

THE FACTORS INFLUENCING THAI PASSENGER'S INTENTION TO REUSE GRAB CAR SERVICE IN BANGKOK

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ABSTRACT: Bangkok is the urban area, where people need convenient and comfortable lifestyle, transportation is one of important factors for urban life since the travel plan should be prepared for traffic congestion, crowd, and rush hours. However, there are many issues in public transportation, even though they are legal, regulated, policies are not strict enough to protect the passengers. This has led to the emergence of e-hailing services in Thailand in recent years. The research aims to explore the key factors influencing Thai passenger's intention to reuse Grab Car service in Bangkok. The researcher focuses on six factors which are Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Perceived Price (PP), Perceived Convenience (PC), Perceived Safety (PS), and Brand Image (BI). The respondents are 400 Thai passengers who live in Bangkok and have experienced on using Grab Car service during the last three months. This researcher uses Cronbach's Alpha method to test the validity and reliability of questionnaires and uses Descriptive Research method to analyze the demographic data of respondents. The results from this research can conclude that four independent variables, consist of perceived usefulness, perceived price, perceived safety, and brand image significantly influence to Thai passenger's intention to reuse Grab Car service in Bangkok.

Keywords: Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Perceived Price (PP), Perceived Convenience (PC), Perceived Safety (PS), Brand Image (BI), Intention to Reuse

Introduction

The global transportation market size has been forecasted to grow by 19.8% from 2018 to 2025, however, there was valued at 75 billion dollars in 2017 for transportation market (Grandviewresearch, 2019). There are related problems which continuously increase including the heavy congestion, increasing of fuel price, and

parking spaces reduction. Moreover, the increase use of smartphone and connected vehicles, the car that include navigation function, have upgraded the transport services. The tendency to use e-hailing services have increased, since they enable users to manage their booking in advance by pre-booking, modifying, and cancelling at lower costs through applications. The occurrence of e-hailing application has been growing fastest in several regions in the world such as North America Region, Europe Region, Africa Region, and Southeast Asia Region.

Currently, e-hailing services are popular in Thailand, where they can see the cheaper fare and low tendency of refusal to

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the requested destination by drivers. E-hailing services allow passengers to book private car via application and take advantage of surge pricing during the high demand for arrive the location of passengers' request within the specific time. However, e-hailing applications have introduced to Thailand, they can improve some transportation problems by offering more alternatives for passengers to match and respond with their travel needs. conflict and controversy among involved parties and create severe issue for Thai competition law.

Objectives

1. To determine the factors influencing Thai passenger's intention to reuse Grab Car service in Bangkok.
2. To determine the significant factors influencing on Thai passenger's intention to reuse Grab Car service in Bangkok.
3. To suggest the way that Grab Car can develop and operate in Thailand effectively.

Literature Review

Technology Acceptance Model (TAM)

According to previous study, the study used the Technology Acceptance Model or TAM Model, which is one of the most influential theories, to understand the

acceptance of technology by user (Mohamad, Fuad, Shahib, Azmi, Kamal, & Abdullah, 2016). This study used TAM Model for purpose to understand customer intention to use transport service in tourism destination. In transportation industry, the connection between the drivers and passengers via mobile application is a new technological innovation (Mohamad, Fuad, Shahib, Azmi, Kamal, & Abdullah, 2016). Referred to previous study, Uber provides the better service than traditional taxi, since their specific features such as reduce waiting and travel time, charge less, more convenient, and concern more on handicap passengers (Mohamad, Fuad, Shahib, Azmi, Kamal, & Abdullah, 2016). Thus, passengers have a good perception on Uber,

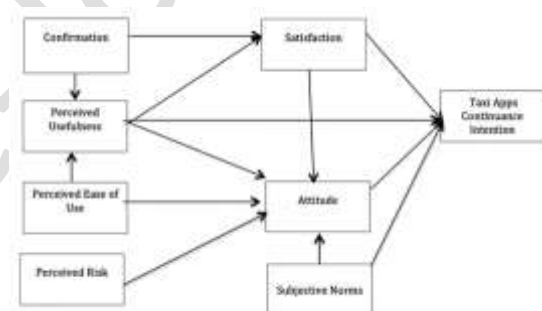


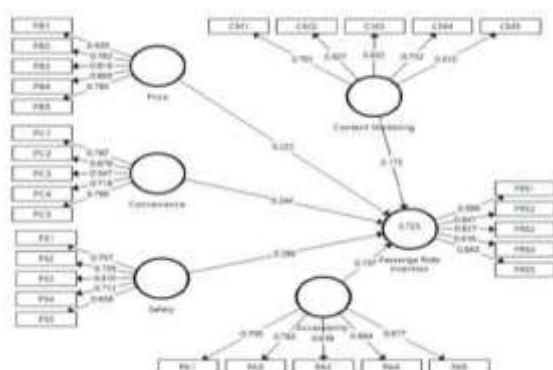
Fig. 5. Proposed extended TCT model for MTR App continuance intention.

which can respond their unmet demand for fast, flexible, and convenient. They accept that Uber suites for urban lifestyle and good transport alternatives in urban areas. Otherwise, these can cause customers intend to use service from Uber more often than traditional taxi and might create intention to reuse.

Perceived Usefulness

Figure 1: The research model of “Mobile taxi booking application service’s continuance usage intention by users”

Perceived usefulness is defined as how the person believes that using public transportation is useful and can support



their travel activities regardless of the short or long distance or far destination. These can satisfy passengers and might create intention to use at the first time (Weng, Zailani, Iranmanesh, & Hyun, 2017).

Perceived Ease of Use

Figure 2: The research model of “Factors affecting the actual use of ride-hailing services (GOJEK/Grab) in Indonesia (Jabodetabek-region)”

Perceived ease of use refers to how the person believes that they can use the system to do transaction and it can be done easily and a system does not cause the difficulty and problems for users. The passengers feel the public transportation service can be lightened to use and satisfied to use since its convenience provided, easy, and trouble-free way (Gumilar, W.D., Oliver, Gunawan, Sfenrianto1, 2019).

Perceived Price

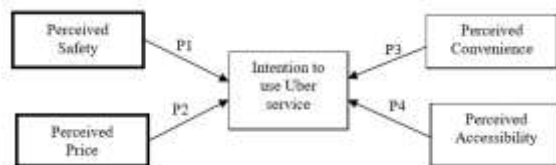


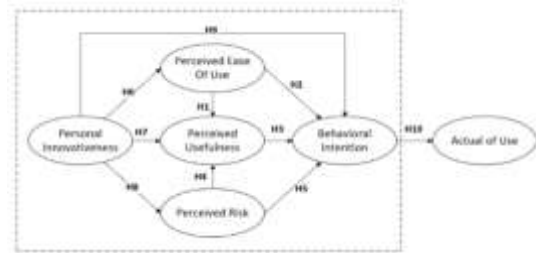
Figure 3: The research model of “A Framework of Customer’s Intention to use Uber Service in Tourism Destination”

Perceived price can be defined as a person’s perception on price in a relation to the price that passenger would be charged for using the service, which the charging occurred after the service had completed. The surge pricing by e-hailing service has occurred during high demand period which lead to differently charge for fare and driver management, especially during primetime. Therefore, perceived price becomes one of the main factors that influence passenger to select as their alternatives (Mohamad,

Fuad, Shahib, Azmi, Kamal, & Abdullah, 2016).

Perceived Convenience

Figure 4: The research model of “Passenger ride intention towards e-hailing services”



Perceived convenience can be defined as an alternative to regular modes of transportation which are similar to general public transportation but provide the better features, which more convenient for passengers with the exposure certain fare and several payment methods that are available as alternatives depend on customers’ convenience (Teo, Mustaffa, & Rozi, 2018).

Perceived Safety

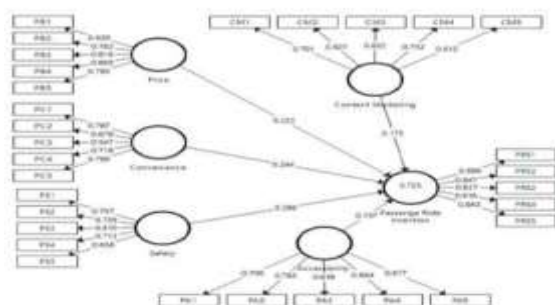


Figure 5: The research model of “Passenger ride intention towards e-hailing services”

Perceived safety is the key indicator for passengers’ perception to make decision for using the public transportation service, which quite sensitive and critical for personal safety of passenger. The perceived safety concerns on the drivers, passenger privacy, vehicle condition as well as

insurance coverage while using the service. Including, the provided information in advance when requesting the service such driver's location, phone number, plate number, and the estimated fare in advance (Teo, Mustaffa, & Rozi, 2018).

Brand Image

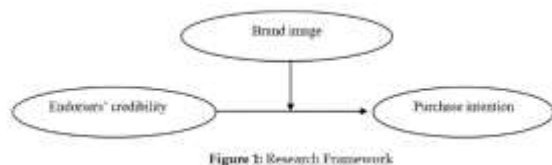


Figure 6: The research model of “The influence of the NBA star endorsers’ credibility and brand image on purchase intention: A case study of Taiwanese American Player Jeremy Lin”

Brand image can be defined as the first impression that the company gives to consumers. The better of brand image can create higher cognitive of quality among consumers (Chiu, Wen, & Lin, 2019). Consumers and the overall market perception of the brand refer to brand image, which is also the way to perceive all the information of the products in term of product properties and functionality.

Intention to Reuse

Figure 7: The research model of “The Effect of Electronic Word of Mouth, Brand Image, Customer Trust and Customer Satisfaction Towards Repurchase Intention at PT. GO-JEK Indonesia”

Intention to reuse can be defined as the intention to buy products or services even can be intended to buy new product or buy similar products or services which the consumer has bought before or intended to buy more frequently in the future. As a degree of being willing to continuously use

the car service from application again in the future (Arumsari & Ariyanti, 2017).

Research Hypotheses

H1o: Perceived Usefulness has no significant influence on intention to reuse.

H1a: Perceived Usefulness has significant influence on intention to reuse.

H2o: Perceived Ease of Use has no significant influence on intention to reuse.

H2a: Perceived Ease of Use has significant influence on intention to reuse.

H3o: Perceived Price has no significant influence on intention to reuse.

H3a: Perceived Price has significant influence on intention to reuse.

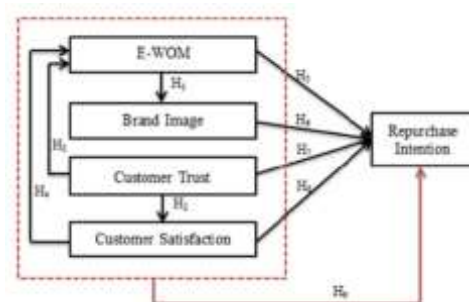
H4o: Perceived Convenience has no significant influence on intention to reuse.

H4a: Perceived Convenience has significant influence on intention to reuse.

H5o: Perceived Safety has no significant influence on intention to reuse.

H5a: Perceived Safety has significant influence on intention to reuse.

H6o: Brand Image has no significant



influence on intention to reuse.

H6a: Brand Image has significant influence on intention to reuse.

Research Framework

The conceptual framework is a model that the researcher uses to apply in this study to achieve the objectives of this research.

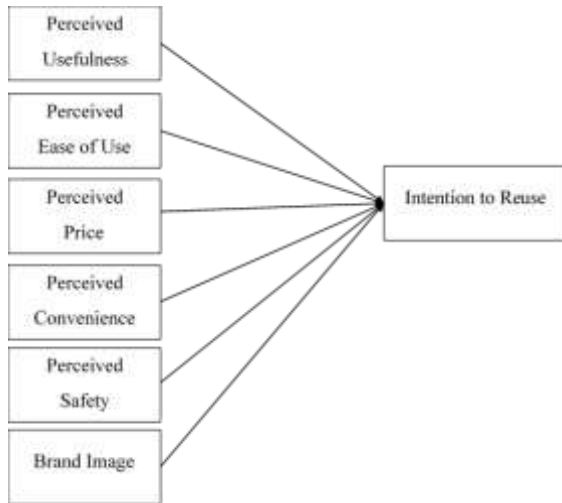


Figure 8: The Research Framework

Research Methodology

Quantitative research method was used to conduct this study and Cronbach's Alpha and Descriptive Research methods was applied to analyze data. The convenience sampling is the technique which researcher distributes questionnaires to respondents who live in Bangkok and have ever used Grab Car within 3 months. Total 400 set of questionnaires were distributed via online survey. The researcher designed to use questionnaire to be a research instrument for gathering information from respondents. The questionnaire of this study consists of 9 parts and includes 45 questions. The first part is screening information by gathering information from respondents who have ever used Grab Car service within 3 months, which consist of three questions. As for the part 2-8, the questionnaire asked for independent variables and dependent variables that consist of perceived usefulness, perceived ease of use, perceived

price, perceived convenience, perceived safety and brand image as independent variables while intention to reuse as dependent variables. The questionnaire used five-point Likert Scale and the statistical level to measure the level of agreement or disagreement for each question. The researcher prefers to do a pretesting questionnaire around 30 set of questionnaires to target respondents. For the result, Cronbach's Alpha are acceptable with the result more than 0.6 which means all questions are consistent with apply as the research instrument. Moreover, Multiple Linear Regressions was applied to test all hypotheses. The last part, part 9 is the part of questionnaire that asked about demographic factors or personnel information of respondents consists of gender, age, education, occupation, marital status, and monthly income per household. The descriptive analysis was applied to describe the demographic factors which are characteristics of the 400 respondents who have experienced to use Grab Car service.

Results And Discussion Of Results

The results show that, there are four variables consist of perceived usefulness, perceived price, perceived safety, and brand image that have significant level less than .05. So, it can conclude the null hypotheses of H1o, H3o, H5o, H6o are all rejected, which means that the perceived usefulness, perceived price, perceived safety, and brand image, have significant influence on intention to reuse. In addition, the VIF value of perceived usefulness, perceived ease of use, perceived price, perceived convenience, perceived safety, and brand image are between 1.287 to 2.302 which all less than 5, so it can be defined as there is no serious problem of multicollinearity among these 6 variables

and can trust these coefficients in this research. Furthermore, the result also shown that perceived safety is a strongest independent variable that influencing intention to reuse with the highest Standardized Coefficients Beta at 0.660 and follow by perceived usefulness in the second rank at 0.227 and then brand image in third rank at 0.116. Moreover, perceived price is considered as the weakest independent variable that influencing intention to reuse at 0.106.

Conclusion And Discussion

Conclusion

This study analyzes demographic factors of respondents, which including 6 demographic factors that were selected to analyze in this research. The result shows that, from 400 respondents, major respondents were female (52.50%) who are age between 31-40 years old (44.00%) and graduated with bachelor's degree (45.75%). Most of them work as government employee or state-owned enterprise (42.25%) and married (52.00%) with household income of 20,001-30,000 THB/month (39%).

Demographic Factors	Characteristics	Frequency (f)	%
Gender	Female	210	52.50 %
Age	31-40 years old	176	44.00 %
Education	Bachelor's degree	183	45.75 %
Occupation	Government employee/ State-owned enterprise	169	42.25 %
Marital Status	Married	208	52.00 %
Monthly income (Household)	20,001-30,000 baht	156	39.00 %

Table 1: The summary results of demographic factors in terms of frequency and percentage based on 400 respondents who are Thai passenger's which have experience on using Grab Car service in

Rank strongest to weakest	Independent Variables	Dependent Variable	Beta	Implications
1 st Rank	Perceived Safety	Intention to Reuse	0.660*	Perceived Safety has significant influence on intention to reuse.
2 nd Rank	Perceived Usefulness		0.227*	Perceived Usefulness has significant influence on intention to reuse.
3 rd Rank	Brand image		-0.116*	Brand Image has significant influence on intention to reuse.
4 th Rank	Perceived Price		0.106*	Perceived Price has significant influence on intention to reuse.

Bangkok area.

Note: *p<0.05

Table 2: Summary of Multiple Linear Regression Analysis of variable predicting (N=400) influence on intention to reuse Grab Car.

The result of hypotheses tested by using multiple linear regression analysis showed that perceived safety is a strongest independent variable that influencing intention to reuse with the highest Standardized Coefficients Beta at 0.660 and follow by perceived usefulness in the second rank at 0.227 and then brand image in third rank at 0.116. Moreover, perceived price is considered as the weakest independent variable that influencing intention to reuse at 0.106.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.670 ^a	.449	.440	1.17736

a. Predictors: (Constant), Perceived Usefulness, Perceived Ease of Use, Perceived Price, Perceived Convenience, Perceived Safety, Brand Image

Table 3: Model Summary

The result can be indicated that Adjusted R Square value is equal to .440,

Null Hypotheses Statement	Statistical Test	Level of Significance	Beta Unstandardized Coefficients	Results
H10: Perceived Usefulness has no significant influence on intention to reuse.	Multiple Linear Regression	0.000	0.220	Reject H10
H20: Perceived Ease of Use has no significant influence on intention to reuse.	Multiple Linear Regression	0.748	-0.015	Failed Reject H20
H30: Perceived Price has no significant influence on intention to reuse.	Multiple Linear Regression	0.022	0.083	Reject H30
H40: Perceived Convenience has no significant influence on intention to reuse.	Multiple Linear Regression	0.066	-0.071	Failed Reject H40
H50: Perceived Safety has no significant influence on intention to reuse.	Multiple Linear Regression	0.000	0.655	Reject H50
H60: Brand Image has no significant influence on intention to reuse.	Multiple Linear Regression	0.007	-0.131	Reject H60

which can be interpreted as 44.0% of the perceived usefulness, perceived ease of use, perceived price, perceived convenience, perceived safety, brand image was influence intention to reuse Grab car by the following table.

Table 4: Hypotheses Testing Result

According to the result of multiple linear regression analysis. Referred to the level of significance at 0.05 or below, the researcher found that there are four independent variables that influence Thai passenger's intention to reuse Grab Car service in Bangkok, meanwhile; there are two independent variables that do not influence Thai passenger's intention to reuse Grab Car service in Bangkok in this study.

Recommendations

The results of this research shown perceived usefulness, perceived price, perceived safety, and brand image significantly influence to Thai passenger's intention to reuse Grab Car service in Bangkok. The results of this study may benefit to organization for both operational level, management level and shareholders of Grab and also useful for academic session.

Perceived safety is strongest influence on intention to reuse Grab Car which means that passengers also concern more on this issue. The researcher would like to suggest according to the survey results. Passengers satisfied with the information of drivers that Grab provided on the application and also keep them secure with the responsibility on accident and confidential information. So, Grab should take advantage and enhance their service with this point to make Grab differs from traditional taxi. Since, most

passengers faced with bad experience or heard the bad news from taxi in Thailand, so they concern more on safety while using the service. The providing of driver's information and the responsibility from Grab, in case of accident and confidential information, make passengers feel safe and satisfied when using Grab Car and believe that it can make them far from unexpected criminal.

Perceived usefulness was ranked the second and has a strongly significant influence on intention to reuse Grab Car which means that passengers concern more on this issue. Hence, Grab should remain the standard of technology and keep it up to date, since from the survey results, passengers satisfy with the application that does not error while doing a transaction and try to avoid the errors. They also satisfied with provided information on Grab's application. It is important for passengers, since they have to make their travel plan which including time and budget management in advance. The passengers also expect good service from the drivers and need improvement from driver's rating score on application. Therefore, Grab should keep and improve the available information, activities, and update their software to strengthen these advantages to support passengers' convenience.

Brand image was the third priority, which has a slightly significant influence on intention to reuse Grab Car. From the survey results, passengers accepted Grab brand, however, Grab provides several services, so there are some services might create bad reputation, which affects overall image of Grab brand. So, the researcher recommends Grab to consider brand image as one of the important factors and give the first priority to solve the problems that damage brand image of Grab. Since, from

the passengers' perspective, brand image can imply about the service quality of Grab and they perceived that Brand Image of Grab is better than other e-hailing apps. Moreover, Grab should focus on the real reviews and rating scores on application that allow passengers to rate the drivers' score, and try to improve from this point or use it to set the strong standard and absolute regulations for forcing Grab's drivers to perform the service very well.

Perceived price has a slightly significant influence on intention to reuse Grab Car in the last ranking, since the passengers was fixed on this issue. Grab sets the standard of price to match with the transportation modes and surge pricing during the primetime or high demand of transportation. From the survey results, passengers strongly satisfied and willing to pay for Grab Car without affect by peak hour price changes. They also prefer to estimate and compare prices with other e-hailing apps before placing a request. So, Grab should ensure and remain the standard price that cheaper than the other e-hailing applications and offer promotions, especially during peak hour that the passengers were drawn by discounts and prefer to see Grab Car charges less.

Further Study

Due to the limited time of the research, there were only 400 respondents' opinion to be collected which can represent only Thai passengers who live in Bangkok. Thus, the further research may be expanded to conduct in other provinces in Thailand, where there are tourism attractions and try to compare the passengers' opinion from different areas such as Pattaya, Chiang Mai, and Phuket or expand to conduct other group of passengers such as international passengers. The future studies may explore

additional independent variables or factors that can influence Thai passenger's intention to reuse Grab Car service in Bangkok such as brand loyalty, reliability, promotions, variety of transportation modes and so on.

References

- About Thailand Living. (2017, October 30). Uber, Grab Taxi, Or Regular Taxi. Retrieved from About Thailand Living: <http://aboutthailandliving.com/2017/10/30/uber-grabtaxi-regular-taxi/>
- Ackaradejruangsri, P. (2015). Insights on GrabTaxi: An Alternative Ride Service in Thailand. *Review of Integrative Business & Economics Research*, 1.
- Afiqah Dania Ezzatul, D. M. (n.d.). Case GRAB. *International Journal of Tourism & Hospitality in Asia Pasific*, 9-10.
- Aittendorf, C. (2017). The Implications of Trust in the Sharing Economy – An Empirical Analysis of Uber. *Proceedings of the 50th Hawaii International Conference on System Sciences*, 5841-5842.
- Anggi, G., Dionisius, W.D., Ivan, O., Jeanifer, G., & Sfenrianto, S. (2019). FACTORS AFFECTING THE ACTUAL USE of ride-hailing services (Gojek/Grab) in Indonesia (Jabodetabek-Region). *International Quality Conference*, 335-341.
- Arumsari & Ariyanti. (2017). The Effect of Electronic Word of Mouth, Brand Image, Customer Trust and Customer Satisfaction Towards Repurchase Intention at PT. GO-JEK Indonesia. *GARDA BUSINESS*, 1-3.
- Chin, T. A. (2018). Determinants of Brand Image and their Impacts on Purchase

- Intention of Grab. *Journal of Arts & Social Sciences*, 26 -34
- Chiu, W.-S., Wen, Y.-C., Lin, K.-W. (2019). The influence of the NBA star endorsers' credibility and brand image on purchase intention: a case study of taiwanese american player jeremy lin. *European Journal of Management and Marketing Studies*, 22-23.
- Gooi Sai Weng, M. I. (2017). Mobile taxi booking application service's continuance usage intention by users. *Transportation Research Part D*, 207-216.
- Grand View Research. (2019, July). Ride Hailing Services Market Size, Share & Trends Analysis Report By Offering (E-hailing, Car Sharing, Rental), By Region, And Segment Forecast, 2019 – 2025. Retrieved from Grand View Research: <https://www.grandviewresearch.com/indust-analysis/ride-hailing-services-market>
- Henama, U.S., Sifolo, P.P.S. (2017). Uber: The Uber: The South Africa Experience. *African Journal of Hospitality, Tourism and Leisure* (Vol. 6, Issue 2, pp. 3-4, 2017).
- Isradila & Indrawati. (2017). Analysis of Uber Acceptance towards Online Transportation Technology Using UTAUT 2 Model: A Case Study in Uber, Grab and GoJek in Indonesia. *International Journal of Sciene and Research (USR)* (Vol. 6, Issue 7, pp. 1480-1481, July, 2017).
- Intelligence, M. (2019). TAXI MARKET – GROWTH, TRENDS, AND FORECAST (2020 – 2025). Retrieved from Mordor Intelligence: <https://www.mordorintel>
- ligence.com/industry-reports/taxi-market
- Join Extra Crunch. (2018, Apr 25). The long-rumored Grab acquisition of Uber's Southeast Asia business may be official now, but it's far from complete. Retrieved from Join Extra Crunch: <https://techcrunch.com/2018/04/24/grab-uber-deal-southeast-asia/>
- Joo, J.-H. (2017). Motives for Participating in Sharing Economy: Intentions to Use Car Sharing Services. *Journal of Distribution Science*, 23.
- Maziriri, E., Mushwana, J. (2018). Antecedents that influence Johannesburg customers' intention to use transportation network companies (TNCs): Perspectives on the uber mobile application. *ResearchGate*, 31-34.
- Musa, N.B.C., Ahmad, S.N.B, & Christiana, E.C. (2018). A study on the factors influencing online consumer repurchase intention. *ResearchGate* (Vol. 10, Issue 12, pp. 76714-76719, December, 2018).
- Mohamad, W.N.A.A.B.W., Fuad, A.F.M., Shahib, N.S., Azmi, A., Kamal, S.B.M., & Abdullah, D. (2016). A Framework of Customer's Intention to use Uber Service. *International Academic Research Journal of Business and Technology*, 103-105.
- Suratman, E., Laksamana, R., & Suradi, R. (2018). Perception of Entrepreneurs of Small and Medium Micro Enterprises in Culinary Fields in Pontianak City to Go-Jek Online Transportation. *Asian Journal of Social Science Studies* (Vol. 3, No. 4, 2018, pp. 44)
- Suriyamongkol, C. (2016). The influence of sales promotion on thai customer

- purchase decision for transportation service application: a case study of grab and uber in thailand. Bangkok: Thammasat University.
- Teo, B.C., Mustaffa, M. A., Rozi, A.I.M. (2018). To Grab or Not to Grab: Passenger ride intention towards e-hailing services. *Malaysian Journal of Consumer and Family Economics*, Vol. 21, 153-159.
- Thailand, P. (n.d.). Thailand Taxi Apps: The TOP Five To Try. Retrieved from Pack Thailand: <http://packthailand.com/thailand-taxi-apps-top-five/>
- Thelen, K. (2018). Regulating Uber: The Politics of the Platform Economy in Europe and the United States. *Perspectives on Politics*, 945-949.
- Ubaidillah, N.Z., Yi, C.Y., Hassan, M.K.H., Ali, S.S.S., & Hwang, J.Y.T. (2019). The Determinants of Generation Z Intention to Use the Grab E-Hailing Services. *International Journal of Academic Research in Business & Social Sciences* (Vol. 9, No. 11, 2019, pp. 483-490).