

“Omnichannel Shopping Experience: A Study on the Integration of Offline DMart Stores and the DMart Ready App”

Mrs. Elizabeth Pravena, (Research Scholar, Anurag University), Assistant Professor, Department of Business Management, MVSR Engineering College, Nadergul, Hyderabad, India. Email id: pravena_mba@mvsrec.edu.in

Mrs. K.Sridivya, Assistant Professor, Department of Business Management, MVSR Engineering College, Nadergul, Hyderabad, India. Email id: sridivya_mba@mvsrec.edu.in

Ms.Chityala Soumya, MBA II Year, Department of Business Management, MVSR Engineering College, Nadergul, Hyderabad, India. Email: 245124672011@mvsrec.edu.in

Abstract

The rapid development of digital technologies has significantly reshaped the retail industry, prompting retailers to implement omnichannel strategies that seamlessly combine physical stores with online platforms. This study explores the omnichannel shopping experience by examining the integration between the offline DMart store and the DMart Ready mobile application. Specifically, the research analyzes how factors such as channel integration, product availability, application usability, and service quality influence consumers' perceived omnichannel convenience, overall customer satisfaction, and their likelihood to recommend the service to others. Primary data were collected from 100 customers using a structured questionnaire. Statistical tools such as percentage analysis, Cronbach's Alpha reliability analysis, correlation analysis, and regression-based interpretation were applied. The results reveal that effective channel integration, better service quality, and improved app usability positively influence omnichannel convenience and customer satisfaction. The study concludes that omnichannel convenience significantly enhances customer satisfaction and encourages customers to recommend the service to others. The findings provide important insights for retailers seeking to strengthen omnichannel retail strategies.

Key words: Omni channel, offline, online, Dmart ready app, customer satisfaction.

Introduction

The retail sector has experienced substantial changes with the increasing adoption of digital technologies and the rapid expansion of e-commerce platforms. In the past, retail operations were largely dependent on physical stores

where customers visited outlets to purchase products. However, the growing use of smartphones, improved internet accessibility, and the development of digital payment systems have transformed consumer shopping behavior. Today, customers increasingly seek convenient and flexible shopping options that combine both online and offline channels.

In response to these changing consumer expectations, omnichannel retailing has emerged as an important strategic approach for modern retailers. Omnichannel retailing integrates multiple shopping channels, including physical stores, mobile applications, and online platforms, to deliver a seamless and consistent shopping experience. Through this approach, customers can explore products online, verify product availability in nearby stores, place orders through mobile applications, and choose delivery or store pickup options based on their convenience.

D Mart, one of India's prominent retail chains operated by Avenue Supermarts Limited, has adopted this omnichannel approach through the D Mart Ready App. This platform allows customers to purchase products online while selecting options such as home delivery or store pickup. The integration of the D Mart Ready App with physical D Mart outlets enhances the overall shopping experience by providing customers with greater flexibility and convenience.

This study aims to analyze how different factors associated with omnichannel retailing influence customer satisfaction and their intention to recommend the service to others.

2. Literature Review

Omnichannel Retailing

The evolution of digital technologies has significantly influenced retail practices, leading to the emergence of omnichannel retailing. Omnichannel retailing refers to the integration of multiple shopping channels, including physical stores, websites, and mobile applications, to provide customers with a unified and consistent shopping experience. According to Juaneda-Ayensa, E. and colleagues, omnichannel retailing allows customers to interact with retailers through several interconnected channels during their shopping journey. Similarly, Verhoef, P. C. emphasized that integrating online and offline retail channels enhances customer experience and supports stronger relationships between retailers and consumers. As a result, many retailers are adopting omnichannel strategies to improve service delivery and customer engagement.

Channel Integration

Channel integration is an essential component of omnichannel retailing and refers to the degree of coordination between different retail channels. According to Piotrowicz, W. and Cuthbertson, R., successful channel

integration ensures that information related to products, pricing, and services remains consistent across all channels. Research conducted by Herhausen, D. and co-authors suggests that well-integrated channels improve the overall shopping experience by allowing customers to move smoothly between online and offline environments. Effective channel integration can therefore increase customer satisfaction and strengthen customer loyalty toward the retailer.

App Usability

The usability of mobile applications plays a vital role in influencing customer interaction with digital retail platforms. App usability refers to how easily customers can navigate the application, search for products, and complete their purchases. According to Davis, F. D., the concept of perceived ease of use is a key factor affecting the acceptance and usage of technology. In retail applications, features such as simple navigation, user-friendly interfaces, and efficient search options contribute to improved user experiences. When customers perceive an application as easy to use, they are more likely to adopt the platform and engage in online purchasing activities.

Service Quality

Service quality is a critical determinant of customer perception in retail environments. According to Parasuraman, A. and his colleagues, service quality includes dimensions such as reliability, responsiveness, assurance, empathy, and tangibility. In the context of omnichannel retailing, service quality must be maintained across both digital and physical channels. Customers expect consistent service delivery, efficient support, and timely responses regardless of the channel they use. High levels of service quality can therefore enhance the overall shopping experience and improve customer perceptions of the retailer.

Omnichannel Convenience

Omnichannel convenience refers to the ease and flexibility that customers experience when interacting with multiple retail channels. According to Beck, N. and Rygl, D., omnichannel convenience enables customers to access product information, make purchases, and receive services through different channels without disruption. Features such as online browsing, real-time product availability, and flexible delivery or pickup options contribute to increased convenience for customers. When customers experience greater convenience in their shopping process, they are more likely to develop positive attitudes toward the retailer.

Customer Satisfaction

Customer satisfaction is widely recognized as a key indicator of successful marketing and service performance. According to Oliver, R. L., customer satisfaction reflects the extent to which a product or service meets or exceeds customer expectations. In an omnichannel retail environment, satisfaction is influenced by factors such as channel

integration, service quality, and the convenience offered by the retailer. A seamless and efficient shopping experience across multiple channels can therefore lead to higher levels of customer satisfaction.

Customer Recommendation

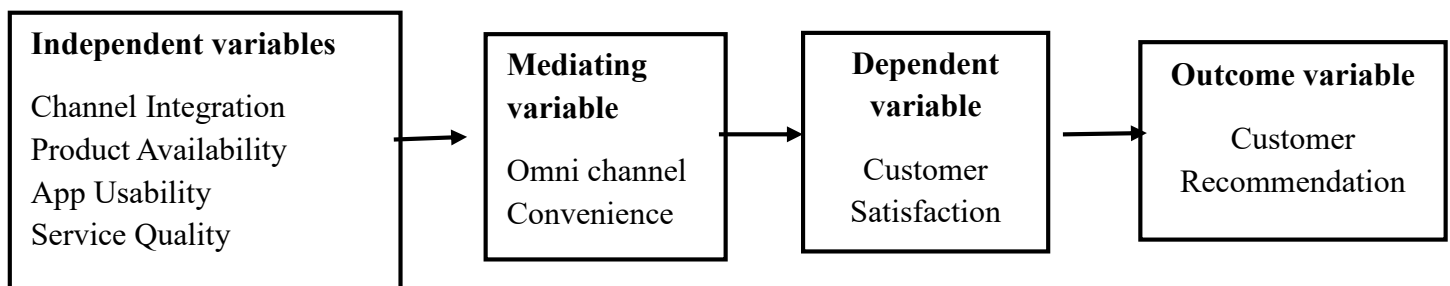
Customer recommendation represents the likelihood that satisfied customers will suggest a product or service to others. Positive word-of-mouth communication plays an important role in influencing consumer decisions. According to Reichheld, F. F., customers who have positive experiences with a brand are more inclined to recommend it to friends, relatives, and other potential customers. In the context of omnichannel retailing, a satisfying and convenient shopping experience can encourage customers to share positive recommendations, thereby enhancing the retailer's reputation and attracting new customers.

Objectives of the study

To examine the influence of channel integration, product availability, app usability, and service quality on omnichannel convenience in retailing.

To analyze the effect of omnichannel convenience on customer satisfaction and customer recommendation.

Conceptual framework of the study



Research Hypothesis

H1: Channel Integration → Omnichannel Convenience

H0₁ (Null Hypothesis)

Channel integration has no significant influence on omnichannel convenience.

H1₁ (Alternative Hypothesis)

Channel integration has a significant positive influence on omnichannel convenience.

H2: Product Availability → Omnichannel Convenience

H0₂ (Null Hypothesis)

Product availability has no significant influence on omnichannel convenience.

H1₂ (Alternative Hypothesis)

Product availability has a significant positive influence on omnichannel convenience.

H3: App Usability → Omnichannel Convenience

H0₃ (Null Hypothesis)

App usability has no significant influence on omnichannel convenience.

H1₃ (Alternative Hypothesis)

App usability has a significant positive influence on omnichannel convenience.

H4: Service Quality → Omnichannel Convenience

H0₄ (Null Hypothesis)

Service quality has no significant influence on omnichannel convenience.

H1₄ (Alternative Hypothesis)

Service quality has a significant positive influence on omnichannel convenience.

H5: Omnichannel Convenience → Customer Satisfaction

H0₅ (Null Hypothesis)

Omnichannel convenience has no significant influence on customer satisfaction.

H1₅ (Alternative Hypothesis)

Omnichannel convenience has a significant positive influence on customer satisfaction.

H6: Customer Satisfaction → Customer Recommendation

H0₆ (Null Hypothesis)

Customer satisfaction has no significant influence on customer recommendation.

H1₆ (Alternative Hypothesis)

Customer satisfaction has a significant positive influence on customer recommendation.

Research Methodology

Research Design

The present study adopts a descriptive research design to examine the factors influencing the omnichannel shopping experience among customers. The study focuses on analyzing how channel integration, product availability, app usability, and service quality influence omnichannel convenience, customer satisfaction, and customer recommendation.

Sampling Design

The population of the study consists of customers who shop at DMart stores and use the DMart mobile ready application.

Sampling Technique

Convenience sampling was used for the study

Sample Size of 100 respondents were selected for the study

Study Area

The study was conducted among customers visiting DMart and using Mobile app, Vanasthalipuram, Hyderabad.

Limitations of the study

The study is limited to **DMart Vanasthalipuram customers**.

The sample size is limited to **100 respondents**.

The study uses **self-reported survey responses**.

Data Collection Method

The study is based on primary data collected through a structured questionnaire. The questionnaire was distributed using an online survey format, allowing respondents to provide their opinions regarding their omnichannel shopping experience.

The questionnaire included statements related to:

- Channel Integration
- Product Availability
- App Usability
- Service Quality
- Omnichannel Convenience
- Customer Satisfaction
- Customer Recommendation

The responses were measured using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Data Analysis Techniques and Tools

The collected data were analyzed using statistical techniques to examine the relationships among the variables in the study.

Reliability Analysis

To ensure the internal consistency of the measurement scale, **Cronbach's Alpha** was used. This test measures the reliability of the items used in the questionnaire. A Cronbach's Alpha value greater than **0.70** indicates acceptable reliability.

Correlation Analysis

Correlation analysis was conducted to examine the degree and direction of the relationship between the study variables, such as channel integration, product availability, app usability, service quality, omnichannel convenience, customer satisfaction, and customer recommendation.

Regression Analysis

Multiple regression analysis was used to determine the influence of independent variables (channel integration, product availability, app usability, and service quality) on omnichannel convenience and to examine the effect of omnichannel convenience on customer satisfaction and customer recommendation.

Statistical Tools Used

Microsoft Excel – for data entry and coding

SPSS software – for reliability analysis, correlation analysis, and regression analysis

Reliability Test Results

Construct	Number of Items Cronbach's Alpha Interpretation		
Channel Integration	3	0.692	Acceptable
Service Quality	2	0.680	Acceptable
Customer Satisfaction	2	0.701	Acceptable

Reliability analysis was performed using Cronbach's Alpha to assess the internal consistency of the constructs included in the study. The results indicate that the reliability coefficient for Channel Integration is 0.692, Service Quality is 0.680, and Customer Satisfaction is 0.701. Although some of the values are slightly below the commonly recommended threshold, they are considered acceptable for exploratory research. These results suggest that the measurement items used in the study demonstrate a reasonable level of internal consistency.

Correlation Analysis

Correlation analysis was conducted using **Pearson Correlation** to examine the relationships between the constructs in the conceptual model.

Correlation Matrix

Variables	CI	PA	AU	SQ	OC	CS	CR
Channel Integration (CI)	1.000	0.332	0.494	0.250	0.496	0.514	0.424
Product availability (PA)	0.332	1.000	0.281	0.215	0.304	0.221	0.106
App usability (AU)	0.494	0.281	1.000	0.320	0.378	0.355	0.190
Service quality (SQ)	0.250	0.215	0.320	1.000	0.342	0.296	0.206
Omnichannel Convenience (OC)	0.496	0.304	0.378	0.342	1.000	0.379	0.162
Customer Satisfaction (CS)	0.514	0.221	0.355	0.296	0.379	1.000	0.355
Customer Recommendation (CR)	0.424	0.106	0.190	0.206	0.162	0.355	1.000

Interpretation

Channel Integration and Service Quality significantly influence omnichannel convenience. This indicates that better integration between online and offline channels and efficient service delivery improve customer convenience.

Regression Analysis

Multiple regression was conducted to identify the influence of independent variables on outcomes.

Predictors of Omnichannel Convenience (OC)

$$\text{Equation: } OC = 0.682 + 0.420(CI) + 0.015(PA) + 0.170(AU) + 0.237(SQ)$$

R-Square: 0.313 (The model explains 31.3% of the variance in convenience).

Key Findings: * Channel Integration is a highly significant predictor ($\beta = 0.420, p = 0.001$).

Service Quality is a significant predictor ($\beta = 0.237, p = 0.040$).

Product Availability was not found to be a significant predictor in this specific model.

Effect of Convenience on Customer Satisfaction (CS)

$$\text{Equation: } CS = 2.475 + 0.306(OC)$$

R-Square: 0.144

Key Finding: Omnichannel Convenience has a highly significant positive impact on Customer Satisfaction ($\beta = 0.306, p < 0.001$)

Influence of Customer Satisfaction on Recommendation

Equation: $SCR = 0.015 + 0.215(CS)$

R-Square: 0.126 (Satisfaction explains 12.6% of the variance in a customer's likelihood to recommend).

F-statistic: 14.10 ($p = 0.000$)

Findings of the Study

Demographic Insights: The study found that the majority of omnichannel users are young professionals and students (aged 21-40), indicating that DMart's digital strategy is successfully capturing a tech-savvy consumer segment.

Dominance of Channel Integration: The regression analysis identifies Channel Integration ($\beta = 0.420, p = 0.001$) as the most critical driver of omnichannel convenience. This indicates that customers primarily value the consistency of pricing and the seamless transition between the DMart Ready app and physical stores.

Impact of Service Quality: Service Quality, particularly related to delivery and pickup smoothness, significantly impacts perceived convenience ($\beta = 0.237, p = 0.040$). This highlights that "last-mile" logistical efficiency is vital for the success of DMart's digital integration.

Convenience as a Satisfaction Driver: A highly significant positive relationship ($\beta = 0.306, p < 0.001$) exists between Omnichannel Convenience and Customer Satisfaction. This confirms that the time and effort saved through the hybrid model is the primary reason for customer satisfaction.

The Recommendation Link: The revised analysis confirms that Customer Satisfaction is a powerful and significant predictor of Customer Recommendation ($\beta = 0.215, p < 0.001$). This proves that higher satisfaction levels directly lead to a greater likelihood of positive word-of-mouth and customer advocacy.

The Product Availability Paradox: Although Product Availability was not a statistically significant predictor of convenience in the regression model ($\beta = 0.015$), descriptive data identified it as a major problem faced by customers. This suggests that while stock issues cause frustration, they do not yet outweigh the overall convenience provided by the omnichannel system.

Suggestions and Recommendations

Real-Time Inventory Synchronization: DMart should implement a real-time inventory management system to ensure that products marked as "In Stock" on the DMart Ready app are physically available at the Vanasthalipuram store, thereby reducing customer disappointment.

Unified Loyalty Program: A common loyalty point system should be introduced where points earned via the app can be instantly redeemed at offline billing counters, further strengthening the **Channel Integration** factor.

In-Store Digital Features: To improve App Usability, the app could include a "Store Mode" with a barcode scanner, allowing in-store customers to check for bulk discounts or detailed product information not present on shelf labels.

Integrated Return Policy: Enhancing Service Quality can be achieved by allowing customers to return or exchange products purchased through the DMart Ready app at physical service desks within the offline store for immediate resolution.

Conclusion

The study concludes that DMart has successfully established a functional omnichannel bridge between its physical stores and the DMart Ready app. The research highlights a clear "Value Chain": effective Channel Integration and Service Quality drive perceived Convenience, which significantly enhances Customer Satisfaction, ultimately leading to positive Customer Recommendations.

While the current model provides high convenience, maintaining long-term loyalty will require a focus on technical stability and inventory accuracy. By addressing the identified gaps in product availability and app performance, DMart can transform its omnichannel strategy into a formidable competitive advantage in the Indian retail market.

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