ACIS 2019 Proceedings   Australasian (ACIS)

2019

Government Regulation in Technology-Based Innovation Continuance

Rino A. Nugroho
Universitas Sebelas Maret, rino.nugroho@staff.uns.ac.id

Okki C. Ambarwati
Universitas Sebelas Maret, okkichandra@student.uns.ac.id

Septyanto G. Prakoso
National Sun Yat-sen University, septyantogalan@gmail.com

Didik G. Suharto
Universitas Sebelas Maret, didikgsuharto@staff.uns.ac.id

Government Regulation in Technology-Based Innovation Continuance

Full Paper

Rino A. Nugroho
Department of Public Administration
Universitas Sebelas Maret
Surakarta, Indonesia
Email: rino.nugroho@staff.uns.ac.id

Okki C. Ambarwati
Master Student of Public Administration
Universitas Sebelas Maret
Surakarta, Indonesia
Email: okkichandra@student.uns.ac.id

Septyanto G. Prakoso
Student of Doctoral Program, Institute of Political Science
National Sun Yat-sen University
Kaohsiung, Taiwan
Email: septyantogalan@gmail.com

Didik G. Suharto
Department of Public Administration
Universitas Sebelas Maret
Surakarta, Indonesia
Email: didikgsuharto@staff.uns.ac.id

Abstract

The emergence of online transportation has triggered the pros and cons. One of the concerns in this matter is the safety issue of taxi-bikes in Southeast Asia. Plenty of studies have analyzed the continuity of services facilitated by an online system, but very limited has conducted a study in a regulated environment. This study will conduct research on the effect of government regulation in public decisions on continuing technology. By having such insight it will help experts and practitioners in understanding the government regulation role on technology continuance. This study used the Technology Continuance Theory basis and added Government Regulation to see the continuity of online taxi-bikes. Data were collected by surveying 454 online taxi-bike users and analyzed using PLS-SEM techniques. The findings indicate that in a developing country, government regulation can directly or indirectly influence the use of online taxi-bikes. Further implications are discussed in the article.

Keywords: Government Regulation, Online Transportation, Technology Continuance, Online taxi-bikes, Developing Country.

1   INTRODUCTION

Nowadays, the presence of an information system in ordering ride-sharing transportation or also known as online transportation has seen in almost any part of the world. This mode of transportation is not only in developed but also developing countries such as Indonesia. Although its emergence has led to pros and cons in various countries, the presence of this application is considered to have provided several benefits, such as, for passengers, taxi drivers and the environment (Weng et a.l, 2017). Different cases occur in developing countries that this mode of transportation is not only in the form of cars but also motorbikes (known as "taxi-bikes"). Prior studies indicate that motorbikes causing problems in the majority of Southeast Asian countries transportation (Le & Nurhayati, 2016). The risks are still present as crimes caused by the passenger or driver happened in some cities. The safety of the passenger is also not 100% guaranteed, as the traffic is also packed with other various vehicles. Some countries such as Malaysia rejected the presence of taxi-bikes, Meanwhile, Thailand permits taxi-bikes as public transportation the legality is still in polemic. Indonesia has a unique circumstance where initially this country rejects the existence of online taxi-bikes but recently permits the presence of it in 2019 by issuing a government regulation.

Online taxi-bikes services in Southeast Asian Countries are unique. It does not only provide passenger pick-up services, but also a variety of other services such as food order, goods delivery, ticket purchases, massage services, and others. Having plenty of benefits in using online taxi-bikes, the presence of traditional taxi-bikes has been threatened. The conflicts between online and conventional taxis have occurred in some countries. According to a previous literature study at least there were five different countries affected by conventional vs online taxis (Wijayanto, et.al, 2018). These conflicts have led further questions, should it be regulated by the government, so that it would reduce the conflicts between parties involved. If it is regulated what should the government do so it would not hinder innovation for a better economy.

According to Battacherjee (2001), the successful adoption of technology does not depend on the initial acceptance and use, but on the continued use of the system. Information about the continuity of the system use is essential for an organization. The existence of studies on the continuity of the system user can show the retention of users and, from which, can be carried out the efficiency of operational costs so that it ultimately benefits an organization (Chenyan, Peak, & Prybutok, 2015; Parthasarathy & Bhattacherjee, 1998). So far, the public view of online taxi-bikes is still a common view without being supported by accurate data. Thus, it will make it difficult for the government to develop policies regarding the existence of online taxi-bikes. The Indonesian government, in responding to the emergence of online taxi-bikes, initially refused their presence. In its development, the government then legalized this transportation mode by giving rise to government regulations on online taxi-bikes. However, it is questioned whether government regulation has an influence on the continuity of community use in this mode of transportation. This article discusses the continuity factors in the use of online taxi-bikes, including related to government regulation factors. Therefore, with the information on the continuity of the use of online taxi-bikes and the factors that influence it, it can be a consideration for the government in taking steps to face the development of this mode of transportation.

Weng et al. (2017) have used Technology Continuance Theory (TCT) to see the continuity of the use of online transportation with the result that the model can see the continuity of online transportation in Malaysia. TCT (Liao et al, 2009) is a model to see the continuity of the use of a technology that has combined several models of Expectation Confirmation Model or ECM (Bhattacharjee, 2009), Technology Acceptance Model or ATM (Davis et al., 1989) and cognitive theory. Thus, from the TCT model, there are several factors to explain the continuity of the use of technology. Weng et al (2017) added subjective norms because they are the major factor for Asian consumers (Weng and deRun, 2013). Cetin and Deakin (2017) in their research have explained the urgency of the rules regarding online transportation. Thus, this article looks at government regulation from the modified TCT model to the continuity of online taxi-bikes use. This study is a continuation of the pilot study of previous instrument validity studies (Ambarwati et al., 2019) that used the modified TCT model to look at the factors that influence the continuity of online transportation use in the developing country context.

Surakarta is one of the cities in Indonesia which shows the high demand for online taxi-bikes. The driver's income from one of the online taxi-bikes companies in the city in mid-2017 is the highest nationally. Even, the income exceeds the local government's minimum wage (Angriawan, 2017). Surakarta City (known as Solo) is an area whose government used to adopt the royal system. As a former kingdom area, the patriarchy culture is closely related to rules. Therefore, Surakarta City is the appropriate city to carry out this study.

2 THEORY

There are several theories that can be used to find out the sustainable use of technology. Some of the big theories often used in human behavior studies with technology are the Theory of Planned Behaviour, UTAUT, ECM, TAM, Technology Continuance Theory (TCT) and so on. This article aimed to look at the factors that influence the continuity of the use of online transportation using the theoretical basis of the TCT model.

To see the use of continuity (continuance intention), there are several variables or factors that can shape it. In TCT, continuity in the use of a system is directly influenced by the perceived of usefulness variable (Liao et al., 2009; Battacharjee, 2001; Davis et al., 1989), satisfaction (Liao et al, 2009; Battacharjee, 2001), and attitude (Liao, 2009). In this context, an online taxi-bikes user will continue to use it (continuance intention) if he has the perspective that an online taxi-bikes is useful or has perceived usefulness. In addition, when online taxi-bikes users are satisfied (satisfaction), they will continue to use online taxi-bikes. Then, the user's positive attitude will also affect the continuity of the use of online taxi-bikes. Thus, in this case, a hypothesis can be formulated as follows:

H1: Perceived usefulness has a significant effect on continuance intention of online taxi-bikes use.

H2: Satisfaction has a significant effect on continuance intention of online taxi-bikes use.

H3: Attitude has a significant effect on continuance intention of online taxi-bikes use.

The continuity of use in the modified TCT model of Weng et al. (2017) mentions subjective norms that influence the continued use of technology. Subjective norms are factors that influence Asian consumers in buying a service (Weng and deRun, 2013). Thus, in this context, subjective norms influence online taxi-bikes users to use online taxi-bikes continuously. Hart and Saunders (1997) suggested that government regulation is a significant factor in the use of technology. Moreover, Çetin (2017) suggested that ride-sharing should be regulated for the better urban transportation system. Therefore in this study government regulation is added as the predictor of system continuance. Thus, in this case, a hypothesis can be formulated as follows:

H4: Subjective norms have a significant effect on continuance intention of online taxi-bikes use.

H3: Government regulation has a significant effect on continuance intention of online taxi-bikes use.

From the ECM model, which is part of the TCT model, if the user feels that it is as expected (confirmation), then he perceives that online taxi-bikes are useful (perceived usefulness) (Battacharjee, 2001). Perceived usefulness has been influenced by Perceived Ease of Use (Davis, et al 1989). Thus, in this context, if the user experience (confirmation) of an online taxi-bikes is confirmed, then he will perceive that online taxi-bikes are useful (perceived usefulness). Then, the perception that online taxi-bikes are useful is influenced by the perception of the perceived ease of use of online taxi-bikes (Perceived Ease of Use). Thus, in this case, a hypothesis can be formulated as follows:

H6: Confirmation has a significant effect on the perceived usefulness of online taxi-bikes use.

H7: Perceived ease of use has a significant effect on the perceived usefulness of online taxi-bikes use.

In ECM, satisfaction is influenced by confirmation and perceived usefulness (Battacharjee, 2001). Therefore, in this context, if online taxi-bikes users feel that the online taxi-bikes service is as expected (confirmation), they perceive that online taxi-bikes are useful (perceived usefulness) and then comes a sense of satisfaction. Thus, hypotheses can be formulated as follows:

H8: Confirmation has a significant effect on the satisfaction of using online taxi-bikes.

H9: Perceived usefulness has a significant effect on the satisfaction of using online taxi-bikes.

In TCT model, attitude is influenced by satisfaction (Liao et al., 2009; Battacharjee, 2001), perceived usefulness (Liao et al., 2009; Battacharjee, 2001; Davis et al., 1989), and perceived ease of use (Liao et al., 2009; Davis et al., 1989). In the modified TCT, Weng et al. (2017) stated that subjective norm also affected attitude. Hart and Saunders (1997) suggested that government regulation is a significant factor in the use of technology. Thus, in this case, the positive attitude of online taxi-bikes users is influenced by satisfaction in using online taxi-bikes. In addition, if one feels that an online taxi-bikes is easy to use (perceived ease of use) and is perceived to be useful (perceived usefulness), then a positive attitude to use it will emerge. In addition, the influence of surrounding or recognized norms and existing policies affect the attitude of online taxi-bikes users. Thus, in this case, the hypothesis can be formulated as follows:

H10: Satisfaction has a significant effect on the attitude of using online taxi-bikes.

H11: Perceived usefulness has a significant effect on the attitude of using online taxi-bikes

H12: Perceived ease of use has a significant effect on the attitude of using online taxi-bikes.

H13: Subjective norms have a significant effect on the attitude of using online taxi-bikes.

H14: Government regulation has a significant effect on the attitude of using online taxi-bikes.

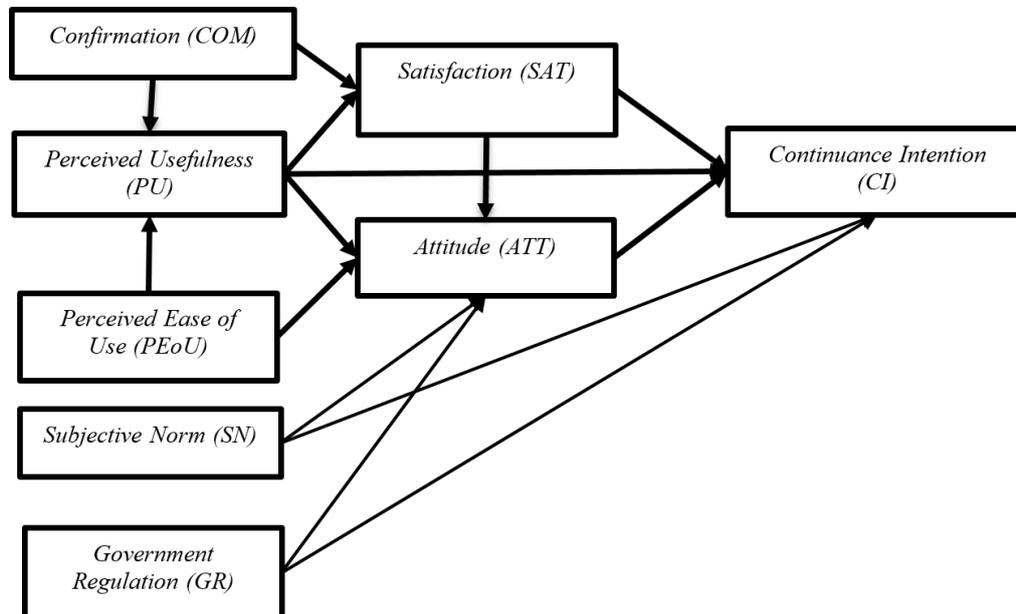Overall, the model in this study can be seen in Figure 1.

Figure 1: Research Model

3   METHOD

This study used the basic theory of Technology Continuance Theory (TCT) which has been modified by also looking at government regulation and subjective norms, which have gone through the instrument validity test from the related study constructs (Ambarwati, et al, 2019). The instrument consisted of 33 question items (see Table 1). The survey was conducted in Surakarta City, one of the cities in Indonesia which was the first ranked city in the highest online taxi-bikes revenue city nationwide in mid-2017. The sample in this study was 454 which exceeded the minimum sample requirement from Isac Michel about the size of an unknown sample population. Sampling was carried out in clusters that were scattered at the crowd points of online taxi-bikes users in 5 districts in Surakarta and the data were collected using convenience sampling. Partial Least Squares-Structural Equation Modelling (PLS-SEM) analysis using Smart PLS software was used in processing the data in this study. The procedure of the data processing is to pay attention to the results of the measurement model evaluation and the results of the model evaluation. Table 1 shows the instrument used in this study after its validity has been tested (Ambarwati, et al., 2019).

4   RESULT

4.1   Respondents' Characteristics

The respondents in this survey consisted of 454 with 28% of males and 72% of females. Of the respondents who answered about age, the two most age ranges of online taxi-bikes user respondents in Surakarta were between 21-25 years of age and under 20 years of age. Thus, more than 50% of the respondents are under the age of 25 years. Most respondents' age backgrounds are students and college students. In this study, the respondents who use online taxi-bikes services for the pick-up service are 54%, for food order service 37%, for goods delivery 8%, and for other services 1%.

4.2   Measurement Model Result

The measurement model evaluation was conducted by evaluating whether the indicator or construct used in the study was valid and reliable. To evaluate the measurement model, there are three criteria, namely by looking at the convergent validity value, Average Variance Extracted (AVE) and discriminant validity used to test the validity, and composite reliability to test the reliability.

The convergent validity of a model with a reflexive indicator can be seen from the correlation between the item score or indicator and its variable which can be seen from the output outer loading. The variation in the values of the outer loading is between 0 and 1 of which the greater the value is, the higher the level of reliability will be. According to Hair et al (2011), the value of the outer loading below 0.40 must be eliminated. From the results of the loading factors, there is an indicator whose value is below 0.5, which is the GR2 indicator of 0.069. Thus, the GR2 indicator is eliminated. From this, besides GR2, the GR2 loading factor value is above 0.5, so the indicator for each variable meets convergent validity. However, besides GR2, the other indicators eliminated are the indicators with PU1 = 0.584, PU4 = 0.696, PU5 = 0.652, ATT3 = 0.644, SN4 = 0.676, CI = 0.670, and CI2 = 0.611. This is related to other validity tests by looking at the value of Average Variance Extracted (AVE), which requires a good model if the AVE of each variable is greater than 0.50 (Hair et al., 2011). With the elimination of several indicators above, after being re-estimated, they can increase the AVE value and fulfill the validity. Discriminant validity of reflective indicators can be seen in cross loading between indicators and variables. The cross-loading of each indicator with its variable must be higher than that of other variables. This shows that the variable predicting the indicator on its own block is better than the indicator in another block. Based on the calculation, all indicators on the output cross-loading have met discriminant validity.

In addition to the validity test, the reliability test was also measured by two criteria, namely composite reliability and Cronbach's alpha from the indicator block that measures variables. Sometimes, the composite reliability value with Cronbach's alpha has a distant difference in value. Composite reliability is to see reliability in indicators whose load values are not balanced while Cronbach's alpha is to see the balanced load of indicator values (Hair, et al., 2014). In this study, the indicator weight of each variable is not the same. Thus, reliability is only seen from the composite reliability value. A variable is considered reliable if the composite reliability value is above 0.70 (Hair et al., 2011). Yet, according to Fornell & Lacker (1981) above 0.60 can still be accepted in composite reliability. Therefore, each variable in the model has good reliability because it has a value above 0.60.

4.3   Structural Model Evaluation

After the evaluation of the measurement model had met all the criteria, then the structural model was then tested. The structural model was evaluated using R-square (R²) for the dependent variable. The structural model that has R-square (R²) results with a classification of 0.67 indicates a good model, 0.33 a moderate model, and 0. 19 a weak model (Hair et al., 2011). Judging from the results of the output R-square (R²) in the table, it can be concluded that the model in the structural model in this study belongs to the moderate category. The interpretation of the output R-square (R²) for the dependent variable Continuance Intention (CI) in this study model was 0.447. This means that PU, COM, SAT, ATT, SN, GR, and PEOU variables can explain the model by 44.7% and the remaining is explained by other variables outside the model.

The evaluation of the structural model also looks at the relevance of predictions (Q²) that can be obtained by blindfolding procedures. A Q² value above zero provides evidence that the model has predictive relevance. Meanwhile, the Q² value below zero indicates the model lacks predictive relevance (Hair et al., 2011). The output of Q² in the blindfolding PLS procedure shows that the model has predictive relevance with the Q² value above 0. This means that the value of the observations produced by the model and the parameter estimates are quite good. In summary, the results of the evaluation of the structural model in this study can be seen in Table 2.

5   DISCUSSION

This study proposes several hypotheses to explain the continuity of using online taxi-bikes by adding the GR variable in the TCT model. In this model, attitude and satisfaction are mediating variables; continuance intention is the dependent variable; and other variables, namely PEOU, PU, SN, and GR, are independent variables. From this study, all hypotheses whose variables are mediated by satisfaction with the continuity of the use of online taxi-bikes are accepted. Meanwhile, the hypotheses rejected in this study are only PU and SN through attitude. GR as a new construct in this model shows different

results from other constructs. GR, directly or indirectly (through the mediating attitude variable), still has a positive influence on the continuity of the use of online taxi-bikes.

Hypotheses		Variable	Result
H1	Perceived usefulness has a significant effect on continuance intention of online taxi-bikes use.	PU→CI	Accepted
H2	Satisfaction has a significant effect on continuance intention of online taxi-bikes use.	SAT→CI	Accepted
H3	Attitude has a significant effect on continuance intention of online taxi-bikes use.	ATT→CI	Accepted
H4	Subjective norms have a significant effect on continuance intention of online taxi-bikes use	SN→CI	Accepted
H5	Government regulation has a significant effect on continuance intention of online taxi-bikes use.	GR→CI	Accepted
H6	A confirmation has a significant effect on the perceived usefulness of online taxi-bikes use.	CON→PU	Accepted
H7	Perceived ease of use has a significant effect on the perceived usefulness of online taxi-bikes use.	PEOU→PU	Accepted
H8	A confirmation has a significant effect on the satisfaction of using online taxi-bikes.	COM→SAT	Accepted
H9	Perceived usefulness has a significant effect on the satisfaction of using online taxi-bikes.	PU→SAT	Accepted
H10	Satisfaction has a significant effect on the attitude of using online taxi-bikes.	SAT→ATT	Accepted
H11	Perceived usefulness has a significant effect on the attitude of using online taxi-bikes	PU→ATT	Rejected
H12	Perceived ease of use has a significant effect on the attitude of using online taxi-bikes.	PEOU→ATT	Accepted
H13	Government regulation has a significant effect on the attitude of using online taxi-bikes.	GR→ATT	Accepted
H14	Subjective norms have a significant effect on the attitude of using online taxi-bikes.	SN→ATT	Rejected

Table 1. Hypotheses Result

5.1 Effect of Perceived Usefulness (PU) on Continuance Intention (CI)

Based on the hypothesis testing, the proposed hypothesis 1 (H1) can be accepted, which means that perceived usefulness (PU) has a significant effect on the continuance intention of using online taxi-bikes. This is evidenced by the output path coefficient which shows that the statistical t value for the perceived usefulness (PU) variable on continuance intention is greater than the value of the t table (1.96) equal to 6.106 so that the influence given is proven to be significant. The coefficient value of the perceived usefulness (PU) variable on the output path coefficient is 0.285, which means there is a positive influence of 2.85% on the continuance intention variable of using online taxi-bikes. Perceived usefulness is met when users feel the benefits or advantages when using online taxi-bikes. This perception is closely related to the advantages of online taxi-bikes compared to other transportations. These advantages include the variety of services offered (can be as food delivery, pick-up service, courier service, etc.) and the advantage of online taxi-bikes as a two-wheeled vehicle is that it can pass through narrow passages so that it can pass through road congestion. From this study, perceived usefulness proved to have a positive effect of 28.5% on the continuity of online taxi-bikes use. This shows that the community feels that the existence of the online taxi-bikes gives them benefits. Because they feel it useful, they will continue to use it. The results of this study are consistent with the research of Weng et al (2017), Bhattacharjee (2001), Lee (2010) and Roca & Gagne (2008), which state that the perception of the system is useful and has a positive effect on the continuity of use. Broadly speaking, the perspective of the usefulness of a system has become one of the factors for the community to continue to use online transportation.

5.2 Effect of Satisfaction (SAT) on Continuance Intention (CI)

Based on hypothesis testing, the proposed hypothesis 2 (H2) can be accepted. User satisfaction is formed when online taxi-bikes users feel satisfied with the services provided. This satisfaction includes services in terms of comfort, completeness, pleasure and overall user satisfaction from online taxi-bikes services. Satisfaction is proven to have a positive effect of 22.4% on the continuity of online taxi-bikes use. This means that the community feels that online taxi-bikes services have provided satisfaction for them.

When online taxi-bikes services are considered more satisfying than other transportation services, the community will continue to use online taxi-bikes as a transportation option. These results are consistent with the results of the research from Gilani et al. (2017), Weng et al. (2017), and Iranmanesh et al, (2017), which show user satisfaction has a positive effect on the continuity of use. Basically, user satisfaction from the use of online taxi-bikes is one of the factors that influence the use of online taxi-bikes continuously.

5.3   Effect of Attitude (ATT) on Continuance Intention (CI)

Based on the hypothesis testing, the proposed hypothesis 3 (H3) is acceptable. The user's positive attitude is obtained when he prefers online taxi-bikes when traveling compared to other conventional transportation. The positive attitude of the users themselves proved to have a positive effect of 16.3% on continuity of use. These results indicate that so far, the community has a positive attitude towards online taxi-bikes. When people still have a positive attitude towards online taxi-bikes, they will continue to be in demand. Attitudes that influence the use of online transportation continuously are consistent with the results of the research from Liao et al. (2009), Weng et al. (2017) and Lee (2010). Thus, the user's positive attitude towards online taxi-bikes is one of the factors that influence the use of online taxi-bikes continuously.

5.4   Effect of Subjective Norm (SN) on Continuance Intention (CI)

Based on the hypothesis testing, the proposed hypothesis 4 (H4) is acceptable. Subjective norms believed include the surrounding influences that make the user use online taxi-bikes, such as surrounding people, figures, media and so on. In the context of online taxi-bikes, the people surrounding, and the media now have an influence on one's continuity in using online taxi-bikes continuously. The subjective norm is proven to have a positive effect of 15.5% on continuity of use. This shows that recognized norms such as the influence of figures, the media, and the people closest to the community currently influence the continuity of the use of online taxi-bikes. This result is supported by the research of Weng et al. (2017) which states that subjective norms influence the continuity of online transportation use but are contrary to the results of research of Fleisher & Wahlin (2016). From this study, it was found that the norm believed to be one of the factors that influence the continuity of the use of online taxi-bikes.

5.5   Effect of Government Regulation (GR) on Continuance Intention (CI)

Based on the hypothesis testing, the proposed hypothesis 5 (H5) is acceptable. Government policies include recommendations and prohibitions which are compulsory to use or stop using online transportation. In this case, government regulation has a significant influence on the user's attitude and continuity of use. The results of this study indicate that although online motorcycle taxis are considered beneficial, the community is still obedient to the government. It was proven that government regulation had a positive effect on the continuity of use. This result is supported by a study from Pudjianto et al. (2015) which states that the government proved to be more effective in maintaining technology use. Having this result it is safe to say that government regulation is one of the factors that influence the continuity of the use of online taxi-bikes.

5.6   Effect of Confirmation (CON) on Perceived Usefulness (PU)

Based on the hypothesis testing, the proposed hypothesis 6 (H6) is acceptable. The results of this study support the study conducted by Bhattacharjee (2001), Hossan & Quaddus (2011), Weng et al. (2017), Li & Liu (2014) and Son et al. (2012), which state that the confirmation has a positive effect on perceived usefulness (PU) which exists. Based on the results of this study, someone would consider the system user if their expectations were confirmed.

5.7   Effect of Perceived Ease of Use (PEOU) on Perceived Usefulness (PU)

Based on the hypothesis, proposed hypothesis 7 (H7) is accepted. Perceived ease of use is a level of ease of use system that can reduce the effort (energy and time) of individuals in doing their work. The results of this study indicate that perceived ease affects the perception of the usefulness of a system. From these results, it means that online taxi-bikes users in Surakarta pay attention to the convenience of their service, both the ease of learning and the ease of operating or using the system. In their perception, the system is useful. The results of this study contradict the results of the study of Weng et al, (2017), but support the study conducted by Shen et al. (2015) which states that perceived ease has a positive effect on perceived usefulness in the use of online transportation. Based on the results of this study, one who feels that the system is easy to learn and use will think that the system is useful.

5.8 Effect of Confirmation (CON) on Satisfaction (SAT)

Based on hypothesis testing, the proposed hypothesis 8 (H8) can be accepted, which means that the confirmation has a significant effect on the satisfaction of using online taxi-bikes. The results of this study support the study conducted by Weng et al. (2017), Liao et al. (2009), and Bhattacharjee (2001) stating that the confirmation has a positive effect on the satisfaction of online transportation use. Based on the results of this study, someone will feel satisfied if his expectation is confirmed.

5.9 Effect of Perceived Usefulness (PU) on Satisfaction (SAT)

Based on the hypothesis testing, the proposed hypothesis 9 (H9) is acceptable. Perceived usefulness is the user's perception that the system is useful. The results of this study support the study conducted by Weng et al. (2017), Li & Liu (2014), Bhattacharjee (2001), and Ghazal (2016) stating that perceived usefulness has a positive effect on satisfaction (SAT) on the use of online taxi-bikes. The perception that the system is useful will give satisfaction to the system. Based on the results of this study, one will feel satisfied with an online taxi-bikes if he has a perception that the system is useful.

5.10 Effect of Satisfaction (SAT) on Attitude (ATT)

Based on the hypothesis testing, the proposed hypothesis 10 (H10) is acceptable. The results of this study support the research conducted by Liao al. (2009), Vancates & Davis (2000) and Weng et al. (2017), stating that satisfaction has a positive effect on the attitude of using online transportation. Based on the results of this study, someone will be positive about using an online taxi-bikes if he has satisfaction with the system.

5.11 Effect of Perceived usefulness (PU) on Attitude (ATT)

Based on hypothesis testing, the proposed hypothesis 11 (H11) is rejected, which means that the perceived usefulness variable does not affect the attitude of online taxi-bikes use. The coefficient value of the perceived usefulness variable on attitude on the output path coefficient is 0.093. Meanwhile, the statistical t value for the perceived usefulness variable on attitude is smaller than the value of the t table (1.96) which is equal to 1.780. Therefore, the influence of perceived usefulness to attitude proved to be insignificant. The results of this study contradict the results of the study of Weng et al. (2017) and Shen et al. (2015) showing that there was a positive correlation between PU and ATT. However, the results of this study indicate that the condition of perceived usefulness does not affect the use of online taxi-bikes in its user attitude.

5.12 Effect of Perceived Ease of Use (PEOU) on Attitude (ATT)

Based on the hypothesis testing, the proposed (H12) is acceptable. The results of this study support the study conducted by Weng et al. (2017), Lee (2010), and Davis (1989), which states that perceptions of ease have a positive effect on the attitude of using online transportation. Based on the results of this study, if someone feels that the system is easy, he will act using an online taxi-bikes.

5.13 5.13 Effect of Government Regulation (GR) on Attitude (ATT)

Based on hypothesis testing, the proposed hypothesis 13 (H13) can be accepted, which means that government regulation has a significant effect on the attitude of using online taxi-bikes. This is evidenced by the output path coefficient which shows that the statistical t value for the perceived usefulness (PU) variable on continuance intention is greater than the value of the t table (1.96) equal to 3.125 so that the influence given is proven to be significant. The coefficient value of the government regulation variable on the output path coefficient is 0,150, which means there is a positive influence of 1.50% on the attitude variable for the use of online taxi-bikes. The results of this study support the research conducted by Pudjianto (2015), stating that government regulation has a positive effect on the attitude of using online transportation.

5.14 Effect of Subjective Norm (SN) on Attitude (ATT)

Based on hypothesis testing, the proposed hypothesis 14 (H14) is rejected, which means that the subjective norm variable does not affect the attitude toward technology continuance. The coefficient value of the subjective norm variable on attitude towards the output path coefficient is 0.055. The statistical t value for the subjective norm on attitude is smaller than the value of the t table (1.96) which is equal to 0.151 so that the influence of the given subjective norm on attitude proved to be insignificant. The results of this study contradict the study of Weng et al. (2017) and Hsu & Lu (2004) stating that the subjective norm influences the attitude of using online transportation. In this case, the subjective norm has no influence on the attitude of using online taxi-bikes.

This study resulted that online taxi-bikes will continue to be used by users with the model strength indicated that 44.7% variations were explained by the factors inside the model. The factors from the survey findings that directly influence the sustainability of online taxi-bikes use are perceived use, user satisfaction, user positive attitude, subjective norms and government policies that regulate. Thus, taxi-bikes will continue to be used if the user sees it as useful. They are satisfied when using and the positive attitude is that they choose to keep using it. In addition, the surrounding environment and government policies also affect the users in using online taxi-bikes continuously. This continued use indicates that communities support the presence of online taxi-bikes and intend to continue using it unless the government forbids it. The results of this study indicate that Government Regulation had a positive effect on the technology continuance. Thus the presence of regulation in technology continuance is essential.

6 CONCLUSION

The above discussion shows that the community will continue to use the online taxi-bikes because they consider online taxi-bikes have benefited them. However, it turns out that government policies influence the continuity of the use of online taxi-bikes in the community. Based on this finding government regulation might be seen as the way out to reduce the social tension between conventional-based and innovation-based businesses such as the social conflict between the conventional taxi and online-based taxi. This finding also indicates that the presence of government significantly affects innovation continuity. No matter how good or how beneficial an innovation, once the government forbids the use of it, the innovation would not be sustained. The government should regulate innovation in a way that balance between economic benefit and reduce social tension in the community.

Theoretically, this study adds variation to the Technology Continuance Theory (TCT) model. It was found that government regulation is a variable that also needs to be considered in its influence on the continuity of the use of technology. For further studies, it is recommended that sample coverage and the use of a structured sample selection method should be used to strengthen the generalization of the study. In further studies, it is also necessary to pay attention to the addition of rule enforcement indicators in the government regulation variable.

7 REFERENCES

Ambarwati, OC., Nugroho R.A & Suharto, D.G. 2019. The Role of the Government Regulation in Online Transportation: A Model Validation. *Bisnis & Birokrasi: Jurnal Ilmu Administrasi dan Organisasi*, 26 (1), 23-32.

Angriawan (2017). *Transportasi Online Pendapatan Driver Gojek Solo Lampaui Pendapatan Rata Rata Driver Nasional (Online Transportation: Income Of Solo Motorbike Drivers Exceeds National Average Income)*, Accessed on http://www.harianjogja.com/baca/2017/05/26/transportasi -online-pendapatan-driver-gojek-solo-lampaui-pendapatan-rata-rata-driver-nasional-819541

Bhattacherjee, A.2001. Understanding Information Systems Continuance: An Expectation Confirmation Model.*MIS Quarterly*: Management Information Systems, 25, 351-370.

Burstein, P. 2003. The Impact of Public Opinion on Public Policy: A Review and an Agenda. *Political Research Quarterly,* 2003, 56, 29-40.

Çetin, T. 2017. The Rise of Ride Sharing in Urban Transport: Threat or Opportunity?. Urban Transport Systems, 191.

Cetin. T & Deakin. E. 2019. Regulation of Taxis and the Rise of Ridesharing. *Transport Policy,* 76, 149-158.

Chenyan, X., Peak, D., & Prybutok, V. 2015. A Customer Value, Satisfaction, And Loyalty Perspective Of Mobile Application Recommendations. *Decision Support Systems*

Davis, F. D. 1989. Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly,* 13, 319-340.

Fleischer, Andreas, and Wahlin, Christoffer. 2016. *Want to take a ride with me? The Intention of Generation Y to Use Uber*. Thesis: Jonkoping University.

Fornell, C., & Larcker, D. F.1981. Evaluating structural equations with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), 39–50.

Ghazal, M., Akmal, M., Iyanna, S& Ghoudi, K., 2016. Smart Plugs: Perceived Usefulness And Satisfaction: Evidence From the United Arab Emirates. *Renew. Sustain. Energy Rev.* 55, 1248–1259.

Gilani, M.S., Iranmanesh, M., Nikbin, D & Zailani, S., 2017. EMR Continuance Usage Intention Of Healthcare Professionals. *Inform. Health Soc. Care* 42 (2), 153–165.

Hair, JF., Anderson, R. E., Tatham, R. L., & Black, W. C.1995. *Multivariate Data Analysis: With Readings*. Englewood Cliffs, New Jersey, United States of America: Prentice-Hall, Inc. A Simon & Schuster Company.

Hair Jr, J. F., Hult, G.T.M., Ringle, C.M & Sarstedt, M. 2014. *A primer on partial least squares structural equation modeling (PLS-SEM),* Sage Publications.

Hart, P. & Saunders, C. 1997. Power and Trust: Critical Factors in the Adoption and Use of Electronic Data Interchange. *Organization Science,* 8(1), 23-42.

Hossan, M.A & Quaddus, M.2011, The Adoption And Continued Usage Intention Of RFID: An Integrated Framework. *Information Technology & People* Vol. 24 No. 3, 2011.

Hsu, C.L & Lu, H.P., 2004. Why do people play on-line games? An extended TAM with social influences and flow experience. *Inform. Manage.* 41 (7), 853–868.

Iranmanesh, M., Zailani, S & Nikbin, D., 2017. RFID Continuance Usage Intention In Health Care Industry. *Qual. Manage. Healthcare* 26 (2), 116–123.

Le, T.Q& Nurhidayati. 2016. A Study of Motorcycle Lane Design in Some Asian Countries. *Procedia Engineering* 142, 292 – 298.

Lee, M.C.2010. Explaining And Predicting Users' Continuance Intention Toward E-Learning: An Extension Of The Expectation–Confirmation Model. *Computers & Education 54,* 506–516.

Li, H& Liu, Y., 2014. Understanding Post-Adoption Behaviors Of E-Service Users In The Context Of Online Travel Services. *Inform. Manage.* 51 (8), 1043–1052.

Liao, C., Palvia, P. & Chen, J.-L. 2009. Information technology adoption behavior life cycle: Toward a Technology Continuance Theory (TCT). *International Journal of Information Management,* 29, 309-320.

Parthasarathy, M & Bhattacherjee, A. 1998. Understanding post-adoption behavior in the context of online service. *Information Systems Research*, 9 (4), 362-379.

Pudjianto, B., Zo, H., Ciganek, A.P& Rho, J.J. 2011. Determinants of E-Government Assimilation in Indonesia. *Asia Pacific Jornal of Information system.* 21 (1).

Roca, J.C & Gagné, M., 2008. Understanding e-learning continuance intention in the workplace: a self-determination theory perspective. *Comput. Hum. Behav.* 24 (4),1585–1604.

Shen, J., Qiu, F., Li, W., & Feng, P., 2015, July. Exploring the Effect of the Telephone/Online Booking System on Taxi Service: Case Study of Suzhou City in China. *In:15th COTA International Conference of Transportation Professionals.*

Son, H., Park, Y., Kim, C & Chou, J.S., 2012. Toward An Understanding Of Construction Professionals' Acceptance Of Mobile Computing Devices In South Korea: An Extension Of The Technology Acceptance Model. *Autom. Constr.* 28, 82–90.

Venkatesh, V & Davis, F.D., 2000. A Theoretical Extension Of The Technology Acceptance Model: Four Longitudinal Field Studies. *Manage. Sci.* 46 (2), 186–204.

Weng, J.T & de Run, E.C., 2013. Consumers' Personal Values And Sales Promotion Preferences Effect On Behavioural Intention And Purchase Satisfaction For Consumer Product. *Asia Pac. J. Market. Logist.* 25 (1).

Weng, G.S., Zailani., S., Iranmanesh, M & Hyun, S.S., 2017. Mobile Taxi booking application service's continuance usage intention by users. *Transportation Research Part D* (57).

Acknowledgments