

MAJOR RESEARCH PROJECT

Understanding Consumer Satisfaction in Quick Commerce Shopping

Submitted By

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Under the guidance of

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CERTIFICATE

This is to certify that Gaurav Shahi, **2K22/DMBA/43** has submitted the Major research project on titled Understanding Consumer Satisfaction in Quick Commerce Shopping in partial fulfillment of the requirements for the award of the degree of Master of Business Administration (MBA) from Delhi School of Management, Delhi Technological University, New Delhi during the academic year 2023-24.

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DECLARATION

I, Gaurav Shahi, a student at Delhi School of Management, Delhi Technological University hereby declare that the Major Research Project on Understanding Consumer Satisfaction in Quick Commerce Shopping submitted in partial fulfillment of the requirements for the award of the degree of Master of Business Administration (MBA) is the original work conducted by me. I also confirm that neither I nor any other person has submitted this project report to any other institution or university for any other degree or diploma. I further declare that the information collected from various sources has been duly acknowledged in this project.

Gaurav Shahi

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Gaurav

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to everyone who has contributed to the successful completion of this major research project on the employee engagement process. I wish to express my sincere thanks to my mentor Dr. PK Suri, Professor of Delhi School of Management, Delhi Technological University for providing me with valuable guidance and support throughout the project. Their expertise and insights have been instrumental in shaping my understanding of the subject matter and in guiding me in the right direction.

I would also like to thank the people who participated in this study. Their contribution has helped me to develop a deeper understanding of Importance of Onboarding.

Finally, I express my sincere thanks to my Parents, Friends, and all the faculty of the Delhi School of Management for their valuable suggestions in completing this Project Report.

EXECUTIVE SUMMARY

The report based on my major research project starts with an introduction of the research project, scope, and objectives of the project, leading to the literature review, conceptual framework of employee engagement, research methodology and analysis.

The research aimed to explore customer satisfaction and factors influencing usage intentions regarding hyperlocal grocery delivery services or quick commerce. Conducted through individual interviews at a local mall, the survey gathered data on delivery time, product quality, pricing perception, and overall satisfaction.

Findings revealed that most participants expressed moderate to high levels of satisfaction with hyperlocal grocery delivery services. Product quality, delivery time, and app usability emerged as significant factors influencing overall satisfaction. Demographic analysis unveiled variations in satisfaction levels, with younger participants tending to report higher satisfaction compared to older age groups.

Despite certain limitations, such as the sampling method employed and potential biases associated with mall-based surveys, the research provides valuable insights into customer preferences. Recommendations suggest prioritizing investments in product quality, delivery efficiency, and app functionality to enhance customer satisfaction and drive repeat business.

In conclusion, understanding customer preferences and delivering an exceptional experience are crucial for success in the competitive hyperlocal grocery delivery market. Addressing key factors identified in the study can help service providers meet customer expectations and foster long-term loyalty.

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CHAPTER 1

INTRODUCTION

1. Background

In recent years, consumer behavior and preferences have changed a lot, especially if we talk about urban parts of India where convenience and time efficiency have become one of the most important factors in deciding. Quick Commerce have become the new reality of the retail industry, this gives consumers the option to order things like groceries and Day To day requirements whenever they need and wherever they want. There are lots of platforms like Swiggy Instamart, Blinkit, Zepto, etc. that are now the biggest players in the quick commerce space and are offering services to the ever-growing demand.

There are many reasons that can be attributed to the rapid growth of this quick commerce, people are more tech savvy, more and more people are using Internet which is getting better day by day, lifestyle changes also contribute to this. Consumers who can afford the convenience of ordering things with a tap on their mobile phones by paying a little extra platform charge and delivery charge do appreciate this change as it has made shopping easier and hassle free.

The competition is increasing as well. Every existing delivery platform wants to take the big chunk of the market share. Companies are using different models like establishing local dark stores, warehouses or using local marketplaces as a medium. Like in every sector, the competition is bringing new innovations and now companies are trying to exceed the limits with ridiculously less delivery time that seemed impossible just a few years ago.

Along with the benefits and opportunities there are some challenges as well that needs to be looked at. There are many factors that impacts how much the customer is satisfied and if he will use the same platform. The switching cost is not a lot, making it very easy for the customers to shift at other platform of their like, so the margin of error is very less. There is a need for research on understanding the perception of the consumer. Companies need to create their strategies by knowing factors that contributes to satisfaction or dissatisfaction.

Without a doubt, In India, Covid-19 was very much responsible the growth of quick-commerce. Everyone turned online for all their needs and were avoiding contacts and going to crowded places. The platforms were clever enough to capitalize on the sudden change n the market and provided unparalleled convenience, with even masks available on those platforms which has become a rarity to find offline at genuine prices. They were successful in catering to the increasing demand.

It is expected that we will be witnessing more innovation in the coming years as the industry expands. Quick commerce players are likely to focus more on customer experience by enhancing their services and adding new innovative features which is only going to make it easier to shop online. These platforms are investing heavily on technology and are more a technology company than an operation one.

This research focuses on the consumer satisfaction in quick commerce shopping and what factors contribute the most. It seeks to answer various useful question and provide insights regarding the customer experience dealing with these platforms.

2. Problem Statement

The rise of quick commerce has changed consumer behavior and preferences a lot. Consumers decision making process has evolved. The convenience of getting things at your fingertip as quickly as possible was not at all imaginable few years ago. The retail industry is not the same anymore, essential items are available at their doors, while also saving their time. Instamart, Blinkit, Zepto are just some of the players in the market, with more and more competition coming every year.

Talking about the competition, platforms are offering competitive prices, heavy discounts, customer service, variety of products that has led to innovation at a big scale and are attracting more and more customers by exceeding their expectations.

Although there have been researches on the models that will be useful for quick commerce services like dark stores, there is a lack of consumer focused studies in the quick commerce that look at overall consumer satisfaction as a whole instead of assuming that only assessing few factors will

be helpful in forging the strategies regarding the customer experience. There is a need to understand the overall satisfaction, Intention of the customer to use the platform again, and the likelihood of them to recommend it to others which makes it a very interesting to explore and will help organizations to create targeted strategies.

3. Objectives

The objective is to analyze overall satisfaction for various demographics. The primary focus is on platforms like Instamart, Blinkit, BigBasket and Blinkit. The aim is to achieve these objectives:

1. To Evaluate overall satisfaction of quick commerce users.
2. To understand if they will use the same platform again as the switching cost is very low, so assessing loyalty is one of the objectives.
3. To Assess likelihood of customers to recommend the platform they use to others.

4. Scope of this study

The study is an analysis of consumer satisfaction in quick commerce or hyperlocal deliveries, where the focus is primarily on platforms like Instamart, Blinkit, BigBasket, Zepto. It is designed to understand various aspects and attributes of quick commerce.

1. Demographics: Age, Gender, Occupation are the demographic attributes that will be considered to assess consumer behavior towards quick commerce.
2. Attributes: These are the various attributes identified with the help of rigorous literature review:
 - i. Delivery Time: Assessing the timeliness and consistency of deliveries.
 - ii. Product Quality: Evaluating the quality, freshness of products.
 - iii. Pricing: Pricing transparency, delivery fee, discounts, and value for money.
 - iv. Customer Service: Customer support and issue management.
 - v. App Usability: Ease of use of the mobile application or website.
 - vi. Product Variety: Variety of the products that the customer can choose from.

3. **Consumer Insights:** The study will gather consumer insights into consumer experiences, preferences, and satisfaction levels.
4. **Recommendations:** Based on the analysis, quick commerce platforms can use the insights to form useful strategies to target their customers and will be able to enhance the service.
5. **Limitations:** The study's scope is limited to consumer perceptions and experiences within the specified geographical and demographic parameters and may not cover all possible factors influencing consumer satisfaction in fast hyperlocal deliveries. External factors such as market dynamics, technological advancements, and competitive strategies may also influence consumer behavior and satisfaction but are not the primary focus of this study.

CHAPTER 2

LITERATURE REVIEW

The research objectives are addressed in this chapter Through secondary sources of data from articles published in numerous scholarly and peer-reviewed publications, the internet, and books.

It's important to understand how happy customers are in quick commerce, also known as q-commerce, where things get delivered fast. This review brings together what different studies have found about what makes customers happy and how they act when using quick commerce.

In 2016, Mukherjee and Michael talked about how online shopping is growing quickly in India and changing how businesses work. This helps us see the background of quick commerce and why it's important to make things easy and fast for customers.

Some researchers looked at the challenges of delivering things locally and quickly. Mukherjee and Michael pointed out in 2016 that modern ways of doing business could shake up traditional ways. They said it's important to find new ways to work well and keep customers happy. Similarly, Nisar and Prabhakar in 2017 and Deepthi and Bansal in 2023 looked at how to make local delivery services work better. They talked about how to use resources well, make employees more effective, and use technology to give better service and make customers happier.

What customers like and how easy it is for them to get things quickly really affect how they shop in quick commerce. In 2024, Luna Sanchez, Pedro study used some models to figure out what makes customers buy things on quick commerce platforms. They found that customers care about how useful and easy the platform is to use, as well as how good the information is. They also saw that what customers like can change over time, so it's important to keep up with what they want.

Al-Muani, L., et al study from Jordan gave us some useful information about what makes customers happy when they use quick commerce. They looked at different parts of the delivery process, like how well customers interact with the delivery people, if the items arrive in good condition, if the products are available, if they arrive on time, and if the orders are correct. They

found that getting the order right is the most important thing. This shows how important it is to make sure customers get exactly what they ordered to build trust.

The study found that people of different age groups care about different things. Even when need is the same, they care about these things differently. Al-Muani, L gives a good understanding of the same fact.

Adding to what we know about how customers behave and what makes them happy in quick commerce, Setiyono, Agus Eko, et al study in 2023. They looked at what makes customers want to keep using quick commerce services, especially in Indonesia.

Setiyono, Agus Eko, et al research talks about how quick commerce is becoming more important, being the third kind of shopping model after regular stores and online shopping. This shows how much attention quick commerce is getting because it's different and matches what customers like.

Their study aims to see how the quality of online services (like being safe, reliable, easy to use, and quick to respond) affects how happy customers are and if they keep using quick commerce services in Indonesia. They asked 341 customers about their experiences to understand better what makes customers happy and loyal in the Indonesian market.

Using a method called Smart Partial Least Square (PLS) to test their ideas, the study found that there's a strong connection between different aspects of service quality and how happy customers are, as well as how likely they are to keep using quick commerce services. This means that providing good services that are safe, reliable, easy to use, and quick to respond to customers' needs is important for making customers satisfied and loyal.

This study also helps us understand more about how people shop online, especially on quick commerce platforms. It gives us insights into what influences decisions about the quality of online services. By figuring out what makes customers happy and keeps them coming back, this research can help quick commerce platforms in Indonesia and other places improve their services and keep customers around.

Setiyono, Agus Eko, et al study adds to what we already know about how customers behave and feel when they use quick commerce. It gives us solid proof that there's a link between the quality of online services, how satisfied customers are, and how loyal they are. By paying attention to what makes quick commerce unique and considering the specific needs of the Indonesian market, this research gives useful advice to businesses that want to do better and keep their customers happy for a long time.

Rumende, Jonathan Weiyn, and Lamhot Henry Pasaribu et al. (2021) wanted to see how good service on Shopee.co.id affects how happy, trusting, and loyal customers are. They asked 300 people who bought things on Shopee.co.id about their experiences and looked at how service quality, satisfaction, trust, and loyalty are connected.

They found that good service makes customers happier and more trusting, which makes them more likely to stay loyal. However, they didn't find a direct link between good service and loyalty. They also found that trust plays a big role in making customers stay loyal when service is good.

Based on their findings, they suggest some ways for Shopee.co.id and similar platforms to keep customers happy and loyal. This includes keeping cash on delivery options to make customers trust them more, improving services overall to make customers happier, giving clear information to make transactions easier, and letting customers track their orders to keep them informed.

The authors think it would be good to study more things and compare different online marketplaces in Indonesia and around the world in future research.

In summary, the literature underscores the multidimensional nature of consumer satisfaction in quick commerce, influenced by factors such as operational efficiency, technological advancements, consumer preferences, and market dynamics. By comprehensively understanding these factors, businesses can develop tailored strategies to improve satisfaction, drive loyalty, and to get an edge in the dynamic landscape of quick commerce.

Variables Identified Using Literature Review

Variable Name	Source
Delivery Time	<p>Al-Muani, L., et al. "The effect of logistics and policy service quality on customer trust, satisfaction, and loyalty in quick commerce: A multigroup analysis of generation Y and generation Z." <i>Uncertain Supply Chain Management</i> 12.3 (2024): 1417-1432.</p> <p>Harter, Alice. <i>Impact of Delivery Time on Consumer Behavior in Quick Commerce</i>. Vol. 14. BoD–Books on Demand, 2024.</p>
Product Quality	<p>Konuk, F. A. (2019). "The influence of perceived food quality, price fairness, perceived value and satisfaction on customers' revisit and word-of-mouth intentions towards organic food restaurants. <i>Journal of Retailing and Consumer Services</i>, 50."</p> <p>Luna Sanchez, Pedro. "An analysis of the drivers of consumers' purchasing behavior in quick commerce platforms." (2024)</p>
Pricing and Value	<p>"Rumende, Jonathan Weiyin, and Lamhot Henry Pasaribu. "The Relationship Between Social Commerce Design Models on Shopee Users' Purchase Decisions." <i>Enrichment: Journal of Management</i> 12.1 (2021): 109-113."</p> <p>Konuk, F. A. (2019). "The influence of perceived food quality, price fairness, perceived value and satisfaction on customers' revisit and word-of-mouth intentions towards organic food restaurants. <i>Journal of Retailing and Consumer Services</i>, 50."</p>
Customer Service	<p>Setiyono, Agus Eko, et al. "Antecedents of E-Loyalty as Research for the Quick Commerce Industry." <i>Interdisciplinary Social Studies</i> 2.8 (2023): 2287-2299.</p> <p>Luhukay, Devyano, et al. "Analysis of System, Information and Service Quality Factors on Customer Satisfaction in Quick Commerce Applications in Indonesia."</p>
App Usability	<p>Luna Sanchez, Pedro. "An analysis of the drivers of consumers' purchasing behavior in quick commerce platforms." (2024)</p> <p>Mukhopadhyay, Mayukh. "From Click to Quick-Examining the drivers of Quick Commerce on Online Consumer Behavior Using Fuzzy Cognitive Mapping." Paper ID ICMI/2321, <i>International Conference on Marketing Innovation</i>. 2023.</p>
Product Variety	<p>Al-Muani, L., et al. "The effect of logistics and policy service quality on customer trust, satisfaction, and loyalty in quick commerce: A multigroup analysis of generation Y and generation Z." <i>Uncertain Supply Chain Management</i> 12.3 (2024): 1417-1432.</p>

Table 2.1 Variables Identified using Literature Review

CHAPTER 3

RESEARCH METHODOLOGY

1. Introduction

The procedures and methods employed for this study are highlighted in this chapter. The study area, targeted population, sample size, sampling technique, data collection, data analysis tool, and presentation are all included.

2. Research Design

Cross-sectional research design was opted for this research. Which means the data was collected at a single moment. To ensure efficiency in data collection, a structured questionnaire was utilized to gather responses from participants.

3. Sampling Technique

Convenience Sampling: Given the practical constraints, convenience sampling was chosen as the sampling technique. In a mall setting, people were surveyed based on their willingness to be surveyed voluntarily.

4. Study Population

Quick Commerce Users.

5. Data Collection

In a shopping mall setting, people were approached to participate in the survey. Mall setting was chosen because to meet and ask people directly enables a personal correction and more honest answers than in an online survey. People tend to be more proactive in face-to-face situations and can ask any queries if they have without barrier. People who agreed to survey were asked the questions from the questionnaire, which was later accumulated using google form.

The sample size was 80 people with various backgrounds and demographics.

6. Data Analysis

Descriptive Analysis was conducted to summarize key findings, mainly the demographic ones.

Regression and ANOVA tests were done to analyze satisfaction, loyalty and likelihood to recommend. Hypothesis testing was done accept and reject different hypotheses.

Key findings and Insights were interpreted to understand more about the preference of the customer.

7. Ethical Consideration

Participants were clearly informed about the purpose of the study to ensure consent. It was voluntary and they were free to withdraw. Participants privacy and anonymity were protected and confidentiality was maintained.

Informed Consent: Prior to participants agreeing to take part, clear information about the study's purpose and procedures was provided to them, ensuring informed consent.

Voluntary Participation: Participation in the survey was voluntary, and participants were free to withdraw from the study at any point without facing any repercussions.

Confidentiality Measures: Measures were taken to maintain the confidentiality of participants' responses throughout the study, ensuring their privacy and anonymity were protected.

8. Limitations

The sample size is 80, a large sample size will be needed to increase accuracy to generalize it. Also, there could be self-report bias as well.

CHAPTER 4

DATA ANALYSIS AND RESULTS

1. Introduction

The data collected through the survey is analyzed with the aim to assess patterns, trends, and insights about the perception of quick commerce. Demographic data like age, gender and occupation of the participants was analyzed first. It gave insights about the sample, and an understanding of different type of people from different background who are using these platforms.

Regression analysis was also done to understand what attributes or factors have an impact on overall satisfaction. It was also implanted to assess the impact of all those attributes in consumers likelihood to recommend the platform and their intention to use it again which measures loyalty for the platform. Our aim was to find the key variables that have the most impact and power over satisfaction and loyalty.

ANOVA was used to do an analysis of mean overall satisfaction score Male and Females of different ages separately. The aim was to understand if different age group have anything different so that post hoc analysis could be done. Also, mean overall satisfaction for people on the basis of occupation was also done to understand if there is any difference between people of different occupations regarding customer experience in quick commerce.

2. Demographic Data

i. Gender based Respondents

Gender
80 responses

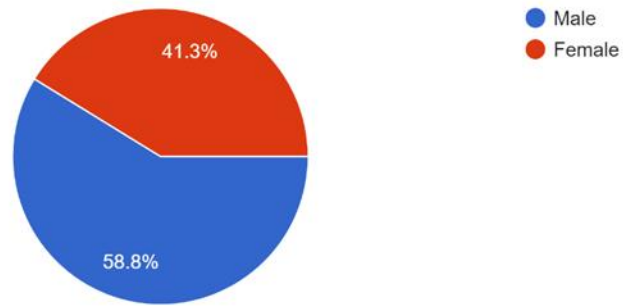


Fig 4.1 Gender Diversification

Source: Primary Data

Out of all the 80 participants, 58.8% were males and 41.3% were female. It is clear that there are more males surveyed compared to females for this study.

ii. Age of the respondents

Age
80 responses

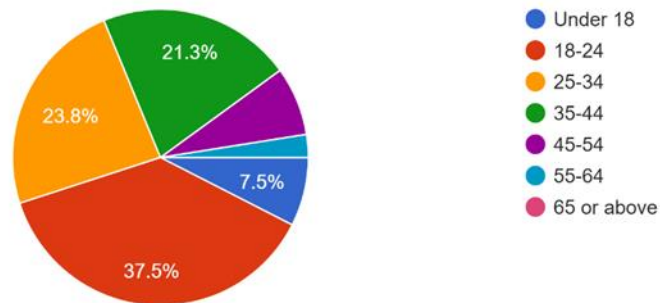


Fig 4.2 Age distribution

Source: Primary Data

Age distribution has analyzed for 80 people who took part in this survey. As per the frequency table, highest number of participations is from age group of 18-24 that is 37.5%, the second largest participation is from age group of 25-34 that is 23.8%. The next age group of participation is 21.3% is age group 35-44, 7.5% of age group of under 18, while remaining for the rest.

iii. Occupation

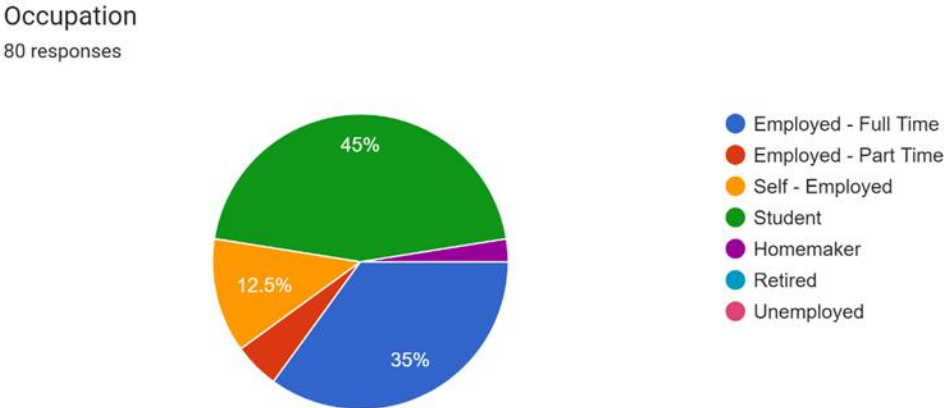


Fig 4.3 Occupation distribution

Source: Primary Data

When considering the participants' occupational status, our analysis highlighted diverse employment backgrounds. Notably, we found that 45% of the surveyed individuals identified themselves as students, suggesting a considerable presence of young, education-focused consumers in our sample. Additionally, 35% of the participants reported being employed on a full-time basis, indicating a substantial representation of working professionals within our study cohort.

iv. Choice Factors

What factors influence your decision to choose one fast hyperlocal delivery platform over another?

79 responses

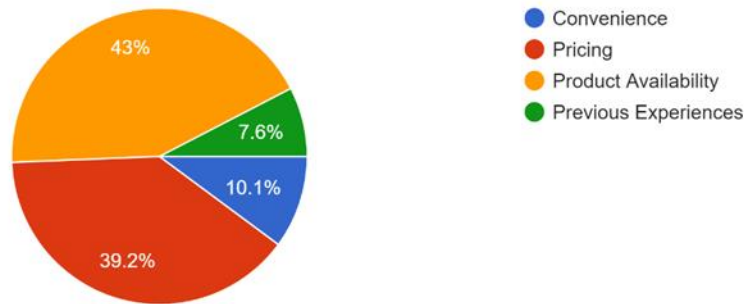


Fig 4.4 Choice Factors distribution

Source: Primary Data

Product Availability (43%) followed by Pricing (39.2%) are the two biggest reasons for a customer to choose one quick commerce platform over others.

3. Regression Analysis: Overall Satisfaction

This OLS (Ordinary Least Squares) regression analysis delves into the factors influencing overall satisfaction with hyperlocal grocery delivery services. The findings shed light on several crucial aspects:

The model exhibits a commendable fit with an R-squared value of 0.726, indicating 72.6% of variance in overall satisfaction is explainable by the independent variables. The adjusted R-squared value stands at 0.704.

Among the predictors, product quality emerges as a significant influencer of overall satisfaction ($p = 0.039$). As customers perceive higher product quality, their overall satisfaction tends to increase correspondingly.

Similarly, the variety of products offered by the service significantly impacts overall satisfaction ($p < 0.001$). Customers express greater satisfaction when they have access to a diverse array of products to choose from.

The usability of the app used for ordering groceries also emerges as a significant predictor ($p = 0.039$). Customers exhibit higher satisfaction levels when the app interface is intuitive and user-friendly.

However, contrary to initial expectations, delivery time does not wield a statistically significant effect on overall satisfaction ($p = 0.259$).

Likewise, neither customer service nor pricing perception significantly influences overall satisfaction ($p > 0.05$).

Other noteworthy observations include the non-significant intercept term ($p = 0.109$). Additionally, the Durbin-Watson statistic suggests the absence of significant autocorrelation in the residuals (approximately 2.787). However, the omnibus and Jarque-Bera tests suggest potential deviations from the normality assumption in the residuals.

In conclusion, this regression analysis underscores the pivotal role of product quality, product variety, and app usability in shaping overall satisfaction with hyperlocal grocery delivery services. Businesses operating in this sector can leverage these insights to prioritize enhancements in these areas, thereby fostering improved customer satisfaction and retention.

3.1 Hypothesis Testing:

Delivery Time:

H0: Delivery time has no impact on overall satisfaction.

H1: Delivery time has an impact on overall satisfaction.

Product Quality:

H0: Quality has no impact on overall satisfaction.

H1: Quality has an impact on overall satisfaction.

Product Variety:

H0: Product Variety has no impact on satisfaction.

H1: Product variety has an impact on overall satisfaction.

Customer Service:

H0: Customer service has no impact on overall satisfaction.

H1: Customer service has an impact on overall satisfaction.

App Usability:

H0: App usability has no impact on overall satisfaction.

H1: App usability has an impact on overall satisfaction.

Pricing Perception:

H0: Pricing perception has no impact on overall satisfaction.

H1: Pricing perception has an impact on overall satisfaction.

Null hypothesis for variables “quality”, “variety”, and “app usability” is rejected. This means that they do have a statistically significant impact on overall satisfaction. Other variables like “delivery time”, “customer service”, and “pricing perception” do not have a significant impact at $p > 0.05$ as their null hypothesis is accepted. It implies that quality, variety and app usability are very influential when it comes to satisfaction.

```

import pandas as pd
import statsmodels.api as sm

data = pd.read_csv('/content/drive/MyDrive/dataset/regression - Sheet1.csv')

# Converting the data to a DataFrame
df = pd.DataFrame(data)

# Adding a constant term to the DataFrame (required for statsmodels)
df['const'] = 1

# Defining the independent variables (predictors)
X = df[['const', 'Delivery_Time', 'Product_Quality', 'Product_Variety', 'Customer_Service', 'App_Usability', 'Pricing_Perception']]

# Defining the dependent variable
y = df['Overall_Satisfaction']

# Fitting the OLS regression model
model = sm.OLS(y, X).fit()

# Printing the regression results summary
print(model.summary())

```

```

OLS Regression Results
=====
Dep. Variable:      Overall_Satisfaction      R-squared:      0.726
Model:              OLS                      Adj. R-squared: 0.704
Method:             Least Squares           F-statistic:    32.26
Date:               Wed, 17 Apr 2024           Prob (F-statistic): 1.15e-18
Time:               23:50:02                 Log-Likelihood: -73.672
No. Observations:  80                      AIC:            161.3
Df Residuals:      73                      BIC:            178.0
Df Model:           6
Covariance Type:   nonrobust
=====
                    coef    std err          t      P>|t|      [0.025    0.975]
-----
const              -0.5743     0.354     -1.622    0.109     -1.280     0.131
Delivery_Time       0.1420     0.125     1.138    0.259     -0.107     0.391
Product_Quality     0.1995     0.095     2.104    0.039     0.010     0.389
Product_Variety     0.4573     0.136     3.357    0.001     0.186     0.729
Customer_Service   -0.0179     0.110     -0.163    0.871     -0.237     0.201
App_Usability       0.2445     0.116     2.101    0.039     0.013     0.476
Pricing_Perception  0.1223     0.120     1.019    0.311     -0.117     0.361
=====
Omnibus:           25.030    Durbin-Watson:      2.787
Prob(Omnibus):     0.000    Jarque-Bera (JB):   70.059
Skew:              -0.947    Prob(JB):           6.12e-16
Kurtosis:          7.175    Cond. No.            46.9
=====

```

Fig 4.5 Regression Analysis: Overall Satisfaction

Source: Own Analysis

4. Regression Analysis: Intention to Use Again

The regression analysis done to understand the intention to use the service again, is like assessing the brand loyalty. “Delivery time”, “product variety” and “app usability” were the most important predictors, which means that people are more likely to use the same platform if delivery is timely, there are variety of products to choose from and they have a lot of options and if they find the app easier to use. It shows how important is it for the platforms to work closely on these attributes to increase the customer retention and grow the business.

The model had the R-squared value 0.826, which means that around 82.6% of variance can be predicted by the variables included in the research. Amongst all the variables, “Delivery time”, “product variety” and “app usability” were the most important predictors. This finding highlights importance of these variables to foster customer retention and growth for the quick commerce platforms. These factors impact loyalty specially in the industry where there is almost no switching cost.

4.1 Hypothesis Testing:

Delivery Time:

H0: Delivery Time has no impact on customers' intention to use the service again.

H1: Delivery Time has an impact on customers' intention to use the service again.

Product Quality:

H0: Product Quality has no impact on customers' intention to use the service again.

H1: Product Quality has an impact on customers' intention to use the service again.

Product Variety:

H0: Product Variety has no impact on customers' intention to use the service again.

H1: Product Variety has an impact on customers' intention to use the service again.

Customer Service:

H0: Customer Service has no impact on customers' intention to use the service again.

H1: Customer Service has an impact on customers' intention to use the service again.

App Usability:

H0: App Usability has no impact on customers' intention to use the service again.

H1: App Usability has an impact on customers' intention to use the service again.

Pricing Perception:

H0: Pricing Perception has no impact on customers' intention to use the service again.

H1: Pricing Perception has an impact on customers' intention to use the service again.

Null hypothesis for variables “delivery time”, “variety”, and “app usability” were rejected. This means that they do have a statistically significant impact on customers’ intention to use the platform again. Other variables like “product quality”, “customer service”, and “pricing perception” do not have a significant impact at $p > 0.05$ as their null hypothesis is accepted. It implies that delivery time, variety, and app usability are very influential when it comes to loyalty.

```

import pandas as pd
import statsmodels.api as sm

data = pd.read_csv('/content/drive/MyDrive/dataset/regression - Sheet1.csv')

df = pd.DataFrame(data)

# Adding a constant term to the DataFrame (required for statsmodels)
df['const'] = 1

# Defining the independent variables (predictors)
X = df[['const', 'Delivery_Time', 'Product_Quality', 'Product_Variety', 'Customer_Service', 'App_Usability', 'Pricing_Perception']]

# Defining the dependent variable
y = df['Use_again']

# Fitting the OLS regression model
model = sm.OLS(y, X).fit()

# Printing the regression results summary
print(model.summary())

```

```

OLS Regression Results
=====
Dep. Variable:      Use_again      R-squared:          0.826
Model:              OLS            Adj. R-squared:     0.811
Method:             Least Squares   F-statistic:        57.57
Date:               Wed, 17 Apr 2024   Prob(F-statistic):  1.04e-25
Time:               23:58:43         Log-Likelihood:     -50.208
No. Observations:  80             AIC:                114.4
Df Residuals:       73             BIC:                131.1
Df Model:           6
Covariance Type:   nonrobust
=====
                    coef    std err          t      P>|t|      [0.025    0.975]
-----
const              -0.3724    0.264      -1.410    0.163     -0.899     0.154
Delivery_Time       0.2862    0.093       3.075    0.003     0.101     0.472
Product_Quality     0.1059    0.071       1.497    0.139     -0.035     0.247
Product_Variety     0.2837    0.102       2.793    0.007     0.081     0.486
Customer_Service    0.0053    0.082       0.065    0.949     -0.158     0.169
App_Usability       0.4358    0.087       5.020    0.000     0.263     0.609
Pricing_Perception -0.0533    0.089      -0.596    0.553     -0.232     0.125
=====
Omnibus:           29.020    Durbin-Watson:      1.695
Prob(Omnibus):     0.000    Jarque-Bera (JB):   65.806
Skew:              -1.238    Prob(JB):           5.13e-15
Kurtosis:          6.689    Cond. No.           46.9
=====

Notes:
[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

```

Fig 4.6 Regression Analysis: Intention to Use Again

Source: Own Analysis

5. Regression Analysis: Likelihood to Recommend

Likelihood to recommend means how likely are the customers to suggest the service or platform to other and becoming a promoter in this process. This is like the NPS (Net Promoter Score) which indicates how promotable is your product. In a way it can be said that with help of regression, important variables can be identified that can help companies to increase their NPS Score.

“Product quality” and “Pricing perception” came out to be the most influential factors when it came to likelihood to recommend. The model had R-squared value 0.733 which means around 73.3% variation is explainable by the variables that are included.

It was more likely for customers to recommend the platform to others when they were impressed by the quality offered, and also when there was value for the money spent. The coefficient for quality (coef = 0.351, $p < 0.001$) and pricing (coef = 0.340, $p < 0.01$) tells how important these variables are. Other factors like delivery time, variety, customer service and app usability were not that much of a strong indicator of recommendation. This indicates the importance of word-of-mouth referrals.

5.1 Hypothesis Testing:

Delivery Time:

H0: Delivery Time has no impact on customers' likelihood of recommending the service.

H1: Delivery Time has an impact on customers' likelihood of recommending the service.

Product Quality:

H0: Product Quality has no impact on customers' likelihood of recommending the service.

H1: Product Quality has an impact on customers' likelihood of recommending the service.

Product Variety:

H0: Product Variety has no impact on customers' likelihood of recommending the service.

H1: Product Variety has an impact on customers' likelihood of recommending the service.

Customer Service:

H0: Customer Service has no impact on customers' likelihood of recommending the service.

H1: Customer Service has an impact on customers' likelihood of recommending the service.

App Usability:

H0: App Usability has no impact on customers' likelihood of recommending the service.

H1: App Usability has an impact on customers' likelihood of recommending the service.

Pricing Perception:

H0: Pricing Perception has no impact on customers' likelihood of recommending the service.

H1: Pricing Perception has an impact on customers' likelihood of recommending the service.

Null hypothesis for variables “product quality” and “pricing perception” were rejected. This means that they do have a statistically significant impact on customers' likelihood of recommending the platform. Other variables like “delivery time”, “app usability”, “customer service”, and “product variety” do not have a significant impact at $p > 0.05$ as their null hypothesis is accepted. It implies that product quality, and pricing perception are very influential when it comes to recommendations.

```

import pandas as pd
import statsmodels.api as sm

data = pd.read_csv('/content/drive/MyDrive/dataset/regression - Sheet1.csv')

df = pd.DataFrame(data)

# Adding a constant term to the DataFrame (required for statsmodels)
df['const'] = 1

# Defining the independent variables (predictors)
X = df[['const', 'Delivery_Time', 'Product_Quality', 'Product_Variety', 'Customer_Service', 'App_Usability', 'Pricing_Perception']]

# Defining the dependent variable
y = df['recommend']

# Fitting the OLS regression model
model = sm.OLS(y, X).fit()

# Printing the regression results summary
print(model.summary())

```

```

=====
OLS Regression Results
=====
Dep. Variable:          recommend    R-squared:                0.733
Model:                  OLS          Adj. R-squared:           0.711
Method:                 Least Squares    F-statistic:              33.42
Date:                   Thu, 18 Apr 2024    Prob (F-statistic):      4.56e-19
Time:                   00:01:47          Log-Likelihood:          -67.108
No. Observations:      80              AIC:                     148.2
Df Residuals:          73              BIC:                     164.9
Df Model:               6
Covariance Type:       nonrobust
=====

```

	coef	std err	t	P> t	[0.025	0.975]
const	0.2993	0.326	0.918	0.362	-0.351	0.949
Delivery_Time	-0.0651	0.115	-0.567	0.573	-0.294	0.164
Product_Quality	0.3508	0.087	4.014	0.000	0.177	0.525
Product_Variety	0.0882	0.125	0.703	0.485	-0.162	0.338
Customer_Service	0.1517	0.101	1.498	0.138	-0.050	0.353
App_Usability	0.1573	0.107	1.467	0.147	-0.056	0.371
Pricing_Perception	0.3399	0.111	3.075	0.003	0.120	0.560

```

=====
Omnibus:                2.718    Durbin-Watson:            1.640
Prob(Omnibus):          0.257    Jarque-Bera (JB):        2.394
Skew:                   -0.080    Prob(JB):                0.302
Kurtosis:                3.832    Cond. No.                 46.9
=====
Notes:
[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

```

Fig 4.7 Regression Analysis: Likelihood to Recommend

Source: Own Analysis

6. ANOVA Test: Comparative Analysis Mean Overall Satisfaction for Females

The analysis delves into the mean overall satisfaction scores concerning females of different age groups. Observing the data, it's apparent that satisfaction scores vary across different age groups and genders. Notably, individuals aged 45-54 exhibit higher average satisfaction scores compared to other age groups. However, despite these variations, the ANOVA test provides insights that suggest that there is no such statistically significant difference in satisfaction scores among females of different ages, as indicated by a p-value of 0.483 for the F-statistic. This implies that while there are apparent differences in mean satisfaction scores across age groups, these differences do not reach statistical significance, suggesting that age alone may not be strong predictors of overall satisfaction levels.

6.1 Hypothesis Testing:

H0: Mean overall satisfaction score does not differ for different age groups of females.

H1: Mean overall satisfaction score do differ for different age groups of females.

The hypothesis testing indicates that mean overall satisfaction is mostly similar in all different age categories of females. The p-value comes out to be 0.483 for the F-statistic, and the null hypothesis could not be rejected. It states there is not any big difference that can clearly make a difference. Even when the satisfaction score seemed to be different, it is not of that big significance or importance.

```

import pandas as pd
from scipy.stats import f_oneway

# Read the data
data = pd.read_csv("/content/drive/MyDrive/dataset/Understanding Consumer Satisfaction in fast hyperlocal deliveries (Responses) - Form Responses 1.csv")

# Group the data by Age and Gender
grouped_data_female = data[data['Gender'] == 'Female'].groupby('Age')

# Calculate the mean overall satisfaction for each age group
mean_satisfaction_female = grouped_data_female['Overall_Satisfaction'].mean()

# Print the mean satisfaction for each age group (female)
print("Mean Overall Satisfaction by Age for Female Gender:")
print(mean_satisfaction_female)

# Perform ANOVA to compare the mean satisfaction among different age groups (female)
f_statistic_female, p_value_female = f_oneway(*[grouped_data_female.get_group(age)['Overall_Satisfaction'] for age in grouped_data_female.groups])

# Print the ANOVA results for female
print("\nANOVA Results for Female Gender:")
print("F-Statistic:", f_statistic_female)
print("P-value:", p_value_female)

```

```

Mean Overall Satisfaction by Age for Female Gender:
Age
18-24      3.615385
25-34      3.500000
35-44      3.375000
45-54      5.000000
Under 18   4.000000
Name: Overall_Satisfaction, dtype: float64

ANOVA Results for Female Gender:
F-Statistic: 0.8886388263732597
P-value: 0.483581776407527

```

Fig 4.8 ANOVA Test 1 Source: Own Analysis

7. ANOVA Test: Comparative Analysis Mean Overall Satisfaction for Males

The analysis delves into the mean overall satisfaction scores concerning males of different age groups. Observing the data, it's apparent that satisfaction scores vary across different age groups and genders. Notably, individuals aged 18-24 exhibit higher average satisfaction scores compared to other age groups. However, despite these variations, the ANOVA test provides insights that suggest that there is no such statistically significant difference in satisfaction scores among males of different ages, as indicated by a p-value of 0.141 for the F-statistic. This implies that while there are apparent differences in mean satisfaction scores across age groups, these differences do not reach statistical significance, suggesting that age alone may not be strong predictors of overall satisfaction levels.

7.1 Hypothesis Testing:

H0: Mean overall satisfaction score does not differ for different age groups of males.

H1: Mean overall satisfaction score do differ for different age groups of males.

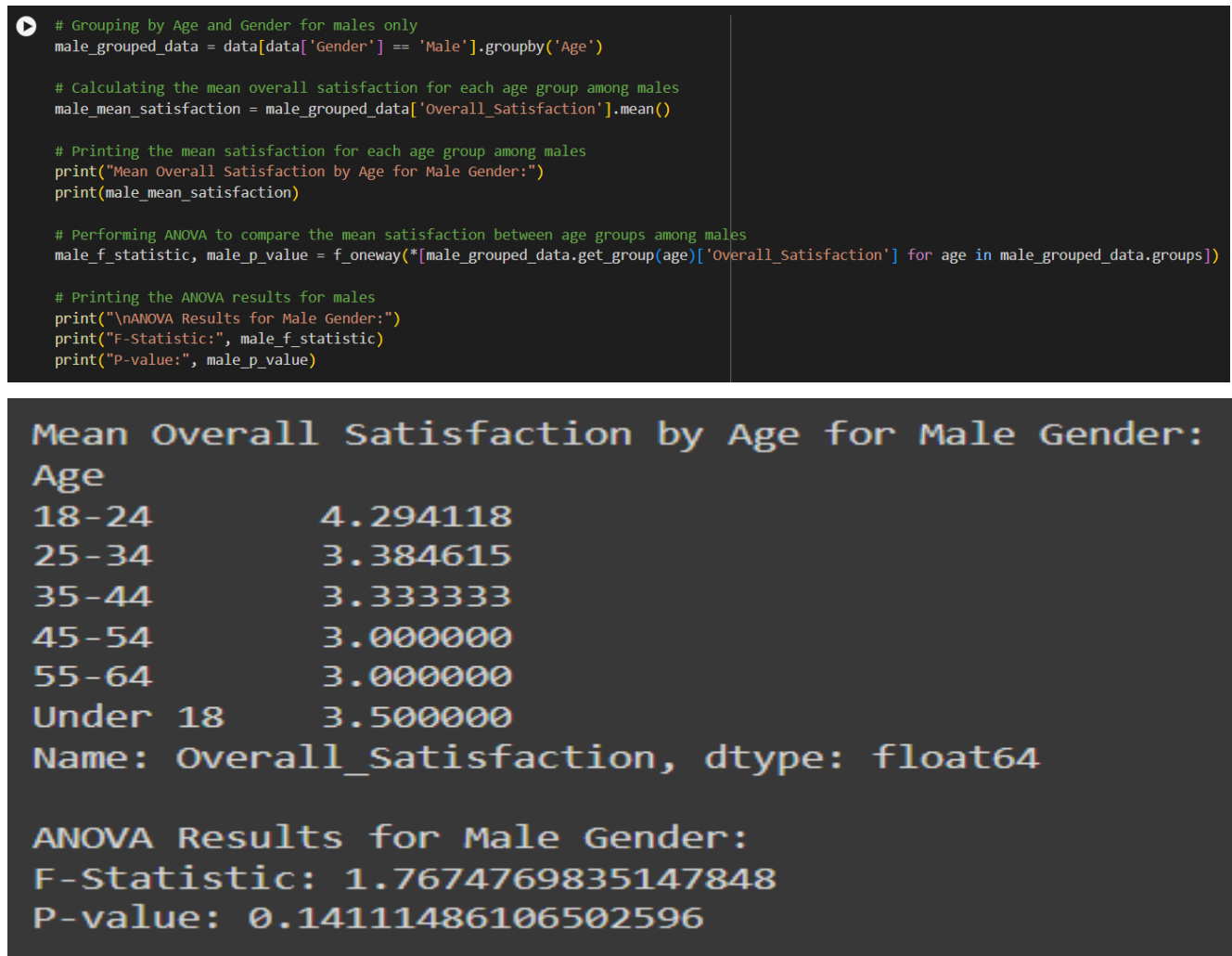


Fig 4.9 ANOVA Test 2

Source: Own Analysis

The hypothesis testing indicates that mean overall satisfaction is mostly similar in all different age categories of males. The p-value comes out to be 0.141 for the F-statistic, and the null hypothesis could not be rejected. It states there is not any big difference that can clearly make a difference. Even when the satisfaction score seemed to be different, it is not of that big significance or importance.

8. ANOVA Test: Comparative Analysis Mean Overall Satisfaction by Occupation

Mean overall satisfaction among people from different occupational groups were analyzed. There was variance in scores of different groups which is interesting. It was reported that homemakers had higher rate of satisfaction i.e., 4.5 whereas people who worked part-time had the lowest score i.e., 2.5. Also, p-value came out to be 0.006 for F-statistic stating that there is a significant difference in scores.

This means that it is more than a coincidence as the null hypothesis had to be rejected which means that definitely there is a difference in satisfaction levels of people of different occupations. It shows that occupation is an important indicator of how people are perceiving quick commerce platforms or services. This can help these apps to understand needs of people of different backgrounds..

8.1 Hypothesis Testing:

H0: Mean overall satisfaction score does not differ for different occupational groups.

H1: Mean overall satisfaction score do differ for different occupational groups.

The test suggests that there is a difference in mean overall satisfaction among different occupational groups which clearly means that people of different background perceive quick commerce differently. Thus, these apps need to consider this to understand the consumer better and provide satisfaction.

```

import pandas as pd
from scipy.stats import f_oneway

data = pd.read_csv("/content/drive/MyDrive/dataset/Understanding Consumer Satisfaction in fast hyperlocal deliveries (Responses) - Form Responses 1.csv")

columns_to_drop = ["Timestamp", "Location ", "Delivery_Time", "Product_Quality", "Product_Variety",
                  "Customer_Service", "App_Usability", "Pricing_Perception", "choice_factor", "continue", "Use_again"]
data = data.drop(columns=columns_to_drop)

# Grouping by occupation
grouped_data = data.groupby("Occupation ")

# Calculating mean overall satisfaction scores
mean_satisfaction = grouped_data["Overall_Satisfaction"].mean()

# Printing mean overall satisfaction scores by occupation
print("Mean Overall Satisfaction by Occupation:")
print(mean_satisfaction)

# Performing ANOVA for overall satisfaction scores by occupation
f_statistic, p_value = f_oneway(*[group["Overall_Satisfaction"] for _, group in grouped_data])
print("\nANOVA Results:")
print(f"F-Statistic: {f_statistic}")
print(f"P-value: {p_value}")

```

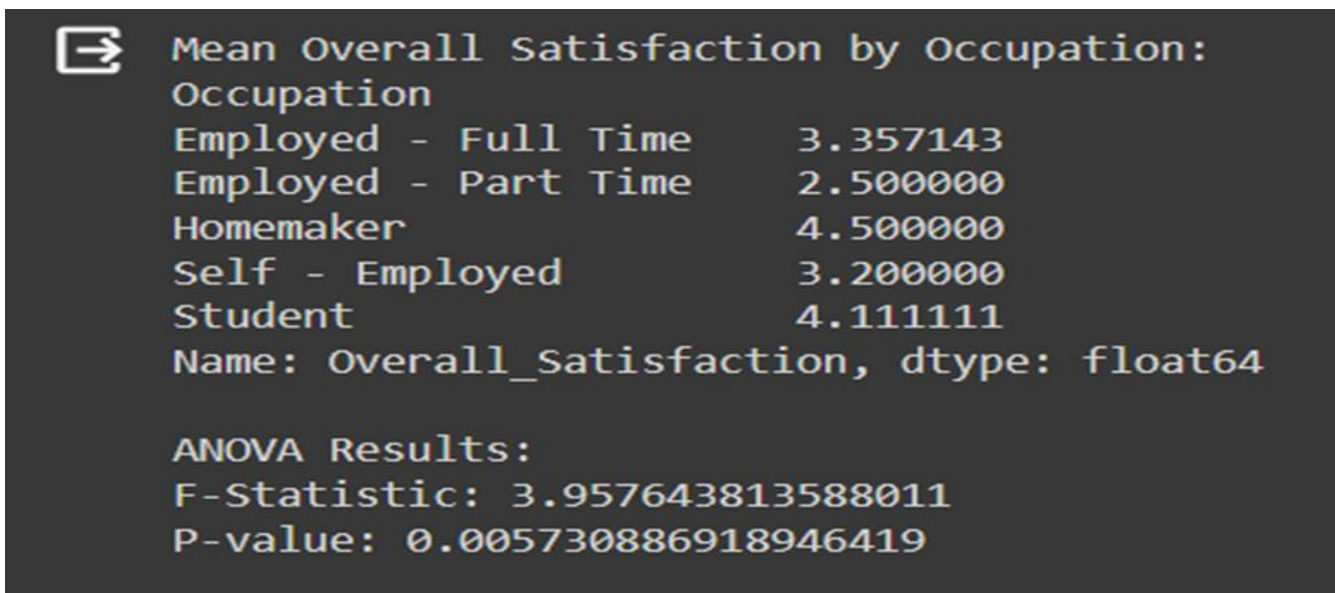


Fig 4.10 ANOVA Test 3

Source: Own Analysis

FINDINGS AND RECOMMENDATIONS

Findings:

- Overall satisfaction mostly depends on “quality”, “variety”, and “app usability”, also the mean overall satisfaction does not differ in different age groups for both male and females, but it does actually depend upon the occupation of the customer.
- Customers intention to use the product again can be attributed to “Delivery time”, “product variety” and “app usability”, which means brand loyalty in quick commerce mostly depends on

these factors. It is very useful as in switching cost is very low.

- “Product quality” and “Pricing perception” are two most important predictors of customers recommending the platform.

Recommendations:

- These quick commerce platforms should tailor their services and products and understand unique needs of people of different demographics. Personalized marketing campaigns should be done to enhance the customer experience.
- It should be looked further for the reason of different level of satisfaction in different occupational groups which can give key insights into consumer behavior and help these platforms for targeted solutions.
- Satisfaction levels should be monitored continuously as the market is ever changing and rapidly evolving.

LIMITATIONS:

- The sample size is small with a total of 80 participants surveyed for the research. It might not represent diversity.
- There can be an element of self-report bias as sometimes people tend to give perfect answers instead of the correct answer. People might forget their experiences to some extent and their can be an element of recency bias.
- The cross-sectional design of the survey can be a limitation as well. As it can be more properly studied with longitudinal studies.
- Only few demographic variables like age, gender and occupation are used. There can be other factors that can be very important but could not be added in the study.
- The study’s findings might not be generalizable for all populations and while implementing it on a completely different context and that can change things.

CHAPTER 5

CONCLUSION

This study provides useful insights in consumer satisfaction with respect to quick commerce shopping. Consumer satisfaction was understood with the help of attributes that were pointed out after the literature review. People rated their experience with the attributes, telling us where more work is needed,

Key Findings:

- Overall Satisfaction with Quick commerce was generally high. There is a positive perception among consumers for quick commerce.
- It was found that Quality and Delivery time were very important parameters for satisfaction. This is the area where platforms need to focus on more to get the best results.
- Demographics variables also played an important role in assessing satisfaction levels, it can be concluded that there is a need for targeted marketing.

This study contributes to the already existing literature on quick commerce. More exploration in the customer experience can be helpful in bringing out more innovation and benefit both platforms and customers.

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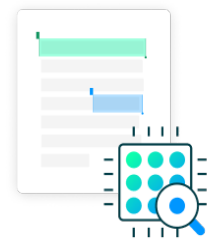
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