

The Influence of Key Supply Chain Factors on Customer Retention Among Facebook-Based Homemade Food Businesses

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Abstract

This study synthesizes the influences of key supply chain dynamics on customer retention among Facebook-based homemade food businesses. The research specifically analyses how macro factors, such as food inflation and operational aspects, including product quality, delivery timeliness, packaging standards, professional communication, and eco-friendly practices, impact on customer retention. Aligning with the hypotheses, a survey consisting of self-constructed questions has been conducted incorporating a 5-point Likert Scale. The survey results are based on cross-sectional data collected from 187 completed responses through social media and personal networks featuring diverse demographic profiles. However, a selective demographic profile has been disproportionately higher than the other groups representing a focused discussion in the study. Data analysis was performed using STATA and Microsoft Excel, using techniques like descriptive statistics, linear regression, variance inflation factor test, etc. The statistical findings reveal the positive correlation between the independent and dependent variables, "Customer Retention", although the magnitude of impact differs. As evidenced by hypothesis testing, product quality is the most substantial factor driving a business's ability to retain customers, followed by communication professionalism,

packaging quality, and order convenience. While sustainability practices subtly influence customers' repurchase decisions, food inflation exerts a non-monotonic impact depending on customers' sensitivity to quantity and price changes. A prominent feature of this research paper is that the key takeaways will facilitate future research endeavors and contribute to a better understanding of the mechanism of homemade food businesses on social platforms. As per the discussion, specifically for entrepreneurs, this study will serve as a fusion of knowledge of both key economic and operational factors to comprehend their sway over customers' repetitive purchasing attitudes and future trends.

Keywords: Supply chain factors, customer retention, homemade food business, Facebook, product quality, communication, food inflation, sustainability.

1. Introduction

In the rapid progress of the food industry, while restaurants used to be the sole representative of F-commerce, homemade food businesses took a remarkable leap in market share in the post-COVID scenario. Understanding the critical survival metrics of a going concern is paramount for the overall longevity of a business, which indirectly impacts customer retention. Amidst intense rivalry with dynamic consumer preferences, over 250,000 Facebook-based entrepreneurs tailor their strategies to ever-changing consumer behaviors. Customer retention has, thus, been a central metric that serves a significant research interest in understanding the operational strength of a firm primarily to fulfil the consumers' needs. Moreover, customer retention is important to the viability of homemade food businesses because it is often more cost-effective and profitable than acquiring new customers, which underlines substantial scalability. Hence, the factors that impact customer retention bear immense importance in comprehending the long-term viability of a Facebook-based homemade business.

The objective of this study is two-fold: to find the interchangeable impact of economic dimensions and operational elements on the variable of customer retention in Facebook-based homemade businesses. The research paper examined how economic variables, such as food inflation and price-quantity dynamics, further impact the functional system, including product-packaging standards, delivery timeliness, and eco-friendly practices. Furthermore, easy ordering procedures and professional communication undeniably affect customer psychology, encouraging repetitive purchase decisions. Regarding the introduction of green initiatives by the Bangladesh government, environmental sustainability practices give an edge to any homemade food venture, like any other corporate firm, to achieve a better status in the respective sector. In fine, this study aims to comprehend the overall and relative influences of a set of 8 independent variables on customer satisfaction and loyalty that thereby sum up the concept of customer retention- influence repurchase decisions in a market of diverse options and involve new customers in the loyalty loop to attain cost-leadership benefits.

While prior research papers have recognized the link between SCM and customer retention, they have fallen short of comprehensively understanding their relationship. Each paper developed a single determinant and focused on the impact of that factor on customer retention. This kind of methodology is expected to present a biased and incomplete fruition. For instance, communication professionalism influences customer retention (Sung & Dae, 2016). On the other hand, Packaging plays a critical role in maintaining the quality of food products, which is essential for customer retention (Das & Sharma, 2017). Food inflation generally leads to instability in the price and quantity of purchases. According to (Dawes,2009), increases in service prices directly affect customer retention. Further research has been extended to analyze the green supply chain practices in manufacturing industries and how industries have evolved in applying such practices in the manufacturing industry. (Tazneen et al.,2020).

This paper, however, focuses on the integrated relationship between key supply chain factors and the scalability of Facebook-based homemade food businesses measured by customer retention. The documentation of the research paper entitles all determinants discussed in the prior papers. In addition, it will address the limitations and challenges within the methodology and fill the gaps serving a comprehensive statement. The paper also seeks to provide valuable insights into green SCM practices enriching the entire process.

This research paper is believed to be a rich resource for entrepreneurs seeking to optimize their supply chain strategies by leveraging platforms like Facebook. Policymakers and investors can make informed decisions and develop effective policies for this growing industry to be regulated through the findings. To elaborate, this study underpins the factors to attain a strong customer base and thrive in an intensely competitive environment.

2. Literature Review

The increasing prevalence of conducting business activities online, mainly through the Facebook app, is gaining substantial popularity. This trend has led to the emergence of Facebook-based food businesses. In these businesses, customer retention is a crucial factor that holds significant importance. Many previous researchers have identified several factors influencing customer retention in this context.

This report primarily analyzes the factors affecting customer retention in Facebook-based food businesses in Dhaka city. According to (Moeller et al., 2009), order convenience significantly influences customer retention. According to the research, the order convenience factor dramatically influences a customer's decision on whether to be a loyal customer of a particular online business. Additionally, a customer may stop purchasing due to inconveniences experienced when placing orders online.

Furthermore, communication professionalism, which examines how professionally sellers handle customer queries, significantly impacts customer retention (Kim & Kim.,2016). This research further discusses how

service quality directly affects customer loyalty, which signifies that communication professionalism plays a pivotal role in determining repeat purchases. Related to the factor above, return policies influence customer satisfaction as a straightforward and easy-to-navigate process can result in a virtuous cycle, inviting more customers to purchase from a business. (Ridwan et al.,2021).

Customers also consider the sustainability practices of sellers, which significantly impact their decision to continue purchasing from these sellers (Gurung & Bablu, 2019). In addition, the research results showcase a positive relationship between using sustainability marketing practices that leads to excellent customer retention. It also provides a broader vision of how customers might subsequently lean toward businesses that practice sustainability. Moreover, further research has been extended to analyse the green supply chain practices in manufacturing industries and how industries have evolved in applying such practices in the manufacturing industry. (Tazneen et al.,2020).

Food inflation generally leads to instability in the price and quantity of purchases. According to (Dawes,2009), increases in service prices directly affect customer retention. Furthermore, maintaining high product quality can help build customer loyalty and retain customers. Additionally, product quality is essential in food businesses, as high product quality can lead to excellent customer retention (Naini et al., 2022).In food delivery businesses, quality is often the most influential factor leading to customer retention. (Zabed et al.,2020) researched the customer's viewpoint on the end tier of the logistics handover, and the results suggested that more excellent food quality significantly impacts customer satisfaction, eventually leading to better retention.

Packaging can be a critical factor in maintaining the quality of food products, which is essential for customer retention (Dutta & Sharma.,2023). Additionally, timely delivery and prompt receipt of food products significantly enhance customer retention, specifically within the youth generation (Saber Deen et al., 2023). This research also explored how several other issues associated with prompt delivery can lead to customer dissatisfaction. (Mona,2019) analysed more about the delivery aspect of supply chain management, delayed delivery is often interrelated with other factors, which suggests gaps in the research need to be addressed.

Focusing extensively on factors that influence customer retention may assist online-based food businesses in achieving sustainable growth. This research examined detailed aspects that impact customer retention based on data, findings, and analysis and presented recommendations to understand which factors are most significant in determining customer retention.

3. Research Objective

Broad Objective: To analyse key supply chain factors' impacts and relative significance on customer retention among Facebook-based homemade food businesses.

Specific Objective:

1. To what extent does food inflation trigger customers' price sensitivity and portion reduction tolerance and impact customers' repurchase decisions?
2. The importance of consistent product quality i.e. high-quality and delicious foods, for building a high retention customer base.
3. The influence of timely and reliable deliveries on customer satisfaction and retention.
4. The magnitude of high-quality packaging contributes to enhanced customer experience and retention.
5. The role of the user-friendly and flexible order process in customer satisfaction and their likelihood of purchase in future.
6. The effect of professionalism and courteousness in the communication process on customer retention rate.
7. Does customers' perception of a business's sustainability practices strengthen customer relationships and retention rate?

4. Methodology

The research methodology is structured to fill the dots between the objectives and provide reliable and meaningful results through a systematic study. For a holistic research study, we require an efficient dataset. Hence, we chose primary data directly related to our research. No secondary dataset is used for the research.

The questions were set by our practical experiences with the homemade food businesses and insights from articles, journals, and close ones. The questionnaire appeared precise, simple and understandable.

The questionnaire was segmented into two parts. The first part collected the gender identity, age group, and profession of the respondents for primary analysis. The second part pulled the most valuable information regarding food inflation, product quality, delivery time, sustainability, and so forth for the research. Different questions and opinions were asked to get valuable insights and, most importantly, meaningful information for proper analysis.

The questionnaire was converted into a Google form for data collection. This form was circulated to the probable respondents who are potentially engaged in buying from homemade food businesses through various social media communication tools like Facebook, WhatsApp, and Messenger. While the circulation result does not match the expectations due to the July crisis, our friends, family members, relatives, and batchmates are asked to complete the survey and circulate the form to their near and dear ones.

The first sampling method for the survey implied convenient sampling, indicating the collection from the most accessible and available respondents. After that, due to the nationwide unrest caused by the internet blackout in July in Bangladesh, the sampling method was shifted to snowball sampling, where respondents assisted in finding potential participants for the research.

The questionnaire was designed so people from all walks of life could participate and provide insights. However, the core group of respondents represents young students aged 18 to 24, since they are the most significant customer group of Facebook-based homemade food businesses. The total respondents of this survey are 187 people from different spheres of life. The 5-Point Likert Scale is introduced, which consists of five scales numbered from "Strongly Disagree = 01" to "Strongly Agree = 05" sequentially.

Finally, the STATA Microsoft Excel software was utilized to sort and analyze the collected data effectively and efficiently through descriptive statistics, linear regression analysis, variance inflation factor test and so on to make informed decisions for a helpful research study.

5. Hypothesis Development

H1: Food Inflation has a non-monotonic impact on Customer Retention.

Customers who are acquainted with the scenario of food inflation and price sensitivity are likely to be retained by a willingness to accept a justified reduction in quantity at a previous price from the desired seller.

However, customers sensitive to reduced quantity will likely be retained if they receive the same quantity at a justified increased price from the desired seller.

H2: Product Quality has a significant positive impact on Customer Retention.

Customers who receive delicious and high-quality food constantly are more likely to be retained than those who are unsatisfied with the food quality and taste.

H3: Packaging Quality has a positive substantial impact on Customer Retention.

Customers who find the packaging ambient and ensure the desired food quality are more likely to be retained than those who experience issues like damaged food or inconvenient packaging.

H4: Prompt Delivery has a significant positive impact on Customer Retention.

Customers who receive timely delivery of their orders are more likely to be retained than those who encounter delayed delivery.

H5: Order Convenience Customer has a substantially positive impact on Customer Retention.

Customers who find the ordering process user-friendly and flexible are more likely to be retained compared to those who find the ordering process complicated.

H6: Communicational Professionalism has a significant positive impact on Customer Retention.

Customers who experience courteous, clear and consistent communication from a business will exhibit a higher likelihood of being retained than those who undergo unprofessional and vague communication.

H7: Sustainability has a strong positive impact on Customer Retention

Customers who perceive a business positively that prioritizes sustainable supply chain practices are likely to be retained compared to those who are not conscious of commitment to sustainability practices.

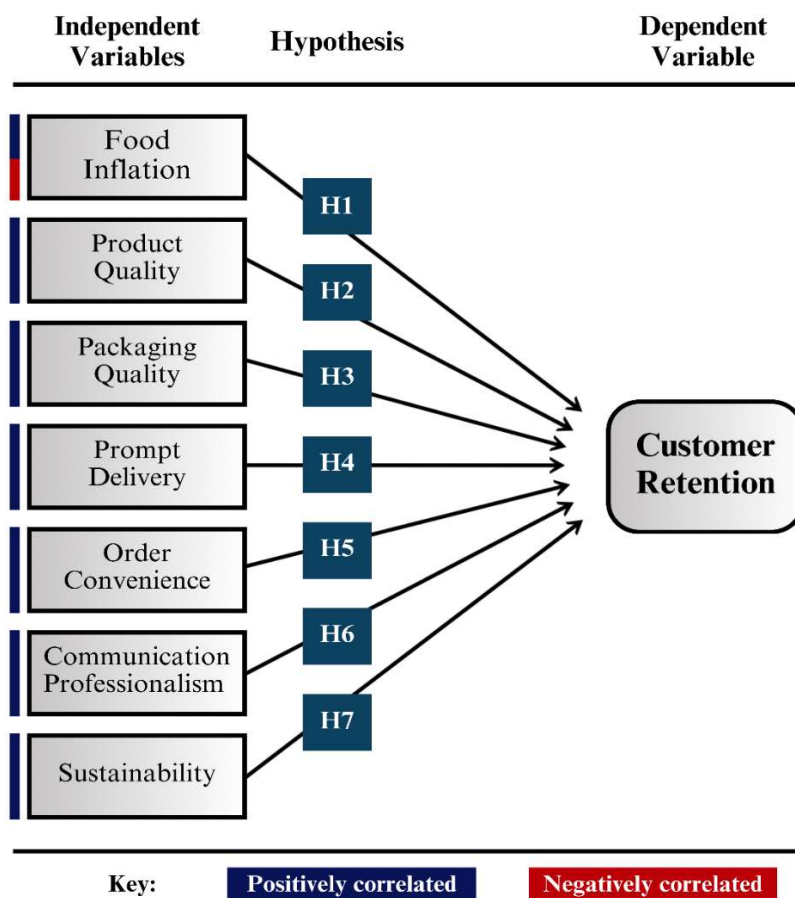


Figure-1: Theoretical Framework

6. Data Analysis

6.1. Demographic Profile

Table-1: Age

Data		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-24 years old	113	60.43	60.43	60.43
	25-34 years old	48	25.67	25.67	86.1
	35-44 years old	16	8.56	8.56	94.65
	45-54 years old	6	3.21	3.21	97.86
	55-64 years old	1	0.53	0.53	98.4
	65+ years old	3	1.6	1.6	100
	Total	187	100	100	

Source: Author's estimation

In this table, the dominant age group is 18-24 years old, yielding more than half the total number of valid respondents of different age groups, 60.43 percent. The cumulative percentage shows that 86.10 percent of respondents are younger than 35 years old. Interestingly, a reverse relationship is observed in our survey between ordering food from online food businesses and age. Younger people are more accustomed to the know-how of the order procedure than seniors. Therefore, people aged under 35 years will have a paramount impact on our research output.

Table-2: Gender

Data		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	102	54.55	54.55	54.55
	Female	85	45.45	45.45	100
	Total	187	100	100	

Source: Author's estimation

The data collection for this study was almost evenly distributed between the male and female respondents, with a slight variation of 9.1%.

Table-3: Occupation

Data		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employed full-time	37	19.79	19.79	19.79
	Employed part-time	15	8.02	8.02	27.81
	Self-employed	16	8.56	8.56	36.36
	Student	113	60.43	60.43	96.79
	Retired	6	3.21	3.21	100
	Total	187	100	100	

Source: Author's estimation

In Table 3, a substantial 60.43 percent of the total respondents are students. In number 113 out of 187 respondents are regular customers of online food businesses. The second largest group of customers are full-time employees. The result depicts the true picture of our social context. Students and full-time employees with limited time rely more on time-saving processed foods. For that reason, online homemade food businesses have become one of the most trusted and time-saving sources for consuming healthy foods.

Table-4: Living Situation

Data		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Living with family	119	63.64	63.64	63.64
	Residing in a hostel/hall/mess	50	26.74	26.74	90.37
	Living alone in a house or apartment	18	9.63	9.63	100
	Total	187	100	100	

Source: Author's estimation

Referring to Table 4, people living with their family make up a significant 63.64 percent. The cumulative percentage shows that 90.37 percent comprises people residing in hostel/hall/mess and residing with family. In the prior survey results, students have been observed to be the dominating force in this survey. And the living arrangements of students align with the findings of this table. In fine, Students, men, in particular, are a considerable portion of the total respondents. Hence, the findings of this research will be heavily driven by the standpoint of a specific class of people.

6.2. Reliability of the Data

Cronbach's Alpha is a statistical tool to evaluate the internal consistency of the data surveyed. A reliable dataset is responsible for measuring the research objectives properly. In this study, the reliability of 8 independent variables is tested to get a true picture of our underlying dependent variable, customer retention.

Rule of thumb: There is no gold standard for Cronbach's alpha. However, some general rules are followed:

Cronbach's Alpha Score	Level of Reliability
0.0-0.20	Less reliable
>0.20-0.40	Rather reliable
>0.40-0.60	Quite reliable
>0.60-0.80	Reliable
>0.80-1.00	Very reliable

Source: Author's estimation

Table-6

Test scale = mean (unstandardized items)	
Average interitem covariance	0.112874
Number of items in the scale	8
Scale reliability coefficient	0.6476

Source: Author's estimation

Interpretation: The result suggests that the value of Cronbach's alpha is 0.6476. According to the guidelines set, the questionnaire surveyed is reliable for constructing the dependent variable, customer retention.

6.3. Descriptive Statistics

The following table figure indicates that, for Facebook-based handmade food businesses, customer behavioral patterns are highly influenced by product quality. In terms of mean values, consumers care much more about the quality of their meals than anything else. Communication professionalism ranks second in terms of mean value and is equally significant as food quality. Customer retention has a distinctive correlation with both order convenience and packaging quality. The results of the remaining factors don't indicate as much relevance as those of the preceding ones.

Table-7

Descriptive Statistics								
	N	min	max	Mean	Median	Var.	Std. Dev.	cv
FoodInflationPrice~t	187	1	5	3.048	3	0.982	0.991	0.325
FoodInflationQuant~i	187	1	5	3.032	3	0.977	0.989	0.326
ProductQuality	187	2	5	3.925	4	0.419	0.647	0.165
PackagingQuality	187	2	5	3.751	4	0.326	0.571	0.152
prompt delivery	187	1	5	3.647	4	0.601	0.775	0.212
OrderConvenience	187	1	5	3.743	4	0.38	0.616	0.165
CommunicationProfe~m	187	1	5	3.84	4	0.609	0.78	0.203
Sustainability	187	1	4	3.112	3	0.541	0.736	0.236

Source: Author's estimation

Nearly all of the variables affect consumer repurchase decisions, as can be seen from the descriptive table, and their mean value of more than 3 is fairly good. Since people are more worried about the quality of their food, communication and packaging quality are preferred. A significant behavioral trend was seen in the online handmade food company on Facebook due to additional considerations.

Additionally, the standard deviation is below 1, ranging from 0.571 to 0.991, which is satisfactory. With a mean variance of 0.604, the coefficient of variation ranges from 0.152 to 0.326, suggesting low to moderate variability relative to the mean.

6.4. Regression Analysis

Table-8: Model Summary

Source	SS	df	MS	Number of obs=187	
Model	38.8302	178	4.8538	F (8, 178) = 85.04	Prob > F = 0.0000
Residual	10.1593	8	0.0571	R-squared = 0.7926	Adj R-squared = 0.7833
Total	48.9895	186	0.2634	Root MSE = 0.2389	

Source: Author's estimation

The table shows that the R-square (0.79) and adjusted R-square (0.78) are very close, which means the independent variables are sufficient. R-square means that about 79.26% of the variation in the dependent variable (Customer Retention) can be explained by the combined variation in all independent variables, such as food quality, food packaging, order convenience etc.

Adjusted R-square indicates that the more independent variables taken, the higher the R-square will be. The adjusted R-square, which is 78.33%, is considered so that excessive independent factors are not considered, as the higher the independent variables, the lower the adjusted R-square.

Table 9: Regression Coefficients

Dependent Variable: Customer Retention						
	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]
FoodInflationPrice~t	0.1523	0.0195	7.80	0.00	0.1138	0.1909
FoodInflationQuant~i	0.1100	0.0186	5.90	0.00	0.0732	0.1467
ProductQuality	0.2032	0.0294	6.90	0.00	0.1451	0.2613
PackagingQuality	0.1438	0.0317	4.54	0.00	0.0814	0.2063
PromptDelivery	0.1259	0.0264	4.78	0.00	0.0739	0.1779
OrderConvenience	0.1323	0.0336	3.94	0.00	0.0661	0.1985
CommunicationProfe~m	0.1349	0.0268	5.03	0.00	0.0820	0.1879
Sustainability	0.0872	0.0250	3.48	0.00	0.0378	0.1365
Constant	0.0805	0.1725	0.47	0.64	-0.2599	0.4209

Source: Author’s estimation

The table shows that food inflation - price and quantity, food quality, packaging quality, prompt delivery, order convenience, communication professionalism, and sustainability- positively and significantly impact customer retention at the 01% p-value level. Sustainability has a 0.001 significance level. However, the coefficient is low, indicating a moderate effect comparatively on the dependent variable. However, according to the estimated coefficients, product/food quality (0.203), food inflation [price sensitivity] (0.152) and packaging quality (0.144) have been key factors in retaining customers for Facebook-based handmade food enterprises. The F-test value of 85.042 is considerably high, implying that the regression model is statistically significant. The lower AIC (4.005) & BIC (33.085) indicate a better-fitting model.

Table 10: Variance Inflation Factor

Variables	VIF	1/VIF
FoodInflationPrice~t	1.22	0.82
FoodInflationQuant~i	1.105	0.905
ProductQuality	1.184	0.845
PackagingQuality	1.066	0.938
PromptDelivery	1.361	0.735

OrderConvenience	1.395	0.717
CommunicationProfe~m	1.428	0.701
Sustainability	1.104	0.906
Mean VIF	1.233	.

Source: Author's estimation

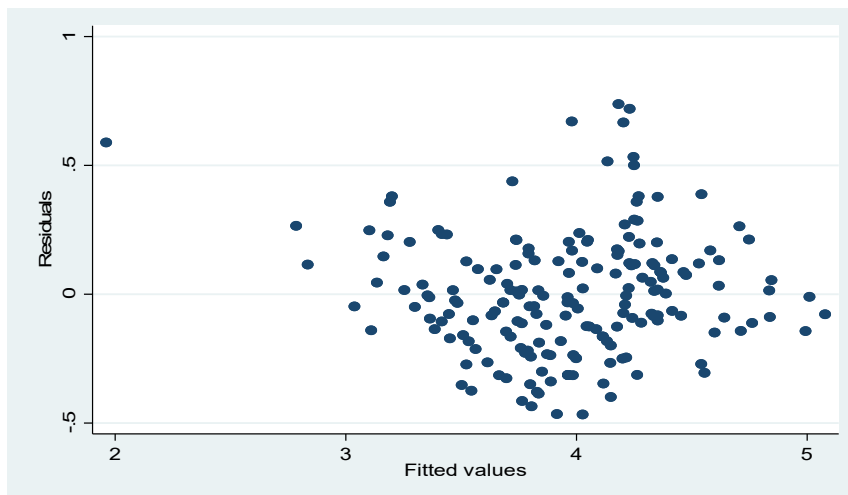
Rule of thumb: A VIF more significant than **10** indicates a multicollinearity problem which indicates inflated coefficients & and model estimates.

Interpretation: The above-estimated table does not refer to any VIF more significant than **10**. Hence, the data set has no multicollinearity problem according to the Variance Inflation Factor. It ensures stable coefficients & and improved model interpretations.

Table 11: Heteroskedasticity Test

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
H ₀ : Constant variance
Variables: fitted values of Total Retention Score
chi2(1) = 0.64
Prob > chi2 = 0.4240

Figure-2: Scatter Plot of Residuals in Y axis vs Fitted values in X axis



Interpretation: Since the Probability value (P) is **> 0.05**, the null hypothesis (H₀: No heteroskedasticity) cannot be rejected. Also, the above graph between fitted values on the x-axis and residuals on the y-axis indicates no fixed pattern in between. As a result, it can be concluded that there is no heteroskedasticity problem ensuring the consistency of standard errors, the validity of the confidence intervals, and the hypothesis tests.

Table 12: Pairwise Correlation

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	FoodIn flation P~t	FoodIn flation Q~i	Produc tQualit y	Packag ingQua lity	Deliver yTime	OrderC onveni ence	Comm unicati onP~m	Sustain ability
(1) FoodInflationP~t	1.000							
(2) FoodInflationQ~i	0.256	1.000						
(3) ProductQuality	0.257	0.130	1.000					
(4) PackagingQuality	0.102	0.043	0.171	1.000				
(5) DeliveryTime	0.267	0.197	0.177	0.162	1.000			
(6) OrderConvenience	0.188	0.141	0.285	0.180	0.392	1.000		
(7) CommunicationP~m	0.247	0.076	0.258	0.067	0.408	0.434	1.000	
(8) Sustainability	0.199	0.010	0.165	0.067	0.150	0.182	0.247	1.000

Rule of thumb: If the correlation between two independent variables is more significant than 0.80 or lower than -0.80, there is a multicollinearity problem between the two variables, which makes the regression coefficients and t stats unreliable.

Interpretation: No correlation exists between two independent variables - more significant than 0.80 or lower than - 0.80. Hence, the data set has no multicollinearity problem according to pairwise correlation. It assures better predictive power for the model with unique independent variables excluding redundancy. To sum up, all the aforementioned statistical tests enhance the model efficiency and reliability of the estimates for the research.

7. Hypothesis Testing

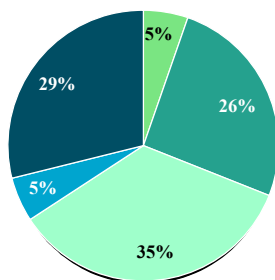
H1: Food Inflation has a non-monotonic impact on Customer Retention.

The survey results indicate that respondents mostly took a neutral stance on whether the reduced quantity of food sold at the same price affects their decision to continue buying from an online food seller. With a mean score of 3.03, this suggests that quantity sensitivity might not be the most crucial factor in customer

retention. This neutrality could imply that while the quantity of food matters, other factors likely play a role in customers' decisions to make repeat orders.

Similarly, the responses to questions about price sensitivity showed a similar pattern, with a mean score of around 3.05. These results further suggest that price changes alone may not be a key driver in influencing customers' purchasing decisions. Instead, customers might consider multiple factors when deciding whether to stay loyal to a particular seller.

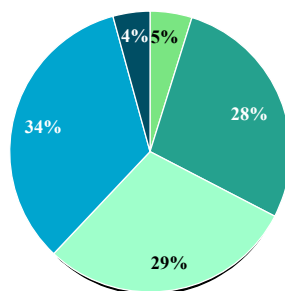
Considering the Food Inflation, I would be willing to accept a slightly smaller portion size from my desired seller if the price remains the same.



■ Strongly Disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly Agree

The pie charts mentioned above provide a visual representation of these findings. About 35% of respondents expressed neutrality when asked how quantity changes would impact their repeat orders. This indicates that while quantity is a factor, it may not be the sole consideration for customers.

Considering the Food Inflation, I'd be willing to purchase from my desired seller at a higher price for the same portion size.



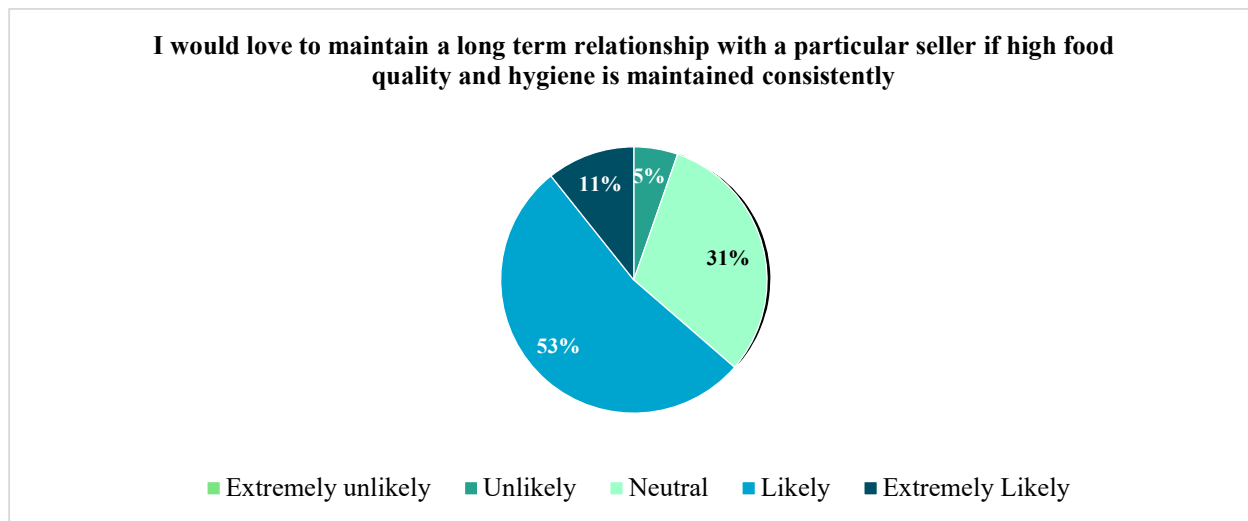
■ Strongly Disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly Agree

In contrast, there was a slight shift when asked about price variations. About 33.69% of respondents indicated they would continue purchasing from the same seller even with a price increase if the portion size remains unchanged. This suggests that many customers are willing to accept higher prices, possibly due to broader factors like food inflation or the perceived overall value of their purchase.

Overall, the data reveals that quantity and price sensitivity are essential but not decisive factors in isolation. Customers make their decisions based on a combination of factors, which suggests that online food sellers should focus on a broader approach to customer retention, considering both the quality and value of their offerings.

H2: Product Quality has a significant positive impact on Customer Retention.

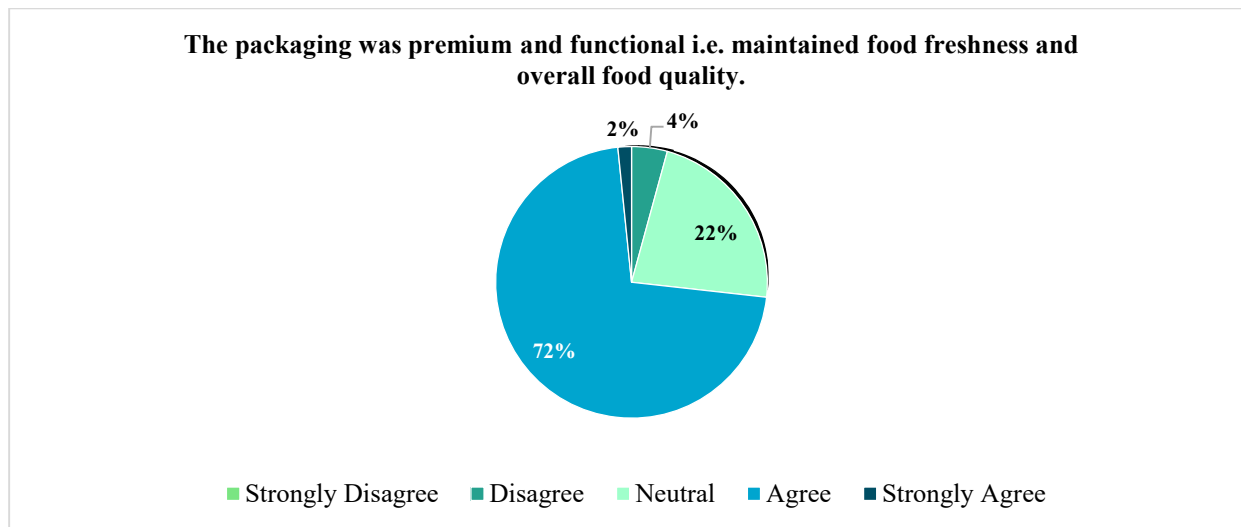
Product quality is the most significant factor influencing customer retention in Facebook-based homemade food businesses. With a high mean score of 3.94, the data suggests a strong positive relationship between product quality and customer retention. This indicates that customers greatly emphasize the quality of food they purchase online, and any compromise in this area can have severe consequences for the seller. A negative experience with food quality can lead to customers avoiding repeat orders, underscoring the importance of maintaining high standards.



The pie chart further illustrates this point, with approximately 53% of respondents identifying product quality as the most essential factor in determining their loyalty to their respective food sellers. This significant majority highlights that for many customers, the quality of the product is the primary consideration when deciding whether to continue purchasing from a particular business.

H3: Packaging Quality has a positive substantial impact on Customer Retention.

Packaging quality has appeared to have a relatively healthy positive impact on customer retention, as indicated by descriptive statistics with a mean value of 3.75. The third-highest regression coefficient further justifies this, suggesting the positive correlation between the variables. Customers prefer to have food in premium and functional packaging, which keeps the freshness of food, maintains product integrity, prevents spills, and, most importantly, makes them feel valued. Hence, customers are likely to repurchase from the businesses that offer foods in quality packaging.

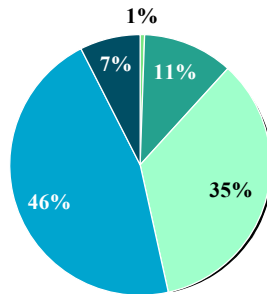


As shown in the pie chart, approximately 74% of the respondents found the food packaging premium and functional, which indicates that a substantial proportion of customers exhibit a higher likelihood to be retained, highlighting the significance of packaging quality.

H4: Prompt Delivery has a significant positive impact on Customer Retention.

The descriptive statistics depict a mean score of 3.65 for “Prompt Delivery”, suggesting a moderately positive correlation with customer retention. Delivering the food in a timely mitigates the concerns related to the freshness and quality of the food. Customers value receiving their orders within the expected timeframe as they may need the food urgently. Hence, prompt delivery leads to enhanced customer satisfaction, eventually increasing the likelihood of repeat orders.

I am satisfied with my order's delivery time, as it arrived within the expected timeframe.



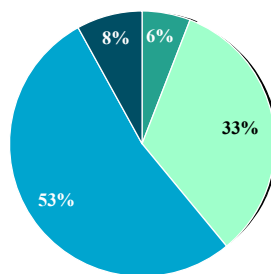
■ Strongly Disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly Agree

When the respondents were asked if they were satisfied with the delivery time, approximately 53.48% responded positively, while 34.76% expressed neutrality. These findings indicate that a significant proportion of customers experienced prompt delivery, which suggests a greater likelihood of them being retained i.e. a healthy correlation between prompt delivery and customer retention.

H5: Order Convenience Customer has a substantially positive impact on Customer Retention.

The findings from descriptive statistics imply a moderately positive correlation between order convenience and customer retention, as evidenced by the third-highest mean score of 3.74. Customers appreciate being experienced with convenient order processes and having the ability to customize the menu as per preference and receive orders at preferred times. While multiple sellers might offer the same products, those who ensure enhanced order experience are likely to retain customers.

The ordering process was easy to navigate and allowed me to easily customize my order to my preferences.

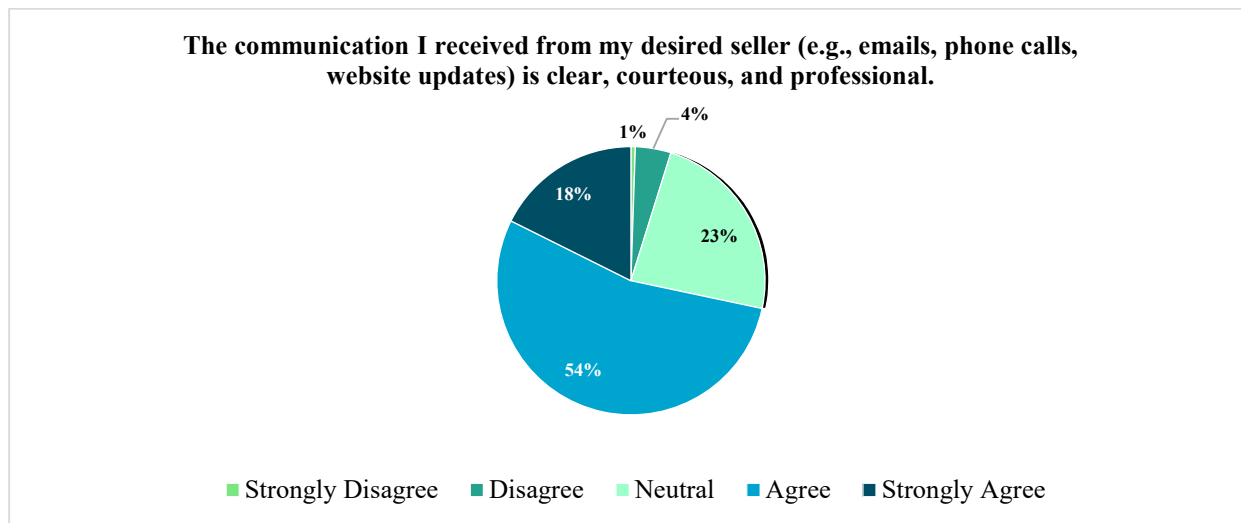


■ Strongly Disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly Agree

The pie chart illustrates that approximately 61% of respondents were able to personalize their meals and found the ordering process easy to navigate, which indicates the greater probability of retention and the influence of order convenience in bolstering customer retention rates.

H6: Communicational Professionalism has a significant positive impact on Customer Retention.

Communication Professionalism has emerged as one of the most crucial factors influencing customer retention. The statistical analysis reveals that the variable “Communication Professionalism” holds a mean score of 3.84, which ranks it as the second most impactful factor after Product Quality. Courteousness, clarity conciseness, and timely responses from a business foster positive perceptions in the customers’ minds, making them feel prioritized and valued.

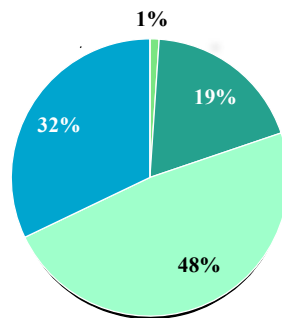


As depicted in the pie chart, approximately 71.66% of respondents experienced clear, consistent and courteous communication, and these findings suggest that communication professionalism not only leads to enhanced customer satisfaction but also bolsters long-term customer relationships.

H7: Sustainability has a strong positive impact on Customer Retention

One interesting observation is that customers exhibit neutrality towards the sustainability practices of their respective sellers, as indicated by descriptive statistics with a mean score of 3.11, which implies a moderate correlation between Sustainability and Customer Retention.

Sustainability practices e.g. eco-friendly packaging and reduced food waste by sellers influence my repurchase decisions.



■ Strongly Disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly Agree

Notably, 48% of the respondents expressed neutrality, while 32.09% agreed that their respective sellers' sustainability practices, such as eco-friendly packaging and waste reduction do not influence the repurchase decision. Only 18.72% of the respondents consider sustainability practices as one of the key aspects in consideration of repurchase decisions. Furthermore, the variable "Sustainability" also has the lowest coefficient of 0.0805, which is statistically significant at a 1% significant level.

8. Conclusion

The Facebook-based homemade food business is an emerging trend in the food industry. Due to the convenience, availability, and customization, those businesses have become very popular. But retaining customers is not a piece of cake for any sort of business. For this reason, several burgeoning businesses have recently been shut down for failing to retain a customer base despite a promising start. The research particularly aims to identify the impact correlation of key supply chain factors on customer retention in Facebook-based homemade food businesses. Despite several limitations, such as a limited sample size, an inappropriate survey setting, a specialized research topic, and so on, the research serves its purpose. Food inflation, product quality, delivery timeliness, sustainability, and other relevant factors are analyzed to understand which factors are most influential and to what extent. According to the above research, it is observed that product quality is the most consequential factor to retain customers in this sector. Professional communication immensely assists in maintaining consumers as a loyal base. Then, delivery time order convenience is highly impactful for customers to shape their buying patterns. Additionally, customers are considerably sensitive to the prices of their respective products, as supported by regression coefficients. As a result, the existing food business groups can depend mainly upon the quality

of products to retain their customers in the long run. Their logistic services in order system, delivery, and overall communication may be better streamlined. Professional communication and timely delivery smooth the operational flow. Businesses can set the price tag based on the sensitivity of their target market and the state of the industry's economy. Thus, businesses might retain a customer base to achieve sustainable growth, minimizing supply chain disruptions against all odds. This research may help Facebook-based food businesses get a head start in the industry through a systematic customer retention study. It states the cohesiveness of the key supply chain factors like product quality, packaging, and communication professionalism through which they might develop a sustainable customer base. Theoretically, this research can be utilized for any specific area or region. Previous studies are mostly limited to a few independent variables. This research can create pathways to go deep down through additional variables like social media engagement, analyze related case studies or develop a model to retain customers in any particular business such as – ‘A supply chain management retention model for courier service’. Lastly, the research fulfils the goal of identifying the critical supply chain factors and their influence on customer retention, providing potential entrepreneurs and policymakers sufficient information, strategies, data and valuable guidance to advance the developing food business sector in the F-commerce industry with a decisive competitive advantage.

9. Limitations

Despite meticulous precautionary measures, the research is not without its limitations. One fundamental limitation arose from the data collection process disruption due to nationwide unrest and an internet blackout in July. Consequently, the questionnaire could not be circulated to the extent that was anticipated, and a handful of potential respondents remained out of the data sample. Additionally, the predominance of the students and the youths in the sample collected significantly outnumbered other demographic groups, potentially affecting the inclusiveness of judgments. Not all the respondents have a regular pattern of ordering homemade food from the Facebook marketplace, and this order frequency issue could also impact the accuracy of the research conclusions. Furthermore, the questionnaire being comprised of qualitative questions introduced probable bias due to the subjectivity and distinctive perceptions of the respondents. The respondents were to choose an option that might not reflect their experience. Some may find answering the questions tiresome and boring, which could also affect the accuracy of the sample relative to reality. Lastly, no directly relevant research papers were found, which posed challenges in carrying out this paper's initial qualitative analysis portion.

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