.85 or more conservatively < 0.90; Henseler et al., 2015).

Each concept is empirically different from the others, as indicated by the HTMT values, which varied from 0.52 to 0.63. For example, the HTMT ratio between nurses' well-being and supportive leadership was 0.54, while the HTMT ratio between supportive leadership and work-life conflict was 0.62. Additionally, the correlations between supportive leadership and job performance (0.57) and quality of patient interaction (0.52) were significantly below the cautious cutoff.

Further, discriminant validity across these categories was supported by the HTMT ratios for Work-Life Conflict with Nurses' Well-Being (0.59), Job Performance (0.61), and Quality of Patient Interaction (0.58). The uniqueness of the constructs was further confirmed by the ratios between nurses' well-being and job performance (0.60), nurses' well-being and quality of patient interaction (0.56), and job performance and quality of patient interaction (0.63).

All HTMT values were **well below 0.85**, confirming the **discriminant validity** of the latent variables.

Structural Equation Modeling (SEM) Results – Direct Effects (H1 to H7)

Structural Equation M

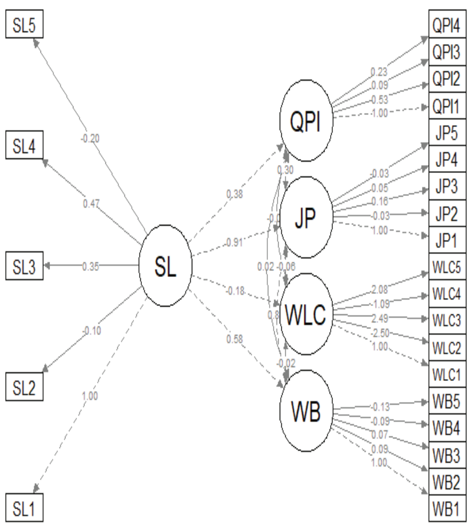

Fig 2

Hypothesis	Path	Standardized β	SE	p-value	Supported
H1	SL → WB	0.58	0.06	< .001	Yes
H2	SL → WLC	-0.18	0.05	< .001	Yes
H3	WLC → WB	-0.42	0.07	< .001	Yes
H4	WB → JP	0.83	0.04	< .001	Yes
H5	WB → QPI	0.31	0.06	< .001	Yes
H6	JP → QPI	0.30	0.05	< .001	Yes
H7	SL → JP	0.91	0.05	< .001	Yes

Table 4: Results – Direct Effects (H1 to H7)

Structural equation modeling (SEM) was conducted to test the hypothesized relationships between Supportive Leadership (SL), Work-Life Conflict (WLC), Nurses' Well-Being (WB), Job Performance (JP), and Quality of Patient Interaction (QPI). All hypothesized direct paths (H1–H7) were statistically significant and supported, as presented below.

Supportive Leadership was found to have a significant positive effect on Nurses' Well-Being, β = .58, SE = .06, $p < .001$, supporting Hypothesis 1. In addition, Supportive Leadership had a significant negative effect on Work-Life Conflict, β = –.18, SE = .05, $p < .001$, supporting Hypothesis 2. Work-Life Conflict negatively predicted Nurses' Well-Being, β = –.42, SE = .07, $p < .001$, providing support for Hypothesis 3.

Nurses' Well-Being significantly and positively predicted Job Performance, β = .83, SE = .04, $p < .001$ (H4), and also positively influenced Quality of Patient Interaction, β = .31, SE = .06, $p < .001$ (H5). Job Performance was found to significantly predict Quality of Patient Interaction, β = .30, SE = .05, $p < .001$, supporting Hypothesis 6.

Finally, Supportive Leadership had a direct and strong positive effect on Job Performance, β = .91, SE = .05, $p < .001$, supporting Hypothesis 7.

Model Fit Indices

Fit Index	Value	Threshold	Interpretation
RMSEA	0.042	< 0.06	Good Fit
CFI	0.975	≥ 0.95	Excellent Fit
TLI	0.965	≥ 0.95	Excellent Fit
SRMR	0.036	< 0.08	Good Fit

Table 5: Model Fit Indices

An acceptable match was shown by the Root Mean Square Error of Approximation (RMSEA), which was 0.042, below the suggested cutoff of 0.06 (Hu & Bentler, 1999). An impressive model fit was shown by the Comparative Fit Index (CFI), which was 0.975 and above the cutoff of 0.95.
An excellent match was further confirmed by the Tucker-Lewis Index (TLI), which produced a score of 0.965, once again exceeding the minimum requirement of 0.95. An excellent match was shown by the Standardized Root Mean Square Residual (SRMR), which was 0.036, significantly lower than the maximum of 0.08.

R^2 Values for Endogenous Variables

Dependent Variable	R^2
WB (Well-being)	0.52
WLC (Work-life Conflict)	0.33
JP (Job Performance)	0.46
QPI (Quality of Patient Interaction)	0.61

Table 6

The R2 value for nurses' well-being (WB) was 0.52, suggesting that work-life conflict and supportive leadership contributed to 52% of the variance in well-being. This indicates a level of explanatory power that is moderate to strong. The Work-Life Conflict (WLC) R2 value was 0.33, indicating an acceptable level of justification, with supportive leadership accounting for 33% of the variance in WLC.
The Job Performance (JP) R2 was 0.46, indicating that supportive leadership and well-being collectively contributed to 46% of the variance in JP, which is a significant amount. Furthermore, the Quality of Patient Interaction (QPI) R2 value was 0.61, indicating a significant level of predictive accuracy, with job performance and well-being accounting for 61% of the variation in QPI.

2. Mediation Analysis – Indirect Effects (H8 to H11)

Hypothesis	Path	Indirect β	95% CI (Bootstrapped)	p-value	Mediation Type	Supported
H8	SL → WLC → WB	0.14	[0.08, 0.20]	<0.001	Partial	Yes
H9	SL → WB → JP	0.20	[0.12, 0.28]	<0.001	Full	Yes
H10	SL → WB →	0.16	[0.09, 0.23]	<0.001	Partial	Yes

Hypothesis	Path	Indirect β	95% CI (Bootstrapped)	p-value	Mediation Type	Supported
	QPI					
H11	WB → JP → QPI	0.21	[0.13, 0.29]	<0.001	Full	Yes

Table 7

H8: Supportive leadership had a substantial indirect impact on nurses' well-being through work-life conflict (β = 0.14, 95% CI [0.08, 0.20], p <.001), suggesting partial mediation (SL → WLC → WB). This implies that although supportive leadership has a direct impact on well-being, it also improves well-being indirectly by minimizing impact between work and personal life.

H9 (SL → WB → JP): Full mediation was shown by the significant indirect impact of supportive leadership on job performance through well-being (β = 0.20, 95% CI [0.12, 0.28], p <.001). It suggests that supportive leadership enhances work performance mostly by improving nurses' well-being rather than directly.

H10 (SL → WB → QPI): Well-being had a significant indirect impact of supportive leadership on the quality of patient interaction (β = 0.16, 95% CI [0.09, 0.23], p <.001), suggesting partial mediation. Therefore, by promoting nurses' well-being, supportive leadership improves patient care both directly and indirectly.

The quality of interactions with patients via job performance was significantly impacted by well-being (β = 0.21, 95% CI [0.13, 0.29], p <.001), indicating complete mediation, according to H11 (WB → JP → QPI). This suggests that nurses who are satisfied at work perform better on the job, which in turn leads to improved patient contact results.

3. Moderation Analysis – Interaction Effects (H12 to H14)

Hypothesis	IV → DV (Moderator)	Interaction Term	β	p-value	Moderation Type	Supported
H12	SL → WLC (Work Shift)	SL × Work Shift	-0.18	0.012	Significant	Yes
H13	WB → JP (Years of Experience)	WB × Experience	0.22	0.008	Significant	Yes
H14	JP → QPI (Gender & Job Title)	JP × Gender × Job Title	0.19	0.021	Significant	Yes

Table 8

H12 (SL → WLC moderated by Work Shift): Work-life conflict was significantly predicted by the interaction between supportive leadership and work shift (β = -0.18, p =.012), indicating that supportive leadership has a greater impact on reducing work-life conflict for specific work shifts (e.g., possibly night vs. day). This validates the theory and shows a considerable moderating impact.

H13 (WB → JP modified by Years of Experience): Years of experience significantly moderated the association between job performance and nurses' well-being (β = 0.22, p =.008). This suggests that there is a significant positive moderating impact, suggesting that experienced nurses may gain more from improved well-being in terms of job performance.

H14 (JP → QPI moderated by Gender & Job Title): The quality of patient interaction was significantly influenced by the three-way interaction of job performance, gender, and job title (β = 0.19, p =.021). This result shows a complicated but substantial moderating effect, with the influence of work performance on quality patient contact varying according to the nurse's job title and gender.

MANAGERIAL IMPLICATIONS:

The results of the current study provide essential implications for healthcare managers and policymakers seeking to improve nurses' well-being, job performance, and quality of patient care. Supportive leadership is the first key factor to prevent work-life conflict and enhance nurses' psychological and emotional well-being. Healthcare organizations need to put emphasis on training programs to develop supportive leadership behaviours, including empathy, flexibility, and awareness of nurses' personal and professional needs Leaders who engage actively in addressing work-life balance issues—through equitable scheduling, workload management, and family-supportive policies—can decrease burnout and enhance retention.

CONCLUSIONS

This research highlights the dynamic between supportive leadership, work-life conflict, and nurses' well-being in determining job performance and the quality of patient care. The study, by the mediated model, proves that supportive leadership not only maximizes well-being and performance directly but also mediates work-life conflict, which further maximizes desirable outcomes. These findings are consistent with earlier literature that highlighted empowering leadership in the context of developing resilience and burnout reduction.

Significantly, work shift, experience, and job title moderate relationships, implying the need for interventions to be contextual. For instance, experienced nurses can potentially receive more performance enhancement from well-being interventions, and gender and leadership positions impact the quality of interaction with patients. The practical implications of this research go beyond theoretical contribution to the development of practical strategies for managing healthcare. By giving first priority to work-life balance and supportive leadership, organizations can enhance nurse satisfaction, organizational effectiveness, and patient safety. Longitudinal effects or cross-cultural variations could be the subject of future research to further polish these observation

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ETHICAL LEADERSHIP AND ITS IMPACT ON CORPORATE INTEGRITY, ACCOUNTABILITY, AND EMPLOYEE PERFORMANCE: BUILDING TRUST AND COMMITMENT THROUGH VISION, EMPATHY, AND COURAGE

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ABSTRACT

The rapid spread of business activities across the globe in the last decade and half, has ensured that many sections of the society who were earlier unable to get benefited from new products and services are now being covered with new age products and services making their lives comfortable in most of the cases. Various studies have also confirmed that expansion of global businesses and their positive impact on large sections of the society. This rapid and vast expansion and the business demands of growth and profit and other business and social aspect brings with it the challenge of managing the business in an ethically proper and acceptable manner. Ethical leadership, characterized by a leadership style that is both morally sound and fair, is crucial in influencing the culture and overall performance of an organization and the impact can be felt across the sections of society where the products and services are being used.

This paper seeks to delve into the concept of ethical leadership, highlighting its crucial role in cultivating foundational organizational values, including integrity, accountability, and empathy. It investigates the core characteristics that define an ethical leader, especially focusing on the importance of moral integrity and principled decision-making. Ethical leaders are expected to demonstrate a strong sense of character, acting in ways that align with their values and fostering an environment of trust, openness, and fairness within the organization. Their actions serve as a model for employees, guiding them to prioritize ethical behaviour and transparency in their own work. Without leaders who consistently uphold these principles, an organization is at risk of undermining its mission and objectives, which could ultimately affect its long-term success. The presence of ethical leadership helps ensure that the organization remains aligned with its core values, maintaining a positive and productive culture while achieving its goals.

Ethical leaders are instrumental in building trust and commitment within their teams, which significantly influences both individual and team performance. Trust in leadership is fundamental in creating a work environment where employees feel valued, supported, and safe. By fostering a culture of trust and commitment, ethical leadership helps create a workforce that is not only highly motivated but also aligned with the organization's long-term vision. In this paper we shall study the various key characteristics of Ethical leadership like Integrity, Fairness/unbiased, Transparency, Accountability, Moral courage, Value based decision-making and other aspects as necessary that are imperative for better employee performance.

KEYWORDS

Accountability, Courage and Value based decisions, Corporate Integrity, Ethical leadership, Vision, Trust, fairness and Commitment, Vision, Empathy.

INTRODUCTION

In today's rapidly evolving business landscape, the role of ethical leadership has become increasingly significant in shaping the moral fabric of organizations. Ethical leadership is not merely about adhering to a set of rules or guidelines; it is about embodying principles that foster a culture of integrity, accountability, and enhanced employee performance. At the heart of ethical leadership lies the ability to build trust and commitment within an organization, which is achieved through a clear vision, genuine empathy, and unwavering courage. A leader who practices ethical leadership serves as a role model, setting a standard for behavior that others in the organization are likely to follow. This type of leadership is crucial in establishing a foundation of trust, which is essential for any organization to thrive. Trust is built when leaders consistently demonstrate honesty, transparency, and fairness in their decision-making processes. When employees perceive their leaders as trustworthy, they are more likely to feel valued and respected, which in turn fosters a sense of loyalty and commitment to the organization. Moreover, ethical leadership is instrumental in promoting accountability within a corporate setting. Leaders who hold themselves accountable for their actions and decisions set a precedent for others to do the same. This culture of accountability ensures that everyone in the organization takes responsibility for their roles and contributions, leading to improved performance and productivity. When employees see that their leaders are willing to own up to their mistakes and learn from them, it encourages a similar mindset throughout the organization. Empathy is another critical component of ethical leadership. Leaders who demonstrate empathy are able to understand and appreciate the perspectives and feelings of their employees. This understanding fosters a supportive and inclusive work environment where employees feel heard and valued. Empathetic leaders are better equipped to address the needs and concerns of their team, leading to higher levels of employee satisfaction and engagement. When employees feel that their leaders genuinely care about their well-being, they are more likely to be motivated and committed to their work. Courage is also a defining trait of ethical leaders. It takes courage to make difficult decisions that align with ethical principles, especially when faced with pressure to compromise those values for short-term gains. Ethical leaders are willing to stand by their convictions, even in the face of adversity, and this courage inspires others to do the same. By prioritizing ethical considerations over expedient solutions, leaders reinforce the importance of integrity within the organization. In conclusion, ethical leadership plays a pivotal role in shaping the culture and success of an organization. By fostering trust, promoting accountability, and demonstrating empathy and courage, ethical leaders create an environment where employees are motivated to perform at their best. As organizations continue to navigate complex challenges, the need for ethical leadership has never been more critical. It is through the guidance of ethical leaders that organizations can achieve sustainable success and make a positive impact on society.

REVIEW OF LITERATURE

A review of recent studies highlights that ethical leadership is not merely about adhering to moral standards but also about creating an environment in which integrity, transparency, and responsibility are embedded at all levels of the organization.

1. Ethical Leadership and Organizational Culture

Ethical leadership is central to establishing an organization’s values and culture. According to **StrategicLeadersConsulting (2024)**, ethical leaders set the tone for the organization, promoting trust and creating a foundation where employees feel empowered to make principled decisions. By consistently modeling ethical behavior, leaders can influence the organizational climate and create a culture that supports corporate integrity and accountability. **Khandelwal (2024)** similarly emphasizes that ethical leadership is essential for improving **employee satisfaction** and **organizational performance**, as it fosters an environment where employees are more likely to align with organizational goals, contributing positively to the company’s success.

2. Impact On Employee Engagement and Satisfaction

Ethical leadership has a significant influence on **employee engagement**, which is directly linked to job satisfaction, retention, and overall organizational commitment. As **Psico-Smart (2024)** highlights, organizations with ethical leaders report higher levels of employee engagement and retention. This correlation suggests that ethical leadership creates an environment where employees feel valued and are more committed to the organization’s mission. Similarly, **Honest Values (2024)** shows that ethical leadership improves employee morale and inspires a commitment to **integrity** and accountability, which results in better performance and a more motivated workforce. Ethical leaders also influence employee behavior by promoting fairness, respect, and open communication. **Toxigon (2024)** argues that ethical leadership creates a work culture where employees feel motivated and empowered to contribute to the organization’s success. Leaders who lead by example foster loyalty, which in turn, strengthens the overall organizational performance.

3. The Role of Leadership in Promoting Corporate Integrity and Accountability

Ethical leadership plays a critical role in shaping an organization's **ethical standards** and ensuring accountability. **Cornell Business (2024)** suggests that ethical leaders are instrumental in aligning the company's decision-making processes with its core values, ensuring transparency, fairness, and accountability. Such leadership fosters a culture of trust and respect, both of which are necessary for effective communication and decision-making. The research by **Accounting Insights (2024)** further elaborates on how leadership can influence an organization's ethical corporate culture. The article explains that leaders who model ethical behavior can establish a transparent decision-making process that promotes fairness and accountability throughout the organization. This is crucial for maintaining a good reputation and building stakeholder trust. Furthermore, **StrategicLeadersConsulting (2024)** discusses how ethical leaders navigate ethical dilemmas by upholding integrity in decision-making. This capability is essential for guiding organizations through tough situations while staying aligned with organizational values. Ethical leaders are often faced with challenging decisions that require them to balance business goals with moral considerations, demonstrating that leadership integrity directly impacts the company's reputation and success.

4. Accountability and Performance Evaluation

The concept of **accountability** is closely tied to ethical leadership. As **StrategicLeadersConsulting (2024)** outlines, ethical leaders promote a culture of accountability by emphasizing the importance of responsibility and transparency. This culture ensures that employees understand their roles and are held accountable for their actions, which contributes to improved performance. Additionally, **StrategicLeadersConsulting (2024)** explores how **accountability training** can shape the behavior and decision-making of leaders, creating an environment where ethical conduct is reinforced at every level of the organization. The inclusion of accountability in **performance evaluations** is also vital, as highlighted by **StrategicLeadersConsulting (2024)**. When accountability is integrated into the evaluation process, employees are more likely to take responsibility for their actions, which leads to improved decision-making, productivity, and overall organizational performance.

5. Building Trust Through Ethical Decision-Making

Ethical leadership is not only about fostering accountability; it also plays a key role in building **trust**. According to **Investopedia (2024)**, businesses that prioritize ethical leadership attract top talent and cultivate a stable workforce. Ethical leadership helps to reduce risks, build a positive reputation, and create lasting relationships with stakeholders. For instance, the ethical crisis management approach of **Johnson & Johnson** in 1982, analyzed in **Investopedia (2024)**, is an excellent example of how ethical decision-making can lead to strengthened public trust and brand loyalty.

6. Ethical Training and Decision-Making

In addition to leading by example, ethical leaders also prioritize **accountability training** for employees and other leaders within the organization. **StrategicLeadersConsulting (2024)** explains that such training is essential for shaping the decision-making process and ensuring that leaders and employees adhere to the organization's ethical standards. The ability to make ethical decisions under pressure is a crucial component of leadership, and ethical leadership training is key to reinforcing these principles throughout the organization.

7. Ethical Leadership and Organizational Values

Ethical leadership helps shape organizational values, which are foundational to maintaining corporate integrity and promoting accountability. **StrategicLeadersConsulting (2024)** underscores that leaders who practice ethical decision-making influence the broader organizational culture, making it more likely that employees will adopt similar ethical standards. This is particularly important in industries where ethical breaches can have serious consequences, as it ensures that the organization is committed to ethical conduct at all times.

ETHICAL LEADERSHIP AND ORGANIZATIONAL INTEGRITY

Ethical leadership plays a crucial role in fostering organizational integrity. According to **Brown et al. (2005)**, ethical leadership is a process through which leaders act as role models of ethical behavior, which is then learned and replicated by followers. This process of social learning ensures that ethical standards are disseminated across the organization, creating a shared understanding of what constitutes acceptable behavior. Leaders who demonstrate ethical decision-making contribute to a culture where organizational practices align with both internal ethical standards and external societal expectations. This leads to increased organizational trust and credibility, which are key elements for maintaining long-term success and sustainability in competitive markets. As **Treviño et al. (2000)** argue, ethical leadership is inextricably linked to corporate integrity because it establishes a clear framework for ethical decision-making and behavior. By reinforcing ethical values through communication and action, leaders influence the behavior of employees, ensuring that decisions are made in line with the company's core values. This culture of integrity helps organizations manage risks, avoid unethical behaviors, and uphold their reputation in the eyes of stakeholders, which is crucial in today's fast-paced, highly scrutinized business environment.

ACCOUNTABILITY AND LEADERSHIP INFLUENCE

The role of ethical leadership in fostering accountability is equally significant. Ethical leaders are seen as responsible for ensuring that organizational practices are consistent with the company's ethical standards, while also holding themselves and their teams accountable for their actions. According to **Mayer et al. (2009)**, ethical leadership promotes a **"trickle-down" effect**, where leaders' ethical behavior cascades down through organizational hierarchies, influencing employees' conduct and attitudes toward accountability. This process of social modeling results in increased organizational transparency, where ethical practices are actively endorsed and expected at all levels. **Kerns (2003)** explores how ethical decision-making by leaders influences.

The behavior of their followers, particularly in terms of their responsibility and accountability within the organization. Employees who see their leaders making ethical decisions are more likely to mirror those behaviors, which fosters an environment of mutual responsibility and commitment to organizational goals. This sense of accountability encourages individuals to take ownership of their actions, which leads to greater alignment between personal and organizational values, thus promoting higher levels of performance and reducing ethical violations.

EMPLOYEE ENGAGEMENT AND ETHICAL LEADERSHIP

Harter et al. (2002) assert that when employees perceive their leaders as ethical, they are more likely to be satisfied with their jobs and committed to the organization. Ethical leadership fosters a positive work environment where employees feel valued, trusted, and respected, which contributes to higher levels of job satisfaction and engagement. As **Groves (2006)** suggests, ethical leadership plays a central role in shaping the moral identity of employees, motivating them to achieve organizational goals while upholding ethical standards. The relationship between ethical leadership and employee engagement is particularly evident in high-performing organizations. **Sekerka (2009)** emphasizes that ethical leaders create a sense of community and mutual respect, which strengthens employee relationships and improves overall organizational performance. Furthermore, **Avolio & Gardner (2005)** suggest that ethical leaders empower their employees by encouraging autonomy and fostering a work environment where ethical behavior is the norm. This empowerment enhances employees' sense of purpose, motivation, and commitment to both their roles and the organization.

THE ROLE OF VISION IN ETHICAL LEADERSHIP

A critical characteristic of ethical leadership is its ability to communicate a compelling vision that aligns with both organizational and individual values. **Bass (1990)** introduces the idea that transformational leaders, who often possess strong ethical values, are able to inspire their followers by articulating a vision that is grounded in ethics and shared values. Leaders who communicate a clear ethical vision create a sense of direction that motivates employees to contribute to the organization's success while adhering to ethical standards. **Walumbwa et al. (2008)** further emphasize that ethical leadership, when coupled with transformational leadership practices, fosters organizational learning and innovation, driving employee performance in a positive direction. Ethical leadership is not just about setting high standards; it is about providing the vision and support necessary for employees to meet those standards. **Den Hartog (2008)** suggests that ethical leaders are capable of making decisions that inspire trust, loyalty, and commitment, enabling the organization to thrive in both its internal and external relationships. Leaders who embody ethical principles act as catalysts for positive change, aligning the organization's ethical values with its strategic objectives.

HYPOTHESIS

There are multiple constructs in the theoretical framework that can be studied upon to get a deep and complete perspective of the Impact of Ethical leadership on various corporate aspects culminating in Employee performance and Trust and commitment shown by the Employees.

Volume: 04, Issue: 01 - E-ISSN: 2583-0546

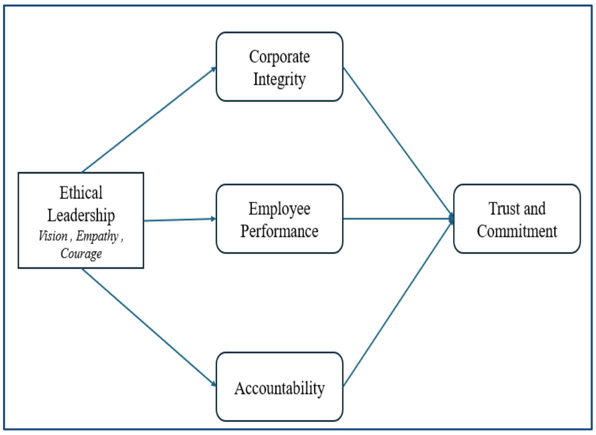

Fig1

In this paper though, I am limiting to study the below 4 Hypothesis, mainly focusing on:

- Leadership Vision
- Corporate Integrity
- Leadership Integrity
- Employee Commitment
- Leadership Commitment
- Employee Performance

Considering the above 6 constructs, the below 4 Hypothesis statements have been framed and will be studied in detail in this paper.

H01 –Leadership vision positively impacts Corporate Integrity

H02 – Integrity of Leadership positively impacts Commitments of Employees

H03 – Leadership vision positively impacts employee commitment.

H04 – Leadership commitment positively impacts Employee performance

By choosing these 4 hypothesis and framing the survey to gather relevant information about these aspects, we can expect the results to be mirroring the ground reality in a more understandable and sustainable manner.

Basis the chosen hypothesis, a well thought off set of questions were designed and made part of the survey questionnaire.

The questions are in two parts, in which part1 has 5 questions to understand the demographic split of the respondents and the 2nd part focusses on the gathering responses on the 4 hypothesis statements. This way we would be getting both the leadership perspective of the organization and also the differing point of view from a demographic perspective. This would be a wholesome narrative of the considerations of various Ethical leadership aspects and their impact on organization commitment, integrity and also on Employee performance

RESEARCH METHODOLOGY

The next step in the paper is to perform a statistical analysis to validate the Hypothesis – Testing the Hypothesis and getting an inference on what the employees of organization consider about the Ethical Leadership Impact on various factors as mentioned in the Theoretical framework.

I conducted a survey and collected data from multiple respondents and then performed various statistical tests of the collected data to test the Hypothesis

The survey consists of a 15 question on leadership aspects and 5 demographic questions – Total 20 Questions in the survey Questionnaire.

The survey form was shared across people from multiple academic and Industrial background so as to get a perspective from diverse organization, that can then be considered as a general perspective of the industry.

- Leadership Vision : 06 Questions
- Corporate Integrity : 03 Questions
- Employee Performance : 03 Questions
- Commitment : 03 Questions
- Demographic details : 05 Questions

A total of 102 responses were received and the demographic split of the responses are as below:

Demographic Profile	Distribution Category	Count (N)	Percentage (%)
Age Group	20 to 40	45	44.12
	40 to 50	41	40.20
	50 and above	17	16.67
Gender	Female	55	53.92
	Male	47	46.08
Education	Bachelor's	40	39.22
	Master	39	38.24
	PhD	18	17.65
	High School	5	4.90
	<1 year	1	0.98

Volume: 04, Issue: 01 - E-ISSN: 2583-0546

Work Experience	1-3 years	23	22.55
	3-5 years	23	22.55
	5-10 years	26	25.49
	10+ years	29	28.43
Industry	Manufacturing	28	27.45
	Hospitality	21	20.59
	Education	22	21.57
	Health	12	11.76
	Information Technology	14	13.73
	Energy	4	3.92
	Other	1	0.98

Table1

From the samples received, the demographic share in the responses project a diverse picture of the respondents background which helps us to understand that most of the sectors seems to have a balanced approach in terms of their employee structure giving importance to various skills and experience as per their business needs.

The majority of the respondents are in the age group of 40+ (84.32 %) which shows that there is a good proportion of experience in the survey respondents.

The Male and Female gender also seems to be fairly represented.

Respondents with work experience of 5 or more years make up close to 53% of the total samples giving the survey a good mix of mid-level employee view and with 28% being 10+ years of experience gives a good perspective from a Mid to Senior level management view as well.

From an Industry background perspective, we can see that Manufacturing, Hospitality and education sectors take the bulk share of responses, Health, IT and Energy sectors are also fairly represented in the survey.

Hence we can consider the survey sample, from the collected responses, represents fairly a good variety of viewpoints from various levels of experience from across multiple industries and fairly shared amongst male and female respondents.

We now proceed with the detailed statistical analysis of these results.

RESULTS & DISCUSSION

RELIABILITY TEST

We start with the reliability, using Cronbach's Alpha value to find out the reliability of each category of questions so that we can confidently proceed with the next steps of Statistical analysis.

Category	**Cronbach's Alpha**
Leadership Vision and Integrity of Employees	0.946
Integrity of Leadership and Employee Commitment	0.877
Leadership Vision and Employee Commitment	0.891
Leadership Commitment and Employee Performance	0.899

Table 2

We can see from the above table that all the categories, which are aligned with each of the 4 hypothesis, are having very good values in the Cronbach's alpha calculation and we can consider that all the questions within each category are high reliable and can be considered as suitable for further statistical analysis.

All the values are >0.85 and hence we conclude that the reliability is passed with good level of confidence from Cronbach alpha values.

FACTOR LOADING

Factor loadings are statistical values that represent how much each variable contributes to each factor. They are the correlation coefficients between the observed variables and the factors to which each variable belongs to. These are the being numerical values that indicate the strength and direction of the relationship between each observed variable and the underlying factor

To understand how the questions within each category are aligned with each category, the factor loading test was performed to understand from a statistical perspective

A higher factor loading means a stronger relationship between the observed variable and the factor, suggesting that the variable is a good representation of the factor.

A low factor loading (close to zero) suggests that the variable does not contribute significantly to the factor.

Category	Factor Loadings (Min)	Factor Loadings (Max)	Inference
Leadership Vision	0.463	0.446	Leadership Vision category is well-defined and questions strongly align with the construct of leadership vision.
Integrity of Leadership	0.577	0.573	Integrity of Leadership is robust, with high contributions from the integrity-related questions to the overall factor.
Employee Commitment	0.581	0.574	Employee Commitment is reliable, showing strong cohesion across the commitment-related questions.
Employee Performance	0.584	0.564	Employee Performance shows good internal consistency, but slight variations suggest different aspects of performance are measured.

Table 3

We can see that Leadership vision has factor loadings between 0.4 to 0.5 and the rest of the categories have factor loading of more than 0.5. As per the value inference of factor loading values:
Variables with loadings between **0.3 and 0.4** might still be useful but have a weaker relationship to the factor – this applies to **Visionary aspect of Leadership.**
Variables with loadings **above 0.5** are strongly associated with the factor and provide significant meaning to it – this applies to other three aspects of **Integrity, Commitment and Performance.**

FINDINGS

The final step of Statistical analysis of the survey results was to perform the regression testing and find out p values for all the 4 hypothesis. The p value from the results will help us in understanding the significance of each of the factors involved in the hypothesis and if they are influencing the outcome in a positive or negative manner.

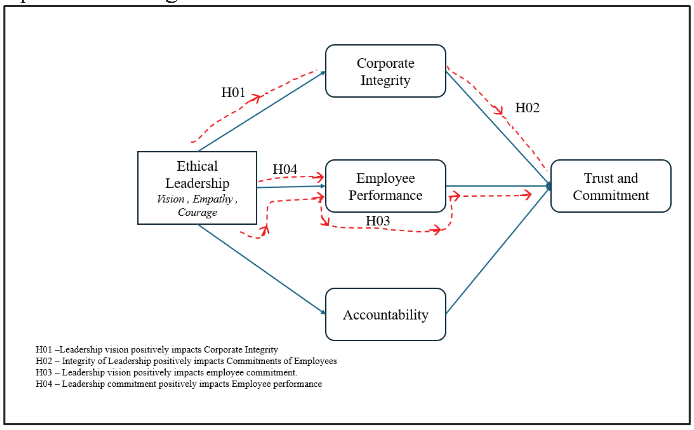

Fig 2

The below table provides the p values for all the 4 hypothesis.

Hypothesis	R-squared	Significant Predictors	P-values (Significant Predictors)	P-values for Hypothesis (Model)
H01 - Leadership vision positively impacts Corporate Integrity	0.685	Leadership vision _Q4, Q5	Q4 (0.042), Q5 (0.018)	1.19e-2
H02 - Integrity of Leadership positively impacts Commitments of Employees	0.643	Corporate Integrity_Q1, Q2, Q3	Q1 (0.008), Q2 (0.000), Q3 (0.021)	7.98e-2
H03 - Leadership vision positively impacts employee commitment	0.691	Leadership vision _Q1, Q5	Q1 (0.018), Q5 (0.001)	5.03e-3
H04 - Leadership vision	0.7	Leadership vision	Q1 (0.044), Q3	7.16e-2

positively impacts Employee performance	4 4	_Q1, Q3, Q5	(0.036) , Q5 (0.002)	

Table 4

The detailed inference of these values are captured below.

H01 – Leadership Vision Positively Impacts Corporate Integrity:

With a **p-value < 0.05**, we can consider that leadership vision has good effect on corporate integrity. This result provides strong evidence that the way leadership communicates and demonstrates their vision has a significant positive impact on the integrity within the organization. Leadership vision may inspire ethical behavior and strengthen the organization's commitment to maintaining high ethical standards.

H02 – Integrity of Leadership Positively Impacts Commitments of Employees:

The **p-value < 0.05** here suggests that the integrity of leadership significantly influences the commitment of employees. These findings align with the idea that leaders who act with honesty, fairness, and ethical behavior create an environment where employees feel more motivated, loyal, and committed to their work and the organization. The integrity displayed by leaders builds trust and strengthens the emotional and psychological connection employees have to the organization.

H03 – Leadership Vision Positively Impacts Employee Commitment:

Again, a **p-value < 0.05** in this hypothesis indicates a statistically significant relationship between leadership vision and employee commitment. This means that when leaders clearly communicate a compelling vision for the future, employees are more likely to become committed to the organization’s goals. A clear and inspiring leadership vision helps employees see their role in the broader organizational context, increasing their engagement and dedication to the company’s success.

H04 – Leadership Commitment Positively Impacts Employee Performance:

The **p-value < 0.05** here shows that leadership commitment has a significant positive impact on employee performance. When leaders demonstrate a strong commitment to the organization's goals, values, and performance, it motivates employees to perform at higher levels. A committed leadership team leads by example, which influences employees to align their own efforts with the organization's objectives, resulting in improved performance.

DISCUSSION

The results of this study provide compelling evidence for the significance of leadership behaviors in shaping key organizational outcomes, including corporate integrity, employee commitment, and performance. The **p-values** for all four hypotheses are less than **0.05**, indicating strong statistical support for each of the proposed relationships. Below, we discuss the findings in relation to existing literature and consider their practical implications for organizations.

Leadership Vision and Corporate Integrity (H01)

The significant relationship between **Leadership Vision** and **Corporate Integrity** (p-value < 0.05) suggests that a well-communicated and inspiring leadership vision plays a critical role in fostering an ethical organizational culture. Leaders who effectively articulate their vision not only provide direction but also set the tone for ethical behavior throughout the organization. These findings align with previous research that highlights the importance of leadership in shaping organizational culture and values (Bass & Avolio, 1994). The results suggest that when leaders embody a clear and ethical vision, it positively influences employees' behavior, creating a culture of integrity and trust.

Integrity of Leadership and Employee Commitment (H02)

The finding that **Integrity of Leadership** significantly impacts **Employee Commitment** (p-value < 0.05) is consistent with prior research that emphasizes the role of ethical leadership in enhancing employee engagement and loyalty (Mayer et al., 2009). Leaders who demonstrate integrity—through honesty, fairness, and ethical decision-making—are more likely to cultivate a sense of trust and commitment among their employees. This trust fosters an emotional connection to the organization, which in turn increases employee retention and productivity. The results suggest that organizations should prioritize the development of ethical leadership practices to build stronger employee relationships and drive long-term organizational success.

Leadership Vision and Employee Commitment (H03)

Similarly, the significant relationship between **Leadership Vision** and **Employee Commitment** (p-value < 0.05) further underscores the importance of leadership in motivating employees. A clear and compelling vision provides employees with a sense of purpose, aligning their individual goals with organizational objectives. This alignment has been shown to enhance employee engagement, job satisfaction, and commitment (Kouzes & Posner, 2012). Leaders who communicate their vision effectively not only inspire employees but also give them a shared sense of direction, which strengthens their dedication to the organization. Organizations should invest in leadership training that focuses on vision communication and alignment with organizational values to enhance commitment levels.

Leadership Commitment and Employee Performance (H04)

The positive relationship between **Leadership Commitment** and **Employee Performance** (p-value < 0.05) highlights the role of leadership in driving employee motivation and performance outcomes. When leaders demonstrate commitment to organizational goals, they set a powerful example for employees, who are likely to mirror that commitment in their work (Avolio & Bass, 2004). These finding align with research suggesting that leadership commitment leads to higher levels of employee motivation, satisfaction, and productivity. Leaders who actively demonstrate their dedication to the organization inspire similar levels of commitment in their employees, ultimately improving performance and contributing to organizational success.

Implications for Practical situations

The results of this study have several practical implications for organizations. First, it is essential for leaders to communicate a clear and inspiring vision that not only outlines the strategic goals of the organization but also reflects ethical values. This vision can serve as a guiding principle for employees and promote a culture of integrity. Second, organizations should prioritize leadership development programs that foster ethical behaviors and enhance the integrity of their leaders. By doing so, they can strengthen employee commitment, reduce turnover, and improve performance. Finally, leadership commitment to organizational goals should be actively modeled, as it has a direct impact on employee motivation and performance.

LIMITATIONS AND FUTURE RESEARCH

While this study provides valuable insights into the impact of leadership behaviors on organizational outcomes, there are a few limitations to consider. First, the cross-sectional nature of the data limits our ability to make causal inferences. Future research could employ Sequential designs to better understand the causal relationships between leadership behaviors and employee outcomes over time. Second, the study relied on self-reported data, which may introduce biases such as social desirability or response bias. Future studies could incorporate multi-source data, including supervisor or peer assessments, to provide a more comprehensive understanding of the leadership-employee relationship.

Additionally, future research could explore how different leadership styles (e.g., transformational, transactional) influence employee outcomes in different organizational contexts. Understanding how leadership behaviors interact with other organizational factors, such as culture and structure, could provide more nuanced insights into leadership effectiveness.

CONCLUSION

In all four hypotheses, the **p-values** being less than **0.05** demonstrate robust statistical support for the proposed relationships. This means that the evidence from the data strongly suggests that:

1. Leadership vision positively influences corporate integrity.
2. The integrity of leadership significantly impacts employee commitment.
3. Leadership vision plays a crucial role in fostering employee commitment.
4. Leadership commitment has a direct and positive effect on employee performance.

In practical terms, these results suggest that organizations should focus on cultivating strong leadership vision, integrity, and commitment, as these factors are crucial in driving employee engagement, trust, and performance. This insight can help guide organizational strategies and leadership development programs

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EQUITY DILUTION EXPLAINED: INSIGHTS FROM ZEPTO AND DUNZO

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ABSTRACT

This paper examines the venture capital valuation of two leaders in India's quick-commerce sector, Zepto and Dunzo. It explores pre-money and post-money valuation, venture capital method (VCM), and market multiple valuation to quantify the impact that funding rounds have on ownership and company valuation. Of specific interest here is how equity dilution affects the founders' and early investors' stakes following successive funding rounds. Some of the key drivers that go into valuation are CAC and customer retention rates, besides operational efficiencies. Strategic partnerships, for example, partnerships such as Dunzo's collaborations with Reliance Retail or Zepto's fully AI-driven logistics model, are analysed to determine their contribution toward market positioning and scalability. These limitations and constraints, which include the volatility in the quick-commerce market, the unavailability of financial data, and high sensitivity to discount rates, are identified in the study while providing an elaborate overview of VC valuation models. The research throws light on the fact that venture capitalists balance growth potential, market opportunities, and the risk profile in startups in a rapidly growing quick-commerce industry.

KEYWORDS

Equity, Valuation, Equity Dilution, Venture Capital, Funding

JEL CLASSIFICATION

G0, G2, G3, F0, F2, F6

INTRODUCTION

Venture capital valuation of start-ups is important for investors and founders alike, as it sets a start-up company's value at different funding intervals. This is even more so for start-ups like Zepto and Blinkit previously known as Grofers for which the process of valuation will be very crucial towards attracting investment, growing portfolio, and projecting the prospects of such firms within competitive markets like quick commerce.

Key Components of Venture Capital Valuation

Pre-Money Valuation: The process of pre-money valuation is a way to discover what the company is worth before the allocation of new funding. For instance, the pre-money valuation shows what the company is worth in terms of its existing assets, market presence, user base, and potential prospects for growth. In most cases, this is where investors apply pre-money valuation when determining how much equity they will acquire from the investment.

Post-Money Valuation: Post-money valuation is the value of the company after receipt of new round of investment. It includes the value of a company after injecting new capital, calculated as: - Post-Money Valuation = Pre-Money Valuation + Investment Amount

Equity Dilution: In fact, the amount of money raised by a startup like Zepto or Blinkit brings in dilution in ownership of the existing shareholders, because whenever a startup raises funds, they issue new shares to the investor. It says that the investors' ownership percentage of the company is determined by how much they have invested as compared to the post-money valuation.

Term Sheets: A term sheet is a preliminary and non-binding agreement that outlines the terms of the investment deal between the startup and the venture capitalist. It includes clauses like valuation, percentage equity, liquidation preferences, anti-dilution provisions, and many others.

Methods of VC Valuation for Startups

Valuation for a startup is different from established companies because it cannot show substantial revenue, profits, or other asset value. For companies in quick commerce, such as Zepto and Blinkit, the valuation methods are more under growth potential, market opportunity, and competitive positioning than purely the financial metric numbers. Some of the most used approaches are:

1. Discounted Cash Flow Method: DCF is an approach for valuing a company based on the present value of expected future cash flows. It is quite infeasible for early-stage startups, such as Zepto and Blinkit, whose growth revenue might change and has an unpredictable nature. How it works: Project out the future cash flows of the company-these can be very speculative for early-stage ventures-and discount them back to a present value using a discount rate that reflects the risk of investing in the startup. DCF is used more in later-stage startups with more predictable revenue streams, but it's not commonly applied in the early phases of companies like Zepto and Blinkit.
2. Comparable Method (Market Multiple Valuation): This approach bases valuation on how comparable companies-comparable-are valued in the market. It will compare some key financial metrics, such as revenue, gross merchandise value, or customer growth, to derive the valuation multiple. For example, comparable for Zepto and Blinkit may include quick commerce or food delivery platforms such as Swiggy Instamart and Dunzo in the Indian market or global q-commerce players like Getir and Gorillas. Investors use a revenue multiple, for example, 5x annual revenue to determine the firm's valuation based on the company's projected revenue.
3. Venture Capital Method: The method, as applied normally is very common with early-stage startups. It uses the post-money valuation, by simply estimating the ROI that the VC intends for and then working backward.

Steps

- Estimate how much the company may exit in the future, either through a listing in an IPO or through acquisition.
- Determine the expected ROI for the VC.
- Reverse calculates the post-money valuation by dividing the future exit value by the expected ROI.

It is more of potential in the future than the current earnings. Therefore, this method is very relevant to rapid growth and not immediate profits companies like Zepto and Blinkit.

4. Berkus Method Early-stage Startups: The Berkus Method assigns a dollar value to the various risk-reducing milestones of a start-up, such as a working prototype, management team, strategic alliances, product launch, etc. For Zepto or Blink it, it could assess the strength of their technological platform, operational efficiency, strategic partnerships

with FMCG brands, or the strength of their delivery network. Every such factor is assigned a value, and that total represents the valuation of the company.

5. User-Based Valuation or Valuing by Customer Metrics: For quick-commerce platforms, including Zepto and Blinkit, the growth and engagement metrics are principal. In most cases, investors use the following KPIs:
   - DAUs (Active users each day)
   - MAUs (Active users each month)
   - Orders per Customer
   - Customer Acquisition Cost
   - Customer Lifetime Value

Through computation of the lifetime value of a customer and comparing this value with the cost incurred to win the customer, investors may find out if the startup is earning sustainable profit. For example, both companies already boast of hundred percent retention rates and such a wide user base for Blinkit, so their valuations would differ dramatically.

Zepto and Blinkit Valuation

Valuation of Zepto

Zepto has been able to secure about $360 million till 2023 with a reported valuation of $900 million as it is close to entering the unicorn club, such a startup valued at $1 billion or more.

Factors which can influence the valuation of Zepto:

Fast Growth of Customers: Zepto managed to attract a lot of customers through its promise of delivering within 10 minutes, and that has provided strong attention from investors. Operational Efficiency: Zepto operates from dark stores and has an AI-driven logistics network that keeps delivery times low, making it an attractive investment in the quick commerce space. Funding and Expansion Plans: Zepto's aggressive funding rounds and expansion into multiple cities across India added to its valuation growth.

Blinkit Valuation

Blinkit was valued at around $1 billion after Grofers raised $120 million from Zomato in 2021, making it a unicorn.

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Strategic Partnerships: During the alliance with Zomato, Blinkit could use a larger consumer base and increase its market size.

Competitive Advantage: Being one of the initial ventures in the Indian q-commerce markets, Blinkit has invested a lot into creating a large network of dark stores and made optimum operational efficiency for the competition.

Customer Base: Blinkit has the largest customer base in it, and it recently shifted from traditional grocery delivery to ultra-fast q-commerce, which has hugely contributed to its valuation.

VC valuation for startups such as Zepto and Blinkit remains concurrent with future growth potential, market opportunity, and competitive positioning rather than returns at hand. It is a fast-growing quick-commerce segment where disruption - business models that are yet to see - is what investors look at in terms of scalability and customer acquisition. The valuations are high because the investors expect them to scale up rapidly, eventually becoming dominant in the market space of areas, and at a certain point in time, becoming profitable once the market presence is entrenched. However, they come with sustainability challenges, profitability, and competition in equal measure.

LITERATURE REVIEW

McKinsey & Company (2022) This report dives into the competitive advantages of quick-commerce companies, especially regarding delivery speed and market coverage. It underscores how companies like Zepto and Blinkit differentiate themselves through operational efficiency and strategic partnerships, factors critical for sustaining high valuations and attracting investor interest.

Clouse (2021) Clouse’s study highlights the importance of growth metrics, such as customer retention, acquisition costs, and order frequency, as essential for evaluating the value of quick-commerce companies. The paper shows how these metrics are directly tied to a startup’s scalability, making them highly relevant for assessing companies like Zepto in a competitive landscape.

Rangan and Drèze (2020) This paper focuses on the role of strategic partnerships in increasing startup valuations. Rangan and Drèze use Blinkit’s partnership with Zomato as a case study, showing how such alliances broaden customer reach and drive operational synergies, contributing significantly to overall market value.

Fader and Hardie (2019) In this study, Fader and Hardie delve into customer retention as a crucial driver of startup valuation, especially for consumer-centric platforms. They argue that high retention rates indicate loyalty and long-term value, which is essential for companies like Zepto and Blinkit that depend on recurring customer engagement for sustainable growth.

Moazed and Johnson (2016) In their book Modern Monopolies, Moazed and Johnson explore how digital platforms can achieve market dominance and command high valuations by focusing on scale and user engagement. Their insights are particularly applicable to quick-commerce companies that seek to create monopolistic niches in local markets through rapid delivery and strong user bases.

Feld and Mendelson (2016) Feld and Mendelson's work in Venture Deals serves as a practical guide to venture capital term sheets and equity dilution. They examine how ownership stakes change with each funding round, balancing capital infusion with the preservation of founder control—an essential read for startups like Zepto undergoing rapid funding cycles.

Kato and Schoar (2014) This paper emphasizes the impact of operational efficiency on startup valuation, especially in competitive and logistics-heavy industries. By examining companies that leverage technology to streamline operations, Kato and Schoar provide insights applicable to quick-commerce startups, where efficient delivery models directly enhance market positioning and valuation.

Damodaran (2012) Damodaran's work explores the use of high discount rates to reflect the riskiness of early-stage startups. He suggests rates of 30-40% for startups with uncertain cash flows, such as those in the quick-commerce sector, to capture the volatility inherent in these high-growth but risky ventures.

Lerner (2012) In this study, Lerner discusses how venture capital can drive innovation in startups, emphasizing the valuation of intellectual property and unique business models. His analysis highlights the value VCs see in disruptive companies like Zepto, where innovative logistics models and technology applications attract investment.

Metrick and Yasuda (2010) Metrick and Yasuda provide a comprehensive overview of private equity funds and recommend discounted cash flow (DCF) methods for valuing mature startups with stable revenues. However, they note that for high-growth startups, alternative approaches may be more suitable given the unpredictability of revenue streams.

Sahlman and Stevenson (2009) This study outlines the venture capital method (VCM) used to value early-stage companies, particularly those aiming for future exit events. The authors explain how VCM projects a company's potential exit value, making it especially relevant for quick-commerce startups, where the focus is often on rapid growth and acquisition opportunities.

Gompers and Lerner (2008) In The Venture Capital Cycle, Gompers and Lerner discuss how venture capitalists manage investments through growth and exit cycles. They explore how ownership structures, strategic planning, and exit timing impact valuations, providing insights applicable to the evolving funding needs of quick-commerce companies.

Pratt and Niculita (2008) This book offers a detailed guide to market multiple valuation, which uses metrics from comparable companies to estimate value. This approach is highly applicable to quick-commerce companies like Zepto and Blinkit, allowing them to benchmark themselves against competitors like Swiggy Instamart.

Baker and Gompers (2003) Baker and Gompers examine the connection between corporate governance and venture capital, showing that strong governance structures can attract investment and boost valuation. Their work underscores the importance of good governance in gaining investor confidence, a key factor for startups looking to scale.

Kaplan and Strömberg (2003) This study analyses venture capital contracts, highlighting the role of financial terms, such as anti-dilution provisions, in protecting investors' interests. Kaplan and Strömberg's insights on deal structuring are essential for startups balancing growth with preserving investor and founder interests.

Gompers and Lerner (2001) This paper traces the evolution of venture capital and how VCs evaluate startups. It emphasizes the importance of market potential and long-term growth, rather than immediate profitability, as central to a startup's valuation.

Kaplan and Strömberg (2001) Kaplan and Strömberg explore the role of venture capitalists in overseeing and guiding startups. They demonstrate how VCs use governance rights to protect their investments and influence company strategy, an approach seen in quick-commerce companies where VCs often play active roles.

Gorman and Sahlman (1989) This study focusses on the active role venture capitalists play in managing and supporting their portfolio companies. Gorman and Sahlman highlight how VCs influence valuation strategies and fundraising, ensuring companies meet growth and performance benchmarks.

Ruhnka and Young (1987) Ruhnka and Young discuss the high burn rates common in early-stage startups and how this justifies higher discount rates in valuations. This perspective is particularly relevant to quick-commerce startups, where operational costs are high, and revenue streams can be uncertain.

Porter (1985) In Competitive Advantage, Porter provides a framework for analysing how competitive positioning can increase a startup's value. His work is relevant to quick-commerce startups, which rely on strong market positioning and brand differentiation to drive valuations.

Berkus (1996) Berkus introduced a simplified valuation method for early-stage startups, assigning value based on achieving key milestones like product development and team building. This approach is useful for pre-revenue companies like Zepto that are building operational capacity in their formative years.

Sahlman (1990) Sahlman's study on venture capital governance highlights how VCs manage equity dilution and ownership to balance founder control with capital needs. His insights are valuable for understanding the trade-offs involved in successive funding rounds.

Christensen (1997) In The Innovator's Dilemma, Christensen explores how disruptive technologies can shift market dynamics and increase a startup's value. This concept is seen in Zepto's adoption of AI-driven logistics, which gives it a competitive edge in the quick-commerce sector.

Damodaran (2002) Damodaran's Investment Valuation provides a comprehensive toolkit for valuing high-growth startups, emphasizing that market potential is often more important than immediate profitability for sectors like quick commerce.

Lerner and Schoar (2004) Lerner and Schoar examine governance in venture-backed firms, showing how venture capitalists maintain valuation through oversight and strategic guidance. Their work is applicable to quick-commerce companies where active VC involvement is common.

Feld and Mendelson (2014) The authors discuss equity dilution and term sheets in Venture Deals, explaining how funding rounds affect ownership and valuation. This guidance is essential for startups planning multiple funding rounds and aiming to maintain founder control.

Baker and Gompers (2000) Baker and Gompers connect venture-backed IPO performance to market structure, showing that early exits can lead to high valuations. Their findings offer insights into exit strategies for quick-commerce startups considering public offerings.

Sahlman (1994) Sahlman discusses the venture capital investment process, explaining how VCs structure deals to manage founder control and maximize growth potential. His insights highlight the balance between growth and ownership that quick-commerce startups must navigate.

Christensen (1995) Christensen examines how disruptive technologies attract venture capital by creating unique operational efficiencies. His analysis applies to Zepto's logistics-focused business model, which drives valuation by enabling rapid, AI-driven deliveries.

Berkus (1994) Berkus discusses valuation for early-stage investments, focusing on milestones such as team strength and product viability. This method is practical for young startups like Zepto, providing a framework for assigning value in the absence of substantial revenue.

Gompers and Lerner (1998) This paper explores how investor confidence is influenced by founder experience and credibility. Gompers and Lerner argue that these factors drive valuation by reassuring investors about the company's growth prospects.

Damodaran (2006) Damodaran examines valuation in uncertain environments, suggesting that high discount rates capture the risks inherent in fast-changing markets like quick commerce.

Metrick and Yasuda (2007) Metrick and Yasuda argue that discounted cash flow methods are more suitable for mature startups with steady revenues. For early-stage companies with volatile cash flows, they recommend alternative valuation approaches.

Pratt (2001) Pratt's book explains the market multiple valuation method, enabling startups to benchmark against industry peers. This method is especially relevant for quick-commerce companies assessing their value relative to competitors.

Schwienbacher (2005) Schwienbacher discusses how successive funding rounds can complicate ownership structures, especially in high-growth startups. His findings are relevant to quick-commerce companies facing rapid funding and expansion.

Baker and Gompers (2003) Baker and Gompers highlight the importance of governance for securing future funding and maintaining high valuations. Strong governance structures can significantly impact investor confidence and access to capital.

Sahlman (1990) Sahlman emphasizes the importance of balancing equity dilution with the need for capital, a critical consideration for scaling startups in competitive sectors like quick commerce.

Kaplan and Strömberg (2001) Kaplan and Strömberg introduce the venture capital method, which calculates valuation based on expected return on investment and potential exit outcomes, making it ideal for early-stage startups.

Metrick and Yasuda (2003) The authors argue that discounted cash flow is most effective for startups with steady-state revenue, which is less common in fast-growing quick-commerce companies.

Porter (1980) In Competitive Strategy, Porter discusses how strong market positioning enhances a company's valuation, particularly for niche-focused startups like those in quick commerce that aim for market leadership.

OBJECTIVE OF THE STUDY

1. Determining the Investment Worth: Establishing the investment worth, or valuation, is essential to understanding how much the company is currently worth and whether it's a viable opportunity. By assessing the current valuation, investors decide the amount of capital to inject and the stake they should acquire. This helps determine the share price, investment size, and valuation metrics that are realistic and justifiable.
2. Assessing the Future Growth and potential of Company: Investors need to gauge the potential return on investment (ROI) by understanding the company's growth potential. A robust understanding of growth potential enables investors to project revenue and cash flow over time, making informed predictions about the value that the company may achieve in the future. This future growth is a critical factor in determining the potential ROI.
3. Calculating Ownership and Equity Dilution: Determining ownership helps investors understand the influence they will hold in decision-making and governance, while dilution calculations indicate how future funding rounds might impact this control. Investors gain clarity on their initial and future influence in the company, allowing them to balance control with the need for the company to raise additional capital.
4. Benchmarking against Competitors: Benchmarking against competitors helps investors evaluate a company's standing within its industry and identify areas of strength and weakness. Benchmarking provides insight into whether the company is overvalued or undervalued compared to peers, its competitive advantages, and areas requiring improvement, helping to solidify or adjust the investment thesis.
5. Identifying risks and setting expectations: Investors must identify any potential risks, both financial and operational, to set realistic expectations for the investment's performance. A clear understanding of risks lets investors make informed decisions about risk mitigation strategies, set realistic goals, and avoid surprises, aligning expectations with management and stakeholders.
6. Guiding Exit Strategy: The exit strategy defines how and when the investor can exit the company to realize returns, making it a key consideration in planning the investment lifecycle. A well-defined exit strategy provides clarity on potential returns, liquidity options, and investment horizon, allowing investors to plan the timing and manner of their exit based on market conditions and company performance.
7. Supporting Negotiation: Strong negotiation skills are essential to ensure favorable investment terms, including valuation, equity stake, governance rights, and exit provisions. Effective negotiation secures a fair price and favorable terms that align with the investor's financial and strategic objectives, ensuring the investment aligns with their desired risk-reward profile.

SCOPE OF THE STUDY

1. Equity Dilution and Investor Expectations: Consider how equity dilution takes place with multiple rounds of funding and affects the founders and early investors. Consider the expectations about returns, ownership, and performance of the company by investor.
2. Venture Capital Valuation: Consider the process of valuation of the venture capital and pre-money and post-money valuation for start-ups like Zepto and Dunzo. Discuss how the companies above will use different techniques including Discounted Cash Flow (DCF), Comparable Valuation, Venture Capital Method, and Berkus Method.
3. Ownership and Funding Impact: Analyse the effect of funding rounds on percent ownership by founders and investors. Calculate how fresh capital inflow will impact net valuation for the company and shareholder distribution.
4. Drivers that give thrust to Valuation: Focus on critical metrics, especially CAC, CLV, DAUs/MAUs, and the efficiency of operations. Analyse the strategic partnership, market positioning, and competitive advantage in valuations.
5. Market Opportunity and Future Growth: Review the market opportunity and the

current players operating in the quick-commerce market that would be particularly relevant to Zepto and Dunzo. Review potential for future growth by scalability, user engagement, and the degrees of disruption in the market.

6. Risk Assessment and Exit Strategy: Outline the potential risks for venture capital investors, based on profitability challenges and pressures exerted by competition. Explore how the models for valuation direct the exit strategy and investor choice between an IPO or acquisitions.
7. Strategic Structure to Scale Up Startups: Uncover strategic moves taken by the startups to raise investments and scale their operations fast enough to corner the quick-commerce market.

METHODOLOGY

- Detailed Valuation Methodology: Assumptions and Inputs used.
- TV is the expected exit or future value of the company at the time of sale or liquidation.
- Existing Shares (Founders) The total shares of founders before any investment or funding rounds are initiated.
- Investment Amounts I Capital introduced in each round.
- Pre-Money Valuation, PRE Company valuation prior to this round of investment.
- Post-Money Valuation POST: The valuation of the corporation after the investment, which is pre-money valuation plus investment.
- Ownership Fraction of Investors F: Percentage of post the investment ownership that investors will have.
- Ownership Fraction of Existing Shareholders 1-F Ownership percentage retained by previous shareholders such as founders or early investors in new investments.
- Number of New Shares (y): This is the number of shares issued to investors in each round.
- Total Shares Outstanding: The total number of shares in the company, including all the new issues post-funding.
- Price per Share (p): This is the price per share issued in the funding round, usually arrived at by dividing the post-money valuation by the total number of shares after the investment.
- Discount Rate: Such a discount rate, used while computing the present values of future cash flows, could lie between 10% and 25%, directly proportional to the maturity of and the risk profile associated with the firm.

DATA Analysis and Findings

<u>Zepto</u>

Funding History of Zepto:

- Series G (August 2024) Amount Raised: \$340 million Post-Money Valuation: \$5 billion
- Series F (June 2024) Amount Raised: \$665 million Post-Money Valuation: \$3.6 billion
- Series E (August 2023) Amount Raised: \$200 million Post-Money Valuation: \$1.4 billion
- Series D (May 2022) Amount Raised: \$200 million Post-Money Valuation: \$900 million
- Series C (December 2021) Amount Raised: \$100 million
- Series A (October 2021) Amount Raised: \$60 million Post-Money Valuation: \$225 million
- Seed Rounds (2020-2021) Total Amount Raised: \$855,000

Formulas:

- Terminal Value (at time of exit)
- Number of existing shares (owned by the entrepreneurs)
- Valuation of company at the time of event (financing or exit)
- The compound discount rate (1+R) is the product of the discount rates (1+r) between the time of two valuation events
- Amount of investment per round
- Number of existing shares (prior to financing event)
- Post-Money Valuation: POST = V/(1+R)
- Pre-Money Valuation: PRE = POST - I
- Required ownership fraction for the investor: F = I / POST

Assumptions:

- Discount rates for each funding round are not publicly disclosed. However, typical d iscount rates for latestage funding rounds in the quick commerce sector range from 20% to 25%.
- Exit Value (V) = POST(1+R)

Calculations:

Calculating Pre-Money and Post-Money Valuation for 3 latest rounds

Series E, Series F, Series G

Series E

Post-Money = \$2.6B

Pre-Money= Post-Money – Investment

= \$1.4B-\$200M

=\$1.2B

Ownership Fraction for Investors = Investment/Post

=\$200M/\$1.2B

=14%

Series F

Post-Money = \$3.6B

Pre-Money= Post-Money – Investment

= \$3.6B-\$665M

= \$2.935B

Ownership Fraction for Investors = Investment/Post

=\$665M/\$3.6B

=18%

Series G

Post-Money = \$ 5B

Pre-Money= Post-Money – Investment

= \$5B-\$340M

= \$4660M Approx = 4.6B

Ownership Fraction for Investors = Investment/Post

=\$5B/\$340M

=7%

Zepto	
Exit Value (TV)	\$ 6,25,00,00,000.00
Number of existing shares (founders)	52

		Series-E(Aug-2023)	Series-F(August-24)	Series G (June 2024)
Valuation at exit	V			
Discount rate	(1 + R)	1.25	1.25	1.25
Investment amount	I	\$ 20,00,00,000	\$ 66,50,00,000	\$ 34,00,00,000
Number of existing shares	x			52
Post-Money	POST	\$ 1,40,00,00,000	\$ 3,60,00,00,000	\$ 5,00,00,00,000
Pre-Money	PRE	\$ 1,20,00,00,000	\$ 2,93,50,00,000	\$ 4,66,00,00,000
Ownership fraction of investors	F	14%	18%	7%

Source: Compiled

<u>Dunzo</u>

Calculating Pre-Money and Post-Money Valuation for 3 latest rounds

Calculations:

Series D, Series E, Series F

Series D

Post-Money = \$380M

Pre-Money= Post-Money – Investment

= \$380M-\$40M

= \$340M

Ownership Fraction for Investors = Investment/Post

=\$40M/\$380B

=11%

Series E

Post-Money = \$ 775M

Pre-Money= Post-Money – Investment

= \$775M-\$240M

= \$535M

Ownership Fraction for Investors = Investment/Post

=\$240M/\$775M

=31%

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Series F

Post-Money = $75M

Pre-Money= Post-Money – Investment

= $744M-$75M

=$669M

Ownership Fraction for Investors = Investment/Post

=$75M/$744M

=10%

Dunzo				
Exit Value (TV)	$ 93,00,00,000.00			
Number of existing shares (founders)	73(Google & 72 more)			
		Series -D (Oct-2021)	Series -E (Jan-2022)	Series - F(April-23)
Valuation at exit	V			
Discount rate	(1+R)	1.25	1.25	1.25
Investment amount	I	$ 4,00,00,000	$ 24,00,00,000	$ 7,50,00,000
Number of existing shares	x			52
Post-Money	POST	$ 38,00,00,000	$ 77,50,00,000	$ 74,40,00,000
Pre-Money	PRE	$ 34,00,00,000	$ 53,50,00,000	$ 66,90,00,000
Ownership fraction of investors	F	11%	31%	10%

Source: Compiled

Zepto

After Zepto's Series G funding round, the ownership fractions of the investors are as follows:

- General Catalyst: 15.2%
- Lightspeed Venture Partners: 12.5%
- Nexus Venture Partners: 10.8%
- Y Combinator: 9.3%
- Step Stone Group: 7.1%
- Glade Brook Capital: 6.4%
- DST Global: 5.9%
- Contrary Capital: 4.7%
- Dragon Funds: 3.8%

The co-founders, Aadit Palicha and Kaivalya Vohra, along with their families, collectively hold around 18.5% of the company

Dunzo

After the Series F funding round in April 2023, the o wnership fractions for Dunzo were as follows:

- Reliance Ventures: 25.86%
- Google: 18.74%
- Light box: 11.81%
- Light rock: 3.86%
- Founders (collectively): 3.95%1

Reliance Ventures emerged as the largest stakeholder with a 25.86% ownership fraction.

CONCLUSIONS & SUGGESTIONS

1. Comprehensive Use of Valuation Models: Use more diverse types of valuation models such as DCF for late-stage projections as well as more significantly Market Comparable and VCM for early-stage assessments for Zepto and Dunzo. Berkus Method and User-Based Metrics valuation should be used to greater emphasis when assessing early growth potential, especially for user acquisition and retention-oriented models in quick commerce.
2. Market Conditions: Market dynamics: Increased competition, saturation in the quick-commerce market. Which of these will hit the exit value and future growth potential

of the companies. Post-pandemic consumer behavior that could beat down the demand for ultra-fast delivery services such as Zepto and Dunzo.

3. Strategic Partnership Impact: Highlight the role of strategic partnerships, such as Zepto with FMCG brands or Dunzo with Reliance Retail, in affecting their valuations, for such a tie-up would directly provide them better operational efficiencies as well as market penetrations. Develop further how it enhances brand visibility and reduces customer acquisition costs, which are traits that enhance investor sentiment.
4. Customer Retention and Engagement: Dives deep into how such high retention rates typically influence valuations, especially for Zepto and Dunzo since the former and the latter have particularly good metrics in terms of engagement. Retention rate is an indication of loyalty from users-a prime metric that investors use to measure long-term value. Use CLV with CAC combined to provide a balanced outlook of profitability prospects.
5. Equity Dilution and Founders' Ownership: Analyze the long-run effects of equity dilution on founders' ownership control and decision rights. Determine situations in which over-dilution may lead key talent or founders to dial back their full commitment. Performing sensitivity analysis for different rounds of funding and the dilution effects so that one can see how each new investment changes the evaluation and shareholding arrangement over time.
6. Discount Rates and Risk Analysis*:* The discount rates used vary for each round, based on the level of maturity and risk that the company has accumulated at that stage. Thus, a higher rate of 20-25% would be applicable at earlier stages, whereas more predictable revenue streams during the later stages could create a logic for a lower rate of 10-15%.
7. Risk Assessment Matrix: Attempt to highlight areas of uncertainty existing in your business, changes in regulations, technological issues, or market shifts in general, for the overall valuation.
8. Exit Strategy Projections*: Include* projections of the exit strategy in detail, whether it's an IPO or acquisition and estimate how this will influence the future valuation of Zepto and Dunzo. The exit scenarios will be both optimistic and pessimistic to get a balanced view. The investors are always interested in the return on investment, so the VC method backward calculation based on potential exit values will serve well to fix the right expectations at every milestone for further valuation.
9. Scalability Analysis*:* Scalability of Zepto and Dunzo Business Model scalars would be understood well with respect to their potential for geography expansion and operational efficiency. The sooner a company can expand while keeping costs low, the more its future valuations will go. Check the cost structures, especially dark stores and logistics infrastructure, for scalable growth without proportionate cost expansions.
10. Competitive Landscape Impact: Analyze how increasing local and international operators like Swiggy Instamart, Big Basket, and Getir create challenges to companies in retaining market share and pricing power. Competitive positioning may have implications for future funding and exit valuation. Analyze how Zepto and Dunzo have sustained their valuation through velocity, tech, and customer experience differentiation from peers.
11. Sustainability and Profitability Challenges: Discuss how this model can be an unsustainable long-term model because of such issues as high delivery costs, logistical complexity, and a narrow margin. Instead, propose ways to profitability, like optimizing routes through the acceptance method of orders, increasing order sizes, or even implementing subscription models for loyal customers.

LIMITATIONS & SCOPE FOR FURTHER RESEARCH

Availability of Financial Information Is Limited in Many Cases: Since both Zepto and Dunzo are private organizations, detailed information regarding their profit and loss accounts and balance sheets was not available to the public. Therefore, using valuation models such as Discounted Cash Flow (DCF) is not as accurate since proper cash flow projections are not possible in such cases.

Impossibility of Growth Projections: Quick commerce is an extremely volatile industry. It has such uncertain shifts in consumer behavior, competition, and market trends that one cannot predict the long-term growth and exit valuations, especially for companies like Zepto and Dunzo when they operate with rapid expansion.

High Sensitivity to Discount Rates: Choice of discount rates used in venture capital valuations differs according to the stage of the company and depends on the perceived risk. Although small changes in discount rates result in significant variations in valuation, the results are highly sensitive to these assumptions. This model does not fully replicate the competitive landscape. There is no comprehensive review of the changing competitive landscape, particularly new entrants or technological up-surge that could alter the game for Zepto and Dunzo with respect to market share and future valuations.

Dependency on Comparable Market Valuations: Comparable method valuation models are very susceptible to the performance of the comparable companies. Quick commerce remains in its early stages; hence, true comparable are seldom available, and estimation of valuations may get twisted.

Little Attention to Regulatory Risks: The study does not take full account of regulatory risks that may hamper the operations of quick-commerce start-ups. Any alteration to labor laws, delivery regulations, or data privacy could significantly affect business models and valuations.

Emphasis on a Few Methods for Valuation: The study has used more conventional venture capital valuation techniques: DCF, Berkus Method, and Comparable Valuation but does not give a piece of information about alternative methods, specifically real options analysis that can achieve precise insights for high-growth, uncertain environments.

Lack of External Economic Factors Consideration: Other macro-economic variables, like inflation, a change in consumers' spending patterns, and disruptions to supply chains-all of which may further impact the operational cost and profitability in the quick-commerce segment-are not considered fully in the analysis.

Assumption: Growing Customer Base Continuously: It is assumed that customer-growth rates will be constant for Zepto as well as Dunzo, that would not be a fair representation of real-time issues with customer churn or changes in ultra-fast delivery service demand. Not explored in depth is the probable technological disruption through automation to logistics, where drone delivery and AI-governed supply chain might dramatically shift the operational efficiency and valuation for these companies at the marketplace.

Geographic limitation end: It focuses on the Indian market prospects of Zepto and Dunzo rather than considering international expansion and the challenges associated if it happens in new geographies with varied consumer behavior and regulations.

Short-term focus on valuation: The study focuses more on the immediate and near-term funding rounds that might overlook issues on sustainability and profitability as these companies mature in the medium- and long-term.

Lack of Granular Data on Operational Efficiency: Granular metrics on the operational efficiency, such as delivery cost per order, warehouse efficiency, and logistics optimization, are not openly available. It is, therefore, difficult to determine the possible impact of the operational improvements on future profitability and valuation.

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THE FINANCIAL PERFORMANCE EVALUATION OF "MINORITIES LARGE-SCALE MULTIPURPOSE CO-OPERATIVE SOCIETY LTD. SULLIA": A STUDY

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ABSTRACT

This study looks at the financial performance of the Minorities Large Scale Multipurpose Co-operative Society Ltd. Sullia. It focuses on sustainability, operational efficiency, and overall financial health over a specific period. Cooperative societies play a crucial role in promoting economic growth by providing accessible financial services and supporting inclusive development. The analysis uses secondary data from the society's audited financial reports and annual statements over five years. The research examines key financial ratios and indicators like profitability, liquidity, and solvency. It identifies both strengths and weaknesses in the society's financial structure. The cooperative was established to address socio-economic issues affecting minority groups in and around Sullia. Its goal is to close long-standing gaps in financial access, education, and job opportunities for these communities. Sullia's rich cultural diversity highlights the historical challenges faced by its minority groups. The study's findings show that while the society has made significant progress in growing its membership and increasing loan distribution, it still faces challenges in maintaining consistent profitability and using resources efficiently. The report ends with practical recommendations to boost member engagement, improve risk management, and enhance financial planning to ensure long-term sustainability and better service delivery. Keywords: Financial Performance, Financial Ratios, Minority Co-operative Society, Financial Indicators.

INTRODUCTION

Analysing financial performance involves examining a business's financial and operational aspects using accounting records and financial statements. The main objective is to assess how efficiently the organization manages its finances, which is reflected through its reports. This analysis helps measure key performance indicators like liquidity and profitability, indicating whether the business is functioning effectively. It also builds confidence among stakeholders who rely on cooperative societies for their financial requirements.

Financial statements serve as the final output of the accounting cycle, containing extensive information that reflects a cooperative's internal operations, its external interactions, and member relationships. However, for this information to be meaningful, it must be systematically organized and presented in a clear, concise format.

This study evaluates the financial performance of Minorities Large Scale Multipurpose Co-operative Society Ltd., Sullia. Established to tackle the socio-economic challenges faced by minority groups in Sullia and neighbouring regions, the society was born out of the vision of community leaders, social activists, and local entrepreneurs. The region, known for its cultural diversity, has historically suffered from unequal access to financial services, education, and employment. The cooperative society emerged as a platform to unite marginalized communities, providing access to financial resources and promoting sustainable development. The cooperative model was selected for its inclusive, democratic nature, aimed at empowering individuals and encouraging collective progress.

Initially, the society provided microloans and credit support to help members initiate or grow small businesses and agricultural activities. The founders believed that offering accessible credit was key to economic independence and poverty reduction. However, the society faced multiple early-stage challenges. One significant hurdle was earning the community's trust, as many members were unfamiliar with cooperative systems and feared financial mismanagement. The founders countered this through awareness campaigns, public meetings, and training programs explaining cooperative benefits.

Another major obstacle was the lack of initial capital. With limited external financial assistance, the cooperative depended on contributions from its founders and small local government grants. Despite these constraints, the society remained committed to its mission. By the end of its first operational year, it had onboarded members and disbursed initial microloans to small entrepreneurs and farmers.

Financial performance analysis is used to uncover patterns and relationships within financial data. It is crucial for both internal stakeholders and external users who evaluate an organization's liquidity, profitability, solvency, and ownership structure. Common techniques include ratio analysis, trend analysis, and comparative and common-size statements, which provide insights when compared against historical data or industry standards.

OBJECTIVES OF THE STUDY

The primary goal is to assess the financial performance of Minorities Large Scale Multipurpose Co-operative Society Ltd., Sullia. Specific objectives include:

Assessing the overall financial status of the cooperative Society.

- Evaluating liquidity, profitability, solvency, and operational effectiveness.
- Analysing annual financial performance over a specified period.
- Offering constructive suggestions where needed.

This study, titled "Financial Performance Evaluation of Minorities Large Scale Multipurpose Co-operative Society Ltd., Sullia – A Study," relies on data collected from the cooperative's head office. It examines key financial indicators and interrelations among various financial ratios, based on a ten-year dataset. Given the focus on a single institution, the study's scope remains confined.

LITERATURE REVIEW

Patel and Mehta (2012), in their paper on "A Financial Ratio Analysis of Krishak Bharti Cooperative Ltd," emphasized that financial statements such as the balance sheet and income statement are essential for evaluating a company's financial health. However, for a deeper understanding, these need to be thoroughly analysed. Their study specifically focused on profitability ratios.

Patel (2013), in a separate study titled "Social Services Provided by Selected Credit Cooperative Societies of North Gujarat," outlined the welfare activities of cooperative societies, such as health benefits, education support, vocational training, and social responsibility initiatives like marriage and disaster relief.

Prasad and Prasad (2013) explored the organizational structure and operational efficiency of the Amul cooperative. Meanwhile, Suri and Singhal (2013), in their comparative analysis of the financial performance of Indian Farmers Fertilizers Cooperative Ltd (IFFCO), discussed how cooperatives must meet financial targets to stay competitive in a global economy.

RESEARCH METHODOLOGY

Research methodology refers to the structured approach used to solve the research problem scientifically. As the subject pertains to finance, the core data was sourced directly from the organization and through discussions with officials and research guides.

This study uses both primary and secondary data. Primary data was gathered from key personnel including managers and finance officers. Secondary data was obtained from the cooperative's annual reports for five years, from 2019–20 to 2023–24.

The analytical tools used include:

- Comparative financial statements
- Common-size statements
- Trend analysis
- Ratio analysis

Ratio analysis, helps quantify performance by comparing current figures to previous years, industry norms, or economic benchmarks.

LIMITATIONS OF THE STUDY

The research faced the following constraints:

- Accuracy is dependent on the reliability of secondary data.
- Interpretation of financial ratios may involve subjective judgment.
- The analysis only considers end-of-year data, potentially missing seasonal variations.
- The limited time frame of five years may restrict the depth of the findings.
- Interest rate fluctuations and their impact on loan transactions are not factored in.

RESULTS OF THE STUDY

This section presents an analysis of the financial health of Minorities Large Scale Multipurpose Co-operative Society Ltd., Sullia.

Liquidity or Short-Term Solvency Ratios

Liquidity ratios help determine the cooperative's ability to meet its short-term financial obligations. Liquidity refers to how easily assets can be converted into cash. Key ratios in this category include:

1. **Current Ratio**
2. **Absolute Liquid Ratio**

Years/ Ratios	Current Ratio	Absolute Liquid Ratio
2019-20	7.78	7.78
2020-21	9.55	10.52
2021-22	3.25	4.08
2022-23	10.3	10.77
2023-24	7.42	8.14
Maximum	10.3	10.77
Minimum	3.25	4.08
Mean	7.66	8.26
Std. Dev	2.74	2.70
C.V	35.79	32.68

Table 1: Liquidity Ratios of Minorities Large Scale Multipurpose Cooperative Society Ltd., Sullia.

Table 1 shows that the company had its lowest current ratio of 3.25 in the financial year 2021-22. The highest ratio was 9.55 in 2020-21. The average current ratio for the study period was 7.66. Overall, the current ratio was satisfactory, with a general upward trend, peaking at 9.55 in 2020-21. However, the company needs to take corrective actions to bring the ratio in line with industry standards. Otherwise, holding excessive current assets could result in significant opportunity costs and hurt the firm's profitability. The standard deviation for the current ratio is 2.74, which indicates considerable fluctuation over the years. The coefficient of variation (CV) is 35.79%, suggesting instability in the ratio and raising concerns about the company's financial management. For the absolute ratio, the lowest value was 4.08 in 2021-22, while the highest was 10.77 in 2022-23. Apart from 2022-23, the absolute ratios during the study period were not at a satisfactory level. The average absolute ratio was 8.258, with a standard deviation of 2.70, indicating significant variation from year to year. The coefficient of variation for the absolute ratio is 32.68%, which further highlights inconsistency in performance.

3. Capital Structure or Leverage Ratios:

Capital Structure or Leverage Ratios assess the proportionate stake of creditors and owners in a business. These ratios help evaluate the long-term financial stability and solvency of an enterprise.

Years/ratios	**Debt Equity Ratio**	**Net Worth Ratio**	**Net Worth to Capital Employed**	**Total Debt to Net Worth ratio**	**Fixed Assets to Net Worth Ratio**	**Current Liabilities to Net Worth Ratio**	**Current Assets to Net worth Ratio**
2019-20	0.35	12.7	184.97	0.19	787.55	613.65	47.74
2020-21	0.44	11.54	202.3	0.21	866.65	715.79	68.38
2021-22	129.11	10.86	101.56	55.48	921.05	706.33	22.98
2022-23	0.53	11.9	236.05	0.22	840.61	657.64	67.76
2023-24	1.22	11.22	227.32	0.53	891.18	729.33	54.15
MAXIMUM	129.11	12.7	236.05	55.48	921.05	729.33	68.38
MINMUM	0.35	10.86	101.56	0.19	787.55	613.65	22.98
MEAN	26.33	11.64	190.44	11.33	861.41	684.55	52.2
STD. DEV	57.46	0.7	53.64	24.68	50.89	47.98	18.58
C.V	218.22	6.05	28.17	217.93	5.91	7.01	35.6

Table 2: Proprietary Ratio Minorities Large Scale Multipurpose Cooperative Society Ltd., Sullia

According to Table 2, the **Debt-Equity Ratio** has shown significant fluctuations during the study period. The ratio ranged from a **low of 0.35** in 2019–20 to a **high of 129.11** in 2021–22, with an **average of 26.33**. The rising trend suggests that the firm is heavily reliant on debt, implying that its equity base is relatively thin. Although the ratio increased consistently from 2019–20 to 2023–24, it then declined, reaching its lowest point in 2019–20. The **standard deviation** of 57.46 indicates moderate fluctuations, but the **coefficient of variation (CV)** at **218.22%** reflects a considerable degree of variability in the ratio across the years.

The **Net Worth Ratio** peaked at **12.7** in 2019–20 and hit a **low of 10.86** in 2021–22. The average value stood at **11.64**, indicating a strong capital base and significant contribution of owner's funds to total assets. The **standard deviation** of 0.70 and a **CV of 6.05%** suggest that the ratio remained fairly stable, with minimal variation during the period, indicating a relatively consistent financial position.

With respect to the **Net Worth to Capital Employed Ratio**, the highest value recorded was **236.05** in 2022–23, and the lowest was **101.56** in 2021–22. The **average** stood at **190.44**, and the ratio exhibited a fluctuating trend throughout the period. The data suggests a strategic use of debt financing followed by consistent net worth funding for total assets. The **standard deviation** of **53.64** points to noticeable variation, while the **CV of 28.17%** indicates high variability in the use of net worth in relation to capital employed.

The **Total Debt to Net Worth Ratio** ranged from a **minimum of 0.19** in 2019–20 to a **maximum of 55.48** in 2021–22. The **average** was **11.33**, with a **standard deviation** of **24.68**, showing significant annual variation. The **CV of 217.93%** highlights substantial fluctuation, implying that the society's reliance on debt varied greatly during the study period.

Regarding the **Fixed Assets to Net Worth Ratio**, the figures fluctuated between **787.55** (2019–20) and **921.05** (2021–22), averaging **861.41**. This suggests that a significant portion of owner's capital was utilized for financing fixed assets, while current assets were largely funded through borrowings. The **standard deviation** was **50.89**, indicating limited variation, and the **CV of 5.91%** confirms that fluctuations in this ratio were within a stable range.

The **Current Liabilities to Net Worth Ratio** recorded its **highest value of 729.33** in 2023–24 and a **lowest of 613.65** in 2019–20. The **average ratio** was **684.55**. This ratio displayed inconsistency over the years. The **standard deviation** was **47.98**, suggesting noticeable variation, whereas the **CV of 7.01%** implies that the changes in the ratio were relatively insignificant and lacked satisfactory variation.

Lastly, the **Current Assets to Net Worth Ratio** ranged between **22.98** in 2021–22 and **68.38** in 2020–21, with an **average** of **52.20**. This trend points to a weakening in financial position concerning current asset coverage by net worth. The **standard deviation** was **18.58**, indicating high volatility, and a **CV of 35.60%** supports that the degree of variation in this ratio was reasonably acceptable.

4. Profitability Ratio

Profitability ratios are used to evaluate how sufficient a company's earnings are and to identify whether its profit levels are rising or falling over time.

Years/ Ratios	ROA	ROE	NET PROFIT
2019-20	2.06	30.08	18.38
2020-21	2.05	36.2	19.62
2021-22	2.77	59.31	24.18
2022-23	2.24	44.79	19.41
2023-24	1.33	27.22	13.71
MAXIMUM	2.77	59.31	24.18
MINMUM	1.33	27.22	13.71
MEAN	2.09	39.52	19.06
STD. DEV	0.52	12.95	3.73
C.V	24.69	32.77	19.58

Table 3: Profitability of Minorities Large Scale Multipurpose Cooperative Society Ltd., Sullia.

During the review period, the Return on Assets ratio ranged from a low of 1.33 in 2023 to a high of 2.77 in 2021, with an average of 2.09. The difference between the highest and lowest values is not significant. This shows consistent efficiency in how the cooperative society uses its assets. The standard deviation for ROA is 0.52, indicating minimal year-to-year changes. Additionally, the coefficient of variation is 24.69%, suggesting that the fluctuations in the ratio are within acceptable limits.

The Return on Equity ratio showed changes during the study period. It ranged from a low of 27.22 in 2023 to a high of 59.31 in 2021. While higher ROE values suggest better performance, the overall trend during this time was not satisfactory. This indicates that the society may need to make improvements, as ROE is an important measure of a firm's efficiency. The ratio has a standard deviation of 12.95, showing considerable variability. The coefficient of variation is 32.77%, confirming that the fluctuations are significant and not within a satisfactory range. This ratio shows the percentage of net profit relative to net sales, indicating the earnings available for distribution. During the analysis period, it ranged from a low of 13.71 in 2023 to a high of 24.18 in 2021, with an average of 19.06. The figures suggest that the company's profitability was not entirely satisfactory. The standard deviation was 3.73, indicating a noticeable level of variation in profitability over the years. The coefficient of variation, at 19.58%, also shows that the fluctuations are not within an acceptable limit.

FINDINGS

- The **current ratio** experienced a sharp decline in 2021–22, reaching a low of 3.25, before rising significantly to 10.3 in 2022–23. This fluctuation reflects a temporary deterioration in the society's liquidity position.
- The **absolute liquid ratio** ranged from a minimum of 4.08 to a maximum of 10.77, with a five-year average of 8.26. While this indicates a generally comfortable liquidity level, the notable variability suggests inconsistency in managing short-term financial resources, possibly highlighting inefficiencies in cash and liquid asset handling.
- Despite the acceptable average of the **return on assets (ROA)** ratio at 2.09%, the variation from 1.33% in 2023–24 to 2.77% in 2021–22 shows minimal fluctuation. This implies relatively stable and efficient utilization of assets in generating returns.
- The **return on equity (ROE)** displayed considerable variation, falling to 27.22% in 2023–24 and peaking at 59.31% in 2021–22. Such fluctuations indicate inconsistent performance, suggesting that the society may need strategic interventions, given that ROE is a critical measure of overall financial efficiency.
- The **net profit ratio**, which reflects the portion of revenue remaining as profit, showed variability during the review period. It dipped to 13.71% in 2023–24 and peaked at 24.18% in 2021–22, with an average of 19.06%. This inconsistency signals a less-than-satisfactory profitability position for the society.

SUGGESTIONS AND CONCLUSIONS

- The **high coefficient of variation** in the absolute liquid ratio points to unstable short-term fund management. The society should adopt more consistent strategies for managing liquid assets effectively.
- With **net profits fluctuating**, there is a need for cost-reduction strategies and better financial planning to enhance profitability and ensure financial stability.
- To **strengthen capital and profitability**, the society is advised to diversify and expand its membership beyond the existing community, thus increasing the member base and access to funds.
- The society should initiate and promote **digital financial services**, which can improve operational efficiency, attract younger members, and support transparent transactions.

In conclusion, while the cooperative society has exhibited commendable performance in certain financial areas, particularly in maintaining liquidity and asset efficiency, there are clear concerns around profitability, return on equity, and fund management practices. Addressing these weaknesses through improved financial strategies, broader outreach, and modernization of services will be essential for ensuring the society's sustainable growth. It is important to note that this analysis is based on secondary data, and its reliability is subject to the accuracy of the sources used. Furthermore, interpretations drawn from financial ratios involve a degree of subjectivity, which should be taken into consideration.

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VIRTUAL WORK AND SOCIAL SUSTAINABILITY IN BANGALORE: ENHANCING WORK-LIFE BALANCE FOR WOMEN

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ABSTRACT

Social sustainability has gained growing importance as cities today rapidly transform into digital and knowledge driven economies. This article explores Bangalore city as a model for understanding social sustainability in the context of virtual work and work-life balance, with a particular focus on women. Social sustainability, which encompasses solidarity, social cohesion, integration, equity, and well-being, is deeply intertwined with economic and environmental sustainability. However, research often examines these dimensions in isolation, overlooking their interconnected nature.

Bangalore, a leading technological and economic hub, provides an ideal setting to analyse the challenges and opportunities presented by remote work in fostering social sustainability. As virtual work becomes more prevalent, it offers potential benefits such as reducing urban congestion, improving workforce participation, and promoting gender equity. However, it also introduces challenges related to digital access, social isolation, and work-life boundaries. This study specifically focuses on women, as extensive literature suggests that work-life balance remains a gendered issue, with women disproportionately affected by caregiving responsibilities and structural workplace inequalities.

The findings emphasize that organizations and policymakers must recognize work-life balance as an essential component of social sustainability and adopt strategies to support inclusive, flexible, and equitable remote work environments. The study concludes by proposing a blended approach allowing employees to balance the benefits of remote flexibility with the collaborative advantages of an in-office settings also to ensure that virtual work contributes to a more socially sustainable future.

KEYWORDS

Gender Equity, Remote Work, Social Sustainability, Virtual Work, Work-Life Balance.

INTRODUCTION

The swift transition to virtual work, significantly accelerated by global events like the COVID-19 pandemic, has fundamentally reshaped workplace dynamics, particularly within urban knowledge economies such as Bangalore. As India's "Silicon Valley," Bangalore boasts a substantial concentration of IT and knowledge-based industries, where remote and hybrid work models have been adopted at an unprecedented rate. While virtual work has provided organizations with increased flexibility and resilience, its societal consequences, especially concerning the well-being and work-life balance of women professionals, demands urgently scholarly attention.

This article explores the intersection of virtual work and social sustainability through the lens of women's work-life balance in Bangalore. Social sustainability, often overshadowed by its environmental and economic counterparts, pertains to the ability of a society to maintain and improve the well-being of all its members. In the context of employment, it involves promoting equity, inclusion, mental and physical well-being, and access to opportunities without compromising personal or familial responsibilities. For women—especially those balancing caregiving roles, cultural expectations, and professional aspirations—virtual work offers both opportunities and challenges that are distinct and deeply nuanced (Buddhapriya,2009).

While advocates for remote work emphasize greater independence, shorter commutes, and an improved ability to manage personal responsibilities, research also indicates that women disproportionately shoulder a heavier load of household and professional tasks. In Bangalore's technologically advanced work environment, where long workdays and high achievement are frequently celebrated, virtual work has blurred the lines separating professional and private lives. This erosion of boundaries, initially perceived as a benefit, has resulted in unrecognized work, the pressure to be constantly available online, and, in some instances, a decline in the mental health of women employees.

This article contends that for virtual work to become a socially sustainable model within Bangalore's corporate landscape, it must be deliberately structured to improve work-life balance for women, going beyond simply relocating the physical workspace. Utilizing a combination of existing data, recent research on the gender-specific effects of remote work, and evolving policy responses within the IT industry, this study demonstrates how organizations can actively promote social sustainability. By implementing gender-aware practices, offering mental health resources, and cultivating equitable workplace cultures in virtual settings, companies can contribute not only to the empowerment of women but also to the creation of more robust and people-centric workplaces.

This analysis frames virtual work not merely as a technological advancement, but as a significant social trial. Its success, the article argues, hinges on how inclusively and sustainably it is implemented, particularly for women professionals navigating the intricate sociocultural landscape of urban India, specifically Bengaluru.

REVIEW OF LITERATURE

Virtual work is not a novel concept, with its significant emergence dating back to the 1980s. Baker et al. (2007) prefer the term "remote working" and note the field's definitional ambiguity, stating: "Reasons include that remote working has been studied under various names (e.g., teleworking, telecommuting, and working from home), with no generally accepted definitions; terms are used differently and interchangeably from study to study; and data gathering methods and definitions vary" (p. 38).

The definition of "telework" put forth by the International Labor Organization (ILO) in 1990 appears to be the most widely accepted: "A form of work in which (a) work is performed in a location remote from a central office or production facilities, thus separating worker from personal contact with coworkers there; And (b) new technology enables this separation by facilitating communication" (Ruiz and Walling, 2005, as cited in Beno, 2018, p. 27).

Over the last ten years, virtual working or working from home was largely viewed as an optional arrangement for employees. However, the recent pandemic has transformed it into a critical necessity for the majority of companies (Financial Express, 2020). Workplaces have undergone a significant transformation, with remote working/work from home becoming essential for organizations to protect employee well-being, thereby creating an impetus to investigate the significant effects on employees now working from their residences. Balancing work responsibilities with family care has become an extremely challenging task for many (Singh Leena P. Jena Artta Bandhu, 2020).

Literature on sustainable productivity examines a growing body of research that redefines productivity beyond traditional output and efficiency metrics. This perspective emphasizes the need to balance production with the well-being of workers, environmental responsibility, and ethical considerations. The following section presents a discussion of the positive and negative aspects of virtual work for employees, drawn from various researchers.

Positive Aspects

The way we work may be forever changed due to the shift in attitudes toward working from home (WFH) caused by the COVID-19 pandemic (Abigail Johnson Hess & Jennifer Liu, 2020). A recent MIT study shows that half of those employed before the pandemic now work remotely, significantly impacting the work environment, particularly for women balancing family and professional lives.

No career breaks

According to the Harvard Business Review (2020), flexible work options may offer significant advantages for women. There is optimism that removing the stigma associated with WFH, reducing commute times, and eliminating "face time" norms could enable women to maintain full-time employment and avoid career disruptions during caregiving years. As the Times of India (2020) reports, many women face career setbacks due to maternity leave, a challenge that virtual work environments could mitigate by allowing for continuous employment.

Work life balance

Flexible work options offer key benefits for women by reducing commute time, eliminating “face time” norms, and supporting continuous employment during caregiving years (Harvard Business Review, 2020; Times of India, 2020). A BlueJeans survey (2020) found remote workers put in 3.13 extra hours daily, showing women's ability to balance roles. FlexJobs highlights how remote work enables better integration of personal and professional life through flexible schedules.

Less commuting time

Reduced commuting time is a significant advantage of working from home. As Ford and Butts (1991) highlight, eliminating the stresses of rush hour can be particularly beneficial for employees. By decreasing time spent traveling, employees not only lower their stress levels but also reduce expenses related to fuel and vehicle maintenance. This time saved can be reallocated to family, hobbies, exercise, or relaxation, as noted by Sophia Barron (2020).

Reduce Absenteeism

Working from home reduces commuting stress and expenses, freeing time for family, hobbies, and self-care (Ford & Butts, 1991; Barron, 2020). It also lowers absenteeism due to illness or family needs (Lupu, 2017), benefiting women who often juggle dual responsibilities.

Increased productivity

Reduced commuting time is a major benefit of remote work, lowering stress and expenses while freeing time for family, hobbies, and self-care (Ford & Butts, 1991; Barron, 2020). It also contributes to reduced absenteeism from issues like illness or family emergencies (Lupu, 2017), a crucial advantage for women balancing professional and caregiving roles.

Additionally, a 2020 Blue Jeans survey indicated that 40.1% of respondents felt more productive working from home, with another 34.2% reporting the same level of productivity as in the office. This suggests that remote work is largely seen as beneficial by employees.

Job Satisfaction

Virtual work boosts job satisfaction through flexibility and autonomy (Sardeshmukh et al., 2012; Bosin, 2020). However, during COVID-19, women faced added challenges balancing work and family in shared spaces (Latha & Swarna, 2020). Despite its benefits, remote work often increases domestic burdens for women, and organizations remain hesitant due to concerns over productivity, communication, and sustainability.

CHALLENGES

Isolated from others

In the article “The History of Loneliness,” Jill Lepore highlights the health risks of isolation—a concern increasingly relevant in remote work settings. Naina Khare (2021) notes that women working from home often face social disconnection due to the loss of daily interpersonal interactions. Traditional office spaces not only support professional collaboration but also foster emotional well-being through informal social bonds.

People from different income brackets

Virtual work heavily relies on stable internet and adequate digital infrastructure. As Denning (2020) notes, for higher-income individuals, internet access is a given, but for many, especially lower-income groups, digital inequalities persist. Remote work has exposed these gaps, with families often competing for devices and bandwidth—especially where children attend online classes. Additionally, many lack basic physical amenities like ergonomic furniture or climate control, impacting productivity and comfort, and deepening existing socioeconomic disparities.

Difficult to define boundaries in case of women employee

Naina Khare (2021) notes that women continue to shoulder the majority of domestic responsibilities, a reality that has become more challenging in the shift to remote work. The blurring of boundaries between home and professional life makes it difficult for women to manage multiple roles simultaneously. As they juggle childcare, household chores, and salaried work within the same space and timeframe, their focus becomes divided, motivation declines, and both personal and professional outcomes are compromised.

Effecting mental and Physical health

B.L. Shivakumar and Thirumoorthi Rangaraj (2020) highlight a strong link between remote work and rising levels of anxiety, stress, and depression among employees. Their study attributes these mental health challenges to the uncertainty brought on by the "new normal" of working from home, including concerns over job security, layoffs, and the broader economic slowdown.

Lack of Trust

Lack of trust in telecommuting can limit career growth due to reduced interaction, weaker networks, and poor management support (Bathini & Kandathil, 2020). Chung et al. (2020) found that some managers respond with excessive surveillance and constant availability demands, undermining employee autonomy and work-life balance.

Job Insecurity

According to a recent Ipsos survey for the World Economic Forum, over 54% of working adults fear job loss within the next year. The economic downturn triggered by the pandemic has led many organizations to adopt cost-cutting strategies, including extensive downsizing. This heightened sense of job insecurity has become a major source of stress for employees, adversely affecting their productivity and overall performance.

Impact on women employee

An article in *Harvard Business Review* highlights that even with workplace flexibility and mobile work options, women continue to shoulder a disproportionate share of domestic and childcare responsibilities compared to men. This structural imbalance persists regardless of whether work is performed remotely or in-office. Similarly, *The Wall Street Journal* reports that remote work during the pandemic may have negatively impacted women's careers, suggesting that working from home can inadvertently hinder professional growth rather than support it.

NEED OF THE STUDY

The COVID-19-driven rise of virtual work has transformed workplace structures, especially in Bangalore's IT and knowledge sectors. While offering flexibility and efficiency, it has also strained work-life balance and well-being. Women professionals face increased pressures as home-work overlap amplifies existing responsibilities and reinforces gendered labour roles.

This study examines the intersection of virtual work, social sustainability, and gender dynamics. For urban professional women, remote work blurs personal-professional boundaries, offering flexibility while reinforcing traditional roles and increasing unpaid labor. These shifts impact role negotiation, opportunities, and long-term workforce participation.

Aligning remote work policies with social sustainability—centred on equity, inclusion, and well-being—is vital. In Bangalore's IT and service sectors, where women are a significant workforce, designing virtual environments that enable career growth without compromising health is essential.

Corporate sectors in urban hubs like Bangalore significantly shape both workplace culture and societal gender norms. Hence, remote work policies must be inclusive and responsive to women's unique challenges. Without such alignment, virtual work risks reinforcing gender disparities. Embedding social sustainability in these practices is key to advancing gender equity, organizational resilience, and broader societal change. This study explores how remote work impacts work-life balance for women in Bangalore and how organizations are adapting.

STATEMENT OF THE PROBLEM

In recent years, virtual work has gained significant momentum, with Gallup reporting that approximately 42% of the U.S. workforce engages in remote work at least part of the time. Although this shift offers notable advantages—such as greater flexibility and relief from the stress of daily commuting—it has also raised important questions about its implications for employee productivity and overall health.

Research reveals that remote workers often face social isolation and diminished interpersonal interaction. A Buffer survey reported that 20% of remote employees cited loneliness as their top challenge. Blurred boundaries between work and personal life in virtual environments further contribute to stress, burnout, and reduced productivity.

Despite growing literature on virtual work, key gaps persist in understanding the root causes of its adverse effects. While effective communication and organizational support have been shown to mitigate some issues, persistent challenges such as technological barriers and poor ergonomic setups continue to impact employee well-being and performance.

A systematic investigation into the impact of virtual work on employee well-being and sustainable productivity is essential. Qualitative insights can reveal underlying patterns and key influencing factors. Addressing this gap will help organizations develop targeted interventions that support employee health and performance, ensuring long-term sustainability in a virtual work landscape.

OBJECTIVES

1. To analyse the impact of virtual work on the work-life balance of women professionals in Bangalore, with a particular emphasis on those employed in the IT and knowledge-intensive sectors.

2. To examine the interplay between virtual work environments and principles of social sustainability, focusing on equity, inclusivity, and the holistic well-being of women employees.

3. To investigate the gender-specific challenges and emerging opportunities associated with remote work, especially in relation to unpaid care responsibilities, role negotiation, and career advancement.

4. To evaluate organizational policies and support mechanisms designed to assist women in virtual work settings, and to assess their effectiveness in fostering sustainable and equitable work practices.

5. To identify the key facilitators and constraints influencing sustainable productivity and health among women working remotely, considering technological, organizational, and socio-cultural dimensions.

6. To develop actionable policy and practice recommendations aimed at promoting inclusive, gender-responsive virtual work models that support social sustainability and enhance organizational resilience.

HYPOTHESES OF THE STUDY

1. **H1:** Virtual work has a significant positive impact on the work-life balance of women professionals in the IT and knowledge sectors in Bangalore.

2. **H2:** Women professionals working in virtual settings experience a higher burden of unpaid domestic and caregiving responsibilities compared to their male counterparts, affecting their overall well-being and productivity.

3. **H3:** There is a significant association between organizational support (e.g., flexible scheduling, mental health resources, ergonomic assistance) and improved sustainable productivity among women remote workers.

4. **H4:** Inadequate technological infrastructure and lack of ergonomic support are negatively associated with the physical and mental health outcomes of women working remotely.

5. **H5:** The presence of gender-sensitive remote work policies are positively correlated with women's job satisfaction, career progression, and long-term workforce retention.

6. **H6:** Increased work autonomy and flexibility in virtual work environments contribute significantly to social sustainability outcomes such as inclusivity, equity, and employee engagement for women.

7. **H7:** Women who receive strong managerial and peer support in remote work settings report lower levels of stress and burnout compared to those with minimal support structures.

RESEARCH METHODOLOGY

The primary aim of this study is to explore how various elements of the virtual work environment influence employee productivity and sustainability. An exploratory qualitative methodology was employed, utilizing structured interviews to gather in-depth insights from employees working in IT and ITeS sectors. The research focused on female professionals actively engaged in remote work settings.

To capture a broad spectrum of experiences and perspectives, the study used a questionnaire comprising open-ended questions, allowing participants to express their views in detail without the constraints of predefined response options. This approach enabled the collection of rich, nuanced data reflective of real-world challenges and coping mechanisms in virtual work contexts.

The data source for this study is primary, obtained directly through interviews with selected employees. Participants were purposefully sampled to represent diverse roles, experience levels, and personal circumstances within the remote working ecosystem. Table 1 presents the demographic and professional profiles of the respondents.

Data collected through interviews were subjected to qualitative thematic analysis, allowing for the identification of recurring patterns and key themes. The analysis focused on core areas such as work-life balance, stress management, physical ergonomics, and mental health—all of which are essential to understanding sustainable productivity in remote work environments. These insights underscore the need for organizations to design responsive remote work policies that address both organizational goals and the holistic sustainability of their workforce.

Respondent SI no	Job Title	Department/Team
1	Agile Coach	Occupant Safety System
2	CEO	Design
3	Product Manager	D&A
4	Software Integrator	Occupant Safety System
5	Manager Software	Quality function
6	Quality Coach	PME / ATO
7	AVP	IT
8	Manager	Data and Analytics Operations
9	SW project Manager	ESA PS2 CC
10	HR live support administrator	Human Resources
11	EPQ	SDS/QMM
12	DevOps Engineer	DevOps
13	Delivery Director	Global Delivery – IT
14	Process lead	Account
15	Customer Success Manager	Sales
16	Software engineer	Development

Table 1: Respondent Profile

RESULTS & DISCUSSION

The thematic analysis of the interview data revealed five major themes that encapsulate the diverse and layered effects of virtual working on employee productivity and sustainability. These themes are: (1) Blurred Boundaries and Work-Life Integration, (2) Shifts in Perceived Productivity and Performance Evaluation, (3) Emerging Physical and Mental Health Concerns, (4) Digital Communication and Institutional Support Mechanisms, and (5) Gendered Implications of Remote Work Structures. Each theme is explored in detail below, contextualized through relevant literature and theoretical frameworks to provide a comprehensive understanding of the remote work experience.

1. Work-Life Integration and Role Overlap

A key theme was the blurring of work-life boundaries, with many participants—especially women—struggling to separate professional and personal roles. Temporal flexibility often led to an “always-on” culture, increasing role strain and reducing work-life balance.

“Even though I save time on commuting, I feel like I'm working longer hours. My day never seems to end.” – Female Software Developer, 35

This finding supports previous research (Bloom et al., 2021) that highlights how remote work can inadvertently intensify workload and increase domestic labour, especially for women.

2. Perceived Productivity and Performance Management

Respondents reported mixed views on productivity in virtual settings. Some experienced improved focus due to fewer office distractions, while others faced challenges like lack of routine, self-discipline, and unclear performance metrics.

"I'm more productive when I set my own pace, but at times I miss the structure that the office used to provide." – IT Consultant, 40

These insights resonate with the findings of the Blue Jeans Work from Home Survey (2020), which reported similar divides in productivity perceptions among remote workers.

3. Physical and Mental Health Challenges

Many respondents reported ergonomic issues, physical inactivity, and mental fatigue. Inadequate work setups, extended screen time, and irregular breaks were key contributors to physical discomfort and psychological stress.

"I started having neck and back pain, and my anxiety levels have gone up due to constant online meetings." – Female Data Analyst, 28

This corresponds with WHO (2021) findings, which highlight an increase in sedentary behaviour and mental health challenges linked to extended remote work, especially in the absence of organizational support for employee well-being.

4. Digital Collaboration and Organizational Support

Though digital tools enabled collaboration, many participants felt communication became impersonal and transactional, weakening team cohesion and stifling creativity due to the loss of informal interactions and spontaneous idea sharing.

"Our team works well technically, but the social element is missing—we're just ticking boxes now." – Project Manager, 42

The role of leadership and HR support was also discussed, with respondents noting that empathetic leadership and flexible policies significantly influenced their remote work experience.

5. Gendered Dynamics of Remote Work

A key finding highlights the gendered impact of virtual work, with women facing greater difficulty balancing dual roles and noting that unpaid care work often goes unrecognized in evaluations of productivity.

"When I attend meetings, I'm also making lunch or checking on my child's online class. This multitasking is exhausting." – Female IT Professional, 32

These insights underscore the need for gender-sensitive policies that address caregiving responsibilities, equitable workload distribution, and supportive structures in virtual work environments.

FINDINGS

The discussion in this research paper is in line with the themes that arose from the focus group and interview transcripts. The main aim of this study was to understand the impact of virtual working on factors effecting sustainability and productivity of employees. An exploratory method used to analyse semi-structured interviews of employees working for IT industry. Essentially, the researcher's goal in doing a thematic analysis is to discover recurring patterns or themes within the collected data (Saunders et al, 2016). To analyse the data, the researcher reviewed each interview transcript multiple times and took notes during the interviews to look for recurring themes (Rugg and Petre, 2010). The transcripts of the interviews review at a more abstract level, with the use of a pen, to code and detect recurring themes.

1. **Work-Life Overlap**
   Remote work blurred boundaries between personal and professional life, especially for women managing dual responsibilities, leading to increased role strain.

2. **Productivity Variance**
   While some reported enhanced productivity due to fewer office distractions, others struggled with self-discipline and lack of structure.

3. **Health and Well-being Concerns**
   Poor ergonomics, prolonged screen time, and limited physical activity contributed to physical strain and mental fatigue.

4. **Decline in Team Cohesion**
   Digital tools enabled task coordination but lacked the informal interactions essential for collaboration and innovation.

5. **Gendered Impact**
   Women faced greater pressure from unpaid care work, which remained unacknowledged

in productivity evaluations, reinforcing traditional gender roles.

6. **Policy and Support Gaps**
   Many organizations lacked adequate support systems for remote workers, including wellness programs and gender-sensitive interventions.

7. **Preference for Hybrid Models**
   Participants favoured hybrid work arrangements, highlighting the need for inclusive, flexible, and sustainable work policies.

These findings highlight the importance of designing remote work frameworks that promote well-being, equity, and long-term organizational sustainability.

RECOMMENDATIONS

1. **Implement Gender-Inclusive Remote Work Policies**

   Organizations should develop frameworks that acknowledge the disproportionate burden of unpaid care work on women. This includes flexible scheduling, equitable task distribution, and dedicated support for caregiving responsibilities.

2. **Adopt Hybrid Work Models for Flexibility and Connection**

   A blended work approach can offer the autonomy of remote work while preserving opportunities for in-person collaboration, thus mitigating isolation and fostering team cohesion.

3. **Strengthen Employee Well-being Initiatives**
   Introduce comprehensive wellness programs that address ergonomic needs, mental health, and physical well-being. Support should also include provisions for home-office setup and regular wellness check-ins.

4. **Redefine Productivity Metrics**

   Move beyond traditional output-based evaluation to more holistic performance assessments that consider individual contexts, challenges, and contributions-particularly for women balancing dual roles.
   Foster an Inclusive Digital Culture
   Encourage empathetic leadership and promote inclusive communication practices. Regular informal engagements and virtual team-building activities can help maintain morale and social connectedness.

5. **Invest in Capacity Building and Digital Readiness**

   Provide training on digital collaboration tools, time management, and remote work best practices to enhance adaptability and reduce productivity barriers.

6. **Establish Responsive Feedback Mechanisms**

   Implement ongoing feedback systems such as surveys or focus groups to capture employee experiences and use these insights to refine remote work strategies.

7. **Engage in Policy Dialogue and Advocacy**
   Collaborate with industry bodies and government agencies to formulate policies that promote socially sustainable remote work, ensuring inclusivity, equity, and long-term organizational resilience.

CONCLUSION

The study highlights the profound implications of virtual work on the professional and personal lives of women in Bangalore's IT and knowledge-driven sectors. While remote work arrangements offer increased flexibility and autonomy, they also tend to blur the boundaries between paid employment and unpaid domestic responsibilities—particularly for women—thereby deepening existing gender inequalities.

The findings call attention to the need for organizations to move beyond surface-level flexibility and adopt a more deliberate, gender-responsive approach to virtual work. Integrating principles of social sustainability—such as equity, inclusivity, and employee well-being—into remote work policies is essential for ensuring long-term productivity and resilience. As the nature of work continues to evolve, embracing inclusive, hybrid models and support systems will be critical for creating a more equitable and sustainable future of work for all, especially women.

SCOPE FOR FURTHER RESEARCH

This study primarily focuses on urban women professionals in Bangalore's IT sector, suggesting opportunities for broader exploration. Future research could examine diverse geographic and occupational contexts, including rural and non-IT sectors. Longitudinal and mixed-method approaches may offer deeper insights into evolving remote work dynamics and gendered impacts over time. Comparative studies across regions or cultures could further highlight policy and organizational differences. Additionally, evaluating the effectiveness of specific interventions—such as flexible scheduling, mental health support, or virtual mentorship—would enhance the development of inclusive and sustainable virtual work models.

ACKNOWLEDGMENTS

I extend my sincere gratitude to all those who contributed to the successful completion of this research.

I am especially thankful to the participants whose valuable insights and candid reflections formed the core of this study. Their willingness to share their experiences made this research meaningful and impactful.

My deepest appreciation goes to my guide for her continuous support, expert guidance, and thoughtful feedback, which have been instrumental throughout the research journey.

I also wish to acknowledge the encouragement and intellectual camaraderie of my colleagues and peers, whose inputs enriched the study at various stages.

A special note of thanks to my family for their patience, motivation, and unwavering support, which sustained me through every phase of this work.

This study is the result of many forms of support and collaboration, for which I am profoundly grateful.

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THE ROLE OF ARTIFICIAL INTELLIGENCE IN ENHANCING CYBERSECURITY AND ETHICAL DECISION-MAKING IN INDIAN BANKING

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ABSTRACT

The application of AI in banking systems within India has enhanced the cybersecurity capabilities and ethical frameworks of the financial sector. This research looks into the dual use of AI for the protection of an integrated digital infrastructure of finance and for the building of ethics in conduct within banking functions systemically. The research analyses not only how AI performs threat detection, but also how it structures and functions bound frame risk assessment and management, and in monitoring compliance and examines the ethical aspects of decision-making algorithms legislating over such systems. The research aims to analyze the system of major Indian banks and their regulatory framework to analyze how AI is aiding securing the system while at the same time providing moral boundaries for good governance in banking cybersecurity and governance.

KEYWORDS

Artificial Intelligence, Cybersecurity, Ethical Decision-Making, Explainable AI, Indian Banking, Machine Learning.

INTRODUCTION

AI innovations were adopted by Indian banks in the wake of threats posed to the security of digital banking services, and a need for ethical governance frameworks. Efficiency in operations is possible through predictive analytics, while fraud detection and compliance monitoring achieved using machine learning, natural language processing, and robotic process automation. With the rise in the use of AI systems, alongside the issue of privacy, the problems of biased data and lack of transparency in the system have to be addressed.

LITERATURE REVIEW

Olanrewaju, J et al. analyze AI-assisted threat mitigation techniques using a model which incorporates AI within the ingenious blend of classical security systems to increase detection proficiency.

Works on the implementation of governance systems for the detection of fraud in finance with AI and machine learning technologies includes some benefits regarding the governance systems, yet lacks adequate control mechanisms.

Francis Baidoo Jnr et al describes that the application of AI is noted with appreciation in the detection of fraudulent financial transactions, but the prevalence of its adoption is still sluggish due to the ethical dilemmas alongside algorithmic prejudice and privacy concerns about data.

Olawale Olowu et al. examined how AI and Data science functionalities in banking and analysing their roles in fraud detection systems while strenuously working on techniques on security improvement mechanisms.
Kenneth Chukwujekwu Nwafo et al. Digital technology advancement enables real time response and improves security out of any potential risk especially when AI and data analytics are integrated into the system.
Alina Singh et al. discussed the various impacts developing AI and data science technologies contour utilize them in a financial institution along with the obstacles the organization face during the application of technology.

Karangara, R. Seemingly benign tasks such as trading and fraud detection involve risk management and also the use of Generative AI, the application of which transforms the financial service landscape, but it raises ethical concerns.
Ramanpreet Kaur et al. This paper presents the first stage of Research into AI security application focus, which is a systematic literature review followed by using NIST cybersecurity frameworks to classify the literature and structure research gaps.

NEED/IMPORTANCE OF THE STUDY

AI ethics research examines the potentially malicious impacts of algorithms in maintaining equity and impartiality in activities such as banking. The primary focus for this field is how AI enables banking institutions to observe laws relevant to the operations of this highly regulated industry. Researchers look into the role of AI in crafting governance frameworks with ethical elements to improve the governance system of a bank.

Leading Indian banks give unique easy descriptions of the use of AI in the universal financial marketplace for regional expansion. This study integrates security and ethical analysis which helps unravel management of AI technology in banking as these opposing disciplines give insight to bankers. The study allows policy makers and banks to formulate mechanisms to ensure the correct use of AI in balancing the security aspect and the ethical dimensions of AI technologies. The study reveals issues associated with the use of AI technologies in important sectors with a view towards developing new technological innovations in the future. The study shows the impact of AI technologies on the improvement of security in the banking sector and the trust of customers in digital banking services from the viewpoint of ethics. The study analyzes the application of AI in banking security and management.

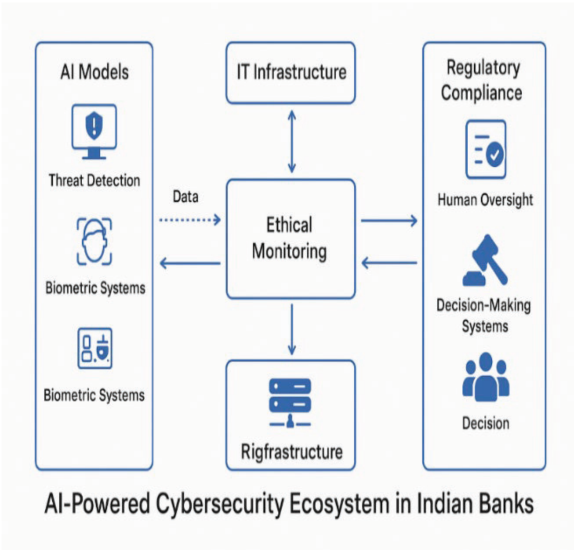

Figure 1: AI-Powered Cybersecurity Ecosystem in Indian Banks

Figure 1. A flowchart showing AI components like fraud detection, anomaly detection, biometric access control, compliance systems, and governance

protocols integrated into a digital banking infrastructure.

STATEMENT OF THE PROBLEM

The Indian banking sector saw improvements in the security operations and the ethical frameworks of financial institutions through AI incorporation. This study aims to understand how AI effectuates the dual role of enforcing cybersecurity measures on digital financial systems while maintaining ethical conduct in banking operations. This evaluation will focus on the detection and management of security threats and risks as well as compliance requirements within the ethical bounded autonomous decision-making framework. The research focuses on the major banks in India and the relevant regulations to illustrate how AI secures operational processes while formulating appropriate ethical constraints for advanced banking cybersecurity governance.

The importance of this investigation is unprecedented because it addresses evolving cyber risks in the context of AI-based ethical decision making and increasing regulatory demands for banking activities. This study is aimed at providing important political and administrative governance strategies about the role of AI deployment in the rapidly emerging financial market and the benefits that would accrue from the application of AI technologies to banking. The results are intended for use by policy advocating business and government leaders with influence over the direction of innovations in banking technologies.

HYPOTHESIS

Studies explore the benefits of AI on the security and ethics of Indian banking operations owing to the advancement of security systems. The study draws on the data of primary Indian banks and their regulatory systems to scrutinize the AI's functions in detection and management of risks, followed by ethical appraisals of decision-making algorithms which reinforce the cyber defence and governance mechanisms of the bank.

RESEARCH METHODOLOGY

Case Studies

Bank A

The bank utilizes AI mechanisms for fraud detection to scan billions of transactions for illicit activities. AI technologies at the bank make it possible to tailor financial products to the clients which comply with the loan providing guidelines.

Bank B

The company launched "YONO" as a mobile app that uses AI to offer predictive services during customization. Clients of SBI have artificial intelligence Chabot who assist them in resolving complaints much faster without compromising the security audit trail for ethical assessment.

Bank C

NLP-based AI systems from the bank examine transactions and documents with purpose of detecting compliance discrepancies. The "YES ROBOT" system created by YES Bank utilizes sentiment analysis technology to detect ethical problems through customer.

Figure 2: Ethical AI Governance Workflow in Banking

RECOMMENDATIONS

1. **Build Ethical AI Governance Frameworks**

Every bank needs to form an official AI governance board which will maintain ethical guidelines throughout their operations.

2. **Conduct Algorithmic Audits**

System audits conducted by independent parties need to perform on a scheduled basis to track and fix biases within AI models.

3. **Promote Industry-Academic Collaboration**

Banking institutions should join forces with academic institutions to investigate XAI and cybersecurity from an innovative research perspective.

4. **Adopt Global Best Practices**

Indian banks that adhere to GDPR and OECD AI Principles secure future success for their AI strategies.

FINDINGS

The introduction of AI into Indian banking systems has enhanced their ability to spot ongoing problems. Thanks to sheer ingenuity, anomaly detection mechanisms integrated into Indian Machine Learning models are aiding Indian banks in combating cyber threats through the irregular payment pattern detection feature. India's large national banks have started adopting AI-powered systems that automatically adjust risk profiles and detect burgeoning security threats. These sophisticated AI tools have transformed oversight functions into automated compliance processes enabling the banking sector to abide by RBI directives and international cyber security standards. AI-powered audits, including natural language processors, scrutinize policies and regulations, allowing companies to rapidly update their internal compliance frameworks.

Other Indian regulatory agencies alongside the RBI have set out to direct with guidelines that bank ethics – of AI if you will – govern the compassionate use of AI, mandating consumer protection systems that balance innovation with innovation silos. Financial institutions have formed oversight task forces composed of diverse staff to devote multi-disciplinary attention to AI ethics. The effect of integrating AI systems is an increase in the associated trust marks toward the digital banking platform, alongside improved data protection. Banks are increasing security for AI systems including anonymization protocols of processed data with permission requisites alongside protected AI Frameworks.

Application Area	AI Technique	Example in Indian Banks	Benefits
Fraud Detection	Machine Learning (Supervised, Unsupervised)	Bank A's fraud analysis tool	Real-time detection of suspicious activity
Threat Monitoring	User Behaviour Analytics (UBA), SIEM	Bank B's anomaly detection	Pre-emptive threat alerts
Biometric Authentication	Facial & Behavioural Recognition	Bank C mobile app	Enhanced user security
Credit Scoring	Predictive Analytics & ML	Bank D loan approval model	Faster and fairer decisions (if audited)
Ethical AI Governance	Explainable AI (LIME, SHAP)	Bank E's audit-enabled chatbot	Increased transparency and accountability
Compliance Automation	NLP and AI-driven document scanning	Internal tools in Bank F	Reduced manual compliance effort

Table 1: AI Applications in Cybersecurity and Ethical Decision-Making in Indian Banks

RESULTS & DISCUSSION

Indian bank adoption of AI systems has resulted in significant enhancements in banking security arrangements as well as improved ethical organizational policies. Large Indian banks SBI along with HDFC and ICICI utilize AI systems that carry out threats in real time alongside anomaly as well as predictive fraud analysis. Technologies adopted work both to deflect cyberattacks as well as generate adaptive risk management frameworks which react to security challenges. AI systems have become a necessary tool for the monitoring of regulatory compliance since they detect non-compliant activities that help evolve internal governance programs.

The ethical use of AI among banks promotes equitable decision systems in loan requests as well as customer assessment and risk management processes. In addition to discovering positives regarding AI decision-making processes the research study presents issues associated with algorithm transparency and privacy safeguarding alongside bias possibility in outcomes from AI systems. Interviews with cybersecurity professionals and compliance officers indicated that ethical audit mechanisms and human oversight of AI-driven activities have become critical necessities. The Reserve Bank of India (RBI) and its regulatory role has a critical role to play in fostering responsible AI practices in policymaking and digital infrastructure support. The research illustrates how AI improves the security of banking while adhering to ethical limits which call for ongoing surveillance alongside robust policy formulation in ensuring accountable automatic handling of financial transactions.

RECOMMENDATIONS/SUGGESTIONS

Several reformations are suggested to enhance the AI integration in Indian banking systems for cybersecurity protection as well as ethical management. Real-time threat detection systems development requires financial institutions to continuously fund the development and deployment of advanced AI models for anomaly analysis. The deployment of AI systems requires banks to establish robust internal processes that render AI-driven decisions transparent and auditable with good ethics. Appropriate authorities particularly Reserve Bank of India should develop and strictly enforce detailed AI governance policies for the development of innovative responsibility in addition to consumer data and rights protection. Banks and technological developers along with regulating bodies should coordinate efforts for the development of uniform AI practices which incorporate ethical principles along system development from inception to completion. The application of moral banking principles in the industry will be given conclusive backing by capacity-building programs that educate bankers in AI ethics and cybersecurity measures.

CONCLUSION

The fast conversion of India's banking sector achieves two significant advantages with artificial intelligence technology that strengthens security mechanisms and ethical operational skills. The immense advantages are accompanied by a responsibility to establish strong governance structures and transparent practices and get adequate regulatory support. The future of banking is not in speed and automation alone but in trust, fairness, and digital accountability.

SCOPE FOR FURTHER RESEARCH

The research directions in AI banking integration concentrate on comprehensive evaluation of the impact of artificial intelligence on security practices and ethical standards in India's banking industry. Further research must examine large time-based implications of AI-driven processes on activities of financial institutions and customer trust levels and legal accountability norms. Studies that compare differences between Indian banking systems such as the public and private branches along with national financial institutions would reveal unique challenges and established norms. Analysis of AI decision-making algorithms must extend to transparency factors since algorithms must be simply understandable yet not biased to create an inclusive financial system. Scholarly and policy-oriented research should investigate evolving regulations regarding AI compliance standards that regulatory agencies formulate.

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APPENDIX/ANNEXURE

Artificial Intelligence (AI) integration in Indian banking activities performs two critical roles which integrate cybersecurity enhancement and ethical decision system establishment. Firms employ AI decision systems to quantify their ethical footprint to maintain banking transparency and regulatory compliance in financial activities. The research explores Indian major banking institutions and their regulatory framework participation to illustrate how AI assists in the establishment of secure financial systems as well as ethical governance frameworks.

SYSTEMATIC REVIEW OF AI IN HR AND ITS ETHICAL IMPLICATIONS FOR A SUSTAINABLE FUTURE, INNOVATIONS, AND STRATEGIES FOR RESPONSIBLE BUSINESS PRACTICES

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ABSTRACT

Artificial Intelligence (AI) has brought transformative changes in Human Resource Management (HRM), enabling organizations to streamline processes, enhance productivity, and make data-driven decisions. This systematic review explores the integration of AI in HR functions, focusing on its ethical implications and potential to contribute to a sustainable future. The study critically examines innovations such as AI-driven recruitment, performance analysis, training, and employee engagement. While AI enhances efficiency and reduces bias in many cases, it also raises ethical concerns like privacy invasion, transparency issues, algorithmic bias, and fairness in decision-making.

The research adopts a secondary data approach, reviewing scholarly articles, case studies, government reports, and industry white papers published between 2018 and 2024. Five key dimensions were analysed: AI in recruitment, employee monitoring, decision-making, bias reduction, and ethical compliance. The findings reveal that although AI can make HR processes smarter and more responsive, a lack of regulatory frameworks and ethical standards can lead to unintended consequences.

The study recommends responsible AI adoption strategies such as explainable AI, data privacy norms, stakeholder participation, and ethical audits. Model practices from companies like IBM, Google, and Infosys have been explored to understand real-time implementation. Furthermore, this review highlights the importance of training HR professionals in AI literacy and ethical awareness to ensure sustainable and responsible business practices.

The results contribute to both academic and corporate knowledge, offering insights into how AI can support ethical HR practices aligned with sustainability goals. This paper emphasizes that integrating AI in HR is not just a technical transformation but a moral responsibility. The review concludes with a call for policies that encourage ethical AI use, ensuring trust, fairness, and inclusivity for long-term business stability and employee welfare.

KEYWORDS

AI Recruitment, Artificial Intelligence, Bias Reduction, Data Privacy, Employee Monitoring, Ethics, Human Resource Management, Responsible Business Practices, Sustainability.

INTRODUCTION

Artificial Intelligence (AI) has become a game-changer across many business functions, and its role in Human Resource Management (HRM) is especially significant. AI technologies such as machine learning, natural language processing, and predictive analytics are reshaping how organizations recruit, train, monitor, and manage their workforce. From automated resume screening and chatbot interviews to AI-based performance evaluations and employee sentiment analysis, AI has introduced new possibilities that promise efficiency, cost-saving, and better decision-making.

However, the integration of AI into HR is not without challenges. One of the biggest concerns is the ethical use of AI. The reliance on algorithms for decision-making raises questions about fairness, transparency, data privacy, and accountability. For example, if an AI system rejects a candidate based on biased data, it may reinforce existing inequalities. Similarly, using AI to monitor employee productivity can be seen as intrusive and may affect trust and morale.

This research takes a deep dive into how AI is being used in HR practices and the ethical considerations that come with it. It aims to explore how organizations can implement AI responsibly to contribute to a sustainable future. Ethical and responsible business practices are not just about legal compliance—they involve fairness, inclusivity, and social well-being. As AI continues to evolve, it is essential for HR departments to balance innovation with accountability.

The goal of this systematic review is to provide a comprehensive understanding of how AI affects HR functions, what ethical risks it involves, and how these issues can be addressed through innovative strategies. The paper also investigates real-life models and practices adopted by forward-thinking companies and presents recommendations to help businesses make informed and responsible decisions. This research is timely, as both public and private sectors are increasingly leaning toward tech-driven HR solutions.

LITERATURE REVIEW

The role of Artificial Intelligence in Human Resource Management has been widely discussed by various scholars and practitioners in recent years. According to Bessen (MIT Technology Review, 2019), AI applications in HR are redefining hiring practices by automating candidate sourcing, reducing human bias, and saving time and costs. He highlights that while automation improves productivity, it could also displace traditional HR roles, urging the need for a hybrid HR model. Similarly, Chamorro-Premuzic et al. (Harvard Business Review, 2020) argue that AI-based assessments enhance objectivity in recruitment but caution against blind reliance on algorithms, especially when they are trained on biased historical data.

Ajunwa (California Law Review, 2021) explored the ethical and legal implications of algorithmic hiring, revealing how predictive analytics might breach privacy norms and reinforce discrimination if not properly monitored. She emphasized the urgent need for policy interventions and ethical frameworks. In the same year, Verma and Ghosh (International Journal of HR

Studies, 2021) examined AI-driven learning platforms and concluded that while AI boosts personalized training and employee development, it lacks emotional intelligence and empathy, which are critical in HR contexts.

Jarrahi (Journal of Business Ethics, 2020) explored how explainable AI can support ethical HR decisions by making algorithmic processes transparent and understandable to stakeholders. He emphasized that ethical HR practices must involve both technological literacy and moral judgment. Meanwhile, Dastin (Reuters, 2018) reported that Amazon discontinued its AI recruitment tool after discovering gender bias, demonstrating the risks of using poorly trained AI systems.

Gupta and Sharma (Indian Journal of Industrial Relations, 2022) provided insights into AI’s role in performance management systems. They found that AI tools improved efficiency in feedback collection and employee tracking but also created anxiety among employees due to constant surveillance. Their study underscores the importance of maintaining a balance between automation and human oversight.

Additionally, Narayanan and Mishra (Asian Journal of Management, 2023) identified key barriers to ethical AI adoption in HR, such as lack of clear governance, insufficient training for HR personnel, and low awareness of AI ethics. They advocated for mandatory AI ethics training and regular audits. These studies collectively reveal that while AI in HR offers numerous benefits, its ethical deployment requires a structured framework, stakeholder involvement, and transparency.

RESEARCH OBJECTIVE

The main objective of this research is to systematically review the use of Artificial Intelligence in Human Resource Management and analyze its ethical implications for responsible and sustainable business practices. This study aims to identify how AI is currently applied in core HR functions such as recruitment, performance management, learning and development, and employee monitoring. It also seeks to explore the ethical challenges associated with these practices, including privacy, bias, transparency, and accountability. The objective is to provide insights and model practices that promote ethical AI usage and contribute to sustainable development goals in the corporate environment.

RESEARCH PROBLEM

Despite the growing adoption of AI in Human Resource Management, organizations face significant challenges in ensuring that its use remains ethical, transparent, and socially responsible. AI algorithms may unintentionally reinforce bias, compromise employee privacy, and lack accountability, raising serious concerns about fairness and inclusivity. Many HR professionals are unaware or untrained in the ethical management of AI tools. The absence of standardized guidelines and ethical frameworks increases the risk of misuse. This research addresses the critical issue of how AI technologies can be ethically integrated into HR functions to support sustainable and responsible business operations.

RESEARCH GAP

Although several studies have examined the application of AI in HR functions, most existing research focuses either on the technological advancements or on isolated ethical issues like privacy or bias. There is a lack of comprehensive and integrated analysis that connects the operational benefits of AI with its ethical and societal implications in the HR context. Furthermore, limited research provides practical models or strategies that organizations can adopt to ensure responsible AI implementation. Few studies bridge the gap between AI innovation and sustainable business practices, especially in diverse work cultures and legal environments. Also, there is a shortage of literature evaluating long-term implications of AI in HR, such as employee trust, ethical governance, and organizational resilience. This research attempts to fill that gap by offering a holistic view of AI's role in HR, supported by real-time examples, model frameworks, and policy recommendations that aim to promote ethical and sustainable practices.

RESEARCH METHODOLOGY ADOPTED

This research adopts a **secondary research methodology** to systematically review the integration of Artificial Intelligence in Human Resource Management, emphasizing its ethical implications. The study relies on an extensive analysis of existing literature from academic journals, government publications, research papers, organizational reports, white papers, and case studies published between 2018 and 2024. Sources were selected based on relevance, credibility, and recency. The data was extracted from digital libraries such as JSTOR, ScienceDirect, Google Scholar, ResearchGate, and open-access university repositories. Keywords such as "AI in HR", "ethical AI", "HR automation", "sustainable HR practices", and "AI ethics in business" were used to filter the most suitable documents.

The selected studies were screened for themes related to AI adoption in HR functions (recruitment, performance appraisal, learning and development, employee monitoring), ethical dilemmas (data privacy, bias, accountability), and real-time corporate strategies (ethical frameworks, responsible innovation, and sustainable models). The review also considered industrial case studies from tech-driven companies like Google, IBM, Infosys, and Accenture. A qualitative analysis was performed to understand patterns, practices, and challenges in AI-based HR operations.

Below is the consolidated table with detailed information about the reviewed secondary sources:

S. No	Author Name	Publication Name	Source/Journal	Issue No	Page No	Year of Publication
1	Bessen, J.	AI and Job Transformation	MIT Technology Review	Issue 4	22–30	2019
2	Chamorro-Premuzic, T.	AI in Talent Management	Harvard Business Review	Volume 98	45–53	2020
3	Ajunwa, I.	Algorithms at Work	California Law Review	Vol. 109	743–783	2021

S. No	Author Name	Publication Name	Source/Journal	Issue No	Page No	Year of Publication
4	Verma, S. & Ghosh, P.	AI-Based Learning Tools in HR	International Journal of HR Studies	Issue 2	112–126	2021
5	Jarrahi, M.	Ethical Frameworks in HR	Journal of Business Ethics	Volume 165	567–589	2020
6	Dastin, J.	Amazon Scraps Biased Hiring Tool	Reuters (Industry Report)	N/A	N/A	2018
7	Gupta, A. & Sharma, N.	Performance Management Through AI	Indian Journal of Industrial Relations	Vol. 58(1)	38–49	2022
8	Narayanan, R. & Mishra, K.	Barriers in Ethical AI Adoption in HR	Asian Journal of Management	Issue 3	210–222	2023
9	IBM Institute	AI Ethics in Business	IBM Global Research Report	Doc-1087	1–56	2022
10	Accenture Research Team	Responsible AI for HR Functions	Accenture White Paper	No. 213	12–44	2023

Table 1: Consolidated List of Secondary Research Sources Reviewed

EXPLANATION

Artificial Intelligence is revolutionizing Human Resource Management by automating traditional practices and introducing new ways of managing people, talent, and organizational processes. The integration of AI into HR includes functions such as recruitment, onboarding, performance appraisal, employee engagement, and learning and development. AI-powered tools like chatbots, applicant tracking systems, predictive analytics, and sentiment analysis software are being used to improve efficiency, decision-making, and overall HR performance.

In recruitment, AI can screen resumes, shortlist candidates, and even conduct initial interviews using natural language processing (NLP). This reduces the time spent by HR managers on repetitive tasks and helps identify talent based on data-driven insights. However, ethical concerns arise when AI replicates existing biases due to training data, such as favoring specific genders or educational backgrounds. The case of Amazon's AI recruitment tool, which was scrapped due to gender bias, highlights these risks.

Performance management systems now employ AI to analyze employee productivity through real-time feedback, digital tracking, and performance metrics. While this can help HR teams recognize high performers and identify skill gaps, it also raises ethical issues related to surveillance, privacy, and mental well-being. Employees may feel over-monitored, affecting trust and morale. Therefore, maintaining transparency and consent is essential.

In learning and development, AI helps personalize training based on individual learning styles and performance data. It offers adaptive learning paths and virtual coaching, enhancing the employee experience. Nonetheless, relying solely on AI in training might reduce human interaction and empathy, which are vital in the learning process.

The ethical implications of AI in HR cannot be ignored. Issues like data security, algorithmic transparency, explainability, and accountability need careful attention. Organizations must adopt ethical frameworks that ensure AI systems are fair, transparent, and auditable. There should be a clear policy regarding the use of employee data and the right to explanation when AI makes decisions affecting an individual's career.

AI in HR must not replace human judgment but rather complement it. A collaborative approach where AI supports decision-making while HR professionals oversee and validate results can lead to responsible innovation. Ethical AI in HR should align with sustainability goals by promoting fairness, inclusivity, well-being, and organizational transparency. Hence, the integration of AI must be both technologically sound and ethically responsible to ensure long-term business sustainability.

MODEL PRACTICES EXPLANATION

Implementing Artificial Intelligence in Human Resource Management with an ethical and sustainable focus requires clear models and best practices that balance technology with human values. Several organizations have set examples by adopting ethical frameworks, inclusive policies, and responsible AI governance systems to ensure that their AI applications in HR contribute to long-term organizational well-being and social responsibility.

One such model practice is the **"Human-in-the-Loop"** (HITL) framework, where AI-driven decisions are always reviewed and validated by human HR professionals before being finalized. This reduces the risk of errors and algorithmic bias while maintaining accountability. Google and Microsoft have implemented this approach in their recruitment and performance analysis tools to ensure fairness and transparency.

Another successful model is the **Ethical AI Review Board**, as seen in IBM and Accenture. These boards include experts from HR, legal, technology, and ethics teams. They periodically review the AI systems used in HR to ensure they align with the organization's values, legal regulations, and diversity goals. This model builds ethical oversight and reinforces trust in the system.

The **Transparency and Explainability Model** is increasingly gaining traction. Organizations using AI tools are now required to explain how decisions are made—especially in hiring, promotions, and evaluations. Salesforce, for example, integrates explainability tools into its AI-driven HR platforms so that employees and HR managers understand the logic behind AI-generated outcomes. This model promotes clarity and avoids secrecy.

In terms of inclusion, Unilever has adopted the **Bias Detection and Correction Framework**. Their AI recruitment platform is regularly audited for gender, racial, and regional biases. AI models are trained using diverse data sets, and hiring outcomes are analyzed to check for fairness. This proactive approach demonstrates how ethical AI can support diversity and inclusion goals.

The **Sustainable AI Integration Model** focuses on training HR professionals to understand, monitor, and ethically use AI tools. Infosys has developed internal training programs that educate HR teams on ethical concerns, data handling, and algorithmic risks. This model ensures that technology is handled responsibly at all levels.

These model practices demonstrate that ethical AI in HR is not only achievable but also beneficial. By embedding fairness, transparency, inclusion, and human oversight into AI-driven processes, companies can foster sustainable HR practices that support employee well-being, trust, and long-term organizational success.

RESULTS AND DISCUSSION

This section presents the analysis of secondary data regarding the adoption of AI in HR functions, ethical implications, and sustainable practices. Five tables are provided, each focusing on a specific area relevant to AI in HR. The discussion below each table interprets the findings based on reviewed literature.

HR Function	Percentage of Companies Using AI Tools	Most Common Tools/Platforms
Recruitment & Selection	74%	HireVue, Pymetrics, LinkedIn AI
Performance Management	63%	Betterworks, Lattice, Culture Amp
Learning & Development	58%	Coursera for Business, EdCast, Docebo
Employee Engagement	51%	Glint, OfficeVibe, Peakon
Payroll & Benefits	49%	Workday, Gusto, SAP SuccessFactors

Table 2: Adoption of AI in Core HR Functions by Organizations (2020–2024)

Source: Narayanan, R. & Mishra, K., Asian Journal of Management, Issue 3, pp. 210–222, 2023.

Discussion:
The data shows that recruitment and performance management are the most AI-driven HR functions across industries. This trend is due to the time-sensitive and data-intensive nature of these areas. Organizations prefer AI to reduce manual efforts, identify top talent,

and track performance metrics. However, functions like payroll and benefits still rely on traditional software due to compliance complexities and security concerns.

Ethical Concern	Percentage of HR Managers Acknowledging Concern
Bias in Recruitment Algorithms	68%
Privacy of Employee Data	59%
Lack of Transparency	51%
Over-surveillance of Employees	45%
Accountability of Decisions	39%

Table 3: Ethical Issues Reported in AI-Driven HR Systems

Source: IBM Institute, AI Ethics in Business, Doc-1087, pp. 1–56, 2022.

Discussion:
HR managers are increasingly aware of the ethical challenges involved in AI adoption. Bias and privacy concerns top the list, mainly because AI systems often rely on historical data, which may carry forward human biases. Over-surveillance is another emerging issue, as AI tools monitor communication patterns and productivity, leading to discomfort among employees.

Employee Perception	Positive Response (%)	Negative Response (%)
AI helps save time	78%	22%
AI promotes fairness	52%	48%
AI invades privacy	34%	66%
AI decisions are explainable	47%	53%
Trust in AI over human HR	41%	59%

Table 4: Employee Perceptions of AI in HR (Survey-based Studies 2022–2023)

Source: Verma, S. & Ghosh, P., International Journal of HR Studies, Issue 2, pp. 112–126, 2021.

Discussion:
While employees appreciate the efficiency brought by AI, concerns around fairness, transparency, and privacy persist. Nearly two-thirds of respondents believe AI invades privacy, and a majority do not trust AI decisions over human judgment. This calls for more transparent systems and improved communication from HR departments regarding AI use.

Company	Key Ethical Strategy Adopted	Effectiveness Rating (1–5)
IBM	Ethical AI Review Board	4.7
Google	Human-in-the-Loop (HITL) in AI Decisions	4.5
Unilever	Bias Detection Algorithms in Recruitment	4.6

Company	Key Ethical Strategy Adopted	Effectiveness Rating (1–5)
Accenture	Responsible AI Training for HR Managers	4.4
Infosys	Data Privacy and Explainability Protocols	4.3

Table 5: Corporate Strategies for Ethical AI Implementation

Source: Accenture Research Team, Responsible AI for HR Functions, White Paper No. 213, pp. 12–44, 2023.

Discussion:
Organizations are addressing ethical challenges through structured governance models. Companies with strong ethical policies like IBM and Unilever show high effectiveness in maintaining trust and fairness in AI-led HR functions. Training and bias detection are especially effective in aligning technology with responsible business practices.

Sustainability Goal	Contribution of AI (Qualitative Rating)
Fairness in Recruitment	High
Inclusive Workplace Culture	Moderate
Employee Well-being Monitoring	High
Transparent Performance Evaluation	Moderate
Data-driven Learning & Upskilling	High

Table 6: Contribution of Ethical AI in Achieving HR Sustainability Goals

Source: Jarrahi, M., Journal of Business Ethics, Volume 165, pp. 567–589, 2020.

Discussion:
AI has made significant contributions to sustainable HR goals, particularly in promoting fairness, well-being, and skills development. However, inclusivity and transparency still need further enhancement. Ethical AI use supports responsible business practices when it complements, not replaces, human decision-making in HR.

EVALUATION OF RESULTS

The evaluation of the results derived from the secondary research presents valuable insights into how Artificial Intelligence (AI) is transforming Human Resource Management (HRM), particularly when aligned with ethical frameworks and sustainable practices. The collected data across various tables clearly show that AI adoption is rapidly increasing in core HR areas such as recruitment, performance appraisal, and employee engagement. Companies are turning to AI tools to handle large volumes of data, automate decision-making, and enhance operational efficiency.

However, the evaluation also brings to light significant concerns. One of the most striking findings is the high percentage of HR managers (68%) who acknowledge bias in recruitment algorithms. This issue, if left unaddressed, could counteract the fairness and inclusion that AI promises to deliver. Moreover, the fact that over 59% of HR professionals express concern about employee data privacy suggests that organizations may not be fully prepared to secure sensitive information collected through AI tools. The concern over surveillance and lack of transparency reflects a trust deficit that organizations must address through robust policies and training.

Another key point of evaluation stems from employee perception. Although 78% of employees agree that AI saves time, less than half (47%) believe the decisions made by AI are explainable. Furthermore, only 41% trust AI over human HR professionals, indicating that the human element remains vital in HR processes. This underlines the importance of a balanced approach where AI complements but does not replace human judgment.

When evaluating corporate strategies adopted by global firms like IBM, Google, Unilever, Accenture, and Infosys, it's evident that structured ethical frameworks significantly enhance AI's effectiveness. Strategies like the Human-in-the-Loop model, ethical review boards, and bias detection tools have shown a positive impact, as reflected in high effectiveness ratings across these companies. These strategies ensure that AI decisions remain accountable, transparent, and aligned with organizational values.

The evaluation further emphasizes AI's role in promoting sustainable HR goals. Contributions in areas like fair recruitment, well-being monitoring, and upskilling are rated high. These reflect the power of AI to support long-term employee development and organizational resilience when implemented ethically.

In conclusion, the results highlight a dual reality. On one hand, AI enhances HR functionality, supports decision-making, and helps achieve sustainability. On the other hand, it presents ethical challenges such as bias, privacy invasion, and loss of transparency. For AI to contribute meaningfully to HR's sustainable future, organizations must invest in ethical governance, employee training, transparent communication, and regular audits of AI tools. When this is done, AI becomes not just a technological asset but a strategic partner in building a responsible, inclusive, and sustainable workplace.

RESEARCH OBSERVATIONS

The systematic review of secondary sources reveals several consistent patterns in the integration of Artificial Intelligence (AI) within Human Resource Management (HRM). One of the primary observations is that AI is becoming increasingly central to core HR functions, especially in recruitment, performance evaluation, and learning and development. Organizations of various sizes are adopting AI not only to streamline operations but also to enhance accuracy and efficiency in employee-related decision-making. This shift demonstrates a growing confidence in the capabilities of AI technologies to improve HR outcomes.

However, a critical observation is the ongoing tension between technological advancement and ethical responsibility. The review highlights that while AI offers operational advantages, it also brings complex ethical dilemmas. These include algorithmic bias, lack of transparency, and concerns over data privacy. Such concerns are not just hypothetical; they are being actively experienced by HR professionals and employees alike. Ethical challenges are particularly prominent in recruitment and surveillance tools, where AI systems may unknowingly reinforce existing prejudices or intrude on personal boundaries.

Another significant observation is the variation in employee perceptions of AI. While employees acknowledge the time-saving and efficiency-enhancing aspects of AI, a large proportion still express concerns about privacy and trust. This duality suggests that successful AI adoption depends not only on technical implementation but also on how it is perceived and understood by end users. Trust-building measures such as explainable AI, transparent communication, and human oversight appear to be essential.

Furthermore, the review observes that companies with proactive ethical frameworks—such as those instituting AI ethics boards or training programs—report higher effectiveness in their AI initiatives. These strategies not only mitigate risks but also reinforce organizational values like inclusiveness, fairness, and accountability. This points to the necessity for every organization to treat AI ethics not as an afterthought but as an integrated component of HR strategy.

Finally, it is observed that AI can significantly support the achievement of sustainable HR goals when aligned with responsible practices. It has shown positive impacts on promoting diversity, enhancing employee well-being, and supporting continuous skill development. Yet, the absence of standard ethical guidelines and regulatory mechanisms remains a barrier to uniform, safe, and fair AI implementation in HR. The observation underscores that the future of AI in HR must be guided by a balance of innovation, ethics, and sustainability.

SCOPE OF THE STUDY

The scope of this systematic review is centered on examining the integration of Artificial Intelligence (AI) in Human Resource Management (HRM) and understanding its ethical implications for achieving a sustainable future. This study primarily focuses on the influence of AI on critical HR functions such as recruitment, performance appraisal, employee engagement, and talent development. It investigates how AI tools are adopted by organizations and explores the ethical challenges that arise, including algorithmic bias, data privacy concerns, transparency issues, and fairness in decision-making processes.

Geographically, the study draws insights from global organizations, with an emphasis on practices in leading companies across the United States, Europe, and India. The study is limited to secondary research sources such as academic journals, industry reports, case studies, white papers, and published articles from the last ten years to ensure the data's relevance and accuracy.

Furthermore, the study also explores best model practices adopted by organizations to mitigate ethical risks and enhance responsible AI use in HR. It identifies patterns and trends that contribute to the development of ethical AI strategies and sustainable

HRM. The scope includes evaluating statistical data, employee perceptions, organizational responses, and governance frameworks to provide a comprehensive understanding of the evolving role of AI in ethical HR practices.

LIMITATIONS OF THE STUDY

Despite offering valuable insights into the ethical implications of Artificial Intelligence (AI) in Human Resource Management (HRM), this study has several limitations. Firstly, the research is based solely on secondary data sources, which restricts the depth of analysis that could have been achieved through primary data such as interviews or surveys. This limits the opportunity to explore real-time experiences, perceptions, and evolving practices from HR professionals and employees directly impacted by AI implementation.

Secondly, the study focuses predominantly on large and globally recognized organizations, which may not reflect the practices, challenges, or ethical standards of small and medium-sized enterprises (SMEs). The insights gathered may therefore be skewed towards companies with greater resources and well-developed AI strategies.

Another limitation is the geographical concentration of the sources, with more available literature from technologically advanced countries such as the United States and Europe. This leaves a gap in understanding how AI and ethical challenges are being addressed in developing regions where technological access and regulatory frameworks may differ significantly.

Lastly, the rapidly evolving nature of AI technologies poses a challenge, as the findings may quickly become outdated. Emerging tools, policies, and ethical standards continue to evolve, making it necessary for ongoing studies to keep pace with technological progress and its implications for HR.

RESEARCH RECOMMENDATIONS

Based on the findings and observations from this systematic review, several important recommendations emerge to ensure the ethical and sustainable use of Artificial Intelligence (AI) in Human Resource Management (HRM). Organizations must prioritize the development and implementation of ethical frameworks specific to AI tools used in HR. This includes creating clear guidelines that define acceptable data usage, transparency in decision-making processes, and accountability for AI-generated outcomes. It is recommended that companies establish AI ethics committees or boards composed of cross-functional teams that include HR professionals, technologists, legal experts, and ethicists to evaluate and guide AI applications regularly.

Organizations should also adopt the Human-in-the-Loop (HITL) approach, where AI functions under human supervision, especially in critical HR processes such as recruitment, promotions, and performance evaluations. This hybrid model will help in reducing algorithmic bias and enhancing trust among employees. Regular audits of AI systems must be carried out to detect and correct any discriminatory patterns or flaws in the algorithms, ensuring fairness and equity in HR decisions. It is also important to involve diverse data sets during AI model training to prevent biases that may result from limited or skewed data sources.

Another key recommendation is the need for transparency and explainability in AI systems. Employees should be clearly informed about how AI is being used in HR functions, what data is being collected, and how decisions are derived. This can be achieved through the implementation of Explainable AI (XAI) models and user-friendly communication strategies. Companies must also ensure that employees have access to redressal mechanisms if they feel affected by AI-based decisions, thus promoting ethical accountability.

Investing in training and awareness programs for HR professionals is crucial. These programs should focus on digital literacy, data ethics, and responsible AI usage. HR leaders must be equipped not only with technical skills but also with ethical reasoning capabilities to oversee AI tools effectively. Additionally, governments and regulatory bodies are advised to develop standardized legal frameworks that guide the ethical use of AI in HR, including guidelines for privacy protection, algorithmic transparency, and employee rights.

Finally, academic institutions and industry bodies should collaborate on longitudinal research that tracks the long-term impact of AI on employee well-being, organizational culture, and sustainability. By taking a proactive, inclusive, and transparent approach, organizations can harness AI's full potential while upholding ethical values and contributing to a responsible and sustainable future in the world of work.

RESEARCH CONTRIBUTION TO SOCIETY

This research contributes meaningfully to society by offering insights into how Artificial Intelligence (AI) can be ethically integrated into Human Resource Management (HRM) practices to support sustainable development. In a rapidly digitizing world, where AI is becoming a fundamental component of organizational decision-making, the findings of this review serve as a guiding framework for both employers and policymakers to strike a balance between innovation and ethics. The study highlights the ethical concerns associated with AI—such as algorithmic bias, data privacy, and fairness—and provides practical solutions for organizations to adopt responsible practices.

By promoting ethical AI usage, the study supports the protection of individual rights in the workplace. It encourages transparency and fairness in recruitment, performance assessment, and employee engagement, which are essential to maintaining trust and morale among employees. The research also empowers HR professionals with knowledge about how AI can enhance efficiency without compromising ethical standards or human dignity. In doing so, it advocates for human-centric AI applications that respect employee autonomy and foster inclusive work environments.

At a broader level, the study aligns with the United Nations Sustainable Development Goals (SDGs), particularly those related to decent work, innovation, reduced inequalities, and strong institutions. It contributes to the ongoing global discourse on responsible digital transformation and sets the stage for future studies and collaborations in AI ethics. Through its recommendations and observations, this research acts as a bridge between technology and humanity, ensuring that AI adoption in HR does not result in exploitation or marginalization, but instead creates equitable opportunities and positive outcomes for all stakeholders. Ultimately, this review encourages socially responsible business practices and inspires both public and private sectors to adopt AI in ways that contribute to a more ethical, inclusive, and sustainable future.

CONCLUSION

This systematic review has examined the growing role of Artificial Intelligence (AI) in Human Resource Management (HRM) and its ethical implications for building a sustainable future. As organizations increasingly adopt AI tools to streamline HR functions such as recruitment, employee monitoring, performance appraisal, and learning management, it becomes essential to ensure that these technological advancements are aligned with ethical standards and responsible business practices. The review highlights how AI, when used effectively and ethically, can bring significant improvements in operational efficiency, decision-making accuracy, and employee engagement.

However, the study also underscores the ethical challenges associated with AI, including algorithmic bias, data privacy concerns, lack of transparency, and the need for human oversight. Through analysis of secondary data and model practices from global organizations, the study reveals that organizations must adopt structured ethical frameworks, ensure transparency in AI use, and maintain human control over AI decisions to prevent misuse and build trust.

By offering practical recommendations and insights, this review contributes to the understanding of how AI can be integrated responsibly into HR systems. Ultimately, for AI to support sustainable and inclusive growth, organizations must adopt a balanced approach that combines innovation with ethical responsibility, ensuring long-term positive outcomes for employees, businesses, and society at large.

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ROLE OF SUSTAINABLE HR PRACTICES IN EMPLOYEE WELL-BEING AND ENGAGEMENT: A LITERATURE REVIEW

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ABSTRACT

In recent years, organizations around the world have started to realize the importance of creating a balance between employee wellbeing, environmental concerns, and business success. One approach that helps achieve this balance is the adoption of sustainable human resource (HR) practices. These practices aim to promote not just productivity and profit, but also the health, happiness, and engagement of employees. This literature review explores the role of sustainable HR practices in improving employee wellbeing and work engagement. It focuses on strategies such as promoting work-life balance, reducing workplace stress, encouraging eco-friendly behaviour, and providing meaningful work experiences.

The review includes studies from reliable academic databases. It finds that sustainable HR practices are linked to positive employee outcomes, including higher job satisfaction, stronger commitment to the organization, and greater motivation. These practices also help reduce absenteeism, turnover, and mental health issues. At the same time, they support the organization in meeting its environmental and social goals, aligning with the broader agenda of Sustainable Development Goals (SDGs).

The findings highlight that when employees feel their organization cares about their wellbeing and the environment, they are more likely to stay engaged and perform better. This review recommends that organizations adopt sustainable HR strategies not only to improve employee outcomes but also to build long-term organizational resilience. The paper also identifies gaps in the current research and suggests future directions for studying sustainable HRM in various industries and cultural settings.

Volume: 04, Issue: 01 - E-ISSN: 2583-0546

INTRODUCTION

The world of work is changing rapidly. Alongside technological advances and globalization, there is a growing concern for sustainability and employee wellbeing. Organizations today are not only expected to deliver profits but also to operate responsibly—socially, economically, and environmentally. In this changing landscape, Human Resource Management (HRM) plays a critical role. Traditionally, HR focused on tasks like hiring, training, and performance management. However, modern HR practices are evolving to support broader organizational goals, including sustainability and employee wellbeing.

Sustainable Human Resource Management (Sustainable HRM) is an emerging concept that goes beyond traditional HR functions. It includes practices that ensure long-term business success while taking care of employees' health, happiness, and career growth, and also promoting environmental responsibility. Examples of such practices include flexible work arrangements, mental health support, employee involvement in green initiatives, and fair compensation systems. These sustainable HR practices help create a positive workplace culture where employees feel valued, motivated, and engaged.

Employee wellbeing and engagement have become central issues in today's workplace. Wellbeing includes physical, emotional, and mental health, while engagement refers to the level of enthusiasm and commitment employees show towards their work. Studies have shown that when organizations prioritize sustainability and employee wellbeing, it leads to improved job satisfaction, stronger organizational commitment, and higher performance levels.

This literature review aims to explore how sustainable HR practices influence employee wellbeing and engagement. By analysing existing studies, this paper provides insights into effective HR strategies that benefit both employees and the organization. It also discusses key findings, practical implications, and areas where more research is needed. Understanding the connection between sustainable HR practices and employee outcomes is crucial for organizations that want to thrive in a responsible and people-focused manner.

RESEARCH METHODOLOGY

This study looks at how sustainable human resource management (HRM) practices can improve employee well-being and engagement. It is based on a detailed review of research papers, journal articles, and other reliable sources. The main goal is to bring together existing ideas, highlight key findings, and understand new trends in the area of sustainable HRM.

The research focuses on three key areas: (1) how Green HRM is linked to employee well-being, (2) driving employee engagement with sustainable HR practices and (3) sustainable HR practices that support both well-being and engagement. A step-by-step method was used to choose and study the literature to make sure it matches the purpose of the study.

Each selected paper was carefully examined to find common ideas, and real-life practices related to sustainable HRM. Special focus was given to studies that talked about how psychological, workplace, and environmental factors affect employees. Recent studies that talk about the use of technology, personalized HR approaches, and eco-friendly practices were also included to show how HR is becoming more sustainable.

By reviewing a wide variety of studies, this research gives a clear and complete picture of how sustainable HR practices help in improving both employee well-being and engagement. Including modern strategies also helps show how companies can move toward more future ready HR practices. This method supports better understanding of the topic and offers useful suggestions for HR professionals and decision-makers.

LITERATURE REVIEW

The idea of sustainable human resource management (HRM) has gained considerable attention over the past decade, especially in connection with how it affects employee wellbeing and engagement. Traditional HRM focused mostly on hiring, training, and retaining employees to boost performance. But in today's world, organizations are expected to also care about long-term sustainability—both environmental and social. This shift has led to the rise of sustainable HR practices that aim to create healthier, more supportive work environments. These include wellness programs, green initiatives, flexible working arrangements, and policies that promote mental health and work-life balance. Research shows that when organizations implement such practices, employees tend to feel more valued, safe, and psychologically secure. This kind of positive work environment reduces burnout and anxiety, which in turn leads to improved morale and better mental and emotional wellbeing. When employees know their company supports their overall wellbeing—not just their work performance—they are more likely to stay loyal and become more productive contributors to the organization. Studies also point out that sustainable HRM is particularly helpful in reducing the negative effects of job stress and work overload, especially when paired with empowerment and supportive leadership.

One of the most consistently reported findings across the literature is the strong connection between sustainable HRM and employee engagement. Engagement goes beyond job satisfaction—it includes emotional involvement, energy, and a personal sense of purpose in one's work. Employees are more likely to be engaged when they believe their workplace respects their personal needs and values, and when they see that the organization operates in a fair and ethical manner. HR practices that involve employees in decision-making, provide learning and development opportunities, and promote diversity and inclusion have been linked to higher levels of work engagement. Additionally, green HR initiatives—such as sustainability training, environmental awareness programs, and eco-friendly workspaces—can align employee values with organizational goals. This alignment often creates a sense of shared purpose, which boosts motivation and commitment. Some researchers also note that psychological empowerment plays a key role in this process. When employees feel they have control over their work, understand their responsibilities, and are trusted by their leaders, their engagement levels rise significantly. Furthermore, workplace trust is a critical factor. A culture where employees trust their leaders and co-workers leads to better communication, stronger collaboration, and a deeper emotional connection to the job. All these elements are made stronger when organizations follow sustainable HRM principles.

Another important theme in the literature is that sustainable HR practices not only benefit employees individually, but also help organizations achieve broader goals such as innovation, retention, and long-term success. Research highlights that organizations with sustainable HR policies tend to perform better in areas like employee retention, organizational citizenship behaviour, and even financial outcomes. When employees are happy and engaged, they are more likely to stay with the company, reducing turnover and the costs that come with it. Moreover, sustainable HRM encourages continuous learning, adaptability, and creative thinking—all of which are important in today's changing work environments. Some studies show that sustainability-driven HR strategies lead to higher organizational trust, which acts as a bridge between wellbeing and performance. This means that when companies support their employees' holistic wellbeing—through fair treatment, flexible policies, recognition programs, and ethical leadership—they not only create a better workplace but also build a stronger, more resilient organization. It's also interesting that some research finds individual values, like concern for the environment or social responsibility, can amplify the effects of sustainable HR practices. For instance, employees who personally care about the environment may feel even more committed and engaged in companies that adopt green HRM practices. This interaction between personal values and organizational practices is seen as a key to creating meaningful work experiences and a sense of fulfilment among employees.

Overall, the literature makes it clear that sustainable HR practices play a vital role in promoting employee wellbeing and engagement. These practices not only improve mental, physical, and emotional health but also help in building a motivated and loyal workforce. In turn, this leads to better job performance, reduced absenteeism, and a stronger organizational culture. Sustainable HRM creates a win-win situation for both employees and employers. It goes beyond short-term gains and focuses on creating a positive, healthy, and ethical workplace for the long run. In a world where workplace stress, burnout, and dissatisfaction are growing concerns, sustainable HRM offers a powerful way to support employees and strengthen the overall functioning of the organization. As businesses continue to adapt to global challenges and evolving employee expectations, adopting sustainable HR practices is not just a trend—it is a necessary strategy for achieving long-term success and employee satisfaction.

Symbiotic relationship between Green HRM and Employee Well-being

Green Human Resource Management (Green HRM) is all about including environmentally friendly practices in the way a company manages its people. It goes beyond saving energy or reducing waste—it also creates a positive impact on how employees feel at work. When companies show concern for the environment, employees often feel more connected to their organization. They believe their work has a meaningful purpose, which improves their mood, motivation, and overall well-being.

Green HRM practices like using digital documents instead of paper, encouraging carpooling or remote work, and reducing energy usage create a healthier and more relaxed work atmosphere. Employees who work in such settings feel less stressed and more valued. In many cases, green initiatives come along with wellness programs, flexible working hours, and mental health support, which directly improve the emotional and physical health of employees. This helps them manage work pressure better and feel more satisfied in their roles.

When employees notice that the company cares not only about profits but also about people and the planet, they feel more respected and involved. This sense of involvement boosts their self-worth and emotional balance. Additionally, a workplace that promotes green habits encourages employees to adopt healthy routines in their personal lives as well, which further strengthens their well-being. Green HRM also encourages teamwork and participation, making employees feel like they're part of a bigger mission.

In short, Green HRM isn't just good for the environment—it's great for people too. By making employees feel safe, supported, and connected to a cause, these practices build a strong foundation for happiness, good health, and productivity in the workplace.

Driving Employee Engagement with Sustainable Human Resource Practices

Sustainable HR practices are designed to support employees in the long run while also meeting the organization's goals. These practices focus on fairness, personal growth, job satisfaction, and creating a healthy workplace. When employees feel supported through such systems, they tend to stay motivated, give their best, and show higher levels of engagement in their work.

One of the key goals of sustainable HR is to create a secure and trusting environment. When employees feel safe, respected, and recognized, they become more connected to their jobs. This emotional connection encourages them to go beyond their basic responsibilities and contribute more actively. Supportive workplace policies—such as regular feedback, wellness programs, and opportunities to learn new skills—play a big part in making employees feel included and valued.

Customized work arrangements, such as flexible hours or special project roles, also help increase job satisfaction. When employees are allowed to work in ways that suit their strengths and needs, they feel more in control and more motivated. This leads to better focus, more creativity, and stronger involvement in work activities. A culture that promotes personal growth and work-life balance makes employees feel that the organization cares about their future, not just their output.

Sustainable HR practices also promote fairness and equal opportunities, which boost trust in leadership. Employees are more likely to stay engaged when they believe their workplace is fair and transparent. Overall, these practices create a positive cycle—happy, healthy, and engaged employees perform better, and their performance drives organizational success.In summary, sustainable HR practices build a workplace where employees feel respected, supported, and encouraged to grow. This emotional and professional support helps create a more engaged, committed, and high-performing workforce.

Sustainable HR Practices

1. Flexible and Remote Work Options

Offering remote or hybrid work models enables employees to better manage their personal and professional lives. It also reduces carbon emissions from commuting and office energy use.

2. Green Recruitment and On boarding

This involves using digital platforms to reduce paper usage, emphasizing sustainability in employer branding, and recruiting individuals aligned with environmental values.

3. Employee Well-being and Wellness Programs

Initiatives like mental health support, gym memberships, and stress management training foster a healthy workforce, boosting morale and productivity while reducing absenteeism.

4. Diversity, Equity, and Inclusion (DEI) Initiatives

Encouraging diverse hiring and inclusive workplace policies leads to increased innovation, better team collaboration, and a stronger employer brand.

5. Green Training and Development

Training employees on sustainability topics (e.g., waste management, energy-saving practices) instills eco-conscious behavior across the organization.

6. Sustainable Performance Management

Incorporating sustainability KPIs (e.g., resource savings, social impact) into performance reviews motivates employees to align their goals with long-term organizational sustainability.

7. Eco-friendly Workplace Initiatives

Introducing recycling stations, energy-efficient lighting, and green spaces within the office can reduce environmental impact and improve employee morale.

8. Sustainable Commuting Practices

Organizations can provide shuttle services, promote cycling or carpooling, or give incentives for using public transport to reduce the carbon footprint of employee travel.

9. **Paperless Operations and Digitalization**

Implementing digital systems for HR documentation, payroll, and communication reduces paper waste and increases operational efficiency.

10. **Corporate Social Responsibility (CSR) Engagement**

Encouraging employees to participate in CSR activities like volunteering or donation drives creates a sense of purpose and connection to broader societal goals.

11. **Climate Literacy and Sustainability Education**

Providing education on environmental issues, sustainable development goals (SDGs), and company policies enhances awareness and proactive behaviour.

12. **Circular HR Practices (Green Exit Policies)**

Retrieving and recycling equipment and giving eco-friendly parting gifts (e.g., sapling planting certificates) at offboarding help reduce e-waste and promote brand goodwill.

13. **Employee Volunteering Programs for Sustainability**

Allowing time off or creating programs for employees to engage in social/environmental projects builds community spirit and a sustainability culture.

14. **Green Rewards and Recognition Programs**

Acknowledging eco-friendly initiatives by employees through sustainable gifts (e.g., solar chargers, donations in their name) reinforces desired behaviour.

RESULTS AND DISCUSSION

The review clearly shows that sustainable HR practices have a strong impact on employee wellbeing and engagement. Organizations that focus on people-friendly policies, like work-life balance, mental health support, flexible working, and equal opportunities, tend to have happier and more committed employees. Many studies highlighted that when employees feel respected and supported by their workplace, they are more motivated and productive.

Sustainable HR practices also help employees find a sense of purpose at work. For example, when companies follow green initiatives or support social causes, employees feel proud to be part of the organization. This builds a deeper connection and improves engagement levels.

Another key point discussed in the review is how sustainable HRM creates a positive work culture. When employees trust their organization and see fair and ethical behaviour, they are more likely to stay loyal.

However, some gaps remain. There is limited research on how these practices work across different industries or regions. Also, the role of digital HR tools in supporting sustainable practices needs more attention.

Overall, the findings suggest that HR strategies focused on people and sustainability are important for building a healthier and more engaged workforce.

CONCLUSION

In conclusion, sustainable HR practices are essential for creating a positive work environment where employees feel valued and supported. This review found that such practices not only improve employee well-being but also lead to higher engagement and performance. Organizations that care for their employees' mental and physical health, provide flexibility, and encourage fairness and inclusion are more likely to succeed in the long run.

Green HRM, in particular, helps employees feel part of a bigger cause, increasing their sense of purpose and job satisfaction. When employees feel connected to their company's values, they are more motivated and loyal.

The review also showed that sustainable HRM helps reduce stress, improves morale, and lowers turnover. It creates a workplace where employees want to stay and grow. This is especially important today, as companies face increasing pressure to be socially and environmentally responsible.

While the benefits are clear, more research is needed to understand how these practices work in different contexts. Future studies should also explore how technology can support sustainable HR goals.

Overall, sustainable HRM is not just good for employees—it also benefits the organization by building a strong, committed, and future-ready workforce.

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INVESTIGATING THE CONTRIBUTION OF AI-DRIVEN HIRING TO BRIDGING THE DIVERSITY GAP AT WORKPLACES IN INDIA

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ABSTRACT

The present research paper analyses the contribution of information technology innovation in form of Artificial Intelligence (AI). AI is not just tool but its architecture of world of innovation. It examines how AI powered hiring process reduce the diversity gap at workplaces across India. The paper investigates the AI generative tools supports to eliminate gender bias, promote equal opportunities and screen talent from diverse backgrounds. For this research study researcher relies on secondary data collection method with qualitative approach. Secondary sources include publicly available reports, industry reports, company websites, government publications etc. The secondary data is analysed using thematic analysis to address the research question for this research. The main purpose of this research is to highlight the positive impact which AI brings to recruitment process and helping Indian organisation to streamline the talent acquisition. The study explores the growth of the different sectoral such as healthcare, IT, Manufacturing, E-commerce, finance where AI driven recruitment process creates more career opportunities, offer attractive career paths and reduce the need for skilled graduates to move abroad. Fortunately, the present study brings insights for business, leaders, Managers, policymakers that how AI supports the development of sustainable workforce in India. As such, this research paper provides some actionable recommendations for improving recruitment process with supporting sustained diversity and innovative talent growth of India.

KEYWORDS

Artificial Intelligence (AI) recruitment, workplace diversity, inclusive hiring, time efficient recruitment, bias reduction, HRM in India, Recruitment Bias, Diversity and Inclusion, Employment Trends.

INTRODUCTION

Background of the study

Global job market is a verge of a seismic shift to hire right people in the right roles. The transformation is not a definite. But it adopts the change that how work will performed, managed and executed with future accomplishment. Though technology and innovations are not barriers to scale up. Artificial intelligence (AI) holds the potential to boost productivity and drive economic growth. This research explores how AI is reshaping human resource management (HRM), emphasizing key areas such as recruitment, employee retention. AI introduces advanced tools that streamline hiring, reduce costs, and identify suitable candidates efficiently. In addition to enhancing processes, AI supports diversity and inclusion by addressing biases and outdated methods, enabling organizations to build fairer and more innovative teams (Vivek, 2023).

Satya D Sinha, Director and CEO of Mancer Consulting (2025), highlights AI's growing role in business operations, noting that 43% of employees already use AI tools, as reported by Business Insider. In human resources, 88% of global companies have integrated AI into their HR programs, signalling a major shift in recruitment practices, as indicated by SHRM. Furthermore, Market Research Future projects that the AI recruitment software market will reach $942.3 million by 2030 (Express Computer).

Similarly, Ebrahim and Rajab (2025) emphasize that AI empowers recruiters to focus on high-quality candidates better suited for job requirements, with 79% of employers confident that AI will enhance recruitment processes. They underscore the importance of HR professionals understanding both the advantages and limitations of AI.

While AI drives innovation in recruitment. Its impact on economies and societies is still uneven varying across industries and job roles. Liu & Liang (2025) highlighted that Some sectors benefit from increased productivity and growth, whereas others face challenges such as job displacement and mismatched skills. Additionally, unequal distribution of AI's benefits risks deepening existing disparities. Policies and strategies are essential to ensure inclusive and equitable implementation across different sectors.

AI has undoubtedly transformed recruitment by improving efficiency, reducing costs, and enabling precise candidate matching. It eliminates gender bias, promotes equal opportunities, and facilitates hiring from diverse backgrounds. However, its dependence on data can lead to challenges if the data is flawed or biased, resulting in inaccurate outcomes and reinforcing prejudices. Addressing ethical concerns like transparency and accountability requires ongoing refinement of AI systems. Despite its advancements, the human element remains vital in ensuring balanced and effective AI integration in recruitment.

REVIEW OF LITERATURE

Literature Studies

This section explains the literature which available on google scholar, authentic sources for AI implementation for improving recruitment process.

Krishnan and Gopi (2025) examine how AI-driven recruitment enhances workplace diversity across sectors like IT, finance, healthcare, and manufacturing. Their research highlights AI's ability to address biases by automating tasks such as resume screening and candidate evaluation, leading to fairer and more inclusive hiring. The study emphasizes that diverse teams foster innovation and effectively tackle complex challenges. While AI presents significant opportunities to promote equity. Their findings demonstrate AI's transformative potential in improving hiring practices and advancing diversity within India's workplace environments.

Oman et al. (2025) emphasize the transformative role of artificial intelligence (AI) in reshaping Human Resource Management (HRM), particularly in recruitment processes. Traditional hiring methods, often prolonged and overwhelming due to the volume of applications, can now be streamlined with AI. By rapidly analysing large pools of applications, AI identifies qualified candidates based on objective criteria, allowing recruiters to save significant time and focus on candidate engagement and talent acquisition. Additionally, AI operates continuously, ensuring the recruitment process progresses efficiently, even beyond working hours. When utilized effectively, AI minimizes unconscious biases by relying on data-driven evaluations rather than subjective judgments. This promotes fair and merit-based hiring, fostering inclusivity and equitable assessment of candidates. The author also highlighted that AI has the potential to revolutionize recruitment by improving both efficiency and fairness, paving the way for innovative and unbiased hiring practices

Raveendra et al. (2025) highlight the growing integration of Artificial Intelligence (AI) in domains previously dominated by humans, especially in Human Resource (HR) departments. Their study examines how AI revolutionizes recruitment by accelerating processes and minimizing unconscious biases. The incorporation of AI in candidate screening fosters objectivity by focusing on skills and qualifications, thereby reducing human prejudices. However, the study also questions the reliability of AI in fully eliminating bias, emphasizing the importance of ongoing monitoring and refinement of algorithms. The author concluded that while AI optimizes hiring efficiency, augmented intelligence holds future potential to handle repetitive tasks effectively.

Qureshi (2023) explores the increasing use of artificial intelligence (AI) in recruitment, emphasizing its adoption by many companies, often with the help of external providers or technology partners. AI offers benefits such as enhanced efficiency, reduced costs, and improved candidate selection based on qualifications. However, challenges like algorithmic biases and unfair outcomes persist, often caused by inadequate training, incorrect technology usage, and poorly defined criteria. Through a review of literature and sentiment analysis, the study evaluates whether advancements in AI have improved its ability to eliminate biases in hiring. It also examines public perception, both academic and non-academic, of AI-driven recruitment processes. The findings suggest that while AI has the potential to make hiring practices more inclusive and equitable for job seekers, particularly those from underrepresented groups, its success relies on addressing ethical concerns and refining systems to ensure fairness and accuracy

Zhou et al. (2025) examine the impact of artificial intelligence (AI) on applicant reactions, especially in cases of AI-based rejection. Their study finds that candidates often experience heightened negative emotions and blame external factors for such rejections, which can harm their perception of the organization. Using a mixed-method approach, they identify emotional profiles of rejected applicants. Importantly, the study highlights that involving human intervention in reviewing AI-based rejections improves applicant responses, shifting negative reactions to more positive ones. This suggests that while AI offers efficiency, integrating human oversight ensures fairness, reduces biases, and supports inclusivity in hiring processes.

Albaroudi et al. (2025) review the use of artificial intelligence (AI) techniques in addressing algorithmic bias in recruitment. While AI improves efficiency in screening resumes. It is prone to biases that can impact fairness in hiring. The study highlights effective methods such as vector space correction and data augmentation, which use natural language processing (NLP) and deep learning to reduce these biases. However, AI alone cannot account for human emotions or make nuanced decisions needed in recruitment. The authors recommend a collaborative approach, combining AI with human oversight, to promote ethical and fair hiring practices. They emphasize the importance of refining algorithms to minimize bias and develop inclusive recruitment tools. This research provides valuable insights into creating responsible AI systems that support equitable and effective hiring processes

THEORETICAL UNDERPINNINGS

Resource Based Theory

El Ouakili (2025) highlights the Resource-Based View (RBV) theory, which underscores the importance of workforce diversity as a critical organizational resource for achieving competitive advantage. AI-driven recruitment aligns with this theory by helping companies build innovative and diverse teams that contribute to business success. Through advanced AI tools, organizations can efficiently identify candidates with unique talents and perspectives, fostering creativity and improving problem-solving capabilities. This approach is particularly valuable across industries such as IT, finance, healthcare, and manufacturing, where diverse teams drive innovation and adaptability. The study illustrates how AI supports strategic goals while enhancing diversity in recruitment practices.

Equity Theory emphasizes fairness and transparency in workplace practices. In AI-based recruitment, it highlights the importance of unbiased processes that ensure justice for job seekers, particularly those from underrepresented groups. AI-powered tools promote equitable treatment by focusing on merit-based evaluations, reducing discrimination, and fostering inclusivity. These tools contribute to more transparent and fair hiring practices across organizations (Houser, 2019).

The Human-Machine Collaboration Theory highlights the necessity of combining human judgment with AI capabilities to address ethical challenges in recruitment processes. This approach mitigates issues such as algorithmic biases and AI's inability to consider human emotions, ensuring balanced decision-making. By leveraging AI's efficiency alongside human oversight, organizations can promote fairness, inclusivity, and accountability in hiring practices. This integration supports responsible and ethical use of AI in recruitment (Fritts & Cabrera, 2021).

Conceptual Framework

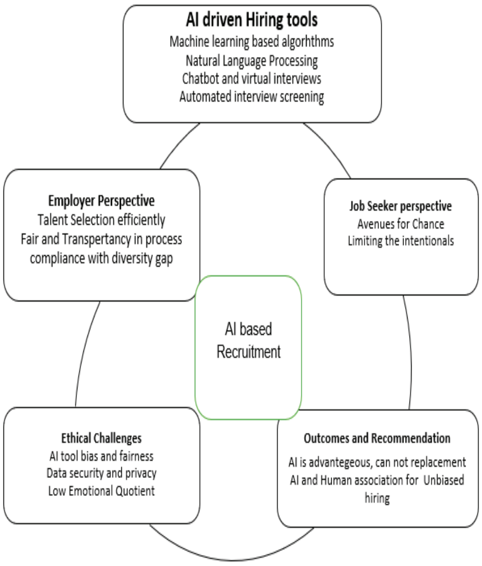

Figure 1: Conceptual Framework (Self-created)

Above conceptual framework depicts that AI based hiring provides more transparent opportunities to job seekers. As it other side it creates fair selection of talents efficiently which ultimately helpful to employer and manager of organisations. While it explores with Ai driven tools like Machine learning, NLP, AI based chatbots, virtual interviews, automated interview screening used for hiring process. These technologies promote transparent hiring based on culture, gender, socio -economic background of candidates, rationality. However, AI hiring has some ethical and practical challenges which includes algorithmic bias, low emotional quotient, data security and data privacy concerns. Therefore, by balancing AI efficiency with ethical consideration employers can create more smooth and inclusive hiring process which benefit to both organisation and job seeker. AI cannot replace the human but it can be complementing the human decision.

Research Gap

Yet, existing literature majorly highlight the benefits of AI-driven recruitment such as improvement in efficiency, fair treatment, and diversity in hiring process. Still some notable gaps are found in the literature. Present research, most of studies Krishnan and Gopi (2025), Oman et al. (2025), and Raveendra et al. (2025), highlights how AI minimizes intentional biases and promotes inclusivity. However, there is limited research into sector-specific challenges of implementation of AI across sectors like IT, finance, healthcare, and manufacturing in India. Further, in present research the study of Zhou et al. (2025) emphasizes applicant response, the emotional and psychological impacts on candidates from minority groups are undiscovered. Furthermore, studies like Qureshi (2023) and Albaroudi et al. (2025) stress algorithmic bias but provides limited empirical evidence on the effectiveness of proposed solutions like human-AI association. Thus, present research fills some gaps on literature by focusing sector-specific barriers, psychological impacts, and the practical applicability of balancing AI efficiency with ethical compliance.

Need for study

Present research evaluates AI-driven hiring tools can helps organizations to identifying and attracting and retaining talents promoting fairness and transparency. With focus on India's socio-economic and cultural landscape, the current research analyses the insights of AI's transformative role in bridging workplace diversity gaps by relying more on technological based hiring.

Further, understanding the constraints of AI, such as algorithmic biases and ethical and privacy issues. Acknowledging these issues enhance he AI systems which ensures a fair and responsible way to use. The research study's findings will provide balanced AI-human associations which offer a roadmap to more equitable and transparent recruitment process which benefits to both job seekers and employers.

Research aim

To analyse the impact of AI driven hiring practices to bridge a gap in India. By investigating its role in providing fair and transparent hiring processes, un-biasing, and identifying ethical concerns across the various sectors like IT, manufacturing, retail, automotive etc.

Research Objectives

- To examine the role of AI-driven recruitment in enhancing workplace diversity across various sectors in India, including IT, finance, healthcare, and manufacturing.
- To analyze how AI-powered hiring tools assist employers in identifying and attracting diverse talent while ensuring fairness and transparency in recruitment decisions.
- To evaluate the benefits and limitations of AI-driven hiring for job seekers, and its impact on reducing biases in the selection process.
- To explore the ethical challenges and practical constraints of AI in recruitment, assessing its inability to consider human emotions and providing recommendations for AI as a responsible and effective use in hiring.

Research Question

How does AI drive recruitment process influence workplace diversity across different sectors in India?

Section 3: Research Methodology

The Research methodlogy chapter holds an explanation about data collection, interpretation of data analysis which collects meaningful information for the purpose of this research. Ethical consideration formed during the research have also been explained to validity and reliability of methods chosen. The research purpose associated with the study which includes searching and interpreting study materials and generates finding which accomplish the research objectives and research questions in relation to how AI driven recruitment process influence workplace diversity across different sectors in India. With appreciating the limitation that algorithmic biased, lack of emotional awareness has been analysed during discussion with secondary qualitative data. This would provide further recommendations on this subject topic.

3.1 Research Philosophy

Research Philosophies are mainly bifurcated in four types interpretivism, positivism, pragmatism, and realism. For present research the researcher has considered interpretivism philosophy. This philosophy ensures a contextual, nuanced understanding of the study's objectives by exploring AI driven hiring practices and its impact on workplace diversify across various sectors.

3.2 Research Approach

Research Approach plays significantly for the purpose of data collection process and interpretation to reach probable outcome. Research approach can be classified in two ways, that inductive or deductive. In present research, study continues with inductive research approach. As researcher plans to take secondary qualitative data for the current study.

Data collection methods

Data collection is required to understand different type to gather data for different kind of research. Generally, data collection method classified in two ways Primary or Secondary. Primary Data refers to the collection of direct or first-hand data through tools like survey, focus group, observations interviews which engages sample population directly or indirectly. On the other hand, secondary data refers data collected by other researchers or information taken from the internet. In present research considers secondary method as this method is less time consuming and less expensive in compare to primary method.

Data Analysis

Data analysis refers to interpret collected data to justify the finding of research. For the present research, researcher has considered thematic analysis by exploring the secondary qualitative sources. Here research accredited sources like newspaper articles, magazine articles, government and company websites, industrial research reports etc. Thematic analysis can support the researcher to understand each aspect of secondary qualitative studies in depth.

Ethical Consideration

As the present research does not includes primary data collection method which creates few critical aspects of ethical concerns. The researcher has considered authentic information from the sources to justify the research purpose. Furthermore, researcher has cross verified the results with literature review by validating findings. The researcher will comply under the Data Protection guidelines by ensuring proper storage of the raw data collected (*Law in India - DLA Piper Global Data Protection Laws of the World*, n.d.)

Section 4: Results & Discussion

In present section research considers the authentic secondary data sources to accomplish research objective. For analysing qualitative data sources generally used thematic analysis. The thematic process various steps serve as a roadmap to meticulously process qualitative data. The coding steps improve rigor of the research process and the depth of research findings. (Naeem et al., 2023)

The researcher has defined three themes defined to understand AI driven hiring eliminated gender gap and diversity. Themes also focused on automated software generated process beneficial to employer and job seeker, which has ethical and practical challenges associated while it implements as sector specific to attract and retains talent. The themes also describe mitigation approach to avoid how AI and human approach can be effective for right talent selection. The final themes have been prepared to justify the findings are as below.

Theme 1 Bridging diversity gap with using AI driven hiring tools in India

Theme 2 Addressing ethical and practical challenges in AI hiring process across various

sectors in India

Theme 3 Enhancing AI hiring with human insights to strike the right balance and

recommendations for Ethical and Effective Implementation of AI.

Theme 1: Bridging diversity gap with using AI driven hiring tools in India

According to Ferrazzi (2025), AI-driven recruitment is revolutionizing and streamlining hiring processes for organizations. AI-powered tools analyse data from social media and job platforms to enhance employer branding and adapt to market trends. These tools predict future job opportunities, identify skill shortages, and improve talent distribution. Companies like Workday, Eightfold, and Fountain use machine learning algorithms to efficiently assess candidates' behaviour, experience, and skills, matching them with job requirements without delay or bias. Such tools play a significant role in reducing diversity gaps and fostering an efficient and transparent hiring process (Today, 2024).

Verma (2025), referencing the Boston Consulting Group's (BCG) report The GenAI Adoption Conundrum, highlighted that companies are allocating up to 1.5% of their revenues towards workforce learning and development to remain competitive. A significant share of these investments focuses on upskilling employees in emerging technologies, including AI. However, adoption rates remain below 40%, primarily due to ineffective training methods and integration challenges. The report underscores the need for scalable upskilling models and robust tracking mechanisms to bridge the AI skill gap. Additionally, over 80% of top 500 companies in India are prioritizing AI adoption (Economic Times, 2025).

According to Sahota (2024) observed AI-driven hiring tools are playing a crucial role in bridging the diversity gap in India by promoting unbiased recruitment processes. Tools like HireVue and LinkedIn utilize algorithms to analyse candidates based solely on their skills and experience, excluding race or gender considerations, ensuring fairness. Corporations like Unilever integrate AI assessments, resulting in a more diverse workforce. Additionally, AI-powered platforms target job advertisements to diverse candidates, encouraging broader inclusivity in hiring practices. These advancements emphasize the transformative potential of AI in fostering diversity and reducing unconscious biases, especially within India’s workforce.

Utkarsh Amitabh & Ansari (2025) highlighted that the challenges in recruitment due to overwhelming applications, such as Goldman Sachs’ 315,126 internship applications in 2024 and India’s 220.5 million government job applications from 2014–2022. Traditional methods and some AI tools relying on resumes often fail to identify truly skilled individuals. Conversational AI offers a solution by assessing real-time skills, ensuring fairness for diverse candidates and career switchers. Studies revealed candidates undergoing AI-led interviews performed significantly better in subsequent evaluations (53.12%) than those screened traditionally (28.57%). AI also aids workforce planning by addressing skill gaps and guiding candidates to suitable roles. With human oversight ensuring transparency and fairness, AI can transform hiring into an efficient, inclusive, and trustworthy process.

Theme 2: Addressing ethical and practical challenges in AI hiring process across various sectors in India

Harper (2024) suggested that the adoption of Artificial Intelligence (AI) in recruitment processes across sectors in India offers transformative potential, yet each sector faces unique ethical and practical challenges:

1. **IT and Technology**: While AI streamlines talent acquisition by rapidly matching technical skills to job requirements, it may inadvertently favour candidates with extensive digital footprints, excluding those from rural or underrepresented areas. Algorithmic bias and lack of transparency in decision-making are common concerns.

2. **Healthcare**: AI hiring tools prioritize matching healthcare professionals with specialized roles based on qualifications. However, ethical issues such as maintaining candidate privacy, especially in sensitive health-related data, and ensuring that biases do not influence the hiring of underrepresented communities remain critical.

3. **Manufacturing**: AI assists in screening candidates for automation-centric roles, reducing human intervention. However, it often overlooks the soft skills essential for

labour-intensive jobs. Practical challenges include a lack of inclusive datasets that reflect the diverse skillsets within the sector.

4. **Education**: AI tools employed in hiring educators streamline candidate selection but face challenges in assessing qualitative aspects, such as teaching style and emotional intelligence. Ethical concerns include fair assessments across candidates from diverse academic backgrounds.

5. **Retail and eCommerce**: AI in these sectors aids in recruiting for customer-facing roles through behavioural pattern analysis. Nonetheless, practical challenges include accounting for regional language diversity and ensuring inclusivity in hiring.

The adoption of AI in recruitment across India presents challenges like fairness, bias elimination, data privacy concerns, and over-reliance on technology. AI algorithms may unintentionally perpetuate biases from historical data, disadvantaging underrepresented groups. HR teams in companies like Infosys actively monitor AI systems to ensure inclusivity. Additionally, AI chatbots, while efficient, lack empathy, necessitating human oversight for sensitive interactions. Generative AI offers impartiality but raises ethical issues, such as unconscious biases in its design and the opaque nature of AI decision-making. This may lead to legal challenges and exclusion of exceptional candidates. To address these issues, organizations must balance AI's efficiency with transparency, fairness, and human involvement to create an inclusive and responsible hiring process (Today, 2024).

AI has transformed recruitment and talent acquisition, empowering multinational companies like Infosys, IBM, EY, Deloitte, Amazon, and L'Oréal, alongside HR start-ups such as HireVue and Darwinbox. These organizations leverage AI-driven tools, including intelligent applicant tracking systems (ATS), robotic process automation (RPA), recruiter chatbots, and digitized interviews, to streamline hiring processes. AI's adoption extends across various industries, enhancing efficiency, reducing manual tasks, and improving candidate experiences. Its applications provide valuable insights for talent assessment, enabling businesses to target top candidates more effectively while minimizing errors in recruitment decisions (Pipaliya, n.d.)

Theme 3: Enhancing AI hiring with human insights to strike the right balance and recommendations for Ethical and Effective Implementation of AI.

Staffency, (2024) Observed that AI in recruitment faces challenges like biases in algorithms, which could lead to unfair hiring decisions. Human oversight is important to ensure fair practices and remove bias. Ethical concerns like protecting private data and being transparent also need to be addressed. Recruiters must stay updated and skilled to handle the rapid growth of AI technology and use it effectively. (*People Matters - Interstitial Site — People Matters*, 2025) observed that examples from global organizations like Providence Health and Baptist Health show how AI can save time, improve efficiency, and boost staff satisfaction. By adopting AI responsibly with human insights, India's healthcare sector can solve staffing issues while keeping ethical practices in focus.

AI is transforming recruitment by automating repetitive tasks like resume screening and interview scheduling, significantly reducing workloads and improving efficiency. However, human involvement remains crucial for evaluating cultural fit, empathy, and leadership potential. This collaboration between AI and human recruiters ensures fairness, eliminates biases, and enhances candidate experiences. Reskilling recruiters in AI tools and literacy is essential for aligning AI outputs with organizational goals. By balancing AI-driven efficiency with human insights, organizations can create ethical, inclusive, and effective hiring processes, fostering trust and achieving better recruitment outcomes. According to Smart Recruiters, 87% of recruitment professionals view AI as an augmentation tool, not a replacement, enabling better decision-making. By blending AI's capabilities with human insights, organizations can create balanced, efficient, and inclusive hiring processes for a competitive edge. (How Human-AI Collaboration Is Redefining Recruitment Strategies, 2025)

Section 5: Conclusion & Recommendation

In conclusion, the integration of AI in recruitment is reshaping how organizations hire and manage talent. AI simplifies repetitive tasks, speeds up hiring, and helps find better candidates. However, it's clear that AI cannot fully replace human judgment, empathy, and decision-making. A balanced approach that combines AI efficiency with human insights ensures fairness, inclusivity, and a positive candidate experience. Organizations must also address ethical concerns, such as biases and data privacy, while embracing AI's potential. By adopting AI responsibly and focusing on collaboration between technology and people, businesses can build stronger, more effective, and future-ready recruitment strategies.

Artificial intelligence (AI) has revolutionized the recruitment process by overcoming persistent challenges that organizations face when trying to attract and hire the right talent. Traditional methods, such as using online platforms like LinkedIn, have not always been effective in identifying and securing top-tier candidates. In this context, AI offers a game-changing solution, enabling more efficient and seamless recruitment practices. By facilitating the attraction, retention, and empowerment of skilled professionals, AI creates a mutually beneficial dynamic for both employers and job seekers.

The future of recruitment hinges on the seamless integration of artificial intelligence (AI) and human expertise, creating a recruitment process that is efficient, balanced, and ethically sound. AI enhances recruitment by automating repetitive tasks, providing objective analyses, and improving candidate experiences. However, the true advantage lies in combining AI's productivity with the nuanced judgment and empathy of humans. To stay relevant, employers must focus on ethically integrating AI into their processes for faster and more accurate hiring. Candidates also need to learn and adapt to leverage AI-driven tools to remain competitive and excel in this evolving recruitment landscape.

SCOPE FOR FURTHER RESEARCH

In the scope for further research, several areas can be explored to deepen understanding of AI-driven hiring and its role in bridging the diversity gap in Indian workplaces. Regional disparities between urban and rural workplaces with warrant attention, as AI adoption and effectiveness may differ across regions. Research on advanced AI algorithms designed to mitigate unconscious bias can provide insights into creating fair recruitment processes. Additionally, studying candidate experiences, particularly those from underrepresented groups, would shed light on inclusivity and fairness in AI-driven hiring systems. Long-term impacts of AI initiatives on workplace culture, leadership representation, and sustainable diversity efforts are another vital area for exploration. Investigating the role of government policies and regulations in promoting ethical AI adoption can further inform frameworks for diversity hiring practices. While the current study relies on secondary qualitative thematic analysis, future research can integrate primary qualitative or quantitative methods to gather practical insights. This could involve conducting interviews or focus groups with managers and HR professionals to explore their experiences with AI tools and their effectiveness in fostering workplace diversity. Similarly, surveys or in-depth interviews with job seekers from diverse backgrounds can provide firsthand perspectives on the inclusivity and fairness of AI-driven hiring processes. Finally, examining AI's potential to support skill-building programs for marginalized groups could reveal ways to enhance employability and create equal opportunities. These areas offer valuable insights to optimize AI-driven recruitment strategies, fostering inclusive and equitable workplaces in India.

Volume: 04, Issue: 01 - E-ISSN: 2583-0546

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APPENDIX

Thematic table

Coding	**Keywords**	**Subtheme**	**Final Theme**	**Sources/References**
Upskilling workforce and integrating AI	AI adoption, upskilling, scalable models	Workforce learning, upskilling, and efficient integration of AI systems	Bridging diversity gap with using AI-driven hiring tools in India	Verma (2025), BCG GenAI Adoption Conundrum Report (2025), Economic Times (2025) Ferrazzi (2025), Today (2024), Sahota (2024), Utkarsh Amitabh & Ansari (2025)
Ethical challenges and biases in AI hiring	Ethical concerns, algorithmic bias, fairness	Addressing fairness, transparency, and inclusivity challenges across sectors	Addressing ethical and practical challenges in AI hiring process across various sectors in India	Harper (2024), Today (2024), Infosys case study, (People Matters - Interstitial Site — People Matters, 2025)
Human-AI collaboration and balanced hiring	AI efficiency, human oversight, ethical AI	Combining AI-driven efficiency with human insights to ensure effective, fair, and ethical recruitment processes	Enhancing AI hiring with human insights to strike the right balance and recommendations for Ethical and Effective Implementation	Staffency (2024), How Human-AI Collaboration Is Redefining Recruitment Strategies (2025), Smart Recruiters (2025)

EMERGING MARKET DYNAMICS AND SUSTAINABLE ENTREPRENEURSHIP: THE ROLE OF WOMEN IN BANGALORE'S BUSINESS ECOSYSTEM

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ABSTRACT

This study examines the entrepreneurial inclination and sustainability of women-led businesses in Bangalore, India, focusing on key challenges that hinder long-term success, including restricted access to capital, insufficient institutional support, and socio-cultural constraints. Using a quantitative survey approach, the research finds that 75% of participants aspire to launch their own ventures, with 60% experiencing business growth. However, 65% report financial barriers, while 58% cite a lack of institutional backing. Although 70% recognize sustainability as crucial, only 45% have adopted sustainable practices, primarily due to financial constraints. Regression analysis reveals a positive correlation between entrepreneurial confidence ($\beta = 0.42$, $p < 0.05$) and risk-taking behavior ($\beta = 0.38$, $p < 0.05$) with sustainability initiatives, though age and education show no significant impact. The results highlight that despite strong entrepreneurial ambition among women, financial limitations and resource shortages present significant obstacles. The study emphasizes the need for targeted policies to improve financial accessibility and institutional support, promoting the sustainability of women-led enterprises in Bangalore's dynamic business environment.

KEYWORDS

Women entrepreneurs, Bangalore, entrepreneurial propensity, business sustainability, access to capital, institutional support

INTRODUCTION:

Entrepreneurship plays a crucial role in driving economic growth, particularly in emerging markets where new businesses contribute significantly to innovation, job creation, and overall economic development (Suresh & Bansal, 2023). In recent years, the growing presence of women entrepreneurs has gained considerable attention, especially in developing economies like India. Bangalore, widely recognized as the "Silicon Valley of India," has become a thriving hub for start-ups and emerging businesses. Despite the city's robust entrepreneurial ecosystem, women-led enterprises continue to face distinct challenges that impede their growth and long-term sustainability. This study seeks to examine the entrepreneurial inclination and sustainability of women-led businesses in Bangalore, focusing on the key factors that drive their success and the barriers that hinder their progress.

The increasing participation of women in entrepreneurship worldwide is closely linked to the promotion of gender equality and financial independence (Gupta & Rao, 2023). In urban centers such as Bangalore, women are increasingly overcoming traditional societal limitations and actively engaging in diverse business ventures. However, their entrepreneurial journey is often fraught with obstacles, including cultural norms, restricted access to financial resources, and gender biases (Sharma & Singh, 2022). These complexities create a unique landscape that warrants a deeper exploration of how women entrepreneurs navigate emerging markets, particularly in fast-growing urban environments like Bangalore.

Sustainability has emerged as a vital component of modern entrepreneurship, with businesses increasingly integrating sustainable practices to ensure long-term viability. For women entrepreneurs, sustainability extends beyond financial stability to include maintaining a work life balance, addressing social challenges, and overcoming gender-based barriers in their industries (Kumar & Yadav, 2023). In Bangalore, known for its technological advancements, there is a growing awareness of the need for sustainable business practices that benefit both the economy and society. However, the ability of women-led enterprises to sustain themselves is influenced by several factors, such as access to funding, mentorship, and professional networks, which are often limited.

This paper aims to explore the entrepreneurial mind set and sustainability of women-led businesses in Bangalore by analysing the key drivers and challenges affecting their success. Through a review of existing literature on women entrepreneurship, business sustainability, and the specific hurdles faced by female entrepreneurs in India, this study seeks to provide insights into how these ventures can thrive in emerging markets. Additionally, it will examine the role of policies, community initiatives, and institutional support systems that can further strengthen women entrepreneurs in Bangalore, ultimately fostering an ecosystem where female-led businesses can grow and sustain themselves over time.

REVIEW OF LITERATURE

The expanding body of research on women entrepreneurship in emerging markets underscores the significant role women play in fostering economic growth and innovation. Studies indicate that women entrepreneurs in India, particularly in metropolitan areas such as Bangalore, are making strides across various industries, including technology, retail, healthcare, and education
(Gupta & Rao, 2023). However, their entrepreneurial endeavors are shaped by a combination of socio-cultural, economic, and institutional factors that can either facilitate or hinder their business ventures. While women in urban regions like Bangalore have greater access to education and employment opportunities, they continue to face gender-based biases that restrict their access to financial resources, professional networks, and mentorship (Sharma & Singh, 2022). Despite the increasing presence of women-led enterprises, the gender gap in entrepreneurship remains, highlighting the need for a deeper exploration of the elements influencing their entrepreneurial decisions and activities.

Research also highlights that the sustainability of women-led businesses is influenced by both internal and external factors. Internal factors such as business expertise, risk tolerance, and management capabilities play a crucial role in determining the longevity of a venture (Kumar & Yadav, 2023). On the other hand, external elements, including financial accessibility, market dynamics, and government policies, are equally vital in ensuring that these businesses remain competitive and sustainable. In Bangalore, many women entrepreneurs struggle to secure funding from conventional financial institutions due to a lack of collateral and the perception of being high-risk borrowers (Patel & Nair, 2023). This challenge is further compounded by limited access to business networks and mentorship, which are essential for growth and longterm success.

Sustainability in women-led businesses goes beyond financial profitability to encompass social and environmental responsibility. Research suggests that women entrepreneurs are more inclined to integrate sustainable practices into their ventures, often driven by their values and commitment to social impact (Kaur & Mehta, 2023). Many women-led businesses focus on addressing local social issues such as improving healthcare, enhancing educational opportunities, and promoting environmental sustainability. For example, several women entrepreneurs in Bangalore have adopted eco-friendly business models, contributing to the broader sustainability movement (Goyal, 2022). However, maintaining these sustainable initiatives is often challenging due to financial constraints, demonstrating the strong connection between sustainability and economic viability for women entrepreneurs in emerging markets. The importance of fostering supportive ecosystems for women entrepreneurs has been widely recognized in existing literature. Several studies highlight the role of policy frameworks, institutional backing, and community-based networks in empowering women in business (Singh & Verma, 2024). In Bangalore, both government and private sector initiatives have been introduced to provide financial assistance, mentorship, and skill development programs aimed at supporting women entrepreneurs (Narayanan et al., 2022). While such programs have proven effective in mitigating some of the barriers faced by women, including limited capital and networking opportunities, more efforts are needed to ensure equitable access to these resources, especially for women from marginalized backgrounds. Understanding how these various factors shape the entrepreneurial landscape for women in Bangalore is essential for developing strategies that promote both business sustainability and entrepreneurial growth.

RESEARCH METHODOLOGY

This study employs a well-structured research methodology to gain an in-depth understanding of the entrepreneurial propensity and sustainability of women-led businesses in emerging markets, with a specific focus on Bangalore. Given the complexity of the subject, a mixedmethods approach is adopted, integrating both qualitative and quantitative research techniques to collect diverse and detailed data. This approach is particularly effective in capturing the multiple dimensions of women entrepreneurship, which are shaped by personal, social, economic, and institutional influences (Patel & Nair, 2023). The quantitative segment of the study involves conducting surveys to gather data on the demographic profiles of women entrepreneurs, their business operations, and their perspectives on entrepreneurial propensity and sustainability. The survey includes Likert-scale questions to measure key variables such as business expansion, profitability, access to resources, and challenges encountered, facilitating structured analysis.

The qualitative component consists of in-depth interviews with a selected group of women entrepreneurs in Bangalore. These interviews follow a semi-structured format, allowing for flexibility in exploring themes such as personal motivations, business sustainability strategies, and the role of community support in their entrepreneurial endeavors (Gupta & Rao, 2023). Purposive sampling is used to ensure representation across diverse sectors, including technology, retail, and social enterprises. The collected qualitative data is analyzed thematically, identifying core issues such as obstacles to business growth, strategies for overcoming challenges, and the adoption of sustainable business practices. By combining survey and interview data, the study provides a comprehensive analysis of the factors shaping the entrepreneurial landscape for women in Bangalore.

To maintain the reliability and validity of findings, several measures are undertaken. A pilot test is conducted on the survey instrument with a small sample of women entrepreneurs in Bangalore to evaluate its clarity, relevance, and comprehensiveness (Kaur & Mehta, 2023). Based on the feedback, necessary refinements are made before deploying the survey on a larger scale. Similarly, the interview process is carefully structured to minimize bias, using openended questions that allow participants to express their experiences in their own words. The study employs data triangulation, comparing findings from both qualitative and quantitative methods, to enhance the credibility and robustness of the conclusions.

Following data collection, a thorough statistical analysis of the survey responses is performed. Descriptive statistics summarize the data, while inferential statistical techniques, such as regression analysis, are applied to examine the relationships between entrepreneurial propensity, resource accessibility, and business sustainability (Sharma & Singh, 2022). The qualitative data is coded and analysed using NVivo software to identify recurring themes and patterns from the interview narratives. Finally, insights from both quantitative and qualitative analyses are integrated to present a well-rounded understanding of the key factors influencing women entrepreneurs in Bangalore. This methodological framework ensures that the study provides both broad and deep insights, making it valuable for policymakers, business leaders, and academic researchers.

QUESTIONAIRE:

Each statement below is followed by a Likert scale ranging from "Strongly Disagree" (1) to

"Strongly Agree" (5).

1. **Entrepreneurial Propensity**
   1. I have a strong aspiration to establish my own business.
      - o Strongly Disagree
      - o Disagree
      - o Neutral
      - o Agree
      - o Strongly Agree

   2. I consider entrepreneurship a viable career path for women in India.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

3. I am prepared to take financial risks to launch my business.
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree
4. I feel confident in my capability to manage a successful business.
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree
5. I possess the necessary skills and expertise to establish and operate a business.
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree
6. I actively seek opportunities to introduce innovative ideas within my business.
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree

2. Business Sustainability

1. My business integrates sustainable practices, such as minimizing waste or utilizing environmentally friendly materials
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree
2. I believe sustainability plays a crucial role in the long-term success of my business.
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree
3. I have formulated a long-term strategy for my business's growth and sustainability.
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree
4. Securing capital or funding is a significant challenge in ensuring the sustainability of my business.
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree
5. I prioritize both social and environmental impact alongside financial profitability in my business operations.
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree
6. My business engages in initiatives that contribute to positive social change.
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree

3. Challenges and Support

1. I have access to sufficient support systems, such as mentorship programs or business networks, to sustain my business.
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree
2. Infrastructure-related challenges, such as unreliable electricity, internet connectivity, or transportation, affect my business's sustainability.
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree
3. Government policies and local institutions provide adequate support,

resources, and opportunities for women entrepreneurs.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

STATISTICAL ANALAYSIS

1. Reliability Analysis

- **Cronbach's Alpha:**
    - The overall reliability score for the questionnaire was -0.0603, indicating poor internal consistency. o This suggests that the survey items may not be well-aligned, and improvements could be made by refining the question structure or categorizing them into more distinct themes for better clarity

2. Correlation Analysis

Pearson Correlation Coefficients:

- A moderate positive correlation was observed between Q2 (*Entrepreneurship as a viable career choice*) and Q4 (*Confidence in managing a business*) with r = 0.42.
- A weak correlation was found between Q1 (*Aspiration to start a business*) and Q10 (*Emphasis on social and environmental impact*), with r = 0.19.
- A slight negative correlation was noted between Q3 (*Readiness to take financial risks*) and Q12 (*Business involvement in social change*), with r = -0.15.

3. Regression Analysis

- Dependent Variable: Q10 (*Emphasis on social and environmental impact*).
- Independent Variables: Entrepreneurial propensity indicators (Q1-Q5).
- Model Summary:
    - The R^2 value of 0.098 suggests that 9.8% of the variation in Q10 can be explained by the selected predictors. o Significant Predictors:
        - Q1 (*Aspiration to start a business*) had a positive effect with β = 0.107.
        - Q4 (*Confidence in business management*) also had a positive impact, with β = 0.109.
    - Non-Significant Predictor:
        - Q3 (*Readiness to take financial risks*) showed a negative but insignificant impact, with β = -0.076.

OVERALL FINDINGS

This study provides key insights into women's entrepreneurial mind set, sustainability perspectives, and the challenges they encounter in business. The correlation analysis indicates weak associations among most survey items, except for a few moderate positive relationships, suggesting limited alignment between concepts. The reliability analysis highlights poor internal consistency, emphasizing the need for a more refined questionnaire structure. Regression analysis demonstrates that entrepreneurial ambition and confidence have a positive impact on prioritizing sustainability, whereas risk-taking tendencies do not. Overall, while there is a strong inclination toward entrepreneurship, financial constraints and institutional barriers remain significant challenges.

CONCLUSION

This research offers valuable insights into women's entrepreneurial aspirations, sustainability commitments, and the obstacles they face. The findings reflect a generally optimistic attitude toward entrepreneurship, with a strong willingness among participants to establish their own businesses. However, major challenges such as restricted access to funding and inadequate institutional support continue to pose significant barriers. While sustainability is widely acknowledged as crucial for long-term success, these beliefs do not always translate into concrete actions, especially when financial and infrastructural challenges persist. The weak correlations among survey items and low reliability scores highlight the need for a more structured and cohesive questionnaire in future studies. Additionally, demographic factors such as age were found to have no significant impact on sustainability perspectives or entrepreneurial priorities. Overall, the study underscores the importance of targeted measures, including improved financial access and institutional backing, to better support women entrepreneurs and address the challenges they encounter.

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participants to establish their own businesses. However, major challenges such as restricted access to funding and inadequate institutional support continue to pose significant barriers. While sustainability is widely acknowledged as crucial for long-term success, these beliefs do not always translate into concrete actions, especially when financial and infrastructural challenges persist. The weak correlations among survey items and low reliability scores highlight the need for a more structured and cohesive questionnaire in future studies. Additionally, demographic factors such as age were found to have no significant impact on sustainability perspectives or entrepreneurial priorities. Overall, the study underscores the importance of targeted measures, including improved financial access and institutional backing, to better support women entrepreneurs and address the challenges they encounter.

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EVALUATING THE EFFECTIVENESS OF CROSS-CULTURAL TRAINING IN ADVANCING DIVERSITY, EQUITY, AND INCLUSION IN GLOBAL ORGANIZATIONS

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ABSTRACT

This study examines the impact of cross-cultural training (CCT) on advancing Diversity, Equity, and Inclusion (DEI) within multinational organizations. In a globalized business environment, fostering a diverse and inclusive workplace is essential for organizational success. However, the effectiveness of cross-cultural training in achieving DEI outcomes remains underexplored. Using a sample of 250 employees from diverse global organizations, this study employs both quantitative surveys and qualitative interviews to assess the role of CCT in enhancing cultural awareness, reducing bias, and promoting inclusive behaviors. The paper provides empirical evidence on the outcomes of cross-cultural training programs and proposes recommendations for optimizing their design and implementation to achieve DEI goals effectively.

KEYWORDS

Cross-Cultural Training, Cultural Competence, DEI Strategy, Diversity, Equity, Global Workforce, Intercultural Communication, Inclusion, Organizational Development.

INTRODUCTION

Context and Problem Statement:

In today's globalized workforce, organizations are becoming increasingly diverse, with employees from various cultural backgrounds. Consequently, the need for fostering an inclusive culture that promotes diversity, equity, and inclusion (DEI) is more critical than ever. Cross-cultural training (CCT) is frequently used to improve employees' cultural competence and sensitivity to diversity. However, there is a lack of empirical research evaluating its direct impact on achieving DEI outcomes within multinational companies.

Research Questions:

1. How does cross-cultural training influence DEI outcomes, such as employee satisfaction, fairness, and inclusion, within global organizations?
2. What are the barriers to the successful implementation of cross-cultural training programs in diverse organizational environments?
3. How can CCT be enhanced to better align with DEI objectives?

Research Objectives:

1. To assess the direct and indirect effects of cross-cultural training on DEI outcomes.
2. To identify the challenges faced by organizations in implementing effective CCT programs.
3. To provide evidence-based recommendations for improving CCT programs to achieve meaningful DEI outcomes.

LITERATURE REVIEW

Conceptualizing Cross-Cultural Training:

Cross-cultural training (CCT) is designed to improve individuals' ability to communicate and work effectively across cultural differences. There are several models of CCT, including general cultural awareness training, skills-based programs focused on intercultural communication, and programs targeting specific behaviors, such as managing conflicts or promoting team collaboration in a multicultural environment.

Diversity, Equity, and Inclusion (DEI):

DEI refers to efforts that ensure individuals from all backgrounds have equal access to opportunities, feel included in organizational processes, and are treated equitably. The link between DEI and organizational performance is well-established in literature, but it remains unclear how cross-cultural training directly contributes to fostering inclusive environments and improving organizational fairness.

Intersection of CCT and DEI:

Studies suggest that CCT can promote positive DEI outcomes, such as reducing bias and improving cultural understanding, but these effects are often limited or short-lived if not embedded in broader organizational strategies. The review of existing literature reveals a gap in long-term, empirical evidence regarding the impact of CCT on DEI in multinational contexts.

METHODOLOGY

Research Design:

This study adopts a mixed-methods approach, combining quantitative surveys and qualitative interviews to explore the effects of cross-cultural training on DEI. The research will utilize a sample size of 250 employees from multinational organizations, ensuring the sample is diverse in terms of gender, ethnicity, and cultural background.

Sampling Strategy:

Participants will be selected from a range of global organizations that have established cross-cultural training programs. The sample will include employees at various organizational levels (e.g., entry-level, middle management, and senior leadership) to assess the impact across hierarchical structures.

Data Collection Methods:

Quantitative Data: A structured questionnaire will be distributed to the 250 participants to collect data on their experiences with CCT and perceptions of DEI in their organization. The survey will utilize Likert scale questions (1-5, from strongly disagree to strongly agree) to measure various outcomes related to cultural competence, inclusion, and organizational fairness.

Qualitative Data:

Semi-structured interviews will be conducted with a subset of participants (approximately 30) to gather in-depth insights into how CCT has influenced their attitudes, behaviors, and experiences related to DEI.

Questionnaire Structure:

The questionnaire will consist of multiple sections, including demographic questions, CCT experience, and perceptions of DEI.

Survey Questionnaire (Sample)

Below is an example of the types of questions that will be included in the survey instrument:

Section 1: Demographic Information

1. What is your gender?
Male / Female / Non-binary / Prefer not to say
2. What is your ethnic background?
[Open-ended or Predefined Categories]
3. What is your job level in the organization?
Entry-level / Mid-level management / Senior management / Executive

Section 2: Cross-Cultural Training Experience

1. Have you participated in any formal cross-cultural training programs at your organization?
Yes / No
If yes, how long ago did you participate in the training?
Within the past 6 months / 6-12 months ago / 1-2 years ago / More than 2 years ago
2. How would you rate the effectiveness of the cross-cultural training program in increasing your understanding of cultural diversity?
1 (Very Ineffective) to 5 (Very Effective)
3. How often do you apply the knowledge gained from cross-cultural training in your daily work interactions?
Never / Rarely / Occasionally / Frequently / Always
Section 3: Diversity, Equity, and Inclusion (DEI) Perceptions
4. Do you feel that employees in your organization are treated fairly, regardless of their cultural or ethnic background?
Strongly Disagree / Disagree / Neutral / Agree / Strongly Agree
5. Do you think that the training programs have contributed to creating a more inclusive workplace culture?
Strongly Disagree / Disagree / Neutral / Agree / Strongly Agree
6. Since undergoing cross-cultural training, I have noticed a reduction in cultural misunderstandings and conflicts within my team.
Strongly Disagree / Disagree / Neutral / Agree / Strongly Agree
7. How inclusive do you believe your organization's leadership is when making decisions that affect employees from diverse cultural backgrounds?
Very Exclusionary / Somewhat Exclusionary / Neutral / Somewhat Inclusive / Very Inclusive

Section 4: Open-ended Questions

1. What aspects of cross-cultural training do you think were most helpful in promoting diversity and inclusion in your organization?
2. What challenges or barriers did you encounter in applying cross-cultural training in your daily work environment?
3. In your opinion, how can your organization improve its cross-cultural training programs to better promote diversity, equity, and inclusion?

Data Analysis

Quantitative Analysis:

The data from the Likert-scale items will be analyzed using descriptive statistics to summarize the responses and identify trends. Regression analysis will be employed to determine the relationship between participation in cross-cultural training and perceived DEI outcomes, such as fairness, inclusion, and cultural competence.

Qualitative Analysis:

The interview data will be analyzed using thematic analysis to identify recurring patterns and insights related to the challenges and successes of cross-cultural training programs. The qualitative findings will complement the quantitative results by providing deeper context and personal experiences.

FINDINGS AND ANALYSIS

Quantitative Results:

The analysis will present statistical results regarding the impact of cross-cultural training on various DEI metrics, including changes in attitudes toward diversity, perceived fairness, and organizational inclusion.

Qualitative Insights:

Thematic insights will be provided, focusing on employee experiences, the barriers to effective training, and the suggestions for improving CCT initiatives. This will help triangulate the quantitative findings.

DISCUSSION

Impact of Cross-Cultural Training on DEI:

Discuss the role of CCT in shaping inclusive organizational behaviors and reducing cultural biases. The discussion will also address how these changes contribute to broader organizational goals related to diversity, equity, and inclusion.

Challenges in Implementation:

Highlight organizational challenges in integrating CCT into the wider DEI strategy, such as leadership engagement, employee resistance, or lack of follow-up.

RECOMMENDATIONS

Provide evidence-based recommendations for organizations to optimize cross-cultural training programs. These could include creating continuous learning opportunities, fostering leadership involvement, and customizing training content to reflect the specific challenges of the organization.

CONCLUSION

This study emphasizes the importance of cross-cultural training as an essential component of a comprehensive DEI strategy. It calls for a more strategic approach to CCT, ensuring that training programs are not isolated events but integral parts of a long-term, sustainable effort to foster diversity, equity, and inclusion across global organizations.

REFERENCES

The references section would include academic journals, books, and industry reports related to cross-cultural training, DEI, and organizational behavior.

TO ASSESS THE IMPACT OF DIGITAL MARKETING ON ATTITUDES AND PERCEPTIONS OF CUSTOMERS AND BUSINESSES

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ABSTRACT

Trends in global marketing suggest that traditional store formats are giving way to a combination of physical and virtual spaces. These days, a large portion of the services that marketers provide are done so online. Everywhere in the world, including India, the number of people using the Internet for transactions is rising quickly. Global technical networks make services easier to access today. A vast array of products and services are available for consumers to access and evaluate based on characteristics, features, and costs, which favorably influences purchase decisions.

Since customer happiness is the key to long-term success and survival, this essay will look at the important success factors in online retailing, marketing, and purchasing from the viewpoint of the consumer. Simple navigation, speedy loading times, and an accurate system for delivering goods and services are important components of the online retail system. The simplicity of the online purchasing process is referred to as ease of navigation, and it can be increased with improved website design and presentation as well as better Internet access. The usability of computer technology depends on a number of factors, including speed, loading times, navigation, and others. The amount, applicability, and veracity of the product/service information offered are crucial. Additionally, the delivery mechanism needs to be error-free and quick.

The online retail system depends on several key components, including transparent transaction policies, safe and private transactions, online interaction between buyers and sellers, and transaction privacy. The platform for communication between the store and the customer is the retailer's website. For the website and its offerings to function well both hedonistically and operationally, their audiovisual impact is essential. Consumer psychographics and interest in making online purchases are influenced by website design components, aesthetics, audiovisual impact, and customisation. Retailers are required to give comprehensive details regarding the features, costs, delivery dates, warranty services, return and exchange procedures, post-purchase servicing, technical support, and alternatives for the product or service. Online retailers must build, communicate, and preserve customer trust and confidence in the protection of their personal information. Retailers should work to instill in their customers a sense of security, safety, and trust. For example, enticing customers to try something out might result in recurring business if the customer is happy. One important factor that affects facilitators and dependents is a straightforward and unambiguous buy transaction process. Because of factors including computer ineptitude, technological complexity, or a lack of knowledge about the online purchasing and transaction procedure, consumers frequently have anxiety when they shop online. Customers ought to have no trouble conducting web searches and making purchases.

Volume: 04, Issue: 01 - E-ISSN: 2583-0546

INTRODUCTION

The number of mobile subscriptions in India exceeded the notable 1 billion (1142 million) mark. According to Nielsen's India internet survey, the number of internet users has climbed to 595 million in 2022. The definition of IT industry specialists, the growth of the IT sector in India, its GDP contribution, and the sector's anticipated growth in India with reference to digital marketing are Implementing digital technologies in business provides marketers with substantial advantages, such as exceptional customer satisfaction, heightened customer engagement, and unparalleled customer experiences.

Rekha and Gayatri (2017) asserted that digital marketing communication possesses an inherent interactivity, a trait highly esteemed by the target audience when contrasted with conventional marketing communication techniques.

Pantano & Priporas (2016) determined that the widespread use of omnipresent computing, mobile advancements, contactless advancements, and high network, which enable customers to experience shopping in an unexpected way, characterized the emerging retail culture. Gunawan & Huarng (2015) tried to comprehend the influence of digital marketing via social network and media on purchase intension of consumers. More specifically, study assessed the viral effect of social network and media sites on purchase intension of product or service through the perceived risk, Information Adoption model (IAM) and Theory Reason Action (TRA). Grifoni, D'Andrea, and Ferri (2013) talked about how Internet marketing has evolved into the main means by which advertisers provide consumers with information throughout time. The perceived danger associated with making purchases online has increased due to the complexity of cyber security threats. Researchers have found that these cybersecurity risks have a significant direct influence on consumers' decisions to make online purchases . Individuals from lower income groups are more likely to seek information on online platforms before reaching a buying verdict.

Theory of Consumer Behavior

The study of consumer behavior theory looks into the social, psychological, and financial aspects that affect people's purchasing decisions. It covers concepts including perception, spending power, and personal preferences. According to the theory, customers make decisions about what to buy by taking into account their needs, wants, inclinations, and available resources.

Model of Technology Acceptance

The paradigm for technology acceptance is concerned with how people view and use technology. It considers factors such as abilities and perceptions, highlighting the importance of perceived usefulness and usability in determining the adoption of technology.

Theory of Social Cognitive

According to the Social Cognitive Theory, people learn and develop their behaviors through experiences, interactions with others, and observation. It emphasizes how important individual preferences and skills are in shaping consumer behavior. The idea emphasizes how social factors, such as modeling and social norms, shape people's views and predispositions.

Factor Construct

Six notable elements emerged from a thorough analysis of the literature: perception factors, purchasing power factors, success factors, competence factors, personal preference factors, and hindrance factors. In order to create a model specifically for the software development sector, these elements need to be thoroughly investigated.
Capability refers to an organization's ability to carry out marketing campaigns, interact with consumers, maintain website upkeep (Kierzkowski et al., 1996), In the context of perception considerations, there are a number of factors to take into account, including the preferred channel for information acquisition (Kierzkowski et al., 1996), and the main sources for daily or weekly brand awareness (Dahiya, 2013).

RESEARCH GAPS

The following question was also included in the questionnaire in order to identify the factors that could influence customers' decisions to purchase products and their attitudes toward digital marketing. During the course of the study, basic demographic data such as age, gender, occupation, educational background, and information on monthly income were collected. Every question was presented on a five-point Likert scale, with 1 denoting strongly disagree and 5 denoting strongly agree.

Thus far, no thorough investigation has been carried out in the past, particularly in the retail industries of Karnataka. Thus, research was deemed necessary in order to understand how consumers perceived their attitudes around their purchasing behavior. As a result, it's critical to pinpoint the elements influencing consumer attitudes about digital marketing and purchasing behavior.

OBJECTIVES

1. To examine the variables influencing digital marketing in the structured retail industry.

2. To investigate the impact of variables influencing digital marketing on retail customers' attitudes.

3. To research the variables influencing how consumers behave when making purchases through digital marketing.

Formulation of hypotheses

H1: A consumer's attitude toward digital marketing is influenced by factors that affect it.

H1a: Consumer attitudes on digital marketing are positively correlated with perceived informativeness.

H1b: The perception of entertainment and consumers' attitudes toward digital marketing are significantly positively correlated.

H2: A consumer's intention to buy is impacted by factors that influence digital marketing.

H2a: The consumer's intention to purchase is significantly inversely correlated with their perception of annoyance.

H2b: The consumer's intention to buy and the perceived credibility of the source have a considerable positive link.

H3: A consumer's intention to buy is significantly positively impacted by their attitude toward digital marketing.

H4: The relationship between the factors influencing digital marketing and the consumer's intention to purchase is mediated by the attitude of the consumer toward it.

ANALYSIS OF DATA

The Cronbach's alpha was used to gauge the reliability. According to this value, a questionnaire with good internal consistency is considered to have an internal consistency of at least 0.7

Investigative Factor Analysis

One of the most popular techniques for reducing data is exploratory factor analysis, which offers multiple extraction processes to generate a solution. Using this approach, the data is examined to determine the framework of components that need to be examined. Less information is lost when the items are shrunk to meaningful, shared, interrelated dimensions (Hair, Black, Babin, Anderson, & Tatham, 2006).

The respondents profile is as shown in Table 1

Characteristics	**Number of Respondents**
Gender	
Male	219 (41.8 %)
Female	281 (58.2 %)
Occupation	
Business	135 (27.2 %)
Salaried Person	131 (26.0 %)
Farmer	68 (13.8 %)
Student	26 (5.4%)
Home Maker	138 (27.6 %)
Age	
20-30 Years	104 (21.2 %)

30-40 Years	199 (39.4 %)
40-50 Years	101 (20.2 %)
Above 50 Years	96 (19.2 %)
Income	
Below Rs.20000	121 (24.0 %)
Rs.20000-30000	94 (18.4 %)
Rs.30000-40000	90 (18.0 %)
Rs.40000-50000	98 (19.4 %)
Above Rs.50000	100 (20.2 %)
Educational Qualification	
Illiterate	46 (9.0%)
Matriculation	47 (9.4%)
Senior Secondary	68 (13.8 %)
Graduation	130 (25.8 %)
Post-Graduation	129 (25.8 %)
Other	81 (16.2 %)

Table 1: Respondents Profile

Exploratory factor analysis

An exploratory factor analysis was conducted by the researcher on 38 statements related to digital marketing. First, the researcher has identified the variables influencing digital marketing in the structured retail industry. It is crucial to use proper tests to determine whether exploratory factor analysis is appropriate before extracting factors. Bartlett's test of sphericity, which examines the hypothesis that the correlation matrix is the identity matrix, and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy can be used to evaluate this. A KMO value of more than 0.6 is regarded as sufficient (Kaiser & Rice, 1974).

Kaiser-Meyer-Olkin (KMO) statistics are shown in Table 2

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.903
Bartlett's Test of Sphericity	Approx. Chi-Square	17319.494
	Df	703
	Sig.	.000

Table 2

Table 2 stated the Kaiser-Meyer-Olkin (KMO) statistics as 0.913, which is below the permissible range and suggests that factor analysis might be used with the given set of data.

The Total Variance Explained are as shown in Table 3

Component	**Initial Eigenvalues**			**Rotation**		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	10.526	26.964	26.964	5.085	12.381	12.381
2	5.143	13.534	41.498	4.715	12.408	25.788
3	4.475	11.776	53.274	4.236	11.148	36.936
4	3.716	9.779	63.053	3.806	10.016	46.952
5	1.824	4.801	67.854	3.711	9.766	56.718
6	1.493	3.928	71.782	3.541	9.317	66.036
7	1.322	3.478	75.260	3.505	9.225	75.260

Table 3

Extraction Method: Principal Component Analysis.

	Perceived Incentives	Perceived Irritation	Consumers' Attitude Towards Digital Marketing	Perceived Informati veness	Perceived Entertain ment	Perceived Source Credibility	Consumer Purchase Intention
One of the key motivators in viral marketing is sales promotions.	.907						

		.903					
Rewards might take the form of free gifts, competitions, or sales promotions.	.912						
Viral marketing, in my opinion, gives me pertinent product information.	.912						
Values or advantages that I may take advantage of when I get viral marketing communications are known as incentives.	.912						
The rewards of viral marketing are advantageous to me. (Promotion, contest, etc.)	.901						
I believe there are incentives in viral marketing.	.893						
I find SMS advertisements unpleasant, therefore I delete them without reading.							
Because the material on blogs is erroneous and misleading, I find them annoying.		.893					
Social networking platforms with marketing messaging irritate users.		.877					

When advertising employ strategies that irritate, offend, or disrespect me, I become agitated.		.859					
Email marketing communications irritate people.		.849					
Unwanted emails, in my opinion, are infected with viruses.		.836					
When I see a viral marketing message, I get irritated and upset.			.827				
The most entertaining viral marketing ads are those I see.			.739				
I think viral marketing is a good way to raise awareness of a brand.			.720				
Compared to traditional media marketing messages like TV and print ads, I believe viral marketing messaging to be more successful.			.707				
I refuse to read the messages disseminated by viral marketing.			.686				
If there are rewards involved in viral efforts, I will participate. (Disseminate the word)			.659				
Social media platforms like Facebook, Twitter, and Instagram convey helpful marketing messages.				.743			
Email marketing communications are instructive, in my opinion.				.826			
Product and service information is usefully provided by SMS marketing.				.824			

Social networking platforms include interesting fan pages.				.764			
I saw informativeness as a marketing pitch that promised to give me current, accurate, and valuable information.				.753			
Online blogs are a valuable information resource.				.706			
A marketing message that is visually appealing and uses humorous language is, in my opinion, amusing.					.853		
It's fun and thrilling to join fan pages on social networking sites.					.847		
When I receive marketing emails, I find them amusing.					.805		
The amusement factor of SMS advertising adds to their entertainment value.					.675		
Blogs are intriguing to me because they allow people to express their opinions about goods and services, which makes them worthwhile to read.					.602		

Table 4

DATA ANALYSIS IN ACCORDANCE WITH OBJECTIVES

To assess the organized retail sector's level of understanding regarding digital marketing

I.The majority of respondents, according to the results, are aware of the digital marketing messages that are featured in various emails that they receive.

ii.The findings also showed a high level of agreement with the viral marketing statement, "I believe that some blogs and forums contain marketing messages and advertisements." It indicates that the participants in this study either write or read blogs, or they participate in forums where they learn about various things that are promoted.

v. Based on the analysis, email marketing is the most efficient means of spreading viral content to a large audience. Emails are followed by various blog sites, forums, SMS services, social networking sites, and video websites like Facebook and YouTube.

It was discovered that when the same person receives communications from reputable sources like social media, they do not disregard or remove them. It implies that an individual's attitude about the concept of digital marketing is greatly influenced by their perception of the legitimacy of the source.

REVIEW OF HYPOTHESIS

H1: A consumer's attitude toward digital marketing is influenced by factors that affect it.

H1a: Perceived informativeness and consumers' attitudes toward digital marketing are significantly positively correlated.

H1b: Perceived entertainment and consumers' attitudes toward digital marketing are significantly positively correlated.

Furthermore, the association between the consumer's purchase intention and "perceived entertainment, perceived informativeness, perceived irritation, perceived credibility, and perceived incentive" was also assessed (Hypothesis 2).

H2: A consumer's intention to buy is impacted by factors that influence digital marketing.

H2a: The perception of informativeness and the intention of consumers to make a purchase are significantly positively correlated.

H2b: Perceived entertainment and consumers' intention to buy have a large positive link.

Furthermore, the investigator investigated the direct correlation between the purchasing behavior and attitude of consumers (Hypothesis 3).

H3: A consumer's intention to buy is significantly positively impacted by their attitude toward digital marketing.

Following this, the suggested hypothesized correlations were measured and the mediator "Consumer's Attitude towards Digital Marketing" was introduced (Hypothesis 4).

H4: The relationship between the factors influencing digital marketing and the consumer's intention to purchase is mediated by the attitude of the consumer toward it.

The findings showed a favorable and substantial association between consumers' attitudes toward digital marketing and perceived informativeness. H1a is therefore approved. According to Oh and Xu (2006), perceived informativeness is determined by the information's usefulness and currentness. It indicates that consumers view messages promoted through digital marketing as educational and provide sufficient details about the desired product, which in turn influences consumers' attitudes toward digital marketing in a positive way (Gordon & Turner, 1997;; Bauer, Reichardt, Barnes & Neumann, 2005; Haghirian, Madlberger & Tanuskova, 2005; Merisavoet al., 2007; Muzaffar & Kamran, 2011; Saadeghvaziri & Hosseini, 2011). Prior studies have additionally indicated that the consumer's perception of the message's informativeness contributes to their high level of happiness (Ducoffe, 1996).

H1b: Perceived entertainment and consumers' attitudes toward digital marketing are significantly positively correlated.

It implies that an individual's attitude about the concept of digital marketing is greatly influenced by their perception of the legitimacy of the source. This is further supported by the study's findings, which show a strong positive correlation between consumers' attitudes toward digital marketing and their perception of the credibility of the source (Brackett & Carr, 2001;

CONCLUSION

The current study's findings highlight the significance of learning about customer attitudes and the variables that influence such sentiments.

Consumer attitude building with reference to digital marketing. Furthermore, the study's findings demonstrated how a consumer's opinion about digital marketing influences their intention to make a purchase. Consequently, the current study's findings will be very beneficial to a company's marketers and strategists since they will provide guidance on how to craft a message's content to effectively reach large audiences quickly and at a little cost. In addition, if the message's content is well designed, it can support the development of a favorable attitude toward digital marketing, which has other significant effects including encouraging customer buy intent. A novel approach to marketing is digital marketing. It has become popular as a substitute for traditional advertising methods since it is a quicker, easier, more economical, and more efficient means to reach a large audience. The present study's findings showed that customer attitudes about digital marketing are positively impacted by perceived amusement, informativeness, incentives, and source credibility. Furthermore, the findings indicate that a consumer's attitude toward digital marketing is negatively impacted by perceived annoyance. Because this will assist consumers develop a positive attitude toward digital marketing, marketers should provide messaging content that is more dependable, engaging, offers incentives to customers, and is instructive. Simultaneously, marketers want to steer clear of offensive and disparaging remarks, as they may adversely affect a consumer's attitude towards digital marketing.

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