LAST MILE LOGISTICS IN A VUCA WORLD:
A STUDY OF GOA'S FOOD DELIVERY APP SERVICE

Abstract

The business world has changed intensely over recent few eras and we now live in a society where change can be unanticipated and abrupt. Food delivery apps have been a boon for customers during the pandemic owing to a number of benefits offered like the availability of a variety of food options, doorstep delivery, shorter wait times, value for money etc. During this study the leading food delivery service providers in Goa were Swiggy and Zomato. A total of 232 valid questionnaires were collected using convenience sampling and empirically tested via SPSS 21. Viewing the continuous growth and development of this service during the pandemic this study aimed to examine the supply chain management of food delivery app services in Goa while analyzing the customer behavior towards the same.

1. INTRODUCTION

Supply chain management in the food delivery industry is very crucial as timing plays a vital role for productivity with high quality and low cost *(Naitik M Patel & Vivek A Deshpande, 2015)(Zhong et al., 2017)*. COVID-19 pandemic and home-bound lifestyle have altered the way people dine and enjoy restaurant food, making way for an innovative world of food agility *(Khandelwal Krishna, 2021)*. A sense of certainty and familiarity that people were used to, has now been replaced with a sense of commotion. The importance of global supply chain sustainability has been brought to the forefront as a result of the COVID-19 pandemic *(Khandelwal Krishna, 2021)(Zhong et al., 2017)*. This kind of environment can often be described as "VUCA" which is an acronym for Volatile, Uncertain, Complex, and Ambiguous"*(Mind Tools Team, n.d.)*.

Masses of people across the world have encountered stages of lockdown and have been reliant on the "last mile" of food supply networks, occasionally for lengthy eras of time *(Lin et al., 2022)*. Glancing back to 2020 there is no hesitation that we reside in a VUCA world. Whether your business is global or local, the importance of the supply chain management in navigating a VUCA world can't be taken too lightly*(Broxton Mark, 2016) (Zhong et al., 2017)*. VUCA demands reconsidering strategies on how to function cost-effectively in a changing environment. Customers' mounting expectations have only added to the trials of the food service industry. Speed of delivery is of

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utmost significance coupled with good quality of meals delivered. Under the enormous pressure placed on delivery personals, as well as at the technology fore front, the food delivery system was able to gauge up rapidly to provide emergency food delivery swiftly and very resourcefully *(Yinan Lin et al., 2022) (Hong et al., 2021)*. The main trial thus remains with the lessening of excessive costs sustained to progress logistics and technology which, in turn, produce*(Yinan Lin et al., 2022)* high order volumes *(2022 Televisory, 2018)*.

Goa being the smallest State in India does not face the issue of heavy traffic. This makes the supply chain management more challenging by demanding low latency on the app's end. Thus, it is very essential that the food delivery app, the restaurant and the delivery rider work in unison with each other to achieve timely, cost effective and safe delivery of the product i.e. the food as well as gaining the long term trust and goodwill of the customer*(Zhong et al., 2017)*.

2. RESEARCH METHODOLOGY

2.1 Research Aim

The aim of this study was to understand the supply chain management of food delivery app. services in Goa while investigating the customer behavior towards the same during the Covid-19 pandemic.

2.2 Research Gap

It was found that there is minuscule to no research conducted in this area in the State of Goa. To fill this gap, this research proposed to study the functionality of food delivery apps in Goa and study the customer behavior towards the same during the Covid-19 pandemic.

2.3 Sources of Data Collection

Primary Research: Data was collected through a structured questionnaire from the respondents selected through convenience sampling technique.

Secondary Research: This data was acquired from websites, research papers and e-articles.

2.4 Objectives of The Study

1. To examine the supply chain management of food delivery app. services in Goa.

2. To investigate the customer behavior towards food delivery app. services in Goa during the Covid-19 pandemic.

3. LITERATURE REVIEW

Online food delivery apps. refer to internet-based food ordering and delivery arrangements that connect customers with registered restaurants via their websites or mobile apps. *(Puneet Kaur et al., 2021) (Hong et al.,*

*2021).*Food delivery apps. as an evolving online-to-offline technology, provide a network between supply enterprises and customers by integrating online orders and offline delivery services *(Arghya Ray et al., 2019)(Hong et al., 2021)*.

Numerous literatures have affirmed that trust is one of the most crucial factors positively affecting customer's intent to use food delivery apps *(Arghya Ray & Pradip KumarBala, 2021; MeeheeCho et al., 2019)(Yuyang Zhao & Fernando Bacao, 2020)(Hong et al., 2021)*. Food delivery apps allow consumers to store payment and prior order details for efficient checkout, enabling customers to save time *(Akshat Bansal, 2019; Statista EServices Report 2020., 2020)* as well as avoiding the time spent travelling to a restaurant and waiting in line *(Hong et al., 2021)*. In the food delivery setting, price saving promotions often serve as effective marketing tools as confirmed by *Puneet Kaur et al.,* (2021) leading to customer's constant usage of this service.

Capgemini Research Institute, (2019), discoursed that three-quarters of shoppers are willing to spend more if they are content with the delivery services. They further added that to grasp the noteworthy chance while handling margin risk, companies need an all-inclusive strategy. Such a technique requires adequate clever technologies, the correct operating model for delivery, innovative tactics to manpower, and a readiness to collaborate with consumers. With those four attributes in line, corporations can solve the profitability puzzle of last-mile delivery.

4. CONCEPTUAL FRAMEWORK

4.1 Supply Chain Management of Food Delivery App Services in Goa.

4.1.1 Functionality

When a customer places an order the restaurant get an intimation on its system through the restaurant partner app. (Fig.1,2). It has an option to accept or reject the order. Normally, restaurants decline orders when there is an overload. After accepting the order a notification is sent to Swiggy's/Zomato's main center. Data analytics like the traffic conditions, predict the preparation time for the restaurants by analysing the number of orders, location of the delivery riders and thus providing customers with accurate delivery time of their order.

Zomato Restaurant Partner	Swiggy Partner App
Fig.1	Fig.2

The main office app. then assigns a delivery rider to pick up the order from the restaurant and deliver it to the customer along with the phone number and address. The delivery personnel also have a separate app. on their smartphones (Fig.3,4), which gives them notifications

about the restaurant they have to pick the order from along with the customer's location as well as providing details to the main office about the delivery rider's whereabouts.

Fig.3

Fig.4

Delivery riders are assigned a particular location and it appears as a map (Fig.5). The delivery riders need not visit the office on a daily basis; all they have to do is log in to the app, click start duty and be present at the location assigned to them. Once their duty starts order notifications appear and they set out to perform their duties.

Fig.5 Delivery Map

The customer on the other hand gets details about the estimated time of arrival in addition to the details of the delivery rider (Fig.6,7). During the pandemic these apps. would also show the temperature of the delivery riders as well as their vaccination status.

Fig.6 Swiggy

Fig.7 Zomato

Once the food is delivered the delivery rider sends a confirmation to the app. office and the customer gets a notification to provide feedback and rate the delivery process (Fig.8,9) which helps the manager to analyse for corrective action in case of negative feedback.

Fig.8 Swiggy Restaurant Rating

Fig.9 Zomato Restaurant Rating

Finally, the customer's money is collected and entered on the app. in the form of floating cash (Fig.10) and at the end of the day it is sent to the main office via Google pay.
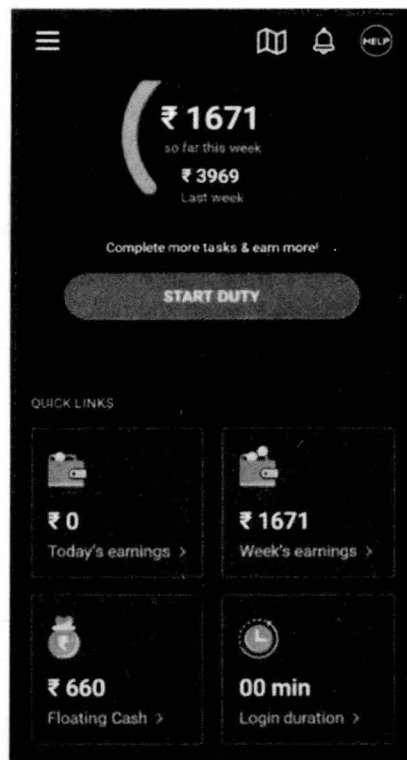

Fig.10 Floating Cash

In case the delivery rider is unable to deliver the food to the customer due to the customer not responding or improper location, the food is given to the app. office and when that customer orders the next time a fine has to be borne by him.

4.1.2 Discounts

SWIGGY AND ZOMATO WITH REGULAR DISCOUNTS

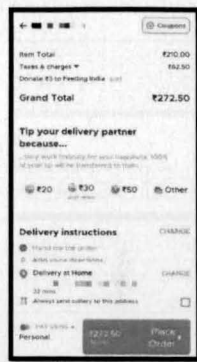Fig.11 Swiggy Before   Fig.12 Swiggy After
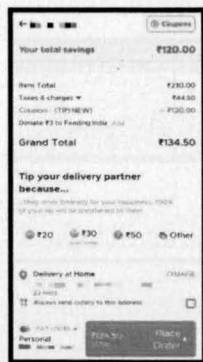

Fig.13 Zomato Before   Fig.14 Zomato After

From the above attached bills, we can ascertain that before the discount the cost comes to Rs. 273 but after using a coupon it gets reduced to Rs. 169 in the case of Swiggy (Fig.11,12). In the case of Zomato (Fig.12,13) before the discount the cost comes to Rs. 272 but after using a coupon it gets reduced to Rs. 134. The taxes and delivery fee were same on both platforms. These coupons are generally given on crossing a particular amount, trying a new restaurant, using of certain e-payment modes and also on buying from a restaurant after an elapsed period of time.

SWIGGY AND ZOMATO WITH PREMIUM SUBSCRIPTION
(SWIGGY ONE AND ZOMATO PROPLUS)

Fig.15 Swiggy One perks   Fig.16 Swiggy One perks   Fig.17 Zomato ProPlus perks

Swiggy One and Zomato ProPlus subscription offer free trials for first time users of this feature. This feature offers consumers free delivery, extra discounts (Fig.15,16,17) and also "buy one get one" offers (Fig.16). It is ideal for those who order frequently as it ensures monetary savings on the items purchased.

Note: The images used above are from screenshots of the food apps. and are solely used for educational purposes as permitted under section 52 of the Copyright Act 1957.

5. DATA ANALYSIS

Consumer Behavior towards Food Delivery Apps during the Covid-19 Pandemic.

Fig.18

About 69.8 per cent users found food delivery apps. to be easy to use given its user-friendly interface. Many users reported the app. logistics are clear and understandable making it hassle-free for them while accessing the same. (Fig.18)
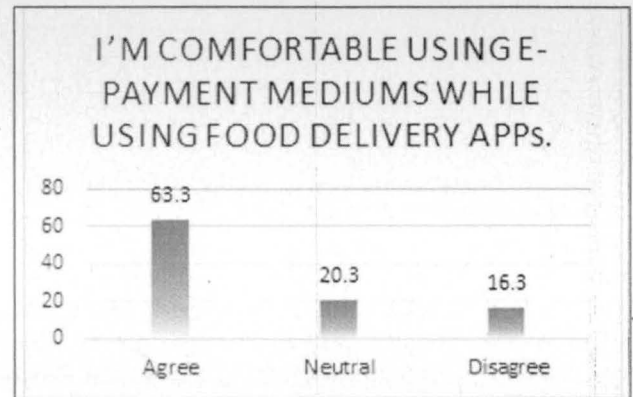

Fig.19

Due to the pandemic and the fear of catching the virus many people opted for e-payment mediums while making transactions thus avoiding contact through touching of hands. 63.3 per cent have shown their trust in food delivery apps. by using various e-payment mediums like google pay, debit/credit cards etc. to pay for the food purchased thus signifying their confidence in the authenticity of the

app. (Fig.19)

USING FOOD DELIVERY APPs PROVIDE TIME SAVING BENEFITS.

Fig.20

The above chart shows that around 79 per cent of the respondents affirmed that food delivery apps. provided them with time saving benefits. It helped them save time which would have been spent on travelling or waiting in line for a table. Thus, this enabled them to accomplish other important tasks and have a proper time estimate of the delivery thanks to the order tracking feature using GPS. (Fig.20)

EVEN THOUGH THERE HAS BEEN COVID-19 OUTBREAKS IN MY AREA, I CONTINUE TO USE FOOD DELIVERY APPs.
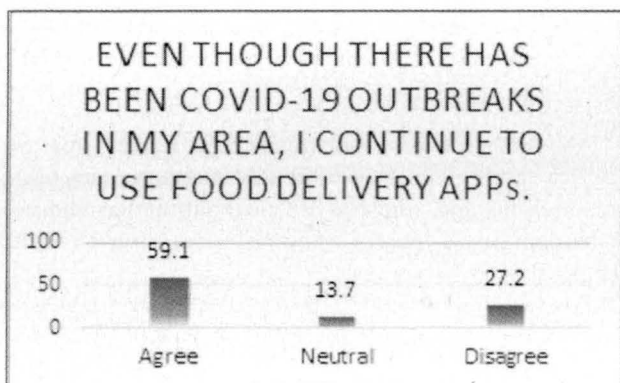

Fig.21

Though the pandemic caused a lot of inconveniences to the general public. 59.1 per cent reported that the food delivery app. service was a boon to them in these tough times. Food delivery apps. took utmost precaution by vaccinating their delivery riders and adopting appropriate sanitation measures. This move gained the trust of many consumers who could order food, groceries and other essentials from the safety and convenience of their homes. (Fig.21)

6. CONCLUSION

Customers have found food delivery apps. to provide better value for money owing to its unique exclusive features. Due to the convenience, time saving benefits, price saving benefits, hygiene precautions etc. majority of the respondents were assertive about using food delivery

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apps. in the future. The efficient customer care service that offers swift refunds in case of any mishap with the order is also one of the reasons for gaining the trust and loyalty of these customers. The last mile delivery process is most crucial for customer fulfilment and endurance of business in terms of the delivery provider, the restaurant and the food delivery personnel. Today, logistics is the sole touchpoint between a consumer and a brand in this VUCA world. Hence, making the 'last mile' extremely significant. The 'last mile' experience is therefore, tremendously important and if given due significance will churn out more and more delighted consumers which will in turn surge profitability and goodwill of the business. MA

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