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The Impact of Consumer Confusion on the Service Recovery Effectiveness in "App-Based" Food Delivery Services

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Abstract: **The food-delivery service sector has been experiencing a sharp growth in Bangladesh due to the changing social and technological landscape. The fast-paced lifestyle and widespread access to internet have created a substantial market for such daily convenience services. Given that services are variable in nature, they are prone to service failures in order fulfillment due to probable delayed or wrong delivery, payment issues, technical glitch, and other actions that fall below customer expectations. When service failures occur, customers often experience confusion, especially in understanding company policies, resolutions, and communication, leading towards customers' negative emotional response. This study investigates the impact of "customer confusion" due to the inevitable uncertainty in realizing every order and its corresponding service recovery facilitation by the food-delivery entity. Drawing insights from service recovery models and consumer behavior theories, the research focuses on the occurrence of "Negative Emotional Response", and "Consumer Confusion", and/or the lack of "Customer Satisfaction", and "Perceived Justice" instigating "Negative Word of Mouth (NWoM)", eventually affecting customers' "Repurchase Intention".A quantitative approach has been devised through a structured questionnaire to evaluate customer perceptions regarding food delivery service recovery in Bangladesh. The survey respondents are active users of food delivery apps in Bangladesh irrespective of demographic variables like age, gender, income group, etc. The survey instrument (structured questionnaire) encompasses constructs that measure consumer confusion, negative emotions, perceived justice, customer satisfaction, negative word-of-mouth, and repurchase intention, drawing on validated scales. A sample of 400 respondents have been surveyed using convenience sampling procedures. The data is analyzed through descriptive statistics, correlation analysis, and hypothesis testing via regression and ANOVA to explore the relationships between variables and validate the proposed conceptual model, test its reliability using Cronbach's alpha.**

The findings indicate that the higher the level of "Customer Confusion" and "Negative Response", the higher tendency of spreading "Negative Word of Mouth". On the contrary, the lower the level of "Customer Satisfaction", and "Perceived Service Justice", the higher the tendency of spreading "Negative Word of Mouth" of the customers. Consequently, increase in NWoM is inversely proportional to "Repurchase Intention".

Keywords: **Food-Delivery Services, Service Failure, Negative Emotional Response, Service Recovery, Negative WoM, Repurchase Intention**

I.INTRODUCTION

Statement of the Problem and Research Objectives

The app-based food delivery industry in Bangladesh has witnessed rapid growth, driven by urbanization, technological advancement, and the growing demand for convenience. However, the inherently variable nature of service delivery—manifested through delays, incorrect orders, payment issues, or app-related glitches—frequently results in service failures that compromise customer expectations.

These service failures not only frustrate customers [2], but often lead to **consumer confusion**, particularly regarding unclear policies, ineffective communication, and inconsistent recovery efforts [1]. This confusion can trigger negative emotional responses, undermining customer trust and satisfaction [2]. Furthermore, customers' perceptions of injustice and lack of satisfaction in service recovery are likely to fuel negative word-of-mouth (NWoM), which significantly damages brand reputation and deters future customer engagement [4].

Despite growing academic interest in service recovery strategies, there is a limited understanding of how **consumer confusion and emotional responses** influence post-failure customer behavior [4] —especially in the context of app-based services in emerging markets like Bangladesh. While previous studies have examined individual factors like **customer satisfaction** or **perceived justice [5]**, few have investigated how these variables jointly affect **repurchase intention**, especially through the mediating role of NWoM.

This research addresses this gap by examining the complex interplay among **negative emotional response, consumer confusion, perceived justice, and customer satisfaction** as predictors of **negative word-of-mouth**, and

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ultimately, **customer repurchase intention**. The findings reveal that heightened confusion and dissatisfaction significantly increase NWoM, which inversely affects consumers' likelihood to repurchase. These insights are critical for app-based service providers striving to design effective recovery strategies in a highly competitive and digitally driven marketplace.

Based on the above-mentioned research problem, the following research objectives have been formulated: To investigate the extent to which negative emotional response and consumer confusion towards service recovery experience are associated with negative word of mouth, and how these factors collectively impact repurchase intention within app-based food delivery services.

To investigate the relationship between customer satisfaction and perceived justice towards service recovery experience with negative word of mouth, and how this association influences repurchase intention in the context of app-based food delivery services."

The following hypotheses are derived from the above research model based on the review of literature.

H1: Consumer confusion tends to influence the intention to share negative word-of-mouth

H2: Negative emotional reactions contribute to the likelihood of engaging in negative word-of-mouth.

H3: Customer satisfaction reduces the tendency toward negative word-of-mouth behavior.

H4: Perceived justice is inversely related to the intention to engage in negative word-of-mouth.

H5: Negative word-of-mouth is negatively associated with repurchase intention.

II. METHODOLOGY

The Research Design – Methods and Procedures

This study employed a causal research design, specifically a correlational approach, in which six variables were assessed, and correlation data were utilized to examine causal relationships. It was a cross-sectional study, as data were collected from the sample at a single point in time.

Primary data were gathered through a survey targeting middle and upper-middle-class residents of Dhaka City, as this socioeconomic group typically has the financial means and tendency to engage in ordering online food. The survey focused on five specific areas—Banani, Dhanmondi, Gulshan, Uttara, and Mirpur—based on the assumption that residents in these neighborhoods are economically stable and has the ability to order food online. A sample of 400 individuals were approached using a structured questionnaire, resulting in 384 complete responses. A convenience sampling technique was employed, with 70 participants selected from each of the five areas based on the researcher's judgment and familiarity with the population.

A 5-point Likert scale was employed in the questionnaire to measure all variables. The survey included 21 items related to the study variables and 5 demographic questions (see Appendix). The dependent variable, **Customer Repurchase Intention**, was initially assessed using 4 items. The independent variables were measured as follows: **Negative Emotion** with 3 items, **Consumer Confusion** with 5 items, **Customer Satisfaction** with 3 items, and **Perceived Justice** with 3 items. The mediating variable, **Negative Word-of-Mouth**, was measured using 3 items.

III. RESULTS

The analysis was conducted using the Statistical Package for Social Sciences (SPSS v.23) and SmartPLS software. Descriptive statistics, including frequency distributions, were generated through SPSS to summarize the demographic characteristics of the respondents. Reliability analysis was carried out to assess the internal consistency of the scale items used in the questionnaire. Additionally, regression analysis was performed to determine the extent to which the independent variables explained the variance in the dependent variable. Hypothesis testing was conducted using a Pearson Correlation and Spearman's Rho test in SPSS V.25.

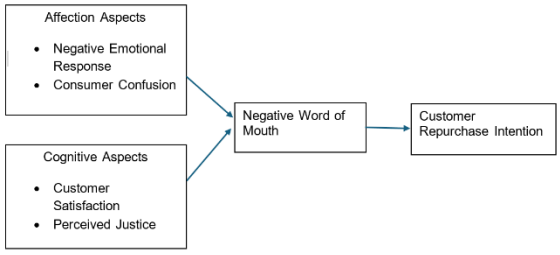


Figure 1: Research framework

Data Analysis

Statistical Package for Social Science (SPSS) software was adopted in this study for data analysis in three steps. In the first step, a descriptive analysis was done to describe the demographic characters of the respondents. Here, frequency distribution was used to analyze demographic data. In table 1, a summary of the descriptive analysis was presented.

Table 1: Frequency distribution of the sample's demographic variables

Variables	Categories	Number of Respondents	Percentage
Gender	Male	78	60.00
	Female	52	40.00
Age	18 to 24 years	101	77.7
	25 to 34 years	28	21.5
	35 to 44 years	1	0.8
Usage (Whether the respondents ever used the service)	Yes	123	94.6
	No	7	5.4
Frequency of use	Everyday	5	3.8
	Several days a week	25	19.2
	Once every week		
	A couple of times a month	15	11.5
	Once every month	28	21.5
	Once in few months or lesser	20	15.4
		37	28.5
Food delivery app that the respondents discontinued or skeptical about recovery practice	Foodpanda	102	78.5
	Pathao	12	9.2
	Foodi	9	6.9
	Munchies	1	0.8
	Others	6	4.6

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In the second step, reliability test of the scale (Likert) was performed. Here the value of Cronbach's alpha was computed to gauge the internal consistency of the items used in the questionnaire. According to the reliability cutoff values proposed by Yockey (2016), a value of 0.7 and above is acceptable, 0.8 or above is good and 0.6 or above is questionable and 0.5 or above is poor. A summary of the outcome of reliability test is presented in the following table 2.

Table 2: Reliability values of items used in variables

Variable	No. of Items	Chronbach's Alpha Value	Result
Customer Repurchase Intention	*4*	*0.834*	*Good*
Negative Emotional Response	*3*	*0.832*	*Good*
Customer Confusion	*5*	*0.802*	*Good*
Customer Satisfaction	*2*	*0.585*	*Poor*
Perceived Justice	*4*	*0.672*	*Questionable*
Negative Word of Mouth	*3*	*0.804*	*Good*

The following table displays the output of regression analysis. The R^2 value of 0.320 indicates that 32.0% variance in dependent variable (Customer repurchase intention) is explained by the independent variables.

IV.DISCUSSION

Interpretation of hypotheses

Table 4: Result of hypotheses testing

Hypothesis	Spearman Rho	Pearson r	Significance
H1	**0.427**	**0.443**	**0.000**
H2	**0.530**	**0.543**	**0.000**
H3	**0.353**	**0.375**	**0.000**
H4	**0.370**	**0.373**	**0.000**
H5	**0.423**	**0.418**	**0.000**

Table 3: Regression Analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.565[a]	.320	.292	.81671

a. Predictors: (Constant), NEGATIVE WORD OF MOUTH, PERCEIVED JUSTICE, CONSUMER CONFUSION, CUSTOMER SATISFACTION, NEGATIVE RESPONSE

H1: Consumer confusion tends to influence the intention to share negative word-of-mouth

From table 2, Spearman Rho value of 0.427 which is not equal to 0, Pearson correlation coefficient (r) value of 0.443 and significance (α) value of 0.000 indicates that there exists a moderately positive relationship between consumer confusion and negative word of mouth.

H2: Negative emotional response contributes to the likelihood of engaging in negative word-of-mouth.

From table 2, Spearman Rho value of 0.530 which is not equal to 0, Pearson correlation coefficient (r) value of 0.543 and significance (α) value of 0.000 indicates that there exists a strong positive relationship between negative emotional response and negative word of mouth.

H3: Customer satisfaction reduces the tendency toward negative word-of-mouth behavior.

From table 2, Spearman Rho value of 0.353 which is not equal to 0, Pearson correlation coefficient (r) value of 0.375 and significance (α) value of 0.000 indicates that there exists a weak positive relationship between customer satisfaction and negative word of mouth.

H4: Perceived justice is inversely related to the intention to engage in negative word-of-mouth.

From table 2, Spearman Rho value of 0.370 which is not equal to 0, Pearson correlation coefficient (r) value of 0.373 and significance (α) value of 0.000 indicates that there exists a weak positive relationship between perceived justice and negative word of mouth.

H5: Negative word-of-mouth is negatively associated with repurchase intention.

From table 2, Spearman Rho value of 0.423 which is not equal to 0, Pearson correlation coefficient (r) value of 0.418 and significance (α) value of 0.000 indicates that there exists a moderate positive relationship between negative word of mouth and repurchase intention.

V. CONCLUSION

Table 3: Regression Analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.565[a]	.320	.292	.81671

a. Predictors: (Constant), NEGATIVE WORD OF MOUTH, PERCEIVED JUSTICE, CONSUMER CONFUSION, CUSTOMER SATISFACTION, NEGATIVE RESPONSE

Understanding these dynamics is crucial for food delivery services seeking to improve recovery strategies and retain consumers in a competitive digital market. The understanding of the effect and significance of the dynamics studied have both theoretical and practical implications. The result identifies the major dimensions affecting customer experience so that consequent studies and corrective service decisions focus on effective measures of overcoming the shortcomings in ensuring satisfactory service recovery that would reduce negative repurchase intension of customers.

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APPENDIX

Questionnaire Scales
Demographic Questions
1. Gender
2. Age Group
3. Have you ever used "App-Based" Food Delivery Services for home delivery of food in Bangladesh?
4. How frequently do you order through the "App-Based" food-delivery services in Bangladesh?
5. Choose the Food-Delivery App you took the service from but discontinued later or still take services from but are skeptical about their service recovery practices in case of service failure.

Customer Repurchase Intention
1. The scales below measure customers' willingness to continue availing the food delivery service from the concerned food-delivery service provider.
2. I will continue to order food through home delivery services through this Food Delivery App
3. I will recommend this Food Delivery App to the people around me.
4. I would like to be a loyal customer to this Food Delivery service provider
5. I trust the Food Delivery App more than other food delivery service providers

Consumer Confusion
1. I experience confusion due to chances of "service failure" concerns about order being not delivered to the right address, wrong items being delivered, missing items in order delivery, or miscalculation and payment issues
2. In case there is any inconvenience or service failure, I am confused about the way of claiming service recovery. The service provider does not give clear instructions and contact details for resolving service failure issues.
3. I am confused or uncertain about what to expect in terms of the attitude of the service providing organization's representatives while contacting them for service recovery
4. I am confused about the effectiveness of service recovery offered after the service provider fails to provide the service.
5. I am confused about the environment of service recovery in terms of process and course of actions

Negative Emotional Responses
How likely are you to have felt the following emotions if the food delivery service failed?
1. Angry
2. Offended
3. Disappointed

Customer Satisfaction
1. This section explores the responses of customer satisfaction arising from delivery of successful services by the concerned food delivery service provider.
2. How well did this service experience meet your needs?
3. Overall, how satisfied or dissatisfied does this food delivery experience leave you feeling?

Perceived justice
1. The outcome I received from the food-delivery company was fair to compensate for the inconvenience caused by their service failure
2. The process of reporting service inconvenience and seeking help was complex to find and understand
3. The service providing company's employees handled the problem in a timely manner; they were prompt and responsive
4. The interaction of the service company employees was empathetic and cordial- they really seemed to care about the problem I encountered in the service

Negative WoM
1. I will inform my friends and/or family about my disappointing experience
2. I will warn my friends and/or family to ensure they do not have to go through the same experience
3. I will convince my friends and/or family not to avail this food-delivery service
4. I will share negative reviews and poor ratings on public platforms

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