

# Investigating the Impact of Omni-Channel on Loyalty Intentions of Customers in Presence of Retail Shopping Experience in Hyderabad

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**Abstract:** This study investigates the "Impact of Omni-channel on Loyalty Intentions of Customers in the Presence of Shopping Experience in Hyderabad." The research aims to understand the interplay between collaborative marketing practices, customer satisfaction, and customer loyalty in an omni-channel retail environment. Data was collected from 200 respondents through questionnaires to explore the demographic factors, factors of collaborative marketing practices, and their influence on customer satisfaction and loyalty intentions. The findings reveal positive correlations among collaborative marketing variables and underscore the significance of Sales Promotion and Price Collaboration. The study establishes a significant impact of collaborative marketing practices on customer satisfaction and identifies their indirect effect in the presence of an omni-channel experience. Moreover, customer satisfaction significantly influences customer loyalty towards omni-channel retail. The study offers suggestions for businesses to implement effective collaborative strategies and prioritize customer satisfaction to foster stronger customer loyalty. Understanding these dynamics is vital for businesses seeking sustainable success in the competitive omni-channel retail landscape in Hyderabad.

**Keywords:** Omni-channel, collaborative marketing practices, customer satisfaction, customer loyalty, retail environment, Hyderabad.

## I. INTRODUCTION

An investigation into the "Impact of Omni-channel on Loyalty Intentions of Customers in the Presence of Shopping Experience in Hyderabad" seeks to understand the complex relationship between collaborative marketing practices, customer satisfaction, and loyalty intentions of customers in the context of an omni-channel retail environment. The study aims to gather primary data from 200 respondents through questionnaires to achieve its objectives.

Demographic factors play a crucial role in shaping consumer behaviour and preferences. Understanding the age, gender, income levels, and educational background of the respondents will provide valuable insights into how these factors influence their loyalty intentions towards omni-channel retail (Kotler et al., 2009).

Collaborative marketing practices involve strategic partnerships between different businesses to create synergistic benefits for all parties involved. These practices can include co-branded marketing campaigns, joint promotions, and shared customer databases. By exploring the factors influencing collaborative marketing practices, the study aims to shed light on how effective cooperation among businesses can enhance customer experiences and foster loyalty (Brito and Duque, 2017). Customer satisfaction is a critical element in any business's success and is influenced by various factors. In this study, the focus is on measuring the direct impact of collaborative marketing practices on customer satisfaction. Understanding how collaborative marketing efforts positively influence customer satisfaction will provide valuable insights for businesses to improve their marketing strategies and enhance customer experiences (Kumar et al., 2019). In the presence of an omni-channel experience, the study also aims to explore the indirect effect of collaborative marketing practices on customer satisfaction. An omni-channel approach offers customers a seamless shopping experience across various channels, such as physical stores, websites, and mobile apps. By examining how collaborative marketing practices interact with the omni-channel experience, the research aims to reveal the interplay between these factors in shaping customer satisfaction (Huang and Beyonce, 2015).

**II. REVIEW OF LITERATURE**

**Manu Sharma (2019)** In order to engage young customers in omni-channel retailing (OCR), the study addresses adoption barriers (AdoBs). Through interpretative structural modeling-fuzzy methods, 18 AdoBs were identified and validated from expert opinions and young consumers' perspectives. Price inconsistency emerges as the dominant AdoB, restricting young consumers from engaging with OCR. Other critical AdoBs include lack of coordination among channels, information sharing, and inconsistent price discounts, influencing all other identified barriers. The study highlights the research-online purchase-offline effect in the purchase process of young consumers. While the research undertakes ten barriers, further exploration with advanced techniques is suggested. Insights from this study offer valuable guidance to retailers and marketers, emphasizing the importance of price consistency, advanced information systems, coordination, and building consumer trust for successful Omni-channel implementation. Understanding and addressing these AdoBs can transform the retail channel into a fully integrated Omni-channel ecosystem, engaging young consumers effectively and creating value through communication channels. Notably, the study provides novel perspectives on young consumer engagement in OCR, shedding light on underexplored Omni-channel barriers in the present context.

**Chugan (2019)** The study sheds light on the Indian retail scenario and explores the relationship between visual merchandising factors and consumers' demographics to analyze the impact of visual merchandising on impulse buying behaviour. With the Indian retail market experiencing rapid growth, including the influx of international and national brands, consumers are becoming more discerning in their purchase decisions, comparing prices online and opting for channels offering the same products at lower prices. The challenge of holding customers in physical stores and leading them to make purchases has intensified with the rise of omni channels. The study examines variables of visual merchandising, such as window display, in-store form/mannequin display, floor display, and promotional signage, and finds a weak relation between attractive window display and different age groups, gender, and income. However, other aspects of visual merchandising have a relatively irrelevant impact on consumer behaviour in terms of gender, age, education, monthly income, and education of consumers. Therefore, retailers are encouraged to focus on creating impressive visual displays for all types of footfalls in the store, as enhancing store displays creatively can influence consumers to enter the stores, spend more time there, and ultimately impact their impulse buying behaviour, leading them to make purchases from the stores.

**Ivan Russo (2019)** In the digital era, the emergence of online shopping has presented both challenges and opportunities for retailers to connect with customers. While this channel offers advantages in terms of cost and time savings for consumers, it has also brought forth new concerns beyond price and service quality, encompassing e-logistics service quality (e-LSQ). To assess the impact of e-logistics service quality on customer satisfaction in online shopping, the study employs a survey-based analysis, assuming that satisfied customers are more likely to exhibit loyalty and retention. The relevance of site usability and the (PDSQ) physical distribution quality of service for assessing customer happiness is confirmed by multiple regression analysis, but additional variables such as physical distribution price of services (PDSP) are not product returns management (PRM) are found to be non-significant. The study not only expands on previous models by establishing a direct correlation between ease of use and consumer satisfaction and loyalty but also highlights the trade-off between price and quality in e-logistics service. Additionally, the non-significance of the PRM hypothesis calls for further investigation in this area.

**Amit Shankar (2021)** The study investigates the impact of offline search convenience and online purchase convenience on consumers' showrooming behaviour, utilizing the stimulus-organism-response (S-O-R) model. It explores the roles of decision convenience, attentiveness convenience, evaluation convenience, transaction convenience, possession convenience, and post-purchase convenience in motivating consumers' showrooming intention. The study also examines the intervening effects of consumers' perceived values and product involvement in this relationship. Data from 303 Indian consumers were collected through an online survey, and the results from structure equation modelling and PROCESS Macro analysis reveal that various convenience factors, including attentiveness convenience, evaluation convenience, possession convenience, and post-purchase convenience, significantly influence consumers' showrooming intention. The perceived values of consumers play a mediating role in the relationship between convenience and showrooming intention, and these effects vary based on the consumers' product involvement level. The study contributes to the S-O-R model by identifying specific factors in the present context and provides evidence for managing the global retail disaster in the omnichannel retailing industry. The findings highlight the importance for retailers to enhance their service convenience to effectively manage consumers' channel switching behaviour.



**Parthiban (2022)** In order to accommodate client preferences, the study investigates the challenges with channel synchronization including the use of the omnichannel supply chain approach. An approach enabling customers to shop seamlessly across various platforms is examined, aiming to identify barriers and develop a path model to understand the strength and pattern of relationships among these barriers. Empirical testing of a model using the structural equation modelling (SEM) technique addresses the challenges faced by firms moving towards omni-channel implementation. The study reveals that strategy-related challenges pose the greatest barriers in the initial stage, while development-related barriers become the most significant obstacle in the second phase. The obtained results offer essential guidelines for multi-channel firms to streamline their existing channels effectively. This research contributes to understanding the complexities of implementing omni-channel strategies and provides valuable insights for future omni-channel implementations.

**Prof. Swapnali Bhosale (2022)** In this study, the impact of subjective norms on consumer behaviour towards apparel brands in rural areas is investigated. The researchers explore how attitudes, subjective norms, and perceived behavioural control influence customers' purchase intentions, considering varying levels of product knowledge (subjective and objective) and attention to social comparison information. The theory of planned behaviour suggests that customers' purchase intentions are influenced not only by their own opinions but also by the influence of peers and perceived control. The study reveals that subjective norms play a crucial role in shaping consumer behaviour towards apparel brands in rural markets, strengthening the relationship between consumers and e-commerce companies. The research findings indicate that subjective norms account for 47.2% of the ability to describe the dependent variable of the regression model, as assumed in the hypothesis statement. The study contributes valuable insights into consumer behaviour in rural areas, particularly regarding the importance of subjective norms and their impact on purchase intentions, providing meaningful implications for apparel companies and e-commerce firms in these markets.

**Kazmi (2022)** The purpose of this research is to identify the underlying factors that impact consumers' impulsive buying behaviour and purchase intentions for offline beauty products. The study adopts a quantitative examination based on the philosophy of positivism and utilizes convenience sampling to gather data from 400 respondents in shopping malls. The findings reveal that a consumer's mood significantly influences impulse buying, while personal situations such as time, money, and fear of missing out can trigger impulsive behaviour. Store layout, including lighting, music, and ambiance, also plays a role in unplanned purchases. Additionally, product promotion, offering free coupons, discounts, and free delivery, affects spontaneous purchases. Furthermore, product design, packaging, colour, and labelling have a positive and significant impact on impulse buying. However, materialism was found to have an insignificant impact on impulsive buying. This research contributes positively to the understanding of intrinsic factors influencing customers' purchase intentions in the cosmetic industry, providing valuable insights for practitioners and sellers in this domain.

**Kristina Natalina (2022)** This research aims to investigate the impact of brand image and omni channel marketing on customer satisfaction and customer loyalty in the context of digital saving opening at Bank BRI. The study was conducted using a survey method, and data analysis was performed through LISREL 8.7. Descriptive findings revealed that customers perceived the brand image and omni channel marketing as good, resulting in their satisfaction and loyalty towards digital saving opening at Bank BRI. Hypothesis testing confirmed significant and positive effects of brand image and omni channel marketing on customer satisfaction and loyalty. Additionally, it was shown that client loyalty was positively correlated with customer satisfaction. The study also established that brand image and omni channel marketing influence customer loyalty through the mediating variable of customer satisfaction. Overall, this research contributes to understanding the factors influencing customer behaviour and loyalty in the digital banking context.

**Ramanjaneya, L., & Sirajuddin, M. (2023)** The point of the scrutiny is to concentrate on the present situation of Rural Marketing in India, the provincial market gives its different open doors and difficulties, considering how differently populated the country purchasers in India are. The country's rural market comprises of 73m cr individuals and this draws in advertisers to enter in this market. To showcase in the domain of provincial promoting enterprises should comprehend the rustic purchaser. There is a shift approaching from metropolitan to the provincial advertising as the turn of events and levels of education and mindfulness among the rustic purchasers is rising and these shoppers need an incentive for their cash. Advertisers while taking special care of country customers need to associate with them and furthermore embrace exhibits for the better comprehension of the rustic individuals. Numerous advancements of methodology to advertise into the country markets have been embraced in the previous years. This paper plans to comprehend these developments and techniques and to comprehend the country customer of India.

**Siti Intan Nurdiana Wong Abdullah(2023)** In recent years, the consumption of organic food has gained prominence as a vital element in sustainable transformation, with significant impacts on the environment and human health. Customers' preferences have shifted towards organic products, driven by the belief in their safety and absence of harmful toxins. This study aims to explore the influence of marketing mix strategies, including product, price, place, and promotion, on the buying behaviour of organic products among consumers in Malaysia and China. Data was collected from 484 respondents, comprising 150 Malaysians and 334 Chinese consumers, using purposive sampling. Structural equation modelling (SEM) with AMOS software was employed to test the hypothesized relationships. The results indicate that price, product, and promotional strategies significantly affect the buying decisions of consumers towards organic products. Moreover, the study finds that the impact of product and promotion strategies varies based on consumers' nationality, being more pronounced among Malaysians compared to their Chinese counterparts. This research adds valuable insights to the existing body of knowledge on consumer behaviour in the organic food market and provides valuable guidance to marketers, producers, and practitioners for developing more effective marketing strategies to stimulate customer demand for organic products.

**L. Ramanjaneya, Priyanka Samuel Ebenezer (2025)** This study finds out how influencer marketing and online customer reviews influence Generation Z consumers' buying behaviour in Hyderabad, India. Being digital natives, Gen Z (people born from 1997 to 2012) strongly depend on social media and peer comments for purchasing decisions. The study finds that influencer credibility, authenticity, and content reliability greatly influence Gen Z's trust and buying intentions. Similarly, review volume, tone, and regency powerfully drive their product perceptions. With a quantitative approach utilizing standardized questionnaires, the study examines the effect of these digital tools using regression and correlation analysis. The results are intended to inform marketers on how to develop effective digital initiatives for involving Gen Z in urban India.

**Singh, P., Arora, L., Sahu, T., Bhatt, V., & Sharma, B. K. (2023)** The retail industry is undergoing substantial changes that necessitate the development of omnichannel approaches to customer engagement. A comprehensive analysis was conducted on 42 scholarly articles extracted from the Web of Science database using the VOSviewer and the Web of Science analytics. This study offers retailers, marketers, and researchers' profound insights into the dynamic field of omnichannel retailing. It serves as an invaluable resource for retailers and marketers, providing a clear roadmap for adapting strategies that align with the expectations of contemporary consumers. The relationship between omnichannel retail and customer experience is intricate, but this study's findings have helped to clarify the transformative impact of omnichannel retailing. The strategic blueprint outlined in this research could enhance customer experiences, benefiting individual retailers and the entire retail industry. Retailers with a comprehensive understanding of the omnichannel framework can skilfully leverage this approach to succeed. This study attempts to provide a robust foundation for the future success of omnichannel retailing as a strategic imperative in the fiercely competitive retail landscape of the modern world by assisting retailers by augmenting their conceptual understandings. Furthermore, this study allows researchers to continue their exploration of omnichannel retailing and provide more profound insights through future research avenues.

**Ch.Satish Yadav, Veeramallu Hema Sree (2024)** The Rise of digital technology has reshaped how businesses connect with their customers, moving interactions from traditional storefronts to online spaces. Marketing approaches have evolved to include tools like social media engagement, search engine visibility, AI-based suggestions, email promotions, and tailored advertisements. Major online retailers such as Amazon have embraced these tools to increase customer interaction, make the buying process smoother, and offer a more convenient and customized shopping journey. In the city of Hyderabad, which is quickly becoming a major urban hub in India, the use of digital platforms has grown significantly. Factors such as widespread internet access, increasing mobile usage, and a tech-literate population have contributed to this trend. Amazon has responded by using modern marketing techniques to better serve the diverse needs of consumers in the region. This study aims to explore how these digital initiatives affect customer satisfaction and influence shopping behaviour within Hyderabad.

**Gunja Sujatha, Pakala Nikitha (2024)** This study examines how gamification affects customer loyalty with a specific focus on Apollo Pharmacy in Hyderabad, a major metropolis with a tech-savvy population. Gamification—the process of introducing game-like elements like challenges, badges, rewards, and points into non-gaming contexts—is gaining popularity as a customer engagement strategy across all industries. This study looks at how these gamified elements affect customer behavior, loyalty, and emotional ties to Apollo Pharmacy. Structured surveys were used to collect data from 128 participants, and correlation and regression analysis techniques were applied for analysis.

**Raju Rathipelli, Gurram Ajay (2025)** In today's digital era, video marketing has emerged as a powerful tool for brands to capture consumer attention and enhance engagement. This study explores the impact of video marketing on

consumer engagement and brand recall. It investigates how video content influences consumers' emotional responses, purchasing behaviour, and their ability to remember brands. Data was collected through a structured questionnaire distributed to a sample of consumers exposed to video advertisements. The findings reveal that visually appealing, emotionally resonant, and informative video content significantly boosts consumer engagement levels and positively influences brand recall. Regression analysis indicates a moderate positive relationship between consumers' interaction with video ads and their perceived connection with brands. The study concludes that video marketing is an effective strategy for fostering stronger consumer-brand relationships and recommends that marketers invest in high-quality, targeted video content to maximize impact. Limitations and suggestions for future research are also discussed.

### **Research Gap**

Despite the existing body of knowledge on collaborative marketing practices, customer satisfaction, and loyalty in the retail industry, there is a lack of specific research on the impact of omni-channel experiences on these variables, especially in the context of Hyderabad. Prior studies have focused on individual aspects separately, but there is a dearth of comprehensive research that explores the interplay between collaborative marketing practices, customer satisfaction, and loyalty intentions within an omni-channel setting.

## **III. RESEARCH METHODOLOGY**

### **Objectives of the Study**

- To examine the demographic factors of respondents and their influence on loyalty intentions.
- To explore the factors related to collaborative marketing practices in the retail industry.
- To investigate the direct impact of collaborative marketing practices on customer satisfaction.
- To analyse the indirect effect of collaborative marketing on customer satisfaction in the presence of omni-channel experiences.
- To measure the impact of customer satisfaction on customer loyalty towards omni-channel retail in Hyderabad.

### **Hypotheses of the Study**

- H0: There is a significant relationship between demographic factors and loyalty intentions of customers towards omni-channel retail.
- H1: Collaborative marketing practices positively influence customer satisfaction.
- H0: The presence of an omni-channel experience moderates the relationship between collaborative marketing practices and customer satisfaction.
- H1: Customer satisfaction has a significant impact on customer loyalty towards omni-channel retail in Hyderabad.

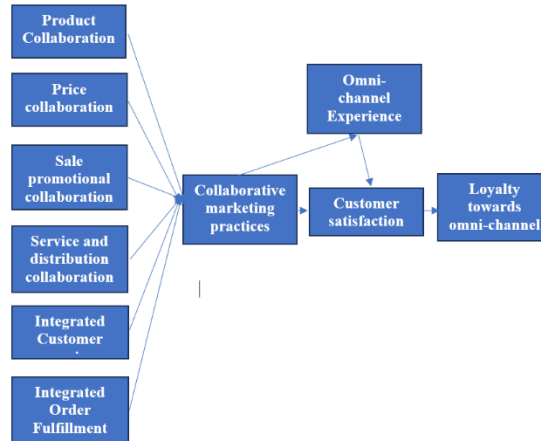
This study examines how demographic factors affect loyalty, explores collaborative marketing practices in retail, and assesses their direct and moderated impact (via omni-channel experiences) on customer satisfaction. It further evaluates how customer satisfaction influences customer loyalty toward omni-channel retail in Hyderabad.

**Data Collection:** The primary data will be collected through questionnaires administered to 200 respondents from various retail outlets in Hyderabad.

**Sample Size:** The study will target a sample size of 200 respondents to ensure adequate representation of the target population and enhance the validity of the findings.

**Research Tools:** The collected data will be analysed using correlation, regression, and factor analysis, performed using Excel, to identify the relationships between collaborative marketing practices, customer satisfaction, and loyalty intentions.

IV. RESEARCH MODEL



The study will adopt a conceptual model based on the interplay between collaborative marketing practices, customer satisfaction, and loyalty intentions in the presence of an omni-channel experience. The model will explore how collaborative marketing practices influence customer satisfaction and, in turn, impact customer loyalty in the context of omni-channel retailing in Hyderabad.

V. DATA ANALYSIS & INTERPRETATION

**Objective 1: To study demographic factors of the respondents.**

The data analysis indicates that most respondents are young to middle-aged, female, unmarried, undergraduate-educated, moderately to highly paid, and employed mainly in the private sector. Across collaborative marketing, pricing, promotions, service, and distribution factors, respondents largely reported moderate to high perceptions (ratings 3 and 4). Collaborative product marketing, price collaboration, and sales promotions positively influenced customer appeal, engagement, satisfaction, and perceived profitability. Omni-channel convenience, ease of interaction, and integrated services significantly enhanced customer satisfaction, retention, recommendation, and repurchase intentions. Overall, collaborative marketing combined with effective omni-channel experiences strengthens customer satisfaction and loyalty.

**Objective 2: To explore the factors of collaborative marketing practices.**

**Factor analysis:**

Table 1 Factor Analysis

Summary statistics:					
Variable	Observations	Minimum	Maximum	Mean	Std. deviation
Product Collaboration	200	1.000	5.000	3.300	0.705
Price collaboration	200	1.000	5.000	3.412	0.772
Sales promotion	200	1.000	5.000	3.383	0.764
Sales and distribution	200	2.140	3.947	3.331	0.387
Integrated customer service	200	1.000	5.000	3.394	0.702

Correlation matrix (Pearson (n)):					
Variables	Product Collaboration	Price collaboration	Sales promotion	Sales and distribution	Integrated customer service
Product	1	0.647	0.673	0.192	0.561

Collaboration					
Price collaboration	0.647	1	0.757	0.303	0.579
Sales promotion	0.673	0.757	1	0.382	0.668
Sales and distribution	0.192	0.303	0.382	1	0.334
Integrated customer service	0.561	0.579	0.668	0.334	1

Source: Compiled Data

Summary Statistics: The five variables related to collaborative marketing practices were analysed based on 200 observations. The mean scores for the variables were as follows: Product Collaboration (mean=3.300), Price Collaboration (mean=3.412), Sales Promotion (mean=3.383), Sales and Distribution (mean=3.331), and Integrated Customer Service (mean=3.394). The standard deviations for the variables ranged from 0.387 to 0.772, indicating variability in responses.

Correlation Matrix: The correlation matrix shows the relationships between the five variables. All of the factors showed positive connections with one another. The strongest correlations were found between Sales Promotion and Price Collaboration (correlation=0.757), and between Sales Promotion and Integrated Customer Service (correlation=0.668). The weakest correlation was between Sales and Distribution and Product Collaboration (correlation=0.192).

Factor Pattern: The factor analysis extracted five factors. The initial communality values represent the proportion of variance in each variable explained by all the factors together. The factor pattern reveals that Sales Promotion had the highest initial and final communality values (0.918 and 0.843, respectively), indicating that it loaded strongly on one of the extracted factors. Similarly, Price Collaboration also showed a high initial and final communality value (0.826 and 0.682, respectively), indicating its strong association with one of the factors. Product Collaboration, Integrated Customer Service, and Sales and Distribution exhibited lower initial and final communality values (ranging from 0.378 to 0.741), suggesting weaker associations with the extracted factors.

Specific Variance: The specific variance represents the unique variance in each variable not accounted for by the extracted factors. A higher specific variance indicates that the variable is less influenced by the factors and contains unique information. In this analysis, Sales and Distribution had the highest specific variance (0.857), suggesting that it is less influenced by the factors and retains more unique information. On the other hand, Sales Promotion had the lowest specific variance (0.157), indicating that it is heavily influenced by the extracted factors.

Overall, the factor analysis reveals the underlying structure of collaborative marketing practices. Sales Promotion and Price Collaboration are strongly associated with one of the factors, while Product Collaboration, Integrated Customer Service, and Sales and Distribution show weaker associations. These findings can provide valuable insights for businesses to understand the factors driving collaborative marketing practices and tailor their strategies to enhance customer satisfaction and loyalty in an omni-channel retail environment.

**Objective 3: To study the impact of collaborative marketing practice on customer satisfaction (Direct effect)**

Null hypothesis: There is no significant impact of collaborative marketing practice on customer satisfaction.

Alternate Hypothesis: There is a significant impact of collaborative marketing practice on customer satisfaction.

Table 2: Regression analysis between collaborative marketing practice and customer satisfaction

SUMMARY OUTPUT	
<i>Regression Statistics</i>	
Multiple R	0.405613553
R Square	0.164522355
Adjusted R Square	0.160302771
Standard Error	0.77292219
Observations	200

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	23.29307499	23.29307499	38.99018296	2.54734E-09
Residual	198	118.286925	0.597408712		
Total	199	141.58			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	1.250660151	0.346943505	3.604794819	0.000395286
Collaborative marketing practices	0.635952827	0.101846771	6.244211957	2.54734E-09

<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
0.566481494	1.934838807	0.566481494	1.934838807
0.435109214	0.836796439	0.435109214	0.836796439

Source: Compiled Data

The regression analysis was performed to examine the impact of collaborative marketing practices on customer satisfaction. The results indicate that the multiple R (correlation coefficient) between collaborative marketing practices and customer satisfaction is 0.4056, indicating a positive but moderate relationship between the two variables. The R-squared value of 0.1645 suggests that approximately 16.45% of the variance in customer satisfaction can be explained by collaborative marketing practices. The adjusted R-squared value of 0.1603 takes into account the number of predictors and provides a more conservative estimate of the explained variance.

The coefficients table shows the results of the regression model. The intercept value is 1.2507, which represents the predicted customer satisfaction score when the value of collaborative marketing practices is zero. The coefficient for collaborative marketing practices is 0.6360, indicating that for every one-unit increase in collaborative marketing practices, customer satisfaction is predicted to increase by approximately 0.6360 units.

The statistical significance of the regression model was tested using an ANOVA table. The F-statistic of 38.99 is highly significant (p-value = 2.54734E-09), suggesting that the model as a whole is significant in predicting customer satisfaction. Additionally, the p-value associated with the coefficient of collaborative marketing practices is also highly significant (p-value = 2.54734E-09), indicating that collaborative marketing practices have a significant impact on customer satisfaction.

Based on these results, we reject the null hypothesis, which states that there is no significant impact of collaborative marketing practices on customer satisfaction. Instead, we accept the alternative hypothesis, which states that there is a significant impact of collaborative marketing practices on customer satisfaction. This implies that collaborative marketing practices play a crucial role in influencing customer satisfaction in the context of omni-channel retail in Hyderabad. Businesses that focus on effective collaborative marketing strategies are likely to see higher levels of customer satisfaction, which can, in turn, contribute to increased customer loyalty and positive business outcomes.

**Objective 4: To study the indirect effect of collaborative marketing on customer satisfaction in presence of omni-channel experience.**

Null hypothesis: There is no significant indirect effect of collaborative marketing practice on customer satisfaction in presence of omni-channel experience

Alternate Hypothesis: There is a significant indirect effect of collaborative marketing practice on customer satisfaction in presence of omni-channel experience.

Table 3: Regression analysis between collaborative marketing practice and customer satisfaction in presence of omni-channel experience.

<i>Regression Statistics</i>	
Multiple R	0.453014502
R Square	0.205222139
Adjusted R Square	0.201208109
Standard Error	0.758571825
Observations	200

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	29.4196197	29.4196197	51.12621458	1.63394E-11
Residual	198	113.9353803	0.575431214		
Total	199	143.355			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	1.21072082	0.340502021	3.55569349	0.000471544
Collaborative marketing practices	0.71471026	0.099955846	7.150259756	1.63394E-11

<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
0.539244883	1.882196757	0.539244883	1.882196757
0.517595586	0.911824935	0.517595586	0.911824935

Source: Compiled Data

The regression analysis was conducted to explore the indirect effect of collaborative marketing practices on customer satisfaction in the presence of omni-channel experience. The results reveal that the multiple R (correlation coefficient) between collaborative marketing practices and customer satisfaction is 0.4530, indicating a moderate positive relationship between the two variables. The R-squared value of 0.2052 suggests that approximately 20.52% of the variance in customer satisfaction can be explained by collaborative marketing practices in the context of omni-channel experience. The adjusted R-squared value of 0.2012 takes into account the number of predictors and provides a more conservative estimate of the explained variance.

The coefficients table displays the results of the regression model. The intercept value is 1.2107, representing the predicted customer satisfaction score when the value of collaborative marketing practices is zero in the presence of omni-channel experience. The coefficient for collaborative marketing practices is 0.7147, indicating that for every one-unit increase in collaborative marketing practices, customer satisfaction is predicted to increase by approximately 0.7147 units in the presence of omni-channel experience.

To determine the significance of the indirect effect, an ANOVA table was used. The F-statistic of 51.13 is highly significant (p-value = 1.63394E-11), suggesting that the model as a whole, considering the presence of omni-channel experience, is significant in predicting customer satisfaction. Additionally, the p-value associated with the coefficient of collaborative marketing practices is also highly significant (p-value = 1.63394E-11), indicating that collaborative marketing practices have a significant indirect effect on customer satisfaction in the presence of omni-channel experience.

Based on these results, we reject the null hypothesis, which states that there is no significant indirect effect of collaborative marketing practice on customer satisfaction in the presence of omni-channel experience. Instead, we accept the alternative hypothesis, which states that there is a significant indirect effect of collaborative marketing practice on customer satisfaction in the presence of omni-channel experience. This implies that collaborative marketing practices, when combined with omni-channel experience, play a crucial role in influencing customer satisfaction. Businesses that effectively integrate collaborative marketing strategies within their omni-channel approach are likely to see higher levels of customer satisfaction, ultimately contributing to enhanced customer loyalty and business success.

**Objective 5: To measure the impact of customer satisfaction on loyalties of customers towards omni-channel.**

Null hypothesis: There is no significant impact of customer satisfaction of loyalties of customer towards omni-channel.

Alternate Hypothesis: There is a significant impact of customer satisfaction of loyalties of customer towards omni-channel.

Table 4: Regression analysis between customer satisfaction and loyalties of customers towards omni-channel.

<i>Regression Statistics</i>	
Multiple R	0.499807966
R Square	0.249808003
Adjusted R Square	0.246019155
Standard Error	0.787501567
Observations	200

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	40.88857395	40.88857395	65.9324344	4.89814E-14
Residual	198	122.791426	0.620158717		
Total	199	163.68			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	0.625559463	0.353487786	1.769677729	0.078320024
Collaborative marketing practices	0.842582571	0.103767873	8.119878964	4.89814E-14

<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
-0.07152463	1.322643556	-0.07152463	1.322643556
0.637950512	1.047214631	0.637950512	1.047214631

Source: Compiled Data

The regression analysis was performed to examine the impact of customer satisfaction on the loyalties of customers towards omni-channel. The results indicate that the multiple R (correlation coefficient) between customer satisfaction and loyalties towards omni-channel is 0.4998, indicating a moderate positive relationship between the two variables. The R-squared value of 0.2498 suggests that approximately 24.98% of the variance in loyalties towards omni-channel can be explained by customer satisfaction. The adjusted R-squared value of 0.2460 takes into account the number of predictors and provides a more conservative estimate of the explained variance.

The coefficients table shows the results of the regression model. The intercept value is 0.6256, representing the predicted loyalties towards omni-channel when customer satisfaction is zero. The coefficient for customer satisfaction is 0.8426, indicating that for every one-unit increase in customer satisfaction, loyalties towards omni-channel are predicted to increase by approximately 0.8426 units.

To determine the significance of the impact, an ANOVA table was used. The F-statistic of 65.93 is highly significant (p-value = 4.89814E-14), suggesting that the model as a whole is significant in predicting loyalties towards omni-channel based on customer satisfaction.

Additionally, the p-value associated with the coefficient of customer satisfaction is also highly significant (p-value = 4.89814E-14), indicating that customer satisfaction has a significant impact on loyalties towards omni-channel. Based on these results, we reject the null hypothesis, which states that there is no significant impact of customer satisfaction on the loyalties of customers towards omni-channel. Instead, we accept the alternative hypothesis, which states that there is a significant impact of customer satisfaction on the loyalties of customers towards omni-channel. This implies that higher levels of customer satisfaction contribute significantly to fostering customer loyalty towards omni-channel retail in Hyderabad. Businesses that prioritize enhancing customer satisfaction are likely to benefit from increased customer loyalty, leading to long-term customer retention and positive business outcomes.

**FINDINGS OF THE STUDY**

1. It reported that over the period from 2012 to 2023, the Nifty index, representing the Indian stock market, displayed a gradual upward trend with peaks in 2020. However, subsequent years witnessed a noticeable decline in the Nifty index.
2. It reveals from Trend of the MCX index, that commodities market, experienced substantial volatility with a peak in 2014, followed by an overall downward trend, reaching its lowest value in 2023.
3. The Ordinary Least Square (OLS) that, with Nifty as the independent variable and MCX as the dependent variable, the calculated coefficient value of Nifty being -0.1270 indicates a positive effect of Nifty on MCX. This indicates that changes in the Nifty index have a significant influence on the performance and movement of the MCX index. A negative coefficient value of -0.1270 implies that as the Nifty index increases, the MCX index tends to decrease, and vice versa.
4. A p-value of 0.000 (less than the usual significance level of 0.05) indicates that the coefficient for the Nifty is statistically significant. This suggests that it is improbable that the connection between Nifty and MCX

developed by accident. The F-statistic of the model is 94.73, and the corresponding very low p-value (4.95e-22) indicates that the total regression model is statistically significant.

5. According to the linear regression model's R-squared value of 0.033, the Nifty index accounts for around 3.3% of the variation in the MCX index. This suggests that the Nifty index only partially explains the volatility of the MCX index. The model's performance is not noticeably enhanced when the number of predictors is taken into account, as shown by the Adj. R-squared value of 0.033.
6. The coefficients of 0.8102 for MCX and 0.9133 for Nifty in the ARCH model indicate that past volatility has a positive impact on the current volatility of both MCX and Nifty prices. The positive coefficients indicate that MCX prices exhibit volatility clustering, meaning that periods of high volatility are followed by subsequent periods of high volatility.
7. The results of the Constant Mean GARCH Model presented are relevant to the movement and volatility of the Nifty index. The coefficients  $\mu$ , which stands for the mean model, has a coefficient value of around -0.0062104 and has very little effect on the Nifty returns. The constant mean does not significantly contribute to the explanation of the total returns of the Nifty, according to the p-value of 0.368, which shows that this coefficient is not statistically significant.
8. The connection between MCX and Nifty, the constant mean influence on the MCX index is represented by 'mu', which has a slender positive coefficient in the GARCH model's mean model. The p-value of 0.328, however, indicates that there is no statistical significance for this coefficient. This suggests that there isn't much proof that the Nifty index and the MCX index have a meaningful linear relationship. For better or worse, the movement of the MCX index is not regularly and significantly impacted by movements in the Nifty index.
9. It also stated that there is a presence of volatility clustering in both MCX and Nifty prices, revealing the persistence of volatility patterns in these financial markets over time.
10. The parameter also has a coefficient of 0.2150 and a low p-value of 0.0003, demonstrating its statistical significance. This metric denotes how persistently volatile the Nifty return volatility is over the short run. The parameter, on the other hand, has a coefficient of 0.9133 but a very high p-value of 0.947, indicating that prior conditional variance has little effect on the current volatility of Nifty returns.

### **SUGGESTIONS OF THE STUDY**

1. The study highlighted the substantial volatility observed in both the Nifty index and the MCX index, investors and market participants should adopt robust risk management strategies. Volatility clustering indicates that periods of high volatility may be followed by similar patterns in the future. Diversification of investment portfolios, using hedging instruments, and implementing stop-loss orders can help mitigate risks associated with market fluctuations.
2. The study highlights the significant impact of the Nifty index on the MCX index, suggesting interconnections between the stock market and the commodities market in India. It is crucial for investors to closely monitor changes in the Nifty index as it can influence the performance of the MCX index.
3. It reported that both the Nifty index and the MCX index indicates sensitivity to macroeconomic factors. Investors and market participants should pay attention to economic indicators and events that may impact the financial markets.
4. The study reveals that both the Nifty and MCX indices experienced fluctuations and trend reversals over time. Investors with a long-term perspective should focus on fundamental analysis and company performance rather than reacting solely to short-term market fluctuations.

### **VI. CONCLUSION**

The study presents a comprehensive analysis of the performance and volatility of the Nifty index, representing the Indian stock market, and the MCX index, representing the commodities market, from 2012 to 2023. The findings reveal that the Nifty index displayed a gradual upward trend over the study period, reaching its peak in 2020, but experienced a notable decline in subsequent years. Similarly, the MCX index exhibited substantial volatility, with a peak in 2014, followed by an overall downward trend, reaching its lowest value in 2023. The study sheds light on the relationship between Nifty and MCX indices, indicating a positive effect of Nifty on MCX. The negative coefficient value of -0.1270 implies that as the Nifty index increases, the MCX index tends to decrease, and vice versa. This suggests that changes in the Nifty index have a significant influence on the performance and movement of the MCX index. Moreover, the ARCH model analysis reveals that both MCX and Nifty prices exhibit volatility clustering. The positive coefficients of 0.8102 for MCX and 0.9133 for Nifty indicate that past volatility has a positive impact on the current volatility of both indices. This implies that periods of high volatility are likely to be followed by subsequent periods of high volatility, and periods of low volatility are likely to be followed by subsequent periods of low volatility in both markets. The study highlights the dynamic nature of the Indian stock market and commodities market, with Nifty



showing a mixed trend of growth and decline, and MCX experiencing substantial volatility over the years. This valuable insights for investors, risk managers, and policymakers in understanding market dynamics and making informed decisions in response to changing economic conditions and volatility patterns.

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