
The Influence of Knowledge, Perception, and Attitude toward the Usage of Online Transportation Base Application among Housewives

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Abstract. This study aimed to analyze the influence of housewife's knowledge, perception, attitude towards the use of online application based transportation. The sample of this study was 100 housewives, including 50 housewives from suburban area, and 50 housewives from urban areas. The results showed that average index score of knowledge and perception both in suburban and urban area had moderate category. Average index score of attitude of housewives in suburban area had a moderate category, and housewives in urban area had a good category. The duration of education, location, knowledge, perception and attitude have positive correlation with frequency of using online application based transportation. Results of regression analysis showed that age, location, knowledge, perception, and attitude positively influenced the frequency of using online application based transportation.

Keywords: housewives, knowledge, perception, attitude, online application based transportation

Abstrak. Penelitian ini bertujuan untuk menganalisis pengaruh pengetahuan, persepsi, dan sikap ibu rumah tangga terhadap penggunaan Transportasi Berbasis Aplikasi Online (OTBA). Contoh pada penelitian ini adalah 100 ibu rumah tangga, yang terdiri dari 50 ibu rumah tangga berdomisili di kabupaten dan 50 ibu rumah tangga berdomisili di kota. Hasil penelitian menunjukkan capaian rata-rata skor indeks pengetahuan dan persepsi ibu rumah tangga di kabupaten dan kota berada pada kategori sedang. Rata-rata skor indeks sikap ibu rumah tangga di kabupaten berada pada kategori sedang, dan ibu rumah tangga di kota berada pada kategori baik. Lama pendidikan, lokasi domisili, pengetahuan, persepsi, dan sikap memiliki hubungan positif signifikan dengan frekuensi penggunaan OTBA. Hasil uji regresi menunjukkan bahwa usia, lokasi domisili, pengetahuan, persepsi, dan sikap berpengaruh positif signifikan terhadap frekuensi penggunaan OTBA.

Kata kunci: ibu rumah tangga, pengetahuan, persepsi, sikap, transportasi berbasis aplikasi *online*

Introduction

Transportation is a very influential element in the wheels of the economy. All aspects of the nation's life depend on this sector, which serves as a driver, supporter, and driver of economic growth. This means that if the transport sector is not well tilled then it can be ascertained that the development, its distribution and its results can not be enjoyed optimally for all people (Haryono 2010).

Public need for transportation for their mobility needs to be supported by developing suitable and affordable transportation facilities (Prasetya and Legowo 2005). Travel time becomes very important in public transportation, in which public transportation must adjust the speed of travel time according to the needs of individual consumers (Vanier and Trippi 1976). High community mobility has encouraged business opportunities in the field of transportation. However, portraits of public transport conditions, such as in large cities that have not been optimal. This makes sense if the current society is not satisfied with public transportation available. The lack of satisfaction of the community for the services it receives, or the emergence of the people's desire to improve the quality of service is the form of response that is considered normal in every public service (Rasyid 2015).

Online Transportation Based Application (OTBA) is one of the transportation services that several years back became popular in Indonesia. OTBA service providers in Indonesia known as Go-Jek, Grab Bike, and Uber provide services between people with booking systems via mobile phone applications and websites (Mar'ati and Sudarwanto 2016). The presence of transportation services is motivated by problems in the community where public transportation has not been able to reach the satisfaction of the community in terms of price, practicality, security, and service. The rise of OTBA indicates the desire of people to find a cheap and fast transportation alternative.

The community can easily mobilize anywhere by having OTBA service application wherever and whenever it is fast and real time (Anindhita et al 2016). The rapid development of OTBA in Indonesia is certainly supported by the high interest of the community in using this transportation service. According to Noland (1994), the perception of security, price, and travel time is an important factor in the process of consumer selection of transportation services to be used. Likewise Sumarwan (2011) explains that consumers often decide to purchase a product based on its perception of the product. Therefore until now it can be concluded that the perception of society as a consumer of OTBA is fairly good, seen from the number of conventional public transport users who began to switch to OTBA which supports its activities.

In addition to perceptions also emerged a person's attitude in assessing the object to be interested. Attitudes are statements or evaluative judgments related to an object, person or event (Robbins 2006 in Wahyuni 2008). Based on the research conducted by Wahyuni (2008), consumer attitudes have a significant effect on purchasing decisions. The decision of consumers in choosing OTBA as a transportation service used to support its activities, of course motivated by a positive attitude that has been formed.

The presence of OTBA, such as Go-Jek, Grab, and Uber, especially in big cities has attracted the attention of various circles including housewives with

practicality and service. So far housewives have been accustomed to using conventional public transportation such as public transportation, pedicab, motorcycle taxi, and so on, but with the development of technology, now housewives can easily access OTBA which is considered more practical and inexpensive, and they have begun to switch to using it in daily activities. Conditions in which the housewife is faced with the choice of transportation services that will be used, of course not be separated from the knowledge, perception, and attitude to the existing transportation services.

Previous research has found a connection between knowledge and consumption, attitudes with buying interest, and perception with the choice of modes of daily transportation. Therefore, the researcher is interested to study more about the influence of knowledge, attitudes, and perceptions on the use of online application-based transportation services among housewives. Weighing the problems of OTBA is still relatively new and has not been studied. In addition, the population of housewives in Indonesia is large enough to make this research important to do with a focus on the housewife as one of the consumer units. The purposes of this study were to: (1) identify characteristics of housewives in terms of use of OTBA services; (2) identify the knowledge, perception, and attitude of the housewife against the use of OTBA services; 3) analyze the relationship of housewife characteristics, knowledge, perception, and attitude with frequency of use of OTBA service; and (4) to analyze the influence of characteristic, knowledge, perception, and attitude of housewife on behavior of OTBA service usage.

Method

This study used cross sectional design with implementation time in May 2017. The research location was chosen purposively in Pagelaran Village, Ciomas Subdistrict, Bogor Regency representing district area and Pabaton sub-district, Bogor Tengah sub-district, Bogor city representing city area. The Pagelaran Village and Pabaton Village are chosen purposively with the consideration that those areas are free for OTBA service to operate and enter into the local community settlement to pick up or deliver passengers.

Respondents in this study were housewives living in Pagelaran Village and Pabaton Sub-district who used or did not use OTBA service within the last three months. Sampling technique used in this research was a probability sampling method that is simple random sampling to determine the neighborhood association in each region and housewives in Pagelaran Village. Cluster proportionate random sampling was conducted to determine the housewife in Pabaton Village because one neighborhood association could not meet the number of respondents required in the study. The number of respondents used in this study was as many as 100 people, consisting of 50 respondents from the City of Bogor, and 50 respondents from the region of Bogor Regency.

The type of data used in this study was the primary data obtained through interviews using questionnaires. Primary data collected included the characteristics of housewife covering age, duration of education, and family income. Knowledge of housewives was measured using self-developed instruments related to product knowledge, purchases, and usage. The knowledge

questionnaire consisted of 10 items of multiple choice questions with ordinal data scale (0 = false and 1 = true), reliability test results showed that Cronbach's alpha value of 0.765. Furthermore, the perception of housewives was measured using self-arranged instruments related to price perceptions, quality perceptions, and security perceptions of 7 items of statements with Cronbach's alpha value of 0.667. Attitude variable was measured by using self-made instrument with reference model of Affective, Behavior, and Cognitive (ABC) attitude according to Solomon (2009) in Sumarwan (2011) amounting to 16 statements with Cronbach's alpha value of 0.695. Variables of perception and attitudes toward OTBA services are measured using Likert scale with 4 answer choices (1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree). The index scores obtained in this study were categorized using the class interval of each variable. Cut off categories obtained for knowledge variables were low (0-33.3), moderate (33.4-66.6), and high (66.7-100). While perceptual variables obtained cut off were bad (0-47.6), moderate (47.7-71.4), and good (71.5-100). The cut off obtained for categorization of attitude variables was bad (0-36.1), low (36.2-57.6), and high (57.7-100). The data collected were then analyzed descriptively and inferentially. Inference analyzes used were included independent sample t-test, correlation test, and logistic regression test. Descriptive and inferencing analysis used Microsoft Office Excel and Statistical Package for Social Science (SPSS).

Result

Characteristics of Housewife

The average age of housewives living in districts and cities is not much different, i.e. 43.7 years for housewives in the district and 45.1 years for housewives in the city. The length of education taken by most (68%) housewives in the district is less than and equal to 6 years, and the length of education of housewives in the city shows almost equal proportions (36% and 38%) in the range less than and equal to 6 years and 10 to 12 years. This is in line with previous research from Hidayah (2011) which states that the educational level of urban communities tends to be better than that in rural areas.

Income earned is about one third of housewives families in the district (36%). This was in the category of 1 500 001 – 2 500 000 IDR with a maximum income of 15 000 000 IDR, while income in almost a third of households in urban households (30%) is in the category of 500 001 – 1 500 000 IDR with a maximum income of Rp 10 000 000 IDR. The average income earned per month in housewives' families in districts and cities was not much different, that is, 2 894 000 IDR for family of housewives in the district and Rp 2 823 000 IDR for families of housewives in the city.

Use of the OTBA Service

Housewives in cities have a greater percentage of OTBA users when compared to housewives in the district with 68 percent of users, while the remaining 32 percent is OTBA users. Almost three quarters (72%) of housewives in the district recorded never used OTBA at all. The main reason most revealed by (55.6%) housewives in the district was that they do not use OTBA is because they prefer to use conventional public transport for traveling.

As many as 50 percent of housewives in district users are categorized very rarely (1 time a month) in using OTBA services. Whereas almost half (47.1%) housewives in urban users fall into the rare category (2-3 times a month) in using OTBA services. User housewives in districts and cities have no significant difference in frequency using OTBA, as evidenced by different test results of 0.532. Most of the OTBA service family housewives in the district (42.9%) and cities (52.9%) have used motorcycles and cars.

Based on the results of the study, none of the hundred housewives uses Go-Jek when using OTBA. The most widely used application of housewives is Grab, that is, 92.9 percent housewives in the district and 91.2 percent housewives in the city. Most housewives in district users (71.4%) and cities (67.6%) do not have an application to use OTBA. Therefore, when ordering OTBA the housewife uses an application installed in a cell phone that belongs to a family member or a friend.

Knowledge of OTBA Services

The distribution of housewives in Table 1 shows that most housewives in the district (48%) have low category knowledge. Housewives in the city (24%) who are in the high category more than housewives in the district (16%). The average knowledge of housewives in the city (48) was higher than that of housewives in the district (36.2), reinforced by different test results showing significant differences in knowledge between housewives in the district and city ($p = 0.029$).

Table 1 Distribution of housewives by area of domicile and knowledge category

Knowledge Categories	District		City	
	n	%	n	%
Low (0-33.3)	24	48	16	32
Medium (33.4-66.6)	18	36	22	44
Height (66.7-100)	8	16	12	24
Total	50	100	50	100
Min-Max	0-90		0-100	
Mean± Dev Std	36.2±26.9		48±26.3	
p-value	0.029*			

Description: *) Significant at $p < 0.05$

Perceptions of OTBA Services

Table 2 shows the percentage of housewives in the district which spread mostly in the bad category (40%) and moderate (44%) with an average of 53.2.

Table 2 Distribution of housewives by area of domicile and category of perception

Perceptions Category	District		City	
	n	%	n	%
Bad (0-47.6)	20	40	6	12
Medium (47.7-71.4)	22	44	29	58
Good (71.5-100)	8	16	15	30
Total	50	100	50	100
Min-Max	23.8-95.2		23.8-95.2	
Mean ± Dev. Std	53.2±17.9		64.5±14.4	
p-value	0.001**			

Description: **) Significant at $p < 0.01$

While most housewives in the city (58%) belong to medium perception category with an average of 64.5. Housewives in cities have almost twice as many percentages (30%) in the good category as compared to housewives in the district (16%). Based on the results of different test on perception. This shows the real difference between housewife in district and city ($p = 0.001$).

Attitudes towards OTBA Services

Based on the results of the distribution of attitude variables in Table 3, the largest proportion is 44 percent of housewives in the districts who belong to a moderate category, unlike housewives in cities, 74 percent falls into good category. The average attitude of housewives in the city is higher (60.7) than housewives in the district (50.7). Based on different test, it is found that the attitude of housewives in regencies and cities is significantly different with p-value of 0.000.

Table 3 Distribution of housewives by area of domicile and attitude category

Attitude Categories	District		City	
	n	%	n	%
Bad (0-36.1)	11	22	2	4
Medium (36.2-57.6)	22	44	11	22
Good (57.7-100)	17	34	37	74
Total	50	100	50	100
Min-Max	14.6-79.1		16.7-77.1	
Mean \pm Dev. Std	50.7 \pm 15.6		60.7 \pm 11.6	
p-value	0.000**			

Description: **) Significant at $p < 0.01$

Relationship of Characteristics of Housewife, Knowledge, Perception, Attitude, and Usage of OTBA Services

Based on Table 4 it can be seen that only age and family income are not related to the frequency of OTBA service usage ($\alpha > 0.05$). The positive relationship with the frequency of OTBA service usage can be seen in the characteristics of housewife including length of education ($r = 0.254$; $\alpha = 0.005$) and domicile ($r = 0.402$; $\alpha = 0.000$).

Table 4 Correlation coefficient value between characteristics, knowledge, perception, attitude with frequency of OTBA services usage

Variable	Frequency of OTBA Usage
Domicile (0 = district, 1 = city)	0.402**
Age	-0.145
Length of education	0.254*
Family income	0.091
Knowledge	0.659**
Perception	0.762**
Attitude	0.758**

Description: **) Significant at $p < 0.01$

This suggests that the longer the education is taken. The more the housewives live in the city, the more housewives use OTBA services. Other results in the study showed that all the variables were positively correlated significantly with the frequency of OTBA service use ($\alpha < 0.01$). This suggests that the higher the knowledge and the better the perception and attitude of the housewife to the OTBA, the more housewives use OTBA services.

The Influence of Characteristics of Housewife, Knowledge, Perception and Attitudes to Frequency of Use of OTBA Services

The results of ordinal logistic regression test in Table 5 show that from seven independent variables that are suspected to have an effect on the behavior of OTBA service, there are five variables that significantly affect the behavior of OTBA service usage of housewife, i.e., age, domicile location, knowledge, perception, and attitude .

Table 5 Regression coefficients between housewife characteristics, knowledge, perceptions, and attitudes towards behavioral use of OTBA services

Variable	Variable Frequency of use of OTBA service		
	B	Exp(B)	Sig.
Domicile (0 = district, 1 = city)	1.489	4.432	0.011**
Age (years)	0.054	1.055	0.044*
Lenght of education (years)	-0.143	0.867	0.154
Family income (IDR/month)	-2.056E-7	0.999	0.130
Knowledge (index score)	0.076	1.078	0.000**
Perception (index score)	0.072	1.075	0.019**
Attitude (index score)	0.112	1.118	0.013**
Sig.	0.000**		
Nagelkerke R Square	0.763		

The age variable (OR = 1,055) had a significantly positive effect on the frequency of use of OTBA services to housewives. This suggests that a year's increase in maternal age increases the chances of being 1055 times more likely to use OTBA services more frequently. Domicile variable also have a significant positive effect to frequency of OTBA service usage on housewife (OR = 4,432). This indicates that housewives that domicile in the city have 4,432 times greater chance to use OTBA services more often. Knowledge variable (OR = 1,078), perception (OR = 1,075), and attitude (OR = 1,118) have a significant positive effect on frequency of OTBA service usage on housewife. This means that each increase in one unit of knowledge increases the odds of mothers more frequently using OTBA of 1,078. The increase in one perceptual unit impacts the mother with a probability of 1,075 times greater use of the OTBA and each increase in one attitudinal unit increases the odds of 1,118 times more often to use OTBA services. The Nagelkerke R Square value of the regression model is 0.763, which means that 76.3 percent of the frequency of OTBA service usage in the housewife can be influenced by the variables included in the study, while the other 23.7 percent are influenced by the variables not tested in this study.

Discussion

The results of this study indicated that knowledge owned by housewives in the district was mostly classified as low category. This is due to the low information obtained on OTBA through various media in the district. In addition, the access of housewives to mobile phone technology at the level of android was still low so that access to OTBA services was low. This is in line with the findings of Setyowati and Mulasari (2013) which reveal that good knowledge is gained from various sources such as experience, as well as those obtained through print, radio and television media that have great influence in the formation of opinions and beliefs.

Solomon et al. (2006) explains that perception is the process by which consumers choose, organize, and interpret the sensations they get. The results showed that most perception of housewife both in district and city belong to medium category. Based on the distribution of answers from all respondents, it is found that most housewives have a good perception in terms of quality of service and speed of OTBA in accordance with the wishes. Most housewives in the city belong to the medium perception category and have a larger percentage of OTBA users than housewives in the district. This is in line with the findings of Thio et al. (2008) better perceptions tend to encourage greater buying or reuse interest, compared with those with lower perceptions.

Attitudes possessed by housewives in the city better than those possessed by housewives in the district. A better attitude encourages more housewives in towns to use the OTBA. This is consistent with the opinion of Hayati (2007) which revealed that attitude became one of the factors related to buying interest. The results showed that most housewives agree that the speed between OTBA services is in accordance with the wishes, OTBA tariffs are cheaper than those of conventional public transport, and OTBA makes it easier to know the exact price for the trip.

The results of this study found a significantly positive relationship between all variables with the frequency of use of OTBA. This shows that the better the knowledge, perception, and attitude of the mother, the higher frequency mothers use OTBA and vice versa. This is in line with biological research (2007), Fuady and Bangun (2009), Mostafa (2007), and Kurniawati (2009) indicating that there is a relationship among knowledge, perception, and attitude with purchasing behavior. But in this study, researchers found that most housewives who use the OTBA have knowledge of low or medium category. This can happen because while using OTBA the mother does not use the application directly so do not know how to order and evaluation that must be done when using OTBA.

Result of influence test in this research indicated that family income influence to behavior of OTBA service to housewife. This is in accordance with the findings of Putri (2012) which states that family income has a positive and tangible relationship with the control of purchasing behavior. The influence of domicile is in line with Camagni (2004) research which states that mobility of citizens in urban areas tends to be higher than that in rural in terms of lifestyle and facilities available in the city. In addition, perceptions also have a significantly positive effect on the usage behavior of OTBA services. This result is in accordance with the opinion of Yang et al. (2010) that perception is one of the important factors determining the choice of public transportation mode. In line

with the study, Dillon and Reif (2004) concluded that perception also influences consumer buying behavior.

Conclusion and Suggestion

Conclusion

The results showed the average age of housewives in the district was 43.7 years and in the city was 45.1 years. Most of the length of education taken by housewives in the district is equivalent to elementary school, and the length of education of housewives in the city shows almost equal proportions in elementary and high school. The average family income in both regencies and cities is below the UMR Bogor limits. OTBA service users are more likely to be housewives in the city compared to housewives in the district. Most housewives in the city have better knowledge compared to housewives in the district. Likewise, more than half of housewives in the district belong to a category of poor perception, whereas most housewives in the city have a better perception of OTBA. Most housewives both in districts and cities have a casual attitude towards OTBA in terms of not being negative or positive. The variables of education, family income, domicile, knowledge, perception and attitude are positively related to the frequency of OTBA use. The result of regression test showed that domicile, age, education length, family income, knowledge, perception, and attitudes that were suspected to have an effect on the behavior of OTBA service were two variables that significantly influence the behavior of OTBA service to housewife, perception.

Suggestion

Based on the results of research, OTBA service management company is expected to develop a system that is easier to use all the people including housewives. In addition, companies should be more active in informing how the use of OTBA services through various media that is easily understood by various circles. The government is expected to develop an easy mode of transportation in its use, yet remains secure, fast and affordable that can be used by the community including housewives traveling for either short or long distances. The hope of research on the influence of people around housewives in the use of public transportation services can be done further. And research related to knowledge, perception, attitude, and usage of housewife as consumer of certain goods and services also need to be deepened, because housewife has unique characteristic and uniqueness in determining decision to purchase goods or services.

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