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Recognizing the need for research for exploring new business models in the changing business scenario as well as developing new pedagogy in management, and for creating an influence on the academics as well as corporate thinkers, the institute embarked upon publication of its journal, *Review of Professional Management: A Journal of Management*, way back in 2003 and has been published regularly ever since. The Editorial Advisory Board of the journal comprises of eminent academics from universities and business schools from across geographies. It is a biannual peer-reviewed journal. It is an open access journal and all the publications of the journal are licensed under Creative Commons. The journal follows guidelines on publication ethics in accordance with The Committee on Publication Ethics (COPE).

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Aims and Scope

Review of Professional Management: A Journal of Management, a bi-annual peer-reviewed journal of New Delhi Institute of Management, provides a platform to academics, researchers, practitioners, and professionals from public, private and government sectors to share their original research, innovative practices and articles with Indian and international perspective that shape policy or governance or functioning of an organisation. The journal publishes conceptual, analytical, empirical, and perspective articles that significantly contribute to theory, practice or policymaking in all the functional areas of management and allied subjects.

The journal contains articles in the following functional areas of management:

- General Management
- Financial Management and Banking
- Organizational Behaviour and Human Resource Management
- Macroeconomic Issues and Business Environment
- International Business Management
- Marketing and e-commerce
- Operations Management
- Innovation and Entrepreneurship
- Socio-economic Issues: Health and Education

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Artificial intelligence (AI) is revolutionising many fields and has the potential to support sustainable development when applied responsibly and ethically. It is increasingly being leveraged by many countries as a powerful tool to address climate change. AI contributes to monitoring real-time greenhouse gas emissions through satellite imagery. AI can improve energy efficiency, optimise renewable energy usage, track deforestation, predict natural disasters, and can improve urban climate resilience. In the field of agriculture, it can predict weather patterns, early detection of plant diseases, and pests, improve irrigation and fertilisation and contribute to enhanced crop yields to mitigate poverty and hunger. It is used to enhance quality of education, diversity and inclusion, promote health awareness and build partnership across organisations and geographies.

An extensive study published by Vinuesa, Azizpour, Leite, et. al. (2020) reports that AI can have both positive as well as negative impact on sustainable development goals (SDGs) comprising 17 goals, 169 targets in the internationally agreed agenda of 2030. They have identified, quantified and diagrammatically presented both positive and negative impacts into three broad categories, namely, *society, economy* and *environment*. Based on their research they posit that AI, with technological advancements, may contribute positively to 134 targets, whereas 59 targets may have negative effects.

In the societal category, according to the study, AI can contribute to the provision of Food (SDG 2), Health (SDG 3) and Quality Education (SDG 4), Gender Equality (SDG 5), Clean Water and Sanitation (SDG 6), and Affordable and Clean Energy (SDG 7) and help maintain Sustainable Communities (SDG 11). In the economic category, the study has included Decent Work and Economic Growth (SDG 8), Industry, Innovation, and Infrastructure (SDG 9), Reduced Inequality (SDG 10), Responsible Consumption and Production (SDG 12) and Partnerships for the Goals (SDG 17) where AI can serve as an enabler. Their environment category consists of Climate Action, (SDG 14), Life Below Water (SDG 14) and Life on Land (SDG 15) where AI can facilitate a positive role.

However, there could be challenges in implementing AI as countries differ with regard to development of AI and related technologies, availability of computational resources, cultural values and norms. Also, AI powered tools require energy which generates greenhouse gas (GHG) emissions from computing, energy and water consumption, and e-waste production affecting environment.

While using AI, ethical considerations, transparency and democratic values would require considerable attention to guard against self- interest or perpetuation of biases. National Artificial Intelligence Advisory Committee (NAIAC) of US (Oct.2023) has identified, inter alia, 'unintended circumstances, and circumvention of safety measures' as potential threats posed by AI. Mostly positive impact of AI is highlighted in the business and work contexts; however, skilling and reskilling are needed to prepare employees for future roles and prevent detrimental effect of AI related technologies on workforce. To take care of negative impacts of AI, a regulatory framework would be helpful. To assess the long-term impact of AI on economic, social and environmental aspects, more research need to be undertaken as development and use of AI is still evolving for the sustainable development goals.

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References

The National Artificial Intelligence Advisory Committee (NAIAC). (2023). *FINDINGS: The potential future risks of AI*. Retrieved on June 3, 2025, from Findings_The-Potential-Future-Risks-of-AI.pdf

Vinuesa, R., Azizpour, H., Leite, I., Balaam, M., Dignum, V., Domisch, S., Felländer, A., Langhans, S. D., Tegmark, M., & Nerini, F. F. (2020) The role of artificial intelligence in achieving the Sustainable Development Goals. *Nature Communication 11*, 233. https://doi.org/10.1038/s41467-019-14108-y

Crawford, K., Dobbe, R., Fried, G., Kaziunas, E., Kak, A., Mathur, V., Richardson, R., Schultz, J., Schwartz, O., West, S. M., & Whittaker, A. (2018). *AI Now 2018 Report*. AI Now Institute.

Radha R. Sharma
Editor-in-Chief

Research Paper

Evaluating the Linkage Between the Market Mood Index and the Indian Stock Market: Evidence Based on ARDL Bounds Testing and DCC-GARCH

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Animesh Bhattacharjee[1], Joy Das[2] and Sunil Kumar[3]

Abstract

The market mood index is a novel sentiment indicator for the Indian stock market, designed to assess the overall mood within the market. This tool purportedly enables investors to become aware of their emotional state and predispositions that may impact their decision-making processes. Given the context, this study aims to explore the relationship between the market mood index and the Indian stock market index in order to verify the effectiveness of the index. The study uses data from March 2012 to May 2023. Various analytical techniques are utilised for this purpose, such as unit root tests, cointegration tests, pair-wise Granger causality tests and the DCC-GARCH approach. The results indicate that the Indian stock market and the market mood index are cointegrated in the long term, suggesting a sustained connection between them. Additionally, a feedback mechanism between the variables is apparent. The GARCH analysis confirms the presence of volatility transmission from the market mood index to the Indian stock market in both the long and short term. Furthermore, the DCC model reveals the changing correlation of volatility between the market mood index and the Indian stock market. Trading tactics should be formulated with the association between the two variables in mind. It can be concluded that

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the studied index, developed by TickerTape, shows good association with the market index suggesting being a good investment indicator.

Keywords

India, mood index, stock market, ARDL, volatility

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Introduction

Traditional theories of the stock market have long been grounded in the assumption of rationality. Nonetheless, contemporary research conducted by Verma et al. (2008), Dimson et al. (2004) and Singh (2012) have revealed that such an assumption is fundamentally flawed. Instead, the irrational behaviour of investors has emerged as a critical factor in the market's fluctuations. This irrationality is often attributed to a number of factors, including cognitive dissonance, confirmation bias, endowment effect, mental accounting, active trading and loss aversion. It is clear that these psychological phenomena have a significant impact on the market's performance and cannot be ignored in any analysis of its dynamics.

Over the past two decades, there has been a notable examination of sentiment analysis within the realm of finance (Prasad et al., 2023). Scholars have engaged in the application of sentiment analysis as a means of constructing an investor sentiment index (ISI), which reveals the mood of the market. Investor sentiment pertains to the anticipation held by market participants with respect to future cash flows as well as the investment risk (De Long et al., 1990). Baker and Wurgler (2007), Pandey and Sehgal (2019), Alsabban and Alarfaj (2020), PH and Rishad (2020) and Pillada and Rangasamy (2023) constructed ISI and measured the indexes' efficacy in predicting the volatility of stock markets.

The market mood index, a novel market sentiment indicator, serves to forecast opportune moments for entering and exiting the stock market. This index is computed by taking into consideration six distinct factors. The first factor, termed the FII activity, is established by gauging the net open interest of foreign institutional investors in index Futures on the Nifty Stock Exchange. The second factor, known as volatility and skew, is represented by the Indian VIX index. The third factor pertains to the momentum of the Nifty and is determined by the variance between the 90-day and 30-day exponential moving averages. The fourth factor, referred to as market breadth, is derived by dividing the AD ratio by the AD volume. The fifth and sixth factors are related to the price strength and demand for gold, respectively. Given that the market mood index is an indicator of the sentiment prevailing in the Indian stock market, it evinces a significant linkage with the Indian stock market, particularly in the short term, as it is classified as a technical indicator.[1]

Against this backdrop, the present study aims to delve into an in-depth analysis of the interrelatedness between the market mood index and the Indian stock market, as represented by the Nifty 50 Index.

The following is a detailed organisation and structure of the subsequent portions of this study: A thorough review of the literature is provided in the second section; information about the data and methodology used in this study is provided in the third section; by using various econometric techniques, a thorough and meticulous analysis of the data is provided in the fourth section; and lastly, a summary of the conclusions and their implications for investors are provided in the fifth section.

Literature Review

In the current decade, extensive research has been carried out to identify the factors that influence investors' trading behaviour. Additionally, several researchers have devised diverse sentiment indices for investors to measure the impact of their sentiment on stock market volatility. A concise summary of these research initiatives is presented below.

Baker and Wurgler (2007) employed a distinctive 'top-down' methodology to illustrate the feasibility of gauging investor sentiment. The findings of their study indicate that waves of sentiment have significant implications for both individual firms and the overall stock market. Hudson and Green (2015) investigated the effect of investor sentiment on equity returns in the United Kingdom by constructing two indices. The findings suggested that US investor sentiment can help predict UK equity returns. Using multivariate Markov-switching, Chung et al. (2012) examined the predictive power of investor sentiment for stock returns across the state of economic expansion and recession. The findings showed that during a recession state, the sentiment's predictive power is insignificant. The finding of Lutz (2015) suggested that during times when the federal funds rate was constrained at zero, the implementation of expansive unconventional monetary policies exerted a substantial and favourable influence on investor attitudes.

Pandey and Sehgal's study (2019) involved experimentation with alternative investor sentiment indices and an evaluation of sentiment-based factors in asset pricing, leading to the development of a superior composite sentiment index. Additionally, they conducted an evaluation of the influence of sentiment-based factors in asset pricing to provide an explanation for notable equity market anomalies, including size, value and price momentum, for India. The results of their research confirmed that the composite sentiment index that they developed leads to other currently prevalent sentiment indices in the investment literature.

Alsabban and Alarfaj (2020) analysed the overconfidence behaviour among investors in the Saudi stock market. To examine this phenomenon, a market-wide VAR model was employed. Their findings indicated that overconfidence is a pervasive trait among Saudi market investors. PH and Rishad (2020) conducted a study to investigate the impact of irrational investors' sentiments on stock market volatility in India. The research involved the development of an irrational sentiment index through principal component analysis and its incorporation into the GARCH and Granger causality framework for assessing its influence on volatility. Findings indicated that irrational sentiment plays a significant role in driving excessive market volatility, a crucial insight for individuals such as retail investors

and portfolio managers aiming to optimise their portfolios for maximum profitability. Baek et al. (2020) undertook an in-depth investigation at the industrial level to ascertain whether the US stock market exhibited any fluctuations during the COVID-19 period. The findings revealed that stock market volatility was significantly influenced by certain economic factors and held a high sensitivity towards COVID-19–related news. Wang et al. (2022) used the turnover ratio as a sentiment proxy and GARCH models to confirm the influence of investor sentiment on stock returns. Pillada and Rangasamy (2023) investigated the impact of investor sentiment on the volatility of the real estate market between November 2019 and June 2022. To achieve this objective, the scholars employed the principal component analysis methodology to develop an ISI. The research outcomes revealed the presence of an asymmetric effect of the sentiment on the realty sector and affirmed the existence of a bidirectional correlation between asset return and investor sentiment. Dash and Maitra (2018) examined the relationship between the Indian stock market and investor sentiment using a wavelet approach. Their research yielded proof that the investment activities of both short-term and long-term investors were closely intertwined with sentiment, highlighting the interconnected nature of sentiment and investment decisions. The literature survey above indicates that the sentiment of investors is a crucial factor in elucidating stock market volatility. Various methodologies have been employed by researchers to assess investor sentiment. Some researchers have viewed the consumer confidence index as a representation of investor sentiment, whereas other scholars have produced their own indices for this purpose.

A sentiment indicator, introduced recently by TickerTape, is designed to gauge the mood of investors. It is claimed that the new market mood index has the capability to assess the current behaviour of the overall market. To validate this argument, advanced econometric techniques must be employed. Consequently, the investigation endeavours to scrutinise the correlation between the market mood index and the Nifty 50 Index ranging from 2012 to 2023 by utilising methodologies such as the unit root test, cointegration test, pair-wise Granger causality test and DCC-GARCH. The article aims to answer the following questions: (a) Is there a long-run equilibrium relationship between the market mood index and the Nifty 50 Index? (b) Is there short-run predictive causality between the market mood index and the Nifty 50 Index? (c) Is there volatility spillover between the market mood index and the Nifty 50 Index? (d) Is co-movement (correlation) between the market mood index and the Nifty 50 Index time-varying? (e) What effect did the COVID-19 pandemic have on the co-movement of the market mood index and the Nifty 50 Index?

The study has established the following hypotheses for examination:

H_1: There is no cointegrating relationship between the market mood index and the Nifty 50 Index.

H_2: The short-run predictive causality does not flow from the market mood index and the Nifty 50 Index or vice versa.

H_3: There is no short-run volatility spillover from the market mood index to the Nifty 50 Index.

H_4: There is no long-run volatility spillover from the market mood index to the Nifty 50 Index.

H_5: There is no time-varying co-movement (correlation) between the market mood index and the Nifty 50 Index.

Data and Methodology

Data Description

The data series (market mood index and Nifty 50 Index) being used in this study is obtained from the TickerTape website and Yahoo Finance covering the period between 12 March 2012 and 2 May 2023. EViews 10.0 econometric software and RStudio are used to analyse the dataset. The market mood index (proxied for market sentiment) ranges from 0 to 100. A value of less than 20 indicates a high extreme fear zone (suggesting a good time to open a fresh position) while a value of more than 80 indicates a high extreme greed zone (suggesting to be cautious in opening fresh positions).

Econometric Methods

The study uses two types of data, namely original index series and return series. The original index series is used for determining the cointegration and direction of predictive causality between the market mood index and the Nifty 50 Index. For determining the short-run and long-run spillover from the market mood index and the Nifty 50 Index, we have used the return series. Both the original index series and the return series are subject to unit root testing using the augmented Dickey–Fuller (ADF) test. The ADF test expands the Dickey–Fuller test equation to include high-order regressive process in the model. The null hypothesis of the ADF test is that a unit root is present in a first-order AR model. The ADF test is executed using the following equation:

$$Y_t = C + \beta_t + \alpha Y_{t-1} + \emptyset_1 \Delta Y_{t-1} + \emptyset_2 \Delta Y_{t-2} + \cdots + \emptyset_p \Delta Y_{t-p}.$$

The autoregressive distributed lag (ARDL) bounds test, developed by Pesaran et al. (2001), is applied to determine the cointegration between the market mood index and the Nifty 50 Index. Many researchers used the ARDL bounds test as a cointegration test; for example, Bhattacharjee and Das (2022) investigated the cointegration between monetary variables and the Indian stock market, Sahoo et al. (2021) determined the long-run relationship among information and communication technology, financial development and environmental sustainability in India, Furthermore, in a recent study Seth and Kumar (2023) employed the ARDL model to study the long-run equilibrium linkage between the market mood index and Indian stock market.

We employ a pair-wise Granger causality test to investigate the direction of predictive causality between the variables. The Granger causality approach

statistically tests the hypothesis of whether variable X Granger causes variable Y and vice versa. If the probability (p) value is less than any alpha level, then the null hypothesis would be rejected. There can be four outcomes of the pair-wise Granger causality test. First, if variable X granger causes variable Y, then it can be said that variable X helps in the prediction of variable Y. If variable Y Granger causes variable X, then it can be said that variable Y is helpful in predicting variable X. There can be a situation where both variable X and variable Y Granger causes each other. Under such circumstances, it might be said that a feed mechanism exists between the variables. The last outcome of the test is when neither variable X nor variable Y does not Granger cause each other. It implies that no predictive causality exists between the variables. An earlier study by PH and Rishad (2020) employed the Granger causality test to determine the flow of causality between investor sentiment and stock market index.

For determining the short-run and long-run spillover from the market mood index and the Nifty 50 Index and investigating whether time-varying co-movement exists between the variables, the dynamic conditional correlation–generalised autoregressive conditional heteroskedasticity (DCC-GARCH) approach is applied. DCC-GARCH, or dynamic conditional correlation GARCH, is a statistical model used in finance to estimate the time-varying correlation between asset returns. It is an extension of the traditional GARCH model, which models the volatility of financial returns, but it also incorporates the correlation dynamics between different assets.

In the DCC-GARCH model, each asset's volatility is modelled using a standard GARCH process, while the correlation between assets is modelled using a separate equation that captures the dynamics of correlation. This allows for a more accurate representation of how correlations between assets change over time, which is particularly useful in risk management, portfolio optimisation and other areas of financial analysis where understanding the interdependencies between assets is important. DCC-GARCH models are widely used in empirical finance because they can capture the time-varying nature of correlations, which are known to be important for portfolio diversification and risk management. They are particularly valuable during periods of financial turbulence when correlations between assets tend to increase.

GARCH and DCC-GARCH techniques have been used by Haritha and Rishad (2020) and Pillada and Rangasamy (2023) to examine the relationship between investor sentiment and stock market volatility.

Results

Both the original index series are subject to the ADF unit root test. From the observation, it can be said that the market mood index is stationary at a level while the Nifty 50 Index achieves stationarity at first difference. Thus, it can be said that the market mood index is integrated of order 0 or $I(0)$ and the Nifty 50 Index is integrated of order 1 or $I(1)$ (see Table 1). Since the variables are mixed order integrated, the ARDL bounds test is employed to investigate whether both the market mood index and the Nifty 50 Index are cointegrated. To execute the ARDL

Table 1. Unit Root Test Result (Original Index Series).

	At Level	At First Differenced	Stationarity Status
Market mood index	−10.1634* (0.000)	—	*I*(0)
Nifty 50 Index	−2.9534 (0.1458)	−18.7598* (0.000)	*I*(1)

Notes: Auto-selection = SIC, trend and intercept included in the test equation.
*Significant at the 1% level.

Table 2. Lag Selection Criterion.

Lag	AIC	SC	HQ
0	1.8700	1.8744	1.8716
1	−7.4130	−7.3999	−7.4082
2	−7.5141	−7.4923	−7.5062
3	−7.5517	−7.5212	−7.5407
4	−7.5606	−7.5213*	−7.5464
5	−7.5593	−7.5113	−7.5419
6	−7.5751	−7.5184	−7.5546
7	−7.5828	−7.5173	−7.5591*
8	−7.5848*	−7.5106	−7.5580

Table 3. F-Bounds Test.

F-statistic		62.609	
Critical values		*I*(0)	*I*(1)
	1%	4.94	5.58
	5%	3.62	4.16
	10%	3.02	3.51

bounds test, optimum lag length is required. The optimum lag order is found to be eight months (refer to Table 2).

Table 3 presents the result of the ARDL bounds test. In the case of the ARDL bounds test, if the computed F-statistic is more than the critical values at the upper bound, then we can say that there is cointegration or a long-run relationship between the variables. If the computed F-statistic is in between the lower bound critical value and upper bound critical value, then it can be said that there is inconclusive evidence of cointegration. If the computed F-statistic is lower than the critical value at the lower bound, it can be said that there is no cointegration. It can be seen from the table that the calculated F-statistic (62.609) is greater than the upper bound critical values at 1% (5.58), 5% (4.16) and 10% (3.51) levels, suggesting that the variables are strongly cointegrated. Thus, H_1 can be rejected, which means that there is a long-run equilibrium relationship between the market mood index and the Nifty 50 Index.

The direction causality is investigated by employing pair-wise Granger causality test and the results are summarised in Table 4. We document that there is bidirectional causality between the Nifty 50 Index and the market mood index,

Table 4. Pair-wise Granger Causality Test (at 8 Lags).

Null Hypothesis	F-statistics	Direction of Causality
Nifty 50 Index does not Granger cause the market mood index	18.7161*	Bidirectional
Market mood index does not Granger cause the Nifty 50 Index	4.3785*	

Note: *Significant at the 1% level.

Table 5. Unit Root Test Results (Return Series).

	At Level	At First Differenced	Stationarity Status
Market mood index	−17.164* (0.000)	—	I(0)
Nifty 50 Index	−13.614* (0.000)	—	I(0)

Notes: Auto-selection = SIC, trend and intercept included in the test equation.
*Significant at the 1% level.

Table 6. DCC-GARCH Estimates.

Parameters	μ (Mu)	ω (Omega)	ARCH	GARCH	$(\alpha + \beta)$	dcca1	dccb1
mmi	0.0004	0.0020	0.2889	0.6576	0.9465	0.0035	0.9948
	(0.8647)	(0.0000)	(0.0000)	(0.0000)		(0.0635)	(0.0000)
nii	0.0007	0.000002	0.0872	0.8925	0.9797		
	(0.0000)	(0.0480)	(0.0000)	(0.0000)			

Notes: mmi, market mood index; nii, Nifty 50 Index.
P value is given in parentheses.

suggesting that the Nifty 50 Index helps in predicting the market mood index and vice versa. Thus, H_2 can be rejected, indicating that short-run predictive causality flows from the market mood index and the Nifty 50 Index and vice versa.

For volatility modelling, both the index series are transformed into return series and are subjected to a stationarity test (unit root test). The results of the ADF unit root test are presented in Table 5. The results indicate that returns of both the market mood index series and the Nifty 50 Index series are stationary at a level and, hence, fit for DCC-GARCH.

The estimates of the DCC-GARCH (1, 1) model are summarised in Table 6. In the table, mu stands for the overall mean and omega denotes the intercept term. Beta1 represents the impact of past changes. The table shows that the sum of the ARCH and the GARCH term is less than 1, for both mmi ($\alpha+\beta = 0.9465$) and nii ($\alpha+\beta = 0.9797$), showing that there is a reduction in unpredictability perseverance over the long run.

Furthermore, the dcc terms, that is, dcca1 and dccb1 (which indicates volatility spillover), are positive and significant, which shows that there is volatility spillover both in the short run and long run from the market mood index to the Nifty 50 Index. Thus, H_3 and H_4 are rejected.

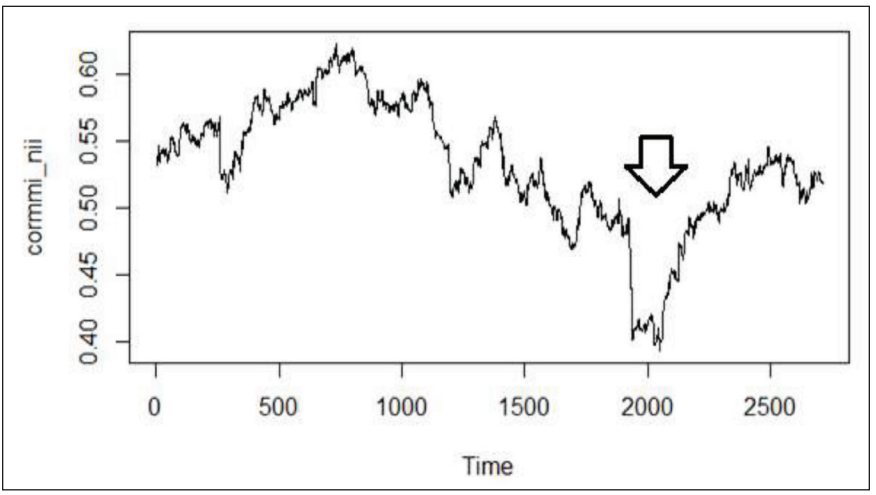

Figure 1. Time-varying Correlation Between Market Mood Index and Nifty 50 Index from 12 March 2012 to 2 May 2023.

Note: The downward arrow sign shows the period of the COVID-19 pandemic.

Figure 1 exhibits the dynamic conditional correlation between the market mood index and the Nifty 50 Index. From the figure, it can be seen that the volatility correlation between the variables lingers around 0.40 to 0.60 throughout the studied time frame. The volatility correlations reached their peak in May 2015. However, in 2020, the volatility correlation between the market mood index and the Nifty 50 Index saw a steep descent, possibly driven by the worldwide spread of COVID-19 (a black swan event)[2] and also due to the uncertain economic events taking place. As per the result presented in Figure 1, H_5 can be rejected.

Conclusion

The study's main objective is to explore the linkage between the market mood index and the Indian stock market. We have established the ARDL bounds test and DCC-GARCH approach to explore the linkage between the variables. From the analyses, we have drawn four conclusions.

First, the market mood index is found to have a long-run equilibrium relationship with the Indian stock market. Second, a feedback mechanism is observed between the market mood index and the Indian stock market, which suggests that the market mood index helps in predicting the Indian stock market in the short run. Third, DCC-GARCH estimates indicate that there is volatility spillover from the market mood index to the Indian stock market both in the long run and short run. Fourth, there is a time-varying (usually ranging from 0.40 to 0.60) correlation between the volatility of the market mood index and the Indian stock market, and the COVID-19 pandemic resulted in a drop in the

correlation between the variables under study. Our findings show the new sentiment index to be connected with the Indian stock market in the long run. In the short run, the market mood index volatility is a strong predictor of the volatility of the Indian stock market.

The findings are extremely important for scholars, policymakers and traders. Developing nations such as India exhibit informational inefficiency and constrained arbitrage opportunities. Consequently, these financial markets could be susceptible to sentiment or emotional biases. Our investigation offers empirical support for the bidirectional relationship between investor sentiment and the stock market index. Therefore, trading tactics should be formulated with this association in mind. Moreover, such findings could assist policymakers in implementing suitable measures to prevent the occurrence of speculative bubbles or market crashes during periods of excessive optimism and fear. Furthermore, the studied index, developed by TickerTape, shows a good association with the market index, suggesting it is a good investment indicator.

Declaration of Conflicting Interests

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Notes

1. Technical indicators are heuristic or pattern-based signals produced by the price, volume and/or open interest of a security or contract used by traders who follow technical analysis. By analysing historical data, technical analysts use indicators to predict future price movements.
2. A black swan event is an exceptionally rare occurrence that carries significant consequences. It is not possible to forecast in advance, yet post-event, there are often unfounded assertions that it could have been foreseen. These events have the potential to result in devastating harm to an economy by exerting adverse effects on markets and investments; however, even the application of rigorous modelling techniques is insufficient to avert a black swan event.

References

Alsabban, S., & Alarfaj, O. (2020). An empirical analysis of behavioral finance in the Saudi stock market: Evidence of overconfidence behavior. *International Journal of Economics and Financial Issues*, *10*(1), 73–86. https://doi.org/10.32479/ijefi.8920

Baek, S., Mohanty, S. K., & Glambosky, M. (2020). COVID-19 and stock market volatility: An industry-level analysis. *Finance Research Letters*, *37*, 101748.

Baker, M., & Wurgler, J. (2007). Investor sentiment in the stock market. *Journal of economic perspectives*, *21*(2), 129–151.

Bhattacharjee, A., & Das, J. (2022). Assessing the long-run and short-run effect of monetary variables on stock market in the presence of structural breaks: Evidence from liberalised India. *The Review of Finance and Banking*, *14*(2), 121–131.

Chung, S. L., Hung, C. H., & Yeh, C. Y. (2012). When does investor sentiment predict stock returns? *Journal of Empirical Finance*, *19*(2), 217–240.

Dash, S. R., & Maitra, D. (2018). Does sentiment matter for stock returns? Evidence from Indian stock market using wavelet approach. *Finance Research Letters*, *26*, 32–39.

De Long, J. B., Shleifer, A., Summers, L. H., & Waldmann, R. J. (1990). Noise trader risk in financial markets. *Journal of Political Economy*, *98*(4), 703–738.

Dimson, E., Marsh, P., & Staunton, M. (2004). Irrational optimism. *Financial Analysts Journal*, *60*(1), 15–25.

Hudson, Y., & Green, C. J. (2015). Is investor sentiment contagious? International sentiment and UK equity returns. *Journal of Behavioral and Experimental Finance*, *5*, 46–59.

Lutz, C. (2015). The impact of conventional and unconventional monetary policy on investor sentiment. *Journal of Banking & Finance*, *61*, 89–105.

Pandey, P., & Sehgal, S. (2019). Investor sentiment and its role in asset pricing: An empirical study for India. *IIMB Management Review*, *31*(2), 127–144. https://doi.org/10.1016/j.iimb.2019.03.009

Pesaran, M. H., Shin, Y., & Smith, R. D. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometrics*, *16*(3), 289–326. https://doi.org/10.1002/jae.616

PH, H., & Rishad, A. (2020). An empirical examination of investor sentiment and stock market volatility: Evidence from India. *Financial Innovation*, *6*(1), 34.

Pillada, N., & Rangasamy, S. (2023). An empirical investigation of investor sentiment and volatility of realty sector market in India: An application of the DCC–GARCH model. *SN Business & Economics*, *3*(2), 55.

Prasad, S., Mohapatra, S., Rahman, M. R., & Puniyani, A. (2023). Investor sentiment index: A systematic review. *International Journal of Financial Studies*, *11*(1), 6.

Sahoo, M., Gupta, M., & Srivastava, P. (2021). Does information and communication technology and financial development lead to environmental sustainability in India? An empirical insight. *Telematics and Informatics*, *60*, 101598.

Seth, N., & Kumar, Y. (2023). Market mood index and stock market. Evidence from National Stock Exchange. *Theoretical & Applied Economics*, *30*(1), 263–272.

Singh, S. (2012). Investor irrationality and self-defeating behavior: Insights from behavioral finance. *Journal of Global Business Management*, *8*(1), 116.

Verma, R., Baklaci, H., & Soydemir, G. (2008). The impact of rational and irrational sentiments of individual and institutional investors on DJIA and S&P500 index returns. *Applied Financial Economics*, *18*(16), 1303–1317.

Wang, W., Su, C., & Duxbury, D. (2022). The conditional impact of investor sentiment in global stock markets: A two-channel examination. *Journal of Banking & Finance*, *138*, 106458.

Research Paper

The Impact of Inflation on Stock Market Return: Evidence from China

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Abstract

Stocks are often considered a decent hedge against inflation since they tend to move together. This research article examines the long-term relationship between inflation and stock returns in Chinese markets from 2000 to 2021. The stock prices are affected by inflation, and this link between the two has long been a source of worry. Investors must understand how the stock market performs in connection to inflation because they anticipate equity markets to provide protection against inflationary consequences. On the relationship between inflation and stock market performance, numerous theoretical frameworks yield conflicting results. This research aims to pinpoint the precise impact of inflation on stock market performance. The consumer price index (CPI), which measures inflation in this research, is the independent variable, and the stock index, which measures stock market returns, is the dependent variable. The Auto Regressive Distributed Lag (ARDL) model and its accompanying Error Correction Models are used to calculate the long- and short-run correlations between Chinese stock market returns and inflation. The empirical findings indicate that there is a considerable positive long-run link between market returns and inflation. This means the price of the stock should rise along with the general prices of inflation. The relationship between inflation rate and stock market return has been examined by several financial economists around the world. However, this relationship has not been investigated widely in China.

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Introduction

The stock markets exhibit turbulent behaviour over time. Volatility occurs when share prices rise and fall quickly. As has been observed in the past, excessive volatility hinders the efficient operation of financial markets and has a negative impact on economies. Instead of investing in riskier assets, this volatility may force investors to switch to risk-free assets. Therefore, knowledge of the stock market's dynamic behaviour is essential for macroeconomists, financial analysts, and policymakers. Since these patterns of volatility influence their investment spending, all investors are curious about the nature of stock market behaviour. All investors are interested in understanding the nature of stock market behaviour since their investing decisions are influenced by these volatility patterns. A country's economic activities influence stock market performance. Different variables may be more relevant in explaining variances in stock returns than a single market element.

Numerous research has been conducted on the connection between stock returns and inflation, but no conclusion has been reached. According to the Fisher model, as they reflect claims on real assets, excepted nominal asset returns should rise in lockstep with excepted inflation (1983). Adams et al. (2004) point out that the majority of empirical data indicates a negative correlation between stock returns and inflation. A negative correlation suggests that stock market returns will be below average, which will aggravate the impact of investors' actual wealth being reduced by inflation. This negative connection is unexpected for equities since they should offset changes in inflation, according to Jacob and Mathew (1993).

Consumer spending, company investment, unemployment rate, and interest rates are all impacted by the economic phenomenon known as inflation. It might be claimed that although low inflation is associated with economic expansion, excessive inflation is risky and not only indicates an overheated economy but also can halt progress and even raise the possibility of a recession in the larger economy. The two main elements that might affect the performance of the stock market are macro and micro influences. However, owing to globalisation, national and international events, as well as, Government Policies may also affect stock market performance. The most significant macroeconomic element that may affect the performance of the stock market is inflation. The effect of inflation on the performance of the stock market may be either beneficial or negative. Every area of the economy is affected by inflation, both directly and indirectly (Geetha et al., 2011). The cost of borrowing will rise if both inflation and the nominal interest rate rise. Due to the high cost of borrowing, net profit and stock prices would decline.

Depending on monetary policy choices and the capacity of investors to hedge, inflation may have either a beneficial or negative effect on the stock markets. A rising rate of inflation lowers the future cash flow's current value. People are able to buy fewer goods with the same amount of money when it becomes less valuable. Because investors will purchase fewer stocks with the same amount of money due to this decline in buying power, stock markets often suffer as a result. Interest rates often increase as inflation increases because the central bank will raise interest rates on loans and deposits to manage liquidity and hence control inflation. The predicted cash flows of businesses decline when loans or the cost of capital increase, which lowers stock prices. Bond prices will drop as interest rates rise, which will result in investor capital losses. Higher inflation might lead to speculative scenarios on future stock values, which increases market volatility.

In this research, we look at the connection between Chinese stock returns and price levels. The Shanghai Stock Exchange was established in 1990. Since then, China's economy has expanded significantly, but the country's stock market does not seem to be mirroring the expansion of its economy. In comparison to the macroeconomic fundamentals throughout the same time period, it has a tendency to swing far more drastically. China's GDP growth rate, for instance, consistently grew from 8.3% in 2001 to 10.0% in 2004. The national economy's gauge, the stock market, however, showed a reversal and mild decline throughout the same time period. China's economy has grown more slowly since the global financial crisis of 2008–2009. In 2017, its GDP growth rate dropped from 14.2% in 2007 to 6.9%. The Shanghai Stock Exchange Composite Index saw a dramatic decline during this time, dropping precipitously from its historical high of about 6000 points in 2007 to around 2000 points by the end of 2008. The index later recovered to reach 3000 points in 2009 before experiencing a protracted downturn that lasted for the next five years, dropping to around 2000 points. The index began to rapidly rise in the second half of 2014. In the middle of 2015, it peaked at over 5000 points, and by the end of the year, it had dropped by 40%. The index stayed mostly within a range of 3000 to 3500 points from 2016 and 2017. In summary, the Shanghai Stock Exchange's performance seems to depart from China's general macroeconomic fundamentals.

Inflation has a significant effect on stock market performance. Before investing in the stock market, investors need to have a basic understanding of the relationship between stock returns and inflation. How does inflation effect stock prices, and are Chinese stocks good inflation hedges? When investors are fully educated about the connection between inflation and stock market performance, it also helps them to lower their risk. The majority of research has been done in industrialised nations, whereas emerging nations, particularly China, have found less evidence. As a result, the study's goal is to ascertain how inflation has affected stock market performance in China during the period of 2000 to 2021. The Chinese stock markets are performing very well, and they may serve as an example of developing markets. Its emergence and growth are an unavoidable by-product of the expansion of the financial markets and market-oriented industries.

Research Problem

When the inflation rate rises, practically all product prices in the market rise simultaneously. Stock prices, however, are inversely related to inflation. In order to lessen or perhaps completely eradicate the negative impacts brought on by excessive inflation, central banks often undertake strict monetary policies, such as raising interest rates and reducing the amount of money in circulation. Stock prices will shift as a result of the policies' effects on the demand and supply of capital in the stock market. There are now primarily two opposing perspectives on how inflation impacts the stock market. Some individuals believe that there is a positive correlation between inflation and stock returns, which implies that when inflation happens, the stock market will be bullish.

Over time, there have been several notable shifts in inflation that have affected the Chinese economy. The consumer price index (CPI) rose by 0.69% from 133.33 points in November to December 2012, but the stock market return decreased to 3.20% from 3.25% (Osoro & Ogeto, 2014). Additionally, in April 2013, the CPI rose by 0.95%, from 137.96 to 139.28, and at the same time, stock returns were impacted by changes in inflation rates and increased to 3% (Kirui et al., 2014). Additionally, owing to inflationary tendencies, the Shanghai Composite Index has been consistently increasing and dropping throughout the years. As a result, it is necessary to examine how inflation affects the stock market returns of companies listed on the Shanghai Securities Exchange. However, the bulk of Chinese studies that investigate the impact of various macroeconomic conditions on stock market performance also consider inflation. As a result, further research is needed to assess how inflation alone influences stock market returns in China.

Review of Literature

Since inflation is unavoidable, the link between stock returns and stock values is crucial for every economy. If we can develop a strong positive relationship between these two variables, we may utilise stocks as an effective hedge against inflation and maintain our real returns in the economy. Numerous scholars have looked at the connection between inflation and stock market returns, but it has remained challenging to explain the link in broad terms.

Several studies have claimed that there is a positive association between inflation and stock market gains and some of them have demonstrated using cross-sectional and time-series data and this relationship differs from country to country, particularly in light of their unique structural changes over the course of obtaining time-series data. Cross-sectional statistics make it pretty clear that market-available equities are effective inflation hedges. By ignoring the stock market as a viable inflation hedge and taking into account the different ups and downs in the economies, some academics have also shown a negative association between stock market returns and inflation. Many of them discovered both positive and negative relationships between these two factors, but they were neutral since their

investigations did not provide any conclusive evidence. The goal of the current research is to fully comprehend how the two key variables—inflation and stock market returns—relate to one another.

In-depth research has been done in the literature on the connection between stock returns and inflation rates. The results of this empirical research were contradictory, nevertheless. Fisher (1930) advised that equity shares be used as a hedge against inflation after discovering a positive association between stock returns and inflation in his empirical study. For Greece from 1985 to 2000, Ioannides et al. (2002) looked at the correlation between stock market performance and inflation rates. They made the case that the stock market can protect against inflation in accordance with Fisher's theory. Expected and unanticipated inflation has an adverse connection with stock returns, according to empirical research by Fama and Schwert (1977). They believed that an increase in development activities causes inflation to decline. Equity prices rose as a consequence of this. Omran and Pointon (2001) use co-integration analysis and ECM to assess the impact of inflation on the Egyptian stock market. The findings indicate that the inflation rate has a significant impact on the stock market.

In his empirical research carried out in China, Zhao (1999) found a substantial inverse association between inflation and the stock market. On a sample of 20 listed stocks, Bethlehem (1972) looked at the connection between inflation and stock market performance on the JSE. He came to the conclusion that equities provide excellent inflation hedges. Research by Bakshi and Chen (1996) found a link between inflation and stock prices that was negative. The association between these two factors in Greece was determined to be negative and statistically insignificant in an empirical investigation by Spyrou (2001). In 1990, Rao and Bhole looked at how inflation affected stock market performance in India. They computed nominal returns to investigate this and discovered a link between inflation and stock returns that was negative, but positive over the long term. Munyaka (2007) conducted research and discovered a clear correlation between real inflation and stock prices as well as an inverse association between predicted and actual inflation.

Alimi (2014) also looked at the long- and short-term links between inflation and the growth of the banking industry in Nigeria between 1970 and 2012. According to the research's results, inflation had a negative impact on financial development over the studied period. Taofik and Omosola (2013) found evidence of a negative long-term connection between inflation and stock market return in Nigeria. Using monthly data on inflation and stock returns, Ahmad and Naseem (2011) investigated the effects of high inflation on stock market returns in Pakistan and discovered that there is a negative and substantial influence of inflation on stock returns.

Madsen (2004) estimated the association between share returns and inflation using Fisher's hypothesis. The Fisher hypothesis has been refuted by the discovery in several articles that share returns are not hedged against predicted inflation. For the US markets, Gallagher and Taylor (2002) examined the relationship between stock prices and macroeconomic factors and found that inflation had a

detrimental effect on stock returns. Geske and Roll (1983) examined the US stock market and discovered a negative relationship between stock price and inflation. Asprem (1989) looked at many European nations and found that stock prices were inversely correlated with inflation. Khan and Yousuf (2013) examined how several macroeconomic factors affected Bangladesh's stock market pricing. Inflation has little long-term effect on stock values, according to research using co-integration analysis and the Vector Error Correction Model (VECM).

The literature investigation on the proposed subject has revealed a link between inflation and stock returns. There is no consensus on whether the correlation between inflation and stock returns is positive, negative, or neutral. Empirical evidence for this association in the Chinese stock market and other emerging stock markets is rare in the literature. In light of this, the relationship between stock market returns and inflation is being investigated. This is why researchers are looking into the relationship between inflation and Chinese stock market performance.

Objectives of the Study

To investigate the correlation between stock returns and inflation.

To investigate the effect of inflation on stock market returns.

Hypothesis of the Study

There is a significant link between inflation (independent variable) and stock returns (dependent variable).

Research Methodology

Data Source

Data required for the study is collected from secondary sources and the macroeconomic indicators like inflation and stock market return in China are collected from the World Economy Database 2021. The data collected for the study covers from 1991 to 2021.

Data Analysis

The current study analyses and evaluates the data using both descriptive and inferential statistics. Descriptive statistics were employed to determine the structural aspects of data. Auto Regressive Distributed Lag (ARDL) Model is used to determine the impact of inflation on stock market return in the Chinese Capital Market. The Augmented Dicky Fuller (ADF) is used to determine the stationary qualities of data. Akaike Information Criteria (AIC) were utilised for the ARDL specification with Eviews 9.

Specification of the Model

The following linear regression model has been developed to examine the putative relationship between stock return and inflation rate.

$$SMR = a + b1\ CPI + €$$

a = Constant Intercept Term of the Model
SMR = Stock Market Return (Dependent Variable)
b1 = Coefficients of the Estimated Model.
CPI = Consumer Price Index (Independent Variable)
€ = Error Component.

Descriptive Statistics

The purpose of descriptive statistics is to identify patterns, trends, and provide a relevant summary of the supplied data set. The patterns and broad trends of the dataset have been statistically summarised using descriptive statistics including mean, median, maximum and minimum values, standard deviation, and probability. According to descriptive data, the average CPI is 8.9%, although the mean value of stock market returns is 2.1%.

According to Table 1, both the Shanghai Composite Index and the CPI in China are increasing trend from 2000 to 2007. This indicates that there was a positive correlation between the two. The price of stocks rises when there is an increase in money supply due to enough liquidity. Companies may increase earnings thanks to lower financing costs, which also causes the price of shares to increase.

Table 1. Descriptive Statistics Inflation and Stock Market Index of China.

Year	Shanghai Composite Index (Closing Level)	Average annual CPI/%
2000	2073.48	0.40
2001	1654.97	0.70
2002	1357.65	–0.80
2003	1497.04	1.20
2004	1266.50	3.90
2005	1161.06	1.80
2006	2675.47	1.50
2007	5261.56	4.80
2008	1820.81	5.90
2009	3277.14	−0.70
2010	2808.08	3.30
2011	2199.42	5.40
2012	2269.13	2.65
2013	2115.98	2.62
2014	3234.68	1.99

(Table 1 continued)

(Table 1 continued)

Year	Shanghai Composite Index (Closing Level)	Average annual CPI/%
2015	3539.18	1.44
2016	3103.64	2
2017	3307.17	1.56
2018	2493.90	2.11
2019	3050.12	2.9
2020	3473.07	2.39
2021	3639.78	0.85
Average	2.177	8.94
S. D	1.73	34.65
Jarque Bera	0.93	8.96
Prob.	0.626	0.011

Source: Globaleconomy.com.

Figure 1. Stock Market Return and Inflation in China.

Additionally, favourable financial conditions increase investor confidence, which boosts the stock market. This means that during the early stages of inflation, a rise in the money supply drives demand for shares, which raises stock prices and benefits the stock market. The expenses of living for residents and producers will, however, rise sharply in lockstep with persistently rising inflation, which will immediately lower corporate earnings and living standards.

Figure 1 depicts the link between the Shanghai Composite Return of the Chinese stock market from 2000 to 2021 and the inflation rate. The CPI fluctuates

Table 2. Correlation Coefficient of Stock Index and Inflation of China.

	CPI	SMR
CPI	1.000	0.473
SMR	0.473	1.000

somewhat between 2000 and 2002, but overall, it declines. The Shanghai index is declining rather steadily, although there has been some volatility recently. Between 2003 and 2006, the CPI increased significantly. However, the stock index remained mostly constant from 2007 to 2009; however, when the CPI increased dramatically, the Shanghai Composite Index also rose strongly, before declining. The Shanghai Composite Index then saw significant volatility.

Correlation Coefficient Between Inflation and Stock Market Return

A correlation matrix has been created in order to evaluate the relationship between inflation and stock index return. In China, there is a statistically significant positive (+0.47) link between the stock index and inflation (Refer Table 2).

Unit Root Test

The stationarity characteristics of the data are typically assessed using the unit root test. The vast majority of economic data has a unit root, which leads to incorrect regression. The research checks for stationarity in time-series data using the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) test statistics to get around this problem. As indicated in Table 3, the stock market return (SMR) is integrated at level whereas the CPI is integrated at level 1.

Impact of Inflation on Capital Market Return of China

A method for concurrently assessing the short- and long-term effects of inflation on the capital market return of the Chinese market is the ARDL model. The market return is the dependent variable, while inflation is its independent variable. I (1) should be the independent variable and I (0) should be the dependent variable, or a mixed order of integration. According to Table 4, the R-square value is 60%. Accordingly, 60% of the volatility in the performance of the Chinese stock market may be attributed to inflation.

Accordingly, a linear equation model is developed in the following way:

$$SMR = \alpha + \beta_1 SMR_{t-1} + \beta_2 SMR_{t-2} + \beta_3 SMR_{t-3} + \beta 4\ SMR_{t-4} + \beta 5\ CPI + \epsilon$$

Table 3. ADF Unit Root Tests Results.

Series	Order of Integration
SMR	I (0)
CPI	I (1)

Table 4. ARDL Model for Inflation and Stock Market Return.

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
SMR (−1)	–0.172152	0.195192	–0.881960	.3951
SMR (−2)	0.014347	0.215409	0.066603	.9480
SMR (−3)	–0.337367	0.206257	–1.635662	.1279
SMR (−4)	–0.489849	0.190913	–2.565817	.0247
CPI	19.40199	5.465938	3.549617	.0040
C	–30.92114	15.18792	–2.035904	.0645
R-squared	0.600566	Mean dependent var		9.311667
Adjusted R-squared	0.434136	S.D. dependent var		37.20469
S.E. of regression	27.98684	Akaike info criterion		9.762547
Sum squared resid	9399.157	Schwarz criterion		10.05934
Log-likelihood	–81.86293	Hannan-Quinn criterion.		9.803471
F-statistic	3.608507	Durbin-Watson stat		2.089476
Prob(F-statistic)	0.031825			

Note: *P* values and any subsequent tests do not account for model selection.

Where t-1 represents the lagged value of the variables by one period and t-2 represents the delayed value etc. The AIC automatically calculates the optimum lag length of the model.

Optimum Lag Length Criteria

The best lag length for the model, or the number of lags employed in the model, is determined using the Akaike Information Criterion (AIC). According to this test, the model is better the lower the AIC value. The top 20 models are those with the lowest AIC values, as shown in Figure 2. The lowest AIC score indicates that ARDL is the ideal lag length (4, 0). With an AIC value of 9.75, the independent variable had a lag value of 0, whereas the dependent variable had a lag value of 4.

Co-integration Using the ARDL Bound Test Approach

After choosing the order of integration of each variable and the lag length, the next step is to analyse the co-integration or long-term connection among the model's variables. The model's variables have a cointegrating relationship if the estimated

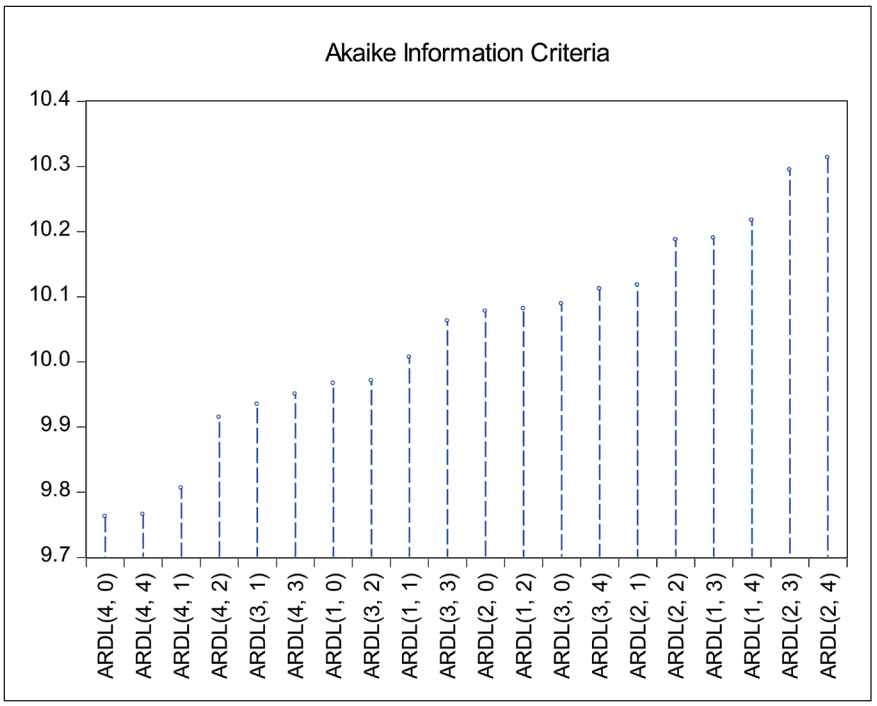

Figure 2. Optimum Lag Length Criteria.

F-statistics are greater than the upper-bound critical value at the 5% level. The ARDL Bounds Test's null hypothesis holds that there is no long-term link between the variables.

Table 5 provides a description of the bound test's resolutions. The calculated F-statistic was 6.55, exceeding the maximum limit at the 5% level. It suggests that the variables in this model have a long-term connection. Then this research points out that the stock market return and inflation in China have a long-term link or co-integration.

The ARDL model analyses the influence of inflation on stock market performance and examines both short- and long-term positive effects of inflation on China's capital market performance. In order to more precisely identify and evaluate the effect of inflation on stock prices, this research introduces the Shanghai Composite Index of stock prices in place of the CPI index. The data shown in Table 6 show that stock returns and inflation have a long-term positive connection, and the Error Correction Term (ECT) is substantial and negatively signed (see Table 6). A statistically significant coefficient with a negative sign is required for the ECT coefficient, which measures how rapidly variables return to equilibrium. The yearly correction in disequilibrium is 198%, according to the ECT value of 1.98. The bound test for co-integration is supported by the exceptionally substantial ECT coefficient with anticipated signs. The study's findings indicate a substantial positive association between inflation and stock

Table 5. ARDL Bound Test.

ARDL Bounds Test		
Null Hypothesis: No Long-run Relationship Exist		
Test Statistic	Value	k
F-statistic	6.559398	1
Critical value bounds		
Significance	I (0) Bound	I (1) Bound
10%	4.04	4.78
5%	4.94	5.73
2.5%	5.77	6.68
1%	6.84	7.84

Table 6. ARDL Cointegrating and Long-run Form of Stock Market Return and Inflation.

ARDL Cointegrating and Long Run Form Dependent Variable: SMR				
		Cointegrating Form		
Variable	Coefficient	Std. Error	t- Statistic	Prob.
D (SMR (–1))	0.812869	0.35143	2.313013	.0393
D (SMR (–2))	0.827216	0.2941	2.812666	.0157
D (SMR (–3))	0.489849	0.19091	2.565817	.0247
D (CPI)	19.401986	5.46594	3.549617	.004
CointEq (–1)	–1.985021	429310	–4.62375	.0006
Cointeq = SMR –(9.7742*CPI-15.5772)				
		Long-run Coefficients		
Variable	Coefficient	Std. error	t- Statistic	Prob.
CPI	9.774198	3.1452	3.107656	.0091
C	–15.577238	8.62211	–1.80666	.0959

market performance. This indicates that investors must balance risk and reward while owning equities, and it also acts as a general risk management strategy.

Conclusion

This study gives a comprehensive understanding of the relationship between China's stock market and inflation. The current study makes it clear how inflation affects stock market returns; as a result, it can assist market participants like traders, fund managers, financial market regulators, and investors in making wise portfolio decisions based on information about anticipated inflation and performance of stock returns in China. The main goals are to investigate the

connection between inflation and stock market returns in China and to evaluate how inflation affects stock market returns. The analysis found a substantial long-term and short-term positive association between market returns and inflation, suggesting that stocks are an effective inflation hedge. These findings are comparable with those of Olufisayo (2013) and Ibrahim and Agbaje (2013), both of whom found a strong positive co-integration relationship between inflation and stock prices. These findings also suggest that China's stock market has a long memory for inflation shocks, implying that equities constitute a reasonable long-term inflation hedge.

Recommendations for Policy and Practice

The current analysis demonstrates a significant association between inflation and stock returns; when investors anticipate that inflation will rise, equities are a better vehicle for keeping or protecting assets. At the same time, the results show that monetary policy is not neutral in the financial market. So, the government can utilise monetary policy to control the inflation rate, which will affect the actual returns on investment and real economic activity in China. Even though inflation is at a moderate level, still there is a chance to rise in the rate, which can increase the cost of living of the common people, thereby affecting the stock market, so through continuous checks on maintaining prudent monetary and fiscal policies of the country, will help to maintain the existing rate of inflation thereby does not affect adversely on the stock market and also thereby helps to increase investor confidence both locally and internationally. Since this research clearly demonstrates that changes in inflation cause movements in the stock market, economic regulators should put in place macroeconomic variable laws that are helpful for the growth of the stock market. To guarantee the success and productivity of the stock market, the regulator should ensure that market participants are abiding by the laws and regulations. During moments of rising inflation, investors should avoid panic and emotion-driven decisions in favour of fundamentally robust shares capable of weathering any economic storm.

Suggestions for Further Research

In order to determine if inflation contributes to share price volatility, the research suggests conducting a second investigation into the impact of inflation on share price volatility. However, the study was also restricted to stock market returns. The impact of inflation on the stock market returns of companies listed on Asian Securities Exchanges is another research that is recommended.

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References

Adams, G., McQueen, G. R., & Wood, R. A. (2004). The effects of inflation news on high-frequency stock returns. *The Journal of Business*, *77*(3), 547–574.

Ahmad, M. I., & Naseem, M. A. (2011). Does inflation hurt the stock market returns? Retrieved June 27, 2016, from https://www.researchgate.net/publication/228311038.

Alimi, R. S. (2014). Inflation and financial sector performance: The case of Nigeria. *Timisoara Journal of Economics and Business*, *7*(1), 55–69.

Asprem, M. (1989). Stock prices, asset portfolios, and macroeconomic variables in ten European countries. *Journal of Banking and Finance*, *13*(4–5), 589–612.

Bakshi, G. S., & Chen, Z. (1996). Inflation, asset prices, and the term structure of interest rates in monetary economies. *Review of Financial Studies*, *9*(2), 241–275.

Bethlehem, G. (1972). An investigation of the return on ordinary shares quoted on the Johannesburg Stock Exchange with reference to hedging against inflation. *South African Journal of Economics*, *40*(3), 254–257.

Fama, F., & Schwert, G. (1977). Asset returns and inflation. *Journal of Financial Economics*, *5*, 115–146.

Fisher, I. (1930). *The theory of interest*. MacMillan.

Gallagher, L. A., & Taylor, M. P. (2002). The stock return–inflation puzzle. *Google Scholar*, *75*, 147–156.

Geetha, C., Mohidin, R., Chandran, V. V., & Chong, V. (2011). The relationship between inflation and stock market: Evidence from Malaysia, United States, and China. *International Journal of Economics*, 1–16.

Geske, R., & Roll, R. (1983). The monetary and fiscal linkage between stock returns and inflation. *Journal of Finance*, *38*(1), 1–33.

Ibrahim, T. M., & Agbaje, O. M. (2013). The relationship between stock return and inflation in Nigeria. *European Scientific Journal*, *9*(4).

Jacob, B., & Mathew, R. (1993). Stock returns and inflation: A long-horizon perspective. *The American Economic Review*, *83*(5), 1346–1355.

Khan, M., & Yousuf, A. (2013). Macroeconomic forces and stock prices: Evidence from the Bangladesh stock market. hdl.handle.net/10419/72453.

Kirui, E., Wawire, N. H. W., & Onono, P. O. (2014). Macroeconomic variables, volatility and stock market returns: A case of Nairobi Securities Exchange, Kenya. *International Journal of Economics and Finance*, *6*(8), 1–17.

Ioannides, D., Katrakilides, C., & Lake, A. (2002). *The relationship between stock market returns and inflation: An econometric investigation using Greek data* [Paper presentation]. International Symposium on Applied Stochastic Models and Data Analysis, Brest-France, pp. 17–20.

Munyaka, P. M. (2007). *The relationship between inflation and stock prices: A case study of the Nairobi Stock Exchange* (Master's thesis). University of Nairobi.

Olufisayo, A. O. (2013). Stock prices and inflation: Evidence from Nigeria. *American Journal of Economics*, *3*(6), 260–267.

Rao, K. V. S. S., & Bhole, L. M. (1990). Inflation and equity returns. *Economic & Political Weekly*, *25*(1), 91–96.

Spyrou, S. (2001). Stock returns and inflation: Evidence from an emerging market. *Applied Economics Letters*, *8*(7), 447–450

Taofik, M. I., & Omosola, M. A. (2013). The relationship between stock return and inflation in Nigeria. *European Scientific Journal*, *9*(4), 146–157.

Zhao, X.-Q. (1999). Stock prices, inflation and output: Evidence from China. *Applied Economics Letters*, *6*(1), 509–511.

Research Paper

The Protagonist Moderated Role of Cognitive Conflict Between Digital Transformation Mechanism and Financial Performance of the Banking Sector

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Abstract

In today's context, digital transformation is essential for the survival of an economy. The digital transformation mechanism involves the understanding of the potential of technology and creating a new road map that details the solutions and resources needed to deliver change. Digitalisation happens when organisations embed digital technologies across all their operations. The purpose of this study involves the verification of whether the digital transformation mechanism could improve organisational performance. Under current research analysis, the effect of digitalisation strategies such as various structural changes, use of digital technologies and value creation upon the short- and long-run financial performance of Indian banks has been examined. For the same, employees of 20 public and private sector banks have been selected through a stratified random sampling technique. First, the effect of digital transformation on the banking industry's financial performance has been analysed, and then, the role of cognitive conflict, that is, employees' mental health or cognitive dissonance as a moderator, has been investigated. The findings revealed that the adoption of digital technologies can significantly affect the financial performance of a business

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enterprise. In the banking industry, the adoption of digitalisation has a positive relationship with the short-run and long-run financial performance, which is moderated by the psychological state of human personnel, that is, cognitive conflicting state.

Keywords

Cognitive dissonance, digital transformation mechanism, financial performance indicators, structural changes, value creation

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Introduction

The survival of an economy without digital transformation is absolutely impossible. The digital transformation mechanism involves the process of implementation of new advanced techniques of information technologies that lead towards the adoption of new and unique business models in today's competitive world. On the one hand, digital transformations of companies include the understanding of the potential of technology and creating a new road map that details the solutions and resources needed to deliver change. On the other hand, digitalisation happens when the organisations embed digital technologies across all their operations (Fichman et al., 2014; Hess et al., 2016; Lucas et al., 2013). Digital transformation is not an easy process, because its implementation passes through complex procedures (Hess et al. 2016). Business organisations are completely upgrading themselves through product improvements, research and developments, innovations, cost reductions and high sales strategies to capture the main market share (Sebastian et al., 2017). Faro et al. (2019) also highlighted the challenge for public sector organisations to preserve their validity by digitally transforming their products and processes so as to remain viable business units. Historically, they are reluctant to bring about new changes to adopt. Complex and core issues have emerged in the preparation and execution of digital transformation mechanisms in that business concerns. Digital transformation has been regarded as a continuous seed which generates roots of further developments in today's modern world with no foreseeable end (Chanias et al., 2019). Strategic management decisions of the business enterprises are now to be majorly focused on digital transformation mechanisms instead of any other technical issue. Digital transformations and innovations are now to be treated as hard-core intensive elements of public and private sector entities (Henriette et al., 2015; Reis et al., 2018).

A SAP 2019 survey revealed that only 3% of business entities have adopted the complete mechanism of a digital transformation system, and 84% entities found this mechanism very important for their survival in the next five years (Besson & Rowe, 2012; Crowston et al., 2005). Kane et al. (2015) suggested that the scope of the digital transformation mechanism incorporates the process of adopting advanced information technologies that incorporate new and unique business models in today's competitive world. The fusion view with regard to digital transformation (Bharadwaj et al., 2013; Mithas et al., 2013) revealed that the

strategic impact of information technology was very imperative because a corporate IT mechanism has been found identical to a business mechanism. In fact the current scenarios indicate that the practical knowledge of new information technology and digital transformation fails the implementation of innovative digital transformation in business concerns (Hess et al., 2016; Matt et al., 2015). On the other hand, cognitive conflict is a psychological state which occurs when there is a discrepancy between a person's cognitive structures and their experiences. Cognitive conflict also refers to how people interpret or prioritise information, which can make it difficult to make decisions. In strategy of practice theory (Jarzabkowski, 2005; Jarzabkowski & Spee, 2009; Whittington, 1996, 2006), digital transformation has been related to the emotional stagnancy of human personnel inside the business world. Without achieving the stability of cognitive dissonance and conflict resolution and establishment of full coordination and support system, the implementation of the digital transformation mechanism is neither effective nor productive (Jarzabkowski, 2005; Jarzabkowski & Spee, 2009; Whittington, 1996, 2006). Aspara also highlighted that the decision for implementing digital transformation strategy is very complex and incorporates the involvement of cautious strategic judgements. To simplify the process of decision-making, the concept of psychology should be taken into consideration, that is, elements associated with emotions and cognitive dissonance (Luce et al., 1999; Nguyen et al., 2018). While focusing on factors generating dissonance or disagreements, this study analyses the effect of the adoption of digital transformation on the performance of study units. The moderated effect of cognitive conflict has been undertaken in the proposed theoretical model. Amason (1996) outlined the conflict as the crux of this paradox and provided strong evidence from two different samples of conflict's constant yet contradictory impacts upon decision quality, consensus as well as upon affective acceptance. The collection of the first sample included 94 CEOs from 48 top management teams from the small food processing firms of America. The second sample included 15 managers from five furniture manufacturing firms in the Southeastern United States. The study builds the relationship between digital transformation mechanism and cognitive conflict theory. Cognitive conflict has been found positively related to decision quality, understanding, commitment and affective acceptance, and the cognitive conflict leads to achievement of business productivity (Amason, 1996; Festinger, 1957; Warner & Wäger, 2019). Parayitam and Dooley (2011) examined the relationship between cognitive conflict, decision quality and decision commitment. The data were collected from the top management teams of 109 hospitals of the United States. The findings of the study revealed that a curvilinear or inverted U-shaped relationship exists between cognitive conflict and decision-making quality variables. The study emphasised that top management team members need not over emphasise cognitive conflict beyond a limit because it may have destructive effects. The findings of the study revealed the presence of a moderated level of cognitive conflict which is desirable always instead of too much conflict, causing destruction in the business units (Bercovitch, 1982; Parayitam & Dooley, 2011). Various longitudinal studies have examined the relationship between task, process and relationship conflict, inter-personal conflict

and inter-group conflict and work performance (Greer et al., 2008), but the impact of digitally transformed strategies on the financial performance of banking industry has been least explored while mediating the role of cognitive conflict. This study focuses on this research gap.

This study expands the literature by indicating the effect of digital transformation mechanisms on banks' operational efficiency and the industry and society as a whole. The study focuses on the effect of digital transformation on short- and long-term performance, widening and deepening the current research. Further, the research confirmed the moderating effect of cognitive conflict on the relationship between digital transformation and the overall performance of the banking sector. Moreover, the bank unit's age, unit size, sector and past performance have been taken as control variables to improve the reliability of the conclusion.

Theoretical Framework and Hypothesis Development

The primary objective of this research is to explore the connection between digital transformation mechanisms and the financial performance of the banking industry units of India. Further, the mediated role of conflicts has been explored to stimulate the low financial performance that turns into the high financial performance of the banking business in India. For this purpose, a single cross-sectional research design has been undertaken, that is, only one sample of respondents is drawn from the target population, and data is obtained from this sample only once. The population of Punjab has been divided geographically into three major belts, that is, Majha, Doaba and Malwa. One city has been selected from each belt on the basis of the highest area population criterion to make the sample representative based on this geographical cut-off criteria. Area population has been considered a major determinant and a significant positive contributor towards the set up of the number and size of bank branches (Avery et al., 1999; Cristina, 2014; Damar, 2007; Hannan & Hanweck, 2007). Therefore, the selected areas have been found enriched with the highest number of offices of all scheduled commercial banks, that is, Amritsar (478), Jalandhar (669) and Ludhiana (783) within each belt of Punjab, that is, Majha, Doaba and Malwa. Thereafter, the sample database was selected from various published annual reports of banks that have been specified as the highest employee-bearing units (Avery et al., 1999; Cristina, 2014; Damar, 2007; Hannan & Hanweck, 2007). Twenty banks have been selected (mentioned in Table 1). The stratified random sampling mechanism involved a survey of 90 branches of public sector banks and 79 branches of private sector banks to get a response of 676 bank employees. Table 1 indicates the number of respondents and branches surveyed of every public and private sector bank. Sixty-six respondents did not return the questionnaire due to their busy schedule, and 69 questionnaires had been discarded due to data redundancy error. Finally, 541 responses have been recorded for data analysis (Krejcie & Morgan, 1970).

The formula for calculating sample size (the Krejcie–Morgan criterion) is

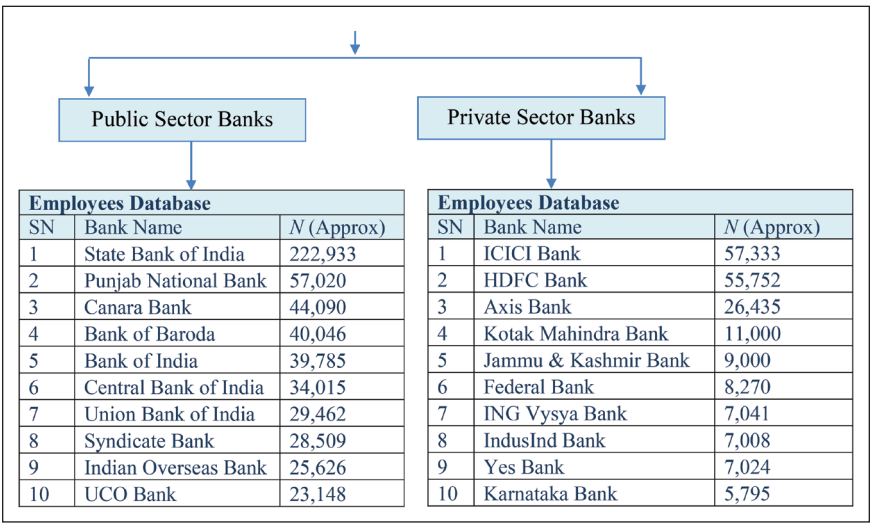
$$S = X^2 NP(1-P) / d^2 (N-1) + X^2 P(1-P).$$

Table 1. Sample Database: Details of Banking Units.

S.N. (1)	Banks Under Survey (2)	ASR	Total Number of Branches in JLD	LUD	R (3+4+5)	Punjab	Branches Surveyed
Public Sector Banks		**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
1	State Bank of India	57(3)	69(3)	71(3)	197	392	9
2	Punjab National Bank	69(3)	69(3)	79(3)	217	651	9
3	Canara Bank	19(3)	39(3)	22(3)	80	140	9
4	Bank of Baroda	7(3)	14(3)	16(3)	37	78	9
5	Bank of India	20(3)	18(3)	44(3)	82	127	9
6	Central Bank of India	24(3)	18(3)	23(3)	65	120	9
7	Union Bank of India	14(3)	30(3)	26(3)	70	112	9
8	Syndicate Bank	3(3)	7(3)	4(3)	14	35	9
9	Indian Overseas Bank	8(3)	16(3)	31(3)	55	93	9
10	UCO Bank	7(3)	33(3)	29(3)	69	131	9
	Total	228	313	345	886	1875	**90**
Private Sector Banks		**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
11	ICICI Bank	15(3)	15(3)	26(3)	56	107	9
12	HDFC Bank	66(3)	51(3)	51(3)	168	215	9
13	Axis Bank	28(3)	24(3)	39(3)	91	99	9
14	Kotak Mahindra Bank	1(1)	3(3)	3(3)	7	16	7
15	J&K Bank	2(2)	1(1)	3(3)	6	16	6
16	ING Vysya Bank	2(2)	1(1)	5(5)	8	24	8
17	IndusInd Bank	2(2)	4(3)	6(4)	12	29	9
18	Karnataka Bank	1(1)	1(1)	2(2)	4	5	4
19	Federal Bank	1(1)	2(2)	7(6)	10	16	9
20	Yes Bank	5(3)	17(3)	5(3)	27	54	9
	Total	123	119	147	389	581	

Source: Data have been captured from the official websites of these units and representing figures under parenthesis depicts the number of branches surveyed under the geographical area of each city.
Note: ASR: Amritsar, JLD: Jalandhar, LUD: Ludhiana (famous green belt-cities of Punjab).

The stratification process started with the selection of these commercial banks situated in Amritsar, Jalandhar and Ludhiana cities of Punjab. Ten banks from the public sector and ten banks from the private sector have been selected based on the highest employee database extracted from annual reports out of Prowess software. The population of Punjab has been divided geographically into three major belts, that is, Majha, Doaba and Malwa. One city has been selected based on the highest area population criterion from each belt to make the sample representative based on this geographical cut-off criteria. Therefore, the selected areas have been found enriched with the highest number of offices of all scheduled commercial banks, that is, Amritsar (478), Jalandhar (669) and Ludhiana (783) within each belt of Punjab, that is, Majha, Doaba and Malwa.



Employees Database		
SN	Bank Name	*N* (Approx)
1	State Bank of India	222,933
2	Punjab National Bank	57,020
3	Canara Bank	44,090
4	Bank of Baroda	40,046
5	Bank of India	39,785
6	Central Bank of India	34,015
7	Union Bank of India	29,462
8	Syndicate Bank	28,509
9	Indian Overseas Bank	25,626
10	UCO Bank	23,148

Employees Database		
SN	Bank Name	*N* (Approx)
1	ICICI Bank	57,333
2	HDFC Bank	55,752
3	Axis Bank	26,435
4	Kotak Mahindra Bank	11,000
5	Jammu & Kashmir Bank	9,000
6	Federal Bank	8,270
7	ING Vysya Bank	7,041
8	IndusInd Bank	7,008
9	Yes Bank	7,024
10	Karnataka Bank	5,795

Figure 1. Public and Private Sector Banks under Study.

Source: Annual reports of public and private sector banks extracted from Prowess software.

Further, having specific control over cognitive conflict dissonance will automatically lead to better work performance and productivity because of for-sure improved decision quality and the digital transformed strategy mechanism. As per strategy-as-practice theory, this research framework conjuncts the various theories of digital transformation and conflict management mechanisms. The proposed research question under the present analysis focused on whether the organisational financial performance can be improved by the implementation of digital transformation in banking units or not. After that, the research further stressed the moderation by the cognitive conflict between digital transformation and the financial performance of banking units.

The proposed theoretical model of the study has been depicted in Figure 2. No economy in the present era can really prevent the occurrence of competitive mutilation that is brought about by upgrading digitalisation processes and business models (Al-Debei & Avison 2010). The impact of the digital transformation mechanism on the units' financial performance should be examined (Vial, 2019). The role of cognitive or task-related conflict cannot be ignored. In strategy-as-practice model theory, strategic decisions have been linked with humans' involvement or their mental cognitive ability to reach targeted goals. Moderated cognitive conflict with greater adoption of digital transformation mechanism will assuredly lead to better work productivity and the firm will reach its heights (Amason, 1996; Chanias et al., 2019).

On the basis of research questions and the proposed model, the following hypotheses have been formulated:

H_a: Digital transformation mechanism has been positively influencing the short-term financial performance of banking units under study.

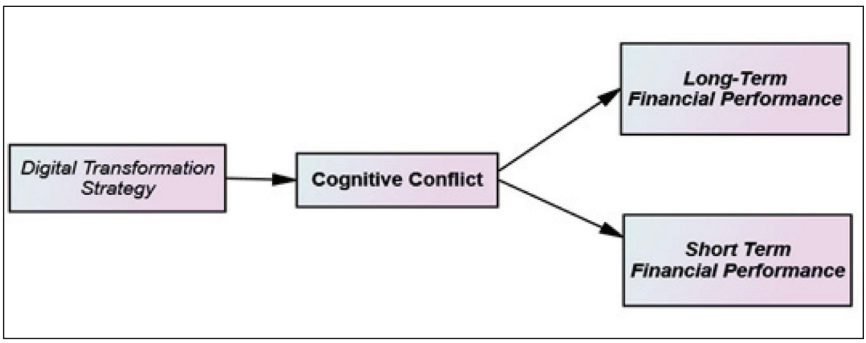


Figure 2. Theoretical Model of the Study.

H_b: Digital transformation mechanism has been positively influencing the long-term financial performance of banking units under study.
H_c: Digital transformation mechanism is positively influencing the cognitive conflict prevailing within banking units under study.
H_d: Cognitive conflict has been positively influencing the short-term financial performance of banking units under study.
H_e: Cognitive conflict has been positively influencing the long-term financial performance of banking units under study.
H_f: There is an inverted U-shaped relationship curve of cognitive conflict between the digital transformation mechanism and the short-term banking units' financial performance.
H_g: There is an inverted U-shaped relationship curve of cognitive conflict between the digital transformation mechanism and the long-term banking units' financial performance.

Application of Standardised Measures

Data have been collected with the help of a set standard questionnaire. The digital transformation mechanism has been examined with the help of a standardised scale which is developed by Hess et al. (2016), which incorporates 11 items of strategic decision questions. For example, 'The firm actively looks for opportunities for implementation of new technologies'. Three dimensions have been bifurcated, that is, strategic questions about technology, changes in value creation activities (what will the future business scope be?) and structural changes (e.g., 'Do you plan to integrate new operations into existing business structures?').

Digital transformation indicators revealed appropriate information extraction extent (communality rate > 0.50 level), variance explained rate (76.44%) with a Cronbach alpha reliability of 0.887. Digital transformation has been taken as a predictor variable. The dependent variable or outcome variable has been taken as the bank's financial performance. The financial performance has been measured

with the help of four subjective indicators where the comparison has been done for at least three financial years to its competitors: (a) returns on sales (ROS), (b) return on assets (ROA), (c) return on equity (ROE) and (d) returns on investments. A 7-point scale has been taken, where 1 indicates much lower performance and 7 indicates much higher performance (Newbert, 2008). The extracted factor analysis indicated that all the variables have communality values > 0.77 (Field, 2019), variance explained rate (69.74%) with Cronbach alpha reliability = 0.811. The moderated role of cognitive conflict has been analysed with the help of a 4-item scale developed by Jehn. Cronbach alpha for a single-factor model was 0.851. The role of cognitive conflict has been found associated with the work environment of the business units which brings the upshot of disagreements of ideas, opinions and crucial judgements about strategic decisions to achieve a shared unit target. This mediator has been introduced in the research framework to have an eye on better performance indicators and analyse the changed impact of digital transformation mechanism on banking financial performance. For example, 'How much disagreement arise between the members in your unit about the ideas about strategic decision implementation?' or 'Did your group discussion find a solution?' The Cronbach alpha was 0.802. Control variables have also been introduced to govern their impacts, such as age, size, sector type and unit's past performance. Age includes the number of years of the creation of a particular unit, size represents the average figure of employees for the last three years and sector means public or private that has been taken as a dummy variable, and past performance has been computed for three years with average revenue of particular unit (Bedford et al., 2019; Jehn, 1995). Bharadwaj et al. (2013), Sebastian et al. (2017) and Tumbas et al. (2017) also highlighted that the age, type or size of an organisation preceding the advent of digitalisation need to reform their business products, processes and technology fully to make its survival possible for the upcoming competitive business environment. Control variables have been undertaken from existing literature, which may have a significant impact on the financial performance of banks. Age, sector, size and past performance have been taken to remove confounding effects upon the dependent variable. The effect of digitalisation on financial performance has been accurately predicted while controlling these control variables and achieves a more realistic apple-to-apple comparison between banks (Bedford et al., 2019; Jehn, 1995).

Results

Confirmatory factor analysis has been performed to confirm the measured variables in our study after EFA. The outcome analysis indicated the four-factor model is a good fit with Chi-square value = 21,887.21 (p = .000) (Kaiser, 1960); (TLI = 0.944, CFI = 0.948; RMEEA < 0.10 exactly = 0.041). All the variables have been loaded with their factors significantly in the model fitted and passed through reliability and validity analysis (Field, 2019). Further correlation coefficients have been found statistically significant (p < .05) between the variables under study. The extracted variance has been divided into two parts: explained variance, which is described by independent variables, and unexplained variance, which is not described by

Table 2. Dependent and Independent Variables Taken for Study.

Dependent Variables	Short-term Banking Financial Performance ($\hat{Y}_1$) and Long-term Banking Financial Performance ($\hat{Y}_2$).
Independent Variables	Use of Digital Technology (X_1), Changes in Value Creation (X_2), Structural Changes (X_3), Cognitive Conflict (X_4), Age (X_5), Size (X_6), Units' Past Performance (X_7), Dummy Variable 1 (Sector, d_private (X_8): Private = 1, Else = 0), Cognitive conflict*X_1 = Interaction Term 1 Introduced (Variable = X_9), Cognitive conflict*X_2 = Interaction Term 2 Introduced (Variable = X_{10}), Cognitive conflict*X_3 = Interaction Term 3 introduced (Variable = X_{11}).

Source: Authors' Elaborations and Data variables entered into Analysis

independent variables, that is, residuals. No problem of multicollinearity occurred in the present analysis as the data represent a good fit (VIF ≤ 3; all the values are under permissible limit) (Dale,, 2003; Field 2019).

Model Development

Testing of Hypothesis

The higher value of *F*-statistics (Table 3) denotes its significance and rejection of the theoretical basis null hypothesis, which states that one or more partial regression coefficients have a beta value ≠0. Thus, the model signifies a good fit. Both H_a and H_b have been tested with the help of multiple regression analysis under structural equation modelling. The effect of the digital transformation mechanism has been analysed, and resultant positive indications have been stimulated (Amason, 1996; Chanias et al., 2019). The effect of variables, such as the use of digital technologies, changes in value creation and the effect of structural changes, has been found to positively influence short-term and long-term financial performance of the banking sector units along with an insignificant effect of the type of unit whether public or private. It reflects that the type of unit affects insignificantly the financial performance of banks. Thus, the results supported the hypothesis, that is, H_a and H_b (Table 3). The effect of control variables, such as age, units' size and sector type, has been found insignificant towards the outcome variable, that is, banks' financial performance (both short-term and long-term). Only the effect of units' past performance has been found significant. The standardised beta coefficients of regression indicated the positive relationship of the three major drivers of the digital mechanism such as the use of digital technologies (β = 0.335, SE = 0.037, $p < .01$), changes in value creation (β = 0.441, SE = 0.044, $p < .01$), and the effect of structural changes (β = 0.553, SE = 0.045, $p < .01$) has been found positive towards the long- and short-term performance of banking sector units under study. This indicates the acceptance of both H_a and H_b in our current research. The extracted values of R^2 and ΔR^2 were 0.487 and 0.231 for long-term performance ($\hat{Y}_2$) and 0.334 and 0.087 for short-term financial performance ($\hat{Y}_1$). The analysis further highlights the context that

Table 3. Regression Coefficients with Standard Errors Results.

	Short-term Banking Performance ($\hat{Y}_1$)			Long-term Banking Performance ($\hat{Y}_2$)		
Regression Model	*STR-M1*	*STR-M2*	*STR-M3*	*LTR-M1*	*LTR-M2*	*LTR-M3*
Independent variables						
X_1 (Use of digital technology)	–	*0.293*** *(0.041)*	*0.335*** *(0.037)*	–	*0.376*** *(0.091)*	*0.391*** *(0.087)*
X_2 (Changes in value creation)	–	*0.382*** *(0.051)*	*0.441*** *(0.044)*	–	*0.482*** *(0.073)*	*0.402*** *(0.051)*
X_3 (Structural changes)	–	*0.493*** *(0.058)*	*0.553*** *(0.045)*	–	*0.501*** *(0.091)*	*0.511*** *(0.093)*
X_4 (Cognitive conflict)	–	*0.354*** *(0.090)*	*0.301*** *(0.134)*	–	*0.383*** *(0.062)*	*0.102*** *(0.091)*
X_5 (Unit's age)	0.121 ℘ (0.311)	0.120 ℘ (0.298)	0.141 ℘ (0.275)	0.210 ℘ (0.286)	0.199 ℘ (0.281)	0.191 ℘ (0.271)
X_6 (Unit's size)	0.118 ℘ (0.122)	0.117 ℘ (0.199)	0.111 ℘ (0.192)	0.021 ℘ (0.201)	0.007 ℘ (0.196)	0.010 ℘ (0.191)
X_7 (Unit's past performance)	*0.316**** *(0.107)*	*0.271**** *(0.091)*	*0.198**** *(0.089)*	*0.338**** *(0.132)*	*0.331**** *(0.128)*	*0.197**** *(0.097)*
X_8 (D_private sector)	0.231 ℘ (0.199)	0.228 ℘ (0.198)	0.221 ℘ (0.181)	0.110 ℘ (0.106)	0.105 ℘ (0.070)	0.109 ℘ (0.069)
X_9 (Cognitive conflict*X_1)	–	–	0.176** (0.071)	–	–	0.267** (0.051)
X_{10} (Cognitive conflict*X_2	–	–	0.193** (0.061)	–	–	0.283** (0.053)
X_{11} (Cognitive conflict*X_3)	–	–	0.245** (0.045)	–	–	0.342** (0.032)
Collinearity statistics/regression predictions						
VIF (Variables under control)	≤2.915	≤2.729	≤2.455	≤2.810	≤2.685	≤2.703
R^2	0.247	0.334	0.410	0.231	0.487	0.662
Adjusted R^2	0.247	0.087	0.076	0.231	0.231	0.175
F-values	5.665***	8.332***	9.221***	5.121***	19.332***	21.221***

Notes: * $p < .05$; ** $p < .01$; *** $p < .001$; ℘, insignificant. The four-factor model is a good fit with $\chi^2 = 21{,}887.21$, $p < .001$; TLI = 0.944; CFI = 0.948; RMEEA = 0.041. All measurement items loaded significantly.

the independent variables of digital transformation mechanism and cognitive conflict together explain the variance of long-term (23.10%) and short-term (0.087%) financial performance of banks. The analysis identified the major significant impact of digital transformation mechanism on long-term financial

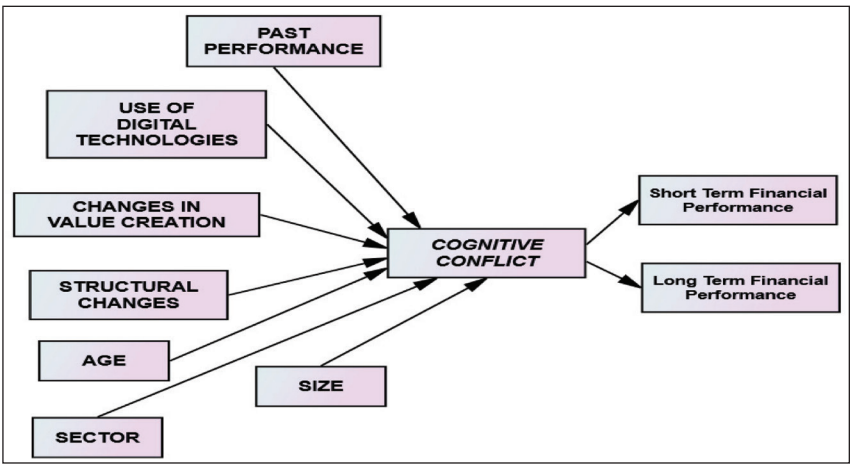


Figure 3. Diagrammatical Representation of Theoretical Model: With Mediator Cognitive Conflict.

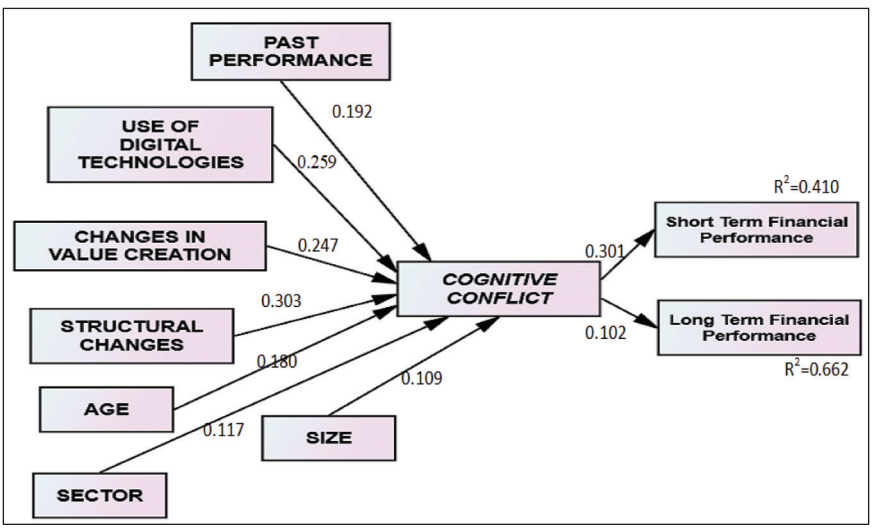


Figure 4. Structure of Path Model: With Cognitive Conflict as Mediator (Structured Equation Modelling).

Source: Model results; path coefficients—model signifies the impact of digital transformation mechanism upon the financial performance as a predicted variable.

performance as compared to the short-term position. Amason (1996) strongly built the relationship between digital transformation variables and cognitive conflict towards the positive and better achievement of financial performance. The results are also in agreement with those of Bercovitch (1982) and Parayitam and Dooley (2011).

The Study of Interactions-moderated Role of Cognitive Conflict

The moderating effect of cognitive conflict has been taken under the present analysis in between the strategies of digital transformation and banking unit financial (short- and long-term) performance. The interaction, as indicated in model STR-M3 and LTR-M3 for variable X_9 (cognitive conflict*X_1), indicates the positive significant relationship between long-term financial performance ($\beta = 0.267$, $SE = 0.051$, $p < .01$) and short-term financial performance ($\beta = 0.176$, $SE = 0.071$, $p < .01$) of the banking sector units. In the same models, the interactions for variable X_{10} (cognitive conflict*X_2) also indicate a positive significant relationship between long-term financial performance ($\beta = 0.283$, $SE = 0.053$, $p < .01$) and short-term financial performance ($\beta = 0.193$, $SE = 0.061$, $p < .01$). Further, the interactions for variable X_{11} (cognitive conflict*X_3) indicate a positive significant relationship between long-term financial performance ($\beta = 0.342$, $SE = 0.032$, $p < .01$) and short-term financial performance ($\beta = 0.245$, $SE = 0.045$, $p < .01$). Afterwards, the effect of interactions between cognitive conflict square (CC^2*DTS) and digital transformation mechanism has been found negative in relation to short-term financial performance ($\beta = 0.209$**, $SE = 0.053$, $p < .01$), but positive towards long-term financial performance. Hence, the results support hypothesis H_g, that is, negative relationship in case of short-term performance, and reject H_f, that is, positive relation in case of long-term performance. The extracted values of R^2 and ΔR^2 were 0.662 and 0.175 for long-term performance ($\hat{Y}_2$) and 0.410 and 0.076 for short-term financial performance ($\hat{Y}_1$). The analysis highlights the context that interactions between cognitive conflict and digital transformation together explain 17% variance in the case of long-term financial performance but 7% variance in the case of short-term performance. Line graphs have been further computed in support of the results (Figures 5 and 6). Dooley conducted a study on 109 hospitals in Florida, California, Texas and Colorado and highlighted the curvilinear or inverted U-shaped relationship that exists between cognitive conflict and performance variables. The study emphasised that top management team members need not over-emphasise cognitive conflict beyond a limit because it may have destructive effects too.

Interaction Graphs: Digital Transformation Mechanism with Short-term and Long-term Banking Performance.

As per the theory of Aiken and West (1991) and Cohen and Cohen (1983), the graphs indicating the association between digital transformation mechanism and long-term as well as short-term financial performance have been computed on the basis of standard deviations (the criterion of Aiken and West, 1991, about interactions). Low cognitive conflict lies < +1 *SD*, moderate cognitive conflict lies between −1 *SD*.< *X* < +1 *SD*, and high level of cognitive conflict lies above > +1 *SD* (Pedhazur, 1997). Thus, the findings do not indicate a U-shaped relationship, thereby H_f and H_g are not supported. Although the results are indicative of arousing upward linear relationship among low, moderate and high conflicts in long- run financial performance.

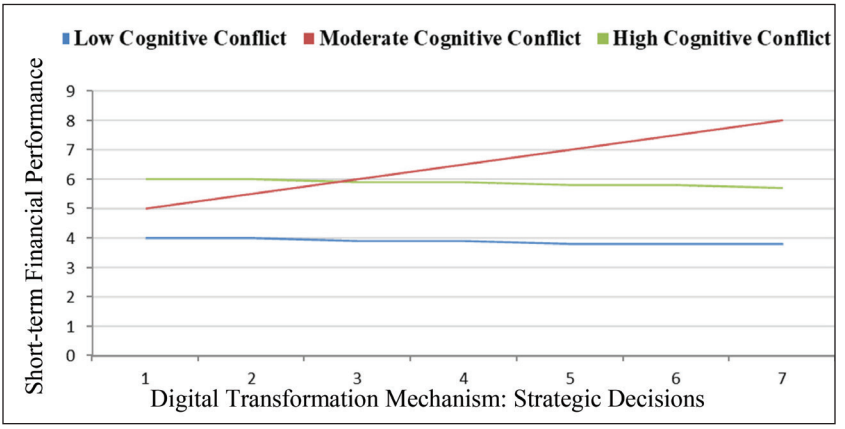


Figure 5. Relationship Structure Between Digital Transformation Strategic Decisions and L-T Financial Performance.

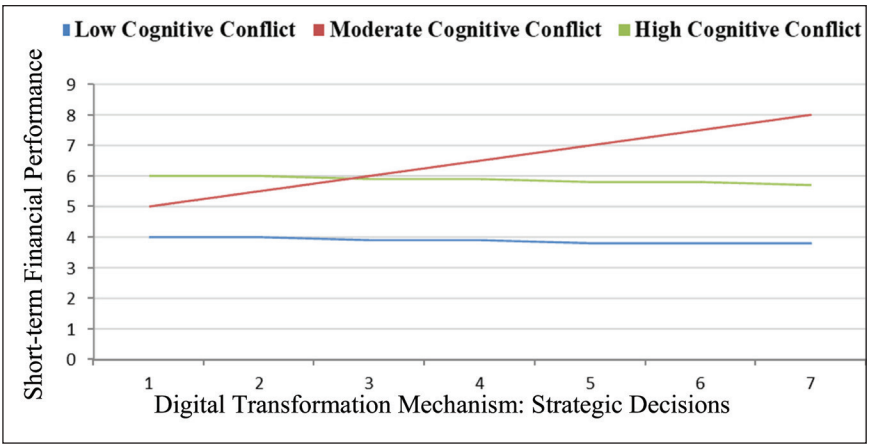


Figure 6. Relationship Structure Between Digital Transformation Strategic Decisions and S-T Financial Performance.

Concluding Observations

Digital economy has become significant because of quality improvements in products, processes, technology, structures, value creation and strategic corporate decisions. The adoption of digital transformation is hard and complex, but it affects various business segments due to competition in the worldwide economy. This study focuses on the effective implementation of digital transformation that significantly affects the financial performance of a business enterprise. It will enhance the short- and long-term financial position of a particular unit. The results revealed the significant impact of the digital transformation mechanism upon long-term financial performance as compared to the short-term position. The effect of variables, such as the use of digital technologies, changes in value

Table 4. Significance of Standardised Estimates for the Relationship Between Digital Transformation Mechanism and Cognitive Conflict.

Dependent Variable	Digital Transformation Mechanism	Standardized Estimates	*SE*	Significance (*p* Value)	Outcome (H_c)
Cognitive conflict ←	Use of digital technology	0.259	0.069	.000**	Accepted
Cognitive conflict ←	Changes in value creation	0.247	0.058	.000**	Accepted
Cognitive conflict ←	Structural changes	0.303	0.047	.000**	Accepted

Source: Calculation under primary data analysis by the author.
Note: Significance levels: * $p < .05$; ** $p < .01$.

Table 5. Significance of Standardised Estimates for Relationship Between Digital Transformation and Financial Performance with Mediator: Cognitive Conflict.

Predicted Variable	Independent Variable	Standardised Estimates	*SE*	Significance (*p* Value)	Interpretations (H_d and H_e)
Short-term financial performance ←	*Use of digital technology*	0.176	0.071	.000**	Accepted
Long-term financial performance ←		0.267	0.051	.000**	Accepted
Short-term financial performance ←	*Changes in value creation*	0.193	0.061	.000**	Accepted
Long-term financial performance ←		0.283	0.053	.000**	Accepted
Short-term financial performance ←	*Structural changes*	0.245	0.045	.000**	Accepted
Long-term financial performance ←		0.342	0.032	.000**	Accepted
Short-term financial performance ←	*Cognitive conflict*	0.301	0.134	.000**	Accepted
Long-term financial performance ←	*(mediator)*	0.102	0.091	.000**	Accepted

creation and the effect of structural changes, has been found to positively influence short-term as well as the long-term financial performance of banking sector units. Amason (1996) too strongly builds the relationship between digital transformation variables and long-run financial performance while moderating the effect of cognitive conflict. The effect of age, size and sector has been found insignificant except for the past performance, which significantly affects financial performance (both short-term and long-term) of a business unit. The effect of interactions between cognitive conflict and various dimensions of digital transformation has been found statistically significant, indicating the moderating role of cognitive conflict is very effective. The research has been in consonance with the study by Pelled et al. (1999), indicating that the moderation of cognitive conflict has

positive and significant effects on financial performance. The moderated role of cognitive conflict indicated the positive appreciative relationship towards the long-term financial performance of banks under study. Dooley studied 109 hospitals in Florida, California, Texas and Colorado and found a curvilinear or inverted U-shaped relationship between cognitive conflict and performance variables. The study emphasised that top management team members need not over-emphasise cognitive conflict beyond a limit because it may have destructive effects. Studies indicate the detrimental effect of conflict on work and financial performance if it is over the limit. The constructive impact of the digital transformation mechanism while moderating the role of cognition conflict has been studied under the current research framework. The investigation of dysfunctional impact can be studied in the future research.

Theoretical and Managerial Implications

The managerial implications of the study involve the considerations of numerous factors detailed below:

- It is a primary assertion that the adoption of digital transformation is becoming the matter of utmost priority to face the competitive challenge for business leaders. The expectations of more than 90% of bank business leaders are to acquire the complete process of digital transformation in today's competitive world for their survival and increase in strategic contribution to the current business environment.
- The adoption of upgraded digital transformation incorporates the unitisation of newly innovative digital technologies and the effect of the digital transformation mechanism upon value creation has been reflected through the dimension changed value creation. Further, the key dimension is structural change, which incorporates processes, policies and structural decisions reflected to bring better organisational performance.
- Digital transformation mechanisms have significantly positive effects on short- and long-run performance. So, managers should take appropriate measures to monitor conflict management by controlling different angles of cognitive conflict.
- Redesigning banking models and organisational restructuring need consideration to achieve digital transformation through continuous iteration and development.
- Bank managers need to play a significant role in developing a strong corporate culture which encourages innovations allowing every personnel to express their opinions towards change and adoption of digital mechanisms.
- Overall, the level of high cognitive conflict can result in negative effects such as non-communication or ineffective communication, suppression of information exchange and lack of coordination. So, bank managers need to control the range and degree of cognitive conflict because of the positive moderating effect of cognitive conflict on digital transformation and banks' performance.

- There is a need for a particular department or digital officer in a bank for guidance on digitalisation of operations and customer related issues. This will enhance organisational ambidexterity so that existing resources can be fully utilised as well as innovative processes and digital techniques can be further explored.
- The cooperative platform has surfaced via open digital technologies for dealers and clients to enhance the value creation among themselves. Further, it resulted in the creation of a new potential client base (Bharadwaj et al., 2013; Lucas et al. 2013, p. 6; Sebastian et al., 2017; Tumbas et al., 2017). So, organisations should be equipped with a chief digital officer and department for exploration and adoption of digital transformation mechanism. This can be only done with top management support and commitment by related office staff.
- Hence, full coordination is required among managerial staff and officers involved in the implementation of the digital transformation mechanism so that strategic decisions and initiatives can be taken for better results. Public sector units should be encouraged to upgrade themselves for the acceptance of digitalised techniques to create a strong balance between all the units in this competitive world. For this, strict rules and expert opinions in management should be entailed (Faro et al., 2019).

The Future Directions

Like all research, this study also has its limitations, particularly in terms of time and resources. A more extensive investigation could have been undertaken if not for the geographical constraints. The study too can suffer due to subjective responses. Longitudinal studies can be conducted because attitude tends to change after some time. Only cognitive conflict as a mediated variable has been under study, and other factors, such as mutual understanding, the type of conflict, sources of conflict generation, and task and relationship conflict, should be taken into consideration for future studies. Further, studies can be conducted to explore the wider effect of cognitive conflict upon the other facets of digital transformation variables, such as CEO innovation and IT intensity; moreover, studies can be conducted in other areas rather than in the banking industry, so that its wider scope can be captured in the future (Anderson, 2003; Luce et al., 1999; Nadeem et al., 2018; Nambisan, 2017).

Declaration of Conflicting Interests

The author declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

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References

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Sage Publications.

Al-Debei, M. M., & Avison, D. (2010). Developing a unified framework of the business model concept. *European Journal of Information Systems*, *19*(3), 359–376.

Amason, A. C. (1996). Distinguishing the effects of functional and dysfunctional conflicts on strategic decision making: Resolving a paradox for top management teams. *Academy of Management Journal*, *39*(1), 123–148.

Anderson, C. (2003). The psychology of doing nothing: Forms of decision avoidance result from reason and emotion. *Psychological Bulletin*, *129*(1), 139–167.

Avery, R. B., Raphael, W. B., Paul, S. C., & Glenn, B. C. (1999). Consolidation and bank branching patterns. *Journal of Banking and Finance*, *23*, 2–4.

Bedford, D. S., Bisbe, J., & Sweeney, B. (2019). Performance measurement systems as generators of cognitive conflict in ambidextrous firms. *Accounting, Organizations and Society*, *72*, 21–37.

Bercovitch, J. (1982). *Conflict and conflict management in organisations: A framework for analysis* (Working Paper). aspheramedia.com/v2/wp-content/uploads/2011/02/5000214.pdf

Besson, P., & Rowe, F. (2012). Strategizing information systems-enabled organizational transformation: A transdisciplinary review and new directions. *The Journal of Strategic Information Systems*, *21*(2), 103–124.

Bharadwaj, A., El Sawy, O. A., Pavlou, P. A., & Venkatraman, N. (2013). Digital business strategy: Toward a next generation of insights. *MIS Quarterly*, *37*(2), 471–482.

Chanias, S., Myers, M. D., & Hess, T. (2019). Digital transformation strategy making in pre-digital organizations: The case of a financial services provider. *The Journal of Strategic Information Systems*, *28*(1), 17–33.

Chia, R. (2004). Strategy-as-practice: Reflections on the research agenda. *European Management Review*, *1*(1), 29–34.

Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd ed.). Erlbaum.

Cristina, I. I. (2014). Study on the influence of the number of the ATMs and population upon bank branch evolution. *Ovidius University Annals, Economic Sciences Series, 14*(1), 136–140. http://stec.univ-ovidius.ro/html/anale/RO/cuprins%20rezumate/volum 2014 p1.pdf

Dale, E. B. (2003). *Introduction to multiple regression*. wise.cgu.edu/downloads/regression.doc

Damar, H. E. (2007). Does post-crisis restructuring decrease the availability of banking services: The case of Turkey. *Journal of Banking and Finance*, *31*(9), 2886–2905.

Faro, B., Abedin, B., & Kozanoglu, D. C. (2019). Continuous transformation of public–sector organisations in the digital era. Emergent Research Forum (ERF), Conference: American Conference on Information Systems. https://www.researchgate.net/publication/335096310_Continuous_Transformation_of_Public-sector_Organisations_in_the_Digital_Era

Field, A. (2019). *Discovering statistics using IBM SPSS statistics* (9th ed.). Sage Publications.

Festinger, L. (1957). *A theory of cognitive dissonance*. Standard University Press.

Greer, L. L., Jehn, K. A., & Mannix, E. A. (2008). Conflict transformation a longitudinal investigation of the relationships between different types of intragroup conflict and the moderating role of conflict resolution. *Small Group Research*, *39*(3), 278–302.

Hannan, T. H., & Hanweck, G. A. (2007). Recent trends in the number and size of bank branches: An examination of likely determinants. *Working Paper*, 1–34, http://www.federalreserve.gov/pubs/feds/2012/201202/201202pap.pdf

Henriette, E., Feki, M., & Boughzala, I. (2015). The shape of digital transformation: A systematic literature review. Paper read at Ninth Mediterranean Conference on Information Systems (MCIS), Samos, Greece.

Hess, T., Matt, C., Benlian, A., & Wiesböck, F. (2016). Options for formulating a digital transformation strategy. *MIS Quarterly Executive*, *15*(2), 123–139.

Jarzabkowski, P. (2004). Strategy as practice: Recursiveness, adaptation, and practices-in-use. *Organization Studies*, *25*(4), 529–560.

Jarzabkowski, P. (2005). *Strategy as practice: An activity-based approach*. Sage Publications.

Jarzabkowski, P., & Spee, A. P. (2009). Strategy-as-practice: A review and future directions for the field. *International Journal of Management Reviews*, *11*(1), 69–95.

Kaiser, H. F. (1960). The application of electronic computers to factor analysis. *Educational and Psychological Measurement*, *20*, 141–151.

Kane, G. C., Palmar, D., Phillips, A. N., Kiron, D., & Buckley, N. (2015). Strategy, not technology, drives digital transformation. *MIT Sloan Management Review*, *1*, 1–25.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30*, 607–610.

Lucas, H. C., Jr, Agarwal, R., Clemons, E. K., El Sawy, O. A., & Weber, B. (2013). Impactful research on transformational information technology: An opportunity to inform new audiences. *MIS Quarterly*, *37*(2), 371–382.

Luce, M. F., Payne, J. W., & Bettman, J. R. (1999). Emotional trade-off difficulty and choice. *Journal of Marketing Research*, *36*(2), 143–159.

Matt, C., Hess, T., & Benlian, A. (2015). Digital transformation strategies. *Business and Information Systems Engineering*, *57*(5), 339–343.

Mithas, S., Tafti, A., & Mitchell, W. (2013). How a firm's competitive environment and digital strategic posture influence digital business strategy. *MIS Quarterly*, *37*(2), 511–536.

Nadeem, A., Abedin, B., Cerpa, N., & Chew, E. (2018). Digital transformation and digital business strategy in electronic commerce: The role of organizational capabilities. *Journal of Theoretical and Applied Electronic Commerce Research*, *13*(2), 1–8.

Nambisan, S. (2017). Digital entrepreneurship: Toward a digital technology perspective of entrepreneurship. *Entrepreneurship Theory and Practice*, *41*(6), 1029–1055.

Newbert, S. L. (2008). Value, rareness, competitive advantage, and performance: A conceptual-level empirical investigation of the resource-based view of the firm. *Strategic Management Journal*, *29*(7), 745–768.

Nguyen, C., Courtney, M. G. R., & Gillis, S. (2018). Factors affecting primary school achievement in Botswana: A multilevel model for general student

performance. *International Journal of Quantitative Research in Education, 4*(3), 218–239.

Parayitam, S., & Dooley, R. S. (2011). The interplay between cognitive and affective conflict and cognition- and affect-based trust in influencing decision outcomes. *Journal of Business Research*, *62*(8), 789–796.

Pedhazur, E. J. (1997). *Multiple regression in behavioral research* (3rd ed.). Harcourt Brace.

Pelled, L. H., Eisenhardt, K. M., & Xin, K. R. (1999). Exploring the black box: An analysis of work group diversity, conflict, and performance. *Administrative Science Quarterly*, *44*(1), 1–28.

Reis, J., Amorim, M., Melão, N., & Matos, P. (2018). Digital transformation: A literature review and guidelines for future research. *World Conference on Information Systems and Technologies (WorldCIST'18)*, Naples, 411–421.

Sebastian, I. M., Ross, J. W., Beath, C., Mocker, M., Moloney, K.G., & Fonstad, N. O. (2017). How big old companies navigate digital transformation. *MIS Quarterly Executive*, *1*(1), 197–213.

Tumbas, S., Berente, N., & Vom Brocke, J. (2017). Born digital: Growth trajectories of entrepreneurial organizations spanning institutional fields. *Thirty-Eighth International Conference on Information Systems (ICIS)*, South Korea, Seoul.

Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *The Journal of Strategic Information Systems*, *28*(2), 118–144.

Warner, K. S. R., & Wäger, M. (2019). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. *Long Range Planning*, *52*(3), 326–349.

Whittington, R. (1996). Strategy as practice. *Long Range Planning*, *292*(5), 731–735.

Whittington, R. (2006). Completing the practice turn in strategy research. *Organization Studies*, *27*(5), 613–634.

Yang, J., & Mossholder, K. (2004). Decoupling task and relationship conflict: The role of intragroup emotional processing. *Journal of Organizational Behavior*, *25*(5), 589–605.

Research Paper

Industrial Relation Climate and Provision of Labour Welfare Measures in Manufacturing Sector

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Abstract

The study was conducted on a sample population of 150 employees of two manufacturing units based in West Bengal, India. The overall objectives of the study focus on finding the general causes of job dissatisfaction and industrial fatigue among workers in the manufacturing sector, including the problem of industrial relations and getting proper statutory labour welfare benefits. Improper job scheduling, excessive workload and job complexities were some of the major factors of industrial fatigues that had been identified from structured questionnaire survey. Though majority of the employees revealed that the general industrial climate was good, in many cases employees were not aware of the claim settlement procedure about various provisions under the Gratuity Act and ESI Act leading to delays and payments not being received in time. This study also established the fact that overall industrial relation climate, availability of welfare measures and awareness level of the employees about different social security schemes varies with the educational level, total tenure of the employees in the present company and total years of working experience of the employees in the manufacturing sector. Lastly, lack of proper trade union to reflect employee grievances, proper training and engagement programmes are the other causes of disengagement and attrition of employees in the manufacturing sector, as also reflected from this study.

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Keywords

Industrial relation, labour welfare, labour legislation, manufacturing

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Introduction

Manufacturing sector is emerging to be one of the integral parts of economic growth in India. As technology encouraged creativity, with digital transformation, the Indian manufacturing sector is steadily moving towards more automated and process-driven manufacturing, which is projected to improve efficiency and enhance productivity. With 17% of the nation's gross domestic product (GDP) and over 27.3 million workers, the manufacturing sector plays a significant role in the Indian economy. Through the implementation of different programmes and policies, the Indian government hopes to have 25% of the economy's output come from manufacturing by 2025 *(Source: IBEF-India Brand Equity Foundations)*. India now has the physical and digital infrastructure to raise the share of the manufacturing sector in the economy and make a realistic bid to be an important player in global supply chains.

Keeping in view India's vision of becoming '*Atmanirbhar*' and to enhance India's manufacturing capabilities and exports, an outlay of ₹1.97 lakh crore has been announced in Union Budget 2021–2022 for production-linked incentive (PLI) schemes for selected key sectors for a period of 5 years starting from fiscal year (FY) 2021–2022.

On the other hand, attrition in the manufacturing and services industries saw an increase of 0.46% from 7.81% in second quarter to 8.27% in third quarter, according to a report by TeamLease Services *(Source: Hindu Business Line 30 January 2023)*.

In this study, an attempt has been made to find out the general causes and dissatisfaction among the workers and employees of two manufacturing units based in Kolkata and Howrah and also to find out how far the organisations were providing labour welfare benefits and whether general workers and employees were aware of their rights and privileges of getting their claim under different labour legislation, namely ESI Act 1948, Employees Provident Fund and Misc. Provision Act 1952, Maternity Benefit Act 1961, Payment of Gratuity Act 1972, etc. The research design is exploratory, and convenient sampling is applied for data collection from the respondents. The total sample size was 150 respondents, both men and women. Data were collected from employees of two large-sized manufacturing plants engaged in synthetic industrial belts and polymer products and another in the manufacturing of spinning cans used in real estate construction work. The scope of the study mainly includes all permanent employees of two manufacturing unit near Kolkata in West Bengal.

Theoretical Framework: John Dunlop Model of Industrial Relation

A conceptual model, as depicted by John Dunlop in the 1950s (Figure 1), explained that the industrial relation system was a subsystem of the wider society that existed to resolve economic conflict. It comprised of four elements and these are actors, contexts, a body of employment rules that are the outcome of the interaction between the actors and a binding ideology. The actors were identified as employers and their organisations, employees and any representative body of workers, such as trade unions, and the government and public agencies. The contextual factors that shaped the conduct of industrial relations were technology, market and budgetary constraints and the distribution of power within the wider society. Within these constraints, the actors develop substantive and procedural rules by unilateral action, by joint regulation, or by tripartite action involving the state. Finally, the whole system is bound together by shared understandings and beliefs leading to the rules of the workplace or happy industrial relation system.

Objectives of the Study

1. To find out the general causes of job dissatisfaction and industrial fatigue at workplace among the employees.
2. To investigate how the industrial relations climate, availability of welfare benefits and nature of claim settlements under different labour legislations vary across the demographic profile of the surveyed population like level of education, service period in the present company and their total years of industry experience.
3. To find out the awareness level of the employees regarding the availability of welfare benefits and how to process the claim settlement in case they are eligible to get the labour welfare benefits as per the legislative provisions.

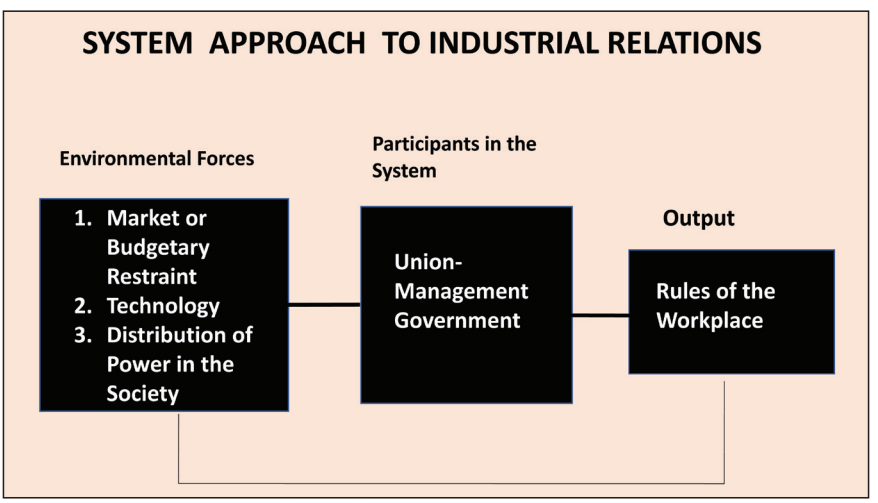

Figure 1. Simplified Version of John Dunlop Approach to Industrial Relations.

Literature Review

Mishra and Mishra (2013) discovered few important factors which were the prominent causes for attrition in the rapid growing Indian manufacturing sector. They were monetary benefits, absence of motivation, absence of personal benefits and poor working condition. Therefore, to reduce the level of attrition, industries must generate some opportunities for the growth of their human assets within the organisation through adaptation of new innovative technologies and effective training programmes.

Jayashree (2015) investigated job satisfaction with various aspects of employee welfare among 297 employees of garment industry, and statistical analysis revealed that employee welfare measures were positively related with job satisfaction, working condition, canteen facilities, rest rooms and financial incentives. It was also concluded that labour welfare measures (LWM) followed in garment industry were satisfactory.

Hemlatha et al. (2017) discussed in their study that the main purpose of employee welfare is enrichment of employees' life and keeps them happy, satisfied and contented. Employee welfare helps to motivate the employees for their better performance in the workplace; it also improves the human relationship. It leads to an increased level of job satisfaction among employees. Job satisfaction is a multifaceted dimension and a very significant integral component of organisational climate. It acts as an important element in between management and employee relationship.

Loganathan and Ashwini (2017) showed in their study that in manufacturing industry, the level of attrition is very high and it is a critical issue. Bhardwaj and Singh (2017) made their study on engineers and non-engineers in a manufacturing industry in India. Their study showed a strong relationship between type of job and factors of attrition. Statistical analysis clearly stated that there was a strong relationship between type of job and factors of attrition. Thus, change in any one will affect the other as well. At the same time, other important outcomes like for technical jobs salary is the most important factor and for non-technical people relationship with their immediate boss is the major factor.

Beloor et al. (2020) conducted a study on job satisfaction level and employee welfare in garment industry. The findings of the study showed that there is an association between welfare facilities provided and satisfaction in job. The study explored that welfare facilities had a significant impact on the job satisfaction. Analysis also revealed that experience, education level and salary of an employee had an association with the job satisfaction.

Nagakumari and Pujitha (2021) concluded from their study that though company was providing both statutory and non-statutory benefits, as well as employee welfare facilities, and employees are satisfied, but still there is a scope for further improvement. So that efficiency, effectiveness and productivity can be enhanced to accomplish the organisational goals.

Maiya (2022), in her study, tried to establish a relationship between the satisfaction level of the workforce, especially operators, with regard to the labour welfare facilities provided by the organisation. The study intends to highlight the gap that was created in the COVID-19 pandemic situation with reference to the

facilities under LWM. Her research also aims to analyse the labour welfare schemes in the manufacturing sector.

Identification of Research Gap

Comprehensive studies examining the impact of employees' demographic profiles in the manufacturing sector on factors such as the overall industrial relations climate and the availability of statutory and non-statutory welfare measures are limited. Therefore, this study aims to investigate this specific research gap.

Research Methodology

Type of Research

Exploratory research approach is used, which investigates research questions that had not previously been studied in depth. Exploratory research is used as the data collection in the manufacturing sector is quite challenging and sometimes, due to the security reasons within the plant or factory sites, information gathered is limited.

Data Collection

Primary data were mainly collected through a structured questionnaire. The questionnaire was framed in such a way which covers many of the variables of industrial relation climate, covering the personnel policies, labour welfare benefits and social security schemes. Nearly 200 sample respondents were surveyed, including both male and female employees from the zonal offices of the manufacturing plant which are in Kolkata and factory sites in Howrah, West Bengal, Out of 200 respondents, only 150 completed questionnaires were taken for the purpose of the study, as nearly 50 questionnaires were either incomplete or wrongly interpreted by the respondents.

Besides, secondary data are collected from the websites of these companies as well as from some company handbooks and official documents from HR department for getting the real information.

Sampling Frame

Employees from two large size manufacturing plants engaged in synthetic industrial belts and polymer products and another in the manufacturing of spinning cans used in real estate construction work are considered for survey. Data collection was done during the period from June – September 2021. Some of the employees of the zonal office, plant level and some hard-core workers those who were included in the muster roll or employee register of the permanent employee of the company were taken as the sample of the study. Contractual workers of the plant were not considered in this study.

Sampling Type

In this study Convenient sampling method is used due to the scarcity of time and resources and Covid-19 restrictions and also for the ease of respondents according to their accessibility as most of the employees under study were in different job schedule and highly engaged. To make data collection during their time of work was almost impossible.

Validity and Reliability of the Data Sets Used

Preliminary pilot testing was done on a sample of 30 respondents in order to reduce any such confusion regarding the various factors of Industrial relations and labour welfare facilities. Some of the factors are also changed and modified after the pilot testing after taking views and suggestions from some of the shop floor supervisors of the workers at the plant. Cronbach's alpha coefficient confirms the internal consistency of the set of items of the structured questionnaire. The present data set for the study shows Cronbach's alpha value is equal to 0.939. In general, any value greater than 0.50 is desirable of the Cronbach's alpha. So, the data set is quite reliable and valid.

Data Analysis

From Table 1, it has been revealed that majority of the sample respondents, that is, 61% are graduate and maximum number of respondents are young less than 5 years of service in their present job profile among the surveyed sample. Only 46% of the employees were having total experience of less than 5 years. 38.7% of the sample population were having total job experience of more than 10 years. So, it can be inferred that majority of the sample respondents were young and <5 years of working experience in the present company.

From Table 2 and Figure 2, it can be seen that overall industrial relations climate is fair, as 45.3% of the sample remarked it as good and 27.3% of the sample remarked it as excellent.

From Table 2 and Figure 3, it is revealed that poor wage structure is the main cause of grievance and dissatisfaction among employees (56.7%), followed by inadequate working conditions (33.3%).

From Table 2 and Figure 4, poor personnel policies (43.3%) followed by lack of career advancement (31.3%) are major reasons for some of the incidences of industrial unrest in the present companies.

From Table 2 and Figure 5, it was revealed that the major causes of industrial fatigue as pointed out in this sector mainly arises due to improper job scheduling (31.3%), overburden of work (25.3%) followed by job complexities (22.7%).

From Table 3 and Figure 6, there are problems regarding the issues of claim settlements regarding getting the proper gratuity benefits (mean value—2.81) as well as to some extent Employee State Insurance (ESI) benefits (mean value—3.51) rather than the other benefits.

Different variations of the welfare provisions clearly illustrate the differences in the nature of the state intervention and the distribution of the resources between

Table 1. Demographic Profile of the Respondents.

Demographic Variables	Frequency	%
Educational Qualification of the Respondents		
Under graduate	49	32.7
Graduate	61	40.7
Post graduate and other technical qualifications	40	26.7
Total	150	100
Length of Service in the Present Company		
0–5 years	92	61.4
6–10 years	14	9.3
>10 years	44	29.3
Total	150	100
Total Working Experience		
0–5 years	69	46.0
6–10 years	23	15.3
>10 years	58	38.7
Total	150	100

rich and poor industrial workers. Most of the cases in manufacturing sector, wage earners are fully skilled, semi-skilled and unskilled labourer. Here in this study, to investigate how far the general workers are getting major provisions of the welfare benefits, including legislative measures of health and safety at their workplace, we tested through structured questionnaire.

The questions regarding rating of the welfare benefits are compared on a 1–5 Likert scale where *'1' means getting least benefits and '5' signifies getting highest benefits*. About *16 types of welfare benefits* were identified as per the provisions of the Factories Act 1948. These includes *medical, housing, travelling allowance, recreation facilities, education loan facilities for children of the employees, canteen facilities, creche facilities, sanitation, drinking water, seating arrangement, provision for first aid, proper seating arrangement, latrines/urinals, spittoons, lighting and ventilation, washing facilities and rest rooms*.

Factor analysis had been conducted on all the 16 factors of welfare benefits in order to decrease the number of variables and to identify few of the critical variables among the group for further study. In Table 4, the Kaiser–Meyer–Olkin (KMO) test was performed to establish whether the data set of 150 respondents of employees in manufacturing unit would be suitable to run the test on factor analysis. For this data set, the KMO and Bartlett's test revealed that sampling adequacy is 0.540, which is >0.50 and the p value <.05. Here, degrees of freedom (df) is 120. So, we can run the factor analysis.

Principal component analysis (PCA) is conducted on the set of 16 variables of welfare benefits through dimensionality reduction technique. Table 6 shows that maximum variance explained is generated from smaller set of welfare benefit factors from a pool of 16 components. Each of the components explained certain percentage of total variance. The eigenvalues of components which are >1 in each case can be taken for further study, excluding the others. Here, in this case, the first five components—medical (Vmedi), housing (Vhousing), travelling allowance (Vtravel), recreational facilities (Vrecre) and education opportunities

Table 2. Frequency and Percentage of Respondents for Some of the Critical Factors of Industrial Relations Climate.

Some Important Factors of IR	Excellent	Good	Average	Poor	Very Poor	Total Respondents
Overall industrial climate at workplace	41 (27.3%)	68 (45.3%)	32 (21.3%)	9 (6%)	0 (0%)	150 (100%)
Main causes of grievance and dissatisfaction among the employees	Poor wage structure	Inadequate working conditions	Personal biases and prejudice	Any other matter	Total respondents	
	85 (56.7%)	50 (33.3%)	12 (8%)	3 (2%)	150 (100%)	
Main reasons for industrial unrest in the present company	Poor working conditions	Bad relationships with peers and co-workers	Poor personnel policies	Lack of career advancement	Other reasons	Total respondents
	20 (13.3%)	15 (10%)	65 (43.3%)	47 (31.3%)	3 (2%)	150 (100%)
Factors responsible for industrial fatigue stress and strain	Excessive control by supervisors	Overburden of work	Job complexities	Improper work scheduling	Wrong allocation of job duties	Total respondents
	9 (6%)	38 (25.3%)	34 (22.7%)	47 (31.3%)	3 (2%)	150 (100%)

Note: IR, industrial relation.

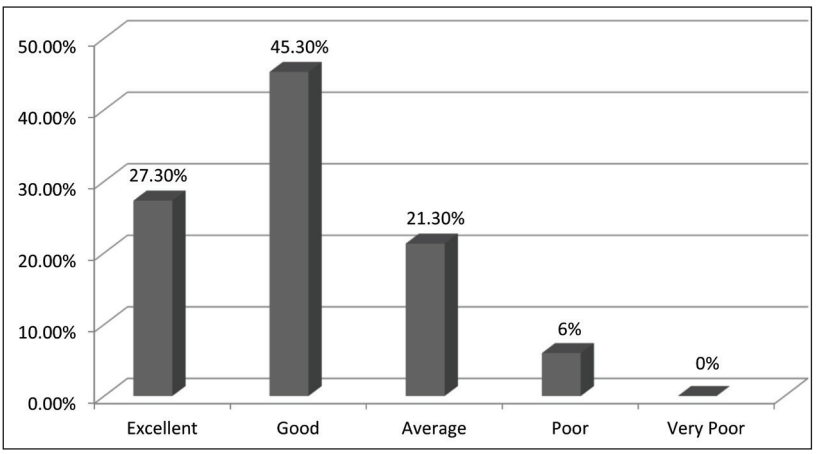

Figure 2. Overall Industrial Relation Climate.

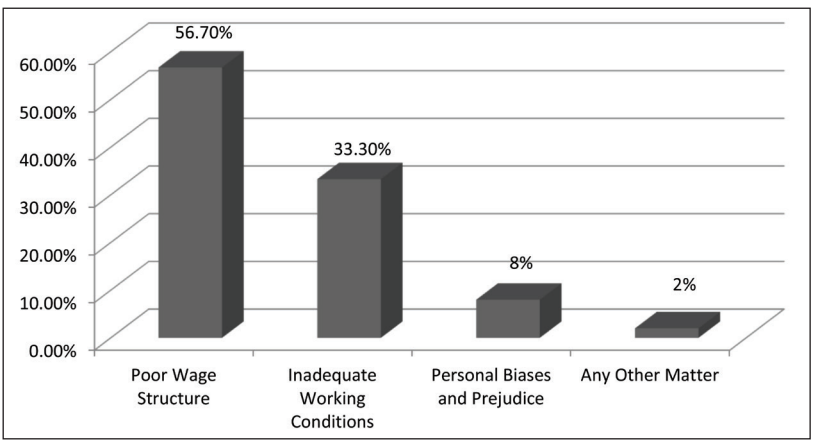

Figure 3. Main Causes of Grievance and Dissatisfaction Among Employees.

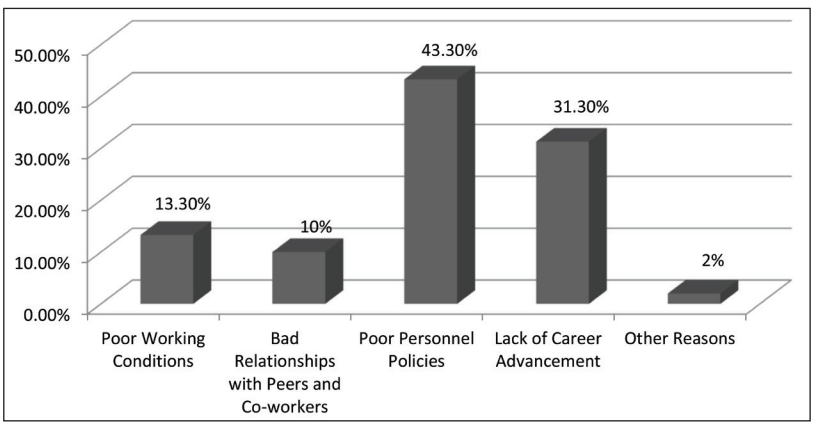

Figure 4. Main Reasons for Industrial Unrest in the Present Company.

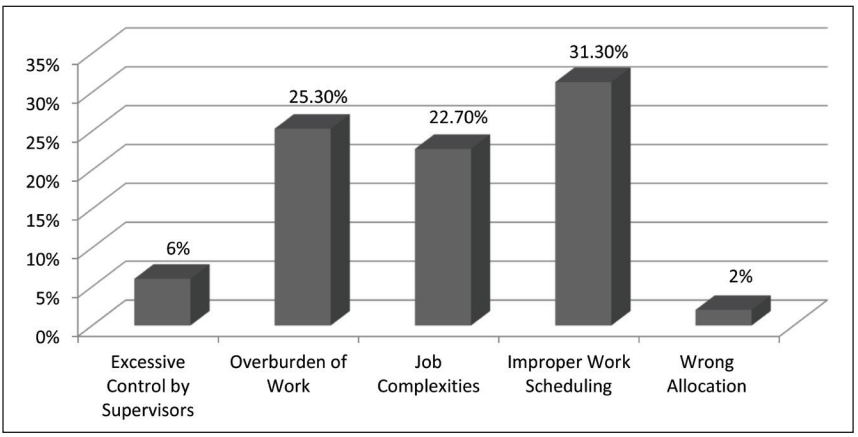

Figure 5. Factors Responsible for Industrial Fatigue.

Table 3. Mean Values and Standard Deviation Regarding the Process of Claim Settlement in a Scale of 1–5.

		ESI Benefit (V15ES)	Provident Fund Benefits (V15EPF)	Workman's Compensation Benefit (V15WCO)	Maternity Benefits (V15MAT)	Gratuity Benefits (V15Gra)
N	Valid	150	150	150	150	150
	Missing	0	0	0	0	0
Mean		3.51	3.56	4.22	4.16	2.81
Std. deviation		1.005	0.780	1.408	1.321	1.149

Note: 1 signifies very complex process and 5 signifies very simple process.

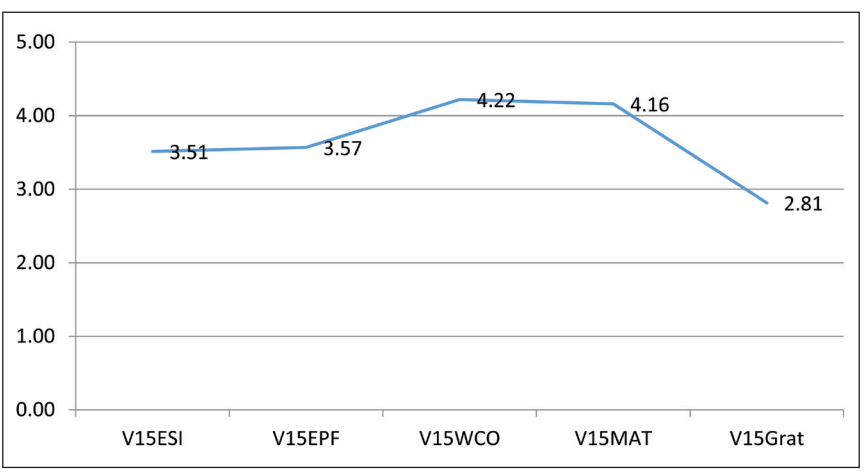

Figure 6. Mean Value Graph Showing Nature of the Process of Claim Settlement.

Table 4. Kaiser–Meyer–Olkin (KMO) and Bartlett's Test.

Kaiser–Meyer–Olkin measure of sampling adequacy		0.540
Bartlett's test of sphericity	Approx. chi-square	1519.101
	df	120
	Sig.	0.000

Table 5. Communalities.

Factors	Initial	Extraction
Vmedi	1.000	0.780
Vhousing	1.000	0.821
Vtravel	1.000	0.863
Vrecre	1.000	0.652
Veduchi	1.000	0.794
Vcanteen	1.000	0.821
Vcreche	1.000	0.886
Vsanitation	1.000	0.623
Vdrink	1.000	0.799
Vseat	1.000	0.765
Vfirst-aid	1.000	0.763
Vlatrin	1.000	0.723
Vspitt	1.000	0.751
Vlight	1.000	0.790
Vwash	1.000	0.603
Vrest	1.000	0.708

Note: Extraction method: Principal component analysis.

for children (Veduchi)—are extracted. All these five factors can explain 75.88% of variance in the data set. It is to be noted that eigenvalue in each of this component is >1. Each of these variables is taken as one factor for further study.

The table for rotated component matrix, Table 8, helps us to determine what the component represents. Here, rotated component matrix generates 5 factors from 16 variables.

Figure 7 shows that the first five factors that we will be taking for further study are showing eigenvalue >1.

The first five variables extracted from factor analysis are medical, housing, travelling allowance, recreational facilities and educational loan facilities for children are clubbed and computed again as a new variable as *VWelfare 1*.

Questions related to nature of the claim settlement under five important labour legislations of social welfare like ESI Benefit Act 1948, Employees Provident Fund and Misc. Provision Act 1952, Workman's Compensation Act, Maternity Benefit Act 1961 and Payment of Gratuity Act 1972 were asked. Responses were measured in a scale of 1–5 where 1 denotes very complex process of claim settlement and 5 represents very simple process of claim settlement. A new variable, *Vclaim*, was computed based on five above-mentioned variables of labour legislation.

Table 6. Total Variance Explained.

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.496	28.101	28.101	4.496	28.101	28.101	3.442	21.515	21.515
2	3.003	18.766	46.867	3.003	18.766	46.867	3.231	20.193	41.707
3	2.100	13.126	59.993	2.100	13.126	59.993	2.327	14.546	56.253
4	1.365	8.534	68.527	1.365	8.534	68.527	1.690	10.565	66.819
5	1.178	7.361	75.888	1.178	7.361	75.888	1.451	9.069	75.888
6	0.801	5.008	80.897						
7	0.611	3.820	84.716						
8	0.562	3.513	88.229						
9	0.400	2.498	90.727						
10	0.348	2.174	92.901						
11	0.328	2.047	94.948						
12	0.277	1.732	96.680						
13	0.247	1.546	98.226						
14	0.156	0.974	99.201						
15	0.076	0.477	99.678						
16	0.052	0.322	100.000						

Table 7. Component Matrix.[a]

	Component				
	1	2	3	4	5
Vmedi	0.780	–0.357	0.003	0.057	0.203
Vhousing	0.739	–0.444	0.096	0.015	0.262
Vtravel	0.605	–0.517	0.413	–0.159	0.184
Vrecre	0.485	–0.254	0.473	–0.276	0.229
Veduchi	0.538	–0.173	0.419	0.009	–0.547
Vcanteen	–0.332	–0.018	0.650	0.528	0.095
Vcreche	0.351	0.155	–0.038	0.848	0.130
Vsanitation	0.480	0.583	0.145	0.160	–0.074
Vdrink	0.630	0.445	–0.420	0.086	0.143
Vseat	0.497	0.592	–0.231	–0.267	0.208
Vfirst-aid	0.580	0.225	–0.160	0.152	–0.572
Vlatrin	0.617	0.550	0.121	0.049	0.152
Vspitt	–0.506	0.583	0.355	–0.168	–0.008
Vlight	–0.328	0.630	0.331	–0.017	0.419
Vwash	0.510	0.470	0.071	–0.310	–0.141
Vrest	0.041	0.302	0.752	–0.085	–0.205

Note: Extraction method: Principal component analysis. Five components are extracted.

Table 8. Rotated Component Matrix.[a]

	Component				
	1	2	3	4	5
Vmedi	0.224	0.760	–0.303	0.158	0.189
Vhousing	0.132	0.842	0.248	0.102	0.149
Vtravel	–0.042	0.916	0.044	0.137	–0.045
Vrecre	0.095	0.755	0.225	0.014	–0.148
Veduchi	0.049	0.409	0.232	0.755	0.005
Vcanteen	–0.415	0.003	0.622	–0.103	0.502
Vcreche	0.205	0.052	–0.074	0.085	0.910
Vsanitation	0.660	0.010	0.262	0.215	0.269
Vdrink	0.794	0.048	–0.338	0.037	0.225
Vseat	0.857	0.032	–0.078	–0.111	–0.108
Vfirst-aid	0.450	–0.030	–0.143	0.719	0.150
Vlatrin	0.771	0.203	0.192	0.051	0.220
Vspitt	0.087	–0.477	0.651	–0.239	–0.186
Vlight	0.264	–0.267	0.585	–0.551	0.066
Vwash	0.681	0.106	0.163	0.244	–0.204
Vrest	0.097	0.099	0.798	0.220	–0.055

Notes: Extraction method: Principal component analysis. Rotation method: Varimax with Kaiser normalisation.
[a]Rotation converged in seven iterations.

Table 9. Component Transformation Matrix.

Component	1	2	3	4	5
1	0.607	0.649	–0.197	0.381	0.160
2	0.742	–0.529	0.390	–0.110	0.075
3	–0.187	0.390	0.897	0.080	0.044
4	–0.173	–0.148	–0.029	0.105	0.968
5	0.128	0.354	–0.055	–0.908	0.174

Note: Extraction method: Principal component analysis. Rotation method: Varimax with Kaiser normalisation.

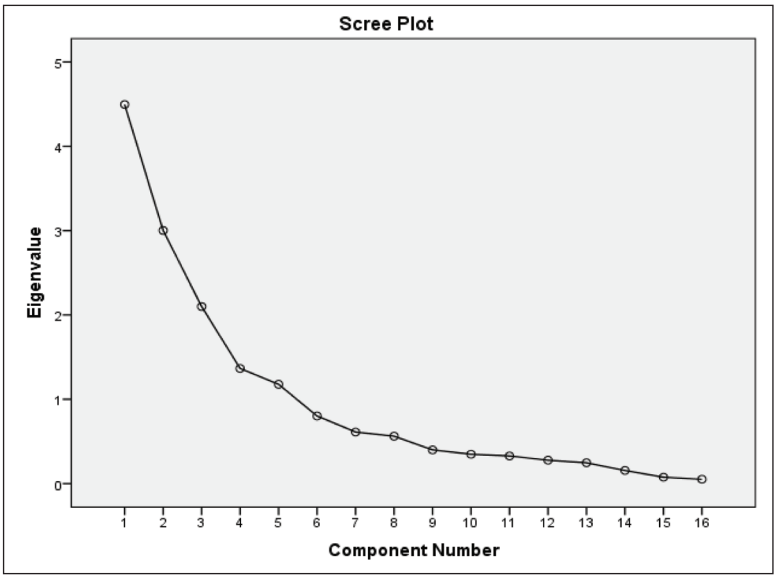

Figure 7. Scree Plot.

One-way Analysis of Variance (ANOVA) Testing

One-way ANOVA was conducted to find out the nature of the variances of the demographic profile of the respondents, like *educational level of the respondents, total service period in the present company and total job experience of the respondents in the manufacturing sector*, with three factors below:

(a) *Industrial relation climate (V6), (b) availability of welfare benefits (Vwelfare1) and (c) ease of claim settlement under the above five labour legislation in their company (Vclaim)*.

The null and alternative hypotheses are framed as follows:

Table 10. Computed Variables.

1. Vmedi	Vwelfare1
2. Vhousing	
3. Vtravel	
4. Vrecre	
5. Veduchi	
Claim under	
1. ESI Act 1948	Vclaim
2. EPF and Misc Provision Act 1952	
3. Workman's Compensation Act 1923	
4. Maternity Benefit Act 1961	
5. Payment of Gratuity Act 1972	

Null Hypothesis

H_0: There are no such impacts of industrial relation climate, welfare benefits or getting claim under the welfare labour legislation with the educational background of the respondents in the surveyed population.

Alternative Hypothesis

H_1: Perception of industrial relation climate, welfare benefits and claim settlement varies across different educational background of the respondents.

Here we see that (Table 11) in each case p value < .05. So, null hypothesis is rejected, and alternative hypothesis is accepted. So, employees' perception about industrial relations climate, getting welfare benefits and claim settlement vary across different educational level of the respondents. Probably, more educated employees are more aware about all these three factors.

Null Hypothesis

H_0: There are no such variations in the perception of industrial relation climate, welfare benefits or getting claim as per statutory provisions varies across the total service periods of the respondents in their present company.

Alternative Hypothesis

H_1: Perception of industrial relation climate, getting welfare benefits and getting benefit under statutory provisions varies across total service periods of the respondents in the present company.

Here we see that (Table 12) in each case p value <.05. So, null hypothesis is rejected, and alternative hypothesis is accepted. So, employees' perception on industrial

Table 11. One-way ANOVA—(Variation With the Educational Level of the Respondents).

		Sum of Squares	*df*	Mean Square	*F*	Sig.
V6	Between groups	27.780	2	13.890	25.308	0.000
	Within groups	80.680	147	0.549		
	Total	108.460	149			
Vclaim	Between groups	4.069	2	2.034	3.506	0.033
	Within groups	85.283	147	0.580		
	Total	89.352	149			
VWelfare1	Between groups	27.559	2	13.779	21.377	0.000
	Within groups	94.753	147	0.645		
	Total	122.312	149			

Table 12. One-way ANOVA—(Variation With the Total Service Period of the Respondents in the Present Company).

		Sum of Squares	*df*	Mean Square	*F*	Sig.
V6	Between groups	29.750	2	14.875	27.781	0.000
	Within groups	78.710	147	0.535		
	Total	108.460	149			
Vclaim	Between groups	9.308	2	4.654	8.547	0.000
	Within groups	80.044	147	0.545		
	Total	89.352	149			
VWelfare1	Between groups	19.727	2	9.863	14.134	0.000
	Within groups	102.585	147	0.698		
	Total	122.312	149			

relation climate, welfare benefit and getting benefit under different labour legislation vary with the total service periods of the respondents in the present company.

Null Hypothesis

H_0: There are no such variations of the perception of industrial relation climate, welfare benefits or claim settlement under the various labour legislations with the total job experience level of the respondents in the manufacturing sector.

Alternative Hypothesis

H_1: Perception of industrial relation, welfare benefit and getting benefit under different labour legislation varies with the total job experience level of the respondents in the manufacturing sector.

Here we see that (Table 13) in the first two variables p value <.05. So, null hypothesis is rejected, and alternative hypothesis is accepted.

But for the variable welfare benefit, p value >.05, so null hypothesis is not rejected. Getting different welfare benefits does not vary with the total experience level of the respondents in this sector so far.

Correlation Analysis

Pearson bi-variate correlation analysis was carried out between the above three variables: (a) Industrial relation climate (*V6*), (b) welfare benefits (*Vwelfare1*) and (c) ease of claim settlement under the above five labour legislation in their company (*Vclaim*).

Null Hypothesis

H_0: There is no such relationship between industrial relation climate and availability of welfare benefits.

Alternative Hypothesis

H_1: Relationship exists between industrial relation climate and availability of welfare benefit for workers.

Table 14—correlation matrix shows that industrial relation climate (V6) is showing significant negative correlation at 0.01 level with welfare benefit (Vwelfare1) and vice versa. Since perception of employee relation climate is compared in the Likert scale in a reverse order in the questionnaire, where 1 denotes excellent industrial relation climate and 5 denotes very poor industrial relation climate, and availability of welfare benefits increases from 1 (least benefit) to 5 (highest benefit) in the scale. So, null hypothesis is rejected, and alternative hypothesis is substantiated.

So, it can be inferred that there exists the relationship between industrial relations climate and availability of welfare benefits in the present study.

Table 13. One-way ANOVA—(Variation With the Total Years of Job Experience in the Manufacturing Sector).

		Sum of Squares	*df*	Mean Square	*F*	Sig.
V6	Between groups	5.174	2	2.587	3.682	0.028
	Within groups	103.286	147	0.703		
	Total	108.460	149			
Vclaim	Between groups	11.184	2	5.592	10.516	0.000
	Within groups	78.168	147	0.532		
	Total	89.352	149			
VWelfare1	Between groups	1.928	2	0.964	1.177	0.311
	Within groups	120.383	147	0.819		
	Total	122.312	149			

Null Hypothesis

H_0: There is no such relationship between claim settlement and availability of welfare benefits.

Alternative Hypothesis

H_1: Relationship exists between claim settlement and availability of welfare benefit for workers.

Table 14—similarly, nature of claim settlement is showing significant negative correlation at 0.01 level with availability of welfare benefits. Procedure of claim settlement is compared in an inverse way in the questionnaire, where 1 signifies very complex process and 5 signifies very simple process of claim settlement. So, negative correlation is substantiated. Null hypothesis is rejected, and alternative hypothesis is accepted. So, there exists a relationship between claim settlement of welfare benefits under various labour legislation and welfare benefits.

Null Hypothesis

H_0: There are no such relationships between industrial relation climate and claim settlement.

Alternative Hypothesis

H_1: Relationship exists between industrial relation climate and claim settlement for the workers.

Here, no significant correlation is noticed (p value >.05). So, the null hypothesis is substantiated.

From the above bivariate correlational matrix, it can be concluded that workers are quite aware of the welfare measures available to them, and unavailability in turn may

Table 14. Correlations Analysis.

		V6	Vclaim	VWelfare1
V6	Pearson correlation	1	–0.007	–0.518**
	Sig. (2-tailed)		0.932	0.000
	N	150	150	150
Vclaim	Pearson correlation	–0.007	1	–0.286**
	Sig. (2-tailed)	0.932		0.000
	N	150	150	150
VWelfare1	Pearson correlation	–0.518**	–0.286**	1
	Sig. (2-tailed)	0.000	0.000	
	N	150	150	150

Note: **Correlation is significant at the 0.01 level (2-tailed).

lead to large-scale job dissatisfaction, industrial fatigue and industrial unrest. But the factor regarding the process of getting claims under various labour legislations do not have a direct impact on industrial relation climate in the present study.

Findings

From the data analysis and frequency distribution (Table 2) of some of the critical factors of employee relation climate in the manufacturing sector, it was revealed that only 45.3% of the sample depicted that the industrial relation climate at workplace is good. 56.7% of the sample indicated that poor wage structure can be one of the major causes of grievance and job dissatisfaction among the employees and another 33.3% had explained that inadequate working conditions can also be one such major factor. Very small percentage of the sample had indicated about personal biases, prejudice and other reasons. Improper job scheduling (31.3% of the respondents), overburden of work (25.3%) and job complexities (22.7%) can be some of the causes of industrial fatigue among the workers. The process of getting benefits under the various labour legislation is also not smooth, especially as employees face lot of problems while claiming different benefits under the Gratuity Act and ESI Act. While taking open-ended interviews, the supervisors, who preferred to remain anonymous, often complained about long-drawn process of claim settlement due to inadequate data and clarification on the part of the companies. General employees need to understand the whole process. Sometimes, due to their ignorance of not having adequate technical skill or computer proficiency to handle the online mode of claim settlement, the system was disrupted. In some cases, there were few incidences where employer denying gratuity to few workers by showing different grounds, but employees were not getting any support due to lack of trade union or inadequate knowledge and education to go to the court or state labour commissioners' office with their cases.

From the factor analysis on the availability of different welfare benefits, we have considered only the first *five factors, that is, medical benefits, housing, travelling allowance, recreation facilities and education for children* from the 16 variables, which are only computed as the major welfare factors to be considered for the study, discarding the others as their eigenvalues >1 (Table 6). From the one-way ANOVA testing (Tables 11, 12 and 13), it was revealed that overall industrial relation climate and getting benefits under different social security legislation varies with the educational level, total tenure of the employees in the present company and total years of working experience in the manufacturing sector. Though getting adequate welfare benefits varies with the different educational background and total years of service in the present company, but it does not vary with level of total experience of the sample in the manufacturing industry. Pearson correlation study (Table 14) established one of the major objectives of the study that the industrial workers and white-collar employees in the surveyed population are aware of their rights and privileges of getting the social security measures under different social security schemes of Government of India. Significant correlation exists between the industrial relation climate and availability of welfare measures at the plant level. But in case of the variable representing industrial relation climate (*V6*) and getting benefits under social

security labour legislation (*Vclaim*), no such significant correlation is noticed in the surveyed population. But different benefits under labour legislation showed significant correlation with general welfare measures of the workers in the factory.

Conclusions

Top management should constantly review the industrial relation climate and go for regular HR audit on a priority basis to find out the causes of rampant absenteeism, industrial fatigue and discontentment of the workers regarding their poor pay packages, bonus, incentives and the way to revive those. Full employee engagement programme with proper identification of training needs should be the topmost priority to reduce redundancy and industrial fatigue among the workers. Recruitment of labour welfare officer, especially in a manufacturing plant employing 500 or more workers who is qualified to handle labour-related problems is urgent for such manufacturing plant. Regular redressal of the employee grievances by forming an employee redressal cell is also required. Formulation and implementation of the welfare policies by interpreting these policies to the general workers should be the top priority of this welfare officer. If needed, outside trainer or person with legal background should be employed to train employees and make them aware about various welfare measures and how to get their legitimate claim under various labour laws which are applicable at their workplace. Company should also give priority to technical training so that employee can handle the online system of claim settlement on their own without much effort. Apart from the structured questionnaire survey, some of the employees were personally interviewed, where they revealed that they expect proper extrinsic reward in the forms of bonus or profit sharing or adequate individual incentives. So, in this manufacturing sector, proper reward management programmes linking with employee performance scheme need to be implemented in order to reduce discontentment and employee absenteeism and for better industrial relation climate.

So, in this study, an attempt has been made to reflect the problem of growing attrition of employees in the manufacturing sector, and in general, there is still lack of education, training and awareness level on the part of the employees. The study thus reflects that many of them are also not sure about the different welfare benefits that they are entitled to get. On the other hand, this research also establishes the fact that the more an employee are having education level and rich industry experience in this sector, the more they are conscious about their rights and privileges that are entitled to. Lack of trade union to fight for their causes and discontentment are also indirectly established from this study. Lack of trade union sometimes can be detrimental to the employee or worker in the manufacturing sector. So, by 2030 if India wants to become the manufacturing hub in the global market, then there is a need to revamp the industrial relation climate along with employee training and engagement programme effectively.

Limitation and Scope of Future Study

Due to Covid 19, the scope of study was only limited two such manufacturing units and if comparison can be made on basis of gender, then different result can be obtained. Our investigation revealed that discontentment was also there among

the contractual workers due to ethics of some principal contractor. Their problems need to be addressed also in order to maintain happy industrial relations and problem of the contractual worker in the manufacturing sector can be another scope of future study.

Declaration of Conflicting Interests

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References

Beloor, V., Swamy, C. J., Nanjundeswaraswamy, T. S., & Swamy, D. R. (2020). A study on job satisfaction and employee welfare in garment industries. *Indian Journal of Science & Technology*, *13*(33), 3445–3456.

Hemlatha, K., Monica, B. S., & Rao, B. N. (2017). A study on impact of employee welfare facilities on job satisfaction. *IJARIIE*, *3*(5), 822–826.

IBEF. (2024). *Manufacturing sector in India industry report*. https://www.ibef.org/industry/manufacturing-sector-india

Jayashree, S. (2015). A study on labour welfare facilities with reference to textile industries. *International Journal in Management & Social Science*, *3*(4), 86–95.

Loganathan, M. S., & Ashwini, S. (2017). A study on employee attrition and retention in manufacturing industries. *International Journal of Commerce Management & Research*, *3*(7), 43–45.

Maiya, S. (2022). A study on labour welfare measures with a special reference to manufacturing sector in post COVID-19 pandemic era. *ANVESHA-A Multidisciplinary E-Journal*, *3*(1), 14–21.

Mishra, S., & Mishra, D. (2013). Review of literature on factors influencing attrition and retention. *International Journal of Organizational Behaviour & Management Perspectives*, *2*(3), 435–444.

Nagakumari, Y. V., & Pujitha, N. S. (2021). Employee welfare measures in manufacturing industry. *The International Journal of Analytical and Experimental Modal Analysis*, *XIII*(VIII), 1153–1162.

Sajuyigbe, A. S., Olaoye, B. O., & Adeyemi, M. A. (2013). Impact of reward on employees performance in a selected manufacturing company in Ibadan, Oyo state, Nigeria. *International Journal of Arts and Commerce*, *2*(2), 117–123.

The Hindu. (2023). *Attrition in manufacturing, service sectors rises to 8.27% in Q3*. https://www.thehindubusinessline.com/economy/attrition-in-manufacturing-service-sectors-rises-to-827-in-q3/article66450205.ece

The Indian Express. (2024). Manufacturing sector saw employment, profits improve despite pandemic blows: Survey. https://indianexpress.com/article/business/market/manufacturing-sector-saw-employment-profits-improve-despite-pandemic-blows-survey-9145917/

Upadhyay, D., & Gupta, A. (2012). Morale, welfare measures, job satisfaction: The key mantras for gaining competitive edge. *International Journal of Physical & Social Science*, *2*(7), 80–94.

Yadav, P. V. (2021). A study of relationship between the labour welfare measures and employee satisfaction at workplace. *Review Research*, 1–9.

Research Paper

Determinants of Dividend Payout: A Panel Data Analysis of BSE 200 Companies

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Abstract

This study analyses various factors that affect firms' dividend payout decisions. It investigates the impact of six firm characteristics: price-earnings ratio, firm age, firm size, growth, firm liquidity and firm leverage on dividend payout. Panel data have been obtained from 151 BSE companies for 2015–2024. A fixed-effect regression model has been used for the study. The results reveal that leverage and growth have a positive significant impact, whereas firm age has a negative significant effect on the dividend payout decisions of the firm. This study is useful for management as well as shareholders in making strategic as well as investment decisions for the firm and also provides financial dynamics regarding the appropriate dividend policy of the firm.

Keywords

Dividend payout, firm age, fixed effect regression, growth, leverage

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Introduction

A dividend is a sum of money paid to the business's owners (Baker & Powell, 2000). Due to the increasing impact of international competition and the part that business

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plays in supporting the national economy, more companies are now listed on the BSE and conducting initial public offerings (IPOs). As a result, the prior investor would expect a bigger dividend return because they had already committed capital. Therefore, choices for dividend distribution must be carefully considered since they may endanger the company's ability to develop and survive. Any unfavourable dividend policy decision would have conflicting effects. Therefore, to ensure that the business runs smoothly and that all parties are satisfied, the company needs to set up an appropriate dividend policy. This policy is expected to keep a balance between the current dividend payout and the company's future growth, which will drive up the stock price. Each company will, therefore, have to make a unique decision regarding dividend policy, such as whether to retain or distribute its profit as dividends, the basis for which has been supported by several competing theories (Al-Kuwari, 2009). Determining the many factors influencing dividend policy is not a difficult process; nevertheless, determining how these components interact is a challenging task. While industrialised economies (such as those in Western Europe, the USA, Canada, the UK, Germany, France and Japan) have been the subject of several studies, developing economies have received relatively little attention on the subject (Musiega et al., 2013). According to Mehta (2012), there are three ways to approach the question of whether dividend policy is significant or not. According to certain authors, a rise in dividend payout will result in a rise in a company's worth. Subsequent research suggested that dividends have an impact on the value of the company (Al-Malkawi, 2008; Amidu & Abor, 2006). However, other researchers think that raising the dividend payout level may result in a drop in the company's worth. However, the third method, which was developed by Miller and Modigliani (MM), holds that a dividend policy is meaningless or has no bearing on a company's worth. Dividend decisions are meaningless in a world without taxes, transaction costs or other market defects, according to MM. The outcome of these theories is not unidirectional and is perplexing. Hence, the researcher tries to find out the significant variables that affect the dividend policy of the firm.

The relationship between dividend payout and various firm characteristics has been discussed in various studies, but the nature of the interaction between them is unclear and differs from the kinds of studies that have already been done in the field. Thus, the purpose of this study is to address the observations derived from the many factors that affect the dividend payout ratio. The current study was motivated by the rapidly expanding capital market in India, the unresolved dividend policy issue and the dearth of research in the field from emerging nations. This study specifically intends to investigate the factors influencing listed firms' dividend policies in India, a developing nation.

The structure of the article is as follows:

> The remaining study has been organised as follows: the following sections consist of literature reviews of various factors of dividend policy and outline six hypotheses; the third section presents the research methodology; the fourth section is the analysis and findings; and the fifth section is the implication, limitations and suggestions for future research.

Literature Review and Hypotheses Development

It is commonly known that there are contentious issues surrounding dividend policy, the best way to maximise shareholder wealth, the proper amount of earnings to distribute as dividends, the selection of profitable projects to invest in and to reduce the agency cost, which decisions need to be made? (Aoki, 2014). Hence it is essential to understand the various essential factors that may influence strategic decisions of the firm. Payment of dividends depends upon the nature of the business. Companies comparatively in developed markets tend to pay less dividend payout. In addition, riskier and more indebted firms prefer to pay lower dividends; larger and more profitable firms and less favourable growth opportunities pay more dividends; companies with more flexible access to debt pay more dividends. Similarly, Bushra and Mirza (2015) exhibit that companies with high profits tend to pay more dividends.

As per the literature, the main factor affecting dividend payout is profitability (Al-Najjar & Kilincarslan, 2018; Bayisa, 2023; Manneh & Naser, 2015; Nasrulloh et al., 2024; Rudy et al., 2023). They study the linear relationship between profitability and dividend payout. To convey a better financial position of the company and a good, credible signal to the market, profitable firms opt to pay high dividends. In contrast, authors like Rudy et al. (2023) and Venkataraman and Venkatesan (2018) exhibit that there is an inverse relationship between them. Despite having high profits, the company wants to invest in projects, in line with Islam and Adnan (2018) and Rudy et al. (2023). On the other hand, Pandey (2001) and Malik et al. (2013) state that profitability has no impact on the dividend payout of the firm.

Now, there have been numerous research studies that considered more variables influencing dividend policy. Leverage is a significant factor of dividend payout (Al-Najjar & Kilincarslan, 2018; Awad, 2015; Kuzucu, 2015; Manneh & Naser, 2015). As per the study of Awad (2015), leverage positively affects the dividend payout of KSE-listed companies. In contrast, Al-Malkawi (2008) and Rudy et al. (2023) state that there is a negative relationship between them. According to Rozeff (1982), a firm's transaction cost and risk will rise as its leverage increases. The leverage ratio shows how much debt a corporation has. A high leverage ratio necessitates a high fixed payment to the lenders in the form of interest for external funding. This implies that the likelihood of paying out a dividend will decrease as leverage increases. This suggests that leverage and dividend policy have an inverse relationship (Abdullah et al., 2018). Some authors like Chukwuebuka et al. (2020) investigate no significant impact of leverage on the dividend payout of the firm

Furthermore, as per the opinion of Birhanu et al. (2023), firm age has a significant positive impact on dividend payout; more aged and mature firms always prefer high dividends. As the firm had already matured and did not have any further investment opportunities, they decided not to retain the profit (Birhanu et al., 2023). In contrast, studies like Al-Malkawi (2008) and Bushra and Mirza (2015) state that companies that are looking to find new investment possibilities or are facing a shift in the firm's life cycle (the growth phase) prefer to pay lower or no dividends during the mature period.

The price-earnings (PE) ratio has a significant impact on dividend policy. As per the opinion of Moradi et al. (2010) and Ang and Peterson (1984), it is inversely related to dividend payout. Since these companies typically retain their earnings to fund future growth, a company with a high PE ratio would be thought to be growing faster than one with a low PE ratio. On the other hand, Baker and Powell (2000) and Kuzucu (2015) state a positive relationship. The price-to-book (PB) ratio shows how much the company is worth in the market compared to its book value. A firm's likelihood of paying out increases with its PB ratio. When investors place a comparatively high stock price on dividend-paying companies, those companies raise their payouts, and vice versa. On the other hand, Malkawi (2008) states that there is no significant association between them.

It is believed that growth plays a major role in determining dividend policy (Barclay et al., 1995; Fama & French, 2001). According to the research, a company's need for capital for growth prospects usually has a major detrimental effect on dividend payout. As a corporation matures, its growth slows down. This leads to lower capital expenditure and the potential for higher dividend payments because the company will have more free cash flow. Companies need to accumulate reserves to handle rapid expansion and financing requirements, which means they will have to pay fewer dividends and retain more profit. A company with a strong investment potential will be expected to pay a low dividend (Al-Malkawi, 2008). Conversely, a business with little growth opportunity may choose to issue a dividend, which could restrict the overviewing management approach (Jensen et al., 1992). However, according to Lin et al. (2012), despite having the potential to generate large returns, a company may choose to pay a large dividend to foster goodwill and protect minority shareholders, which is in line with Arif and Akbarshah (2013).

Firm size is a significant factor influencing corporate dividend decisions, and numerous studies have shown a positive correlation between firm size and dividend policy (Al-Najjar & Kilincarslan, 2018; Barclay et al., 1995; Fama & French, 2001). The majority of larger companies pay higher dividends to investors to establish their financial stability in the market (Arif & Akbarshah, 2013). Conversely, other writers argue that larger companies are more likely to retain cash flow rather than pay dividends, and smaller companies require less cash flow than larger companies do because they require less money to run their daily operations (Bushra & Mirza, 2015).

Significant outcomes of various determinants of dividend payout in various studies have been shown in Table 1. While several research studies have looked at the determinants influencing dividend policy in India, the data utilised in these studies were not current, and the published findings were inconsistent (Kumar, 2006; Movalia & Vekariya, 2014). Furthermore, the few previous studies on Indian corporations' dividend policies had a sector-specific focus. Anil and Kapoor's (2008) study, for example, focused mostly on consumer product firms. With the use of more recent data and a wider scope that includes all sectors, the current study expands on the body of research on the factors

Table 1. Evidence of Various Determinants of Dividend Payout.

	Authors													
Variables	Rozeff (1982)	Jensen et al. (1992)	Jensen et al. (1992)	Pandey (2001)	Kania (2005)	Al-Malkawi (2008)	Moradi et al. (2010)	Abor and Bokpin (2010)	Gul et al. (2012)	Lin et al. (2012)	Malik et al. (2013)	Aoki (2014)	Tamimi and Takhtaei (2014)	Kuzucu (2015)
GRO		–**	–**					–**		+**				–*
PRO		+**	+**				+***	+***			+			
LEV	–**				+**							+***		–***
AGE						–***							–*	+***
SIZE						+***	–*					+***	+**	
P/E						+	–***		+			+***		+***

Source: Author's compilation.
Notes: *** significant at 1%, ** significant at 5% and *significant at 10%.

influencing corporate dividend policy from developing economies, such as India.The following null hypotheses were developed to determine the factors influencing the dividend policy of BSE 200 listed companies in India.

Ho_1: There is no significant effect of profitability on dividend payout.
Ho_2: There is no significant effect of leverage on dividend payout.
Ho_3: There is no significant effect of firm age on dividend payout.
Ho_4: There is no significant effect of PE ratio on dividend payout.
Ho_5: There is no significant effect of growth on dividend payout.
Ho_6: There is no significant effect of firm size on dividend payout.

Research Methodology

Universe of the Study

The study's goal is to present a comprehensive analysis of the factors influencing dividend policy. The companies chosen for this study are those that are included in the top 200 firms listed on BSE based on market capitalisation as of 12 October 2021 (consistent with the study of Yusof & Ismail, 2016 and Abdullah et al., 2018). Because high market capitalised companies are financially sound and have stable earnings and high dividend payout. The study includes all the companies except the following:

- All banks and non-banking financial corporations.
- All insurance companies.
- All companies where annual report is not available for any specific year.
- All companies that have been merged during the study period.

Hence, 151 companies were included in this study.

Awad (2015)	Manneh (2015)	Tahir and Mushtaq (2016)	Islam and Adnan (2018)	Al-Najjar and Kilincarslan (2018)	Chukwuebuka et al. (2020)	Mazengo and Mwaifyusi (2021)	Kiangi and Milamo (2022)	Rudy et al. (2023)	Birhanu et al. (2023)	Bayisa (2023)	Ali et al. (2024)	Nasrulloh et al. (2024)
	+***	+*		+***		+***		–**		+***		+**
+***		–***		–***	+		+***					
				+*					+***	–		
+***	+***	+*	–**	+***		+***		+		+**	+**	

Data Collection

Data for the period 2015–2024 have been gathered from the software ACE Equity and the annual reports of the companies. The sample size of 10 years has been taken for a balanced, comprehensive and empirically relevant data set for analysing dividend payout. Such a long-framed period can predict the economic fluctuations during the study period of assessing dividend payouts.

Statistical Tool

Software called Gretl has been used to analyse the data. Regression analysis was specifically performed using the pooled least squares model, fixed- and random-effects models. Panel regression has been applied by the researcher. Panel data analysis, as noted by Hsiao (2022), has certain advantages since it takes into account the influence of other measurable factors on the determination of the dependent variable in addition to the function of unobservable firm-specific and time-specific elements. We have utilised panel data analysis because of its benefit over cross-sectional analysis.

Model

The dividend payout is the dependent variable in the model, and the independent variables are firm size, PE ratio, profitability, growth, firm age and leverage of the company.

Model specifications: For testing the hypotheses, the research model is presented as follows:

$$\mathrm{DO}_{it} = \beta_0 + \beta_1 \mathrm{PROF}_{it} + \beta_2 \mathrm{LEV}_{it} + \beta_3 \mathrm{AGE}_{it} + \beta_4 \mathrm{PE}_{it} + \beta_5 \mathrm{GROW}_{it} + \beta_6 \mathrm{FS}_{it} + \varepsilon_{it}$$

Definition of Variables

Variables	Description/Measurement	Studies Used as Proxy
Dividend payout ratio (DO)	Dividend/Net income × 100	Ali et al. (2023), Arif and Akbarshah (2013), Bayisa (2023), Birhanu et al. (2023), Bushra and Mirza (2015), Islam and Adnan (2018), Mehta (2012), Nasrulloh et al. (2024)
Profitability (PROF)	ROA = PAT/Total asset	Al-Najjar and Kilincarslan (2018), Bayisa (2023), Bushra and Mirza (2015), Manneh and Naser (2015), Mehta (2012), Movalia and Vekariya (2018), Nasrulloh et al. (2024)
Leverage (LEV)	Debt/Total asset	Al-Najjar and Kilincarslan (2018), Awad (2015), Kania (2005), Kiang and Milamo (2022), Kuzucu (2015), Rozeff (1982), Tahir and Mushtaq (2016)
Firm age (AGE)	Current year – Establishment year of the firm	Al-Najjar and Kilincarslan (2018), Ali et al. (2023), Bayisa (2023), Manneh (2015), Rudy et al. (2023), Venkataraman and Venkatesan (2018)
Price-earnings ratio (PE)	Price of stock/EPS	Al-Malkawi (2008), Ang and Peterson (1984), Damodaran (2002), Kuzucu (2015), Moradi et al. (2010)
Growth (GROW)	(Net fixed assets – Net fixed assets – 1)/Net fixed asset – 1	Barclay et al. (1995), Fama and French (2001)
Firm size (FS)	Natural log of assets	Al-Malkawi (2008), Al-Najjar and Kilincarslan (2018), Birhanu et al. (2023), Kuzucu (2015), Tamimi and Takhtaei (2014)

where, DO = Dividend payout, PROF = Profitability, LEV = Leverage, AGE = Firm age, PE = Price-earnings ratio, GROW = Growth and FS = Firm Size.

Analysis and Findings

Descriptive Statistics

In this section, Table 2 depicts the mean, median, standard deviation, minimum and maximum value of each variable used in this study.

Table 2. *Descriptive Statistics of Determinants of Dividend Payout.*

Variables	Mean	Median	S.D.	Minimum	Maximum
DO	20.2	5.62	49.9	0.000	1,430
AGE	45.7	40.0	24.3	2.00	121
PROF	0.0992	0.0801	0.0871	0.000	0.776
FS	20.4	10.2	375	0.000	13,800
GRO	0.256	0.0418	1.74	–0.999	46.2
LEV	6.25	3.26	22.9	0.000	555
PE	50.652	30.046	157.18	0.000	3,747.1

Source: Author's compilation.

Table 3. Correlation Analysis (Total Observations = 1,347).

Variables	DO	AGE	PROF	FS	LEV	GROW	PE	VIF
DO	1	.102**	–.046	–.308	.167**	–.070*	.000	
AGE	.102**	1	–.049	.709*	.141**	–.106**	–.043	1.014
PROF	–.046**	–.049	1	–.195	–.058	.554**	–.061	1.011
FS	–.308	.709*	–.195	1	.319	–.311	.178	1.000
LEV	.167**	.141**	–0.058	.319	1	–.064*	–.040	8.950
GRO	–.070*	–.106**	.554**	–.311	–.064*	1	–.009	1.013
PE	0.000	–0.043	–.061	.178	–.040	–.009	1	8.950

Source: Author's compilation.
Notes: *Correlation is significant at the 0.05 level (two-tailed).
**Correlation is significant at the 0.01 level (two-tailed).

The table illustrates the mean DO (20.02%) indicates that BSE companies in our sample paid dividends in about 20.02% of the total observations Additionally, the means of PROF and LEV show that companies had returns of roughly 0.099% on their total assets invested during the time, and made about 6.25% of their capital structures from debt financing. On average, BSE firms had a good signal of growth of approximately 25.6%. Furthermore, the mean value of firm age and firm size is 45.7 and 20.4, respectively.

Correlation Analysis

The degree of association between two variables can be examined with the use of the statistical method known as correlation analysis; they discovered that the correlation between the variables should not be greater than .80, which may suggest the existence of multicollinearity. Additionally, the variance-inflated factor, or VIF, can be used to test for multicollinearity. If the value of each variable is less than 10, multicollinearity is not present (Gujarati, 2021). However, in our investigation, Table 3 indicates that the correlation coefficient between a dependent variable and independent variables is less than .80, and all variable values are less than 10. Hence, there is no problem of multicollinearity.

Diagnostics Tests

Autocorrelation

The optimal mix of explanatory factors and the existence of autocorrelation in the residuals (prediction errors) are found using Durbin–Watson (DW) statistics (Gujarati, 2021). The data do not exhibit autocorrelation, as indicated by the calculated DW value of 2.080282.

Heteroskedasticity

Heteroskedasticity can be managed during model execution by utilising a robust standard error (Gujarati, 2021).

Hausman Test to Select the Appropriate Model

Table 4 displays the findings of the regression analysis of the pooled ordinary least squares, random-effects, and fixed-effects models on the variables influencing dividend policy. According to the Hausman test, the fixed-effects model is more suitable than the random and pooled methods for this investigation.

Similarly, Table 4 demonstrates that the six factors considered in this study explain almost 18.87% of the factors affecting dividend policy. The regression results indicate that there is no statistically significant association between the dividend payout and profitability (p value = .2168). Therefore, our first null hypothesis is not rejected. This demonstrates that dividend policy is not much influenced by profitability. The outcomes here agree with those of Mehta (2012), Pandey (2001) and Malik et al. (2013).

Leverage has a negative but insignificant relationship with dividend payout, in line with Gill et al. (2010) and Al-Kuwari (2009). It is because the p value of .3050 is not less than 5%. Hence, our null hypothesis is not rejected.

Firm age was shown to have a statistically significant negative association with the dividend payout value (p value = .0034). Thus, the hypothesis was disproved. This suggests that in Indian corporations, a firm's age has a major role in determining its dividend policy. According to this theory, companies prefer to pay fewer or no dividends during the maturity period because they may be facing a shift in the firm's life cycle (the growth phase) and seeking to identify new investment opportunities (Al-Malkawi, 2008; Bushra & Mirza, 2015).

With a p value of .2539, Table 4 demonstrates that the coefficient of the PE ratio is statistically insignificant. It is not decided to reject the third null hypothesis. This implies that the company's dividend policy is not significantly influenced by its PE ratio. This discovery aligns with the findings of Gul et al. (2012) and Al-Malkawi (2008).

With a p value of .0459 and a threshold of significance of 5%, the regression demonstrates a strong positive link between dividend policy and growth. Even if a company has a phase of growth, Lin et al. (2012) state that it may opt to give greater dividends to foster goodwill and help minority shareholders. This finding is consistent with Lin et al. (2012). It is determined that high-growth companies choose to pay large dividends to draw in both current and new investors and to win over shareholders, which helps the companies lower the agency problem (Easterbrook, 1984).

Table 4. Regression Results for Determinants of Dividend Payout.

Models	Pooled OLS (Robust Standard Error)				Fixed-effects Model (Robust Standard Errors)				Random-effects Model (GLS) (Robust Standard Errors)			
Regressor	Coefficient	Std Error	*T* Ratio	*p* Value	Coefficient	Std Error	*T* Ratio	*p* Value	Coefficient	Std Error	*T* Ratio	*p* Value
(Constant)	0.413909	4.77176	0.08674	.9310	79.2610	21.5878	3.672	.0003***	1.73764	5.16804	0.3362	.7367
FS	–0.001189	0.000151	–7.834	8.02E-013***	–0.000519	0.000237	–2.186	.0304**	–0.000623	0.000121	–5.120	3.05e-07***
LEV	−1.71407	1.62495	−1.055	.2932	–1.90336	1.84910	–1.029	.3050	–1.80595	1.72133	–1.049	.2941
PROF	117.351	19.6195	5.981	<.0001***	43.6718	35.2114	1.240	.2168	104.822	22.1551	4.731	2.23e-06***
GROW	1.44901	0.879554	1.647	.1016	1.89369	1.02226	1.852	.0459**	1.70941	0.947032	1.805	.0711*
PE	0.321523	0.282877	1.137	.2575	0.356041	0.310845	1.145	.2539	0.337152	0.295144	1.142	.2533
AGE	0.0520347	0.0501560	1.037	.3012	–1.51779	0.509707	–2.978	.0034***	0.041436	0.0517701	0.8004	.4235
R square	0.171255(adjusted)				0.188767				0.174082 (corr(y,yhat)^2)			
f-statistics (*p* value)	4.07e-23				8.88808e-10				3.35282e-26			
Durbin– Watson	1.631500				2.080282				2.080282			
Observation	1,347				1,347				1,347			

Source: Author's compilation.
Note: ***, **and * represent significance levels at 1%, 5% and 10%, respectively.

A statistically significant negative link between firm size and value is observed, as demonstrated in Table 4, with a *p* value of .0304. Firm size is a significant factor; hence, the null hypothesis is rejected. This result is in line with the findings of Moradi et al. (2010).

Implication, Limitations and Suggestions

This study looked at several variables influencing the dividend policy of Indian companies using data from 151 BSE companies between 2015 and 2024. The findings indicate that firm price earning, leverage and profitability were not significant factors, but firm age, size and growth are some of the key determinants of dividend policy. The results led to six hypotheses regarding the determinants influencing dividend policy. From these, we deduced that firm age and size had a negative relationship with the dividend policy. In contrast, growth and the dividend policy of the company are positively correlated. The results of this study also help current and potential shareholders make investment decisions. It also provides the board of directors with valuable input for the formulation and revision of dividend policy. In particular, the consideration of profit, leverage, size, growth and PE ratio should be carefully considered if the board of directors is thinking about raising the dividend payment to shareholders.

By looking at the factors that influence dividend policy for BSE companies, the research contributes to the body of knowledge by illuminating the trends seen in this type of financing decision for businesses in developing markets. The empirical results of this study provide valuable insights into the various factors of dividend payout of listed firms in India, a developing nation, and hence contribute significantly to the body of literature. The success of the company will be affected in the long run by the integration of good determinants into their cultures. It implies that to attract international investment and grow through cross-border commerce and acquisitions, developing economies are required.

While aligning with the financial stability of the company, one can make a structure of dividend policy by understanding the impact of leverage, profitability, growth, size and so on, and for promoting investors' confidence, regulators and policymakers can also develop strategies for creating balanced dividend policies. Companies, investors and regulators can make properly informed financial decisions owing to the practical implications of these determinants. Variability in dividend policy by sector and nation can be evaluated in further detail.

The determinants of dividend policy have only been examined in this study using six independent variables. To better understand the effects of these variables, future studies should try to include more relevant determinants such as tax, market-to-book ratio, asset tangibility, insider ownership, block ownership and corporate governance features. Additionally, this could be researched through banks or NSE firms. For better outcomes, certain useful behavioural and psychological elements could be taken into account. The study is based on secondary data based on quantitative data, where chances of mistakes may occur; hence, qualitative techniques like an interview and questionnaire could be used for better results. Despite some limitations, the

study contributes to the knowledge of existing literature about the significant issues of various determinants of dividend payout.

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References

Abdullah, M. N., Quader, S. M., & Saha, J. (2018). Impact of payout policy on market value. *International Review of Business Research Papers*, *14*(1), 109–131.

Abor, J., & Bokpin, G. A. (2010). Investment opportunities, corporate finance, and dividend payout policy: Evidence from emerging markets. *Studies in Economics and Finance*, *27*(3), 180–194.

Ali, A., Khan, A., & Khan, S. (2023). Dividend policy attributes and its impact on firm profitability. *Sarhad Journal of Management Sciences*, *9*(1).

Al-Kuwari, D. (2009). Determinants of the dividend policy of companies listed on emerging stock exchanges: The case of the Gulf Cooperation Council (GCC) countries. *Global Economy & Finance Journal*, *2*(2), 38–63.

Al-Malkawi, H. A. N. (2008). Factors influencing corporate dividend decision: Evidence from Jordanian panel data. *International Journal of Business*, *13*(2).

Al-Najjar, B., & Kilincarslan, E. (2018). Revisiting firm-specific determinants of dividend policy: Evidence from Turkey. *Economic Issues*, *23*(1), 3–34.

Amidu, M., & Abor, J. (2006). Determinants of dividend payout ratios in Ghana. *The Journal of Risk Finance*, *7*(2), 136–145.

Ang, J., & Peterson, P. P. (1984). The leasing puzzle. *The Journal of Finance*, *39*(4), 1055–1065.

Anil, K., & Kapoor, S. (2008). Determinants of dividend payout ratios: A study of Indian information technology sector. *International Research Journal of Finance and Economics*, *15*, 63–71.

Aoki, Y. (2014). How does the largest shareholder affect dividends? *International Review of Finance*, *14*(4), 613–645.

Arif, A., & Akbarshah, F. (2013). Determinants of dividend policy: A sectoral analysis from Pakistan. *International Journal of Business and Behavioral Sciences*, *3*(9), 16–33.

Awad, B. (2015). Determinants of dividend policy in Kuwait stock exchange. *International Journal of Business and Management Review*, *3*(7), 72–78.

Baker, H. K., & Powell, G. E. (2000). Determinants of corporate dividend policy: A survey of NYSE firms. *Financial Practice and Education*, *10*, 29–40.

Barclay, M. J., Smith, C. W., & Watts, R. L. (1995). The determinants of corporate leverage and dividend policies. *Journal of Applied Corporate Finance*, *7*(4), 4–19.

Bayisa, Y. (2023). Determinants of dividend payout in private insurance companies of Ethiopia. *International Journal of Advanced Research in Science and Technology*, *12*(8), 1064–1070.

Birhanu, D. C., Gelaye, Z. E., & Gelalcha, W. G. (2023). Determinants of dividend payout ratio of private insurance companies in Ethiopia. *Journal of Research in Engineering and Computer Sciences*, *2*(1), 1–13.

Bushra, A., & Mirza, N. (2015). The determinants of corporate dividend policy in Pakistan. *The Lahore Journal of Economics*, *20*(2), 77.

Chukwuebuka, O., & Okonkwo, O. (2020). Financial leverage and dividend policy: Evidence from oil and gas firms in Nigeria. *Asian Journal of Economics, Business and Accounting*, *14*(2), 51–62.

Damodaran, A. (2002). *Tools and techniques for determining the value of any asset*. John Wiley & Sons.

Easterbrook, F. H. (1984). Two agency-cost explanations of dividends. *The American Economic Review*, *74*(4), 650–659.

Fama, E. F., & French, K. R. (2001). Disappearing dividends: Changing firm characteristics or lower propensity to pay? *Journal of Financial Economics*, *60*(1), 3–43.

Gill, A., Biger, N., & Tibrewala, R. (2010). Determinants of dividend payout ratios: Evidence from United States. *The Open Business Journal*, *3*(9), 8–14.

Gujarati, D. N. (2021). *Essentials of econometrics*. Sage Publications.

Gul, S., Sajid, M., Razzaq, N., Iqbal, M. F., & Khan, M. B. (2012). The relationship between dividend policy and shareholder's wealth. *Economics and Finance Review*, *2*(2), 55–59.

Hsiao, C. (2022). *Analysis of panel data* (No. 64). Cambridge University Press.

Islam, M. S., & Adnan, A. T. M. (2018). Factors influencing dividend policy in Bangladesh: Survey evidence from listed manufacturing companies in Dhaka stock exchange. *European Journal of Business Science and Technology*, *4*(2), 156–173.

Jensen, G. R., Solberg, D. P., & Zorn, T. S. (1992). Simultaneous determination of insider ownership, debt, and dividend policies. *Journal of Financial and Quantitative Analysis*, *27*(2), 247–263.

Kania, S. L. (2005). What factors motivate the corporate dividend decision? *Theses, Dissertations & Honors Papers*, 195.

Kiangi, R. F., & Milamo, M. W. R. J. (2022). Dividend policy for commercial banks in Tanzania: Controlling for random and specific effects. *Research Journal of Finance and Accounting*, *13*(4).

Kumar, J. (2006). Corporate governance and dividends payout in India. *Journal of Emerging Market Finance*, *5*(1), 15–58.

Kuzucu, N. (2015). Determinants of dividend policy: A panel data analysis for Turkish listed firms. *International Journal of Business and Management*, *10*(11).

Lin, H., Lin, W. Y., & Liu, Y. C. A. (2012). Dividend catering and the information content of dividend changes. *Journal of Interdisciplinary Mathematics*, *15*(1), 1–21.

Malik, F., Gul, S., Khan, M. T., Rehman, S. U., & Khan, M. (2013). Factors influencing corporate dividend payout decisions of financial and non-financial firms. *Research Journal of Finance and Accounting*, *4*(1), 35–46.

Manneh, M. A., & Naser, K. (2015). Determinants of corporate dividends policy: Evidence from an emerging economy. *International Journal of Economics and Finance*, *7*(7), 229–239.

Mazengo, S. D., & Mwaifyusi, H. A. (2021). The effect of liquidity, profitability, and company size on dividend payout: Evidence from financial institutions listed in Dar es Salaam stock exchange. *Business Education Journal*, *7*(1).

Mehta, A. (2012). An empirical analysis of determinants of dividend policy: Evidence from the UAE companies. *Global Review of Accounting and Finance*, *3*(1), 18–31.

Moradi, M., Salehi, M., & Honarmand, S. (2010). Factors affecting dividend policy: Empirical evidence of Iran. *Poslovna izvrsnost*, *4*(1), 45–61.

Movalia, N., & Vekariya, P. (2014). A study on determinant of dividend policy and its impact on dividend of listed company under S&P BSE Sensex. *Journal of Business Management & Social Sciences Research*, *3*(12), 70–72.

Musiega, M. G., Alala, O. B., Musiega, D., Maokomba, C. O., & Egessa, R. (2013). Determinants of dividend payout policy among non-financial firms on Nairobi Securities Exchange, Kenya. *International Journal of Scientific & Technology Research*, *2*(10), 253–266.

Nasrulloh, N., Supraptiningsih, J. D., & Alvianingsih, V. (2024). The effect of profitability (ROA) and free cash flow on dividend payout ratio in manufacturing companies listed on the IDX in 2019-2022. *JISIP (Jurnal Ilmu Sosial dan Pendidikan*), *8*(2), 1016–1025.

Pandey, I. M. (2001). *Corporate dividend policy and behaviour: The Malaysian experience* (IIMA Working Papers WP2001-11-01).

Rozeff, M. S. (1982). Growth, beta and agency costs as determinants of dividend payout ratios. *Journal of Financial Research*, *5*(3), 249–259.

Rudy, R. P., Hady, H., & Nalurita, F. (2023). Factors influencing dividend payout in manufacturing industries listed on the Indonesia Stock Exchange, Riwayat. *Educational Journal of History and Humanities*, *6*(4), 3002–3018.

Tahir, M., & Mushtaq, M. (2016). Determinants of dividend payout: Evidence from listed oil and gas companies of Pakistan. *The Journal of Asian Finance, Economics and Business*, *3*(4), 25–37.

Tamimi, M., & Takhtaei, N. (2014). Relationship between firm age and financial leverage with dividend policy. *Asian Journal of Finance & Accounting*, *6*(2), 53.

Venkataraman, R., & Venkatesan, T. (2018). Empirical analysis of the determinants of dividend payouts of Indian banking stocks using panel data econometrics. In *Advances in finance & applied economics* (pp. 283–297). Springer.

Yusof, Y., & Ismail, S. (2016). Determinants of dividend policy of public listed companies in Malaysia. *Review of International Business and Strategy*, *26*(1), 88–99.

Perspective Article

Socio-cultural Capital and Educational Inequalities: A Critical Analysis

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Abstract

India has significantly increased its access to education across the country over the last few years. Not only schools but the number of students enrolled in higher education has also increased from 2019–2020 to 2020–2021 by 28.8 lakhs (from 3.85 to 4.13 crore). This increase in enrolment, among others, is also because of the government's affirmative actions to improve the availability and accessibility of education to disadvantaged social groups. However, this improvement is also accompanied by social inequalities. There are significant barriers in the education system that prevent the Scheduled Caste, Scheduled Tribe, Other Backward Castes and women students (referred to as socially disadvantaged groups) from enrolment and further advancement in educational institutions. It is worrying whether this education massification has improved the accessibility or widened it for under-represented groups and regions.

This article is based on secondary data sources such as AISHE, UGC, ASER, research papers and other relevant reports. The purpose of this research is to present the existing socio-cultural inequalities in the country's education system along with ways to reduce these inequalities. Goal 4 of the Sustainable Development Goals (SDGs) is to achieve an equitable and inclusive quality education that includes promotion of lifelong learning opportunities for all by 2030. Despite this goal in the hindsight, we have a long way to go as the nation aims to progress towards an 'inclusive' society.

Keywords

Cultural capital, social capital, inclusive education, HEIs, inequalities

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Introduction

India has significantly increased its access to education across the country over the last few years. There were 29 million more students attending school in 2018–2019 than there were in 2004–2005 (increased from 219 to 248 million). Despite this increase in enrolment, the students' learning outcomes among all ages remain below par (World Bank, 2021). The availability and accessibility of education to the disadvantaged social groups have improved because of the affirmative action policies taken by the government, but it is accompanied by social inequalities (Wadhwa, 2018). Moreover, there are significant barriers that prevent backward castes and women students (referred to as socially disadvantaged groups) from enrolling in elite higher education institutions and taking highly valued academic courses (Sabharwal, 2021). This emphasises the need to narrow down this gap and ensure wider participation of students from the lower socio-economic background as the country aims to become an 'inclusive society'. This aim is in line with Goal 4 of the United Nations' (UN) Sustainable Development Goals (SDGs) formulated in 2015, which intends to reach an inclusive and equitable quality education including the promotion of lifelong learning opportunities for all by 2030 (United Nations, n.d.).

In the field of education, the learning outcomes are influenced by the social and cultural experiences of students (Maunah, 2020). The learning outcome is the measure of abilities, skills and knowledge that the students have accomplished because of their participation in educational experiences. The effectiveness of the learning process is longitudinal in nature; it is more important than outputs and goes beyond just academic achievement (Jain & Prasad, 2018). The idea behind this article is to present the emerging forms of social and cultural capital inequalities that influence students' learning outcomes and their access to higher education in India. This article highlights the presence of these inequalities in schools and colleges, which leads to a difference in the educational choices and learning outcomes of students. Other inequalities such as symbolic, digital and economic inequalities have not been included under the scope of this article. In a country like India, understanding these inequalities is critical because the biggest challenge is to effectively manage the country's limited resources given its large population.

Methodology of the Study

This research has been articulated using secondary sources of data from different AISHE annual reports published by the Ministry of Education, various educational institutions' reports like ASER, UGC and relevant research papers. These sources have helped the authors to form linkages between the existence of social and cultural capital in higher education. They also provide some measures to move towards an inclusive form of education and how the inequalities can be reduced.

Theoretical Framework

This research provides discussion and perspectives from the lens of French sociologist Pierre Bourdieu's (1986) theory of capital in the education system. His theory presents

various forms of capital such as social, cultural and economic capital. In every society, resources such as money, power and education are not equally available and accessible to all. Economic capital includes material assets and income; social capital comprises the network of contacts and social associations; and cultural capital contains educational qualifications and status. More specifically, depending on the time period, society and social class, cultural capital can be gained to varying degrees without any conscious instruction. It always influences its class or region which marks its origination. 'Cultural capital' refers to acquaintances and familiarity with a society's dominant culture. Individuals' body language, accents and speech patterns are examples of cultural capital (Bourdieu, 1986). The author claims that the presence of cultural capital varies by social class, and this makes it extremely difficult for students belonging to the lower class to get ahead in the education system (Zimdars et al., 2009). Other authors defined cultural capital as 'appropriate manners and good taste' (De Graaf, 1986); 'linguistic and cultural competence', which includes buying and borrowing books; presence at theatres, museums and concerts; interpersonal skills; and speech styles, also forms part of cultural capital (Robinson & Garnier, 1985). This means that certain aspects of cultural capital (such as knowing slang words, greeting people properly, beliefs and behaviour) are not openly taught to children. That is sometimes referred to as the hidden curriculum cultural capital. The place in which a person is raised teaches him/her the way to behave and treat people. This implies that those with more access to cultural and social capital are more successful and can achieve higher levels of education (Pishghadam & Zabihi, 2011).

Statement of the Problem

Capital Inequalities in Higher Education in India

When compared to other countries, India's educational attainment appears to be sluggish. Even after seven decades of policy interventions, educational inequality by gender, location and social group persists. As presented by Wadhwa (2018), parents with a high socio-economic status pass on their social and cultural capital to their children by sharing their knowledge and beliefs necessary for their children's school and higher education success. Unfortunately, when compared to the non-first-generation peers, the first-generation peers lack social and cultural capital. This creates a disadvantaged situation for them. Moreover, a low female participation in higher education is a cause of worry as it exhibits the rural–urban divide (Varughese & Bairagya, 2020). Such inequalities create a block in the minds of the students and make them feel inferior. This is directly reflected in their learning capability and personality.

These inequalities also reflect in the students' career path and their educational choices. These choices are the stream choices made for one's higher education. The rational choice theory indicates that the choices are rational, but its rationality varies for individuals (Coleman, 1990). Several factors can be attributed to the educational choices such as gender issues (Chanana, 2000), parents' background and teaching (Lahoti & Mukhopadhyay, 2020) and social-economic status (Auðardóttir & Kosunen, 2020). Furthermore, a student's family, friends, teachers

or mentors also shape their stream choice-making in higher education (Dassani, 2023). This has been further shown in Tables 1 and 2.

Review of Literature

Social and cultural capital is important in higher education as it influences students' access to education and their progress in academics. Pierre Bourdieu strongly claimed that individuals who had many forms of capital, including social and cultural capital, would be able to positively influence their academic life and prospects.

- **Social capital and higher education:** As discussed, social capital means the networks, social connections and relationships that an individual has. It has been observed that students with extensive social networks tend to have better access to information regarding scholarships, career opportunities and details about various colleges (Coleman, 1988). Such networks are a source of increased resource acquisition and lead to improved educational access. Peer network plays a key role in shaping the attitude and behaviour of students in higher education (Stanton-Salazar, 2011). The presence of supportive peer groups is positively linked to academic success. Another form of social capital is networking with alumni. They offer valuable capital about career opportunities, internship leads and mentorship (Bourdieu, 1993). The institutions can make efforts to tap these resources for the benefit of all students.
- **Cultural capital and higher education:** Cultural capital means the cultural knowledge, skills and habits that individuals learn during their upbringing and socialisation. Moreover, it refers to students' cultural awareness and their ability to engage in diverse discussions (Lareau, 2003). Not only this, an individual's language proficiency is often influenced by his/her cultural background. Language proficiency significantly impacts academic achievement (Bourdieu, 1993). Students with a strong cultural capital background may excel due to their command of the academic language. Cultural capital involves exposure to educational resources and intellectual pursuits (Bourdieu, 1986). These experiences provide students with a foundational advantage in higher education.

Discussion

Tables 1 and 2 depict the enrolment status of males and females in technical and non-technical courses such as engineering and technology, arts and social sciences for three years. During the year 2021–2022, engineering and technology courses (PG level) had more male students enrolled, that is, 68%, and female students comprised only 32%. The years 2019–2020 and 2020–2021 present a similar trend. For the same course, at the UG level (shown in Table 2), about 71% were male students and only 29% of the female students opted for these courses during

Table 1. Distribution of Gender in Post-graduates Courses (in %).

Year	Course	Engineering and Technology	Arts	Social Science
2021–2022	Male	68	49	43
	Female	32	51	57
2020–2021	Male	67	40	44
	Female	33	60	56
2019–2020	Male	65	44	42
	Female	35	56	58

Source: Compiled and calculated from AISHE (2021–2022, 2020–2021, 2019–2020) reports (includes public and private institutions of higher education).

Table 2. Distribution of Gender in Under-graduates Courses (in %).

Year	Course	Engineering and Technology	Arts	Social Science
2021–2022	Male	71	49	49
	Female	29	51	51
2020–2021	Male	71	48	49
	Female	29	52	51
2019–2020	Male	71	47	48
	Female	29	53	52

Source: Compiled and calculated from AISHE (2021–2022, 2020–2021, 2019–2020) reports (includes public and private institutions of higher education).

2021–2022. Likewise, a similar pattern was found for the years 2019–2020 and 2020–2021. Conversely, during the years 2021–2022, for the arts stream (PG level), the male students accounted for 49% while the female students comprised around 51% of the total students (Table 1). The same was found at the UG level, and even for the remaining years, a similar trend was observed where the female students were enrolled more in number when compared to male students. For the social sciences courses (PG level), a higher percentage of female students were enrolled when compared to the male students, that is, 57% and 43%, respectively. A similar trend was observed for the social sciences stream at the UG level, wherein 49% were male students and 51% were female students. It can be inferred that in arts and social sciences, the enrolment of girl students was higher when compared to the male students. In the engineering and technology field, it was vice versa.

The numbers show an improvement in enrolment, but the issue of gender disparity continues to exist in technical and non-technical courses. It clearly shows the societal stereotypes that girls are less interested in computer science and engineering when compared to boys. The researchers found that these stereotypes among class one to twelve students—children and adolescents—have a negative impact on girl students' participation in these fields (Master et al., 2021). Moreover, these stereotypes are results of social and cultural capital. Some serious questions can be posed that why are technical courses more favoured by male students and less by female students. Research has also shown that families may be less willing to fund the education of a female child when compared to a male child. The nature

of technical courses is known to be expensive than non-technical courses as it requires lab and electronic provisions. Therefore, arts and social sciences have a stereotype linked to being for girls and are also the preferred option by their family. This choice is ingrained in a girl child from childhood. Also, the fees structure being low when compared to science courses is another reason for this. Due to this, students who hail from weaker sections of the society feel excluded in the learning process (Bali, 2021), as their choices are based on family culture and choices. A high cost of education and existing financial debts specifically for the lower income group make education taxing (Rahman et al., 2022). Education in sciences is known to be for the rich, powerful and upper castes. The socio-economic background of a student and their career graph are reflected in the disciplinary choices they make; that is, the underrepresented groups are less represented by professional courses that require huge investments for a continuous time (Chanana, 2000).The students who hail from underrepresented groups tend to have several psychological barriers, which make them feel insecure (Nature, 2016). Consequently, a weak social and cultural capital influences the choices and consequently their learning outcome.

Social and Cultural Capital: Research Field

In interesting research findings, it was revealed that conferences are a platform for the development of one's academic knowledge and networking. However, it was found that the conferences had lower participation from underrepresented groups and women when compared to men and upper caste academicians. This is the unfortunate state of affairs in a country where social capital is low for the mentioned groups and can be termed as a case of social exclusion (Sabharwal et al., 2020). In the age where publish and perish has gained importance, it has been observed that researchers gave more importance to strengthen their social and cultural capital; that is, they would wish to collaborate with their networks more often and also with people who would share their cultures. The collaborations were more focused on the mutual benefit of their networks (Aprile et al., 2021). It must be understood that the collaborations should be more with the intent to give a useful output to the society first.

Suggestions

The government has taken several steps to reduce inequalities in higher education. Financial assistance has been provided by the government for the socially and economically disadvantaged groups that have helped to improve the enrolment of students in higher education. Not only this, the establishment of educational institutions in their vicinity has enhanced accessibility to the rural community. The institutes have made efforts to ensure a gender balance in their admission process. Also, the development of courses in bilingual language has helped students from diverse backgrounds to get themselves educated (Government of India, 2020). To address disparities related to social and cultural capital in higher education, several best practices and policy solutions are recommended:

1. **Financial aid and mentorship:** The policies must be implemented as per the need of scholarships and financial aid programmes to support students from diverse socio-economic backgrounds (Hossler & Gallagher, 1987). Mentor–mentee programmes will help first-generation students to get guidance and support from experienced mentors throughout their academic journey (Crisp & Cruz, 2009). They are useful for all students to shape their thoughts and choices independently.
2. **Academic support and inclusion initiatives:** Providing academic writing workshops and language support for students who face issues in language and communication will be immensely beneficial to overcome fear and gain confidence (Leki, 2001). It is essential to create an inclusive campus environment for students to promote a sense of belongingness and equality (Hurtado & DeAngelo, 2012).
3. **Accessibility of resources:** Equitable access to essential educational resources, such as libraries and study spaces (Tinto, 2017), irrespective of students' cultural or social backgrounds, should be provided.
4. **Cultural competency training:** It is essential to train faculty and staff in the aspect of cultural competency to ensure sensitivity to diverse backgrounds and student needs (Hurtado et al., 1999).
5. **Data collection and monitoring progress:** On a regular basis, data must be collected on student outcomes, disaggregated by socio-economic and cultural factors. Such data must be used to monitor progress, identify disparities and adjust policies and interventions as suitable.
6. **Community engagement:** The local communities and organisations can create engagements and events for underrepresented students into higher education. Social initiatives can be taken via outreach efforts to include college preparatory programmes, mentorship initiatives and workshops for parents and students. For example, some churches are examples of social capital that can play a significant role in community development because they work with reputable leaders who are driven by their religious convictions to serve their communities (Warren et al., 2001).
7. **Advocacy and policy change:** At the institutional and governmental levels, systemic issues related to social and cultural capital disparities should be addressed. Lobby for increased funding for education, fair admissions policies and anti-discrimination measures.
8. **Research and evaluation:** Support research initiatives that examine the impact of various interventions and policies on reducing disparities in higher education. Use evidence-based practices to inform future strategies.

Conclusion and Way Forward

In the realm of higher education, social and cultural capital play integral roles in shaping students' access to and success within academic institutions. Based on theories of Pierre Bourdieu, this comprehensive review delves into the multifaceted ways in which these forms of capital exert influence and examines the disparities they create among students. This article discussed social and cultural

capital, wherein social capital encompasses networks and relationships and cultural capital includes cultural knowledge, habits and skills acquired through upbringing, all of which impact students' academic journeys.

To ensure equitable access to essential educational resources, it is important to emphasise the role of each stakeholder, that is, the student, parent, teacher, institution and the society, and to train faculty and staff in the area of cultural competency as it would help to reduce the influence of social and cultural capital in higher education. Considering this measure with effective implementation, it will help the institutions move closer to the situation of an ideal setting where there is equal opportunity for all students, irrespective of their social-cultural backgrounds (Bourdieu & Passeron, 1990). The introduction of bridge courses for students who come from weaker backgrounds will help to eliminate their fear and become more confident. It will also help to improve their cultural capital. Those who have a weak parental social capital must not feel excluded or lost and can be provided suitable academic and mentoring support for their development. The role of teachers is also crucial in ensuring a behavioural change among students to treat everyone with equality and help each other in need. The country needs to reach the UN SDG goals by 2030, for which the support of the state is needed, and requires more proactive interventions from institutions to make higher education more inclusive.

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References

AISHE. (2019–2020). *All India survey on higher education*. Government of India.

AISHE. (2020–2021). *All India survey on higher education*. Government of India.

AISHE. (2021–2022). *All India survey on higher education*. Government of India.

Aprile, K. T., Ellem, P., & Lole, L. (2021). Publish, perish, or pursue? Early career academics' perspectives on demands for research productivity in regional universities. *Higher Education Research & Development*, *40*(6), 1131–1145.

Auðardóttir, A. M., & Kosunen, S. (2020). Choosing private compulsory schools: A means for class distinctions or responsible parenting? *Research in Comparative and International Education*, *15*(2), 97–115. https://doi.org/10.1177/1745499920921098

Bali, A. K. (2021). Contesting learning spaces in higher education: Problems of language acquisition. In P. K. Choudhury & Suresh Babu G. S. (Eds.), *Contextualising educational studies in India* (pp. 148–165). Routledge India.

Bourdieu, P. (1986). The forms of capital. In J. G. Richardson (Ed.), *Handbook of theory and research for the sociology of education* (pp. 241–260). Greenwood Press.

Bourdieu, P. (1993). *The field of cultural production: Essays on art and literature*. Columbia University Press.

Bourdieu, P., & Passeron, J. C. (1990). *Reproduction in education, society, and culture*. Sage Publications.

Chanana, K. (2000). Treading the hallowed halls: Women in higher education in India. *Economic & Political Weekly*, *35*(12), 1012–1022.

Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, *94*(1), 95–120.

Coleman, J. S. (1990). *Foundations of social theory*. Belknap Press of Harvard University Press.

Crisp, G., & Cruz, I. (2009). Mentoring college students: A critical review of the literature between 1990 and 2007. *Research in Higher Education*, *50*(6), 525–545.

Dassani, P. (2023). Examining socio-economic inequalities in educational choices in higher education institutions. In *Revisiting management and business practices in dynamic era* (pp. 58–64). Kunal Books.

De Graaf, P. M. (1986). The impact of financial and cultural resources on educational attainment in the Netherlands. *Sociology of Education*, *59*(4), 237–246.

Government of India. (2020). *National Education Policy*. Ministry of Education.

Hossler, D., & Gallagher, K. S. (1987). Studying student college choice: A three-phase model and the implications for policymakers. *College and University*, *62*(3), 207–221.

Hurtado, S., & DeAngelo, L. (2012). Linking diversity with the educational and civic missions of higher education. In J. C. Smart (Ed.), *Higher education: Handbook of theory and research* (Vol. 27, pp. 233–277). Springer.

Hurtado, S., Milem, J., Clayton-Pedersen, A., & Allen, W. (1999). Enhancing campus climates for racial/ethnic diversity: Educational policy and practice. *The Review of Higher Education*, *23*(3), 233–266.

Jain, C., & Prasad, N. (2018). *Quality of secondary education in India*. Springer Nature.

Lahoti, R., & Mukhopadhyay, R. (2020, August). *School choice in rural India: Perception versus reality*. Ideas for India. https:// www.ideasforindia.in/topics/human-development/school-choice-in-rural-india-

Lang, D. (1984). Education, stratification, and the academic hierarchy. *Research in Higher Education*, *21*, 329–352.

Lareau, A. (2003). *Unequal childhoods: Class, race, and family life*. University of California Press.

Leki, I. (2001). A narrow thinking system: Non-native-English-speaking students in group projects across the curriculum. *TESOL Quarterly*, *35*(1), 39–67.

Master, A., Meltzoff, A. N., & Cheryan, S. (2021). Gender stereotypes about interests start early and cause gender disparities in computer science and engineering. *Proceedings of the National Academy of Sciences*, *118*(48), e2100030118.

Maunah, B. (2020). Social and cultural capital and learners' cognitive ability: Issues and prospects for educational relevance, access, and equity towards digital communication in Indonesia. *Journal of Social Studies Education Research*, *11*(1), 163–191.

Nature. (2016). *Is science only for the rich?* https://www.nature.com/articles/537466a

Pishghadam, R., & Zabihi, R. (2011). Parental education and social and cultural capital in academic achievement. *International Journal of English Linguistics*, *1*(2), 50.

Rahman, F., Bhat, V., Ozair, A., & Detchou, D. (2022) Rising inequity and disparities in medical education in India: Challenges to training a representative workforce. *JMIR Medical Education*. https://doi.org/10.2196/preprints.38623

Robinson, R. V., & Garnier, M. A. (1985). Class reproduction among men and women in France: Reproduction theory on its home ground. *American Journal of Sociology*, *91*(2), 250–280.

Sabharwal, N. S. (2021). Nature of access to higher education in India: Emerging pattern of social and spatial inequalities in educational opportunities. In M. S. Jaglan & Rajeshwari, *Reflections on 21st century human habitats in India* (pp. 345–369). Springer.

Sabharwal, N. S., Henderson, E. F., & Joseph, R. S. (2020). Hidden social exclusion in Indian academia: Gender, caste and conference participation. *Gender and Education*, *32*(1), 27–42.

Stanton-Salazar, R. D. (2011). A social capital framework for the study of institutional agents and their role in the empowerment of low-status students and youth. *Youth & Society*, *43*(3), 1066–1109.

Tinto, V. (2017). *Leaving college: Rethinking the causes and cures of student attrition*. University of Chicago Press.

United Nations. (n.d.). *United Nations in India*. https://in.one.un.org/: https://in.one.un.org/page/sustainable-development-goals/quality-education-in-india-sdg-4/

Varughese, A. R., & Bairagya, I. (2020). Group-based educational inequalities in India: Have major education policy interventions been effective? *International Journal of Educational Development*, *73*, 102159.

Wadhwa, R. (2018). Unequal origin, unequal treatment, and unequal educational attainment: Does being first generation still a disadvantage in India? *Higher Education*, *76*(2), 279–300.

Warren, M. R., Thompson, J. P., & Saegert, S. (2001). The role of social capital in combating poverty. *Social Capital and Poor Communities*, *3*, 1–28.

World Bank. (2021). *World Bank signs project to improve quality of India's education system.* https://www.worldbank.org/en/news/press-release/2021/01/28/world-bank-signs-project-to-improve-quality-of-india-s-education-system

Zimdars, A., Sullivan, A., & Heath, A. (2009). Elite higher education admissions in the arts and sciences: Is cultural capital the key? *Sociology*, *43*(4), 648–666.

Factors Influencing Shopping Behaviour in Retail Sector of Goa: Focus on Local Markets and Consumer Preferences

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Abstract

Local markets are at the heart of community identity and tourism economies, rendering an understanding of shopper behaviour critical to improving consumer experience and sustainable growth. Critical factors influencing shopper behaviour in local market settings are identified in this study, including six independent variables such as proximity of markets, availability of traditional goods, influence of tourism on shopper behaviour, attitude and amicability of staff handling shoppers, cultural relevance of shopping products, and seasonal product promotions. The relationships of the variables studied are investigated by using correlation analysis, multiple regression techniques and Thurstone Case V Scaling. Results indicated that tourist activity had the highest relationship with shopper behaviour, followed by proximity to markets and staff attitude. The study provides good guidelines to develop customer engagement, utilise tourism potential and improve local products. The results add to the growing literature on consumer behaviour in local market contexts and suggest managerial strategies for fostering positive customer-staff interactions and capitalising on tourism's influence. The dynamic nature of consumer preferences offers opportunities for further research.

Keywords

Customer buying behaviour, retail landscape, proximity to local markets, Goa retail market

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Introduction

Shopping behaviours in the retail industry of Goa are influenced significantly by a combination of cultural heritage, economic dynamics and changing consumer preferences. Its local markets form a colourful commercial platform for economic trading but with rich social exchanges, and more importantly, local craftsmanship preservation through which people will go for purchases, unlike mere shopping destinations—manifestations of historical richness about a region as well as variances of tastes about the demands of residents and outsiders of the markets (Abu-AlSondos et al., 2023).

The forces of globalisation have significantly transformed the retail sector in Goa. The entry of different formats of retailing, including international brands and modern shopping complexes, has increased competition and changed the expectations of consumers (Frasquet et al., 2001). These include the pricing, variety of products, quality and shopping experience as a whole.

Demographic diversity, cultural relevance and technological advancement have complicated the retail world further (Guo & Wang, 2024). Online reviews, social media and mobile commerce have transformed the way consumers interact with brands and make purchases (Kushwaha et al., 2017). The study aims to provide insights for tailoring retail strategies to local needs. The findings support data-driven decisions and sustainable growth in a culturally rich market (Sham et al., 2023).

The location of a retail store is the first variable selected, which is paramount in determining consumer shopping decisions. Areas close to popular markets, such as Mapusa and Margao, are seen to have the benefit of high foot traffic and visibility. Preferred shopping areas are considered those that offer access to multiple outlets and enable comparison among products. The proximity advantage encourages impulsive buying and also supports the selection of retailers that belong to the local community (Zulqarnain et al., 2015).

In Goa, customers have an affinity for whatever product would speak to the rich culture and heritage of the region. Availability of locally produced goods, such as Goan handicrafts, spices and traditional food items, was the second variable selected, which greatly influences the decision to shop (Méndez-Vogel et al., 2023). For the tourism market, the purchase of authentic local products is what makes them experience and take home a part of Goan culture (Chetioui et al., 2021).

Tourism, the third variable, happens to be one of the major activities in Goa and contributes substantially to the retail sector (Guo & Wang, 2024). The retailers are thus constrained to modify their product range and prices by this temporary customer. They ensure that they meet the changing tastes of residents and visitors (Zheng et al., 2020).

The attitude displayed by the staff in retail stores also forms the basis of the shopping experience was the fourth variable selected. Attentive and knowledgeable salespeople can offer information about the products to help inform customers' purchasing decisions (Pardeshi & Khanna, 2021).

The cultural aspects of the products that are sold in retail stores were the fifth variable selected, which have especial significance whenever local festivals and functions take place. All shoppers who want to be in contact with their cultural heritage shop at retailers that sell products related to festivals such as Carnival or

Ganesh Chaturthi (Méndez-Vogel et al., 2023). This provides not only a positive impulse to sales at festival times but also feeds into the emotional need of the consumer with the store (Fu et al., 2020).

Festive offers and discounts fuel peak consumer activity by instilling a sense of urgency and drawing greater footfall. These offers have a major impact on purchase decisions during peak times (Ketanbhai, 2020).

Strategically planned promotions can make retailers' choices very crucial for shopping behaviour in the competitive retail market of Goa (Behera et al., 2023).

Theoretical Background & Literature Review

Proximity and Accessibility of Markets

The Central Place Theory proposed by Christaller in 1933 points out that consumers tend to shop in closer geographical areas because it saves time and effort (Shi et al., 2020). In places like Goa, where traffic congestion and parking constraints are prevalent, accessibility is most important, as it scores well over other factors (Mohamad et al., 2011). Also, Pei et al. (2020) claim that regular exposure to local shops boosts impulse purchasing, whereas Baker et al. (2002) point out that local retail stores possess greater potential to convert passers-by to customers.

Theory of Consumer Preferences

Based on Lancaster's Theory of Consumer Preferences (1966), consumer behaviour is influenced by the importance consumers place on factors such as cultural relevance, uniqueness and quality. In areas such as Goa, where lifestyle is interwoven with tradition, consumer preference is towards culturally relevant products (Grönroos & Ravald, 2011).

Cultural Relevance and Consumer Preferences

The Theory of Consumer Preferences suggests that purchasing decisions are influenced by culture, distinctiveness and product quality (Feldmann & Hamm, 2015). In Goa, both locals and tourists prefer culturally significant products like local crafts and heritage goods. Studies show that consumers value authenticity and cultural identity in their purchases. Wang and Zhang (2020) and Srivastava and Thaichon (2023) argue that consumers prioritise authenticity and are more inclined to products which support cultural identity (Fisman et al., 2017). In Goa, this is noticeable for tourists and locals able to purchase goods that capture Goan traditions and lifestyle

Tourism Impact Theory

The theory by Wall (1996) claims that tourists have a particular influence on the behaviour of consumers in retail businesses. Ask anyone, and they will concede that tourists, especially those in search of authentic and local handicrafts,

compel retailers to change their product mix and the way goods are sold (Wang & Chen, 2015). Tourism's seasonal timelines create unique shopping behaviours, as noticed by Chang et al. (2023) and Rani et al. (2023), who emphasise that in addition to local gifts, clothes and food, retailers have to serve foreign patrons. The phenomenon in which tourism crosses over into retailing is apparent in Goa, where retailers take advantage of seasonal increases in tourists' visits and use season-specific advertising and unique types of goods (Dasoomi et al., 2023).

Service Quality Theory

The Service Quality Theory emphasises that customer satisfaction is greatly driven by employee service performance and interactions (Ho & Wei, 2016). Service operators, if friendly and more attentive, help improve the shopping experience and encourage loyalty. Studies from Wu et al. (2023) and Sari (2023) demonstrate that customer service emerges as an important factor that distinguishes success in retail. According to Diaz-Gutierrez et al. (2023), with increasing competition in Goa, retailers who spend resources on training their staff to improve customer service are rewarded by feedback and referrals.

Cultural Proximity Theory

According to Hofstede (1980), Cultural Proximity Theory implies that the probability of purchase is high if products have cultural similarities and are relevant to people (Zimmermann et al., 2023). When the product belongs to the cultural values or beliefs a consumer holds, then they are more likely to make that buy (Bourg et al., 2023). In Goa, being a place of traditions and cultural heritage, the same products increase consumer involvement through culture (Kakaria et al., 2023). This is especially true for locals and tourists alike looking for authentic, culturally meaningful experiences in the region (Fisman et al., 2017).

Consumer Behaviour Theory

Consumer behaviour theory (Schiffman & Kanuk, 2007) emphasises promotions, discounts and limited-time offers as being different from other psychological stimuli that create urgency and excitement, and thus induce higher purchase rates (Zhang & Benyoucef, 2016). Consumer purchasing behaviour in Goa is particularly driven by seasonal festivals and peak travel seasons (Ligaraba et al., 2023). Studies by Kakaria et al. (2023) indicate that successful promotional campaigns entice tourists.

Objectives & Hypotheses

- To identify and rank key factors influencing consumer preferences in retail outlets in Goa.
- To examine the impact of local market accessibility on consumer purchasing behaviour.

H_1: Accessibility of local markets is positively related to consumer shopping behaviour in Goa.

- To assess how the availability of local and traditional products enhances store attractiveness.

  H_2: The availability of local and traditional products significantly enhances customer attraction toward retail stores.

- To investigate the influence of tourists on product diversity and pricing strategies in Goa's retail sector.

  H_3: The presence of tourists influences product assortment and pricing strategies in Goa's retail sector.

- To evaluate the role of staff attitude and friendliness in attracting customers and fostering loyalty.

  H_4: Positive staff interactions, including friendliness and attentiveness, contribute to customer loyalty and an enriched shopping experience.

- To determine the significance of culturally relevant products during festivals in shaping consumer preferences.

  H_5: The presence of culturally significant products during local festivals significantly impacts consumer purchasing behaviour.

- To analyse the effect of seasonal sales and promotions on shopping behaviour, particularly during peak tourist seasons.

  H_6: Seasonal promotions and discounts boost shopping intentions among consumers in Goa's retail industry.

Research Methodology

Research Design

An exploratory research design has been adopted in this study for the purpose of unearthing the major characteristics of the organised retail formats that attract consumers in Goa, India. This approach easily offers an understanding of consumer preferences and behaviour in the view of dynamics developed in local retail environments (Rehman et al., 2024). The research explores consumer shopping habits as the dependent variable, controlled by six independent variables: locality to local markets, presence of local and traditional products, effect of tourism, attitude and helpfulness of staff, cultural significance of products and seasonal promotion and sales.

Target Population

The sample population for the study are the regular customers who regularly visit the organised retail outlets in Goa. It includes local residents as well as tourists visiting and interacting with the retail sector in this region (Kar, 2023).

Sample Size

A total of 320 questionnaires were distributed among the customers, but after close scrutiny, 20 responses were found wanting and were excluded due to incompleteness, and therefore, the sample size for this study was set at 300 respondents. The sample is divided evenly into 150 representing the north Goa area, including Porvorim and Baga, while 150 represent the south Goa region, including Margao and Cavelossim, thus evenly distributing representation among various geographies and demographics (Hossan et al., 2023).

Sampling Technique

Convenience sampling was adopted in this study to ensure that the best possible data could be collected from participants who were convenient to access in some of the well-organised retail outlets across Goa (McDowell et al., 2016). It was adopted because of time and resource constraints, there was a real need to ascertain quickly something that would be relevant (Selvarajan & Chandran, 2024). The study captured customer preferences in key high-traffic areas like Margao, Cavelossim, Porvorim, Baga and Panaji.

Data Collection Methods

In retrieving data for this study, primary and secondary sources were used.Primary Data: The structured questionnaire was prepared to collect primary data from the participants about their shopping behaviour, preferences and perceptions related to the identified six independent variables of the study. Participants were approached in high-traffic retail areas within Goa, especially in Margao, Cavelossim, Porvorim, Baga and Panaji, thereby creating a diverse representation of shoppers (Seock, 2009).

Secondary data: The secondary data were sourced from journals, books, internet sources and relevant previous research studies that have taken place concerning retail consumer behaviour and shopping preferences. Such data sets helped establish context and support the primary results, and therefore overall robustness of the study (Khoa et al., 2023).

Area of Survey

A set of such strategic locations was surveyed across Goa to understand consumer preferences in both North and South Goa. The chosen areas for data collection are: Margao, which is perceived to have a vibrant market feel and lots of retailing outlets; Cavelossim, which is a tourist area having shops to cater to the locals as well as visiting tourists; Porvorim, an area fast developing with the presence of both organised and relatively more traditional retail stores; and Panaji, which is the capital city of Goa, representing different kinds of consumers and retailing options (Ghosh et al., 2010).

Data Analysis Techniques

In this study, the relative importance of the six independent variables that affect shopping behaviour was assessed by using the Thurstone Case V Scaling for data analysis

(Figure 1) (Turner et al., 2024). Thurstone scaling utilises pairwise comparisons wherein respondents rated factors by preference; the results were analysed using the formula below:

$$P_{ij} = 1 + e(S_i - S_j)/e(S_i - S_j)$$

where P_{ij} is the preference scale of respondents for factor i in comparison with factor j, while S_i and S_j denote the factor scale for each factor. Furthermore, Pearson's correlation analysis was performed to analyse the relationships among the six independent variables. The correlation coefficient was calculated (Cleophas et al., 2018):

$$r = \Sigma(X_i - \bar{X})(Y_i - \bar{Y}) / \sqrt{[\Sigma(X_i - \bar{X})^2 \times \Sigma(Y_i - \bar{Y})^2]}$$

In addition, multiple regression analysis was used to find out how much the independent variables affected consumer shopping behaviour (Sarstedt & Mooi, 2019).

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_n X_n + \varepsilon,$$

where Y is consumer shopping behaviour, $X_1, X_2, \ldots, X_n$ are independent variables (e.g., accessibility, tourism, seasonal promotions); β_0 is the intercept, β_1, β_2, ..., β_n are coefficients quantifying each variable's effect, and ε is the error term (Sarstedt & Mooi, 2019).

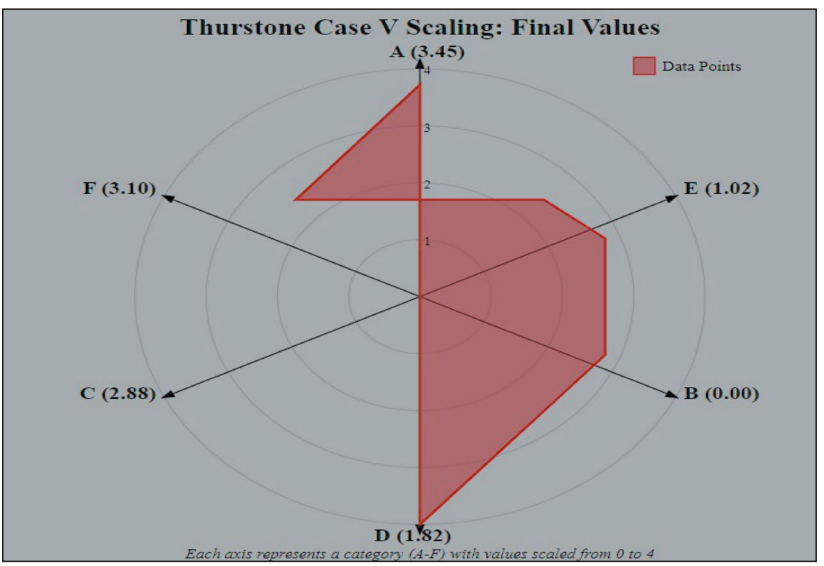

Figure 1. Spider Graph Representing Final Thurstone Case V Scaling Values.

Source: Primary data.

Results and Discussion

Results

The Thurstone Case V Scaling Technique

Thurstone Case V scaling, an established means of analysing ordinal data by pairwise comparison, was utilised in the current study to score six factors affecting consumer preferences in organized retail. The variables measured included: (A) Proximity to Local Markets, (B) Availability of Local and Traditional Products, (C) Tourist Influence, (D) Attitude and Friendliness of Staff, (E) Culture Relevance and (F) Seasonal Offers. The method begins with raw paired preference data in Table 1 which is then converted to decimal proportions in Table 2 and further on in z-cores using standard normal table appearing in Table 3, the z-scores are summed up in Table 4 and normalized in Table 5 to produce final value ranked items.

Table 1. Initial Values of the Thurstone Case Scaling.

	A	B	C	D	E	F
A	0.5	45/300	115/300	205/300	125/300	85/300
B	255/300	0.5	225/300	145/300	113/300	222/300
C	195/300	75/300	0.5	172/300	102/300	110/300
D	95/300	158/300	148/300	0.5	85/300	253/300
E	180/300	185/300	198/300	215/300	0.5	65/300
F	230/300	98/300	205/300	67/300	245/300	0.5

Source: Primary data and self-computed.

Table 2. Decimal Conversion of Initial Data.

	A	B	C	D	E	F
A	0.5	0.15	0.38	0.68	0.42	0.28
B	0.85	0.5	0.75	0.48	0.37	0.74
C	0.65	0.25	0.5	0.57	0.34	0.37
D	0.32	0.53	0.49	0.5	0.28	0.84
E	0.6	0.62	0.66	0.72	0.5	0.22
F	0.77	0.33	0.68	0.22	0.82	0.5

Table 3. Values Derived from the Thurstone Case V Table.

	A	B	C	D	E	F
A	0	−1.02	−0.28	0.54	−0.15	−0.58
B	1.05	0	0.62	−0.21	−0.39	0.56
C	0.29	−0.78	0	0.12	−0.48	−0.46
D	−0.54	0.18	−0.1	0	−0.65	1.05
E	0.12	0.4	0.53	0.62	0	0.87
F	0.63	−0.53	0.44	−0.91	0.88	0

Source: Thurstone Case V table.

Table 4. Added Values of Thurstone Case V Scaling.

A	B	C	D	E	F
2.45	−1.72	2.1	0.07	−0.73	1.38

Source: Primary data and self-computed.

Table 5. Final Value Conversion.

A	B	C	D	E	F
3.45	0	2.88	1.82	1.02	3.1

Source: Primary data and self-computed.

Correlation Analysis

The correlation matrix shown in Table 6 presents the detailed interrelation among the six variables studied. Therefore, the high correlation values above indicate that Proximity to Local Markets, Availability of Local and Traditional Products and Influence of Tourism are the key drivers of the customers' buying behaviour in Goa's retailing landscape.

1. Proximity to local markets and other variables: The report reports that proximity to local markets has a moderate positive correlation with many of the variables. These include availability of local and traditional products (r = 0.350), Influence of Tourism (r = 0.420) and Staff Attitude and Friendliness (r = 0.390). The other two correlations, namely Cultural Relevance of Products (r = 0.280) and Seasonal Sales and Promotions (r = 0.230), are weaker but statistically significant, thus revealing that though the proximity impacts product relevance and promotional activities, the impact is relatively smaller.
2. Presence of local and traditional products and other factors: Its correlation with availability of local and traditional products is generally strong and positive and reveals a relationship with Influence of Tourism (r = 0.460), as well as with Staff Attitude and Friendliness (r = 0.520) which mostly store traditional products attract the tourists and also have staff who are positive-minded. The r value for Cultural Relevance of Products is at 0.380, which means that traditional products enhance the cultural relevance of the store offerings and appeal to local consumer preferences.
3. Tourism impact: This aspect has a positive association with Staff Attitude and Friendliness (r = 0.480), which suggests the service quality of stores is highly influenced by the effects of tourism. The association with Cultural Relevance of Products (r = 0.360) and Seasonal Sales and Promotions (r = 0.290) indicates that tourism in general influences the stores' products and the offers as the stores sell culturally relevant products and provide seasonal sales and promotions for the stores to cope with the needs of the tourists.
4. Staff attitude and friendliness: This very high correlation of Staff Attitude and Friendliness with other variables, such as Availability of Local and

Table 6. Correlation Matrix of Variables.

Variables	Proximity to Local Markets	Availability of Local and Traditional Products	Influence of Tourism	Staff Attitude and Friendliness	Cultural Relevance of Products	Seasonal Sales and Promotions
Proximity to local markets	1	0.350**	0.420**	0.390**	0.280**	0.230**
Availability of local and traditional products	0.350**	1	0.460**	0.520**	0.380**	0.310**
Influence of tourism	0.420**	0.460**	1	0.480**	0.360**	0.290**
Staff attitude and friendliness	0.390**	0.520**	0.480**	1	0.400**	0.360**
Cultural relevance of products	0.280**	0.380**	0.360**	0.400**	1	0.230**
Seasonal sales and promotions	0.230**	0.310**	0.290**	0.360**	0.230**	1

Source: Correlation analysis computed through SPSS (Version 29.0) based on primary data.
Notes: Significance levels: $p < .01$: Highly significant (indicated with **).
N (sample size for all correlations): 300.

Traditional Products ($r = 0.520$) and Influence of Tourism ($r = 0.480$), points out that the interactions of staff play a highly significant role in enhancing the overall shopping experience, particularly in areas and markets in tourist locations and local and traditional products.

5. Cultural relevance of products: The study found moderate positive correlations between the Cultural Relevance of Products and both Influence of Tourism with $r = 0.360$ and Availability of Local and Traditional Products with $r = 0.380$. Therefore, it suggests that the cultural relevance in the retail context is both driven by the availability of traditional products and the influence of tourism.
6. Seasonal sales and promotions: Least correlated with the other variables, seasonal sales and promotions exhibit the highest correlation factors only with Staff Attitude and Friendliness at $r = 0.360$. This, therefore, indicates that while doing promotions may affect the consumers' shopping behaviour, it is not necessarily compared to some of these factors, such as easy access to the market, availability of products, among others.

Regression Analysis

A multiple linear model regression analysis was conducted in order to check the impact of several independent variables on the dependent variable-consumer

shopping behaviour. The dependent variable list related to those independent variables was Proximity to Local Markets, Availability of Local and Traditional Products, Influence of Tourism, Staff Attitude and Friendliness, Cultural Relevance of Products and Seasonal Sales and Promotions. Every independent variable has been tested as to how much contribution it gives toward the dependent variable, and then all together tested for their overall significance.

The model summary in Table 7 shows a high correlation between the independent variables and consumer shopping behaviour, with an r value of 0.789 and R^2 of 0.622, indicating that 62.2% of the variance is accounted for by the model. The adjusted R^2 of 0.605 verifies a good fit of the model after adjusting for the number of predictors, and the standard error of 0.421 indicates the average deviation from the regression line.

The ANOVA test in Table 8 indicates a highly significant F-statistic ($F = 12.641$, $p = .000$) that demonstrates the overall significance of the model. Regression sum of squares (14.327) and residual sum of squares (8.500) indicate that the model accounts for a large percentage of the total variance (22.827), which justifies the predictive relevance of the predictors.

Table 9 for coefficients shows a better view of the amount of contribution each independent variable can make to the regression model. The constant is 1.256 and represents the value that would be anticipated for consumer shopping behaviour if all other variables were at zero. The unstandardised coefficients, B, indicate the change in the dependent variable, consumer shopping behaviour, due to an increase of a unit of each of the independent variables. Of the significant predictors, Proximity to Local Markets $B = 0.212$, $p = .003$ exerts a positive influence, suggesting that consumers care about how close they are to local markets. Availability of Local and Traditional Products $B = 0.184$, $p = .015$ is of high significance, which confirms that consumers have value on locally sourced products. This makes tourism the strongest influence with $B = 0.276$, $p = .000$, to show that, on the whole, this is what is first considered when coming to make decisions over purchases. Staff attitude and friendliness were the second most

Table 7. Summary of the Model R for Regression Analysis.

Model	R	R^2	Adjusted R^2	Std Error of the Estimate
1	0.789	0.622	0.605	0.421

Source: Model summary computed through SPSS (Version 29.0) based on primary data.

Table 8. ANOVA Results for the Regression Model.

Source	Sum of Squares	df	Mean Square	F	Sig
Regression	14.327	6	2.388	12.641	0
Residual	8.5	293	0.029		
Total	22.827	299			

Source: ANOVA analysis computed through SPSS (Version 29.0) based on primary data.

Table 9. Coefficients of the Regression Model.

	Unstandardised Coefficients	Standardised Coefficients		
Variable	*B*	*Std* Error	*t*	Sig
(Constant)	1.256	0.324	3.885	0
Proximity to local markets	0.212	0.071	2.983	0.003
Availability of local and traditional products	0.184	0.075	2.452	0.015
Influence of tourism	0.276	0.07	3.943	0
Staff attitude and friendliness	0.195	0.078	2.495	0.013
Cultural relevance of products	0.129	0.072	1.792	0.074
Seasonal sales and promotions	0.167	0.065	2.569	0.01

Source: Regression coefficients computed through SPSS (Version 29.0) based on primary data.

N (sample size): 300

Significance Levels:

$p < .05$: Significant (indicated with respective *p* values).
$p < .01$: Highly significant (indicated in the ANOVA table).

powerful determinant of behaviour, at $B = 0.195$, $p = .013$, and the Cultural Relevance of Products proved to be the weakest influence at $B = 0.129$, $p = .074$, and sat just above the 0.05 significance level. Finally, Seasonal Sales and Promotions positively influence consumer behaviour at $B = 0.167$, $p = .010$.

Discussion

The present study aimed to analyse factors that have been influencing consumer shopping behaviour by utilising Thurstone Case V Scaling, correlation analysis and regression analysis, while keeping six independent key variables: proximity to local markets, availability of local and traditional products, tourist influences, staff attitude and friendliness, cultural relevance of products and seasonal sales and promotions.

By the use of the Thurstone scaling technique, the relative importance of the influencing factors varying in purchase decision-making was found. The Influence of Tourism seems to be the most preferred factor of the respondents, so the consumers are significantly influenced by this tourism factor while purchasing the products. Following the Thurstone scaling, the correlation matrix was used to study the inter-relationships among the independent variables. All the variables showed strong correlations with each other. The two most strongly correlated factors were Availability of Local and Traditional Products ($r = 0.520$, $p < .01$), while the Staff Attitude and Friendliness ($r = 0.520$, $p < .01$). However, Seasonal Sales and Promotions showed the weakest relationship with Proximity to Local Markets at a mere $r = 0.230$, $p < .01$, which indicates that though both are

associated with each other, their effect on the shopping behaviour is less pronounced compared to the effects of other variables. Regression analysis was carried out to test hypotheses H_1-H_6 with respect to independent variables and their impact on consumer shopping behaviour. Thus, in the process, many independent factors showed significant influences on the dependent variable. Proximity to Local Markets ($B = 0.212$, $p = .003$) confirmed H_1, while Availability of Local and Traditional Products ($B = 0.184$, $p = .015$) validated H_2. Influence of Tourism ($B = 0.276$, $p = .000$) had the largest impact, supporting H_3. Effects of Staff Attitude and Friendliness ($B = 0.195$, $p = .013$) confirmed H_4. Cultural Relevance of Products ($p = .074$) did not meet the significance threshold, leading to the rejection of H_5. Seasonal Sales and Promotions ($B = 0.167$, $p = .010$) were significant, validating H_6. Findings, therefore, indicate that the focus should be put on tourism-based strategies with greater numbers of local products and enhanced employee engagement to enhance the experience of consumers for retailers. The study enriches existing literature as it shows how Proximity to Local Markets significantly affects consumer choices, supporting more recent research on the impact of location convenience (van der Lee et al., 2020). Last but not least, it stresses the role of Staff Attitude and Friendliness as a key determinant in reaching consumer satisfaction through a connection to current modern work on the impact of service quality on customer loyalty (Jin et al., 2017).

Policy Implications & Conclusion

The research provides some managerial insights for retailers in local markets. Focusing on market proximity can promote convenience-based marketing campaigns. Prioritising old-style product availability can enhance brand differentiation and consumer attraction. Involving investments in employee training to enhance service quality can promote customer satisfaction and loyalty. Cooperating with tourism organisations and coordinating seasonal sales can increase tourist demand and revenue. Coordinating retail strategies with these elements ensures correspondence with consumer requirements, promoting growth and retention.

Conclusions

This research study highlights the multi-faceted nature of consumer shopping behaviour in local markets, indicating strong relationships between different influencing factors and consumer preferences. A very strong relationship was established between Proximity to Local Markets, Availability of Local and Traditional Products and the Influence of Tourism as major factors in shaping shopping behaviour, but the influence of tourism is the most powerful predictor. Staff Attitude and Friendliness, and Seasonal Sales and Promotions are two of the most influential factors that determine consumer satisfaction and choice, etc. These results need to be blended with both the internal retail factors and with influences of the external market. The local retailers must adopt these in their

strategies so that they can attract consumers more effectively, utilise marketing efforts efficiently, and progress in customer loyalty.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

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References

Abu-AlSondos, I., Alkhwaldi, A., Salhab, H., Shehadeh, M., & Ali, B. (2023). Customer attitudes towards online shopping: A systematic review of the influencing factors. *International Journal of Data and Network Science*, *7*(1), 513–524.

Baker, J., Parasuraman, A., Grewal, D., & Voss, G. B. (2002). The influence of multiple store environment cues on perceived merchandise value and patronage intentions. *Journal of Marketing*, *66*(2), 120–141.

Behera, R. K., Bala, P. K., Tata, S. V., & Rana, N. P. (2023). Retail atmospherics effect on store performance and personalised shopper behaviour: A cognitive computing approach. *International Journal of Emerging Markets*, *18*(8), 1948–1977.

Bourg, L., Chatzidimitris, T., Chatzigiannakis, I., Gavalas, D., Giannakopoulou, K., Kasapakis, V., Konstantopoulos, C., Kypriadis, D., Pantziou, G., & Zaroliagis, C. (2023). Enhancing shopping experiences in smart retailing. *Journal of Ambient Intelligence and Humanized Computing*, *15*(4), 1–19.

Chang, Y.-W., Hsu, P.-Y., Chen, J., Shiau, W.-L., & Xu, N. (2023). Utilitarian and/or hedonic shopping–consumer motivation to purchase in smart stores. *Industrial Management & Data Systems*, *123*(3), 821–842.

Chetioui, Y., Lebdaoui, H., & Chetioui, H. (2021). Factors influencing consumer attitudes toward online shopping: The mediating effect of trust. *EuroMed Journal of Business*, *16*(4), 544–563.

Cleophas, T. J., Zwinderman, A. H., Cleophas, T. J., & Zwinderman, A. H. (2018). Bayesian Pearson correlation analysis. *Modern Bayesian Statistics in Clinical Research*, 111–118. https://doi.org/10.1007/978-3-319-92747-3_11

Dasoomi, M., Naderan, A., & Allahviranloo, T. (2023). Predicting the choice of online or offline shopping trips using a deep neural network model and time series data: A case study of Tehran, Iran. *Sustainability*, *15*(20), 14764.

Diaz-Gutierrez, J. M., Mohammadi-Mavi, H., & Ranjbari, A. (2023). COVID-19 impacts on online and in-store shopping behaviors: Why they happened and whether they will last post pandemic. *Transportation Research Record*. https://doi.org/10.1177/03611981231155169

Feldmann, C., & Hamm, U. (2015). Consumers' perceptions and preferences for local food: A review. *Food Quality and Preference*, *40*, 152–164.

Fisman, R., Paravisini, D., & Vig, V. (2017). Cultural proximity and loan outcomes. *American Economic Review*, *107*(2), 457–492.

Frasquet, M., Gil, I., & Molla, A. (2001). Shopping-centre selection modelling: A segmentation approach. *The International Review of Retail, Distribution and Consumer Research*, *11*(1), 23–38.

Fu, H., Manogaran, G., Wu, K., Cao, M., Jiang, S., & Yang, A. (2020). Intelligent decision-making of online shopping behavior based on internet of things. *International Journal of Information Management*, *50*, 515–525.

Ghosh, P., Tripathi, V., & Kumar, A. (2010). Customer expectations of store attributes: A study of organized retail outlets in India. *Journal of Retail & Leisure Property*, *9*, 75–87.

Grönroos, C., & Ravald, A. (2011). Service as business logic: Implications for value creation and marketing. *Journal of Service Management*, *22*(1), 5–22.

Guo, B., & Wang, D. (2024). Will online shopping lead to more brand loyalty than offline shopping? The role of uncertainty avoidance. *Journal of Marketing Research*, *61*(1), 92–109.

Ho, C.-T., & Wei, C.-L. (2016). Effects of outsourced service providers' experiences on perceived service quality: A signaling theory framework. *Industrial Management & Data Systems*, *116*(8), 1656–1677.

Hossan, D., Dato'Mansor, Z., & Jaharuddin, N. S. (2023). Research population and sampling in quantitative study. *International Journal of Business and Technopreneurship (IJBT)*, *13*(3), 209–222.

Jin, H., Moscardo, G., & Murphy, L. (2017). Making sense of tourist shopping research: A critical review. *Tourism Management*, *62*, 120–134.

Kakaria, S., Saffari, F., Ramsøy, T. Z., & Bigné, E. (2023). Cognitive load during planned and unplanned virtual shopping: Evidence from a neurophysiological perspective. *International Journal of Information Management*, *72*, 102667.

Kar, P. S. (2023). Luxury home market and pre-sales challenges: Aldeola-de-Siolim, Goa. *Emerald Emerging Markets Case Studies*, *13*(1), 1–25.

Ketanbhai, M. D. (2020). Exploring the factors influencing online shopping convenience in the Indian e-tailing sector. *International Journal of Management*, *11*(10), 1062–1076.

Khoa, B. T., Hung, B. P., & Hejsalem-Brahmi, M. (2023). Qualitative research in social sciences: Data collection, data analysis and report writing. *International Journal of Public Sector Performance Management*, *12*(1–2), 187–209.

Kushwaha, T., Ubeja, S., & Chatterjee, A. S. (2017). Factors influencing selection of shopping malls: An exploratory study of consumer perception. *Vision*, *21*(3), 274–283.

Ligaraba, N., Nyagadza, B., Dörfling, D., & Zulu, Q. M. (2023). Factors influencing re-usage intention of online and mobile grocery shopping amongst young adults in South Africa. *Arab Gulf Journal of Scientific Research*, *41*(3), 389–415.

McDowell, W. C., Wilson, R. C., & Kile Jr, C. O. (2016). An examination of retail website design and conversion rate. *Journal of Business Research*, *69*(11), 4837–4842.

Méndez-Vogel, G., Marianov, V., Lüer-Villagra, A., & Eiselt, H. A. (2023). Store location with multipurpose shopping trips and a new random utility customers' choice model. *European Journal of Operational Research*, *305*(2), 708–721.

Mohamad, M., Ali, A. M., & Ab Ghani, N. I. (2011). A structural model of destination image, tourists' satisfaction and destination loyalty. *International Journal of Business and Management Studies*, *3*(2), 167–177.

Pardeshi, V. H., & Khanna, V. (2021). Factors influencing online apparel shopping orientation among women in Mumbai. *Journal of Global Entrepreneurship Research*, *11*(1), 163–174.

Pei, X.-L., Guo, J.-N., Wu, T.-J., Zhou, W.-X., & Yeh, S.-P. (2020). Does the effect of customer experience on customer satisfaction create a sustainable competitive advantage? A comparative study of different shopping situations. *Sustainability*, *12*(18), 7436.

Rani, A., Chaudhary, N., & Gusai, O. P. (2023). Impact of social media influencers' credibility and similarity on Instagram consumers' purchase intention. *A Journal of Management*, *1*, 20.

Rehman, A., Behera, R. K., Islam, M. S., Elahi, Y. A., Abbasi, F. A., & Imtiaz, A. (2024). Drivers of metaverse adoption for enhancing marketing capabilities of retail SMEs. *Technology in Society*, *79*, 102704.

Sari, N. W. (2023). Consumer preference for product categories sold online and offline. *Inspirasi & Strategi (INSPIRAT): Jurnal Kebijakan Publik & Bisnis*, *13*(2), 96–109.

Sarstedt, M., & Mooi, E. (2019). Regression analysis. In *A concise guide to market research: The process, data, and methods using IBM SPSS statistics* (pp. 209–256) Springer Nature.

Selvarajan, S. K., & Chandran, V. G. R. (2024). Financial inclusion trajectories: Geographical dispersion, convergence, and development implications. *The European Journal of Development Research*, *36*(4), 1–28. https://doi.org/10.1057/s41287-023-00616-7

Seock, Y.-K. (2009). Influence of retail store environmental cues on consumer patronage behavior across different retail store formats: An empirical analysis of US Hispanic consumers. *Journal of Retailing and Consumer Services*, *16*(5), 329–339.

Sham, R., Chong, H. X., Aw, E. C.-X., Thangal, T. B. T., & binti Abdamia, N. (2023). Switching up the delivery game: Understanding switching intention to retail drone delivery services. *Journal of Retailing and Consumer Services*, *75*, 103478.

Shi, L., Wurm, M., Huang, X., Zhong, T., & Taubenböck, H. (2020). Measuring the spatial hierarchical urban system in China in reference to the Central Place Theory. *Habitat International*, *105*, 102264.

Srivastava, A., & Thaichon, P. (2023). What motivates consumers to be in line with online shopping? A systematic literature review and discussion of future research perspectives. *Asia Pacific Journal of Marketing and Logistics*, *35*(3), 687–725.

Turner, M. M., Wade, R. B., Heo, R., Ye, Q., & Jang, Y. (2024). Development and validation of the commitment to social activism scale using the Thurstone scaling procedure. *Communication Research Reports*, *41*(3), 178–192.

van der Lee, J., Oosting, S., Klerkx, L., Opinya, F., & Bebe, B. O. (2020). Effects of proximity to markets on dairy farming intensity and market participation in Kenya and Ethiopia. *Agricultural Systems*, *184*, 102891.

Wang, S., & Chen, J. S. (2015). The influence of place identity on perceived tourism impacts. *Annals of Tourism Research*, *52*, 16–28.

Wang, X., & Zhang, J. (2020). Factors influencing Chinese online shopping distributions of fresh agricultural products. *Journal of Distribution Science*, *18*(10), 53–64.

Wu, Z., Aw, E. C.-X., & Chuah, S. H.-W. (2023). Webrooming as the new retail experience: A smart-shopping perspective. *International Journal of Retail & Distribution Management*, *51*(6), 736–754.

Zhang, K. Z. K., & Benyoucef, M. (2016). Consumer behavior in social commerce: A literature review. *Decision Support Systems*, *86*, 95–108.

Zheng, Q., Chen, J., Zhang, R., & Wang, H. H. (2020). What factors affect Chinese consumers' online grocery shopping? Product attributes, e-vendor characteristics and consumer perceptions. *China Agricultural Economic Review*, *12*(2), 193–213.

Zimmermann, R., Mora, D., Cirqueira, D., Helfert, M., Bezbradica, M., Werth, D., Weitzl, W. J., Riedl, R., & Auinger, A. (2023). Enhancing brick-and-mortar store shopping experience with an augmented reality shopping assistant application using personalized recommendations and explainable artificial intelligence. *Journal of Research in Interactive Marketing*, *17*(2), 273–298.

Zulqarnain, H., Zafar, A. U., & Shahzad, M. (2015). Factors that affect the choice of consumers in selecting retail store for grocery shopping. *International Journal of Multidisciplinary and Current Research*, *3*(1), 1167–1172.

Book Review

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Erik Baker, *Make Your Own Job: How the Entrepreneurial Work Ethic Exhausted America*. Harvard University Press, 2025.

Reviewed by: Parul Malik, Department of Corporate Skills Development, New Delhi Institute of Management, New Delhi, India

Erik Baker's *Make Your Own Job: How the Entrepreneurial Work Ethic Exhausted America* (2025) takes a deep look at how the modern entrepreneurial mindset has changed work culture. Through history, social analysis and economic insights, Baker explains how the focus on self-reliance, hustle and flexibility has reshaped jobs today. This book makes readers think about what work, success and financial security really mean in today's world.

One of the book's key ideas is 'ungraded learning', where people gain skills on their own without formal training or certification. Baker argues that today's workers must constantly learn and adapt without any clear recognition or reward. While freelancing, gig work and entrepreneurship offer freedom, they also encourage unpaid labour in the form of self-improvement, networking and job searching. Baker criticises how this shift puts too much pressure on individuals rather than on companies or governments that should provide stable opportunities.

Baker's book focuses on several important themes:

- **The Myth of Self-Sufficiency**: The author challenges the idea that people can 'make their own job' just through hard work, emphasising that economic policies, social conditions and historical factors play a big role in success.
- **Overwork and Job Insecurity:** This book explains how workers, especially in creative and knowledge-based fields, often work too much due to job insecurity and the hope of future rewards.
- **The Commodification of Passion:** Baker explores how encouraging people to 'follow their passion' has led to workers accepting poor pay and unstable jobs because they love what they do.

- **Economic and Technological Changes:** This book discusses how declining job stability, automation and the gig economy is shaping today's job market.

Baker supports his ideas with historical and modern examples. He traces the origins of the entrepreneurial mindset to the Protestant work ethic and examines how economic policies and technology have shaped today's job culture. He uses examples from tech startups, academia and creative industries to show how people internalise and respond to these pressures.

This book also looks at government policies that have shifted jobs towards freelancing and gig work. Baker explains how deregulation, fewer worker protections and the rise of digital platforms have made job security weaker. He highlights real-world examples, such as Uber drivers and freelance journalists, to show the downsides of a work culture that values flexibility over stability.

Baker's arguments connect with ideas in books like *Bullshit Jobs* by David Graeber and *The Gig Economy* by Diane Mulcahy. He also builds on sociological studies like Richard Sennett's *The Corrosion of Character*, which examines the emotional effects of unstable jobs. His historical analysis is influenced by Max Weber's *The Protestant Ethic and the Spirit of Capitalism*, which explains the roots of today's work culture.

Make Your Own Job is a powerful book that questions modern work culture. By exposing the problems of self-sufficiency, overwork and passion-driven exploitation, Baker encourages readers to rethink work policies and job expectations.

For Indian readers, this book is especially relevant in a fast-changing job market. India's growing gig economy, driven by digital platforms and startups, faces many of the same challenges Baker discusses. While entrepreneurship is often promoted as a solution for unemployment, the lack of social security and job stability remains a serious issue. This book highlights the need for Indian policymakers, businesses and workers to balance entrepreneurial ambition with fair wages, job security and worker protections. *Make Your Own Job* is an essential read for anyone interested in the changing nature of work in both India and the world.

In today's world, where the pressure to succeed can feel overwhelming, *Make Your Own Job* offers valuable insights for young professionals and students. It challenges common beliefs about work and success and encourages readers to think critically about their career choices. This book is a must-read for young minds looking to navigate the evolving job market wisely. By understanding the realities of modern work culture, youth can make informed decisions, advocate for fair opportunities and contribute to a more balanced and secure workforce. Let this book be your guide to making thoughtful career choices in a rapidly changing world.

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