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THE EFFECT OF TRANSPORTATION COSTS ON FOOD PRICES OF SHOPEEFOOD AND GRABFOOD APPLICATIONS

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ABSTRACT

Ordering food using online applications is one of the technological developments. The purpose of the study was to analyze transportation costs against the food prices of Shopeefood and Grabfood applications. The research data comes from primary data (questionnaires). The total sample was 61 people, most of whom were in the Jabodetabek area for 2 months (July-August 2022). The research method is to use linear regression. The dependent variable is the Price of Food. Independent variables are Transportation Costs, Normative and Behavioral. The study's results explained that transportation and normative costs affect the food prices of Shopeefood and Grabfood applications. This provides evidence that people's interest and desire for technological developments, especially food, is very high.

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INTRODUCTION

The development of the food industry is currently dominated by online food sales. The food industry is advancing more rapidly due to easy access to food orders from mobile phones. Herison et al. (2021) discuss service quality, sales promotion about Grab Food Makassar. This result explains the positive influence based on the quality of service, especially food repurchases, so this proves that online food ordering is in demand by the public, especially in Makassar. Decisions regarding the occurrence of food repurchases by consumers, due to competition from various platforms such as Gofood, Shopeefood, Maxim so that decisions in repurchasing food from merchants are common in online developments now (Ashari et al., 2020). Indriana & Pasaribu (2022) also discussed the motives of online shopping for MSME-scale products on the Shopee application. This result proves that Shopee is one of the most preferred marketplaces by the public in buying MSME products.

The food industry is becoming more accessible, not only large restaurants, but also restaurants founded by Small and Medium Enterprises (MSMEs) which proves that there is a change in people's appetite for technological advances so that purchasing products is easier without having to leave the house, thereby reducing costs. In accordance with cost accounting, costs can be minimized by reducing the costs in the transaction component, as in the research of Muhammad et al. (2017) explained that there are changes in distribution routes to save transportation costs using the saving matrix method, which discusses changes in product distribution routes to consumer so that the capacity and transportation costs are low. The selection of this route has an impact on savings made by the company. These changes in financing can affect future decision-making because with smaller costs, companies can also maximize profits. The food industry is increasingly widespread because of the tendency of MSMEs who can start their businesses with limited capital, and there is not too much need to spend rent on a large area for business activities.

The existence of regular customers provides benefits and convenience for sellers because regular customers do not think too much about price changes, have the capacity to spend a larger amount, and have the opportunity to provide information about valuations, and experiences and can recommend it to others. Therefore, sellers must be able to retain customers by improving service in maintaining profits (Gupta & Kim, 2007). Based on these studies, this study aims to (1) analyze consumers' views on transportation costs in the Shopeefood and Grabfood application, (2) to analyze consumer interest in food prices in the Shopeefood and Grabfood applications. The contribution of this study is to provide a quantitative analysis of consumers' assessments of transportation costs charged to Shopeefood and Grabfood consumers. The differences between this study and the research of Herison et al. (2021), Ashari et al., 2020) and Indriana & Pasaribu (2022) namely (1) This study uses transportation cost analysis in measuring cost accounting by comparing consumer interests and tastes for purchasing food products, (2) This research focuses on two food applications, namely Shopeefood and Grabfood which are trending this year, (3) Research respondents are economics students (accounting and management), so they know about transportation costs to the price formation process.

LITERATURE REVIEW

Transportation Costs

Salama et al. (2017) and Yi et al. (2019) discussed transportation costs involving transportation activities using means of transportation. If there is only one type of truck and there is no determination regarding other considerations in determining transportation, for example, dimensions, weight capacity, and level of transportation costs need to be measured to reduce costs incurred so as to get maximum profit. The determination of transportation costs must be determined, Cheng & Wang (2021) researched the importance of transportation costs in various countries, and there are two technological changes, namely technological changes that provide improvements in productivity and technological changes that can reduce the number of transportation costs. When there is a reduction in transportation costs internationally, it can cause a decrease in prices, namely a decrease in the price of imported goods and an increase in demand. There are technological changes that have a positive impact on countries that have significantly adopted the technology. Hypothesis 1 is:

H1: Transportation costs have a positive effect on food prices.

Normative

Normative assessment is an assessment based on conformity or applicable rules, if it is associated with the Theory Of Planned Behaviour (SDGs) that normative application must be carried out in measuring behavior. Yahya (2015) discussed the normative analysis of sukuk in the implementation of the state budget that there is a need for a study of profit-based interests and consumption so that consumption activities can be reduced. The hope is that activities can generate profits that can be useful, not just consumption. Hypothesis 2 is:

H2: Normative Positively Affects Food Prices.

Behaviour

Community behavior is to measure the actions of a society. Wardani et al. (2021) explained the analysis of factors that affect purchases, especially the food at Shopeefood. The results of this study provide evidence of the need for factors that provide influence based on purchasing decisions by determining the implementation of Shopeefood services, namely the development of Shopeefood, the more widespread and strong influence for the implementation of savings, the existence of discounts, namely price cuts provide an increase in public interest in ordering online, there is an efficiency in reducing time, so that with the existence of Shopeefood, it is hoped that MSMEs the more the profit increases. The public is also expected to be interested in placing orders online. This affects consumer behavior in making choices, especially food prices.

H3: Behavior positively affects food prices.

Food Prices

The influence of e-commerce is a development of advanced internet technology by utilizing consumers to business people regarding the purchase and implementation of the sale of goods (Mumtahana, Nita, & Tito, 2017). The implementation of digital / online business is growing based on purchases to ordering food so that users can choose and use the application. This service is one of them initiated by ShoopeFood. Pane et al. (2018) explained that there is an influence of price on the implementation of service quality at Sidempuan Restaurant. This result explains that the determination of food prices is influenced by many factors, one of which is the adjustment of the price of the product sold (too expensive price, appropriate price, or low price).

The formulation of the study is as follows:

$$\mathbf{Y= \alpha+ \beta 1X1it +\beta 2X2it + \beta 3X3it +\varepsilon it..... (1)}$$

Information:

Y= Food Price.

X1= Transport Charges.

X2= Normative.

X3= Behavior

RESEARCH METHODS

Research method by means of multiple linear regression method. The research data is based on primary data (using questionnaires) of 61 Shopeefood and Grabfood users. Questionnaire measurement uses a likert scale (1=strongly disagree to 5=strongly

agree). The study period is two months (July-August 2022) with a total observation of 61. Data processing using the stata application.

Table 1. Gender

Information	Amount.
Man	23
Woman	38
Grand total	61

Table 1 describes the total gender in this study. Women were 38, and men were 23. The number of women dominated in the study.

Table 2. Age

Information	Amount.
18-25 years	20
25-30 years	23
>30 years	18

Table 2 describes the age range with the most age range of 25-30 years as many as 23 people, 18-25 years as many as 20 people and >30 years as many as 18 people.

Table 3. Markets used

Information	Amount.
Grab	27
Shopeefood	20
Miscellaneous	14

Table 3 explains that food orders are predominantly Grab (27 people), Shopeefood (20 people), and others (14 people). The most market usage is grab.

Table 4. Work experience

Information	Amount.
Haven't worked yet	12
6–12 months	5
1-2 Years	6
2-4 Years	14
>4 Years	24

Table 4 describes work experience, the most >4 years is 24 people, and the least is 6-12 months which is five people.

Table 5. Location of residence

Information	Amount.
Jakarta	22
Bogor	5
Depok	7
Tangerang	19
Bekasi	4
Miscellaneous	4

Table 5 describes the location of respondents' residences, namely the most in Jakarta (22 people) and the least in Bekasi and others (4 people).

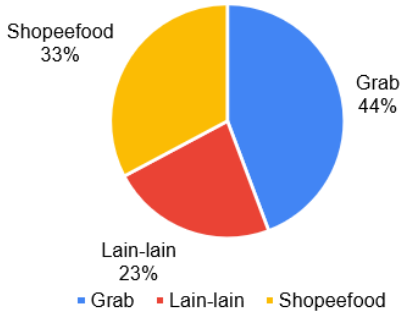

Figure 1. Widely Used Applications

Figure 1 is a pie chart. The most are grab (44%) blue, then Shopeefood (33%) yellow and others (23%) red. This percentage proves that food orders are still dominated by purchases on the grab.

RESULTS AND DISCUSSION

Table 6. Descriptive Statistics

Var	Obs.	Mean	Min	Max
X1	61	4.012295	1.75	5
X2	61	3.75	2	5
X3	61	3.454918	1.5	5
Y	61	4.27459	2.5	5

Table 6 describes descriptive statistics. The largest average is the mean of 4.27459 explained from the likert scale range (1-5) i.e. Y= price.

Table 7. Regression Results

Var.	Coef.	t	P>t	Hypothesis.
X1	0.2628384	3.24	0.002	Accepted
X2	0.4417898	3.40	0.001	Accepted
X3	-0.1405858	-1.05	0.297	Rejected
_Cons	2.049005	4.74	0.000	

Table 7 describes the regression results. This regression explains that Hypothesis 1 is accepted. This means that transportation costs have a positive effect on food prices. This is in accordance with Cheng & Wang (2021) regarding the cost of transportation which is a very influential cost in decision-making. This explains that (1) low transportation costs cause buyers to make food purchase transactions online if the price of transportation costs increases, there is a possibility that food will not be purchased or bought directly to merchants (stores), (2) low transportation costs using the application explain. There is an ease for people to buy goods through cellphones without having to leave the rum, so it is considered efficient and effective in terms of time. Hypothesis 2, i.e. normative (normative judgment) explains the hypothesis is accepted. Normativity positively affects the price of food. These results provide an explanation that (1) the consumer's assessment of the price of food in the application is considered reasonable and appropriate, although there is an ordering fee between 20-30% of the initial price, (2) the consumer's assessment of the development of the food ordering application is considered to be in accordance with the consumer's willingness to place a food order. While Hypothesis 3, Behavior Positively Affects Food Prices, is not accepted because the value is >0.05. These results explain that (1) There are changes in individual behavior in making decisions about food prices depending on individuals/groups, which

cannot be compared, (2) human behavior is difficult to measure, especially regarding decision-making, namely *behavior* when acting.

Table 8. VIFs

Var.	VIFs
X3	2.12
X2	1.86
X1	1.20
Mean	1.73

Table 8 describes the VIF. This VIF gives a mean score of 1.73. If the VIF value is <10, it means that the sample of this study is free from the assumption of multicollinearity and is reasonable to study.

CONCLUSION

This study provides a quantitative explanation of the effect of transportation costs on the food prices of *Shopeefood* and *Grabfood applications.* The results of this study explain that there are only two hypotheses accepted, namely transportation costs have a positive effect on food prices and normatively affect food prices, while uninhabited behavior does not affect food prices. The results of the study provide evidence of different decision-making in each individual in the use of food ordering applications. Food ordering applications are considered to help people in ordering food quickly (efficiently and effectively). With an ordering application, it can help *merchants* (stores) so that their food is more in demand and the community feels helped to get food on time, but this can be undone if the transportation costs for ordering food are too expensive. For example, transportation costs are too high. All respondents, on average, already understand the use of food ordering applications, but the most important thing is when the tariffs are too expensive, so there needs to be a decision made on the part of the application to be wise in increasing tariffs. The implications of the research are (1) For companies, they can develop applications to make them more accessible and can determine tariffs that are not burdensome to customers, (2) For the public, they can provide a comparison of options in ordering products such as food and make it easier to make decisions about prices. The limitations of the study are still dominated by the Jabodetabek area with a total of 61 respondents. The next suggestions are (1) adding a sample of research to see changes more effectively, (2) using additional management and financial variables such as consumer tastes, income and others.

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