



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

SECI 2143

PROBABILITY & STATISTICAL DATA ANALYSIS

PROJECT 1:

The Use of Food Delivery App

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INTRODUCTION

The development of technology nowadays is peaking and giving many benefits in various sectors. This development also helps to develop e-commerce globally. In addition, it introduces many jobs among the world community. Consumers are more attracted to the online-offline business. Electronic payments become more trustworthy, and the range of suppliers and the size of their delivery networks expand.

One e-commerce platform that is widely used by consumers is the food delivery service. Food delivery service has experienced strong growth over the past decade, as consumers increasingly move to online. Basically, a food delivery service is a concept where the consumers can be ordering the food via calling or ordering using food delivery applications such as Food Panda, Grab Food, and other similar things.

The purpose of the project is to determine the use of food delivery among Universiti Teknologi Malaysia (UTM) students. We want to know how many students in Universiti Teknologi Malaysia use the food delivery service. We also want to know which food delivery service they often use and how much they spend on food delivery service. All of these questions and more will be answered in this report.

DATA COLLECTION

The data will be collected by electronic survey, Google Form. This survey form has been distributed to Universiti Teknologi Malaysia (UTM) students via social media platforms such as WhatsApp and Telegram. 60 random students filled in this survey. This survey form consists of three sections. The first section is about respondent personal information such as age and gender. The second section of survey is questionnaire, a list of closed-ended and open-ended questions. For the last section is questions about respondent satisfaction in the form of multiple-choice grid.

The Variable

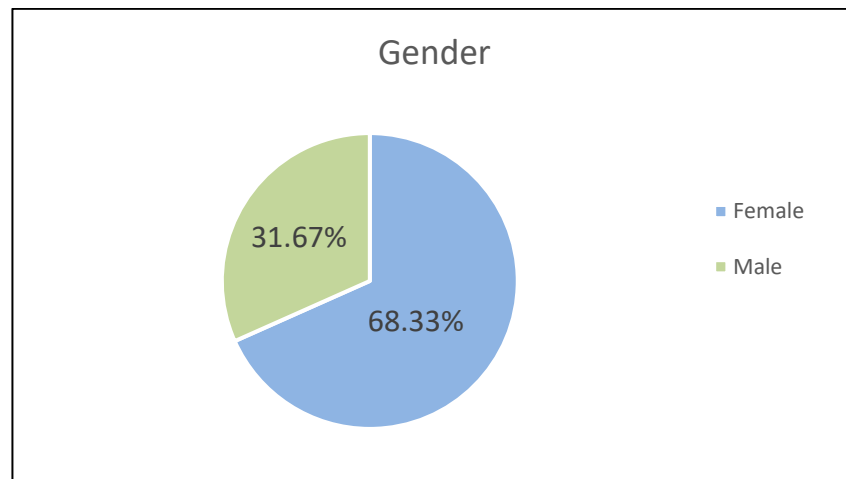
Questions	Answers	Level of Measurement
Which food delivery app do you usually used?	Foodpanda/Grab Food/KFC/Pizza Hut/Mc Donald	Nominal
How frequently do you use the apps in a month?	Short answer	Ratio
Do the food deliver on time?	Yes/No	Nominal
Do you satisfied with the service of the app you choose?	Very unsatisfied/ unsatisfied/ neutral/ satisfied/ very satisfied	Ordinal
What is your primary reason you order food via food delivery app?	discount/convenience/better selection	Nominal
Do you satisfy with the payment system of the delivery app?	Very unsatisfied/ unsatisfied/ neutral/ satisfied/ very satisfied	Ordinal
How much time usually need for the food to reach?	Short answer	Ratio
Do the delivery app provide various choice of food?	Yes/No	Nominal
Which promotion/ discount method are provided in the food delivery app you choose?	cashback/ free delivery/ voucher/coupon	Nominal

Did you receive your delivery as ordered?	Definitely/Mostly/Neutral/Not Really/Definitely Not	Ordinal
Is the price of food from the delivery app (including service charge and delivery fee) cheaper compared to other app?	Yes/No	Nominal
How much do you spend in food delivery in a month?	Short answer	Ratio
Which payment method do you prefer?	online payment/cash on delivery	Nominal
How do you feel about delivery minimum limit?	Strongly disagree/disagree/neutral/agree/strongly agree	Ordinal

Gender of Students

Gender	Frequency	Percentage (%)
Female	41	68.33
Male	19	33.67
Total	60	100.00

Table 1: Gender of students



Graph 1: Pie chart for gender of students

Graph 1 is the pie chart for gender of 60 students. Based on the graph it is clearly shown that the majority of our respondents are female students which is 68.33% and only 31.67% of our respondents are male students.

Amount of time required for the food to reach destination

Stem	Leaf
1	0 0 0 0 0 5 5 5 5 5 5 5 5 6 6 7 8 8
2	0 0 0 0 0 0 0 1 2 3 3 5 5 5 5 5 5 5 5 5 7 7 8
3	0 0 0 0 0 0 0 0 0 0 0 5
4	0 0 0 5 5 5
5	0

Key: 5 | 0 mean 50 minutes

a) Mean = $\frac{\sum f(x)}{N}$
= $[5(10) + 7(15) + 2(16) + 17 + 2(18) + 7(20) + 21 + 22 + 2(23) + 10(25) + 2(27) + 28 + 11(30) + 35 + 3(40) + 3(45) + 50] \div 60$
= $24.52 \approx 25$ minutes

b) Median = $60 / 2 = 30$
Since it is even number,
= $(30^{\text{th}} + 31^{\text{st}}) / 2$
= 25 minutes

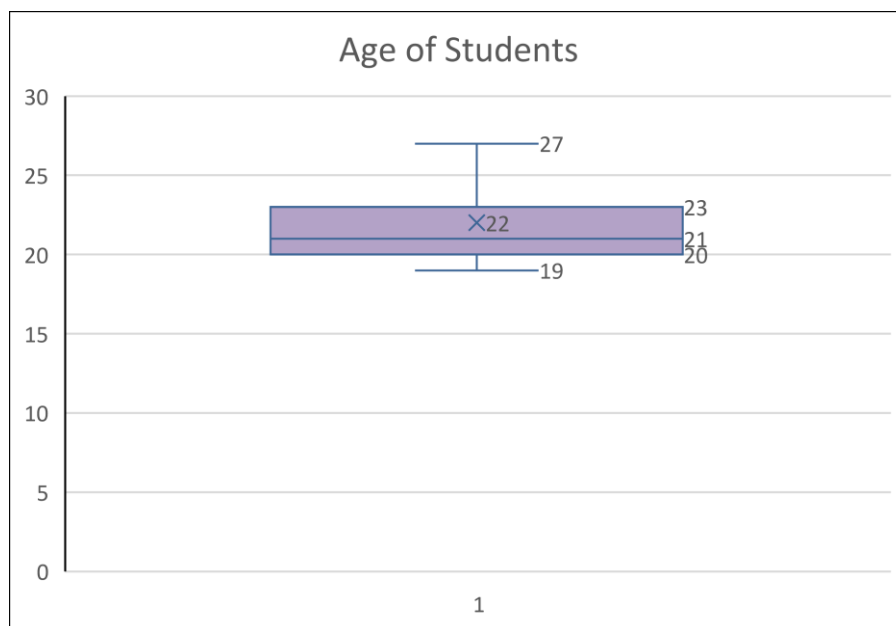
c) Mode = since 30 occur 11 times, mode is 30 minutes

The stem and leaf plot shows the amount of time required for the food reach its destination that is collected among 60 students. The mean and median for the amount of time required for the food to reach is 25 minutes while the mode is 30 minutes. This means that generally the students will receive their food after waiting 25 minutes.

Age of Students

Age	Frequency	Percentage (%)
19	7	12.00
20	13	22.00
21	15	25.00
22	8	13.00
23	7	12.00
24	2	3.00
25	3	5.00
26	3	5.00
27	2	3.00
Total	60	100.00

Table 2: Age of students



Box plot 1: Age of students

a) Mean = $\frac{\sum f(x)}{N}$
= $\frac{[7(19) + 13(20) + 15(21) + 8(22) + 7(23) + 2(24) + 3(25) + 3(26) + 2(27)]}{60}$
= $21.67 \approx 22$ years old

b) Median = $60 / 2 = 30$

Since it is even number,

$$= (30^{\text{th}} + 31^{\text{st}}) / 2$$

$$= 21 \text{ years old}$$

c) Mode = since 21 occur 15 times, mode is 21 years old

d) Quartile =

$$Q1 = 60 (25/100) = 15^{\text{th}} = 20 \text{ years old}$$

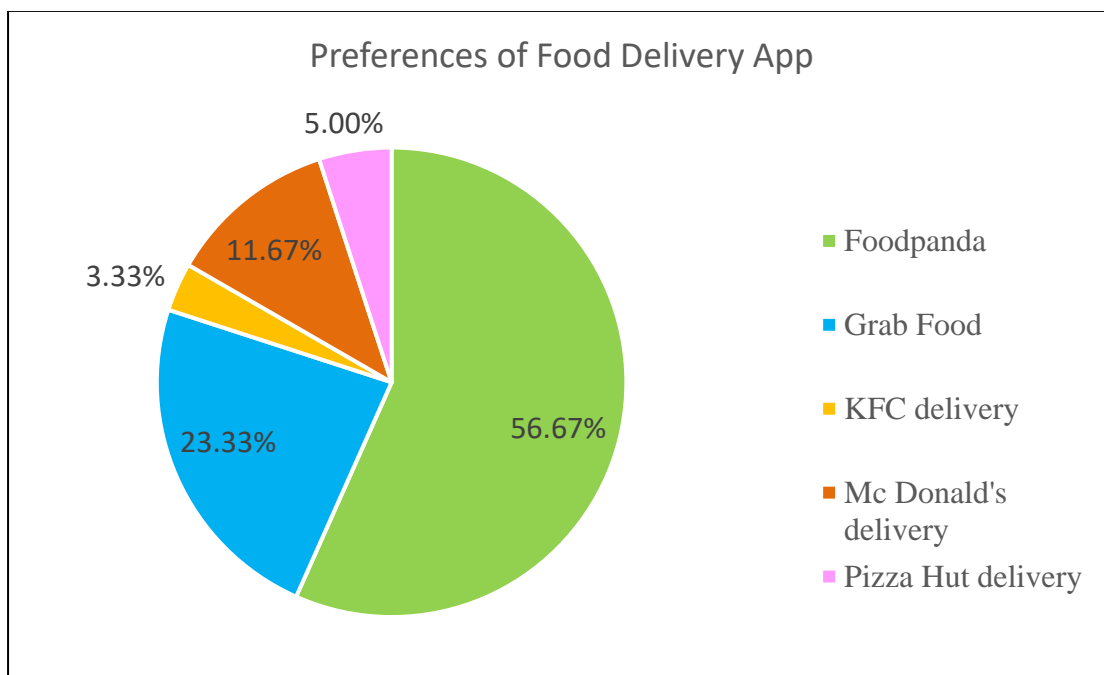
$$Q3 = 60 (75/100) = 45^{\text{th}} = 23 \text{ years old}$$

This is the box plot for the age of students among 60 respondents. The median age of students is 21 years old, while the first quartile (Q1) is 20 years old, and the third quartile (Q3) is 23 years old. The mean for age of students is 22 years old. According to these, we can conclude that the distribution is almost symmetrical. The oldest age among the students that answered the survey is 27 years old while the youngest is 19 years old. The mode for age of students is 21 years old which is 25% from the total. This might be because we distributed the survey to groups which consist mainly of first year students. As we could not go to campus, it is hard for us to distribute the survey to master or PhD students.

Preferences of food delivery app

Food delivery App	Frequency	Percentage (%)
Foodpanda	34	56.67
Grab Food	14	23.33
KFC delivery	2	3.33
Mc Donald's delivery	7	11.67
Pizza Hut delivery	3	5.00
Total	60	100.00

Table 3: Preferences of food delivery app



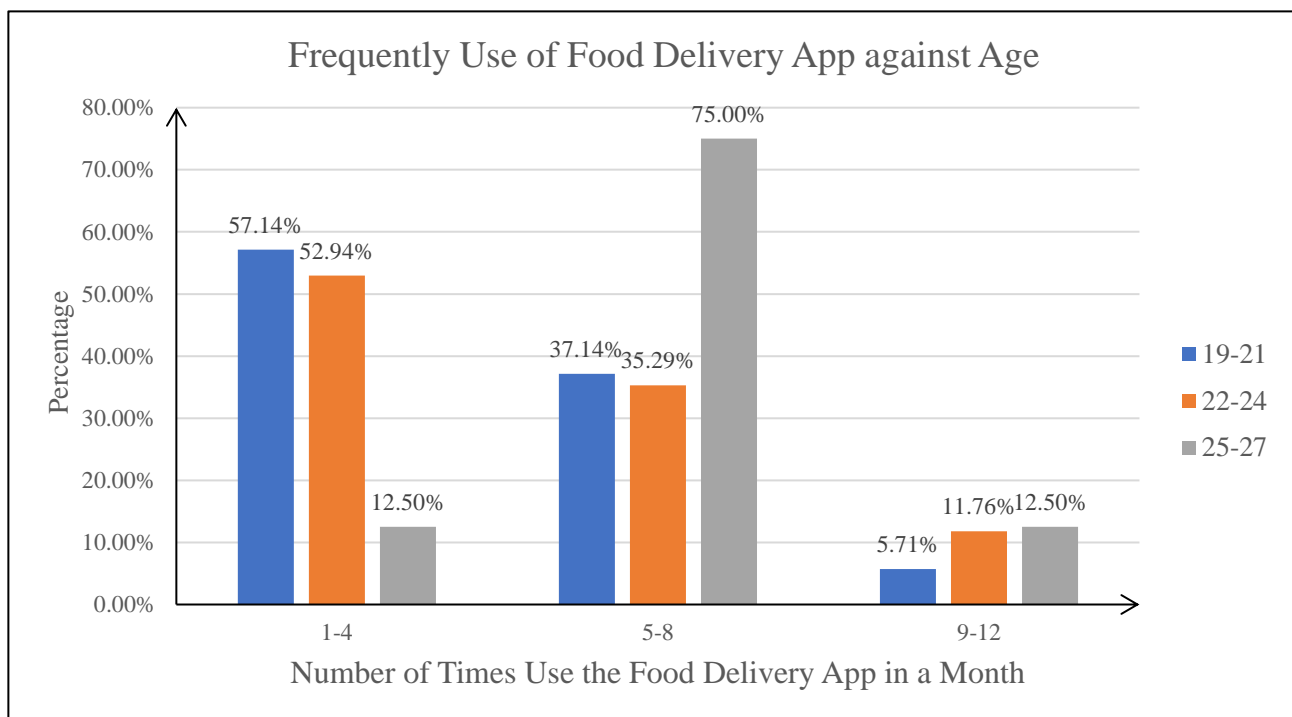
Graph 2: Pie chart for preferences of food delivery app

Graph 2 is the pie chart which indicates the preferences of 60 students towards 5 delivery app. It is clearly shown that most of the students prefer to use Foodpanda as it consists of the highest percentage (56.67%) of students. 23.33% of students prefer to use Grab Food followed by Mc Donald's delivery which is 11.67%. Pizza Hut delivery is less preferred by the students compared to the other 3 delivery app and only 5% of students choose them. The delivery app that least preferred by the students is KFC delivery which only 3.33% of students choose to use it.

Frequently Use of Food Delivery App against Age

Age \ Number of Times	Frequency			Percentage (%)		
	18-21	22-24	25-27	18-21	22-24	25-27
1-4	20	9	1	57.14	52.94	12.50
5-8	13	6	6	37.14	35.29	75.00
9-12	2	2	1	5.71	11.76	12.50
Total	35	17	8	100.00	100.00	100.00

Table 4: Frequently Use of Food Delivery App against Age



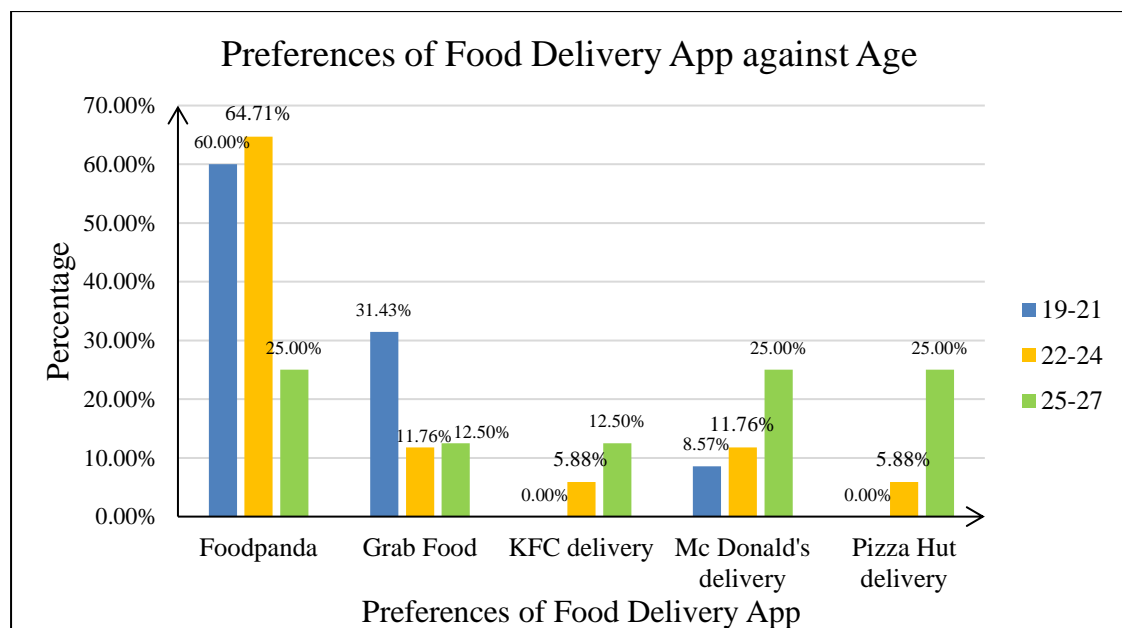
Graph 3: Comparative bar chart for Frequently Use of Food Delivery App against Age

Graph 3 is the comparative bar chart which shows the relationship between the number of times to use the food delivery app in a month and age of 60 students. Most of the students with the age of 19-21 years old (57.14%) and 22-24 years old (52.94%) will use the food delivery app 1-4 times per month while most of the 25-27 years old students (75%) will use the food delivery app 5-8 times per month. Based on the graph, we can also conclude that only a small group of students will use the food delivery app 9-12 times per month.

Preferences of Food Delivery App against Age

Preferences Apps \ Age	Frequency			Percentage (%)		
	19-21	22-24	25-27	19-21	22-24	25-27
Foodpanda	21	11	2	60.00	64.71	25.00
Grab Food	11	2	1	31.43	11.76	12.50
KFC delivery	0	1	1	0.00	5.88	12.50
Mc Donald's delivery	3	2	2	8.57	11.76	25.00
Pizza Hut delivery	0	1	2	0.00	5.88	25.00
Total	35	17	8	100.00	100.00	100.00

Table 5: Preferences of food delivery app against age



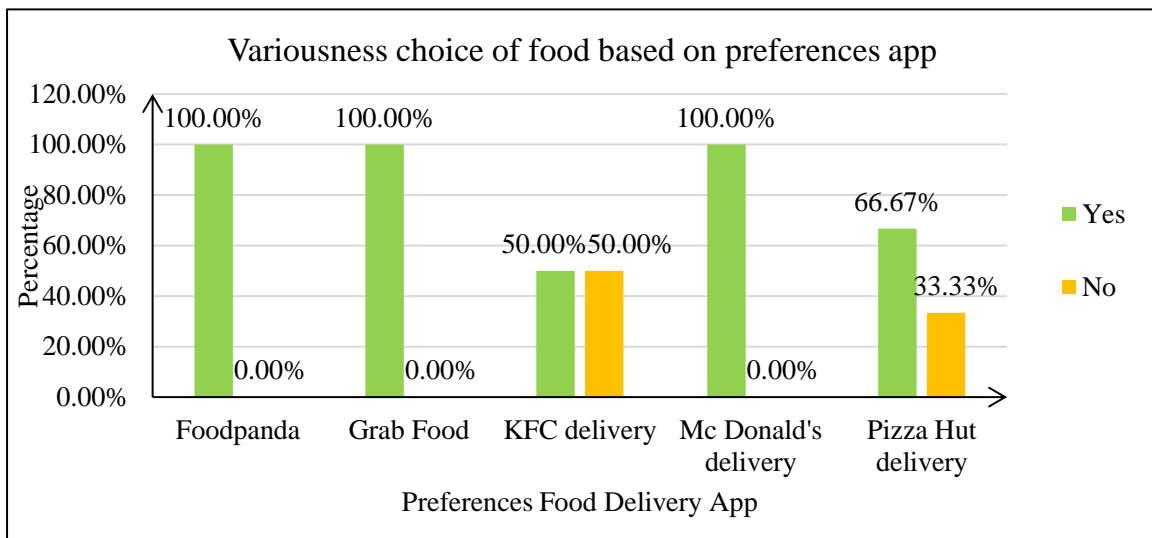
Graph 4: Comparative bar chart for preferences of food delivery app against age

Based on the graph, we can conclude that Foodpanda is the most popular food delivery app. This is because both students from the age group of 19-21 (60%) and 22-24 (64.71%) most prefer to use Foodpanda to order their food. However, students with the age 25-27 years old (25%) equally prefer among Foodpanda, Mc Donald's delivery and Pizza Hut delivery. Students with the age of 19-21 years old (0%) and 22-24 years old (5.88%) least preferred KFC and Pizza Hut delivery while students with the age of 25-27 years old (12.50%) least prefer Grab Food and KFC delivery. Among all the 5 delivery apps, KFC delivery is the least preferred delivery app by the students.

Comparison of Preferences App against Variousness Choice of Food

Preferences app \ Variousness choice of food	Total	Frequency		Percentage (%)	
		Yes	No	Yes	No
Foodpanda	34 (56.67%)	34	0	100.00	0.00
Grab Food	14 (23.33%)	14	0	100.00	0.00
KFC delivery	2 (3.33%)	1	1	50.00	50.00
Mc Donald's delivery	7 (11.67%)	7	0	100.00	0.00
Pizza Hut delivery	3 (5.00%)	2	1	66.67	33.33
Total	60 (100.00%)	58	2	-	-

Table 6: Variousness choice of food based on preferences app



Graph 5: Variousness choice of food based on preferences app

Based on the data collected from the survey towards UTM students, 100% of the 34 students who selected Foodpanda as their preferences app agreed that it provides various choices of food. Among 14 students who choose Grab Food as their preferences app, 100% of them satisfied with the variousness of food. Same as Grab Food, all (100%) of the McDonald’s delivery’s respondents (7 persons) select “Yes” to the various choices of food. However, only 66.67% of students for the Pizza Hut delivery, which is 2 persons from total 3 respondents agree Pizza hut provide various choices of food. 50% of the KFC delivery’s respondents (2 persons) do not agree it provides various choices of food.

Amount of Spending in Food Delivery in a Month

Stem	Leaf
1	0 5 5 5 5 5 6 8
2	0 0 0 0 0 1 2 3 4 5 5 5
3	0 0 0 0 2 2 2 5 5 5 6 8
4	0 0 0 0 0 1 1 5 5 5 8
5	0 0 0 0 5 6
6	0 0 0 4 5
7	0
10	0
30	0 0
40	0

Key: 4 | 0 means RM40

a) Mean = $\frac{\sum f(x)}{N}$
= $[10 + 6(15) + 16 + 18 + 5(20) + 21 + 22 + 23 + 24 + 3(25) + 4(30) + 3(32) + 3(35) + 36 + 38 + 5(40) + 2(41) + 3(45) + 48 + 4(50) + 55 + 56 + 3(60) + 64 + 65 + 70 + 100 + 2(300) + 400] \div 60$
= RM50.82

b) Median = $60 / 2 = 30$
Since it is even number,
= $(30\text{th} + 31\text{st}) / 2$
= RM35

c) Mode = since RM15 occur 6 times, mode is RM15

d) Outlier $Q1 = 60 (25/100) = 15\text{th} = \text{RM}21$ (no outlier)

$$Q3 = 60 (75/100) = 45\text{th} = \text{RM}50$$

$$\text{IQR} = Q3 - Q1 = \text{RM}29$$

$$\text{Lower boundary} = 21 - 1.5(29) = -\text{RM}22.50$$

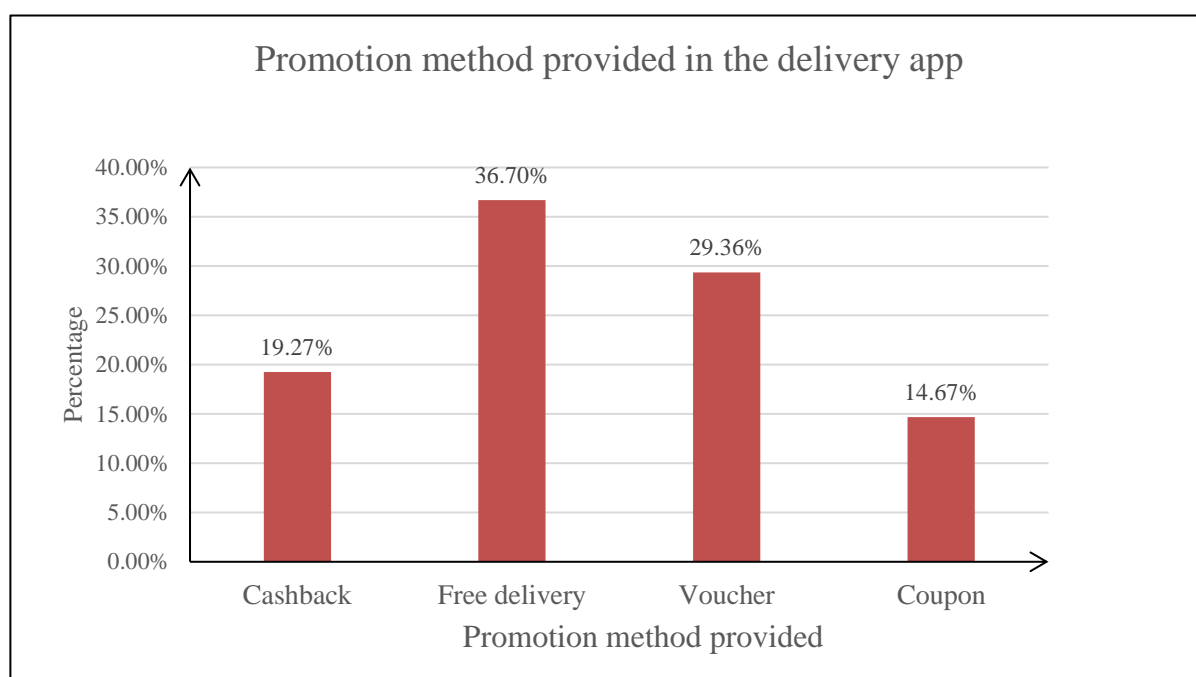
$$\text{Upper boundary} = 50 + 1.5(29) = \text{RM}93.50$$

Since the upper boundary is RM93.50, therefore the value more than RM93.50 is outlier which are RM100, RM300, RM300 and RM400. The stem and leaf plot shows the amount of spending in food delivery in a month among a sample of 60 UTM students. The mean is calculated from the data collected, which is RM50.82. The median for this data is RM35 while mode is RM15. Since it contains outliers of RM100, RM300 and RM400, the mean is not suitable to use. Therefore, most of the students spend about RM15 in food delivery in a month according to the mode.

Promotion Method Provided in the Delivery App

Reason	Frequency	Percentage (%)
Cashback	21	19.27
Free delivery	40	36.70
Voucher	32	29.36
Coupon	16	14.67
Total	109	100.00

Table 7: Promotion method provided in the delivery app



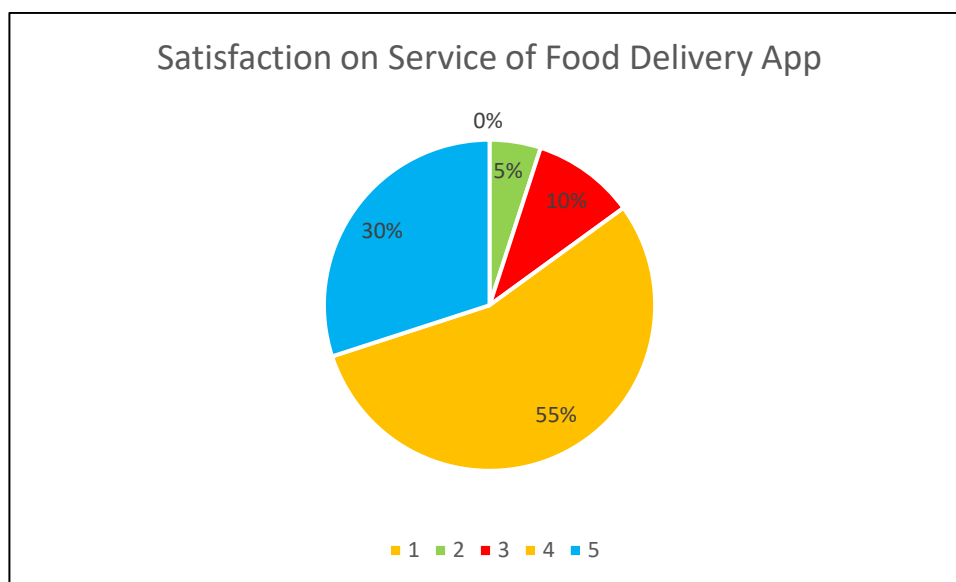
Graph 6: Promotion method provided in the delivery app

Based on the graph, 36.70% students (40 students) stated that the delivery app has provided a free delivery promotion to their customers. 29.36% students (32 students) agreed that voucher is one of the promotions provided in their preferences apps while 19.27% from the sample of UTM students (21 students) agree that cashback is one of the promotion methods provided in the delivery app. The least promotion method found is coupon as only 14.67% students (16 students) pick coupon as their choice. Therefore, we can conclude that most of the delivery apps provide free delivery as their promotion method.

Satisfaction on the Service of the Food Delivery App

Satisfaction on service	Frequency	Percentage (%)
1	0	0.00
2	3	5.00
3	6	10.00
4	33	55.00
5	18	30.00
Total	60	100.00

Table 8: Satisfaction on the Service of the Food Delivery App



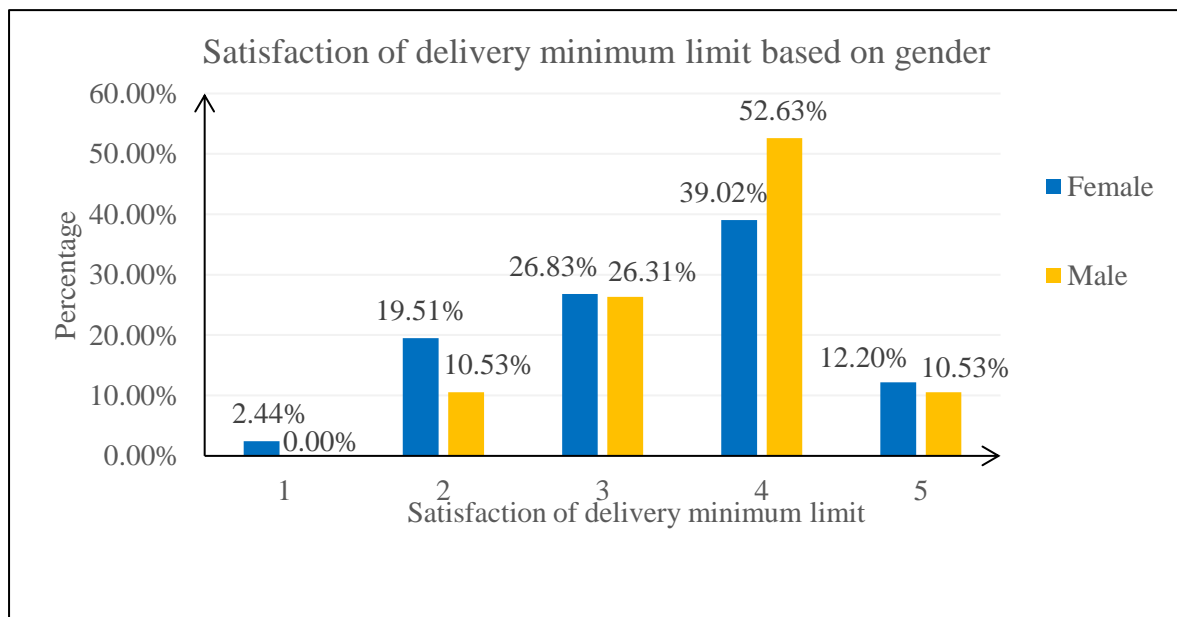
Graph 7: Satisfaction on the Service of the Food Delivery App

The pie chart shows the satisfaction on the service of the food delivery app. Most of the sample of 60 UTM students, which is about 55% of respondent (33 students), scored 4 (satisfied) for the service of the food delivery app. There are 30% students, which is about 18 students, very satisfied on the service of the food delivery app. 10% (6 students) and 5% of them (3 students) scored 3 (neutral) and 2 (unsatisfied) to the service when they order food by using delivery app respectively. However, no students (0%) is very unsatisfied to the service of the food delivery app. As a conclusion, most of the respondents satisfied to the service of the food delivery app.

Satisfaction of Delivery Minimum Limit against Gender

Satisfaction of delivery minimum limit \ Gender	Frequency		Percentage (%)	
	Male	Female	Male	Female
1	0	1	0.00	2.44
2	2	8	10.53	19.51
3	5	11	26.31	26.83
4	10	16	52.63	39.02
5	2	5	10.53	12.20
Total	19	41	100.00	100.00

Table 9: Satisfaction of delivery minimum limit vs gender



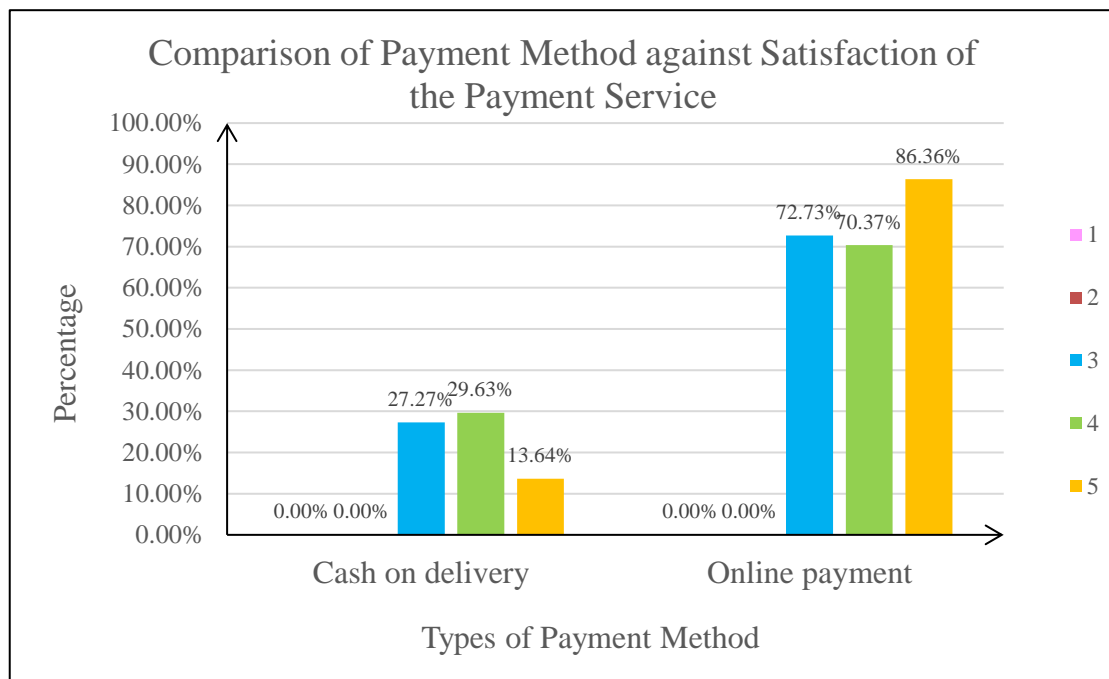
Graph 8: Satisfaction of delivery minimum limit based on gender

The comparative bar chart shows the relationship between the satisfaction of delivery minimum limit and gender of 60 UTM students. From the total number of 41 female students, 39.02% of them (16 students) scored 4 to the satisfaction of delivery minimum limit. Moreover, out of 19 male students, 52.63% of them (10 students) scored 4 to the satisfaction of delivery minimum limit. Therefore, we can conclude that most of the students are satisfied to the delivery minimum limit no matter female or male.

Comparison of Payment Method against Satisfaction of the Payment Service

Satisfaction of the payment service Types of Payment Method	Likert Scale									
	Frequency					Percentage (%)				
	1	2	3	4	5	1	2	3	4	5
Cash on delivery	0	0	3	8	3	0.00	0.00	27.27	29.63	13.64
Online payment	0	0	8	19	19	0.00	0.00	72.73	70.37	86.36
Total	0	0	11	27	22	0.00	0.00	100.00	100.00	100.00

Table 10: Comparison of payment method against satisfaction of the payment service



Graph 9: Comparison of Payment Method against Satisfaction of the Payment Service

Graph 9 shows the comparison of payment methods against the satisfaction of the payment service. There are two types of payment services investigated in the survey which are cash on delivery and online payment. The satisfaction of the online payment is investigated using the Likert Scale where 1 represent very unsatisfied, 2 represent unsatisfied, 3 represent neutral, 4 represent satisfied and 5 represent very satisfied.

Based on the comparative bar chart in graph 8, it shows that the overall students were most likely to choose online payment (46 students) to make the payment. Furthermore, most of the students were also satisfied with the online payment service compared to the cash on delivery services. This is because 86.36% of students chose 5 (very satisfied) for the online payment service compared to the cash delivery service among the students who graded 5 (very satisfied).

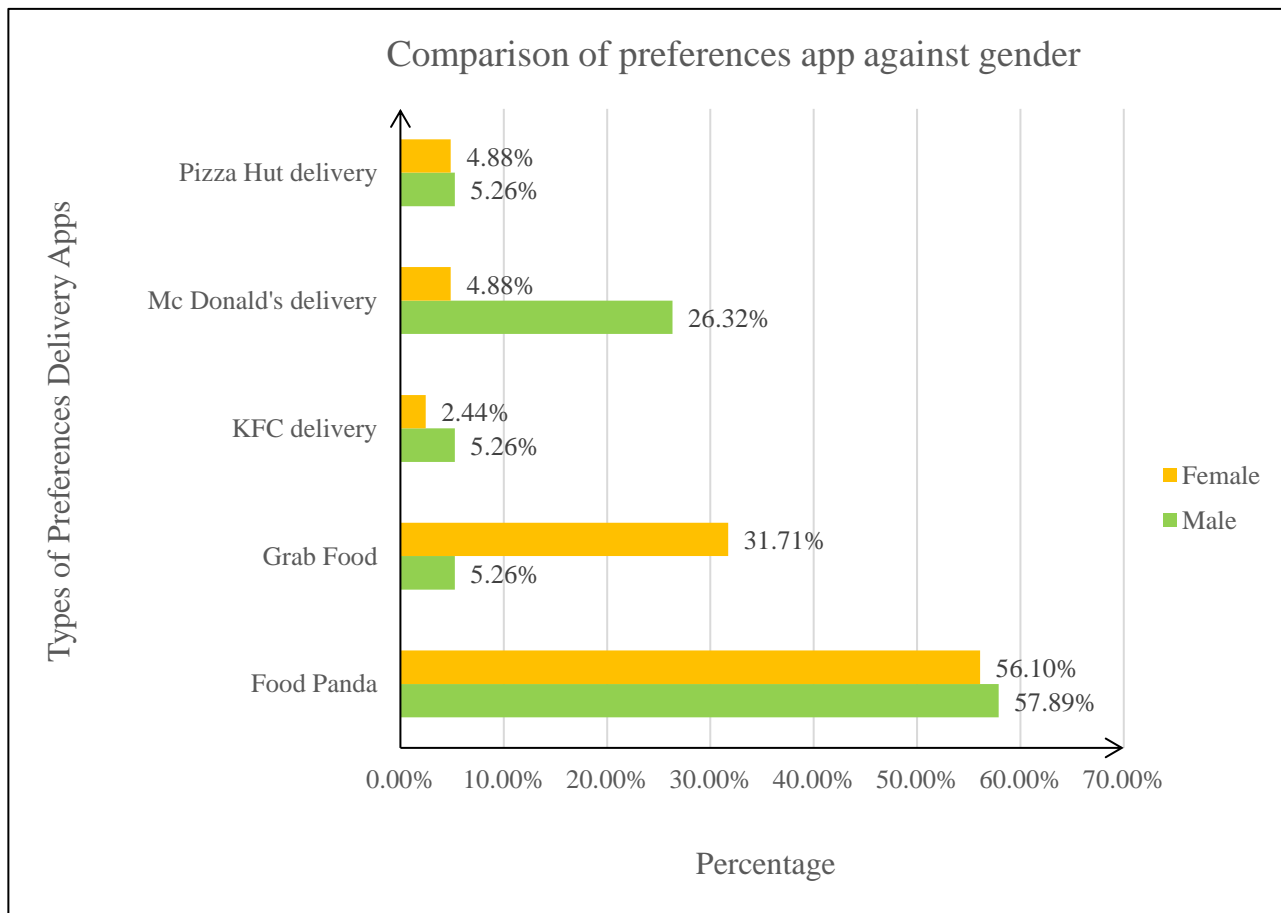
Besides that, for the respondent who graded 3 (neutral) for the payment service (11 respondent), 72.27% of them agree that online payment service is better than cash on delivery service. Moreover, for the students who graded 4 for the payment service, 70.37% of them were satisfied with the online payment service compared to the cash on delivery payment service. This clearly shows that most of the respondents were more satisfied with online payment service.

Furthermore, based on the graph, there are no students graded neither 1 (very unsatisfied) nor 2 (unsatisfied) for both cash on delivery and online payment service. This means that both payment services were overall satisfied by the respondents, but the online service is more likely used and satisfied by the users.

Comparison of Preferences App against Gender

Types of Preferences Delivery Apps	Frequency		Percentage (%)	
	Male	Female	Male	Female
Food Panda	11	23	57.89	56.10
Grab Food	1	13	5.26	31.71
KFC delivery	1	1	5.26	2.44
Mc Donald's delivery	5	2	26.32	4.88
Pizza Hut delivery	1	2	5.26	4.88
Total	19	41	100.00	100.00

Table 11: Comparison of preferences app against gender



Graph 10: Comparison of preferences app against gender

Graph 10 shows the comparison of preference apps against the gender. Among the male students (19 students), there were 57.89% of them choose Food Panda as their preferences delivery apps while for the female students (41 students), their preferences delivery apps also same as the male respondents since there were 56.10% female students choose Foodpanda.

For the second preference food delivery apps, the male students were more prefer to use Mc Donald's delivery apps while the female students were second likely to use Grab Food delivery apps. This is because 26.32% of male students choose the MC Donald's delivery apps which was the second highest percent compared to others food delivery apps. Moreover, 31.71% of female students chose Grab Food where it was also the second highest percent compared to other food delivery apps.

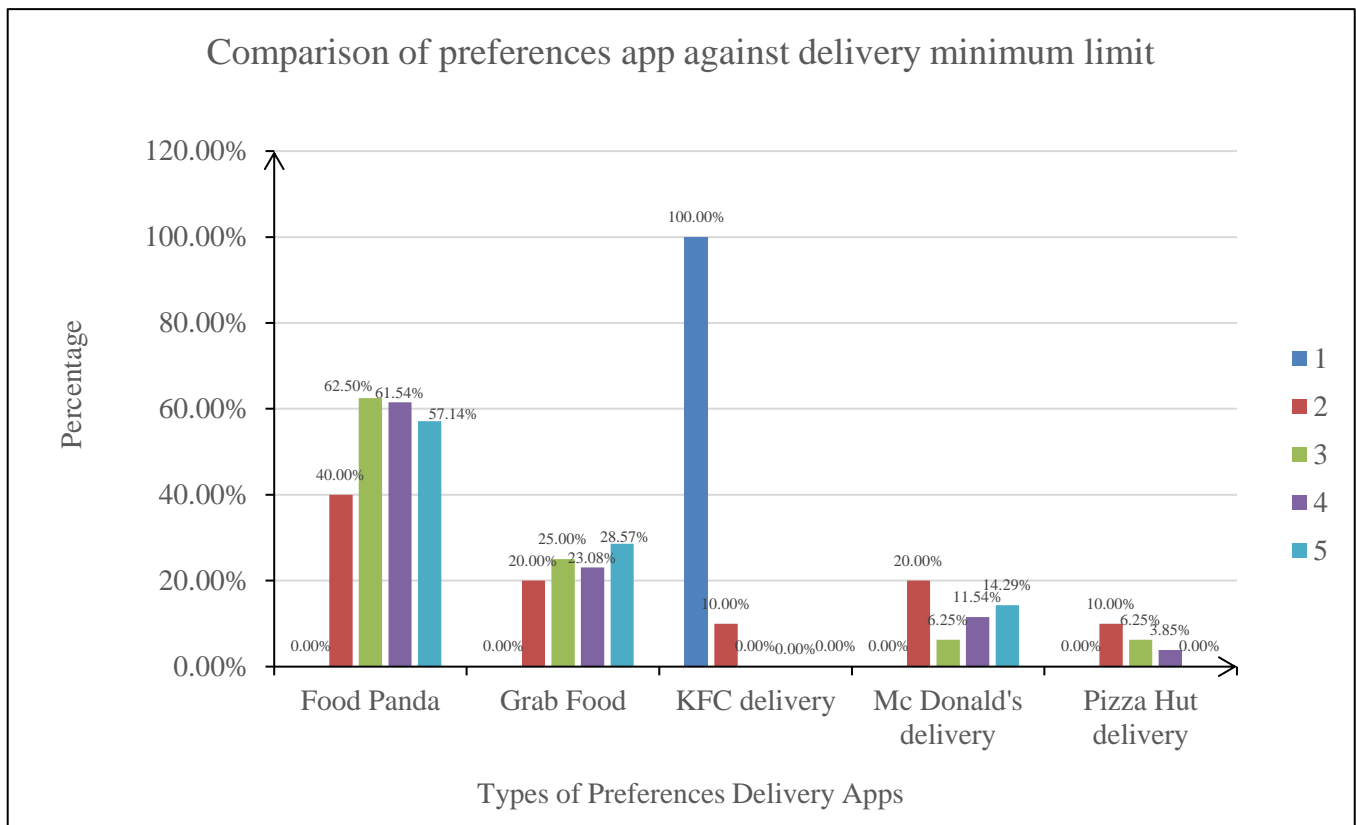
Furthermore, for the male students, there were not any unpreferable delivery apps by them because for the rest of the delivery apps (Pizza Hut delivery, Grab Food and KFC delivery), each of the delivery apps achieved the same percentage, 5.26%. Meanwhile, for the female students, they preferred to choose KFC delivery since it had the least percentage (2.44%) among all the food delivery apps. Besides that, the third preferable delivery apps for female respondents were Pizza Hut delivery and KFC delivery since they had the same percent, 4.88% of female respondents to choose them.

Generally, the most preferable apps chosen by male and female students were Foodpanda since it had the highest percentage among the male and female respondents compared to other delivery apps.

Comparison of Preferences App against Delivery Minimum Limit

Satisfaction on Delivery Minimum Limit Types of Payment Method	Likert Scale									
	Frequency					Percentage (%)				
	1	2	3	4	5	1	2	3	4	5
Foodpanda	0	4	10	16	4	0.00	40.00	62.50	61.54	57.14
Grab Food	0	2	4	6	2	0.00	20.00	25.00	23.08	28.57
KFC delivery	1	1	0	0	0	100.00	10.00	0.00	0.00	0.00
Mc Donald's delivery	0	2	1	3	1	0.00	20.00	6.25	11.54	14.29
Pizza Hut delivery	0	1	1	1	0	0.00	10.00	6.25	3.85	0.00
Total	1	10	16	26	7	100.00	100.00	100.00	100.00	100.00

Table 12: Comparison of preferences app against delivery minimum limit



Graph 11: Comparison of preferences app against delivery minimum limit

Graph 11 shows the comparison of preferences apps against the delivery minimum limit. From the graph, it can clearly show that students are very unsatisfied with the KFC delivery minimum limit because it is the only delivery app graded 1 (strongly disagree) (100%) compared to other delivery apps. Besides that, among the students who graded 2 (disagree) for the delivery limit minimum for the preference delivery apps, students were unsatisfied with the Food Panda delivery app as it has the highest percentage (40%) for 2 (disagree) compared to other delivery apps.

Moreover, among the students (16) who chose 3 (neutral), 62.5% of students graded Food panda for 3 (neutral) for the delivery minimum limit service provided by it whereas there were 25% of students graded 3 (neutral) for Grab Food and 6.25% of students graded 3 (neutral) for MC Donald's delivery and Pizza Hut delivery. KFC delivery was not graded any 3 (neutral) by students.

Furthermore, among 26 students who graded 4 (agree) for the delivery minimum limit, there were 61.54% of them graded 4 (agree) for Foodpanda, 23.08% for Grab Food, 11.54% for MC Donald's delivery and 3.85% for Pizza Hut delivery. This shows that the delivery limit minimum service provided by Food Panda is agreed by the students.

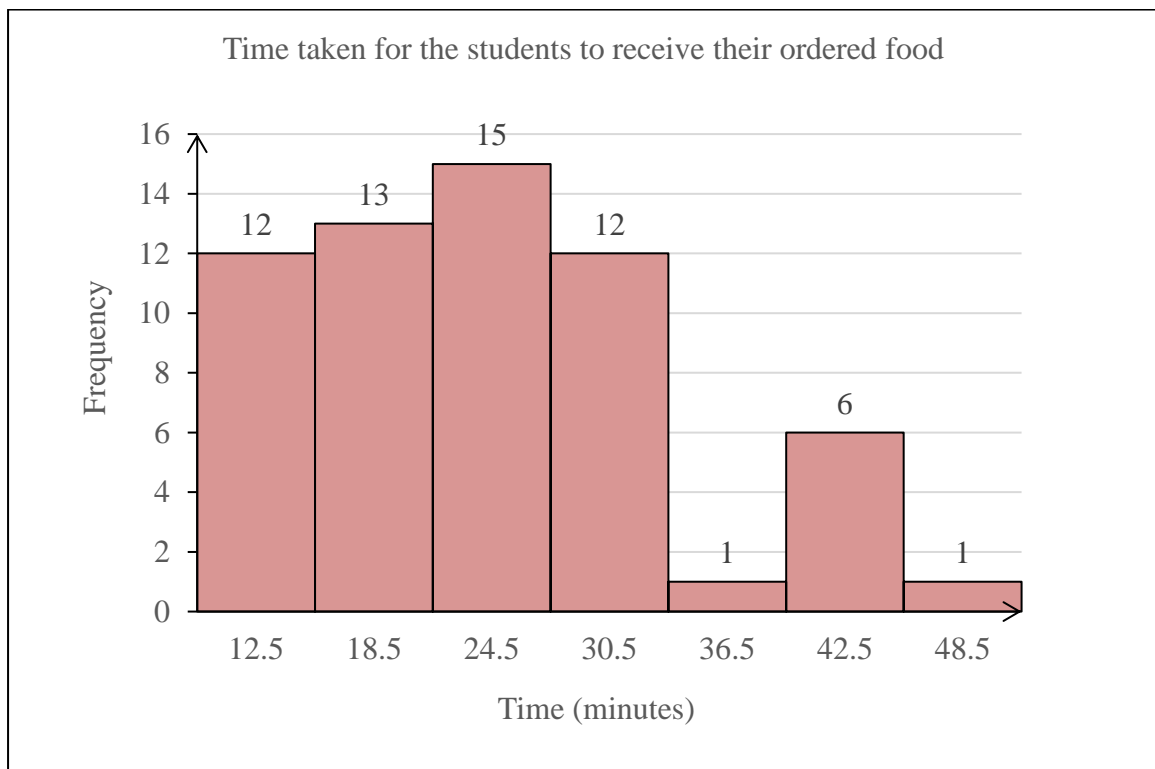
Lastly, among students who graded 5 (strongly agree), only Food Panda and Grab Food were graded 5 (strongly agree) by the students. Among the students who graded 5 (strongly agree), the delivery minimum limit service provided by Foodpanda is the most satisfied by the students as it obtained 57.14% compared to other delivery apps. Grab Food is the second delivery app that provided the satisfied delivery minimum limit as it had the second highest percentage, 28.57% compared to other delivery apps.

In general, the delivery minimum limit service provided by Foodpanda were strongly agree by students as it obtained the highest grading for 4 (agree) and 5 (strongly agree).

Time Taken for the Students to Receive Their Ordered Food

Times (minutes)	Lower Boundary	Upper Boundary	Midpoint	Frequency	Cumulative Frequency
10-15	9.5	15.5	12.5	12	12
16-21	15.5	21.5	18.5	13	25
22-27	21.5	27.5	24.5	15	40
28-33	27.5	33.5	30.5	12	52
34-39	33.5	39.5	36.5	1	53
40-45	39.5	45.5	42.5	6	59
46-51	45.5	51.5	48.5	1	60
Total	-	-	-	60	-

Table 13: Time taken for the students to receive their ordered food



Graph 12: Time taken for students to receive their ordered food

a. Mean = $\frac{\sum f(x)}{N}$

$$= \frac{12(12.5) + 13(18.5) + 15(24.5) + 12(30.5) + 1(36.5) + 6(42.5) + 1(48.5)}{60}$$

= 24.4 minutes

b. Median Class = (22 - 27) minutes

$$\text{Median} = L + \frac{(N/2 - C_{fp})}{f_{med}} \times W$$

$$= 21.5 + \frac{(60/2 - 13)}{15} \times (27.5 - 21.5)$$

= 23.5 minutes

c. Mode Class = (22 - 27) minutes

$$\text{Mode} = L + h \times \left[\frac{(f_1 - f_0)}{(2f_1 - f_0 - f_2)} \right]$$

$$= 21.5 + (27.5 - 21.5) \times \left[\frac{(15 - 13)}{(2(15) - 13 - 12)} \right]$$

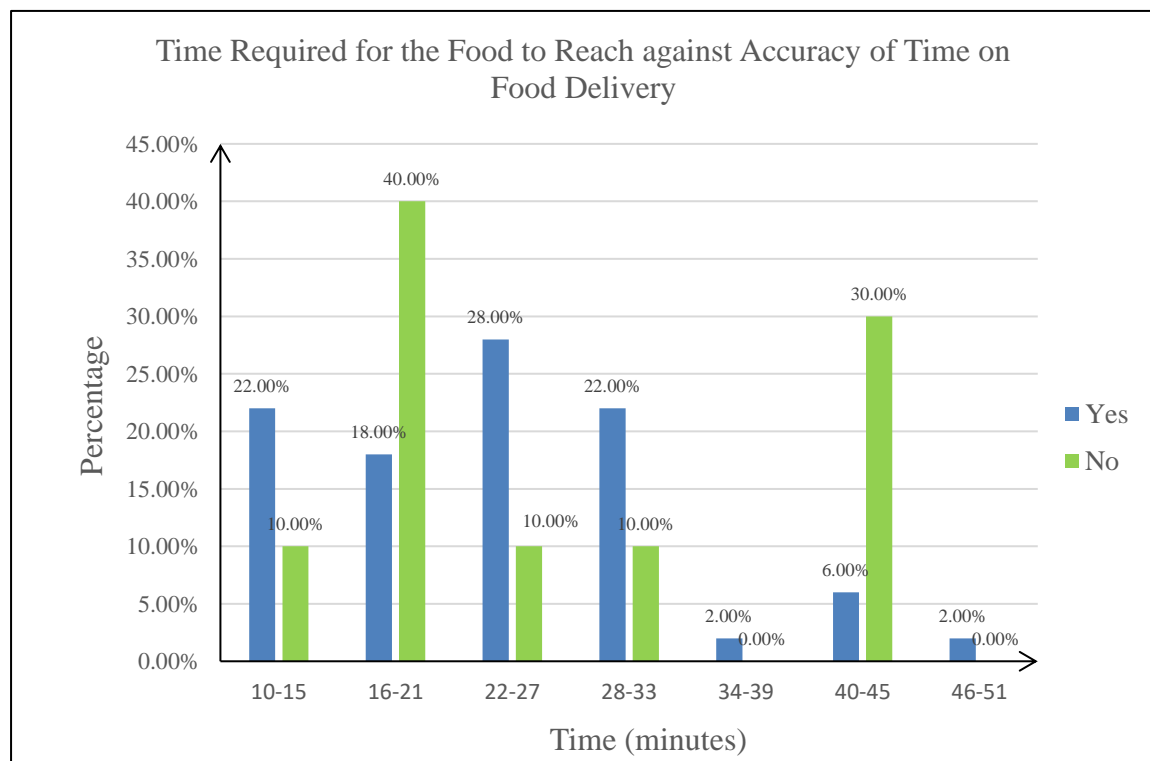
= 23.9 minutes

Graph 12 shows the time taken for the students to receive their ordered food. The histogram obtained is slightly right skewed since the mode (23.9) is slightly less than median (23.5) and less than the mean (24.4). This shows that the majority of students receive their ordered food around 23.9 minutes which less the average time taken (24,4).

Time Required for the Food to Reach against Accuracy of Time on Food Delivery

Accuracy of time on food deliver Time (minutes)	Frequency		Percentage (%)	
	Yes	No	Yes	No
10-15	11	1	22.00	10.00
16-21	9	4	18.00	40.00
22-27	14	1	28.00	10.00
28-33	11	1	22.00	10.00
34-39	1	0	2.00	0.00
40-45	3	3	6.00	30.00
46-51	1	0	2.00	0.00
Total	50	10	100.00	100.00

Table 14: Time required for the food to reach against accuracy of time on food delivery



Graph 13: Time required for the food to reach against accuracy of time on food delivery

From graph 13, among the students who chose the food delivery on time (50 students), there are 28% of students stated that the food delivered on time when the time required for the food to reach their destination were around 22 to 27 minutes which had the highest percentage of yes (agree the food delivers on time). Meanwhile, there were only 2% (the lowest percentage) of students among the students who chose yes who stated that their food delivery on time when the time required to reach their destination were around 40 to 45 minutes and 46 to 51 minutes.

While among the students who chose food delivery no on time (10), there were 40% of them claim that their food no delivery no on time when the time was 16 to 21 minutes which was the highest percentage for students who chose no (food delivery no on time). Besides that, the second highest percentage (30%) of students who chose no (food delivery no on time) claimed that their food was not delivered on time when the time required was 40 to 45 minutes. For 10 to 15 minutes, 22 to 27 minutes and 28 to 33 minutes, each of these times obtained 20% students who chose no (food delivery no on time). Generally, when the time taken for the food to reach the students destination is around 22 to 27 minutes, the food will be able to deliver on time.

CONCLUSION

In conclusion, most UTM students use the food delivery service to order their foods, especially during Covid-19. From the data, we can see most female students often use the food delivery services compare to male students. They also prefer use Foodpanda service to deliver the food compare to the other apps such as Grab Food, MC Donald, KFC delivery and Pizza Hut delivery. Most of the students use the food delivery app 1-4 times per month to order their food because and most of them are satisfied with the services and payment system of the food delivery app. They also agree that food delivery provide various options and give a glimpse of the menu ahead of time. In this report, we learned that the delivery minimum limit service provided by Foodpanda were strongly agree by students as it obtained the highest grading for 4 (agree) and 5 (strongly agree). Otherwise, food delivery also provided a lot of promotion or discount methods such as cashback, free delivery, voucher, and coupon. But through the data, Most UTM students stated that the app delivery provided the free delivery as the promotion method compared to the coupon as their choice. Thus, the food delivery service is very assuring to its customers that they would deliver and prepare the order will reach our hands hot and fresh, which eases the mood when you are about to eat.

APPENDIX

Google form of our project:

The Use of Food Delivery App

Hello everyone, we are students from Universiti Teknologi Malaysia would like to have a survey about The Use of Food Delivery App for the project of Probability and Statistical Data Analysis (SECI 2143), Section 1. Please lend us a few minute to fill in this form. Thank you.

* Required

Gender *

Male

Female

Age *

Your answer _____

Next

Which food delivery app do you usually



Food Panda



Grab Food



Pizza Hut delivery



Mc Donald's delivery



KFC delivery



How frequently do you use the app in a month *

Short-answer text

How much money do you spend in food delivery in a month *

Short-answer text

Do the food deliver on *

Yes

No

How much time usually need for the food to *

Short-answer text

Do the delivery app provide various choice of *

Yes

No

Is the price of food from the delivery app (including service charge and delivery fee) cheaper compared to other app? *

Yes

No

Which payment method do you *

Cash on delivery

Online payment

Which promotion/discount method are provided in the food delivery app you choose? (can choose more than 1) *

- cash back
- free delivery
- voucher
- coupun

What is your primary reason you order food via food delivery *

- discount
- convenient
- better selection

Do you satisfied with the service of the app you *

	1	2	3	4	5	
very unsatisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	very satisfied

Do you satisfy with the payment system of the delivery *

	1	2	3	4	5	
very unsatisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	very satisfied

Did you receive your delivery as *

	1	2	3	4	5	
never	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	always

How do you feel about delivery minimum limit (must exceed a certain amount to enjoy delivery service)? *

	1	2	3	4	5	
strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	strongly agree