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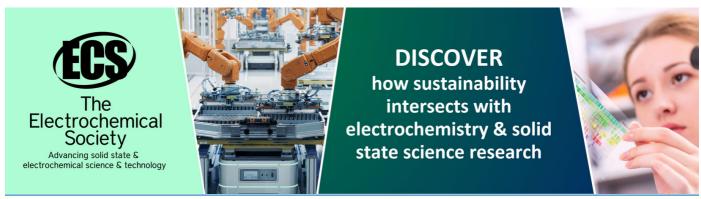# The effect of online food ordering to home based and non-home-based trip

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The effect of online food ordering to home based and non-home-based trip

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Abstract. In general, people eat three times a day and in the past they either prepare the meal by themselves or make a travel to find the desired meal. As online transcation (including for food ordering) become more available nowadays, online food ordering may substitute ordinary food purchasing travel. This paper was prepared to reveal factors affecting the preference for online food ordering. 105 respondents were asked to fill online questionnaires. Responses were in Likert scale from 1 (strongly disagree) to 4 (strongly agree). A series of mean difference tests was conducted to compare the responses with 2.5 (the departure from disagree to agree). In general, level of services and level of trustworthiness were affecting the choice for order food online.
Keywords: online food ordering, home based trip, non-home based trip

1. Introduction
In Indonesia, Go-jek was the first online transport operator in 2010 [1]. Grab and Uber followed later. In 2018 Grab acquired Uber, leaving Grab and Go-Jek as the only two largest online transportation companies remaining [2]. From June 2016 to June 2019, number of transactions processed in Go-Jek platform upto 11 times. Go-Jek started with only 20 drivers. In 2019, there was 2 milion drivers and 400.000 merchant in South East Asia [3].

Silalahi et al [4] in 2017 conducted the entropy analysis. In the analysis each criterion was weighted to rank the quality of the services relatively to each other. For Go-Jek, the order of the criterion from the highest weight are (1) perceived cognitive, (2) perceived website innovativeness, (3) ease of use, (4) billing, (5) valence, (6) accessibility, (7) reliability/fulfillment, (8) website design, (9) contact, (10) content usefulness, (11) responsiveness, (12) personalization, (13) punctuality, (14) content adequacy, (15) system availability, (16) privacy, (17) interactivity, (18) compensation, (19) trust, and (20) perceived risk. One of the popular services was the online food ordering

Online food ordering is considered beneficial for the public, as the customers do not need to visit the restaurant to get the ordered food. According to Herman [4] , on June 2019, Gofood omzets increase 2.63 times compared to August 2018 omzets. Gross merchandise value (GMV) of Grabfood in South East Asia from June 2018 to June 2019 growing rapidly (about 900%). In Januari 2019 GMV of GrabFood in Indonesia as well as in Vietnam, Thailand and the Phillipines increased upto 3 times.

2. Method
Due to the Covid-19 pandemic, direct respondent interview for data collection was rather impossible. Therefore, an online questionnaire using google form was prepared. 105

respondents were managed to be interviewed Therespondents should be practicing food ordering in their daily life. The questionnaire consists of 2 main parts. Firstly, the general data. Secondly, the food ordering data. The general data consists of age, gender, address, education attainment, and monthly expenses, The food ordering data consists of:

- Service choice (Grabfood or Gofood, Restaurant Food Ordering, Both Service)
- Frequency of food ordering in different time of day (morning, noon, afternoon/evening).
- Quality of food ordering services.
- Factors affecting online food ordering.
- Trustworhiness of the food ordering services.
- The impact of online food ordering services on daily travel, activity, and expenses.
- Service comparison between Gofood, Grabfood and Restaurant food ordering.

Responses were in Likert scale from 1 (strongly disagree) to 4 (strongly agree). A series of mean difference test was conducted to compare the responses with 2.5 (the departure from disagree to agree) with 0.05 significant level. The only exepctions were regarding Tables 6 and 7. In Table 6 the scale was 1 if the respondent prefers for Gofood and 2 if the respondent prefer for Grabfood. In Table 7 the scale was 1 if the respondent prefers for online food ordering (Grabfood or Gofood) and 2 if the respondent prefer for vendor food ordering

3. Summary of the data

There were 65 males and 40 females' respondents. Most of the respondents (88%) were young with age less than 27 years old. Most of the respondents (77%) lived and Jakarta. Most of the respondents (71%) got a bachelor's degree. Most of the respondents (64%) spent between 1 to 4 million Rupiah per month (USD 71 to USD 282) for their personal needs. Most of the respondents (83%) chose Goofood or Grabfood for food ordering. 45% of the respondents were rarely order food online, whilst 42% were frequently order food online.

4. Results

Table 1 shows the result of mean difference test of choice of time of day for online food ordering with 2.5. It can be seen that most of the respondents (2.65) order food online in the evening ($\alpha=0.042$).

Table 1. Mean difference test of choice of time of day for online food ordering with 2.5

Time of Day	N	Mean	Mean Difference	α	Significant at $\alpha<0.05$ (Yes/No?)
Morning	105	1.50	-0.95	<0.001	Yes
Noon	105	2.60	0.10	0.091	No
Evening	105	2.65	0.15	0.042	Yes

Table 2 shows the result of mean difference test of service quality for online food ordering with 2.5. It can be seen that the respondents were satisfied on all of 9 service quality evaluated (mean score 3.03 to 3.38) with high level of significant ($\alpha<0.001$).

Table 3 shows the result of mean difference test of factors affecting online food ordering with 2.5. It can be seen that the respondents agreed that all of 3 factors evaluated were affecting food ordering online (mean score 2.97 to 3.56) with high level of significant ($\alpha<0.001$).

Table 2. Mean difference test of service quality of online food ordering with 2.5

Service Quality	N	Mean	Mean Difference	α	Significant at α<0.05 (Yes/No?)
Suitable food	105	3.35	0.85	<0.001	Yes
Consumable food	105	3.38	0.88	<0.001	Yes
Food appearance	105	3.03	0.53	<0.001	Yes
Driver responsibility	105	3.19	0.69	<0.001	Yes
Location accuracy	105	3.23	0.73	<0.001	Yes
Driver closeness location choice	105	3.24	0.74	<0.001	Yes
Driver shortest route choice	105	3.07	0.57	<0.001	Yes
Driver respond to customer note	105	3.16	0.66	<0.001	Yes
Availability of free call order	105	3.03	0.53	<0.001	Yes

Table 3. Mean difference test of factors affecting online food ordering with 2.5

Factors Affecting Online Food Ordering	N	Mean	Mean Difference	α	Significant at α<0.05 (Yes/No?)
Promotion/ discount	105	3.56	1.06	<0.001	Yes
Weather	105	2.97	0.47	<0.001	Yes
Vendor rating	105	3.06	0.56	<0.001	Yes

Table 4 shows the result of mean difference test of trustworthiness with food ordering application with 2.5. It can be seen that the respondents trusted all of 5 evaluated aspects regarding food ordering application (mean score 3.16 to 3.40) with high level of significant ($\alpha<0.001$).

Table 4. Mean difference test of trustworthiness with food ordering application with 2.5

Trustworthiness With Food Ordering Application	N	Mean	Mean Difference	α	Significant at α<0.05 (Yes/No?)
Payment security	105	3.40	0.90	<0.001	Yes
Sealed food	105	3.40	0.90	<0.001	Yes
Payment according to application	105	3.29	0.79	<0.001	Yes
Consumer data confidentialiy	105	3.16	0.66	<0.001	Yes
Responsive customer care	105	3.24	0.74	<0.001	Yes

Table 5 shows the result of mean difference test of impact of online food ordering with 2.5. It can be seen that the respondents perceived that food ordering can reduce travel (3.40) and be able to use time saved by ordering food online for other activities (3.53) with high level of significant ($\alpha<0.001$).

Table 6 shows the result of mean difference test of preference of respondents of the service of Gofood or Grabfood with 1.5 (the departure from preference of Gofood to Grabfood). It can be seen that except for driver responsiveness (1.58), driver friedlinesss (1.58), choice for vendors (1.51), the respondents preferred to use Grabfood compared to Gofood for food ordering online in all 7 aspects evaluated (mean score 1.60 to 1.830 with high level of significant (α<0.001).

Table 5. Mean difference test of impact of online food ordering with 2.5

Impact of Online Food Ordering	N	Mean	Mean Difference	α	Significant at α<0.05 (Yes/No?)
Reducing travel	105	3.40	0.90	<0.001	Yes
Shifting time for other activity	105	3.53	1.03	<0.001	Yes
Reducing food cost	105	1.75	-0.75	<0.001	Yes

Table 6. Mean difference test of Gofood and Grabfood services with 1.5

Service Characteristics	N	Mean	Mean Difference	α	Significant at α<0.05 (Yes/No?)
Easy to use application	105	1.64	0.14	<0.001	Yes
Cheaper delivery cost	105	1.73	0.23	<0.001	Yes
More attractive promotion/ discount	105	1.83	0.33	<0.001	Yes
Slightly higher price than vendor price	105	1.60	0.10	<0.001	Yes
Responsiveness of driver	105	1.58	0.08	0.097	No
Friendliness of driver	105	1.58	0.08	0.097	No
Quick delivery	105	1.60	0.10	<0.001	Yes
Safe transaction	105	1.63	0.13	<0.001	Yes
Various vendor choice	105	1.51	0.01	0.771	No
Various payment method	105	1.66	0.16	<0.001	Yes

Table 7 shows the result of mean difference test on respondent preference on ordering food directly from vendor or ordering food online (Gofood or Grabfood). It can be seen that except for customer care rensponsiveness (140), the respondents prefer to order food online in 7 other service characteristics evaluated (mean score 1.16 to 1.39) with high level of significant (α<0.001).

Table 7. Mean difference test between 1.5 and online and vendor food delivery services with 1.5

Service Characteristics	N	Mean	Mean Difference	α	Significant at α<0.05 (Yes/No?)
Easy to use application	105	1.16	0.34	<0.001	Yes
Cheaper delivery cost	105	1.39	0.11	0.024	Yes
Responsive driver	105	1.18	0.32	<0.001	Yes
Friendly driver	105	1.30	0.20	<0.001	Yes
Quick delivery	105	1.29	0.21	<0.001	Yes
Safe transaction	105	1.39	0.11	0.024	Yes
Various payment method	105	1.20	0.30	<0.001	Yes

Customer care responsiveness	105	1.40	0.10	0.063	No

5. Conclusion and recommendation

Most respondents ordered food online in the evening. They satisfied with the quality of the online food ordering service. They perceived that discount/ promotion availibility, adverse weather and, vendor rating affect their intention to order food online. They trusted the food ordering application. They perceived that online food ordering can reduce travel and they can use time saved by ordering food online for other activities. In general, they prefer the service of Grabfood over Gofood and online food ordering (Grabfood or Gofood) over direct order to the food vendor. Based on the results, the government is recommended to improve internet quality and the food industry is recommended to increase the use of online food ordering to boost their revenue. At the end, it will be beneficial for travel reduction and traffic congestion reduction.

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