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From the Editor's Desk...

The issue for July-December 2024 continues the practice of bringing selected of articles that highlight diverse management issues that would arouse the interest in academicians, researchers and management practitioners. The present issue contains seven articles from researchers exploring assorted themes.

The first article of this issue is, A Study on the Effectiveness of Telecom Operators' Marketing Mix Strategies in Building Customer Loyalty and Retention. This study mentions that found that telecom companies' marketing mix strategies significantly impact customer loyalty, retention, and buying behaviour. The second article, The Dynamics of Employee Engagement: Investigating Its Influence on Job Satisfaction in the Workplace examines the complex interdependency between job satisfaction and employee engagement, and how these factors work together to positively impact organizational performance. The next is article, Heuristic Bias, Investment Decision-Making: Moderating Role of Financial Literacy. This study examines whether the investment decision making is influenced by heuristic behavioural biases, with financial literacy moderating this causal relationship. The findings revealed that financial literacy moderates availability bias; the study observed an insignificant relationship between anchoring bias, gambler's fallacy bias, representativeness bias and overconfidence bias and investors' decision-making. The next article is, HRM Practices for Sustainability and Corporate Social Responsibility (CSR). This paper contributes to the growing discourse on sustainable business practices by providing actionable insights for HR professionals seeking to foster a more responsible and resilient workforce. The next article, The Mediating Effect of Customer Satisfaction on the Relationship Between Brand Loyalty, Brand Awareness, and Customer Repurchase Intention with Reference to a D2C Brand, examines the mediating role of customer satisfaction in the relationship between brand loyalty, brand awareness, and repurchase intention within the Direct-to-Consumer (D2C) cookware industry. The next article is, Advertisement on Children and Its Impact on Parents Buying Behaviour: A Conceptual Model. This study developed a conceptual model showing the relationship between impact of advertisement on children and its influence on parents buying behaviour. The final article is, The Impact of ESG Integration on Financial Sustainability in Selected Pharmaceutical Companies. This study analyzes impact of environmental, social and governance factors on financial sustainability of selected pharmaceutical companies.

IPE Journal of Management has focused on exploring newer challenges in the domain of management research. The research papers in this issue discuss various aspects related to the marketing mix for telecom operators, dynamics of employee engagement, heuristic bias and investment decision making, HRM practices for CSR, ESG integration on financial sustainability, impact of advertisement on children etc. We trust our readers would appreciate the efforts of the authors and this would contribute to the enhancement of the management knowledge system.

Samarendra Kumar Mohanty

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A Study on the Effectiveness of Telecom Operators' Marketing Mix Strategies in Building Customer Loyalty and Retention

Shreyasee Das[1]
Kushal De[2]

Abstract

In India, mobile telecom operators are competing fiercely to gain a larger market share. The study aims to assess if the marketing mix strategies used by the mobile telecom operators significantly affect customers' buying behaviour. It aims to establish a relationship between marketing mix components and customer loyalty and retention. The study tries to find the impact of telecom operators' marketing mix strategies on customers' buying behaviour, loyalty, and retention. It is based on a primary survey conducted through a structured questionnaire distributed to mobile telecom service users. In total, 183 responses were collected from Kolkata, Sonarpur, and Patharpratima which is considered to be the sample size for the research. In the study, statistical tools, namely, Factor Analysis, Bivariate Correlation, Partial Correlation, and Multiple Regression, are used in SPSS 27. Factor analysis is conducted to find the prime factors that affect telecom customers' buying behaviour; Bivariate Correlation and Partial Correlation are found to establish the relationship between those prime marketing mix strategies and customer loyalty and retention; and Multiple Regression is conducted to find the impact of telecom operators' marketing mix strategies on customers' buying behaviour, loyalty, and retention. It is found that telecom companies' marketing mix strategies significantly impact customer loyalty, retention, and buying behaviour. Thus, a balanced marketing mix framework can shape favourable customer loyalty and retention in the telecom industry.

Keywords: Buying Behaviour, Customer Loyalty, Customer Retention, Marketing Mix, Telecom Operators

1 Assistant Professor, Department of Commerce, Netaji Mahavidyalaya, Bijoygarh (PO), Jadavpur, Kolkata and can be reached at shreyasee.dass@gmail.com

2 Assistant Professor, Department of Commerce, Dhruba Chand Halder College, Kolkata and can be reached at dekushal@yahoo.co.in

Introduction

The telecommunication sector is experiencing rapid expansion worldwide. In India, the second-largest telecom market, various mobile service providers fiercely compete to establish their presence in the industry. Thus, the success of telecom operators not only depends on attracting new customers but also on retaining existing customers. To strive in this competition, customer loyalty and retention become critical factors to sustained success. Customer loyalty is a continuous and favourable connection between a customer and a business. It encourages customers to make repeat purchases and choose a business over other competitors who may offer similar products or benefits(Qualtrics).Customer retention refers to a company's ability to retain first-time customers and prevent them from switching to a competitor. It is an important indicator of the quality of a product or service and the level of customer loyalty. To achieve customer retention, it is essential to overcome switching barriers, optimize the value of products and services, meet customer expectations, and enhance the overall customer experience(IBM). To survive ina dynamic market structure having cut-throat competition, knowing the factors that influence customer buying behaviour has become essential. The marketing mix is a comprehensive framework offering the '8Ps' of service marketing that influence customer buying behaviour, customer loyalty and retention. The 8Ps of the marketing mix framework are price, product, place, promotion, people, physical evidence, process, and performance. The framework is crucial in positioning products in a competitive market and achieving customer loyalty and retention. The study aims to analyse whether the marketing mix strategies of mobile telecom operators influence customers' buying behaviour and, thereby, impact customer loyalty and retention.

Literature Review

Gupta and Sharma (2009) in their study identified factors affecting customer loyalty in mobile telecom market. Most customers preferred to keep their current service provider but would switch to another if needed. According to Kalita (2019), customer loyalty and retention were achieved through proper employee interaction. Ramesh and Rajeshwari (2019) found that price, place, and promotion strategies impacted customer satisfaction. The product mix in the marketing mix framework influenced the likelihood of a customer choosing a particular cellular service provider. Rashmi and Krishnakumar (2015) found that customer loyalty was greatly influenced by the moderating construct of customer satisfaction. The latter, in turn, was influenced by service quality, corporate image, customer relations, trust and pricing strategies of the telecom service providers. Saroha and Diwan (2019), in their study, developed a customer loyalty model taking into account several aspects of customer interaction. The model was framed with perception-based and experience-based drivers of customer loyalty.

Among the perception-based drivers, image, quality, and price were the most impactful factors. Similarly, among the experience-based drivers, network, short message service and recharging were the major driving factors. Keerthi et al. (2017), in their study, found that employees played a leading role in the services provided by telecom companies that influenced customer retention. Jasrotia et al. (2019) concluded that customer churn in Jio happened due to the factors of service quality, network coverage, price and promotional offerings of the company. The promotional offers attracted the customers to retain their service provider and thus be loyal to the current mobile telecom operator. Virk (2014) opined that customer loyalty, customer retention, and customer satisfaction majorly depended on the physical evidence of the telecom operator. The physical evidence encompassed service and recharge outlets, schemes, offers, and a user-friendly interface for bill management. Haridasan and Venkatesh (2011), in their study, found that effective customer relationship management (CRM) helped in improving service providers' efficiency. Telecom operators could gain a better understanding of their customers by optimizing their CRM processes. This impacted customer loyalty, customer retention and customer buying behaviour. Joshi (2014) suggested that customer retention could be improved by identifying high-revenue customers and managing their experience. Service delivery and customer care significantly impacted customer experience for cellular mobile services.

Research Objective

The objectives of the study are as follows:

- To assess if the marketing mix strategies used by the mobile telecom operators significantly affect customers' buying behaviour.
- To assess the relationship between marketing mix components and customer loyalty and retention.
- To examine if the marketing mix strategies of telecom operators significantly impact customer loyalty and retention.

Research Methodology

Quantitative research method is applied with a primary field study to observe the effectiveness of telecom operators' marketing mix. The primary survey with a structured questionnaire is conducted in select districts of South Bengal namely, Kolkata, Sonarpur, and Patharpratima. The survey is based on convenience sampling method. A total of 200 responses were received, out of which 183 responses are considered suitable for the study. The data analysis is conducted using statistics, namely factor analysis, descriptive statistics, correlation, and regression in SPSS 27. The factor analysis using Principal Component Analysisis conducted to find out the prime components of marketing mix strategies of mobile telecom operators that affect the buying behaviour of customers. Karl Pearson Correlation, both Bivariate and Partial Correlation,are conducted to determine the relationship between Customer Loyalty and Retention, and marketing mix factors. Regression analysis is conducted to find out if marketing mix components significantly impact Customer Loyalty and Retention.

Data Analysis and Findings

Table-1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.710
Bartlett's Test of Sphericity	Approx. Chi-Square	699.124
	df	120
	Sig.	.000

Source: Researchers' computation using SPSS 27

The Kaiser-Meyer-Olkin (KMO) test value of .710 indicates adequate data has been taken for factor analysis. Barlett's test indicates that the data is statistically significant at 0.01 significance level and the observed correlation matrix is not an identity matrix. In the Total Variance Explained table, as computed by researchers using SPSS 27, it is observed that the first six components have an Eigen-value greater than 1 and hence, six factors are considered. These six factors explain the sixteen variables to the extent of 65.098 per cent. The Rotated Component Matrix is computed by researchers in their Principal Component Analysis with Varimax Rotation and Kaiser Normalization; rotation is converged in 41 iterations. It shows how the six factors correlate to the study's sixteen variables. According to the strong correlations of the factors with each of the variables as observed in the Rotated Component Matrix, the factors are named Performance Mix (PM), Customer Loyalty and Retention (CLR), Price-People Mix (PPM), Place-Physical Evidence Mix (PPEM), Product-Promotion Mix (PPRM), and Process Mix (PROM). The mean scores of all these factors are calculated to proceed with further analysis to observe the relationship between marketing mix factors and the factor of Customer Loyalty and Retention.

Table-2: Bivariate Correlations

		CLR	PM	PPM	PPEM	PPRM	PROM
Pearson Correlation between the mean scores of the factors found	CLR	1.000	.308**	.100	.113	-.034	.098
	PM	.308**	1.000	.213**	.001	-.022	-.114
	PPM	.100	.213**	1.000	.046	.213**	-.218**
	PPEM	.113	.001	.046	1.000	.176*	-.071
	PPRM	-.034	-.022	.213**	.176*	1.000	-.078
	PROM	.098	-.114	-.218**	-.071	-.078	1.000

		CLR	PM	PPM	PPEM	PPRM	PROM
Sig (2- tailed)	CLR	.	.000	.178	.127	.649	.187
	PM	.000	.	.004	.994	.762	.124
	PPM	.178	.004	.	.537	.004	.003
	PPEM	.127	.994	.537	.	.017	.342
	PPRM	.649	.762	.004	.017	.	.291
	PROM	.187	.124	.003	.342	.291	.

CLR: Customer Loyalty and Retention
PM: Performance Mix
PPM:Price-People Mix
PPEM: Place-Physical Evidence Mix
PPRM: Product-Promotion Mix
PROM: Process Mix

Source: Researchers' computation using SPSS 27

A Bivariate Pearson Correlation analysisis conducted to examine the linear relationship between the mean of Customer Loyalty and Retention (CLR) and the mean scores of various factors of the marketing mix framework. The results show that CLR has a positive correlation with the mean of Performance Mix (PM), r(181) = .308, p = .000; the mean of Price-People Mix (PPM), r(181) = .100, p = .178; the mean of Place-Physical Evidence Mix (PPEM), r(181) = .113, p = .127; and the mean of Process Mix (PROM), r(181) = .098, p = .187. On the other hand, mean of CLR has a negative correlation with the mean of Product-Promotion Mix (PPRM), r(181) = -.034, p = .649. The results of Bivariate Pearson Correlation indicate that only mean of Performance Mix (PM) has a statistically significant correlation with mean of Customer Loyalty and Retention (CLR), whereas the other mean scores of factors are weakly correlated with mean of CLR.

Table-3: Partial Correlations

		PM	PPEM	PROM	PPM	PPRM
CLR	Control Variables	PPM, PPEM, PPRM, PROM	PM, PPM, PPRM, PROM	PM, PPM, PPEM, PPRM	PM, PROM, PPEM, PPRM	PM, PROM, PPEM, PPM
	Correlation	.307	.136	.159	.073	-.055
	Significance (2-tailed)	.000	.069	.033	.329	.466
	df	177	177	177	177	177

CLR: Customer Loyalty and Retention
PM: Performance Mix
PPM:Price-People Mix
PPEM: Place-Physical Evidence Mix
PPRM: Product-Promotion Mix
PROM: Process Mix

Source: Researchers' computation using SPSS 27

The results of the Partial Pearson Correlation analysis indicate that there is a significant relationship between mean of CLR and mean of PM, with a partial correlation of r = .307 and a p-value of .000, which is significant at 0.01 level of significance. Additionally, there is a significant relationship between mean of CLR and mean of PROM, with a partial correlation of r = .159 and a p-value of .033, which is significant at 0.05 level of significance. However, the relationship between mean of CLR and mean of PPEM is not as strong, with a partial correlation of r = .136 and a p-value of .069, which is only significant at 0.1 level of significance.

Table-4: Multiple Regression Analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.366	.134	.110	.45788	1.810

ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.755	5	1.151	5.490	.000
	Residual	37.108	177	.210		
	Total	42.863	182			

Coefficients

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.461	.333		4.392	.000		
	PM	.248	.058	.309	4.295	.000	.945	1.059
	PPM	.052	.053	.073	.979	.329	.875	1.142
	PPEM	.077	.042	.130	1.826	.069	.966	1.035
	PPRM	-.023	.031	-.053	-.730	.466	.922	1.085
	PROM	.091	.043	.154	2.143	.033	.943	1.060

Predictors: (Constant), PROM, PPEM, PM, PPRM, PPM

Dependent Variable: CLR

CLR: Customer Loyalty and Retention
PM: Performance Mix
PPM: Price-People Mix
PPEM: Place-Physical Evidence Mix
PPRM: Product-Promotion Mix
PROM: Process Mix

Source: Researchers' computation using SPSS 27

In Table-2, a multiple regression analysis has been conducted between the independent variables namely, the mean scores of Performance Mix (PM),Price-People Mix (PPM), Place-Physical Evidence Mix (PPEM), Product-Promotion Mix (PPRM), and Process Mix (PROM) and the dependent variable i.e. mean of Customer Loyalty and Retention (CLR). The variables show linearity, normally distributed residuals, no multicollinearity (indicated by VIF less than 10 in sub-table Coefficients), no autocorrelation (indicated by Durbin-Watson value between 1.5 and 2.5 in sub-table Model Summary), and exhibit homoscedasticity. The R-value of 0.366 indicates the overall correlation between independent and dependent variables. The adjusted R^2 value of 0.110 indicates that 11 per cent of the variance in the dependent variable i.e., mean score of CLR is explained by the model. The ANOVA results show that the overall model fit is significant, $F(5,177) = 5.490$, p-value is less than 0.01. In the Coefficients table, the results indicate that mean of PM has a significant impact on mean of CLR ($b = 0.248$, $p<0.01$), mean of PPM does not have a significant impact on mean of CLR ($b = 0.052$, $p>0.5$), mean of PPEM has a significant impact on mean of CLR ($b = 0.077$, $p<0.1$), mean of PPRM does not have a significant impact on mean of CLR ($b = -0.023$, $p>0.05$), and mean of PROM has a significant impact on mean of CLR ($b = 0.091$, $p<0.05$). Thus, the regression equation can be interpreted as follows:

$$Y = a+b_1X_1+b_2X_2+b_3X_3+b_4X_4+b_5X_5$$

Here, Y is the dependent variable i.e. mean score of Customer Loyalty and Retention (CLR), a is a constant term, b1 to b5 are the unstandardised coefficients of the predictors, and X_1 to X_5 are the predictors namely, mean scores of Performance Mix (PM), Price-People Mix (PPM), Place-Physical Evidence Mix (PPEM), Product-Promotion Mix (PPRM), and Process Mix (PROM). The regression equation is derived as:

CLR = 1.461+0.248PM+0.052PPM+0.077PPEM-0.023PPRM + 0.091PROM

i.e., Customer Loyalty and Retention = 1.461 + 0.248 Performance Mix + 0.052 Price-People Mix + 0.077 Place-Physical Evidence Mix - 0.023 Product-Promotion Mix + 0.091 Process Mix.

Conclusion

Principal Component Analysis identifies factors, namely, Performance Mix, Customer Loyalty and Retention, Price-People Mix, Place-Physical Evidence Mix, Product-Promotion Mix, and Process Mix. Effective use of these marketing mix strategies influences customers' buying behaviour and, hence, customer satisfaction. Bivariate Pearson Correlation found a statistically significant positive correlation between the mean of Customer Loyalty and Retention and the mean of Performance Mix. Though in Bivariate Correlation, only mean of Performance Mix is positively correlated with mean of Customer Loyalty and Retention, in Partial Pearson Correlation, three of the mean scores were significantly positively correlated with mean of Customer Loyalty and Retention: mean scores of Performance Mix,Place-Physical Evidence Mix and Process Mix. Hence, an adequate relationship exists between Customer Loyalty and Retention, and the marketing mix of telecom operators. Multivariate Regression Analysis identifies a significant positive impact of mean scores of Performance Mix, Place-Physical Evidence Mix and Process Mix on mean of Customer Loyalty and Retention. The model states that all the predictor variables explain the regressed variable namely,mean of Customer Loyalty and Retention to 11 per cent. The predicted equation states that when there is 1 per cent change in mean scores of Performance Mix, Price-People Mix, Place-Physical Evidence Mix and Process Mix,mean score of Customer Loyalty and Retention changes by 0.248, 0.052, 0.077 and 0.091 in a positive manner. Similarly, with 1 per cent change in mean value of Product Promotion Mix, mean value of Customer Loyalty and Retention changes by 0.023 in a negative manner.

In conclusion, the study found that the marketing mix strategies implemented by telecom companies significantly affect customers' buying behaviour. A strong correlation existed between Customer Loyalty and Retention, and marketing mix strategies like Performance Mix,Place-Physical Evidence Mix, and Process Mix. The findings suggest that these factors collectively account for changes that occur in Customer Loyalty and Retention. The predictive model shows that even minor modifications in these marketing components can have a positive effect on Customer Loyalty and Retention, except for the Product-Promotion Mix, which demonstrated a negative impact. The study emphasizes the importance of a well-balanced marketing mix framework in shaping favourable customer loyalty and retention in the telecom industry.

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The Dynamics of Employee Engagement: Investigating Its Influence on Job Satisfaction in the Workplace

Vidhya S[1]
Vaneeta Aggarwal[2]

Abstract

This paper examines the complex interdependency between job satisfaction and employee engagement, and how these factors work together to positively impact organizational performance. Since most of a person's life is spent working, the level of motivation and interest that employees achieve becomes an overarching determinant of productivity, satisfaction, and overall wellness. In the highly competitive and dynamic business world of today, organizations need to acknowledge and foster the correlation between employee engagement and job satisfaction in a bid to sustain a motivated labor force and long-term success.

Employee involvement is the degree to which employees are actively encouraged to take part in decision-making, contribute their ideas, and claim ownership of their responsibilities and roles. When workers feel appreciated and part of the group, they are more likely to be emotionally and mentally engaged in their job. This increased level of engagement boosts job satisfaction, which is a central psychological state that indicates how satisfied people are with their jobs, roles, and work settings. Job satisfaction, in turn, has an important role in shaping employee behavior, lowering turnover intentions, and building organizational loyalty. There is increasing research evidence that reinforces the idea that employee engagement is a bridge between satisfaction and involvement. Engaged workers have increased levels of energy, are more attached to organizational objectives, and have higher levels of performance on a consistent basis. This article brings together multiple studies and empirical evidence that continue to indicate a strong link between employee engagement and job satisfaction. Evidence indicates that employees who report greater job satisfaction are

1 Teaching Fellow, MBA, IFMR GSB-KREA University, Chennai, Tamilnadu and can be reached at vidhyasathishkumar021@gmail.com

2 Assistant Professor, University of Madras and can be reached at vaneeta@unom.ac.in

frequently individuals who feel strongly connected and committed to their organization and work.

In addition, organizations that support a culture of inclusion and engagement not only experience enhanced employee morale but also registered increases in productivity and profitability. The findings of the study emphasize that by building an environment conducive to employee engagement – via open communication, recognition, career development opportunities, and encouraging leadership – organizations can more effectively foster motivated and engaged employees. Such engaged employees become more contributive to organizational goals and create a sustainable source of competitive advantage for the organization in the marketplace. In summary, investment in initiatives that increase employee engagement and participation is necessary to create a strong, high-performing organization. As this essay illustrates, higher employee engagement results in higher job satisfaction, which ultimately translates to better performance, innovation, and organizational growth.

Keywords: Attrition, Employee Engagement, IBM SPSS 20, Job Satisfaction

Introduction

An organization's human capital, or people resources, are essential to its survival. They are one of the production variables that help the company grow. They make a substantial contribution since they are a vital component of the many functional areas of the business. They are working for the company to achieve its goals. Megginson1 argues that "human resources represent the entirety of the inherent abilities, acquired knowledge, and skills as exemplified in the talents and aptitudes of its employees, whereas, from the viewpoint of the individual enterprise, they are knowledge, skills, creative abilities, talents, and attitudes obtained in the population." Employees are the most valuable resource of a company. Managers of human resources are more concerned with how happy workers form a productive workforce. The desire for work-related organizational environments can be driven by several factors for managers and employees. Managers need content employees because they care about their employees. Results-driven managers seek happy employees since they may work more productively, miss a few days of work, and stay on the job longer. Furthermore, happy employees usually produce higher-quality work than their unhappy counterparts. Studies on workplace humanization indicate that contented employees generate higher output, and contented people lead to more efficient organizations.

Work satisfaction is a significant determinant of attrition. It has significantly greater credit than monetary values. Offering appealing benefits and a stimulating work environment will make employees very happy, which will increase employee turnover and decrease attrition. Job satisfaction is a key element that could reduce attrition. Satisfied employees grow into pillars, and the company grows gradually with them. The assessment indicates that approximately 20.16 percentage of respondents are satisfied with their positions and their jobs. These people are the Brand executives; they have a strong sense of loyalty to their employer. They remain because of their dedication and perseverance, even when the organization provides competitive pay and performance reviews.

They are the company's constituents and help it achieve its objectives. Companies must make sure they stay that way as part of their mission. The companies must maintain them as such. Employee dissatisfaction percentages hover around 1.52 percentage in every firm. They don't appear to be happy where they are right now. Instead of creating space for advancement, they are always criticizing the business. Since 0.51 percentage of people seem to be dissatisfied, these categories include resignation and position changes. The corporations nevertheless need to give these people a serious assessment, even though their share may have been little in contrast. Review shows that not many people don't care about their jobs. They are not satisfied, but they are also not happy with their work.

Need for the Study

Employee satisfaction, often known as job satisfaction (JS), refers to a person's emotional state regarding their position at work (Warr & Inceoglu, 2012). The outcome of an employee's labour is determined by their level of satisfaction, which is reflected in the profit they generate. Absenteeism and volatility are two more variables that have a strong relationship with satisfaction. These two elements have a direct impact on a company's efficiency and successful growth. Research on job happiness was first conducted by psychologists in the early 1920s of the 20th century. One of the earliest studies of this type was conducted in a Western Electric Company unit and demonstrated that working productivity rose independently of changes in the workers' physical perspectives and adverse situations. The purpose of the studies was to identify more effective strategies for influencing worker productivity. Among the initial variables with a rate of variability in an organization are communications regarding the job position, attention to occupational safety, duration of employment, and satisfaction levels.

Literature Review

Work satisfaction and employees' engagement are some of the best-researched constructs in both organizational behavior and human resource management, approximately individual employee performance and team dynamics as well as intensive and permanent impact on general organizational success. Those two factors, besides being essential drivers of productivity, also strongly influence workplace culture and long-run stability of every organization. Because organizations quickly realize the value of human capital as a strategic asset, how employee engagement influences job satisfaction it has become the central theme of scholarly research and real-world application.

The connection between employee engagement and job satisfaction has garnered considerable interest because of its multifaceted, intricate nature. Researchers and doctors alike have also discovered that engaged employees, who are emotionally committed, are mentally concentrated, and are physically engaged in their work, their work is more likely to be satisfactory. This subsequently translates into improved performance outcomes, such as high productivity, low turnover, and higher organizational commitment (Massey and Schneider, 2008). Job satisfaction, however, has been known to be a major determinant of employee well-being, retention, and motivation for many years. This is the general attitude of an individual towards his work, influenced by both internal (eg, sense of meaningful work, opportunities for development) and external factors (eg, pay, working status, and job safety).

The association between employee engagement and job satisfaction has been consistently confirmed by recent studies, demonstrating a strong, positive, and reciprocal association between the two variables. Employee engagement – made up of emotional commitment, passion, and deep attachment to work – has been found to strongly influence job satisfaction. Existing literature, which includes work conducted by Rai and Maheshwari (2021) and Albrecht et al. (2022), confirms that the most engaged employees are the most satisfied with their jobs, their responsibilities, and where they work. These employees are likely to get meaning from work, perceive that leadership is with them, and are motivated by reward and career advancement opportunities. Conversely, high levels of job satisfaction result in increased engagement through the development of a positive emotional climate, reduced stress, and discretionary effort. Gallup's (2023) large-scale survey also confirmed this relationship, indicating that organizations with higher employee engagement scores also had significantly higher satisfaction and retention rates. The study also noted that companies which actively invest in workers' well-being, communication, and empowerment have greater alignment between engagement and satisfaction levels. This synergetic interdependence further leads to a virtuous cycle where engagement drives satisfaction and satisfaction stimulates engagement, leading to improved productivity, innovation, and organizational commitment. Engagement and satisfaction are thus both essential to foster in order to create a high-performing, resilient team in the fast-changing workplaces of today. Job satisfaction often varies with the total years of work experience, reflecting changes in employees' expectations, values, and career trajectories over time. Several studies have explored this relationship, with findings suggesting that job satisfaction tends to increase with experience – particularly in the early to mid stages of a career – before plateauing or slightly declining in later years. According to a study conducted by Ng and Feldman (2010), the most experienced employees tend to be more satisfied with their jobs due to higher job mastery, stability, and organization familiarity. Experienced employees are also more realistic in their expectations, which assists them in controlling stress and having a positive work attitude. This has been supported by research by Kosteas (2011), which states that years of experience do lead to increased perceived autonomy and competence, both of which are good predictors of job satisfaction. Some research, however, such as that by Bader, Hashim, and Zaharim (2013), purports that after some time, job satisfaction might decrease because of stagnation, insufficient new challenges, or failure to achieve long-term career aspirations. More recently, a study by Jena and Pradhan (2021) highlighted that generational differences and evolving career motivations also influence how job satisfaction aligns with experience levels, particularly in fast-changing industries. Generally, the dynamics between total experience and job satisfaction are complex – while experience typically increases satisfaction via skill acquisition, security, and professional identity, it needs to be balanced by ongoing growth potential in order to maintain high rates of engagement and satisfaction.

In a Kahn (1990) article, emotional engagement is first defined as the self-actualization of the employee in performing the organizational task allocation: in engagement, individuals use and express themselves physically, emotionally, literally, and conceptually in role performances. All such stressors and stress symptoms created by the organizations, including all these, were identified by Kang and Singh (2006). The research ended by concluding that workers indicated stringent rules, poor interrelations, poor organizational environments, work inhibitors, and thoughtless authorities as major stress inducers. Aggressiveness, changing thoughts, anxiety, and poor performance are some typical stress intermediary indicators. The researchers recommended, in the study, that the company construct a climate of trust and respect and reward, participation, and effective communication, and sensitize the administrators to the needs of the employees. Mwakidimi, D., et al. (2015). Their report Pay and Work Effects of the Impact of HRM Techniques on Employee Retention at Kenya Power Company Ltd. is the name of a research paper. The variables examined in the research will be centered on three independent variables, namely pay structures, placement, and leadership. All the points that have been mentioned above are usually considered to be the key drivers of employee retention and, if well managed, are able to produce a high rate of retention of key staff. In 2014, Shanmuga and Vijayadurai explained that “the emotional attachment of an employee to their work, their colleagues, or their organization, which can be both positive or negative, influences their emotion in learning and work performance.” Schaufeli, the author, and other colleagues in 2006 p. 702 explained that “work engagement is a positive, work-related state of mind characterized by vigor, dedication, and absorption.” Saks (2006) explains employee engagement includes a unique and distinct construct because it involves behavioural, emotional, and cognitive processes related to effort allocation towards individual performance. Schaufeli et al. in 2002. This is work engagement, and it is a rewarding, enriching experience that is job-related and defined by vigor, dedication, and absorption. Once again, Maslach et al. (2001) contend that if exhaustions, cynicism, and inefficacy can be considered burnout, then the reverse of the three dimensions is engagement, which is defined by energy, involvement, and efficacy. The outcome of this study has shown that the more content the employees are with the condition of their lives, the more they engage with their work (Vorina, 2013). They proceeded to demonstrate that employee engagement levels would mirror the growth of ICT skill development, as depicted by Vorina, David, and Vrabič-Vukotić (2013). The study managed to accomplish the above objectives by relating Rathi’s (2011) results on the three organizational commitment facets: affective – belonging, portraying a sense of concern; behavioral – behaving in support of one’s commitment; Bedford College Students’ Union; and the domain of psychological well-being. As expounded by way of figures, two sets of past employee engagement measures have been discovered in existing studies. This research quantifies the impact of organizational culture, work satisfaction, and leadership style on employee performance (Ratnasari Sri Langgeng et al. 2020). Adhikari (2009) states that employee erosion and harassment causes in the software industry can be categorized into four types, which are job concomitant, employer-related issues, employee capability, and compensation.

Out of these four factors that surfaced, compensation appeared to have the smallest impact on erosion. Abassi and Hollman (2000) cite reasons why staff decide to leave these types of businesses: the management style, poor recruitment practices, lack of recognition, an unfriendly work environment, and no competitive wage structure. Other reasons may be not being promoted, not receiving training or advancing, doing nothing stimulating, and insecurity in the job. Certain intrinsic and extrinsic drivers would be of help. In accordance with Homand Gaertner (2000), there are certain appropriate antecedents for employee retention or turnover that consist of job satisfaction, organizational commitment, job search, alternative comparisons, withdrawal cognitions, and intentions to leave. As Schuler et al. (2011) noted, “Retention strategies should include the following: managers’ promises regarding talent management of all employees, not just the ‘talent’ few; willingness to search for recruits globally; manager accountability for talent losses; and pay based on retention benefits. Semih and Tugba (2016) carried out research that tested the local change in standard deviation between labor market satisfaction and job position satisfaction. The results indicate a change in job satisfaction. The link between marital status and job satisfaction has been a topic of growing interest, as individual life factors like marriage can have a considerable influence on workplace attitudes and overall well-being. Research indicates that marital status plays a considerable role in shaping job satisfaction, with married individuals often reporting higher levels of satisfaction compared to their unmarried counterparts. A study by Stutzer and Frey (2006) suggested that marriage tends to provide emotional stability, social support, and a sense of responsibility, which can positively impact one’s attitude toward work and overall life satisfaction. In addition, married workers can enjoy dual sources of financial and emotional security, which are associated with lower stress levels and a better work-life balance. Later research has also analyzed this link in cross-cultural and organizational settings. For instance, Gazioglu and Tansel (2020) established that married people in developing nations, where family support systems are stronger, reported job satisfaction than single or divorced people. On the other hand, there is some evidence that single people might have less work-family conflict, which may result in greater job satisfaction in some high-demand professions (Lopez & Ramos, 2019). Furthermore, gender dynamics play a considerable part in this relationship; a study by Jena and Pradhan (2021) found that married women, particularly from dual-career families, can experience specific difficulties in juggling family obligations against career pressures and consequently may see their job satisfaction impacted differently than that of their male counterparts. In general, marital status positively correlates with job satisfaction because of the buffering influences of emotional and social support, which in turn often accompany marriage. It is essential, however, to also recognize that personal conditions like gender roles, culture, and organizational work-life balance efforts moderate this relationship. As work-family life changes in contemporary society, increasingly sophisticated research is needed to completely grasp how marital status crosses over with job satisfaction across demographic groups.

Research Objectives

H_{01}: There is no significant correlation between employee engagement and job satisfaction within the organization.

H_{02}: There is no significant difference in job satisfaction among individuals with total years of experience.

H_{03}: There is no significant difference in job satisfaction or marital status of the individual.

Research Methodology

The study involved participants within the corporate IT park in Chennai, which is located in the southern part of India. The target population included those persons, 18 years and above, in different establishments, business places, or organizations in this area. The participants were selected from different locations and towns in Chennai, and a total of 100 respondents were administered. Out of them, 36 were male (36 percent) while 64 were female (64 percent). In this research, the questionnaire was developed with twenty closed-ended questions. It comprised four questions relating to demographic data, like gender, age, marital status, and total company experience. Although the questionnaire was developed by the author Vorina (2017), the part that aims at assessing the level of engagement of the employees is the Utrecht Work Engagement Scale. The collection of the data took place through distributing the Google questionnaires from 4/1/2024 to 14/4/2024. During this period, the authors conducted interviews with colleagues, neighbours from the IT park, friends, and acquaintances. All the participants spent approximately five minutes completing the developed questionnaire. The procedure was developed to be easy to implement so the participants would feel free to engage with the provided questions. In this approach, it was possible to guarantee a high level of self-organizing learning and the reliability of the responses received. Data processing: The collected data were analyzed using IBM SPSS, version 20. We have also used the Microsoft tools Word and Excel. Regarding the purpose and objectives of the research, we used the ANOVA test, the independent T-test, and correlation analysis.

Data Collection

Primary data in this study was collected through a survey method using a structured questionnaire. The questionnaire was designed to capture specific information relevant to the research objectives. To ensure the accuracy and reliability of the responses, a Likert scale was used to measure the attitudes, opinions, and perceptions of the respondents. The Likert scale provided a range of responses (such as strongly agree, agree, neutral, disagree, and strongly disagree), allowing for a detailed analysis of the data collected from the participants. This approach enabled the researcher to gather quantitative data that could be analyzed systematically.

In Table-1, the consistency of scale has been assessed through Cronbach's alpha. The generally accepted value for Cronbach's alpha is 0.70. Here, as in all the components, Cronbach's alpha is more than 0.70, which shows the internal consistency of the questionnaire.

Table-1

Component	Cronbach's Alpha	Number of Questions	Source
Employee Engagement	0.867	12	Anton Vorina, ECONOMIC THEMES (2017)
Job Satisfaction	0.872	8	Anton Vorina, ECONOMIC THEMES (2017)

Data Analysis and Findings

Table-2 presents the demographic details of the sample population. Among the age categories, 48 percent are between 18 and 25 years old, 18 percent fall into the 26-35 year range, another 18 percent are aged 36-45, and 16 percent are over 45 years old. Gender distribution shows that 64 percent of the sample are women, while 36 percent are men. Regarding marital status, 52 percent of the individuals are unmarried, and 48 percent are married. In terms of professional experience, 44 percent of the population have more than 6 years of experience, whereas 42 percent have 2 years of experience or less, and 2-4 years of experience individuals are 8 percent, whereas the other 6 percent are experienced for 4-6 years.

Table-2

Demographic Variable		Frequency	Percentage
Age	18-25	48	48 percentage
	26-35	18	18 percentage
	36-45	18	18 percentage
	45 above	16	16 percentage
Total		100	100 percentage
Gender	Female	64	64 percentage
	Male	36	36 percentage
Total		100	100 percentage
Marital Status	Unmarried	52	52 percentage
	Married	48	48 percentage
Total		100	100 percentage
Total years of experience	Below 2 years	42	42 percentage

Demographic Variable		Frequency	Percentage
	2-4 years	Correlations	8 percentage
	4-6 years	6	6 percentage
	6+ years	44	44 percentage
Total		100	100 percentage

Correlation Analysis

Table-3 shows the correlation between dependent and independent variables such as: The value of the Pearson correlation coefficient between employee engagement and job satisfaction is 0.680, which indicates a high positive correlation between them. So, H_{11} is accepted.

Table-3: Correlations

		EE	JS
EE	Pearson Correlation	1	.680**
	Sig. (2-tailed)		.000
	N	100	100
JS	Pearson Correlation	.680**	1
	Sig. (2-tailed)	.000	
	N	100	100

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

Anova

Table-4 denotes that the P value is 0.004, which is less than 0.05, and hence H_{12} is accepted.

There is a significant difference in job satisfaction among individuals with total years of experience.

Table-4: JS

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	257.365	3	85.788	4.804	.004
Within Groups	1714.195	96	17.856		
Total	1971.560	99			

Table-5 denotes that the P value is 0.005, which is less than 0.05, and hence H_{13} is accepted.

There is a significant difference in job satisfaction and the marital status of individuals.

Table-5: JS

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	152.816	1	152.816	8.234	.005
Within Groups	1818.744	98	18.559		
Total	1971.560	99			

Implication and Suggestions

The findings of this study should be interpreted in light of certain underlying limitations. Firstly, the sample size was restricted to a hundred respondents, which may not be sufficiently large to yield statistically robust conclusions or to capture the full spectrum of experiences and perceptions within the broader population. A small sample can introduce potential biases and limit the reliability and generalizability of the results. Secondly, the research was conducted within the confines of a single urban location, thereby restricting the geographical diversity of the sample. Given that organizational cultures, work environments, and employee expectations can vary significantly across regions, the findings may not be directly applicable to other cities, rural areas, or international contexts.

Moreover, the study was confined to a limited range of organizational settings, which may not account for the diversity of practices across different sectors, industries, or types of employment. This narrow focus may have overlooked important contextual factors that could significantly influence employee satisfaction and engagement. In light of these limitations, there is considerable scope for future research to expand upon and deepen the current findings.

Subsequent studies would benefit from incorporating larger and more diverse samples to enhance statistical reliability and the representativeness of the data. Expanding the geographic scope to include multiple cities, regions, or even countries would facilitate cross-cultural comparisons and provide a more holistic understanding of employee experiences. Additionally, examining a broader range of industries and organizational structures would help capture sector-specific dynamics and challenges, thereby contributing to a more comprehensive understanding of the factors that influence employee satisfaction and engagement.

Conclusions and Managerial Implications

The study has brought to light the importance of employee satisfaction in HR strategies for reducing the rate of attrition and enhancing employee involvement. This research indicates how interactions between these variables and influencing aspects may affect the overall level of satisfaction by systematically analyzing those aspects affecting employee satisfaction. From these results, which show a significant positive relationship between several influencing factors and the response variable of employee well-being, the specific interventions needed are those targeting and improving these areas. With this data, organizations can devise a strategic plan that would engender engagement, improve employee well-being, and eventually translate into better retention. It also brings out the fact that concerning job satisfaction and employee engagement, a strong correlation exists; the higher one's level of engagement, the happier a worker will be. In the demographic research, it can also be noted that in most cases, younger workers, particularly those between the ages of 18 and 25 years of age participate more than older workers, indicating a high number of youths in the workforce. Moreover, the majority of female respondents show that females are more concerned and communicative about survey-based research. However, statistically speaking, there is no significant relationship between gender and independent variables in this study of job satisfaction and employee engagement. In addition, the present study does not indicate any significant association between age/work experience and employee engagement, possibly demonstrating that these factors may not influence the state of engagement in the current sample.

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Heuristic Bias, Investment Decision-Making: Moderating Role of Financial Literacy

Ancy Gonsalves[1]
Juao Costa[2]

Abstract

Conventional finance assumes rationality in investment decisions. However, in an actual investment scenario, irrationality occurs through the influence of behavioural biases.This study examines whether the investment decision-making is influenced by heuristic behavioural biases, with financial literacy moderating this causal relationship. Five heuristic behavioural biases – anchoring bias, availability bias, gambler's fallacy bias, representativeness bias and overconfidence bias are the dependent variables, while investment decision-making and financial literacy are dependent and moderating variables, respectively. A representative sample of 72 individual investors was evaluated. A structured questionnaire was designed using the Likert scale method to collect the research variables, and the data acquired were analysed using SPSS. The research findings revealed that financial literacy moderates availability bias; the study observed an insignificant relationship between anchoring bias, gambler's fallacy bias, representativeness bias and overconfidence bias and investors' decision-making.

Keywords: Biases, Heuristics, Investment Decisions, Moderation Effect

The study of irrationality within the stages of the investment decision-making process and the stock market is intriguing due to the distortions it can cause. Irrationality stems from both behavioural and cognitive biases, which significantly influence an individual investor's approach to investment decisions.

According to traditional finance principles, information within the stock market is presumed to be universally available to all investors. However,

1 Assistant Professor Goa University, Sant Sohirobanath Ambiye, Govt. College of Arts & Commerce (Research centre) Rosary College of Commerce and Arts, Navelim, Goa and can be reached at ancy@rosarycollege.ac.in

2 Professor, Goa University, Sant Sohirobanath Ambiye, Govt. College of Arts & Commerce and can be reached at juao@rosarycollege.ac.in

the impact of this information varies as each investor interprets it differently based on their cognitive abilities and personal influences. Consequently, stock markets are inherently uncertain, fostering the emergence of behavioural biases during investment decision-making.

The process of decision-making process involves multiple steps, including aligning investment goals with expected returns and selecting appropriate financial products. With a plethora of financial products and services available, the decision-making process becomes arduous. Assessing available information for decision-making is influenced by cognitive abilities and comprehension of financial terminology.

A new frontier in behavioural finance research focuses on investment behaviour, encompassing the entirety of the decision-making process. This research involves investigating investors, assessing judgments, and analysing their reviews in investment decision-making.

Behavioural biases refer to variations in judgement due to perception shift, illogical interpretation of information, shift in perception, or simply being irrational. Here, the reasoning capacity is influenced by sentiments, emotions or mental shortcuts and is prone to inaccuracy. Investors can achieve their investment goals if they are mindful of the biases that affect the investment process.

Heuristic Biases

Heuristics serve as mental shortcuts or rules of thumb utilized by investors, particularly in uncertain and complex environments. While decision-making is crucial for resource allocation, these heuristics streamline the process, aiding in assessing the likelihood of negative returns through simplified decisions and judgments. According to Tversky and Kahneman, heuristics prove valuable when investors lack access to information and face time constraints. Common heuristic biases include anchoring, availability, representativeness, gambler's fallacy, and overconfidence.

Overconfidence bias entails excessive reliance on one's own abilities, skills, and knowledge in investment decision-making, often disregarding external information and assuming higher returns based on personal capacity or experience. Essentially, overconfidence bias occurs when investors overestimate their abilities (Trivers, 1991), a phenomenon that has been identified as a significant factor contributing to the overtrading phenomenon in financial markets.

Representativeness bias involves making investment decisions based on recent events or experiences, such as purchasing trending stocks while avoiding those that have recently performed poorly. Investors may extrapolate from recent events to assess the growth prospects of a company or explain a stock's underperformance in the market.

Availability bias occurs when investors disproportionately rely on easily accessible information rather than considering all relevant data. This bias often leads to decisions based on recent information without adequate consideration of its source or predictability. For example, investors may exhibit availability bias by favouring investments in familiar local companies, neglecting the principles of portfolio diversification.

Anchoring bias gives undue weight to the earliest information and uses it as a reference point for future decisions. In the financial market, anchoring occurs when recent observations establish a value scale, influencing subsequent decisions such as selling or analysing investments based on their initial purchase price. This bias can lead to underreaction to unexpected changes in market conditions.

Gambler's fallacy occurs when investors incorrectly predict trends in the market, basing investment decisions on these predictions. This fallacy involves the belief in accurately forecasting reversal points in trends, leading to irrational decision-making. Investors may hold onto losing stocks in anticipation of a reversal, despite the randomness of market trends and the lack of significance in past prices for predicting future prices

Impact of Heuristic Bias on Investors' Decision-Making

Heuristics are all-purpose kinds of decision strategies people adopt based on little information and are often correct (Dolreen, 2014). The mental alternatives reduce reasoning burdens in the decision-making process. Heuristics or heuristic biases offer an individual fewer options or signals to streamline the process, thereby reducing the dependence on complete information necessary for an informed decision or choice. Through the use of heuristic biases investors do not decide-based on the principles of classical rationality (Suomala & Kauttonen, 2023) and are affected by anchoring behaviour and the past performance.(Yasseri & Reher, 2018). Heuristics in judgment affect the likelihood that investors purchase using the available information (Piotrowski & Bünnings, 2022), and Overconfidence assumes a stronger hold on investment decisions (Kasoga, 2021)(Cao et al., 2021). These biases are the result of the rational use of limited computational resources (Lieder et al., 2018).

Financial Literacy and Investment Decisions

Every day, investment opportunities are influenced by various factors such as personal preference, motivation, available funds, time horizon, and financial goals. Investors often exhibit behavioural biases stemming from inexperience, limited knowledge, disinterest, and time constraints, leaving individual investors with fewer options for evaluating stock investment and performance.

Behavioural biases lead to financial decision-making irrationality, potentially contributing to market inefficiencies by disregarding or downplaying the role of intrinsic value. Intelligent and risk-aware judgments require a comprehensive understanding of various financial concepts and facts. Achieving financial stability necessitates a broad comprehension of diverse financial instruments, as well as the ability to effectively apply and communicate this knowledge. When discussing financial opportunities, the situations are where financially savvy investors have the potential to generate returns on their investments.

Moderating Effect of Financial Literacy on Equity Investors

The increasing significance of financial literacy in investment decisions cannot be ignored. Financial literacy is the application of financial knowledge, financial attitude, and financial behaviour in the investment decision-making process. The level of financial literacy may influence the relationship between investment horizon, decision-making biases, and equity investment behaviour. A highly financially literate investor may exhibit different investment behaviours in response to market volatility compared to an investor with low financial literacy. By examining the moderating effect of financial literacy, an insight is gained into how financial education and awareness initiatives can improve investment decision-making and financial outcomes for individual investors.

The objectives of the study two folded. Firstly, to examine the presence of heuristic biases on investment decision making of individual investors and secondly, whether financial literacy is a moderating variable between heuristic biases and investment decision making of individual investors.

Data and Methodology

Research Design

Primary data is used to meet the objective of the study. Data is collected from individual investors who invest in shares and are from the western Indian region, which comprises the states of Goa, Maharashtra and Karnataka. This region has been prioritised as the region accounts for 53% of overall registered equity investors and is found to be tech-savvy1. Google Forms were forwarded using the basic random sampling method, and the survey was carried out between January and May 2024.

Reliability Analysis

Construct	No of Items	Cronbach's Alpha	Mean	Standard Deviation
Financial Attitude	06	0.922	1.91	0.27
Financial Behaviour	10	0.944		
Overconfidence	04	0.881	3.44	1.06
Representativeness	05	0.866	3.27	0.88
Anchoring	04	0.842	3.41	0.98
Availability	06	0.907	3.51	1.00
Gambler's Fallacy	03	0.845	3.39	1.06
Investment decisions	07	0.910	3.50	0.95

The study met the overall reliability requirement with 0.749

Demographic Profile of Respondents

Profile	Group	Frequency	Percentage
Gender	Male	**48**	66.7
	Female	24	33.3
Age	18 years to 30 years	16	22.2
	31 years to 45 years	**25**	34.7
	46 years to 60 years	16	22.2
	61 years and above	15	20.8
Marital Status	Married	35	48.6
	Single	**37**	51.4
Education	High School	12	16.7
	Higher Secondary	11	15.3
	Graduate	**28**	38.9
	Post Graduate	10	13.9
	Professional	11	15.3
Occupation	Private Sector	18	25.0
	Government Sector	**21**	29.2
	Business/Self Employed	16	22.2
	Student	9	12.5
	Retired	8	11.1
Monthly Income	Less than 20,000	11	15.3
	20,001 -50,000	**29**	40.3
	50,001-1,00,000	22	30.6
	1,00,001 and above	10	13.9
Investment Experience	Less than 1 year	16	22.2
	1-3 years	26	36.1
	3 years and more	**30**	41.7

The respondent's demographic profile is furnished in Table-1. There were 67% male investors, 35% in the age group of 31 years to 45 years, 51% were unmarried, 39% were graduates, 29% were government employees, 40% had a monthly income of Rs 20,000 to 50,000, and 30% had invested for more than 3 years.

Financial Literacy of the Respondents

The financial knowledge of the respondents is analysed using 14 questions as part of the survey instrument. Each question is given an equal weight in determining financial knowledge. The financial knowledge scoring followed the recommendations of the OECD ([OECD] International Network on Financial Education, 2022) and some Indian studies (Atkinson & Messy, 2012). (Choudhary & Kamboj, 2017)

The correct answer for each question carries one score, with a maximum knowledge score of 14. The financial knowledge score of the respondent is created by counting the number of correct responses given by them.

The maximum possible financial literacy score is 30 (14 for financial knowledge, 10 for financial behaviour and 06 for financial attitude). A score of 24 and above is an indicator of high financial literacy of the respondent, a score ranging from 18 to 23 indicates moderate financial literacy, and a score of 17 and below reflects low financial literacy of the respondent. (Choudhary & Kamboj, 2017) (Harsha, 2017)

"*The overall financial literacy score is obtained as the sum of the three previous scores (financial knowledge (7), financial behaviour (9) and financial attitudes (5). It can take any value between 1 and 21 and can be normalised to 100 for reporting by multiplying by 100/21.*"[1]

Overall Financial Literacy

The results indicate that on average, respondents answered 42.36 percent of the questions correctly. The mean percentage of correct scores is inferred using the benchmark set in previous research studies (Chen and Volpe, 1998; 2002) (Yahaya et al., 2019). The benchmark divided percentage correct scores into three categories: >80% (High Literacy), 60-79% (Medium Literacy) and <60% (Low Literacy). Thus, based on this benchmark, it is evident that individual investors have a low level of financial literacy.

The following table shows the level of financial literacy:

S No	Level of Financial Literacy	Number of Respondents	Percentage of Respondents
1	High	Nil	0
2	Moderate	06	8.33
3	Low	66	91.67
Total		72	100

Overall Financial Literacy = total correct answers/total responses *100
1.36 Percent

Behavioural Biases of Individual Investors

The correlation analysis between the heuristic biases and investment decision making has been carried out to analyse the degree and direction of the relationship among the variables. The nature of the correlation is positive and significant for all biases. A moderate correlation is found. The financial literacy is negative for investment decisions and not significant.

	Anchoring Bias	Availability Bias	Gambler's Fallacy Bias	Over confidence bias	Representativeness Bias	Financial Literacy
Anchoring Bias	-					
Availability Bias	0.524**	-				
Gambler's Fallacy Bias	0.290*	0.498*	-			
Over Confidence Bias	0.414*	0.340*	0.363**	-		
Representativeness Bias	0.421**	0.348**	0.269**	0.328*	-	
Financial Literacy	-0.078	-0.063	-0.188	0.118	-0.21*	-
Investment decision making	0.266*	0.403**	0.349**	0.306**	0.447**	-0.109

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

*. Correlation is significant at the 0.05 level (2-tailed).

The above correlation analysis confirms the significant positive correlations with most biases, including Anchoring Bias ($r = 0.266$, $p < 0.05$), Availability Bias ($r = 0.403$, $p < 0.01$), Gambler's Fallacy Bias ($r = 0.349$, $p < 0.01$), Overconfidence Bias ($r = 0.306$, $p < 0.01$), and Representative Bias ($r = 0.447$, $p < 0.01$). However, it shows a weak negative correlation with Financial Literacy ($r = -0.109$, $p > 0.05$).

Regression Analysis

Moderation Analysis is conducted in SPSS to find the moderating effect of financial literacy. The results show no statistically significant moderating effect of financial literacy between heuristic behavioural biases (except for availability bias) and investors' decision-making of individual investors.

	R square	B	P	R-square change
Without Moderator				
Anchoring- IDM	0.071	0.252	0.024	-
Availability-IDM	0.170	0.287	0.002	-
GFB- IDM	0.124	0.306	0.011	-
Represent-IDM	0.210	0.482	0.000	-
Overcon-IDM	0.115	0.291	0.150	-
With Moderator				
Anchoring- IDM	0.078	0.220	0.448	0.008
Availability-IDM	0.224	0.389	0.033	0.054
GFB- IDM	0.160	0.311	0.092	0.036
Represent-IDM	0.234	0.504	0.145	0.024
Overcon-IDM	0.129	0.291	0.306	0.014
Anchoring x FL			0.147	0.008
Availability x FL			0.033*	0.054
GFB x FL			0.092	0.036
Represent x FL			0.145	0.024
Overcon x FL			0.306	0.014

The table summarises the results of regression analyses examining the relationship between different types of biases (Anchoring Bias, Availability Bias, Gambler's Fallacy Bias, Representativeness Bias, and Overconfidence Bias) and their impact on decision-making, with the interaction effect of financial literacy.

For Anchoring Bias before the interaction variable, the model explains 7.1% of the variance in decision-making behaviour, with a significant F-change (p = 0.024); with moderation variable the explanatory power (R-square) improves by 0.8%, but the F-change is not significant (p = 0.448) suggesting financial literacy does not significantly enhance the model's fit.

For Availability Bias,the model's explanatory power increases by an additional 5.4% with a significant F-change (p = 0.033). This suggests that the moderating variable significantly enhances the model's fit.

For the remaining biases (Gambler's Fallacy bias, Representativeness Bias, Overconfidence Bias), with the introduction of a moderating variable, the model's fit explanatory power improves, but the F-change is not significant. Overall, the findings suggest that different biases have varying degrees of influence on decision-making behaviour, with financial literacy as the moderating variable, with availability bias being particularly prominent.

Using moderation analysis,except for availability bias, the moderating tests are insignificant with a low R-squared value,which means model strength is very low. Therefore, financial literacy as a moderator variable does not moderate the relationship between the heuristic behavioural biases,namely anchoring bias, gamblers' fallacy bias, representativeness bias and overconfidence bias,in individual investors' investment decisions.

Discussion

The findings demonstrate that five heuristic biases, namely overconfidence, representative, availability bias, anchoring bias and the gamblers fallacy bias,are present and are contributing to the investment decision process through incorrect assessment of information, using extreme rules of thumb and keeping unrealistic anchors. However, in spite of the existence of these biases, an individual investor will still move ahead with their investment decision. The study findings are supported by (Lather et al., 2020)(Jain et al., 2021) (Weixiang & Rui, 2022)

The study did not find any moderation effects of financial literacy on the relationship between heuristic behavioural biases and the decision-making of individual investors. The absence of any moderation can be attributed to a low level of financial literacy among the respondents. The finding is supported by (Soomro et al., 2021)

Conclusion

Investment decision-making is a rational process and is complex and complicated. At the time of an individual investor's decision-making,individual investors are faced with a host of behavioural facts, including understanding the information and using mental shortcuts.

The study documented that behavioural biases are positively connected to investment decisions, suggesting that investors' biases are present and significantly contribute to investment decisions of individual investors.

Understanding the unpredictability of the stock market pushes investors to develop strategies to beat untoward situations. Often, investors depend on past information, the rule of thumb, past experiences, time-tested personal information anchors, and follow other investors to construct their strategies and methods. These strategies, when evaluated through an educated and bounded rational approach, investors may not maximise their returns through investment decision making. However, even if biases are present, they push the investors to take an investment decision, be it to buy, sell, hold or diversify.

Notes

1.https://www.oecd.org/finance/financial-education/Guide-2015-Analysis-Fin-Lit-Scores.pdf

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HRM Practices for Sustainability and Corporate Social Responsibility (CSR)

K. Sangeetha[1]
Vanathi Vembar[2]

Abstract

The role of Human Resource Management (HRM) in advancing sustainability and Corporate Social Responsibility (CSR) initiatives has gained considerable attention in recent years, particularly as organizations are increasingly held accountable for their environmental, social, and governance (ESG) impacts. This paper explores the strategic integration of HRM practices in promoting sustainable development goals and fostering a culture of corporate responsibility. By examining how HR functions – such as recruitment, training, performance management, and employee engagement – can be aligned with CSR objectives, this study highlights HRM's critical role in embedding sustainability within organisational culture. Through a review of current literature and case studies, this research identifies effective HRM strategies that support CSR efforts, including green HRM practices, ethical leadership development, and community-oriented employee programs. Furthermore, the study addresses the challenges and ethical considerations associated with implementing sustainable HRM practices and proposes a framework for companies to enhance CSR through HR functions. Findings suggest that organizations with proactive HRM-CSR alignment not only contribute positively to society and the environment but also experience enhanced employee morale, improved brand reputation, and a competitive advantage in the market. This paper contributes to the growing discourse on sustainable business practices by providing actionable insights for HR professionals seeking to foster a more responsible and resilient workforce.

Keywords: Corporate Social Responsibility (CSR), Ethical Leadership, Green HRM, Human Resource Management (HRM), Sustainability

1 Research Scholar, Department of Business Administration, Affiliated to Annamalai University, Chidambaram, Tamil Nadu, India and can be reached at sangeethakrish.mba@gmail.com

2 Professor, Department of Business Administration, Affiliated to Annamalai University, Chidambaram, Tamil Nadu, India and can be reached at prof.vanathivembar@gmail.com

Introduction

The increasing urgency of global challenges, such as climate change, social inequality, and economic instability, has elevated the importance of sustainability and Corporate Social Responsibility (CSR) within organisational strategies worldwide. Traditionally, companies were primarily accountable to shareholders, focusing on maximizing profits and achieving financial success. However, today's stakeholders – including consumers, employees, investors, and communities – demand that organizations play a more active role in addressing pressing environmental, social, and governance (ESG) issues (Carroll, 1991; Porter & Kramer, 2006). This shift has prompted organizations to integrate CSR as a core business function rather than as an ancillary or compliance-driven activity (Wood, 2010; Freeman, 2010). In this context, Human Resource Management (HRM) has emerged as a key driver of sustainable business practices, facilitating the alignment of organisational objectives with CSR initiatives.

HRM practices offer a unique platform for embedding CSR and sustainability into an organization's culture, strategy, and operations (Renwick et al., 2013). Through strategic HRM, organizations can ensure that employees at all levels understand and contribute to CSR goals, thereby fostering a collective commitment to social and environmental responsibility (Jackson et al., 2011). Practices such as green recruitment, sustainable performance management, employee engagement in CSR initiatives, and leadership development are essential in cultivating a workforce that values ethical behaviour and sustainable practices (Cohen et al., 2012). The concept of Green HRM, which focuses on aligning HR practices with environmental management goals, has garnered particular attention as a means to reduce organisational carbon footprints, promote environmental stewardship, and instil eco-consciousness within the workplace (Ahmad, 2015; Jabbour, 2013).

By embedding sustainability principles into HRM practices, organizations can create a resilient and ethically oriented workforce capable of driving positive social and environmental change. Research indicates that a strong CSR orientation within HRM can lead to numerous benefits, including enhanced employee morale, increased retention, improved corporate reputation, and a competitive advantage (Kim & Scullion, 2013; Aguilera et al., 2007). Furthermore, aligning HRM practices with CSR goals contributes to the organization's sustainability in the long term, as employees are more likely to remain loyal to a company that reflects their own ethical values and commitment to societal well-being (Story & Castanheira, 2019).

Despite the evident advantages, many organizations face challenges in implementing sustainable HRM practices. Barriers include a lack of understanding of how to integrate CSR into HR functions, limited resources, and the difficulty of measuring the direct impact of HR-driven CSR initiatives on overall business performance (Aguinis & Glavas, 2012). This paper aims to address these gaps by providing a comprehensive analysis of effective HRM strategies for sustainability and CSR, drawing on case studies and empirical research to outline a practical framework for HR professionals seeking to support organisational sustainability goals.

The study contributes to the growing body of literature on sustainable HRM by offering insights into how HR departments can lead the way in transforming organisational values, moving beyond profit-centric models to embrace a holistic view of corporate responsibility (Boudreau & Ramstad, 2005). This research also emphasizes the role of HR as a change agent that promotes ethical leadership, fosters a sustainable workplace culture, and engages employees in socially responsible practices. As organizations worldwide strive to align with the Sustainable Development Goals (SDGs) outlined by the United Nations, the findings from this paper are intended to guide HR professionals in building more socially responsible and sustainable organizations, ultimately creating a positive impact on both society and business.

Literature Review

As the global business landscape evolves, so does the emphasis on sustainable and socially responsible practices. This section reviews the contributions of Human Resource Management (HRM) to Corporate Social Responsibility (CSR) and sustainability, examining key areas where HRM practices intersect with environmental and social goals. To structure this review, it is divided into thematic areas: the strategic role of HRM in CSR, Green HRM, the impact of CSR-aligned HRM practices on employee engagement and organisational outcomes, and the role of ethical leadership in fostering a CSR culture.

Strategic Role of HRM in CSR

In recent years, organizations have increasingly acknowledged the need to balance profitability with societal impact. CSR has transitioned from a marginal, compliance-driven activity to a core element of business strategy, aimed at satisfying the growing demands of stakeholders (Porter & Kramer, 2006; Wood, 2010). HRM is essential to achieving this balance, as it acts as a bridge between organisational goals and CSR objectives (Renwick et al., 2013; Jackson et al., 2011). By embedding CSR principles into HR policies and practices, organizations foster a culture where employees are aligned with broader social and environmental goals (Aguinis & Glavas, 2012). In this capacity, HRM functions as a driver of social change, with research demonstrating that socially responsible HR practices contribute positively to employee satisfaction, organisational commitment, and public perception (Aguilera et al., 2007).

Green HRM: Environmental Management through HR Practices

Green HRM represents a subset of sustainable HR practices specifically focused on minimizing environmental impact. This approach encompasses eco-friendly recruitment, training, performance management, and employee engagement practices, designed to create a workforce that values environmental responsibility (Ahmad, 2015; Jabbour, 2013). Through green HR practices, companies can develop a more environmentally conscious workforce that actively contributes to reducing the organization's carbon footprint (Renwick et al., 2013). Green HRM practices have shown potential in building an environmentally sustainable organisational culture, as these practices influence employee behaviours and promote long-term environmental stewardship (Jackson et al., 2011). Additionally, research suggests that companies engaged in Green HRM enjoy enhanced reputation and a competitive edge, as they demonstrate proactive responsibility toward environmental sustainability (Jabbour, 2013).

Impact of CSR-Aligned HRM on Employee Engagement and Organisational Outcomes

Aligning HRM with CSR has been shown to impact employee attitudes and organisational outcomes positively. Studies reveal that employees tend to be more engaged and committed to organizations that demonstrate social responsibility, which can, in turn, enhance job satisfaction and reduce turnover (Kim & Scullion, 2013; Story & Castanheira, 2019). For instance, HR practices such as CSR-oriented recruitment and rewards tied to social contributions reinforce a sense of purpose among employees (Aguilera et al., 2007). According to Cohen et al. (2012), CSR initiatives supported by HRM improve talent attraction and retention, as employees seek meaningful work that aligns with their values. This alignment with CSR fosters a deeper commitment to the organization, with positive outcomes for morale, productivity, and organisational identity (Jackson et al., 2011).

CSR-oriented HRM also enhances organisational performance by contributing to the organization's reputation and legitimacy. Companies perceived as socially responsible are more likely to attract ethically conscious employees and loyal customers, thus driving competitive advantage (Porter & Kramer, 2006). Moreover, sustainable HRM practices help establish trust between employees and management, reinforcing an organisational culture where individuals feel valued and aligned with the company's social objectives (Story & Castanheira, 2019).

Ethical Leadership as a Foundation for CSR Practices

The success of CSR initiatives often depends on the organization's ethical foundation, where leadership plays a critical role. Ethical leadership fosters an environment where trust, transparency, and integrity are prioritized, helping to embed CSR into the organisational framework (Aguinis & Glavas, 2012; Carroll, 1991). Leaders who promote ethical decision-making influence the organization's culture and employee behaviour, motivating them to engage in CSR-related activities (Aguilera et al., 2007). HRM can support this by developing leaders who model ethical behaviour, encouraging a commitment to CSR across all levels of the organization.

Developing ethical leadership through HR practices – such as leadership training, mentorship programs, and ethical performance metrics – ensures that CSR remains an integral part of the organization's values and operations (Cohen et al., 2012). As highlighted by Freeman (2010), organizations with ethical leadership are better positioned to build trust and loyalty among employees, fostering a culture where CSR is seen as a shared responsibility rather than a mandated initiative.

Challenges and Future Directions for CSR-Driven HRM

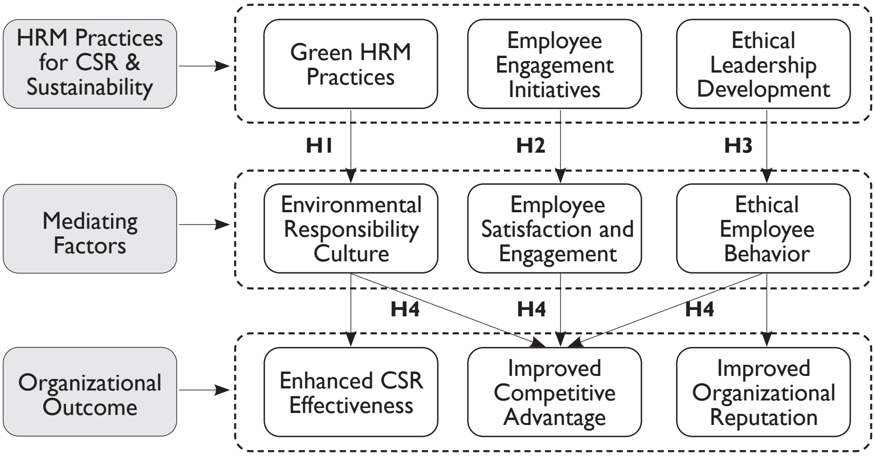
While the benefits of CSR-aligned HRM are well-documented, challenges remain. Many organizations struggle to develop and implement CSR-oriented HR practices due to limited resources, inadequate frameworks for measuring impact, and challenges in sustaining employee engagement (Aguinis & Glavas, 2012). Furthermore, operationalizing Green HRM practices can be particularly challenging in industries where environmental management is not directly integrated into core functions (Boudreau & Ramstad, 2005). Future research should explore ways to overcome these challenges, including developing standardized metrics for assessing the effectiveness of CSR-focused HRM practices and identifying best practices for sustainable workforce engagement.

HRM's integration with CSR and sustainability objectives represents a significant evolution in business strategy. By supporting green initiatives, promoting ethical leadership, and engaging employees in CSR activities, HRM plays a transformative role in building sustainable organizations. This literature review highlights the foundational research that underpins the integration of HRM with CSR, offering insights into how HRM can foster a socially responsible, environmentally conscious workforce.

Hypotheses

Each hypothesis addresses specific aspects of the relationship between CSR-aligned HRM practices and organizational outcomes. These relationships are visually depicted in Figure-1, the conceptual framework, which illustrates the interconnected impact of these practices on key organizational metrics.

Figure-1: Conceptual Framework: The Impact of CSR-Aligned HRM Practices on Organisational Outcomes



Hypothesis 1 (H1): *Green HRM practices positively impact the effectiveness of CSR initiatives within organizations.*

Justification: Green HRM includes practices like eco-friendly recruitment, training focused on sustainability, and performance management aligned with environmental goals. Previous studies show that such practices foster an environmentally responsible culture among employees and enhance organisational commitment to CSR (Renwick et al., 2013; Ahmad, 2015). Green HRM is believed to contribute to the organization's CSR outcomes by cultivating a workforce that values sustainability.

Hypothesis 2 (H2): *CSR-oriented HRM practices enhance employee satisfaction and engagement.*

Justification: Evidence from studies suggests that HRM practices aligned with CSR, such as community involvement, charitable contributions, and employee recognition for CSR participation, positively impact employee morale and job satisfaction (Kim & Scullion, 2013; Story & Castanheira, 2019). CSR-oriented HRM creates a sense of purpose, motivating employees by aligning organisational values with personal values, thus fostering a more engaged workforce.

Hypothesis 3 (H3): *Ethical leadership development within HRM positively influences employees' CSR-related behaviours.*

Justification: Ethical leadership is a cornerstone for creating a CSR-aligned culture within organizations. Leaders who demonstrate integrity, fairness, and a commitment to ethical practices set a standard that influences employees' attitudes and behaviours (Aguinis & Glavas, 2012; Aguilera et al., 2007). Through HRM practices that emphasize ethical leadership training, organizations can strengthen their CSR initiatives by encouraging ethical behaviours and decision-making among employees.

Hypothesis 4 (H4): *CSR-aligned HRM practices contribute to the organization's competitive advantage.*

Justification: According to Porter and Kramer (2006), CSR can be a strategic asset that enhances organisational reputation and stakeholder relationships. Research indicates that HRM practices aligned with CSR – such as employee development programs focused on CSR values and policies that encourage responsible practices – can create a distinct competitive advantage by attracting socially responsible talent, improving organisational image, and enhancing customer loyalty (Jackson et al., 2011).

These hypotheses are designed to empirically test the influence of HRM practices on CSR effectiveness, employee engagement, ethical behaviour, and competitive advantage, providing insights into how HRM can be strategically aligned with CSR objectives to foster a more sustainable and socially responsible organization.

Methodology

This study adopts a quantitative research design to explore the impact of CSR-aligned Human Resource Management (HRM) practices on organisational outcomes, such as CSR effectiveness, employee satisfaction, and competitive advantage. A structured questionnaire was employed to gather primary data from employees working in CSR-focused organizations across Tamil Nadu. Stratified random sampling was used to ensure representation across industries, including IT, manufacturing, and services. A total of 400 respondents participated in the survey, and all items were measured on a five-point Likert scale, ranging from one (Strongly Disagree) to five (Strongly Agree).

The constructs for this study were adapted from established scales in prior research to ensure validity and reliability. Key variables include Green HRM Practices, Employee Engagement Initiatives, Ethical Leadership Development, Environmental Responsibility Culture, Employee Satisfaction and Engagement, CSR Effectiveness, and Competitive Advantage. Each construct was measured using validated scales from renowned studies, with Cronbach's alpha values exceeding 0.7, confirming internal consistency. The questionnaire underwent pilot testing with 30 participants to refine clarity and ensure the appropriateness of measurement items.

Ethical considerations were strictly adhered to throughout the research process. Approval was obtained from the Institutional Ethics Committee, and informed consent was secured from all participants. Anonymity and confidentiality of respondents were ensured. Data were analysed using SPSS for descriptive and reliability assessments and AMOS for Structural

Equation Modelling (SEM). This combination of tools allowed for rigorous analysis of the hypothesized relationships, providing a robust foundation for understanding the strategic role of CSR-focused HRM practices in driving organisational success.

Data Analysis and Results

The data analysis, conducted using SPSS and Structural Equation Modelling (SEM) in AMOS, provides comprehensive insights into the hypothesized relationships between CSR-aligned Human Resource Management (HRM) practices and organisational outcomes. Table-1 below presents the key findings from descriptive and inferential analyses, demonstrating the impact of Green HRM, Employee Engagement Initiatives, and Ethical Leadership Development on CSR effectiveness, employee satisfaction, ethical behaviour, and competitive advantage.

Table-1: Mean Scores and Standard Deviations of Constructs

Construct	Number of Items	Mean (M)	Standard Deviation (SD)	Cronbach's Alpha	Interpretation
Green HRM Practices	6	4.32	0.58	0.89	High adoption of sustainable HR practices.
Employee Engagement Initiatives	5	4.2	0.6	0.87	Strong focus on employee involvement.
Ethical Leadership Development	7	4.18	0.59	0.91	High emphasis on ethical leadership.
Environmental Responsibility Culture	4	4.3	0.54	0.85	Well-embedded environmental culture.
Employee Satisfaction and Engagement	6	4.25	0.61	0.88	Strong employee satisfaction and engagement.
Organisational Reputation	5	4.27	0.57	0.83	Positive perception of the organization.
CSR Effectiveness	5	4.35	0.55	0.86	High CSR impact and performance.
Competitive Advantage	4	4.23	0.63	0.84	Significant strategic benefit realized.

Descriptive Statistics and Reliability Analysis

Descriptive statistics showed high mean scores for Green HRM, Employee Engagement Initiatives, and Ethical Leadership Development, suggesting widespread adoption of these CSR-focused HR practices in the sampled organizations. Reliability analysis, conducted using Cronbach's alpha, revealed values between 0.78 and 0.91 for all constructs, confirming internal consistency and reliability.

Factor Analysis and Model Fit

- Exploratory Factor Analysis (EFA): EFA confirmed the expected factor structure, with all items loading on their intended factors with loadings above 0.6. This supports the construct validity of the model.
- Confirmatory Factor Analysis (CFA): CFA results showed strong fit indices (RMSEA = 0.05, CFI = 0.94, TLI = 0.92), indicating excellent model fit with the observed data. This confirms that the constructs accurately reflect the theoretical model and strengthens the validity of the measures.

Structural Model and Hypothesis Testing

The structural model demonstrated good fit indices (RMSEA = 0.048, CFI = 0.92, TLI = 0.90), meeting the criteria for model acceptability. Each hypothesized path was significant, supporting the theoretical relationships between CSR-aligned HRM practices and key organisational outcomes.

H1: Green HRM Practices → Environmental Responsibility Culture → Enhanced CSR Effectiveness

The path from Green HRM Practices to Environmental Responsibility Culture was positive and significant ($\beta = 0.67$, $p < 0.001$). Environmental Responsibility Culture positively influenced CSR effectiveness ($\beta = 0.59$, $p < 0.001$), indicating that Green HRM fosters an environmentally responsible culture, thereby enhancing CSR impact.

H2: Employee Engagement Initiatives → Employee Satisfaction and Engagement → Improved Organisational Reputation

Employee Engagement Initiatives positively impacted Employee Satisfaction and Engagement ($\beta = 0.62$, $p < 0.001$), which, in turn, positively influenced Organisational Reputation ($\beta = 0.55$, $p < 0.01$). This result highlights the role of engagement-focused practices in enhancing employee satisfaction, contributing to a stronger organisational reputation.

H3: Ethical Leadership Development → Ethical Employee Behaviour → Enhanced CSR Effectiveness

Ethical Leadership Development was found to significantly influence Ethical Employee Behaviour ($\beta = 0.73$, $p < 0.001$), which further contributed to CSR effectiveness ($\beta = 0.64$, $p < 0.01$). This indicates that ethical leadership promotes ethical behaviour among employees, enhancing the perceived effectiveness of CSR efforts.

H4: Mediation by Environmental Culture, Employee Satisfaction, and Ethical Behaviour on Competitive Advantage

Environmental Responsibility Culture, Employee Satisfaction, and

Ethical Employee Behaviour collectively contributed to Increased Competitive Advantage ($\beta = 0.70$, $p < 0.01$). This finding underscores the cumulative effect of CSR-aligned HRM practices on competitive advantage through enhanced culture, employee attitudes, and ethical behaviour.

Indirect Effects and Mediation Analysis

Mediation analysis using bootstrapping confirmed significant indirect effects, validating the mediating roles of Environmental Responsibility Culture, Employee Satisfaction, and Ethical Employee Behaviour. These mediators play a crucial role in translating CSR-focused HRM practices into broader organisational benefits, underscoring the importance of fostering an environmentally and ethically responsible workplace culture.

Findings

This research provides empirical evidence on the impact of CSR-aligned HRM practices on key organisational outcomes, reinforcing the role of HRM as a strategic lever for achieving both CSR and competitive advantage.

Impact of CSR-Aligned HRM Practices

The analysis confirms that CSR-aligned HRM practices – including Green HRM, Employee Engagement Initiatives, and Ethical Leadership Development – significantly enhance CSR effectiveness, organisational reputation, employee satisfaction, and competitive advantage. These findings illustrate the positive influence of CSR-focused HRM on multiple organisational dimensions, promoting social and environmental responsibility while bolstering organisational success.

Mediation Pathways in Achieving Organisational Benefits

The study reveals that Environmental Responsibility Culture, Employee Satisfaction, and Ethical Employee Behaviour are essential mediating mechanisms that facilitate the translation of CSR-aligned HRM practices into broader organisational benefits. Mediation analysis highlights that these factors enhance the effectiveness of CSR initiatives by fostering a responsible culture, increasing employee satisfaction, and encouraging ethical behaviour within the organization.

Strategic Integration of Sustainability and Ethics in HRM

Structural analysis supports the view that incorporating sustainability and ethics into HRM practices is a valuable strategic approach, enabling organizations to strengthen CSR outcomes and competitive positioning. By embedding sustainable HRM practices, organizations can cultivate a culture aligned with CSR goals, making them more attractive to both employees and stakeholders and contributing to long-term competitive advantage.

Conclusion

This study provides critical insights into the strategic role of CSR-aligned Human Resource Management (HRM) practices in driving organisational success. By integrating practices such as Green HRM, Employee Engagement Initiatives, and Ethical Leadership Development, organizations can significantly enhance CSR effectiveness, employee satisfaction, ethical behaviour, and competitive advantage.

The findings reveal that the mediating factors – Environmental Responsibility Culture, Employee Satisfaction, and Ethical Employee Behaviour – are pivotal in translating HRM initiatives into tangible organisational benefits. These mediators not only strengthen CSR outcomes but also contribute to a stronger organisational reputation and long-term competitive positioning.

The structural analysis using SEM validates the hypothesized relationships, highlighting that sustainability and ethics, when embedded in HRM practices, create synergistic effects that align organisational goals with societal and environmental imperatives. Moreover, the confirmed indirect effects emphasize the importance of fostering a culture of environmental responsibility, employee engagement, and ethical leadership to achieve broader organisational benefits.

Implications for Practice

- **Strategic HRM Integration**: Organizations should embed CSR and sustainability principles into their HRM practices to achieve competitive and reputational advantages.
- **Focus on Mediation Mechanisms**: Cultivating environmental responsibility, ethical behaviour, and employee satisfaction should be prioritized to amplify CSR outcomes.
- **Leadership Development**: Investment in ethical leadership training can create a cascading positive impact on employee behaviour and CSR effectiveness.

Future Research Directions

Future research could explore the longitudinal effects of CSR-aligned HRM practices on organisational performance across different industries and cultural contexts. Additionally, examining the role of technology and digital HRM tools in enhancing CSR practices presents a promising area for further investigation.

In conclusion, this study underscores the transformative potential of aligning HRM practices with CSR and sustainability objectives. By adopting a strategic, ethical, and sustainability-focused approach, organizations can not only achieve superior performance outcomes but also contribute meaningfully to societal and environmental well-being.

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The Mediating Effect of Customer Satisfaction on the Relationship Between Brand Loyalty, Brand Awareness, and Customer Repurchase Intention with Reference to a D2C Brand

M Naveen*

Abstract

This study examines the mediating role of customer satisfaction in the relationship between brand loyalty, brand awareness, and repurchase intention within the Direct-to-Consumer (D2C) cookware industry, focusing on The Eco-friendly Cookware brand, using survey data from 156 customers analyzed through correlation and multiple linear regression (SPSS). The findings reveal strong positive relationships among all variables, with brand awareness ($\beta = 0.530$, *p* < 0.01) and customer satisfaction ($\beta = 0.348$, *p* < 0.01) as significant predictors of repurchase intention, demonstrating that customer satisfaction partially mediates the link between brand factors (awareness/loyalty) and repurchase behavior. Practical implications suggest D2C brands should enhance brand visibility and deliver exceptional customer experiences to foster loyalty, targeting environmentally conscious, financially stable, and educated consumers by highlighting eco-friendly benefits, improving brand visibility, and ensuring high satisfaction to strengthen market position and repurchase intention. This study contributes to the underexplored domain of D2C eco-friendly cookware by validating customer satisfaction as a mediator.

Keywords: Brand Awareness, Brand Loyalty, Customer Satisfaction, D2C, Repurchase Intention

Introduction

The burgeoning e-commerce landscape has witnessed significant growth in Direct-to-Consumer (D2C) brands, driven by increasing disposable income

* Naveen,naveenmanokaranal@gmail.com

and evolving consumer preferences (Mishra, 2023). D2C brands have revolutionized the retail industry by bypassing traditional intermediaries and engaging directly with customers, offering unmatched convenience, transparency, and personalized brand narratives. This shift has enabled brands to foster stronger relationships with consumers, thus enhancing customer loyalty and driving repurchase intentions. As competition within the D2C space intensifies, understanding how key brand attributes, such as brand awareness and brand loyalty, influence customer repurchase intention becomes critical for sustaining business growth and customer retention. The rise of D2C brands has been underpinned by the importance of direct customer engagement and the increasing reliance on digital channels for shopping. Brand awareness, defined as the degree to which consumers can identify or recall a brand (Keller, 2003), plays a crucial role in shaping purchasing behavior. Similarly, brand loyalty, characterized by repeat purchases and positive emotional connections (Yi & La, 2004), remains pivotal for fostering long-term customer relationships. Prior research has established the positive relationship between these brand factors and repurchase intention (Ilyas et al., 2020; Chinomona & Maziriri, 2017). However, an emerging debate suggests that customer satisfaction may mediate these relationships, particularly in competitive industries like D2C cookware, where customer expectations are high. Du et al. (2022) highlighted that while strong brand awareness can elevate customer loyalty and reduce switching behaviors, unmet expectations may lead to dissatisfaction and reduced repurchase intention. Despite the wealth of research on brand factors, a critical problem persists regarding the role of customer satisfaction in mediating the relationship between brand awareness, brand loyalty, and repurchase intention. While studies by Ilyas et al. (2020) and Hussain (2016) have explored these relationships, findings remain inconsistent. For instance, Ilyas et al. (2020) found no mediating role of customer satisfaction in the brand awareness-repurchase intention link, whereas other studies, such as those by Ritonga and Digdowiseiso (2023), demonstrated a significant mediating effect. This inconsistency underscores the need for further research to clarify how customer satisfaction influences repurchase behavior, particularly in the D2C cookware industry, where product quality, price perception, and brand narratives are central to consumer decision-making.

A key research gap exists in understanding the mediating role of customer satisfaction within the D2C cookware market. While previous studies have explored these dynamics in other industries, such as cosmetics (Hussain et al., 2024), telecommunications (Srivastava & Sharma, 2014), and halal products (Hussain et al., 2024), limited attention has been given to D2C cookware brands. This gap is significant as cookware products are often high-involvement purchases influenced by brand trust, perceived quality, and price-value considerations. Additionally, existing research has yet to address how D2C cookware brands can leverage brand awareness and loyalty to cultivate customer satisfaction and drive repeat purchases.

Empirical evidence supports the importance of customer satisfaction in influencing repurchase intentions. For example, Ahmed et al. (2010) demonstrated that customer satisfaction mediates the relationship between service quality and repurchase intention in the telecom sector. Similarly, Ritonga and Digdowiseiso (2023) revealed that social media usage and brand awareness directly influence customer satisfaction and repurchase decisions. These findings emphasize the need for businesses to prioritize customer satisfaction as a strategic tool for enhancing brand performance and fostering customer retention. In the local context, the D2C cookware industry in emerging markets like India has witnessed rapid growth due to the rise of e-commerce platforms, digital literacy, and increasing demand for premium kitchenware. Indian consumers, particularly millennials and Gen Z, are increasingly drawn to D2C brands that offer transparent pricing, high-quality products, and authentic brand stories. However, the competitive nature of the market necessitates that brands understand how customer satisfaction can mediate the influence of brand awareness and loyalty on repurchase intention to build sustainable competitive advantages.

The study's objective is to examine the mediating role of customer satisfaction in the relationship between brand factors – specifically brand awareness and brand loyalty – and customer repurchase intention within the D2C cookware industry. By exploring this relationship, the research aims to provide actionable insights for D2C brands to enhance customer satisfaction and strengthen repurchase behaviour. This research paper aims to address the existing gaps in literature by analyzing the intricate relationships between brand awareness, brand loyalty, customer satisfaction, and repurchase intention. The study will contribute to the understanding of how D2C cookware brands can strategically leverage customer satisfaction to drive repeat purchases, thereby enhancing brand performance and customer loyalty in an increasingly competitive market.

Literature Review

Brand Awareness and Repurchase Intention

Brand awareness, defined as the degree to which customers can identify and recall a certain brand in any given circumstance (Bernarto et al., 2020), has been a significant focus in understanding consumer behavior. In the context of e-commerce, Ilyas et al. (2020) examined the relationships between brand recognition, consumer satisfaction, and repurchase intention. They found that while brand awareness positively affects repurchase intention, the indirect effect of customer satisfaction mediating this relationship was unsupported; instead, customer satisfaction directly influenced repurchase intention (Ilyas et al., 2020). Chinomona and Maziriri (2017) corroborated the positive influence of brand awareness on repurchase intention among South African male consumers of cosmetic goods, where higher brand awareness led to increased brand loyalty and repurchase intention. This aligns with the broader marketing perspective that brand awareness is crucial in influencing consumer behavior. However, Ali (2019) highlighted nuances by discovering a weak, negative correlation between brand awareness and repurchase intention for private-label products, attributed to their limited recognition and a price-sensitive demographic prioritizing affordability over brand recognition. This underscores the importance of considering product type, target audience, and purchase motivations, suggesting that for private label products, brand awareness must be paired with other strategies emphasizing product features and value. Du et al. (2022) explored the impact of brand awareness on repurchase intention in online knowledge services, finding that it created switching barriers and fostered customer loyalty, though high expectations from strong brand recognition could lead to dissatisfaction and lower repurchase intention if unmet. Lastly, Razak et al. (2019) added that brand attitude moderates the connection between brand awareness and repurchase intention, with positive attitudes strengthening and negative attitudes weakening this effect. These insights collectively contribute to understanding the complex dynamics between brand awareness and repurchase intention, with varying implications depending on the context and moderating factors.

H1: There is a significant positive relationship between brand awareness and customer repurchase intention.

Brand Loyalty and Customer Repurchase Intention

Brand loyalty, a non-random purchasing behavior exhibited by consumers over time, reflects a preference for certain brands within a category driven by psychological factors and emotional responses (Jacoby, 1971). Pranata and Permana (2021) examined the connection between repurchase intention, brand loyalty, brand association, and brand awareness, proposing that brand awareness and brand association positively influenced brand loyalty, which in turn influenced repurchase intention. Their study supported these relationships, suggesting that companies could enhance repurchase intention by strengthening brand awareness and brand association. Yi and La (2004) associated brand loyalty, characterized by repeat purchases, with positive customer behaviors like recommendations and resilience towards negative experiences. They found that recent experiences (disconfirmation) have a stronger impact on satisfaction for less loyal customers, whereas loyal customers base their decisions more on overall satisfaction, influenced by accumulated positive experiences. This highlights the importance of managing customer expectations to attract new customers while building customer satisfaction to retain loyal ones. Hussain et al. (2024), in a study on brand loyalty towards halal cosmetics among millennial Muslim women in Pakistan, utilized the theory of planned behavior to explore repurchase intention as influenced by a consumer's overall perception of halal cosmetics. They identified product quality, religious beliefs, and trust as significant determinants shaping a positive attitude, which fostered stronger repurchase intention and increased brand loyalty. The study emphasized the mediating role of repurchase intention between a consumer's attitude and brand loyalty, offering insights for brands in the halal cosmetics market to prioritize product quality, align with religious beliefs, and build trust. Upamannyu et al. (2015) investigated the link between customer trust, loyalty, and repurchase intention, finding that customer trust positively influenced both loyalty and repurchase intention, with perceived CSR strengthening this relationship. These findings suggest that CSR initiatives can enhance the positive effects of customer trust on loyalty and repurchase behavior. Foroudi et al. (2014) examined the complexities of brand perception's influence on brand loyalty and purchase intention in the fashion industry using a mixed methodology. Their research indicated that a combination of brand perception elements – brand awareness, perceived quality, brand association, and brand image – exerted the strongest influence on brand loyalty and purchase intention, highlighting the significance of cultivating positive brand perception through a multifaceted approach to drive customer loyalty and purchasing behavior.

H2: There is a significant positive relationship between brand loyalty and customer repurchase intention.

Customer Satisfaction

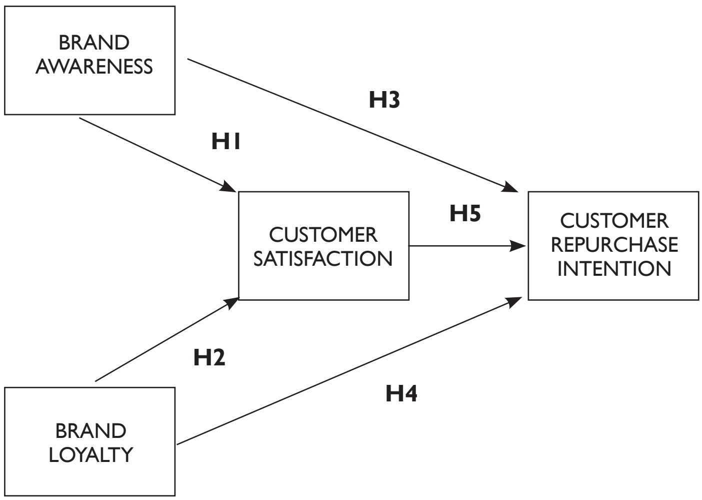
Kotler (1997) defines customer satisfaction as "the satisfaction or dissatisfaction a person experiences after comparing the perceived performance (or result) of a product to their expectations. The comparison between perceived performance and expectations is highlighted in this term." Srivastava and Sharma (2014) investigated the interplay between service quality, corporate image, and customer satisfaction in the telecommunications industry, finding that positive perceptions of service quality and a strong corporate image indirectly affect customer switching behavior through customer satisfaction and repurchase intention. Their study revealed that customer satisfaction acts as a key mediating variable, with high service quality and a favorable corporate image leading to increased repurchase intention and reduced customer churn. This research underscores the importance of businesses prioritizing customer satisfaction to develop a devoted clientele by delivering high-quality services and fostering a positive brand image, ultimately enhancing customer retention. Ahmed et al. (2010) analyzed how consumer satisfaction in Pakistan's telecom industry influences the link between service quality and repurchase intentions, discovering that all dimensions of service quality, except empathy, significantly positively relate to satisfaction. Satisfaction was found to significantly mediate the relationship between service quality and repurchase intentions, indicating that high-quality service leads to increased customer satisfaction and higher repurchase intentions. Hussain (2016) investigated the mediating influence of customer satisfaction in the UAE airline industry, finding significant positive effects of service quality on both brand loyalty and customer satisfaction, emphasizing the need for preventative steps to ensure consumer satisfaction and raise brand loyalty. Recommendations included optimizing service quality across various touchpoints and implementing effective service recovery mechanisms. Additionally, the study revealed that a positive corporate image correlated with increased brand loyalty and customer satisfaction, suggesting strategies such as community engagement and sponsorship initiatives to bolster corporate image and foster greater brand loyalty. Khan et al. (2020) examined how Pakistani SMEs' reputation and use of customer relationship management (CRM) affected customer loyalty, finding that both CRM and company reputation significantly positively impact customer loyalty, with customer satisfaction partially mediating these relationships. This highlights the importance of fostering trust among company staff and implementing effective marketing strategies to enhance company reputation and cultivate greater customer loyalty within the turbulent Pakistani SME market. Ritonga and Digdowiseiso (2023) investigated the mediation effect of customer satisfaction among millennial customers at KFC La Terrace Lenteng Agung, exploring the connections between pricing perception, social media usage, brand awareness, and repurchase decisions. They found that while perceived price had a positive but non-significant direct influence on customer satisfaction, social media usage and brand awareness had significant direct effects on customer satisfaction and repurchase decisions. Furthermore, customer satisfaction played a crucial role as a mediator in these relationships, highlighting the importance of customer satisfaction in shaping repurchase decisions among millennial customers.

H3: Brand awareness positively influences customer satisfaction.

H4: Brand loyalty positively influences customer satisfaction.

H5: Customer satisfaction positively mediates the relationship between brand factors (brand awareness and brand loyalty) and the customer repurchase intention.

Conceptual Framework and Hypothesis



Hypothesis

H1: There is a significant positive relationship between brand awareness and customer repurchase intention.

H2: There is a significant positive relationship between brand loyalty and customer repurchase intention.

H3: Brand awareness positively influences customer satisfaction.

H4: Brand loyalty positively influences customer satisfaction.

H5: Customer satisfaction positively mediates the relationship between brand factors (brand awareness and brand loyalty) and the customer repurchase intention**.**

Research Problem

Understanding how consumers develop brand preferences and make repeat purchase decisions is crucial for businesses in today's competitive landscape. This research delves into the complex interplay between brand awareness, brand loyalty, customer satisfaction, and repurchase intention within the D2C cookware industry. While prior studies have established positive relationships between brand factors and repurchase intention (e.g., Ilyas et al., 2020), the mediating role of customer satisfaction remains under-explored in the context of D2C cookware.

Investigating these relationships offers valuable insights for D2C cookware businesses. By examining how brand awareness and brand loyalty influence repurchase intention, and the potential mediating role of customer satisfaction, this research can inform strategic marketing decisions to enhance customer loyalty and drive repeat purchases (Ilyas et al., 2020). Identifying the factors that contribute to customer satisfaction within the D2C cookware industry allows companies to focus on refining the overall customer experience, ultimately leading to increased brand loyalty and customer retention.

This research addresses a critical gap by exploring the mediating role of customer satisfaction in the relationship between brand factors and repurchase intention within the specific context of D2C cookware. Understanding these drivers can provide D2C cookware businesses with a competitive advantage by enabling them to tailor their brand strategies and offerings to effectively meet customer needs and preferences. The insights gained from this study can inform strategic decision-making across various areas, including product development, branding initiatives, and customer relationship management practices. By aligning marketing strategies with the factors that cultivate customer satisfaction and drive repurchase intention, D2C cookware businesses can achieve sustainable growth and success.

Objectives

To investigate the mediating effect of customer satisfaction on the relationship between brand awareness, brand loyalty, and customer repurchase intention.

Data and Methodology

This study employs descriptive research to gather and analyze data on the characteristics, behaviors, and opinions of customers of The Cookware Brand, The Eco-friendly cookware. A non-probability sampling technique, specifically convenience sampling, was utilized to select a representative subset of the population, ensuring efficient data collection and statistically reliable inferences.

The population for this study consists of various cookware users. The sampling frame includes all members of this target population. Convenience sampling was chosen for its ease and practicality, selecting participants based on their availability and accessibility. A total of 156 customers were included in the sample.

Data collection was carried out using a survey method, employing a well-structured questionnaire. The survey collected both primary and secondary data. Primary data was gathered firsthand to address the research questions, while secondary data provided additional context from existing sources. The questionnaire was designed to collect appropriate data, ensure comparability, minimize bias, and engage respondents.

Reliability analysis showed strong internal consistency for all constructs, with Cronbach's Alpha coefficients exceeding 0.7, indicating reliable measurements.

Table-1: Reliability Test

Construct	No. of Items	Cronbach Alpha
Brand Awareness	5	0.823
Brand Loyalty	5	0.821
Customer Satisfaction	4	0.782
Customer Repurchase Intention	5	0.839

Statistical tools used in the study include the chi-square test, one-way ANOVA, correlation, and multiple linear regression. These tools help assess relationships between variables, analyze group differences, measure the strength and direction of relationships, and model the influence of multiple predictors on the outcome variable.

The statistical analysis was performed using SPSS Statistics software (version 23). This software is widely used for statistical analysis in social sciences and other fields, providing robust capabilities for data administration, analysis, and documentation. The use of SPSS ensured accurate and efficient analysis of the collected data, supporting the reliability and validity of the study's findings.

Results and Discussion

A total of 156 samples were collected through the questionnaire The collected data are screened, categorised, coded And fed in SPSS.

Descriptive Analysis

The breakdown of respondents' ages reveals that a substantial proportion falls within the 41-55 age range (38.5 percentage), followed by 25-40 (23.1 percentage), above 55 (23.1 percentage), and less than 25 (15 percentage) years. Females constitute a majority of the respondent pool, accounting for 61.9 percentage, while males represent 38.1 percentage. The majority of respondents are salaried employees (53.8 percentage), followed by business persons (15.4 percentage), students (15.4 percentage), and retirees (15.4 percentage).

A significant portion of respondents hold master's degrees or higher qualifications (38.5 percentage), followed by bachelor's degrees (30.8 percentage), high school diplomas or equivalents (15.4 percentage), and other degrees (15.4 percentage). A notable percentage of respondents fall within the income bracket of 3,00,000 to 10,00,000 rupees annually (84 percentage), while smaller percentages earn below 3,00,000 (23.1 percentage) or above 10,00,000 rupees (23.1 percentage). Metro cities are the most common residential locations for respondents (46.2 percentage), followed by mid-sized cities (23.1 percentage), suburban areas (15.4 percentage), and rural areas (15.4 percentage).

Nearly half of the respondents (46.2 percentage) view environmental sustainability as very important, while 30.8 percentage consider it somewhat important. A smaller proportion (23.1 percentage) remains neutral on the matter. The majority of respondents (84.6 percentage) currently own eco-friendly cookware, while a minority (15.4 percentage) do not. Most respondents (61.5 percentage) reported rarely purchasing cookware, while smaller percentages purchased occasionally (15.4 percentage) or frequently/very frequently (15.4 percentage). A minor portion (7.7 percentage) never purchased cookware.

Approximately half of the respondents (46.2 percentage) are familiar with The Eco-friendly cookware brand, while a notable percentage (23.1 percentage) are not. Another 23.1 percentage recognize the name but are unsure about the products, and a small proportion (7.7 percentage) are uncertain or prefer not to answer.

Category	Option	Percentage
Age Group	41-55	38.5
	25-40	23.1
	Above 55	23.1
	Less than 25	15
Gender	Female	61.9
	Male	38.1
Occupation	Salaried Employees	53.8
	Business Persons	15.4
	Students	15.4
	Retirees	15.4
Educational Qualification	Master's Degree+	38.5
	Bachelor's Degree	30.8
	High School Diploma	15.4
	Other Degrees	15.4
Income Bracket (Annual)	3,00,000 - 10,00,000	84
	Below 3,00,000	23.1
	Above 10,00,000	23.1
Residential Location	Metro Cities	46.2
	Mid-sized Cities	23.1
	Suburban Areas	15.4
	Rural Areas	15.4
Environmental Sustainability View	Very Important	46.2
	Somewhat Important	30.8
	Neutral	23.1
Ownership of Eco-friendly Cookware	Yes	84.6
	No	15.4
Cookware Purchase Frequency	Rarely	61.5
	Occasionally	15.4

Category	Option	Percentage
Awareness of the Eco-Friendly Cookware Brand	Frequently / Very Often	15.4
	Never	7.7
	Familiar	46.2
	Not Familiar	23.1
	Recognize Name/Unsure	23.1
	Uncertain/No Response	7.7

Statistical Analysis

Correlation

In this section, the relationships between brand awareness, brand loyalty, customer satisfaction, and customer repurchase intention were examined using Pearson correlation coefficients. The null hypothesis (H0) posited that there is no significant association between these variables, while the alternative hypothesis (H1) proposed a significant association.

Table-2 and 3: Correlation Analysis

Descriptive Statistics

	Mean	Std. Deviation	N
Brand Awareness	17.15	3.852	156
Brand Loyalty	16.46	4.616	156
Customer Satisfaction	13.69	3.157	156
Customer Repurchase Intention	17.00	3.895	156

Correlations

		Brand Awareness	Brand Loyalty	Customer Satisfaction	Customer Repurchase Intention
Brand Awareness	Pearson Correlation	1	.919**	.908**	.877**
	Sig. (2-tailed)		.000	.000	.000
	N	156	156	156	156
Brand Loyalty	Pearson Correlation	.919**	1	.838**	.822**
	Sig. (2-tailed)	.000		.000	.000
	N	156	156	156	156
Customer Satisfaction	Pearson Correlation	.908**	.838**	1	.881**
	Sig. (2-tailed)	.000	.000		.000
	N	156	156	156	156
Customer Satisfaction	Pearson Correlation	.877**	.822**	.881**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	156	156	156	156

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

The analysis revealed strong positive correlations between all variables (Table-2 and 3). Specifically, brand awareness was highly correlated with brand loyalty ($r = 0.919$, $p < 0.01$), customer satisfaction ($r = 0.908$, $p < 0.01$), and customer repurchase intention ($r = 0.877$, $p < 0.01$). Similarly, brand loyalty showed strong correlations with brand awareness ($r = 0.919$, $p < 0.01$), customer satisfaction ($r = 0.838$, $p < 0.01$), and customer repurchase intention ($r = 0.822$, $p < 0.01$). Customer satisfaction also exhibited strong correlations with brand awareness ($r = 0.908$, $p < 0.01$), brand loyalty ($r = 0.838$, $p < 0.01$), and customer repurchase intention ($r = 0.881$, $p < 0.01$). Finally, customer repurchase intention was strongly correlated with brand awareness ($r = 0.877$, $p < 0.01$), brand loyalty ($r = 0.822$, $p < 0.01$), and customer satisfaction ($r = 0.881$, $p < 0.01$). These significant positive correlations indicate that higher levels of brand awareness, brand loyalty, and customer satisfaction are associated with higher levels of customer repurchase intention.

The correlation analysis revealed strong positive associations between all variables, indicating that customers who are more aware of the brand, loyal to it, and satisfied with their experiences are more likely to intend to repurchase. This underscores the importance of fostering brand awareness and loyalty, as well as ensuring high levels of customer satisfaction to drive repeat purchases.

Multiple Linear Regression

The multiple linear regression analysis aimed to determine the impact of brand awareness, brand loyalty, and customer satisfaction on customer repurchase intention. The null hypothesis (H0) suggested no significant relationship between these variables, whereas the alternative hypothesis (H1) indicated a significant relationship.

The model summary showed an R value of 0.884, an R-square value of 0.781, and an adjusted R-square value of 0.727, indicating that the independent variables collectively explain 78.1 percentage of the variance in customer repurchase intention. The ANOVA results confirmed the overall model's significance ($F(3, 12) = 14.299$, $p < 0.001$).

Examining the coefficients, brand awareness had a significant positive relationship with customer repurchase intention ($\beta = 0.530$, $t = 1.240$, $p < 0.01$). This suggests that an increase in brand awareness leads to an increase in customer repurchase intention. Brand loyalty also showed a significant positive relationship with customer repurchase intention ($\beta = 0.033$, $t = 0.092$, $p < 0.01$), indicating that higher brand loyalty results in higher customer repurchase intention. Lastly, customer satisfaction demonstrated a significant positive relationship with customer repurchase intention ($\beta = 0.348$, $t = 1.176$, $p < 0.01$), implying that increased customer satisfaction enhances repurchase intention.

The final regression equation derived from the model is:

Repurchase Intention = 0.884 + 0.530 (Brand Awareness)+0.033(Brand Loyalty)+0.348(Customer Satisfaction)

Repurchase Intention = 0.884 + 0.530 (Brand Awareness) + 0.033 (Brand Loyalty) + 0.348 (Customer Satisfaction)

These findings highlight the significant roles of brand awareness, brand loyalty, and customer satisfaction in predicting customer repurchase intention. The adjusted R-square value of 0.781 indicates a high explanatory power of the model. Assumptions of linearity, independence of errors, constant variance, and normality of residuals were met, and no significant multicollinearity was detected among the independent variables.

Table-4, 5 and 6: Multiple Regression

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.884[a]	.781	.727	2.05325	.781	14.299	3	12	0.000	1.091

a. Predictors: (Constant), customer satisfaction, brand loyalty, brand awareness

b. Dependent Variable: Customer repurchase intention

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	180.847	3	60.282	14.299	.000[b]
	Residual	50.590	12	4.216		
	Total	231.438	15			

a. Dependent Variable: Customer repurchase intention

b. Predictors: (Constant), customer satisfaction, brand loyalty, brand awareness

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
		B	Std Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.252	2.497		.501	0.00					
	Brand Awareness	.535	.432	.530	1.240	0.00	.869	.337	.167	.100	10.028
	Brand Loyalty	.028	.308	.033	.092	0.00	.812	.027	.012	.145	6.897
	Customer Satisfaction	.415	.353	.348	1.176	0.00	.846	.321	.159	.208	4.801

a. Dependent Variable: Customer repurchase intention

The multiple linear regression analysis further substantiated these findings, demonstrating that brand awareness, brand loyalty, and customer satisfaction are significant predictors of customer repurchase intention. Among these, brand awareness had the strongest impact, followed by customer satisfaction and brand loyalty. This suggests that increasing customer awareness about the brand can significantly enhance their intention to repurchase, supported by their loyalty and satisfaction with the brand.

The high adjusted R-square value (0.781) indicates that the model explains a substantial portion of the variance in repurchase intention, confirming the robustness of the predictors used. The findings are consistent with prior research, emphasizing the critical role of customer satisfaction as a mediator in the relationship between brand-related factors and customer loyalty outcomes. The majority of respondents fall within the 41-55 age range and reside in metro cities.

This demographic segment could be a primary target audience for The Eco-friendly cookware's marketing efforts.

Implication

The findings of this study offer important implications for The Eco-friendly cookware 's marketing and operational strategies. With females constituting a significant portion of the respondent pool (61.9 percentage), The Eco-friendly cookware could tailor its messaging and product offerings to better appeal to this demographic. Marketing campaigns that emphasize convenience, health benefits, and eco-friendly cookware features are likely to resonate well with female consumers. Additionally, the majority of respondents being salaried employees (53.8 percentage) presents an opportunity for The Eco-friendly cookware to focus on marketing strategies that align with the needs and preferences of working professionals. Highlighting time-saving features, durability, and the environmental benefits of their products could strengthen the appeal to this segment.

The demographic data also reveals that a notable proportion of respondents hold master's degrees or higher qualifications (38.5 percentage) and fall within the income bracket of 3,00,000 to 10,00,000 rupees annually (84 percentage). This financially stable and educated consumer base aligns well with the premium positioning of The Eco-friendly cookware 's eco-friendly cookware. The company can leverage this insight by reinforcing the value proposition of their products, emphasizing quality, innovation, and sustainability to attract this target audience.

The results further highlight the growing importance of environmental sustainability, with 46.2 percentage of respondents considering it very important and 30.8 percentage viewing it as somewhat important. This aligns with The Eco-friendly cookware 's eco-friendly brand positioning.

To capitalize on this trend, the company should continue to emphasize the environmental benefits of its products in marketing campaigns, such as reduced carbon footprint, toxin-free materials, and long-term sustainability benefits. These messages are likely to resonate with environmentally conscious consumers and enhance the brand's appeal.

The correlation analysis revealed strong positive associations between brand awareness, brand loyalty, customer satisfaction, and customer repurchase intention. Specifically, brand awareness had the strongest impact on repurchase intention ($r = 0.919$, $p < 0.01$), followed by customer satisfaction ($r = 0.881$, $p < 0.01$) and brand loyalty ($r = 0.822$, $p < 0.01$). These findings underscore the importance of building and maintaining a strong brand image. The Eco-friendly cookware should invest in initiatives to enhance brand visibility through targeted advertising, influencer collaborations, and social media campaigns. Additionally, fostering brand loyalty through consistent product quality, customer engagement, and rewards programs could encourage repeat purchases.

The multiple linear regression analysis further substantiated these insights, showing that brand awareness, loyalty, and customer satisfaction collectively explain 78.1 percentage of the variance in repurchase intention. The derived regression model highlights that increasing brand awareness ($\beta = 0.530$), improving customer satisfaction ($\beta = 0.348$), and strengthening brand loyalty ($\beta = 0.033$) significantly enhance customer repurchase intention. These findings suggest that The Eco-friendly cookware should prioritize strategies aimed at improving customer satisfaction, such as exceptional customer service, product innovation, and addressing consumer feedback promptly. By ensuring a positive customer experience, the company can drive repeat purchases and foster long-term relationships.

Overall, the study highlights key areas of focus for The Eco-friendly cookware to achieve sustained business growth and customer retention. By appealing to a financially stable, educated, and environmentally conscious consumer base, the company can strengthen its market position. Emphasizing eco-friendly benefits, enhancing brand visibility, and delivering high levels of customer satisfaction are critical strategies for driving customer repurchase intention and building brand loyalty. These actionable insights can guide The Eco-friendly cookware in aligning its marketing strategies with consumer preferences and ensuring continued success in the competitive market.

Conclusion

The investigation conducted into the relationship between brand factors, customer satisfaction, and repurchase intention within The Eco-friendly cookware's cookware market offers valuable insights for strategic marketing endeavors. The research elucidates the intricate interplay among brand awareness, brand loyalty, customer satisfaction, and repurchase intention, affirming their pivotal roles in influencing consumer behaviors and perceptions. Particularly notable is the mediating effect of customer satisfaction on repurchase intention, emphasizing the importance of fostering positive customer experiences. Moreover, the demographic analysis highlights key consumer segments, guiding targeted marketing efforts tailored to resonate with urban residents, particularly the 41-55 age group, and environmentally conscious consumers. In conclusion, the research findings underscore the importance of brand awareness, brand loyalty, and customer satisfaction in driving repurchase intention. These factors are crucial for enhancing customer retention and loyalty. Moving forward, investing in initiatives to bolster brand visibility, cultivate customer loyalty, and prioritize product quality and service excellence emerges as paramount for sustaining competitive advantage and driving business growth. By implementing these strategic recommendations, The Eco-friendly cookware can navigate the dynamic market landscape, foster enduring customer relationships, and thrive in the competitive cookware market.

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Annexure – Questionnaire

Demographic Details

1) Name _______
2) Age a) 18-30 b) 31-45 c) 45-60 d) 60 and above
3) Gender a) male b) female
4) Occupation
   A. Student
   B. Professional
   C. Homemaker
   D. Retired / Unemployed

5) Education Level
   A. High School Diploma or Equivalent
   B. Bachelor's Degree
   C. Master's Degree or Higher
   D. Prefer not to answer
6) Household Income: (annually)
   A. below 50000
   B. 50000-100000
   C. 100000-500000
   D. 500000 and above
7) Location
   A. Metro City
   B. Mid-Sized City
   C. Suburban Area
   D. Rural Area
8) How important is environmental sustainability to you when making purchasingdecisions?
   A. Very Important
   B. Somewhat Important
   C. Neutral
   D. Somewhat Unimportant / Not Important
9) Do you currently own any eco-friendly cookware?
   A. Yes
   B. No
10) In the past year, how often have you purchased cookware (including pots, pans,etc.)?
    A. Never
    B. Rarely
    C. Occasionally
    D. Frequently / Very Frequently
11) Are you familiar with the D2C brand The Eco-friendly cookware ?
    A. Yes, I am familiar with The Eco-friendly cookware
    B. No, I am not familiar with The Eco-friendly cookware
    C. I recognize the name, but I am not sure what they sell
    D. Not sure / Prefer not to answer

The following research questions utilize a Likert scale format (1 = Strongly Disagree, 5 = Strongly Agree) to explore the independent and dependent variables. Strongly Disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, Strongly Agree = 5

Brand Awareness
I can quickly recall the symbol or logo of The Eco-friendly cookware , the eco-friendly cookwareproduct, when it appears in social media.
Some characteristics of The Eco-friendly cookware , the eco-friendly cookware product, come to mymind quickly when it appears in social media.
I am aware of The Eco-friendly cookware , the eco-friendly cookware product, when it appears insocial media.
I can recognize The Eco-friendly cookware , the eco-friendly cookware product, when compared toother competing products/brands that appear in social media.
the Eco-friendly cookware products are best when compared with other brands cookware products
Brand Loyalty
Compared to other eco-friendly cookware brands with similar features, I would be willingto pay a premium (higher) price for The Eco-friendly cookware 's cookware.
If The Eco-friendly cookware 's eco-friendly cookware is available at a store, I would not considerbuying a different brand.
I enjoy purchasing eco-friendly cookware from The Eco-friendly cookware
When looking for eco-friendly cookware, The Eco-friendly cookware would be my first choice
I would recommend The Eco-friendly cookware 's eco-friendly cookware to other people who arelooking for sustainable kitchenware options.
Repurchase Intention
Considering my experience with The Eco-friendly cookware 's eco-friendly cookware, I intend tocontinue purchasing from them in the future.
I intend to seek information about new eco-friendly cookware products from The Eco-friendly cookware before considering other brands.
I would recommend The Eco-friendly cookware 's eco-friendly cookware to people in my networkwho are looking for sustainable kitchenware options.
When I need new eco-friendly cookware in the future, The Eco-friendly cookware will be my firstchoice to consider.
Unless unforeseen circumstances arise, I intend to keep purchasing eco-friendly cookwarefrom The Eco-friendly cookware in the future.
Customer Satisfaction
How satisfied are you with your overall experience using Eco-friendly cookware products?
In general terms, how satisfied are you with the Eco-friendly cookware brands you have used?
In general, how satisfied are you with the service you have received from Eco-friendly cookware products?
Are you happy with your decision to use Eco-friendly cookware products?

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Advertisement on Children and Its Impact on Parents Buying Behaviour: A Conceptual Model

Chithira John*

Abstract

Advertisement is a marketing strategy used to promote products and services to the people. Now a days children get attracted towards advertisement and they request their parents to buy those products advertised which in turn has a greater influence on the buying behaviour of parents. The main objective of the study is to develop a conceptual model showing relationship between impact of advertisement on children and its influence on parents buying behaviour. The study uses exploratory and descriptive research approach for conducting the research. Multi Stage Sampling method has been used as the sampling technique and the data were collected from 1540 parents having children in the age group 8 to 14 years residing in Delhi. A pre structured questionnaire has been used to collect data from the respondents. Path analysis using AMOS 26 was done for testing the proposed model and all the 11 relationships proposed in the model were significant.

Keywords: Buying Behaviour, Children, Parents, Pester Power, Purchase Request

Introduction

Advertising occupies an essential position as one of the marketing equipment's, which the organizations use to persuade and draw the interest of customers about the existence of their offerings. One can't avoid the necessary position of advertising in the delivery of information and imperative product facts for buyer to enhance their buying decisions (Xiong & Bharadwaj, 2013). Advertisements has several functions and got many intentions, which includes the purpose of holding and controlling customers attention (Boush et al., 2015; Wright et al., 2005), which is

* Assistant Professor, BCIPS, Delhi and can be reached at chithirajohn7@gmail.com

very crucial in the case of kids who may have a short attention period. Entertainment entails to attracting a child towards the advertisement by way of music, jingles, animation, celebrity, free gifts etc. Kids pay high attention to the advertisement which makes them to enjoy. The enjoyment has been determined to be a characteristic by the use of humor, cartoon characters, celebrities, and swift action in advertisements (Ward, Wackman & Wartella E. 1977; Gorn & Goldberg, 1978).

Organisations try to increase the demand for products or services by way of influencing kids' choices via advertisements. If the purchase requests of the children are not fulfilled, they pester their parents which has a greater influence on their buying behaviour. Parents are now getting the details from their children to purchase any kind of product ranging from ordinary items to long lasting things (Sharma & Das Gupta, 2009). Thus, the position of children in the family's buying decision- making process is not ignorable as they have a distorting effect on their parents" buying behaviors". Children's function in the family buying decision-making process varies in accordance to the special product categories and in the buying decision-making process (Chaudhary & Gupta, 2012). So, advertisement plays an important role in children's purchase request which in turn has a greater influence on the buying behaviour of parents.

Objectives of the Study

- To study the relationship between attributes of advertisement (celebrity, jingles, animation, and free gifts) and attention capturing intention of advertisement.
- To determine the role of advertising intentions in activation of persuasion attribution among children.
- To ascertain the impact of peer influence on the children's persuasion attribution for advertised product items.
- To analyse the influence of persuasion attribution in the purchase request raised by children.
- To determine the relationship between purchase request and pester power, pester power and buying behaviour of parents.

Hypothesis Development

Celebrity Advertisements and Attention Capturing Intention of Advertisement

Celebrity advertisement will create a desire in the minds of the children to have the product, then the children acquire the product by buying it or forcing their parents to buy it for them (saraf V,2013). Advertisement acted by any film stars, sports star and even kids they like capture their attention. Companies have also understood the fact and started endorsing celebrities to attract the children. People give more attention to advertisement featuring a celebrity than ads acted by non-famous people (Falsarella, C. R. B. M., de Oliveira, J. H. C., & Giraldi, J. D. M. E.,2017).

H_{1a} - There is a significant positive relationship between celebrity advertisements and attention capturing intention of advertisement

Jingles in Advertisement and Attention Capturing Intention of Advertisement

A catchy jingle in an advertisement captures a child's attention. An attention capturing jingle in advertisement will make the kids to remember the advertisement and the products advertised. Jingles in advertisement will attract the consumers and will help in product retention and recall when compared to advertisement without jingles (Shakil, A., & Siddiqui, D. A. 2019). Music in advertising helps in remembering the product and get attracted to it (Sri Sailesh 2015).

H_{1b}- There is a significant positive relationship between jingles in advertisement and attention capturing intention of advertisement.

Animation in Advertisement and Attention Capturing Intention of Advertisement

The animated spoke characters in advertisement may influence a child's attention and retention of the product (Neelay, Schumann 2004). The liking of the animated characters has a great effect on product and brand recognition (Shuja, Ali, Anjum, Rahim 2016). It was also noticed that the effects of animated advertisements were greater than general advertisements, especially in those products targeted towards children (Nasir, Jalbami 2009).

H_{1C}- There is a significant positive relationship between animation in advertisement and attention capturing intention of advertisement

Free Gifts in Advertisement and Attention Capturing Intention of advertisement

Giving free gifts with the product is a marketing strategy used by manufacturers to capture attention and sell the product at premium price. Most of the children are attracted to the fancy gifts offered by manufacturers and buy the product for obtaining the free gift associated with it. The kids can also recognize and recall the product with free gifts (Mary &,Simone 2004). Kids were influenced by the free gifts in Kinder joy and make them to purchase again and again (Anish John, A & Sarika Mohan. (2015).

H_{1d}- There is a significant positive relationship between free gifts in advertisements and attention capturing intention of advertisement.

Attention Capturing Intention of Advertisement and Persuasion Attribution

Several attention capturing methods are utilized to maintain kid's attention (Campbell, 1995), however the most famous one consists of the use of promotional characters (Jenkin et al., 2014; Page & Brewster, 2007). When children's attention is attracted by pleasing visual approaches, it leads to persuasion attribution among children (Moses & Baldwin, 2005). It is predicted that kids potential to grasp the attention capturing intention will activate persuasion attribution by making persuasion more salient and exposed (Wentzel, Tomczak, & Herrmann,2010).

H_{2a}- There is a significant positive relationship between attention capturing intention of advertisement and persuasion attribution

Liking Intention of Advertisement and Persuasion Attribution

While kids may not always be in a position to buy a brand or goods themselves, advertisement made of entertaining elements induces liking towards it which creates persuasion in the minds of the kids. Some researchers have found that likability towards advertisement results into recall and high levels of recognition (Gulla 2014). Children liking toward advertisement also depends on the type of product being advertised (Scammori, D. L., & Christopher, C. L. (1981)). Children like advertisement of FMCG products and toys because these advertisement are attractive and also they also like these products (Chan K. 2000)

H_{2b}- There is a significant positive relationship between liking intention of advertisement and persuasion attribution

Informative Intention of advertisement and Persuasion Attribution

Advertisements often give facts about new brands or products providing an informative motive (Cotte et al., 2005). Traditionally, viewing commercials as a source of information has been suggested to appear formerly in childhood (Carter et al. 2011; Moses & Baldwin, 2005) and has been determined to limit with age (John, 1999). However, perceiving advertising as a source of facts is quite frequent among children of all ages (Andronikidis & Lambrianidou, 2010) and current qualitative research suggests that some children, in fact, may also consider the informative nature of advertisements as quite useful (Mehta et al.,2010).

H_{2c}- There is a significant positive relationship between informative intention of advertisement and Persuasion attribution

Peer Influence and Persuasion Attribution

Advertising information is positioned in a context in which peers play a vital role. Peers (e.g., buddies, friends, and classmates) have long been diagnosed as taking part in a buying behaviour function in shaping kid's consumer behaviour (e.g., Moschis and Churchill 1978).) The focus on 8- to 12-year-olds, the so-called tweens is due to the fact that the children in this age crew are most involved in seeing television advertisement (Fielder et al. 2007) and their willingness to conform to the peer team is at its peak (John1999; Valkenburg 2004).

***H_3* - There is a significant positive relationship between peer Influence and persuasion attribution**

Persuasion Attribution and Purchase Request

Atkin (1981) found that, respondents who reported heavier exposure to children's TV (& its advertising) also reported making more requests for advertised products like toys, cereals, & fast foods. Kraak and pelletier (1998) stated that, the TV commercials & prime – time activities have been identified as vital impact on the kinds of food that kids ask their parents to purchase for them and food they purchase for themselves.

***H_4* - There is a significant positive relationship between persuasion attribution and purchase request**

Purchase Requests and Pester Power

The liking of advertised products make the kids to buy these products by themselves or ask their parents to purchase them. TV advertisement has some attractive attributes which leads to continuous requests to parents for purchase which may lead to parent child conflict (Andguladze, 2007). Sometimes the kid bargains and cries to get the advertised product .Some kids also applies different persuasion techniques such as anger, negotiation, flattery and lies to convince their parents to buy the advertised products. Children put pressure on their parents to buy advertised products which leads to family conflict (Gulla 2014).

***H_5* - There is a significant positive relationship between purchase requests and pester power**

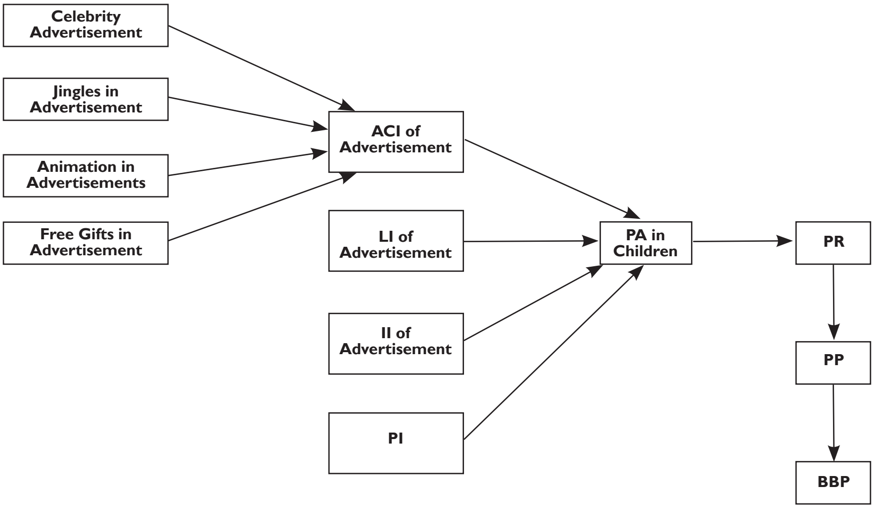
Pester Power and Buying Behavior of Parents

The influencer role of children showcases over purchase choices in family along with the nagging influence that they have on their parents, has accelerated considerably ahead of what he or she can earn when their buying impact is regarded (Shoham and Dalakas, 2005; Kaur and Singh, 2006). The pester power in children affect the buying behavior of parents. They will consider their child preferences while going for shopping (Gulla 2004). Marketers are making their advertisement more attractive in such a way that the kid make use of the pester power in nagging their parents to buy the product of their choices.

***H_6* - There is a significant positive relationship between pester power and buying behavior of parents**

The hypothesis relationship are depicted in the Figure-1

Figure-1: Conceptual Framework of impact of advertisement on children and its influence on buying behavior of parents



ACI: Attention Capturing Intention PA: Persuasion Attribution
LI: Liking Intention II: Informative Intention
PI: Peer Influence PR: Purchase Request
PP: Pester Power BBP: Buying Behavior of Parents

Research Methodology

Data Collection and Sample

Research design chosen for the study is explorative and descriptive and the research has been conducted in 11 districts of Delhi. A pre structured questionnaire has been used to collect data from the respondents. The respondents of the study are parents in Delhi having children between the age group 8 to 14. The researcher used Sample Size Calculator to make an estimation of the sample size required for the study. The resultant sample size obtained was 385 for the population 8298816 at 95% confidence level with a confidence interval 5.

It was determined to gather as many samples as viable above and beyond the calculated sample size. When the sample size increases the precision of the outcomes additionally increases. So, it is decided to gather data from 4 times the size of the resulted sample size (385*4=1540). A total of 1540 samples are collected from the 11 districts of Delhi. The number of samples to be collected from each district was fixed in proportion to the total number of parents in each district. From the 1540 questionnaires, only 1378 questionnaires were complete and accurate for the study. Therefore, a total of 1378 responses had been used for the data analysis. The sampling technique used for collecting data is multistage random sampling. In the first stage the researcher selected all the 11 districts of Delhi. In the second stage sub-divisions from each district are selected. From all the eleven districts, the number of sub-divisions for the study was fixed in proportionate to the total number of sub-divisions in each district. In the third stage schools are selected randomly from the list of schools of these selected sub-divisions.. The questionnaires are then randomly disbursed to the students at each school studying in class 3rd to class 9th. Students had been instructed to take their questionnaire home and get it filled by their parents and bring it back within one week. The sample profile is identified on Table-1.

Table-1: Sample Profile

Criteria	Category	Number of Respondents	Percentage
Gender	Male	907	65.8
	Female	471	34.2
		1378	100%
Age	Below 30	31	2.2
	30-35	216	15.7
	36-40	492	35.7
	Above 40	639	46.4
		1378	100%
No of children	One Children	234	17.0
	Two Children's	904	65.6
	Three Children's	231	16.8
	Above Three	09	0.7
		1378	100%
Age of Child	8-9	289	21
	10-11	415	30.1
	12-14	674	48.9
		1378	100%
Family Type	Nuclear	823	59.7
	Joint	555	40.3
		1378	100%

Measures

The researcher developed a structural survey instrument based on the items from the literature. After generating the item pool, the researcher evaluated the scaling and formatting options. Five point Likert scale is used to elicit responses for all items. The exploratory research helps the researcher to identify the variables and scales needed for the study. The variables selected for the study are Celebrity, Jingles, Animation, Free gifts, Advertising intentions, Peer influence, Persuasion attribution, Purchase request, and Pester power and Buying behavior of parents. Advertising Intentions are measured by using three variables. They are Attention capturing intention, Liking Intention and Informative Intention (Tarabashkina liudmila et.al, 2018). The influence of celebrity, jingles, animation and free gifts in advertisement for capturing the attention of children is also studied. The 4 dimensions of celebrity were selected from previous studies (Jain deepmala & Girdhar seema 2014, Soni abhishek, 2016). The 4 item scale of music/jingle are selected based on previous studies (V.sri sailesh, 2015). Animation is measured using 4 items (Shuja, K., et.al, 2016, Neelay M. Sabrina & Schumamm David W, 2004). The four item scale of free gifts is based on previous studies (Rozendaal esther, 2011). The 4 item scale of attention capturing intention, 4 item scale of liking intention, 5 item scale of informative intention and 3 item scale of persuasion attribution is taken from previous studies (Tarabashkina L, Quester P, & Tarabashkina O,,2018).The 4 dimensions of peer influence is chosen from previous studies (Singh, R., & Nayak, J. K, 2014). The 5 item scale of purchase request is taken from (Arnas yasare aktas, 2006 & Ahmad, W, et.al, 2013). Pester power is measured using 6 items (Gulla anju & Purohit harsh 2013) The dependent variable buying behavior of parents is measured using 5 item (Gulla anju & Purohit harsh, 2013).

Results

The Measurement Model

We initiated our analysis by applying Confirmatory Factor Analysis (CFA) using AMOS. As shown in the Table-2, the results demonstrate that our CFA model fitted satisfactorily: CMIN/DF -3.135, 3.135, CFI .950, GFI .907 AGFI.893 RMSEA.039 P CLOSE -1.000 (Bagozzi & Yi, 1988; Byrne, 1998; Wheaton, Muthen, Alwin, & Summers, 1977). In this study, Convergent validity measures the extent to which the indicators truly represent the intended latent construct. Standardised factor loadings greater than 0.50, Critical Ratios higher than 0.7, and AVE close to or above 0.50 indicate convergent validity of the latent constructs used in the model. Fornell and Larcker (1981) present a method for assessing the discriminant validity of two or more factors (constructs). According to them, AVE for each construct should be greater than its shared variance with any other construct. Table-2 indicates that the results of CR value which is greater than 0.7 for all the factors and AVE values are more than 0.5 support the construct validity of the constructs.

Table-2: Test of Reliability and Convergent Validity

Sl. No.	Factor name	Item	Cronbach's alpha	Factor Loading	CR	AVE
1	Celebrity Advertisement	Celebrity_1	.878	.788	0.879	0.647
		Celebrity_2		.763		
		Celebrity_3		.760		
		Celebrity_4		.719		

Sl. No.	Factor name	Item	Cronbach's alpha	Factor Loading	CR	AVE
2	Jingles in Advertisement	Jingle_1	.893	.824	0.893	0.676
		Jingle_2		.800		
		Jingle_3		.767		
		Jingle_4		.723		
3	Animation in Advertisement	Animation_1	.910	.814	0.911	0.719
		Animation_2		.808		
		Animation_3		.804		
		Animation_4		.773		
4	Free Gifts in Advertisement	Free_Gifts_1	.901	.844	0.918	0.737
		Free_Gifts_2		.841		
		Free_Gifts_3		.820		
		Free_Gifts_4		.770		
5	Attention Capturing Intention of Advertisement	ACI1	.828	.870	0.814	0.531
		ACI2		.830		
		ACI3		.826		
		ACI4		.718		
6	Liking Intention of Advertisement	Liking_Intention_1	.925	.790	0.925	0.757
		Liking_Intention_2		.784		
		Liking_Intention_3		.765		
		Liking_Intention_4		.733		
7	Informative Intention of Advertisement	Informative_Intention_1	0.859	.824	0.863	0.559
		Informative_Intention_2		.785		
		Informative_Intention_3		.783		
		Informative_Intention_4		.748		
		Informative_Intention_5		.708		
8	Peer Influence	Peer_Influence_1	0.869	.809	0.869	0.625
		Peer_Influence_2		.789		
		Peer_Influence_3		.755		
		Peer_Influence_4		.753		
9	Persuasion Attribution	Persuasion_Attribution_1	0.857	.773	0.863	0.679
		Persuasion_Attribution_2		.753		
		Persuasion_Attribution_3		.639		
10	Purchase Request	Purchase_Request_1	0.890	.640	0.890	0.669
		Purchase_Request_2		.585		
		Purchase_Request_3		.584		
		Purchase_Request_4		.563		
11	Pester Power	Pester_power_1	0.924	.820	0.922	0.665
		Pester_Power_2		.805		
		Pester_Power_3		.767		
		Pester_power_4		.763		
		Pester_power_5		.729		
		Pester_Power_6		.677		

Sl. No.	Factor name	Item	Cronbach's alpha	Factor Loading	CR	AVE
12	Buying Behaviour of Parents	Buying_Behaviour_1	0.784	.795	0.782	0.508
		Buying_Behaviour_2		.705		
		Buying_Behaviour_3		.692		
		Buying_Behaviour_4		.668		

Hypothesis Testing

The structural model and hypothesis were checked using Structural Equation Modeling (SEM). Twelve factors were included in the model and eleven relationships have been studied using SEM. SEM is a very powerful multivariate approach and uses a conceptual model, path diagram and system of linked regression-style equations to capture complex and dynamic connections within a web of observed and unobserved variables.

Table-3: Summary of Model Fit

Paths and Hypothesis	Critical Ratio	Regression Coefficients	Significance	Decision
H1a – Celebrity advertisement – Attention Capturing Intention of advertisement	29.574	.272	p<0.05	Supported
H1b – Jingles in advertisement – Attention Capturing Intention of advertisement	26.354	.242	p<0.05	Supported
H1c – Animation in advertisement – Attention Capturing Intention of Advertisement	30.394	.260	p<0.05	Supported
H1d – Free gifts in advertisement–Attention Capturing Intention of Advertisement	33.279	.248	p<0.05	Supported
H2a – Attention Capturing Intention of advertisement– Persuasion Attribution	11.028	.195	p<0.05	Supported
H2b – Liking Intention of advertisement – Persuasion Attribution	11.634	.169	P<0.05	Supported
H2c – Informative Intention of advertisement – Persuasion Attribution	4.189	.063	p<0.05	Supported
H3 – Peer Influence – Persuasion Attribution	11.431	.165	p<0.05	Supported
H4 – Persuasion Attribution – Purchase Request	28.910	1.55	p<0.05	Supported
H5 – Purchase Request – Pester Power	35.736	1.289	p<0.05	Supported
H6 – Pester Power – Buying Behavior of Parents	21.165	0.359	p<0.05	Supported

Model Fit Measures:
CMIN/DF = 4.96, CFI = 0.987, GFI = 0.982, AGFI = 0.954, RMSEA =0.054, PCLOSE = 0.224

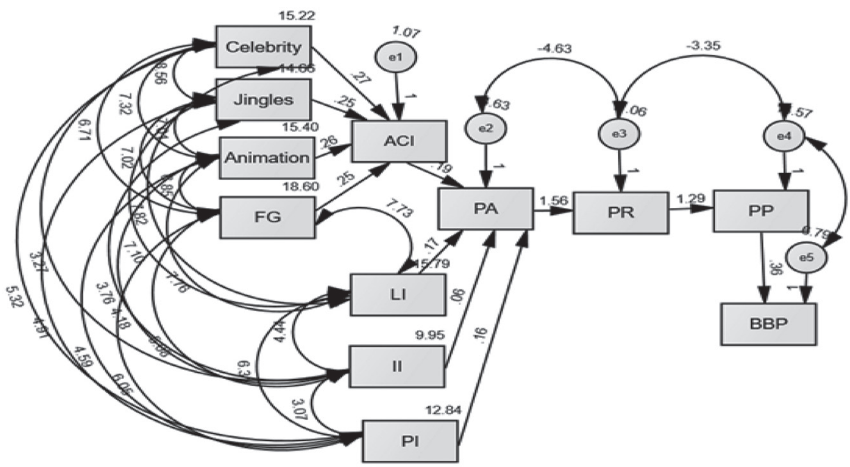
The testing of hypothesis indicates that there is a significant effect of all the four variables celebrity, jingles, animation and free gifts in advertisement with attention capturing intention of advertisement (b = 0.272,0.248,0.260,0.248, p<0.05).It also shows a significant effect between all the three intentions(attention capturing intention, liking intention and informative intention of advertisement) to persuasion attribution(b =.195,.169,.063). The relationship between peer influence and persuasion attribution is significant (b = 0.165, p<0.05). Persuasion attribution has a significant effect on purchase request (b = 1.55, p<0.05). Purchase request significantly influences pester power (b = 1.28, p<0.05). Finally, pester power has a significant effect on buying behavior of parents (b = 0.359, p<0.05).

Model fit Measures

Results in Table-3 show that hypothetical model fits the data well. The model fit showed χ = 154.017, df = 31, (p value <.05), CFI = 0.987, GFI = 0.982, AGFI = 0.954, RMSEA = 0.054. The Tucker Lewis Index at 0.973 indicates that the model fit is acceptable. CMIN/DF reported as 4.968 was significant (p<0.05). The threshold values of CFI. GFI and AGFI were all close to 1 and hence indicated good fit. RMSEA at 0.054 was within the acceptable range and hence acceptable. PCLOSE = .224 which is greater than 0.05 and hence within the threshold limit. Additionally, TLI, NFI, RFI values have also been extracted for the model and found to be satisfactory. It may be mentioned that all estimated parameters were significant at the 0.05 level. Correspondingly, all the assessment measures indicate that the hypothesised conceptual framework exhibits a good fit to collected data and the model is in turn acceptable.

The AMOS output of the model is shown in Figure-2

Figure-2: AMOS output



Conclusion and Implications

Discussion of Findings

Initially, the first level of relationships in the conceptual model is interpreted. They are the relationships pertaining to the exogenous variables celebrity, jingles , animation and free gifts in advertisement. It has been interpreted that the effect of celebrity advertisement on attention capturing intention of advertisement is significant at the 5% level. Subsequent research verified the positive impact of attention to advertisement featuring a celebrity than ads acted by non-famous people (Falsarella, C. R. B. M., de Oliveira, J. H. C., & Giraldi, J. D. M. E.,2017).

The effect of jingles in advertisement on attention capturing intention of advertisement is also significant at the 5% level. Previous researchers have reported that jingles in advertising helps in remembering the product and get attracted to it (Sri Sailesh 2015).It has been observed that the effect of animation in advertisement on attention capturing intention of advertisement is significant. Recent research has identified that animated spoke characters in advertisement may influence a child's attention and retention of the product (Neelay, Schumann 2004). In the case of foods advertisement, the companies make use of animation in advertisement to capture the kids attention (Campbell, 1995; Jenkin, Madhvani, Signal, & Bowers, 2014; Page & Brewster, 2007)

The effect of free gifts in advertisement on attention capturing intention of advertisement is significant at 5% level. Most of the children are attracted to the fancy gifts offered by manufacturers and buy the product for obtaining the gift associated with it. The kids can also recognize and recall the product with free gifts and it capture the attention of kids (Mary &Simone 2004).

When interpreting the second level of relationships in the conceptual model the relationships pertaining to the exogenous variable's attention capturing intention, liking intention, informative intention and peer influence with persuasion attribution is determined.

The effects of attention capturing intention of advertisement on persuasion attribution is significant at 5% level. Advertisements have numerous features and got numerous intentions, including the motive of preserving and controlling viewers' attention (Boush et al., 2015; Wright et al., 2005), which is indispensable in the case of kids who may additionally have a shorter interest span. It is predicted that kids potential to grasp the attention capturing intention will activate persuasion attribution by making persuasion more salient and exposed (Tarabashkina L, Quester P, & Tarabashkina O, (2018). It can be seen that the effect of liking intention of advertisement on persuasion attribution is significant at the 5% level .Liking intention and attention capturing intention leads to higher persuasion in children than informative intention (Tarabashkina et.al 2018). Wentzel's et al. (2010) study, it is possible that young consumers might also attribute persuasion to a commercial when its product liking intention is salient. The effects of informative intention of advertisement on persuasion attribution is significant at 5% level. Previous research has proven that kids can view advertisements as both informative and persuasive (Robertson & Rossiter, 1974). There is a relationship between informative intention and persuasion attribution (Tarabashkina L, Quester P, & Tarabashkina O, (2018).

The effects of peer influence on persuasion attribution is significant at 5% level. It is likely that peer influence additionally takes place in advertising activities, which may additionally make children more inclined to the persuasive consequences of the advertising that they come across in these advertisements (Banerjee and Dittmar 2008).

When interpreting the third level of relationships in the conceptual model – those pertaining to the variable persuasion attribution, it can be seen that the effects of persuasion attribution on purchase request is positive and significant at 5% level. When children watch TV advertisement it creates a persuasion in their minds which makes them to ask for those products to their parents. Atkin (1981) found that, respondents who reported heavier exposure to children's TV (& its advertising) also reported making more requests for advertised products like toys, cereals, & fast foods. Kraak and pelletier (1998) stated that, the TV commercials & prime – time activities have been identified as vital impact on the kinds of food that kids ask their parents to purchase for them and food they purchase for themselves.

When interpreting the fourth level of relationships in the conceptual model – those pertaining to the variable purchase request, it can be seen that the effects of purchase request on pester power is positive and significant at 5% level. The liking of advertised products make the kids to buy these products by themselves or ask their parents to purchase them. TV advertisement has some attractive attributes which leads to continuous requests to parents for purchase which may lead to parent child conflict (Andguladze, 2007).

While interpreting the fifth level of relationships in the conceptual model-those pertaining to the variable pester power ,it can be seen that the effects of pester power on the buying behaviour of parents is positive and significant at 5% level. The pester power in children affect the buying behavior of parents. They will consider their child preferences while going for shopping (Gulla 2004).

Theoretical Implications

A conceptual model was developed by (Tarabashkina L, Quester P & Tarabashkina O, 2018) relating advertising intentions and persuasion attribution in children. The study concluded that advertisements serve several actions and pursue several intentions like attention capturing intention, liking intention and informative intention which induces persuasion attribution in children. But the study failed to consider the attributes of advertisement like celebrity, jingles, animation and free gifts which attracts children towards advertisements and the role of persuasion attribution and purchase request in influencing the buying behaviour of parents. Another conceptual model was developed by (Anju Gulla, 2014) for buying behaviour of parents. The study concluded that the advertisement intentions lead to pester power in children which in turn affects the buying behaviour of parents. But the study failed to consider the role of advertising intentions in inducing persuasion attribution and purchase request in children. So, the studies related to the combined conceptual model showing relationship between persuasion attribution in children and buying behaviour of parents have not been carried out in the past. So, the study contributes a model which includes the impact of advertisement on children and its influence on buying behavior of parents

Implications for Marketers

The study helps the advertisers to know which attribute of advertisement (celebrity, jingles, animation, and free gifts) capture the kid's attention. By knowing that they can use that particular tactic in advertisement to attract children which helps in product request and recall.

The research discusses the role of advertising intentions (attention capturing intention, liking intention, and informative intention) in activation of persuasion attribution to an advertisement in children. The findings of the study proved that advertising intentions leads to persuasion attribution in children. So, it helps the advertisers to know that advertising intentions play an important role in creating persuasion to an advertisement. But in another way, this research is also helpful for the society to guide the future of our children against the objectionable and undesirable effects of advertisements. This research significantly adds to already existing body of facts and figures, mostly, on the influence of advertisements on children's behavior.

Directions for Future Research

Future research can be done in different metropolitan cities as well as rural regions of India as each region is distinct in its cultural settings. Different approaches of investigation like direct observation, projective strategies and simulation will provide greater accurate outcomes. Another feasible extension of this study relates to consumers' capability to resist advertising, which has been proposed as a potential that kids need to strengthen to cope with advertising information's (Harris et al., 2009). Since participants in this study were not given a possibility to buy or request the brand featured in the commercials, it was not feasible to investigate kid's perceived ability to resist persuasion. The study used survey method to collect data from respondents. But in future the researchers can use observation method or focus group interview method to collect data from respondents. Using this method provide better insight about the various attributes of advertisement which creates attention in children. The respondents of the study are parents of children in the age group 8 to 14. So, further studies can be conducted by considering both parents and children as the respondents.

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The Impact of ESG Integration on Financial Sustainability in Selected Pharmaceutical Companies

Pasunuri Amaraveni[1]
K. Chandana[2]

Abstract

Now a day's pharmaceutical industry plays a major role in the current world, and the operations performed by them have a significant effect on environmental, social and governance factors. As the government is coming up with new regulations and pressure from the society side has been increased on pharmaceutical companies they started focusing on sustainability. This study analyzes impact of environmental, social and governance factors on financial sustainability of selected pharmaceutical companies. A comprehensive study of quantitative analysis was done to analyze the strategies and outcomes related to sustainability in pharmaceutical companies. Here for the study select pharmaceutical companies are Cipla Ltd., Sun Pharmaceutical Industries Ltd., and Dr.Reddy's laboratories in India. For the study environmental, social and governance data has been taken from sustainability reports of select pharmaceutical companies. Financial Sustainability of companies is analyzed by using five years financial data of companies from the year 2018-2023. ROE (Return on Equity), ROA (Return on Assets) and PER (Price-Earnings Ratio) is used to assess the financial sustainability of companies. For analyzing environmental, social, governance factors and to relate financial data panel data analysis technique has been used. The result shows that the financial sustainability of select pharmaceutical companies is influenced by environmental, social and governance factors. The findings of the study provides valuable information to pharmaceutical companies in understanding the relationship between environmental, social, governance and financial factors of companies and helps to develop effective business

1 Head & Dean of Commerce & Business Management, Kakatiya University, Warangal, Telangana, India and can be reached at amaravenipasunuri@gmail.com

2 Research Scholar, Kakatiya University, Warangal, Telangana, India and can be reached at chandanakilari@gmail.com

strategies that give scope for long-term survival of the company and positive societal outcome. This research provides information on the importance of integrating environmental, social and governance factors in pharmaceutical companies for financial sustainability.

Keywords: Environmental Sustainability, Financial Performance, Governance, Pharmaceutical Industry, Social Responsibility

Introduction

At present the world is placing a lot of issues in the area of environmental pollution and resource shortage to overcome these issues globally actions were taken in Paris agreement and UN 2030 agenda for sustainable development. For sustainable development, many organizations were focused on non-financial issues related to environmental, social and corporate governance. Pharmaceutical industry also focused more on sustainability initiatives after the global pandemic situation where focus on ESG has been increased. E focuses on environmental sustainability where it considers energy consumption levels of pharmaceutical companies in the form of renewable and non-renewable sources, air emission like nitrogen oxide, sulphuric Oxide, Particular Matter and other greenhouse gasses, water consumption level and the waste generated from companies has been focused. Whereas S means social sustainability which focuses on employee welfare, skills, education, health and environmental support that focus on internal and external relationship between stakeholders. G focus on governance factors like board meetings, executive compensation relating to performance, shareholder rights, ethics and compliance, transparency and discourse, stakeholder engagement and corporate culture.

Among the pharmaceutical companies in India Dr.Reddy's, Cipla, Sun Pharmaceutical was focusing on ESG factors for sustainability.

Cipla was established in the year 1935 is a global pharmaceutical company committed to producing accessible and affordable medicine and its motive is caring for life where focus is on positive climate, community well-being care, raising governance and easy access and affordability which is the 3rd largest player in India in pharmaceutical industry. Cipla company motive on sustainability is to stand for people and our planet and goal is to support operations and develop positive social change for stakeholders, protect natural capital and develops long term value for organization and their sustainability goal is by December 2025 for Indian manufacturing operations is carbon neutrality, water neutrality and zero waste to landfill.

Dr.Reddy's Laboratories Ltd is a global pharmaceutical company in Hyderabad established in the year 1984 to provide affordable and innovative medicines and drive in the motive of 'Good Health Can't Wait' and ESG action was started in the year 2004 and released first sustainability report and their main goal is environmental sustainability and affordable access to patient. Dr.Reddy's Laboratories Ltd in 2022 has integrated sustainability with business strategy and has strengthened there ESG vision is "we are working towards increasing access to medicines, reducing the burden of disease globally and improving people's lives".

Sun pharmaceutical was established in the year 1983 their motive was enriching life's everyday and it was focusing on developing a positive impact on humility, integrity, passion and innovation and the vision is "Reaching People and Touching Lives Globally as a Leading Provider of Valued Medicines". Sun pharmaceutical Company has been working on translating sustainability commitment into action and focused on resources, people and network to guide in a shared and sustainable future and to continuously collaborate with stakeholders that show positive impact on society.

The future business strategy of the company is to move on with ESG principles like integrity, accountability and transparency. Integrating environmental and social factors for financial sustainability in select pharmaceutical companies incorporates environmental and social factors to business strategies to achieve long-term profitability while also benefiting society and the planet.

Pharmaceutical companies need to implement sustainable practices throughout their manufacturing process to reduce environmental footprint by reducing energy consumption, minimizing waste generation. In the same way organizations need to focus on social factors like corporate social responsibility and employee benefits. Integrating environmental and social factors with financial sustainability increases brand reputation, decreases operational cost and attracting investor is possible through sustainability.

Problem Identification

Usually the pharmaceutical companies are not integrating environmental, social and governance factors with their business strategies because of many reasons like lack of awareness about the importance of sustainability and were still following the traditional methods. As companies failed to address these issues, the risk factor has been increased resulting in penalties, reputation damage and operational disruptions. Mminimizing environmental footprint, contributing to social welfare and governance practices like transparency etc is required. Focusing on environmental, social and governance factors will help to gain competitive advantage where it improves employee morale, attracts investors and improves brand reputation. For the long term viability of any company they need to focus on sustainability. One of the biggest challenges is integrating environmental, social and governance factors with financial sustainability and even companies are facing problems in communicating it properly to stakeholders.

Review of Literature

The study has identified positive, negative and neutral effect of corporate social responsibility on financial performance. The study estimates the effect of CSR regressing firm performance on corporate and social performance (Abagail McWilliams, D. S. 2000). The study determines the effect of sustainability reporting on the profitability of pharmaceutical companies in Nigeria and the results have shown negative and insignificant relationship between economic discourse and ROA but environmental and social factors are positive but insignificant relationship with ROE and finally the result was environmental and social factors have positive and insignificant relationship with net profit and management need come with comprehensive sustainability disclosure to boost profitability (Agu, S.,. 2018).

The study shown information related to state environmental report by Fortune Global 250, 35 percent has environmental report and 32 percent has other environmental information and the results of analysis fit partially in the framework (Ans Kolk, S. W. 2001). Article has focused on the asymmetric role of green finance and clean energy for reducing carbon emission for economic growth, foreign direct investment and urbanization by using the econometric model of non-linear autoregressive distributed lag for the time period from 2000 to 2020 in ASEAN nations. Coming to results of the study positive shock increases ecological quality and negative shocks crates harm to environments and also in addition economic growth and urbanization leads to increase in pollutants and they have finally recommended governments, environmentalist and policymakers to develop long term strategy to attract green finance and opportunities to bridge gap in clean energy (Atif Jahanger, D. B.-L.2023).

The study has developed the ability concept from 1980 with three pillars like social, economic, environmental and recent financial and economic issues has increasingly focused on different types of indicator used for the analysis of environmental sustainability, setting targets and measuring the way the target achieved and identifying the gap in achieving the target (Bedřich Moldan, S. J. 2012). It has worked on comparing internal and external stakeholder's affects. Corporate social responsibility on restaurant firm's financial performance and two financial measures return on assets and Tobin's are used. The results of the study are that external CSR increases a firm's market value negatively related to profitability and the internal CSR has no effect on a firm's market value (Borham Yoon, Y. C. 2018).

The study is to understand corporate processes for developing sustainability reports. Findings are integration of planning and decision making, particularly Kurt Lewin's integrated model of planned change. Differences were identified between state owned organizations and shareholder owned companies towards motivation for achieving sustainability and greater accountability (Carol A. Adams, P. M.2007). It was done to analyze the impact of mergers and acquisitions on environmental, social and governance sustainability of companies. To measure the evolution of company performance, financial and non-financial measures are used in the pharmaceutical sector. The sample consisted of 100 pharmaceutical companies, ranked by stock market who registered 30 percent (n = 492) of the total M&A transactions over a period (2010-2020).The study concluded that ESG score is an indicator for measuring sustainability and has positive and direct impact on performance of a company (Diana Marieta Mihaiu, R.-A. S. 2021).

It has analyzed the relationship between environmental, social and governance sustainability policies with financial performance by mediating innovation. A sample of 148 European companies of Euro stock from the period of 2009-2014 has been taken. Companies with high innovation find a positive relationship between social issues and CFP. Weaker linkage between environmental indicators and CFP, governance issues negatively influence CFP, in case of medium innovation companies the relationship is absent and in the case of low innovation companies it is negatively related. Finally identified three key factors are related to organization policies like investment in innovation, environmental regulation and channels of communication (Federica Doni, M. F. 2023). The article has examined the metrics of twenty major German companies to measure sustainability. It was said that most of the companies have come up with sustainable initiatives for meeting the demand and expectations of society, most of the people say that these sustainability initiatives make business profitable and were not accepted by some managers because sustainable initiatives are developed in isolation of business activity and are not directly linked with business strategy (Francisco Székely, M. K. 2005).

It aims to examine whether correlation exists between corporate social sustainability culture and financial success of a company. By applying multiple regression analysis the results show four social sustainability related dimensions for financial success they are sustainability strategy and leadership, mission, communication and learning, social care and work life , loyalty and identification (Gregor Schönborn, C. B.2019). Paper has been focused on to analyze the relation between environmental, social and governance with corporate financial performance. For the analysis primary and secondary data of previous studies was taken. For the study has 2200 individual studies were considered and when we observe results of study 90 percent of studies find a non-negative ESG-CFP relation and majority research studies have positive results and the results were obtained by differentiating portfolio and non-portfolio studies (Gunnar Friede, T. B. 2015).

It has done analysis on CSR from economic and financial perspectives and suggests how it reflects in financial markets. Study suggests there is a resource allocation role for CSR programmes in case of market failures through private social cost differentials (Heal, G. 2005). The paper has been focused on the benchmark of evolution of reported sustainability activity in the pharmaceutical sector which is a leading sector in industrial sustainability. It has found that sustainability related activity has enhanced depth and breadth and focus has been moved towards corporate social responsibility which is required to satisfy the public (Jennifer L. Schneider, A. W. 2010).

The study was done to identify empirical data from Johnson & Johnson, a pharmaceutical firm, on whether CSR contributes in creating financial wealth and value for corporations. The study has given evidence that profitability can be achieved by integrating with social and environmental goals as part of a strategy to benefit shareholders, consumers, and society. The study promotes transparency, adherence and promotes social equity, environmental restoration, financial performance and CSR processes is to be managed to take advantage of come up with programs like safer, greener and economical (Jessica Turcsanyi, S. S. 2013). It is to analyze the environmental factors and its impact on corporate financial performance and it was assessed by using return on equity and return on assets. A sample of Korean firms for a period of 2011-12 has been taken. Two tests were used OLS and 2SLS and it was shown that environmental performance and firms ROE and ROA are positively significant (Ki-Hoon Lee, B. C. 2014).

The study focused on the concept of integrated sustainability, pharmaceutical companies when integrating sustainability and reaping business value has a standard method for measuring, communicating and integrating Pharmaceutical companies on relying on self interpretations to integrate sustainability (Leonard, T. &. 2004). The article has focused on drivers of corporate social performance; measuring good and bad performance of various stakeholders contributes for company and society. The study of social performance and performance of stakeholders integrates day to day operations and this framework provides data related to system, structure and the necessary measures required for organization culture and improve both social and financial performance (Marc J. Epstein, M.-J. R. 2001).

The study has focused on integrating sustainability principles with business strategies and resource allocation decisions by managers must quantify the link between social and environmental factors with financial factors. By using sustainability reports, the study has measured financial impact on social and environmental initiatives, identified the obstacles integration of sustainability into corporate performance and also specified how companies integrate for better decision making and finally results have shown that companies were trying to integrate environmental factors with financial sustainability (Marc J. Epstein, M.-J. R.2003). It has studied on the telecentre projects which move under the concept of sustainability and it has financial and social dimension and the relationship is mutually exclusive. The social dimension of the telecentre feeds the financial one and the new model is social and financial sustainability are interlink with mutual reinforcement (Masiero, S. 2011).

The research article studied the complexity is affecting pharmaceutical companies in which they need to ensure environmental, economic and social sustainability. In the study carried out by the authors environmental sustainability has been the main focus of management studies in the area of green supply chain, green material and sustainable human resource and the paper proposes future scope of research in waste management, economic impact of new drugs and contribution of pharmaceutical companies towards economic sustainability (Matilde Milanesi, A. R. 2020). It has focused on the relationship between adoption of corporate social responsibility and the financial performance of companies in Australia. The results of the study were that there is no statistically significant relationship between corporate social responsibility and financial performance (Matthew Brine, R. B. 2007).

It was done to provide holistic and contextual level of CSR by Pharmaceutical companies in developing countries. First content analysis was done, survey is done to record managers response and then taken views form stakeholders who believe in CSR implementation and it was identified that only 26.67 percent of companies are disclosing CSR reports and also most of the managers opinion that companies need to meet expectations of stakeholders for running business successfully (Mohammad Istiaq Azim, Z. H.2013). As per the investors are interested in getting the highest level of future cash flow for given risk where investors select diversified securities to achieve their goal and investors are not interested in paying premium for corporate behavior that is socially responsible and now according to Social Investment Forum 538 institutions allocate funds using social screens (Moses L. Pava, J. K. 1996).

"It has focused to identify the relationship between environmental performance and financial performance in publicly listed companies in Australia. Results of the study was there was a strong positive association between environmental and financial performance from the period 2001-2007 and their no relationship between environmental and financial performance during financial crisis from the year 2008-2010 (Noor Muhammad, F. S. 2015). The purpose is to identify the role of environmental performance, intellectual capital and CSR in profitability and financial performance of Pharmaceutical companies on Indonesia stock exchange. For data analysis PLS method is used and the result shows environmental performance has no significant effect on financial performance, intellectual capital has no significant effect on profitability and CSR has positive and significant effect on profitability. Environmental performance and intellectual capital has no significant effect on financial performance and CSR has negative and significant effect on financial performance and company profitability has negative significant effect on financial performance (Nurul QOMARIAH, N. E. 2021).

The study examines the social, environmental and economic disclosures and profitability of manufacturing companies in Nigeria. Hypothesis was tested with t-test statistics and also study results in economic and social performance has an insignificant positive impact on both earnings per share and it was suggested that companies need to publish sustainability reports for improving profitability of their business (Ofoegbu, G. N. 2020). The article study is related to CSR and financial performance in microfinance sector in Pakistan. CSR develops customer attraction and loyalty, employee attraction, motivation and commitment. MFIs' reputation and access to capital, and eventually builds financial performance. Interview and survey was done where data was collected from bank managers and findings of the study are CSR is not a barrier to performance in microfinance banks to access capital. CSR is positively correlated with financial performance and also with customer retention, employees' motivation and attraction, business reputation and with capital it is found to be weak (Rai Imtiaz Hussain, S. B. 2020)

The article has done research on non-financial aspects that influence a company's financial performance. For analyzing financial performance return on assets, return on capital, stock and price-earnings ratio is been taken and by using regression and correlation results have shown that there is a positive relationship between the ESG with firm ROA, ROC and no significant relationship between stock price and P/E and finally concluded that social factor and governance factors no significant relationship with financial performance (Raisa Almeyda, A. D. 2019). For the study a sample of Fortune 500 firms, Newsweek Green rankings, the corporate Knights Global 100 and the 100 Best Corporate Citizens lists has been taken and coming to results it was identified that firms have positive relationship between social sustainability performance and financial performance of companies (Robert Sroufe, V. G.-R. 2018).

The paper has focused on “institutional theory” and “stakeholder theory.” Focused on the interaction between factors of the environment (E), social (S), and governance (G), and internal governance is the research focus of ESG. It has analyzed the interaction between executive factors and environment dimension, the interaction between stakeholders and the environment has analyzed the role of governance in risk prevention and also focused on the impact of ESG on economic consequences. (Ting-Ting LI, K. W 2021)

For the study 62 peer reviewed articles were considered and the article has revealed contextual factors in this context they have impact on learning, organization culture and leadership on the process of change. It has an impact on contextual factors on the process of organization change for sustainability (Tipu, S. A. 2022). The article has been focused on measuring progress towards sustainability and by using a five level indicator hierarchy developed by Lowell Center for Sustainable production and the author has analyzed environmental sustainability of six pharmaceutical companies. And the results of study are performance or co-efficiency, few indicators shows effect on environmental factors (Vesela Veleva, M. H. 2003).

The study has been done with a sample of 95 publicly traded American firms from various sectors in the year 2015-2016 to study how corporate sustainability reports affect financial performance of firms. It has identified a positive and significant effect on the sustainability of firm’s return on equity, return on assets and profit margin. Corporate sustainability reports are effective substitutes for institutional investors (Whetman, L. L. 2017). Purpose of the article is to analyze industrial and institutional conditions under which the growth of the US bio-pharmaceutical industry is sustainable. The solution to this was the willingness of stock market investors to accept the IPO of BP ventures with commercial products and another part is knowledge base that companies develop products from government investment and spending from business finance (William Lazonick, Ö. T. 2011).

The study concluded that healthcare is a part of global economy and it is important to understand environmental impact on industry. To improve the scope of assessment Ghent University and European Commission’s Joint Research Centre, Sustainability Assessment Unit studied the current challenges, conducted surveys and finally concluded that integration of healthcare pathways with system boundaries, developing life-cycle databases for pharmaceuticals and supplied resources, linkage of LCA with ERP (Wouter De Soete, C. J.-G. 2017).

The study hypothesis has been proved as environmental performance has positive impact on financial performance and vice versa according to Japanese data. According to the study it was identified that information based environment policy is effective to encourage a sustainable market economy (Yuriko Nakao, A. A. 2007).

Objective of the Study

- To examine the most significant environmental, social and governance factors that affect financial sustainability.
- To identify the relationship between environmental factors and financial sustainability of selected Pharmaceutical companies.
- To assess the integration of social factors and financial sustainability of selected Pharmaceutical companies.
- To analyze the relationship between governance factors and financial sustainability of selected Pharmaceutical companies.
- To known the impact of financial sustainability of selected Pharmaceutical companies on environmental, social and governance factors.

Methodology of Study

Data Collection

For the study secondary data is the source, which is collected from the annual reports and sustainability reports of select pharmaceutical companies in India.

The Instrument

Dependent Variable: Financial Sustainability (Financial Ratio: Return on Assets (ROA), Return on Equity (ROE), Price Earnings Ratio (PER))

Independent Variable: Environmental Variables (Energy Consumption, Water Consumption, Emission Management) Social Variables (Research and Development Expenditure (R&D), Corporate Social Responsibility (CSR) and Employee Benefits) Governance Variables (Remuneration of Key Managerial Personnel and Directors, Employee Stock Options (ESO's))

Sample Size & Frame

The sample for the analysis is selected based on market capitalization and the top three pharmaceutical companies are Dr.Reddy's Laboratories Ltd., Cipla Ltd. and Sun Pharmaceutical Industries Ltd. For the analysis five-year data has been taken from the annual and sustainability reports of select pharmaceutical company.

Hypothesis Statement

The hypotheses below are defined to examine the financial sustainability in decision making in select pharmaceutical companies.

H01: An environmental factor has no significant impact on the financial sustainability of selected pharmaceutical companies.

H02: Social factors have no significant impact on the financial sustainability of selected pharmaceutical companies.

H03: Governance factors have no significant impact on the financial sustainability of selected pharmaceutical companies.

H04: There is no significant relationship between ESG factors and financial sustainability of selected pharmaceutical companies.

Techniques Applied in Analysis

The present proposed research work carried out by examining the collected data from the secondary data sources and panel data analysis (Generalized Liner Model- Newton- Raphson / Marquardt steps) technique was used to test the defined hypothesis in the present study.

Data Analysis

To examine environmental, social and governance factors that affect financial sustainability.

For examining the relationship between environmental factors, social factors and governance with financial sustainability, secondary data has been taken from sustainability and annual reports of Dr.Reddy, Cipla, and Sun Pharmaceutical. The dependent variable for the research was financial sustainability and the independent variables are environmental, social and governance factors of selected Pharmaceutical companies. Environmental variables considered for analysis are energy consumption, water consumption and emission management. Social factors considered for analysis are research and development expenditure, CSR expenditure and employee benefits. Governance factors considered for analysis are remuneration to key management personnel and directors, employee stock options and for analyzing financial sustainability ROA, ROE and PER data was taken from the annual reports of the select pharmaceutical companies from the year 2018-2023.

Relationship between environmental factors and financial sustainability

Financial sustainability means the ability of a company with strong financial health to ensure profitability against market fluctuations and risks. Return on assets (ROA) is the ratio used to measure the efficiency of company assets in generating profits. Environmental variables such as energy consumption, water consumption, and emission management need to be focus on the well-being of society. To identify the relation between environmental variables and the financial sustainability of select pharmaceutical companies, the hypothesis stated was "Environmental factor has no significant impact on the financial sustainability of selected pharmaceutical companies."

Table-1: Generalized Linear Model values of relationship between environmental factors and financial sustainability

Company	Dependent Variable	Independent Variable	Coefficient	Z-statistic	P-Value	Model Fit Variables
Cipla Limited	Return on Assets	Environmental Variables	.0000719	17.25119	P<0.05	• AIC-3.781390 • Schwarz Criterion-3.703278 • Pearson SSR-8.413246 • Deviance-8.413246 • RMSE-1.297170
Sun Pharmaceutical Industries Limited	Return on Assets	Environmental Variables	0.0000283	2.972996	P<0.05	• AIC-5.593741 • Schwarz Criterion-5.515628 • Pearson SSR-51.52967 • Deviance-51.52967 • RMSE-3.210286
Dr.Reddy's Laboratories Limited	Return on Assets	Environmental Variables	0.0000506	6.457180	P<0.05	• AIC-5.743279 • Schwarz Criterion-5.665167 • Pearson SSR-59.84131 • Deviance-59.84131 • RMSE-3.459518

Source: Secondary data from sustainability and annual reports is analysed by using E-Views

Interpretation

According to generalized linear model analysis dependent variable was return on assets and independent variable is environmental variables.

CIPLA Limited = Return o assets =.0000719*Environmental Variables

Sun Pharmaceutical Industries Limited = Return on assets = 0.0000283*Environmental Variables

Dr.Reddy's Laboratories = Return on assets = 0.0000506*Environmental Variables

In the Cipla company, it was observed that environmental variables are showing a positive impact on return on assets with a coefficient of .0000719, z-statistic was high that is 17.25119, and the p-value is less than 0.05, indicating statistical significance. By observing the values of AIC (3.781390), schwarz criterion (3.703278), Pearson SSR (8.413246), deviance (8.413246), and RMSE (1.297170), a good model fit. Sun Pharma has a coefficient of 0.0000283, z-statistic value is 2.972996, and the p-value is less than 0.05, which indicates it was statistically significant. By considering values AIC (-5.593741), schwarz criterion (-5.515628), Pearson SSR, deviance (51.52967), and RMSE (3.210286), it indicates model fit.

Dr. Reddy's Laboratories Ltd. coefficient value is 0.0000506, z-statistic is 6.457180, and the p-value is less than 0.005 and is statistically significant.

AIC (-5.743279), schwarz criterion (-5.665167), Pearson SSR, deviance value are (59.84131), and RMSE is 3.459518, which indicates model fit. Among the companies it was observed Cipla's focus was high on environmental initiatives to improve the efficiency of assets and operational performance. Across the companies, p-value is less than 0.05 so, the null hypothesis is rejected, and the alternative hypothesis "Environmental factors have a significant impact on the financial sustainability of selected pharmaceutical companies" is accepted.

Relationship Between Social Factors and Financial Sustainability

In the present scenario focus on the relationship between financial sustainability and social factors has been increased and it was integrated to business strategies. Social factor such as research and development, corporate social responsibility and employee benefits were considered for the study as these factors plays a major role in building image in the market, stakeholder trust. To measure financial sustainability price earnings ratio was considered, which is used to assess company valuation. To assess the integration of social factors with financial sustainability the hypothesis stated was **"**Social factors have no significant impact on the financial sustainability of selected pharmaceutical companies."

Table-2: Generalized Linear Model values of relationship between Social factors and financial sustainability

Company	Depen-dent Variable	Inde-pendent variable	Coef-ficient	Z-statistic	P-Value	**Model Fit Variables** (Akaike Information Criterion (AIC),Schwarz Criterion, Pearson Sum of Squares for Regression, Deviance,Root Mean Square Error (RMSE))
CIPLA Limited	Price earnings ratio	Social Variables	0.001497	15.26848	P<0.05	AIC-3.594828 Schwarz Criterion-5.741901 Pearson SSR-64.61395 Deviance-64.61395 RMSE-3.694828
Sun Pharma-ceutical Industries Limited	Price earnings ratio	Social Variables	0.001129	4.751843	P<0.05	AIC-8.957344 Schwarz Criterion-8.879231 Pearson SSR - 1488.853 Deviance- 1488.853 RMSE - 17.25603
Dr.Reddy's Laboratories	Price earnings ratio	Social Variables	0.001198	4.412684	P<0.05	AIC-8.129640 Schwarz Criterion-8.051528 Pearson SSR - 650.7058 Deviance- 650.7058 RMSE - 11.40794

Source: Secondary data from sustainability and annual reports is analysed by using E-Views

Interpretation

According to generalised linear model analysis dependent variable was price -to- earnings ratio and independent variable is social variables.

CIPLA Limited = P/E Ratio = 0.001497 *Social Variables

Sun Pharmaceutical Industries Limited = P/E Ratio = 0.001129 *Social Variables

Dr.Reddy's Laboratories = P/E Ratio = 0.001198 *Social Variables

The coefficient value of Cipla is 0.001497, which is positive indicating that as social variables increase the P/E ratio also increases which is a sign of increase in market valuation. By observing values, akaike information criterion (3.59482), schwarz criteria (5.741901), Pearson SSR, and deviance (64.61395) and even RMSE (3.694828) we can see that all values are lower indicating a better model fit. The Z-statistic value of 15.26848 which is high, which indicating that social factors show a strong impact on the P/E ratio. The coefficient value of Sun Pharma is 0.001129, showing a positive impact on social variables and P/E ratio and by considering the values of AIC (8.957344), schwarz criterion (8.879231), Pearson SSR (1488.853), deviance (1488.853) and RMSE (17.25603) indicates a moderate model fit, and the Z-statistic value is 4.751843 as social variables have a positive influence on P/E ratio but variability indicates the market is inconsistent.

When Dr. Reddy's Laboratories values were observed, the coefficient is 0.001198, and moderate model fit values are AIC (8.129640), schwarz criterion (8.051528), Pearson SSR (650.7058), deviance (650.7058), RMSE (11.40794), and Z-statistic value is 4.412684, which is highly significant. Across all the companies p value is less than 0.05 so, the null hypothesis is rejected, and the alternative hypothesis, "Social factors have a significant impact on the financial sustainability of selected pharmaceutical companies," is accepted.

Relationship Between Governance Factors and Financial Sustainability

For assessing the long term viability of company and to attract investors governance factors and financial sustainability plays a major role. To analyse the relationship between governance factors and financial sustainability variables like remuneration of key management personnel and directors, employee stock options and return on equity were considered. Hypothesis stated was "governance factors have no significant impact on the financial sustainability of selected pharmaceutical companies."

Table-3: Generalized Linear Model values of relationship between governance factors and financial sustainability

Company	Dependent Variable	Independent Variable	Coef- ficient	Z-statis- tic	P-Value	Model Fit Variables
Cipla Limited	Return on Equity	Governance Variables	0.000610	1.975092	P<0.05	AIC-7.649460 Schwarz Criterion-7.571348 Pearson SSR-402.5733 Deviance-402.5733 RMSE-8.972997
Sun Phar- maceutical Industries Limited	Return on Equity	Governance Variables	0.001305	7.270623	P<0.05	AIC-5.409870 Schwarz Criterion-5.331758 Pearson SSR-42.87494 Deviance-42.87494 RMSE-2.928308
Dr.Reddy's Laborato- ries Limited	Return on Equity	Governance Variables	0.000235	5.679523	P<0.05	AIC-6.523659 Schwarz Criterion-6.445547 Pearson SSR-130.5918 Deviance-130.5918 RMSE-5.110613

Source: Secondary data from sustainability and annual reports is analysed by using E-Views

Interpretation

According to generalised linear model analysis dependent variable was return on equity and independent variable is governance variables.

CIPLA Limited = Return on Equity = 0.000610*Governance Variables

Sun Pharmaceutical Industries Limited = Return on Equity = 0.001305*Governance Variables

Dr.Reddy's Laboratories = Return on Equity = 0.000235*Governance Variables

The coefficient of Cipla Limited was 0.000610, as it was positive and shows a direct relationship between governance factors and ROE. Values like alkaike information (7.649460), schwarz criteria (7.571348), Pearson SSR, and deviance are 402.5733 and the RMSE (8.940740) values are less, indicating a better model fit. The Z-statistic value is 1.975092, which indicates a significant impact of governance variables on ROE. The coefficient value of Sun Pharma is 0.001305, which is positive, and values like AIC (5.409870), schwarz criterion (5.331758), Pearson SSR, and deviance are 42.87494, and the RMSE is 2.928308, which indicates a good model fit, and the Z-statistic value is 7.270623, which is positive and has a significant impact on variables.

The coefficient of Dr. Reddy's is 0.000235 shows a positive relationship between variables values like AIC (6.523659), schwarz Criterion (6.445547), Pearson SSR (130.5918), deviance (130.5918), and RMSE (5.110613) indicates model fit, and the z-statistic value is 5.679523, which shows a significant impact. Across the companies, p-value is less than 0.05 so, the null hypothesis is rejected and accept the alternative hypothesis, "Governance factors have a significant impact on the financial sustainability of selected pharmaceutical companies."

Relationship between ESG Scores and Financial Sustainability

In the present scenario environmental, social and governance factors are considered to assess company performance. As ESG factors have gained importance in representing corporate reputation, shareholders trust and operation efficiency. Financial sustainability shows companies long term profitability, growth in dynamic economic environment to assess the relationship between ESG factors and financial sustainability the hypothesis stated was "There is no significant relationship between ESG factors and financial sustainability of selected pharmaceutical companies".

Table-4: Generalized Linear Model values of relationship between ESG scores and financial sustainability

Company	Dependent Variable	Independent variable	Coefficient	Z-statistic	P-Value
Cipla Limited	Financial variables	ESG variables	.905874	3.654915	P<0.05
Sun Pharmaceutical Industries Limited	Financial variables	ESG variables	1.148481	5.300354	P<0.05
Dr.Reddy's Laboratories Limited	Financial variables	ESG variables	0.752366	3.314686	P<0.05

Source: Secondary data from sustainability and annual reports is analysed by using E-Views

Interpretation

Cipla Limited = Financial Scores = 0.905874 × ESG

Sun Pharmaceutical Industries Limited = Financial Scores = 1.148481 × ESG

Dr. Reddy's Laboratories Limited = Financial Scores = 0.752366 × ESG

For understanding the relationship between ESG scores and financial sustainability generalised linear model is applied when results were observed , Cipla coefficient value is .905874 indicating a positive relation between the variables and Z-statistic value is 3.654915 and p value is less than 0.05 indicates statistically significant. Sun pharma coefficient value is 1.148481 which is showing strong relationship and z-statistic value is 5.300354, p value is less than 0.05 represent statistically significant relationships between variables. Dr.Reddy's coefficient is 0.752366 indicates positive relationship and Z-statistic value (3.314686) and P-value ($P < 0.05$)indicates statistically significant. Across all the companies when it was observed value is than 0.05 so, null hypothesis is rejected and alternative hypothesis "There is a significant relationship between ESG scores and financial sustainability of selected pharmaceutical companies" is accepted.

Table-5: Comparative analyses of ESG variables and financial sustainability across Cipla, Sunpharma and Dr.Reddy's

Variables	Cipla Limited	Sun Pharmaceutical Industries Limited	Dr.Reddy's Laboratories Limited
Environmental (ROA)	Relationship between the variables is positive, and has moderate impact (best performance)	Relationship between the variables is positive and has low impact	Relationship between the variables is Positive and has moderate impact
Social (P/E)	Relationship between the variables is positive, and has strong impact (best performance)	Relationship between the variables is Positive and has moderate impact	Relationship between the variables is Positive and has moderate impact
Governance (ROE)	Relationship between the variables is Positive and has moderate impact	Relationship between the variables is positive, and has strong impact (best performance)	Relationship between the variables is positive and has low impact

Source: Secondary data from sustainability and annual reports is analysed by using E-Views

Interpretation

Environmental factors have positive influence on operating efficiency of all companies where the result was not immediate which shows in long run. Social variables shows impact on market valuation and governance factors shows impact on profitability where it results in increasing shareholder trust and stability in financial position. From the above table: it can be concluded that Cipla was good at implementing various environmental initiatives and social initiatives like R&D, CSR and community welfare and Sun pharma was strong in governance factors. So, if the companies focus on ESG factors it results in financial sustainability of companies.

Conclusion

To study the impact of environmental, social, and governance factors on financial sustainability, a statistical technique generalized linear model has been used. The sustainability data of three pharmaceutical companies, Dr.Reddy's Laboratories, Cipla Ltd., and Sun Pharmaceutical, from the years 2018 to 2023 has been taken. The financial data was collected from the annual reports for measuring the financial performance of companies and accounting indicators like ROE, ROA, and P/E ratio were considered. For analysis, environmental variables, social variables and governance variables were considered.

By observing the results of the study, usually change in environmental improvement will not show immediate impact on return on assets, but in the long run it shows influence on financial returns. As the relationship between the variables is positive, it indicates that companies need to focus on environmental sustainability practices to reduce energy costs, reduce emissions, and enhance alignment with regulations, which improve customer loyalty and brand image of the company and show positive influence on financial returns.

Social factors are showing influence on financial variables in pharmaceutical companies. As the coefficient value is small also, it represents a positive direct relationship between social and financial variables where the company needs to focus on CSR, employee benefits, and R&D so that market valuation increases. It was observed that companies with good social practices are committed towards social responsibility and also focused on fulfilling the benefits of employees, which helps to improve brand image in society. Strong governance practices show an impact on the efficiency and profitability of the company, as these variables are important in analyzing the financial health and sustainability of the business.

Cipla, Sun Pharma and Dr Reddy's generalized linear model values are statistically impact on financial sustainability. It was finally observed that ESG integration with financial variables like return on assets, return on equity, and price-earnings ratio has a direct impact, so companies need to focus on increasing funding towards ESG variables, which shows an impact on market valuation and perception towards the company.

The future scope of the study on integrating environmental, social and governance factors for financial sustainability can be done with large sample size and other variables of pharmaceutical companies can be considered, comparative study with different pharmaceutical companies can be done, sectoral analysis, value chain and integrating the entire ecosystem for sustainability, challenges and opportunities globally can be done.

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