CHANGING FMCG BUYING BEHAVIOUR THROUGH E-COMMERCE: A COMPARATIVE ANALYSIS OF PRE- AND POST-COVID-19 IN AHMEDABAD CITY.

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Abstract: The COVID-19 pandemic has significantly transformed consumer purchasing behaviour, particularly in the Fast-Moving Consumer Goods (FMCG) sector. This study analyses changes in FMCG purchase behaviour before and after COVID-19, examines the role of e-commerce platforms, and identifies key factors influencing online FMCG adoption. Primary data from 160 respondents were analysed using descriptive statistics, Chi-square tests, Wilcoxon Signed-Rank test, factor analysis, and Spearman's rank correlation. The findings reveal a statistically significant shift from offline to online and hybrid FMCG purchasing in the post-COVID period. Chi-square analysis indicates that occupation and income significantly influence post-COVID purchase behaviour, spending patterns, and platform recommendations, while age and gender show limited or no impact. Factor analysis identifies post-purchase service and trust, delivery efficiency and product availability, and perceived cost burden as the key determinants of online FMCG purchase behaviour. Further, Spearman's correlation results highlight that customer support, return and refund policies, and delivery speed play a critical role in driving customer recommendations and future engagement with e-commerce platforms. Overall, the study concludes that convenience, service reliability, and delivery experience have become more influential than traditional price considerations in shaping post-pandemic online FMCG purchase behaviour.

Index Terms **- FMCG Purchases, COVID-19, Online Purchase Behaviour, E-commerce Platforms, Consumer Trust**

I. INTRODUCTION

According to Statista, the market size of the e-commerce sector in India is estimated at approximately USD 125 billion. Over the years, increasing internet penetration, widespread smartphone adoption, advancements in digital payment systems, and changing consumer lifestyles have driven the steady growth of online retail platforms. The COVID-19 pandemic significantly accelerated this digital shift when traditional retail operations were disrupted due to lockdowns and mobility restrictions. As physical shopping became constrained, consumers increasingly relied on e-commerce platforms for essential purchases, motivated by convenience, safety, and accessibility. This resulted in a substantial transformation in consumer behaviour, marking an unprecedented shift from brick-and-mortar retail formats to online purchasing channels.

The Fast-Moving Consumer Goods (FMCG) sector, the fourth-largest segment of the Indian economy, has also experienced rapid digital integration. According to EBS Consultancy Group, the FMCG market is projected to grow at a compound annual growth rate of 27.9% between 2024 and 2030, reaching nearly USD 1,288.52 billion by 2030. Traditionally dominated by Kirana stores and supermarkets, FMCG purchasing patterns have been reshaped by the emergence of quick-commerce platforms such as Blinkit, Zepto, and Swiggy Instamart, which emphasize ultra-fast delivery as a core value proposition. Factors such as convenience, price sensitivity, delivery speed, and service experience now strongly influence consumer decision-making, particularly for non-durable products (Deloitte, 2023). In this context, the present study examines the influence of e-commerce platforms on FMCG buying behaviour in Ahmedabad city, with a focus on understanding whether pandemic-driven behavioural changes represent temporary adjustments or long-term structural shifts in consumer purchasing patterns.

II. LITERATURE REVIEW

Amir Khan et al. (2023) researched consumer buying behaviour towards e-commerce in the pre- and post-Covid era by collecting primary data from the city. The results of the study had revealed that there was an increase in the preference of shopping for food products from Amazon due to restraints like social distancing, scarcity of goods in nearby stores, etc.

Dr. Yogesh D. Mahajan (2020) studied the impact of the covid pandemic on the Indian FMCG sector and Kirana stores (local grocery stores), mainly focusing on consumer behaviour and measures to improve the situation. This was done through the means of primary and secondary data in order to analyses multiple aspects of the consumer and the industry. The findings reveal a paradigm shift in consumer tastes, business practices, and economic structures, clearly indicating that adaptiveness had become vital in order to survive in the market.

N. Subha et al. (2021) investigated how the pandemic affected consumer purchasing habits and how it affected the satisfaction of the e-commerce sector. Customers prefer online purchasing, according to the analysis, because of factors like cheaper prices, quick delivery and convenience that were lacking in physical stores during the pandemic.

Dr. Ranjith Somasundaran Chakkambath et al. (2021) examined the elements that affected online shopping during the pandemic. Convenience, payment methods, deals, and other important aspects of internet shopping were highlighted by the results. By 2026, e-

commerce in India is predicted to rise by 200 billion. This demonstrates the increase in internet shopping that is taking place even during this pandemic.

Roy and Datta (2023), the study reviewed around 90 papers and it revealed consumer behaviour in online environments are shaped by a combination of product-related factors, consumer characteristics, past online experiences, consequential variables and trust in various online platforms. In the Pre-covid, the shopping patterns were driven particularly by price, discounts, product variety and FMCG products were not a preferred purchase commodity. The preference change of online FMCG purchases was distinctively seen in the post covid due to the heavy disruption in supply chains and movement barriers.

Rai, U. (2023), showed that the pandemic encouraged businesses to move on from short-term panic to long term opportunities. During the covid period the purchases were more of FMCG products and essentials but when normalcy returned the lists widened towards non-essentials. It was also observed retail businesses started strongly investing in online sales platforms and were moving towards automation. The main cause of the shift was that online sales was more convenient and was becoming a huge source of income for various businesses.

Hamidi, H., & Madani, S. S. (2024), study was conducted in the Iranian background, which revealed that the covid pandemic was a source of increased adoption of technology in the country. Due to the restrictions even the older individuals with low technological literacy also adopted online shopping, which widened the customer base extensively. A direct and significant relation was even revealed between convid-19 mortality rate and the volume of online shopping, indicating that high perceived risk led to increase in e-commerce activity.

The research gap lies in the lack of empirical studies comparing pre- and post-COVID FMCG purchasing behaviour in urban India while examining the role of e-commerce and factors like convenience, price, and delivery experience.

III. RESEARCH METHODOLOGY

3.1 Objectives of the Study

The study was conducted with the following objectives:

I. To analyse changes in consumer purchasing preferences for FMCG products before and after the COVID-19 pandemic.

II. To examine the role of e-commerce platforms in shaping FMCG purchase behaviour during and after the pandemic.

III. To identify factors influencing online FMCG purchases, such as convenience, price sensitivity, and delivery experience.

3.2 Research Design

- The study adopted a descriptive and analytical research design.
- The descriptive design was employed to understand the demographic profile and online purchasing patterns of FMCG consumers, while the analytical design facilitated the examination of relationships among variables influencing online FMCG purchase behaviour.

3.3 Sample Design

- The target population of the study comprised residents of Ahmedabad city who had prior experience purchasing FMCG products through e-commerce platforms.
- Primary data were collected using a structured questionnaire administered through Google Forms and circulated across diverse age groups and occupational categories. A total of 160 valid responses were collected during the data collection period spanning February to April, 2025.
- Purposive sampling was adopted to ensure that only respondents with relevant online FMCG purchasing experience were included in the study, thereby enhancing the relevance and reliability of the findings.

3.4 Tools and Techniques

- The collected data were analysed using IBM Statistical Package for Social Sciences (SPSS) version 25.0. Various statistical tools and techniques were employed, including descriptive statistics for summarizing respondent characteristics, chi-square tests to examine associations between variables, factor analysis to identify underlying dimensions influencing online FMCG purchases, and Spearman's rank correlation to assess relationships among key study variables.

Table 1: Showing the Summary of Demographic Profile of Respondents

Demographic Variables	Categories	Frequencies
Age (in years)	Below 20	51
	20-30	60
	31-40	31
	41-50	16
	51 And above	2
Gender	Male	81
	Female	79
Occupation	Student	82
	Working Professional	46
	Business Owner	20
	Homemaker	8
	Retired Individuals	4
Monthly Household Income (in Rs.)	Below 20,000	18
	20,001-50,000	46
	50,001-100,000	55
	Above 100,000	41

IV. RESULTS AND DISCUSSION

4.1 CHI SQUARE ANALYSIS

To examine the association between demographic characteristics and post-COVID online FMCG purchase behaviour, the chi-square test of independence was applied. The demographic variables considered for analysis included age, gender, occupation, and income, while the behavioural dimensions comprised frequency of online FMCG purchases, spending patterns, and recommendation of online platforms.

Table 2: Chi-Square Analysis of Demographic Variables and Post-Covid Purchase Behaviour

Demographic Variables vs. Post-Covid Purchase Behaviour			
Demographics	**Chi-Square Value**	**P-value**	**Decision for Null Hypothesis**
Age vs. Post-Covid Behaviour H1: Age affects the purchase behaviour.	26.921	0.042	Rejected
Gender vs. Post-Covid Behaviour H1: Gender affects the purchase behaviour.	5.502	0.240	Accepted
Occupation vs. Post-Covid Behaviour H1: Occupation affects the purchase behaviour.	59.909	0.000	Rejected
Income vs. Post-Covid Behaviour H1: Income affects the purchase behaviour.	17.478	0.132	Accepted
Demographic Variables vs. Frequency Change in Online Purchases			
Demographics	**Chi-Square Value**	**P-value**	**Decision for Null Hypothesis**
Age vs. Change of Frequency H1: Age affects the frequency change in terms of online purchases.	6.755	0.563	Accepted
Gender vs. Change of Frequency H1: Gender affects the frequency change in terms of online purchases.	5.166	0.076	Accepted
Occupation vs. Change of Frequency H1: Occupation affects the frequency change in terms of online purchases.	5.095	0.747	Accepted
Income vs. Change of Frequency H1: Income affects the frequency change in terms of online purchases.	2.471	0.872	Accepted
Demographic Variables vs. Spending Patterns of FMCG Purchases			
Demographics	**Chi-Square Value**	**P-value**	**Decision for Null Hypothesis**
Age vs. Spending Behaviour of FMCG Purchases H1: Age affects the spending patterns of FMCG purchases.	8.508	0.385	Accepted
Gender vs. Spending Behaviour of FMCG Purchases H1: Gender affects the spending patterns of FMCG purchases.	0.885	0.643	Accepted
Occupation vs. Spending Behaviour of FMCG Purchases H1: Occupation affects the spending patterns of FMCG purchases.	30.308	0.000	Rejected

Income vs. Spending Behaviour of FMCG Purchases H1: Income affects the spending patterns of FMCG purchases.	12.819	0.046	Rejected
Demographic Variables vs. Recommendation of Online Platforms for FMCG Purchases			
Demographics	**Chi-Square Value**	**P-value**	**Decision for Null Hypothesis**
Age vs. Recommendation of Online Platforms H1: Age affects the recommendation of online platforms for FMCG purchases.	12.935	0.677	Accepted
Gender vs. Recommendation of Online Platforms H1: Gender affects the recommendation of online platforms for FMCG purchases.	4.085	0.395	Accepted
Occupation vs. Recommendation of Online Platforms H1: Occupation affects the recommendation of online platforms for FMCG purchases.	44.723	0.000	Rejected
Income vs. Recommendation of Online Platforms H1: Income affects the recommendation of online platforms for FMCG purchases.	22.713	0.030	Rejected

The Chi-Square analysis reveals that **occupation consistently influences post-COVID purchase behaviour, frequency of online purchases, spending patterns, and recommendation of online platforms**, highlighting its strong role in shaping FMCG buying decisions. **Income significantly affects spending patterns and recommendations**, indicating that higher financial capacity drives both expenditure and advocacy for online platforms. **Age shows a limited effect**, influencing only post-COVID purchase behaviour, while **gender does not have a significant impact** on any of the variables analysed. Overall, these results suggest that demographic factors, particularly occupation and income, play a key role in determining consumers' online FMCG behaviour and their likelihood to recommend e-commerce platforms, whereas age and gender are less influential.

4.2 OBJECTIVE WISE ANALYSIS

4.2.1 To examine changes in FMCG purchase behaviour before and after COVID-19.

A comparative analysis was conducted to examine shifts in FMCG purchase behaviour before and after the COVID-19 pandemic. Table 3 presents the distribution of respondents' purchase modes.

Table 3: FMCG Purchase Behaviour Pre- and Post-COVID-19

Purchase Mode	Pre Covid (%)	Post Covid (%)
Completely Offline	49	14
Mostly Offline	30	18
Equal	17	44
Mostly Online	3	17
Completely Online	1	7
	100	100

Descriptive analysis reveals a clear shift from offline-dominated purchasing to greater adoption of online channels. Prior to the pandemic, nearly half of respondents relied entirely on offline markets, with only 1% shopping exclusively online. Post-pandemic, hybrid purchasing behaviour increased markedly, with 44% of respondents using both online and offline channels.

To statistically validate this shift, the Wilcoxon Signed-Rank Test was conducted, as the data were paired and ordinal in nature.

Table 4: Wilcoxon Signed-Rank Test

Comparison	**Negative Ranks**	**Positive Ranks**	**Ties**	**Z**	**p-value**
Post-COVID vs Pre-COVID Purchase Behaviour	3	109	48	−8.896	<0.001

The results indicate a substantial shift in purchasing behaviour following the pandemic. A significantly larger number of respondents exhibited a positive change towards online purchasing in the post-COVID period (positive ranks = 109) compared to those showing a reverse trend (negative ranks = 3), while 48 respondents reported no change. The test statistics confirm that this difference is statistically significant ($Z = -8.896$, $p < 0.001$). These findings provide strong empirical evidence that the COVID-19 pandemic significantly accelerated consumers' transition towards online FMCG purchasing.

4.2.2 To examine the role of e-commerce platforms in shaping FMCG purchase behaviour during and after the pandemic.

The descriptive analysis indicates a substantial shift in FMCG purchasing behavior from offline markets to e-commerce platforms in the post-COVID period. Before the pandemic, most respondents preferred physical stores, while among online platforms JioMart, D-Mart, and Big Basket were the most frequently used. However, after COVID-19, usage of quick-commerce platforms such as Blinkit, Zepto, and Swiggy Instamart increased sharply, with Blinkit emerging as the dominant platform, reflecting consumers' growing preference for faster delivery, convenience, and ease of access. At the same time, reliance on offline shopping declined significantly, indicating a structural transformation in consumer shopping habits and a sustained movement toward digital channels for routine FMCG purchases.

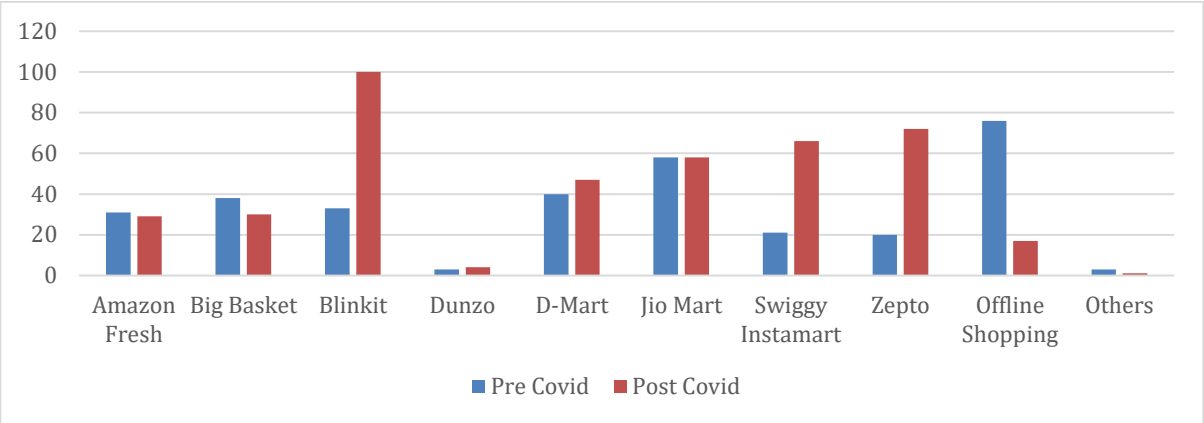

Chart 1: Showing the frequency of usage of different e-commerce platforms pre & post covid-19

While these results illustrate a clear change in platform usage, it is essential to understand the key factors influencing consumer choices on these platforms. To uncover the underlying determinants, factor analysis was conducted on six service attributes reported by the respondents.

To identify the key determinants influencing online FMCG purchase behaviour, factor analysis was conducted. The descriptive statistics of the six variables are summarized in Table 5. Delivery Speed received the highest mean score, indicating it is the most significant factor influencing online purchases, while Delivery Charges received the lowest mean score. Discounts showed the least variability, suggesting consistent perceptions among respondents, whereas Delivery Charges had the highest variability.

Table 5: The descriptive analysis of the scores obtained from 160 respondents on 6 variables under study

Variable No.	Statements	Mean	Standard Deviation	Coefficient of Variation
1	Delivery Speed	**3.9750**	1.06369	26.76
2	Discounts	3.6500	.89161	**24.43**
3	Delivery Charges	**3.0375**	1.15409	**37.99**
4	Product Range	3.5938	.97321	27.08
5	Customer Support	3.6250	1.03249	28.48
6	Return and Refund Policy	3.7313	1.08577	29.10

The adequacy of the data for factor analysis was confirmed by a Kaiser-Meyer-Olkin (KMO) value of 0.849 and a significant Bartlett's Test of Sphericity ($\chi^2 = 414.804$, $p < 0.001$), indicating the sample was suitable for factor extraction. Principal Component Analysis with Varimax rotation extracted three meaningful factors explaining 82% of the total variance presented in table 6.

The Rotated Component Matrix is presented in table 7:

Table 6: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.568	59.465	59.465	3.568	59.465	59.465
2	.713	11.878	71.343	.713	11.878	71.343
3	.623	10.376	81.720	.623	10.376	81.720
4	.490	8.172	89.892			
5	.342	5.700	95.591			
6	.265	4.409	100.000			

Table 7 : Rotated Component Matrix			
	Component		
	1	2	3
Delivery Speed		0.651	
Discounts		0.556	
Delivery Charges			0.950
Product Range		0.900	
Customer Support	0.793		
Return and Refund Policy	0.894		
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 5 iterations.			

Factor Interpretation:

- **Factor 1 – Post-Purchase Service and Trust:** Customer Support and Return & Refund Policies highlight the importance of reliable post-purchase assistance in shaping consumer confidence.
- **Factor 2 – Delivery Efficiency and Product Availability:** Delivery Speed and Product Range indicate that quick deliveries and availability of desired products strongly influence online purchase behaviour.
- **Factor 3 – Perceived Cost Burden:** Delivery Charges independently load on this factor, reflecting consumer sensitivity to additional costs.

To further examine the relationship between service quality attributes and customer recommendation behaviour, Spearman's rank correlation analysis was conducted.

Table 8: Correlation between service quality attributes and customer recommendation behaviour									
			Recommendation	Delivery Speed	Discounts	Delivery Charges	Product Range	Customer Support	Refund Policy
SPEARMAN'S RHO	Recommendation	Correlation Coefficient	1.000	.315**	.230	.087**	.109	.384**	.396
		Sig. (2-tailed)	.	.000	.003	.272	.168	.000	.000
		N	160	160	160	160	160	160	160
	Delivery Speed	Correlation Coefficient	.315**	1.000	.571**	.305	.423**	.522	.489**
		Sig. (2-tailed)	.000	.	.000	.000	.000	.000	.000
		N	160	160	160	160	160	160	160
	Discounts	Correlation Coefficient	.230**	.571**	1.000**	.431**	.380**	.581**	.501**
		Sig. (2-tailed)	.003	.000	.	.000	.000	.000	.000
		N	160	160	160	160	160	160	160
	Delivery Charges	Correlation Coefficient	.087	.305**	.431	1.000**	.329	.372**	.386
		Sig. (2-tailed)	.272	.000	.000	.	.000	.000	.000
		N	160	160	160	160	160	160	160
	Product Range	Correlation Coefficient	.109	.423**	.380	.329**	1.000	.472**	.377
		Sig. (2-tailed)	.168	.000	.000	.000	.	.000	.000
		N	160	160	160	160	160	160	160
	Customer Support	Correlation Coefficient	.384**	.522**	.581**	.372**	.472**	1.000**	.682**
		Sig. (2-tailed)	.000	.000	.000	.000	.000	.	.000
		N	160	160	160	160	160	160	160
	Refund Policy	Correlation Coefficient	.396**	.489**	.501**	.386**	.377**	.682**	1.000**
		Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.
		N	160	160	160	160	160	160	160

The results indicate that

- Customer Support ($\rho = 0.384$, $p < 0.01$) and Return & Refund Policy ($\rho = 0.396$, $p < 0.01$) exhibited the strongest positive correlations with recommendations.
- Delivery Speed ($\rho = 0.315$, $p < 0.01$) and Discounts ($\rho = 0.230$, $p < 0.01$) showed moderate positive relationships.
- Delivery Charges ($\rho = 0.087$, $p > 0.05$) and Product Range ($\rho = 0.109$, $p > 0.05$) were not significantly correlated with recommendations.

These results suggest that **trust and service assurance factors**—rather than cost or product variety—play a more critical role in driving consumers' advocacy for e-commerce platforms.
Thus, the analyses confirm that e-commerce platforms have significantly influenced FMCG purchase behaviour post-pandemic, with consumers valuing convenience, product availability, and reliable post-purchase services.

4.2.3. To identify factors influencing online FMCG purchases, such as Convenience, Price Sensitivity, and Delivery Experience

The descriptive analysis highlights the key factors influencing respondents' online FMCG purchases before and after the COVID-19 pandemic.

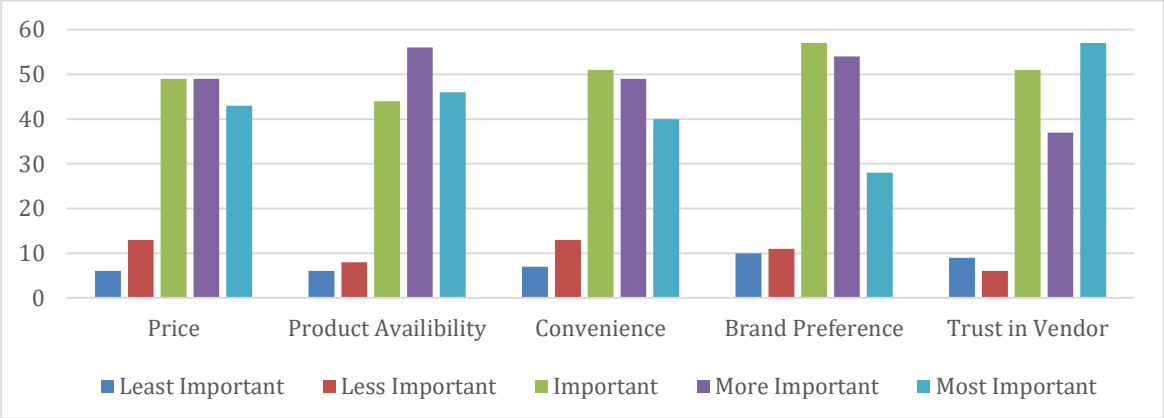

Chart 2: Showing the factors that influence the purchase decision before the pandemic

Prior to the pandemic, respondents primarily considered **trust in the vendor**, **product price**, and **product availability** when making online purchase decisions. Convenience and brand preference were less emphasized.

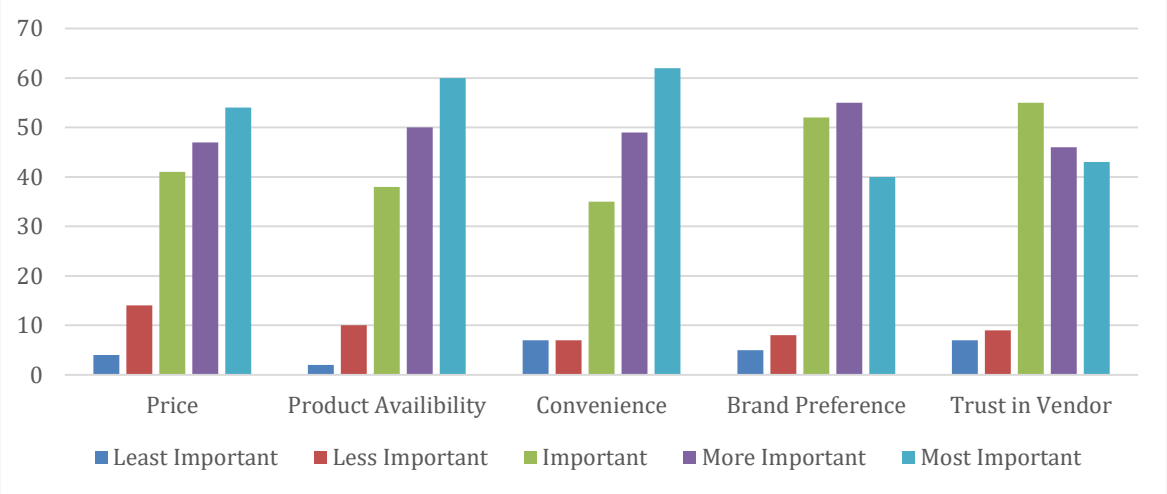

Chart 3: Showing the factors that influence the purchase decision after the pandemic

After the pandemic, there was a noticeable shift in priorities. Respondents placed greater importance on **convenience** and **product availability**, while trust and brand preference became relatively less critical. This suggests that consumers increasingly value ease of purchase and accessibility over traditional considerations such as price or vendor reliability.

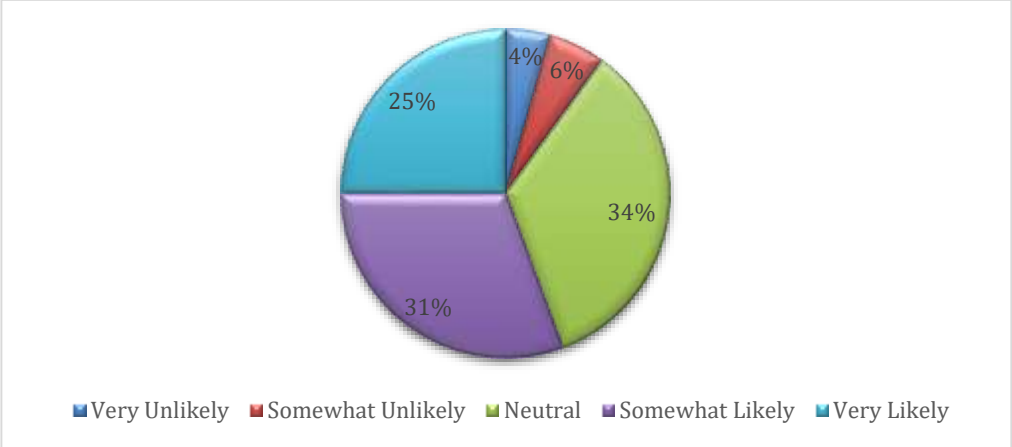

Chart 4: Showing the willingness of the respondents to use online platforms in the future

Analysis of respondents' willingness to use online platforms in the future indicates that the majority are likely to continue using e-commerce channels, with around 34% remaining neutral and only a small proportion showing little interest in future use. This reflects growing acceptance and reliance on digital channels for FMCG purchases.

To identify the underlying dimensions influencing online FMCG purchase behaviour, factor analysis was conducted. The descriptive statistics of the six variables are summarized in Table 9. Delivery Speed received the highest mean score, indicating it is the most significant factor influencing online purchases, while Product Range received the lowest mean score. Delivery Speed showed the least variability, suggesting consistent perceptions among respondents, whereas Discounts had the highest variability.

Table 9: The descriptive analysis of the scores obtained from 160 respondents on 6 variables under study

Variable No.	Statements	Mean	Standard Deviation	Coefficient of Variation
1	Convenience	4.0438	1.04819	25.92
2	Delivery Speed	**4.0625**	.91588	**22.55**
3	Discounts	3.9813	1.05492	**26.50**
4	Delivery Charges	3.9313	1.02866	26.17
5	Product Range	**3.8688**	.93917	24.28
6	Price Sensitivity	3.9250	.99401	25.33

The adequacy of the data for factor analysis was confirmed by a Kaiser-Meyer-Olkin (KMO) value of 0.883 and a significant Bartlett's Test of Sphericity ($\chi^2 = 575.775$, $p < 0.001$), indicating the sample was suitable for factor extraction. Principal Component Analysis with Varimax rotation extracted three meaningful factors explaining 84% of the total variance presented in table 10. The Rotated Component Matrix is presented in Table 11.

Table 10: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.108	68.459	68.459	4.108	68.459	68.459
2	.597	9.957	78.416	.597	9.957	78.416
3	.392	6.525	84.941	.392	6.525	84.941
4	.368	6.132	91.073			
5	.297	4.950	96.023			
6	.239	3.977	100.000			

Table 11: Rotated Component Matrix

	Component		
	1	2	3
Convenience	0.775		
Delivery Speed	0.662		
Discounts		0.797	
Delivery Charges		0.782	
Product Range	0.858		
Price Sensitivity			0.841
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 5 iterations.			

Factor Interpretation

Factor 1: Convenience and Accessibility states that convenience, delivery speed, and product range load strongly on this factor, indicating that ease of use, quick service, and variety drive future adoption of e-commerce platforms.

Factor 2: Cost Considerations states that discounts and delivery charges load together, reflecting consumer sensitivity to pricing benefits and additional costs.

Factor 3: Price sensitivity states that price sensitivity loads independently, highlighting individual differences in consumer price consciousness.

To further examine the relationship between service quality attributes and customer recommendation behaviour, Spearman's rank correlation analysis was conducted.

Table 12: Correlation between service quality attributes and customer recommendation behaviour

Particulars			Ecommerce Future	Convenience	Speed	Offers	Charges	Range	Price Sensitivity
SPEARMAN'	Ecommerce Future	Correlation Coefficient	1.000	.285**	.196	.109**	.109*	.228	.112**
		Sig. (2-tailed)	.	.000	.013	.170	.171	.004	.158
		N	160	160	160	160	160	160	160
	Convenience	Correlation Coefficient	.285**	1.000	.607**	.496	.512**	.605**	.500
		Sig. (2-tailed)	.000	.	.000	.000	.000	.000	.000
		N	160	160	160	160	160	160	160

S R H O	Speed	Correlation Coefficient	.196*	.607**	1.000*	.595**	.522	.641*	.501**
		Sig. (2-tailed)	.013	.000	.	.000	.000	.000	.000
		N	160	160	160	160	160	160	160
	Offers	Correlation Coefficient	.109	.496**	.595	1.000**	.656**	.509	.560**
		Sig. (2-tailed)	.170	.000	.000	.	.000	.000	.000
		N	160	160	160	160	160	160	160
	Charges	Correlation Coefficient	.109	.512**	.522	.656**	1.000**	.433	.598**
		Sig. (2-tailed)	.171	.000	.000	.000	.	.000	.000
		N	160	160	160	160	160	160	160
	Range	Correlation Coefficient	.228**	.605**	.641**	.509**	.433**	1.000**	.593**
		Sig. (2-tailed)	.004	.000	.000	.000	.000	.	.000
		N	160	160	160	160	160	160	160
	Price Sensitivity	Correlation Coefficient	.112	.500**	.501	.560**	.598**	.593	1.000**
		Sig. (2-tailed)	.158	.000	.000	.000	.000	.000	.
		N	160	160	160	160	160	160	160

The results indicate

- **Convenience** ($\rho = 0.285$, $p < 0.01$) and **Product Range** ($\rho = 0.228$, $p < 0.01$) showed significant positive correlations with the future of e-commerce, suggesting that ease of shopping and variety strongly influence long-term adoption.
- **Delivery Speed** ($\rho = 0.196$, $p < 0.05$) had a smaller but significant impact.
- **Price sensitivity, discounts, and delivery charges** did not show statistically significant correlations, indicating these factors are less critical for predicting future engagement.

Thus, Future engagement with online FMCG platforms is strongly shaped by convenience, delivery efficiency, and product variety, while pricing factors play a secondary role. Platforms should prioritize these attributes to enhance user satisfaction and loyalty.

➢ KEY FINDINGS AND IMPLICATIONS

- Chi-Square Analysis (Demographics vs. FMCG Purchase Behaviour)
  The chi-square analysis indicates that occupation and income significantly influence post-COVID FMCG purchase behaviour, spending patterns, and recommendation of online platforms, whereas gender shows no significant association and age exhibits limited influence. This finding implies that FMCG marketers should emphasize socio-economic segmentation rather than demographic variables like gender when formulating online marketing strategies.
- Objective 1: Change in FMCG Purchase Behaviour Before and After COVID-19
  Descriptive statistics supported by the Wilcoxon Signed-Rank Test confirm a significant behavioural shift towards online FMCG purchasing in the post-pandemic period. This implies that the pandemic has permanently altered consumer buying patterns, making digital and omni-channel presence a strategic necessity for FMCG firms.
- Objective 2: Role of E-commerce Platforms in Shaping FMCG Purchase Behaviour
  The combined results of descriptive analysis, factor analysis, and Spearman's rank correlation reveal that post-purchase service quality, delivery efficiency, and trust-related attributes are the most influential factors shaping FMCG purchase behaviour and platform recommendation. This implies that e-commerce platforms must focus on reliable customer support, flexible return policies, and fast delivery, rather than relying solely on discounts or price incentives.
- Objective 3: Factors Influencing Online FMCG Purchase and Recommendation Behaviour
  Factor analysis and correlation results indicate that service assurance and convenience-oriented factors have a stronger impact on customer recommendation behaviour than cost-related factors such as delivery charges. This implies that building long-term trust and service consistency is more effective for customer retention and advocacy than short-term pricing strategies.

➢ SUGGESTIONS

Based on the findings and implications of the study, the following suggestions are proposed for e-commerce platforms and FMCG marketers.

- Since occupation and income significantly influence FMCG purchase behaviour and platform recommendations, e-commerce platforms and FMCG firms should design income-based pricing structures, subscription models, and occupation-specific promotional strategies, rather than adopting a one-size-fits-all approach based on age or gender.
- As consumers have shifted significantly toward online and hybrid purchasing modes in the post-COVID period, FMCG companies should invest in seamless integration of online and offline channels, including unified inventory systems, digital loyalty programs, and click-and-collect options, to enhance overall shopping convenience and accessibility.
- Given that post-purchase service, customer support, and return and refund policies have emerged as dominant factors influencing consumer trust and recommendations, e-commerce platforms should prioritize transparent return policies, responsive grievance redressal mechanisms, and proactive customer communication to reduce perceived risk and strengthen long-term customer confidence.

- As delivery speed strongly influences both purchase behaviour and recommendation intentions, e-commerce platforms should optimize last-mile logistics and strengthen quick-commerce partnerships, while ensuring that delivery charges remain reasonable, transparent, and value-justified to avoid negative consumer perceptions and resistance.

➢ CONCLUSION

The study concludes that the COVID-19 pandemic has acted as a catalyst in transforming FMCG purchase behaviour, accelerating the adoption of e-commerce platforms and hybrid shopping modes. Empirical evidence from descriptive statistics, non-parametric tests, factor analysis, and correlation analysis confirms that service quality, trust, and convenience play a more critical role than price-related factors in influencing consumer decisions. Furthermore, socio-economic variables such as occupation and income significantly shape post-pandemic FMCG buying patterns and platform recommendations. Overall, the findings highlight the need for FMCG firms and e-commerce platforms to adopt customer-centric, service-oriented, and digitally integrated strategies to sustain competitiveness in the evolving retail landscape.

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