

A study of the fast food delivery service quality during the fuel shortage in the Colombo district

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Abstract

This research paper studies the ramifications of the fuel shortage on the fast-food delivery service quality within the confines of the Colombo district. This research paper delves into the repercussions of the crisis, which has disrupted the operational capacities of fast-food delivery companies, leading to delayed deliveries and compromised service quality. This study explores how tangibility, responsiveness, reliability, assurance and empathy have impacted the service quality of fast-food delivery services amidst the fuel scarcity. The primary data collection involved a structured questionnaire administered to a sample of 130 participants who had utilized fast food companies in the Colombo district over the past year. Statistical analyses, including correlation, and multiple linear regression, were conducted using SPSS software to identify the significant factors influencing service quality. The research findings revealed that tangibility, responsiveness, reliability, assurance and empathy have a positive correlation with service quality, with tangibility and assurance having the most impact. The overall service quality was given a rating of “neutral”, which means the respondents were not satisfied with the service quality. Recommendations are given on how to mitigate the impact of the fuel shortage on the service quality of fast-food delivery services.

Keywords: Fuel Shortage, Fast Food Delivery Services, Service Quality

1. Introduction

1.1 Background of the Study

Sri Lanka presently finds itself ensnared within one of the most severe economic crises in recent memory. The adverse effects of this crisis have been acutely felt. During the peak of the crisis, millions of Sri Lankan citizens were plunged into interminable queues for fuel, profoundly hampering their daily lives.

Amidst this turmoil, companies like Uber Eats and PickMe Food have grappled with a protracted period of stagnation over the past year, predominantly due to the omnipresent fuel shortage afflicting Sri Lanka. This crisis has critically impacted the quality of fast food delivery services (FFDS), particularly in the bustling Colombo district. The gravity of this situation cannot be overstated, as substantiated by Jayasinghe (2022), who underscored that the fuel crisis catalyzed an unprecedented economic

contraction of 8.4% in the June quarter of 2022, a precipitous decline witnessed over a mere three-month period. Escalating fuel costs have wrought havoc on the agricultural sector, leading to a scarcity of essential fertilizers and culminating in a perilous confluence of fuel and food supply chain disruptions, culminating in soaring food prices (Matthias, Govindapala & Jaysinghe, 2023).

In the midst of this crisis, fast-food delivery service quality has been negatively impacted. The paucity of fuel has severely constrained the operational capacities of these delivery companies, rendering them unable to meet the demands of a populace in dire need. Restaurants and fast-food establishments, especially those situated in densely populated commercial hubs in the Colombo district, continue to grapple with the arduous task of timely and efficient food distribution (Jayasinghe, 2022).

Marian (2022) has stated that the increase in essential commodity prices is directly attributable to the soaring fuel costs. Sectors vital to the nation's economy such as agriculture, tea exports, tourism, and the food industry have all been grievously impacted. Fast food delivery services have been especially impacted by the fuel crisis. The impact has been more prevalent in urban centers, where 60%-75% of the populace relies on fast-food, as opposed to rural areas, where this figure stands at 25%-30% (Jayatissa, Wickramasinghe & Piyasena, 2014). In the ongoing crisis, the issue of food security has emerged as a major issue, posing significant hurdles to fast food delivery service companies (Wijesignhe & Yogarajah, 2022).

1.2 Research Aim

The aim of this study is to analyse the impact of the fuel shortage on the fast-food delivery service quality in the Colombo district.

2. Research Methodology

This study used the quantitative mono method. Correlation and multiple linear regression analyses were conducted using SPSS software to identify the significant service quality variables that impacted the fast food delivery outlets. A sample of 130 respondents were chosen based on the convenience sampling method.

2.1 Conceptual Framework

The conceptual framework of this study is given in Figure 1.

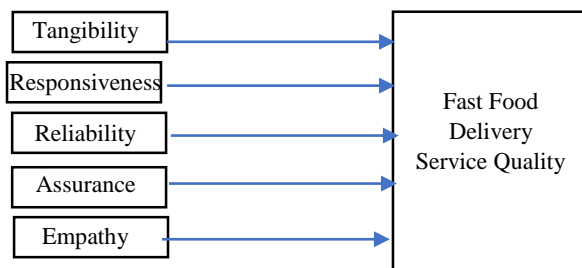


Figure 1. Conceptual Framework

The conceptual framework is based on the SERVQUAL model. The SERVQUAL model is used to determine whether the service quality of

fast food outlets deteriorated during the Sri Lankan fuel crisis due to challenges in delivery and other service quality aspects.

The definitions of the variables are given below based on Parasuraman, Zeithaml and Berry (1988).

Tangibility - The willingness to help customers and to provide prompt service.

Assurance - the knowledge and courtesy of employees and their ability to convey trust and confidence.

Reliability - The ability to perform the promised service dependably and accurately

Empathy - The provision of caring, individualized attention to customer.

Responsiveness - The willingness to help customers and to provide prompt service

2.2 Research Hypotheses

The hypotheses formulated in this study are given below.

H1: There is a relationship between Tangibility and Service Quality

H2: There is a relationship between Responsiveness and Service Quality

H3: There is a relationship between Reliability and Service Quality

H4: There is a relationship between Assurance and Service Quality

H5: There is a relationship between Empathy and Service Quality

2.3 Operationalization

Table 1 gives the statements that were used to measure the service quality of the fast food outlets based on the SERVQUAL model.

Table 1. Operationalization Table

Variable	Statements
Tangibility	I am comfortable with the appearance and condition of the food packaging when it is delivered to me
	I think the delivery staff presented themselves well in terms of their attire and personal grooming
	I found it easy to track the delivery status of my order, such as the estimated delivery time and the delivery person's location
	I am comfortable with the completeness of my order and the transaction of the order
	I am satisfied with the packaging.
	I feel that the fast-food delivery service promptly addresses my concerns or complaints
Responsive ness	I am promptly informed of any delays or changes in the delivery time by the fast-food delivery service
	I receive adequate assistance and answers to my questions from the fast-food delivery service
	I am satisfied with how the fast-food delivery service fulfills my specific requests or requirements
	I feel that the fast-food delivery service is responsive to my needs and concerns within a short period of time
	I can rely on the fast-food delivery service to deliver my order within the promised time
	I am confident that my order will be accurate and complete when it is delivered to me.
Reliability	I feel that the delivery service is consistent in the quality of food and service they provide
	I believe that the delivery service is responsive to my needs and concerns.

	I feel that the delivery service is reliable in terms of keeping me informed about the status of my order
Assurance	I feel that the fast-food delivery staff are knowledgeable about the menu items and can answer any questions I have
	I feel that the fast-food delivery service is reliable and dependable
	I feel that the fast-food delivery service provides me with the necessary information about my order, such as estimated delivery time and total cost
	I feel that the fast-food delivery service takes appropriate measures to ensure the safety and hygiene of the food
	I feel that the fast-food delivery service is honest and transparent in their pricing and billing practices
Empathy	It is easy for me to communicate my concerns or issues regarding my delivery to the fast-food restaurant
	I feel that the delivery service staff understand my needs and preferences when delivering my order.
	I feel that the delivery service staff are genuinely interested in ensuring that I am satisfied with my order
	I feel that the delivery service staff are responsive to my requests for modifications or changes to my order
	I feel that the delivery service staff are empathetic towards me when they encounter issues or delays in delivering my order.

3. Findings and Analysis

3.1 Demographic Data

The demographic data of the respondents are given in Table 2.

Table 2. Demographic Data

Demographic Data		Percentage
Gender	Male	50.8%
	Female	49.2%
Age	18-24	21.20%
	25-32	44.10%
	33-40	28%
	41-55	5.90%
	56 and above	0.80%
Average Monthly Household Income	<Rs 25,000	3.4%
	Rs 26,000 – Rs 50,000	35.6%
	Rs 51,000 – Rs 200,000	46.6%
	Above Rs 200,000	14.4%
Percentage of using food delivery service apps	Frequently	54.20%
	Rarely	28.00%
	Sometimes	17.80%

An equal number of men and women participated in the survey. The average monthly household income of the majority of the respondents ranges between 26,000 to 200,000 rupees. 54.2% of the respondents stated they use fast food delivery services frequently.

3.2 Cronbach's Alpha

The reliability analysis, presented in Table 2, indicates that all the variables are reliable, since the Cronbach alpha values are higher than 0.70, indicating acceptable reliability.

Table 2. Cronbach's Alpha Values

Variable	Cronbach's Alpha
Tangibility	0.884
Responsiveness	0.822
Reliability	0.838

Assurance	0.768
Empathy	0.795
Service Quality	0.805

3.3 Correlation Analysis

The correlation analysis results given in Table 3 shows that all the variables studied have a strong positive correlation with fast-food delivery service quality (at 5% significance level).

Table 3. Correlation Analysis

Variable	Pearson Correlation Coefficient	Significance
Tangibility	0.819	0.000
Responsiveness	0.739	0.000
Reliability	0.779	0.000
Assurance	0.786	0.000
Empathy	0.740	0.000

3.4 Hypotheses Validation

The correlation analysis results reveal that all the hypotheses H1 to H5 are valid as shown in Table 4.

Table 4. Hypotheses Validation

Hypotheses	Supported
H1: There is a relationship between Tangibility and Service Quality	Yes
H2: There is a relationship between Responsiveness and Service Quality	Yes
H3: There is a relationship between Reliability and Service Quality	Yes
H4: There is a relationship between Assurance and Service Quality	Yes
H5: There is a relationship between Empathy and Service Quality	Yes

3.5 Multiple Linear Regression

Multiple linear regression results reveal that at 5% significance, tangibility and assurance are the most significant variables as shown in Table 5.

Table 5. Multiple Linear Regression Analysis

Independent Variable	Beta	Significance
Tangibility	0.450	0.000
Responsiveness	-0.045	0.681
Reliability	0.050	0.667
Assurance	0.358	0.002
Empathy	0.198	0.066

The regression model has a R square value of 0.863, which means the chosen model is of high accuracy.

3.6 Average Scores

The average Likert scale scores obtained for the service quality variables are given in Table 6.

Table 6. Average Scores

Variable	Average Score
Tangibility	3.12
Responsiveness	3.23
Reliability	3.23
Assurance	3.21
Empathy	3.22

Note: 1 – Strongly Disagree, 2 – Disagree, 3 – Neutral, 4- Agree, 5 – Strongly Agree

The average scores on the level of satisfaction with the service quality variables indicate that the respondents rated the overall service quality as “neutral”, since the average scores for all the variables range from 3.12 to 3.23.

As shown in Table 7, the respondents on average, did not feel that the fuel shortage had a significant impact on the efficiency of the fast-food delivery services and neither had they experienced cancellations due to fuel shortages.

Table 7. Fuel Shortage Assessment

Statement	Average Score
In my opinion, the fuel shortage in Sri Lanka has an impact on the efficiency of fast-food delivery services.	2.9
I have experienced cancellations or non-availability of fast-food delivery services due to the fuel shortage in Sri Lanka.	2.2

Note: 1 – Strongly Disagree, 2 – Disagree, 3 – Neutral, 4 - Agree, 5 – Strongly Agree

4. Discussion

In examining the impact of the fuel shortage on the service quality of fast-food delivery services in the Colombo district, several key relationships were explored based on the provided data.

This study revealed a strong positive relationship between tangibility and service quality. Tangibility, which refers to the physical appearance of service facilities, was found to significantly influence the service quality of fast-food delivery services in Colombo. This suggests that the visible aspects of the service, such as the condition of delivery vehicles and packaging, play a crucial role in maintaining service quality. According to a study by Boshoff and Gray (2004) tangibility significantly influences the perceived service quality in the fast-food industry. Customers tend to associate tangible cues, such as visually appealing packaging and well-presented food, with higher service quality.

This study found a strong positive relationship between responsiveness and service quality. Smith and Johnson (2018) found a similar positive correlation between responsiveness and service efficiency in the fast-food industry. The findings highlighted that responsive delivery services positively influenced customer satisfaction and subsequently fostered customer loyalty.

This study revealed a strong positive relationship between reliability and service quality. A study by Anderson and Smith (2017) similarly highlighted a positive correlation between reliability and service efficiency in the fast-food industry. These results highlight the significance of consistent and dependable service in enhancing the efficiency of fast-food delivery services. The research highlighted that reliable delivery services played a crucial role in reducing delivery errors, improving order accuracy, and enhancing overall operational efficiency.

This study found a strong positive relationship between assurance and service quality. Assurance, which includes the knowledge and courtesy of employees and their ability to convey trust and confidence, was identified as a vital factor in maintaining service quality (Smith & Johnson, 2018).

This study revealed a strong positive correlation between empathy and service quality. A study by Johnson and Smith (2019) explored the impact of empathy on customer satisfaction and loyalty in the food delivery sector. The findings emphasized that empathetic service positively influenced customer satisfaction and subsequent loyalty. Moreover, a study by González-Navarro, García-Rodríguez, and Calvo-Porrá (2021) focused on the effects of empathy on service quality and customer loyalty in the fast-food industry. Their research highlighted that empathetic interactions positively affected service quality perceptions and subsequently fostered customer loyalty.

The most significant variables that impact service quality was found to be tangibility and assurance, further emphasizing its importance in providing a high quality of service in the fast-food delivery sector.

5. Conclusion

In conclusion, the majority of the respondents gave a “neutral” score to the service quality offered by the fast-food delivery outlets during the fuel shortage period. However, the service quality was not directly attributable to the fuel

shortage itself, since the majority of the respondents stated that the fuel shortage per se did not affect the service quality directly. This is understandable, since only fast-food outlets which found workarounds for the fuel shortage took the challenge of continuing with the food deliveries during the fuel shortage period. These food outlets ensured they had sufficient fuel for food deliveries. The fast-food outlets which could not obtain the required fuel quantity did not deliver food during the fuel shortage period.

This study highlighted the critical roles of tangibility and assurance, revealing that these factors significantly influence service quality within the fast-food delivery sector. Responsiveness, reliability and empathy was also found to have an impact on service quality of fast-food delivery services.

All the service quality variables were rated as neutral; indicating that the respondents were not really satisfied with the service offered. The fast-food outlets should, therefore, take this into consideration and improve their service quality on all aspects in order to obtain a higher score.

Fast food outlets should pay special attention to the tangible aspects of the service they offer, such as packaging and the cleanliness and quality of the food. The appearance and mannerisms of the delivery person are also important. The tracking of the order should be easy and convenient.

Since, assurance is a significant factor, the fast-food outlets should ensure that the staff and delivery personnel are pleasant to deal with and can assist the customers effectively. The staff should be well trained on how to manage customers effectively.

Reliability, responsiveness and empathy also have an impact on service quality. Therefore, fast food outlets should ensure a reliable and responsive service. The staff should be empathic towards customer needs and complaints.

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