

Conference Paper

Understanding the Intention to Use the Grab Service in Ho Chi Minh City

Dat Ho Do, Toan Pham Nguyen Minh, Hieu Vo Minh

FPT University

Abstract.

The primary objective of this study was to identify the factors that influence Grab's intention to use its services in Ho Chi Minh City and assess the impact of these factors. The ultimate goal was to provide appropriate recommendations to enhance Grab's services. The study involved 200 participants from Ho Chi Minh City. To achieve this objective, a quantitative research method was employed, and several analytical techniques were used, including reliability testing using Cronbach's Alpha coefficient, exploratory factor analysis, correlation analysis, and regression. The analysis results revealed three factors that significantly influence the intention to use Grab services, ranked in descending order of influence: (1) Perceived Usefulness, (2) Price Value, and (3) Alternative Vehicles. These factors play a significant role in shaping customers' intentions to use Grab's services. The study acknowledges its limitations and suggests future research directions for similar studies to further explore and refine the understanding of customer behavior in the ride-hailing industry.

Keywords: intention, service quality, perceived usefulness, price value, alternative vehicles

Corresponding Author: Dat Ho Do; email: DatHD3@fe.edu.vn

Published 7 December 2023

Publishing services provided by Knowledge E

© Dat Ho Do et al. This article is distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use and redistribution provided that the original author and source are credited.

Selection and Peer-review under the responsibility of the ICESG Conference Committee.

1. INTRODUCTION

1.1. Background

Society is increasingly growing; human life is more caring. And the travel needs of the people is a necessity, public transport was born and developed to meet the above demand. Therefore, transport services have also been becoming one of the big business and the world's most influential. In this context, the development of information technology is also impact and create many new changes for the sector of passenger transport services.

These apps like Uber, Grab ... born as a result of the advancement of science and technology and it brings a new step in the transport services sector. The usability of these applications has changed the tastes of customers as well as change their habits

 OPEN ACCESS

ago. In the past, if customers want to catch a taxi, they need to call on the switchboard or beckoning any taxi parked on the road. And now, customers simply use a smartphone and log on to these applications, they can ask a car to pick them up quickly and simply.

In the world, there have been many research papers related to the factors affecting the reasons customers choose these applications instead of other traditional means. The research related to these applications such as the research of Wan Mohamad et al (2016) research of factors affecting the intention to use Uber in the tourist destination in Malaysia, Alley, J. K. (2016) research on the impact of Uber Technology to sector transportation service of New York's city.

In Vietnam, which is a country with quick access to changes. Grab service has really created a big step forward in transportation services in Vietnam in general and Ho Chi Minh City in particular. But in the current tough competition, does Grab stand for it? In order to stand firm in this period, what measures did Grab have to help their services more efficient, attracting more customers? To do this, Grab needs to understand what factors affect the intention of users to use the service. Therefore, the topic *"Factors Affecting The Decision To Use The Grab Service In Ho Chi Minh City"* will provide a scientific view on the psychology and trend of consumer behavior in using Grab services at Ho Chi Minh City, and when Grab captures these important elements, it will help them create a sustainable competitive advantage, improve market share, as well as compete with other businesses.

2. LITERATURE REVIEW.

According to Ajzen (1991), the intention to use is that individual behavior will be influenced by motivational factors, which will show the level of willingness and effort that each individual will spend to do that behavior. Blackwell, Miniard, and Engel (1973) developed and introduced a decision-making model, which consists of 5 stages.

2.1. Theory of Reasoned Action (TRA)

The theory of rational action (TRA) was developed by Fishbein and Ajzen in 1975 in the field of social psychology, based on the assumption that individuals based on reason and use the information available in a systematic way to take action. According to this theory, the most important factor in the decision on the individual's behavior is intended behavior, rather than their attitude. And the combination of the subjective norm and attitude will create is the intended behavior of an individual.

2.2. Theory of Planned Behavior (TPB)

Theory of Planned Behavior (Ajzen, 1991) is an innovative theory and development theory of reasoned action from (TRA) developed by Fishbein and Ajzen in 1975 in the field of social psychology. TRA theoretical models have shown that factors affecting the decisions that individual behavior is the behavior and intentions it is a combination of attitude and subjective Standard. But the model of the theory of TPB are outside factors Attitudes and Subjective Norm, Ajzen added factors Perceived Behavioral Control, this factor will help to know an individual will ease or difficulty in performing the behavior and this behavior that has been controlling or limit or not.

2.3. Proposed models and research hypotheses.

2.3.1. Analysis of factors in the proposed research model.

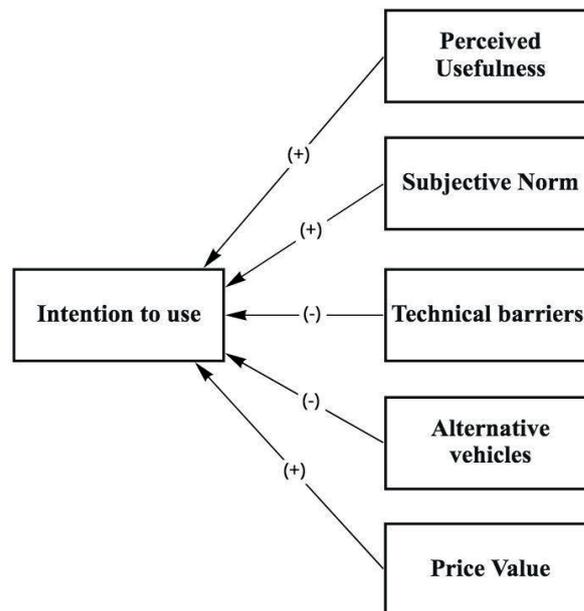


Figure 1: Research model proposed.

2.3.2. Perceived Usefulness of Grab.

According Beirao and Cabral (2007) pointed out the advantages of public transport that are low cost, reduces stress, helps users do not have to drive and do not have to search for parking, more plenty of time to relax, help reduce environmental pollution.

On the other hand, Aoife, a. (2001) has used TPB models for systems of Lucas, a light rail system in Dublin, Republic of Ireland, to measure was the belief of the people for this system. And the factors used to measure that is to save time, convenience, cost savings, reduce traffic accidents, environmental protection, safety, traffic reduction.

Thanks to the studies on, can identify the factors that impact variables perceived usefulness of the Grab service that is convenient (PU1), safety (PU2), comfort (PU3), the master of time (PU4), the time savings (PU5).

2.3.3. Subjective Norm.

According to Borith et al (2010) or Chen., C.F. and Chao, W.H. (2010) have shown factors to measure Subjective Norm's effects on the intention to use transport and those factors is the opinion of family and friends, community opinions, policies to encourage the government.

Based on these studies, to determine the elements to know the impact of norm subject to the intention to use the Grab services. However, unlike previous studies, because there Grab own characteristics and factors encouraging policies of the government will not be mentioned here. And instead, the factors of the spread on social networks, the media will be the factors that affect the intention to use the Grab. Therefore, the three factors to measure the effects of the subjective norm to intend to use Grab it was influenced by the opinions of the family (SN1), the influence of friends, colleagues (SN2), affected by journalism, social media (SN3).

2.3.4. Technical barriers.

The disadvantage related to science and technology in the access service also caused difficulties for the Grab is a new service of high technology. And in this research paper will apply the method Delphi to determine the factors about this technical hurdle and that is the understanding of the technology users (TB1), the availability of suitable phone (TB2), technology infrastructure (TB3).

2.3.5. The appeal of alternative vehicles.

One of the alternative means of creating a major threat to affect the intention to use the Grab services, it is personal vehicles. Because personal vehicles one of the means to be the people of Vietnam in general and people of Ho Chi Minh City in particular,

the first choice to participate in traffic thanks to the advantages that it brings. So, in this study, personal vehicles are the main means mentioned. According to research by Beirao and Cabral (2007) gave the advantages of private vehicles that is freedom, autonomy, flexibility, convenience, privacy, comfort, agility quickly.

Based on the above research, to identify the factors of the attractiveness of personal vehicles influence the intended use of that user is convenience of personal vehicles (AP1), the flexibility of personal vehicles (AP2) The save time of personal vehicles (AP3), the active time (AP4), costs of use of personal vehicles (AP5) habit use personal vehicles (AP6).

2.3.6. Price Value

In the study about the acceptance and use of mobile services, Venkatesh et al (2012) have given three factors among factors the price value and the three elements that are affordable, value it brings, the correlation between value and price.

Based on this study, to determine the factors of price of value to influence intention to use the Grab, and the element that is the reasonableness of the price of services (PV1), correlation value and expenditure cost of service (PV2), competing on price with traditional vehicles (PV3), competing on price with service Go Viet, Fastgo (PV4).

2.3.7. Intention to use

Using multiple statements to measure the intent to use, it helps to confirm the consistency and reliability of this dependent variable. The following three factors that can help us measure intended to use: Intent use (IU1), intended to use as often (IU2), intended to introduce the Grab for others (IU3).

2.3.8. The hypothesis of the study.

In summary, this chapter has completed the synthesis of previous studies to determine to see the elements affect the behavior of the individual. The research model was constructed based on two theories is the Theory of Planned Behavior, the Technology Acceptance Model, and combines a number of other factors, the results from the previous study. And this model will fit the audience and context of research services in Thanh Ho Chi Minh Grab. Based on the research model, the 5 factors affecting the

behavior users of Grab service are: Perceived Usefulness, Subjective Norm, Technical Barriers, The appeal of alternative vehicles, Price value.

H1: *Perceived Usefulness impact covariates (+) to the intended use of Grab*

H2: *Subjective Norm impact covariates (+) to the intention to present use Grab.*

H3: *Technical barriers impact inverse transform (-) to the intended use of the Grab.*

H4: *The appeal of alternative vehicles impacts inverse transform (-) to the intended use of the Grab.*

H5: *Price value impact covariates (+) to the intended use of the Grab.*

3. RESEARCH METHODOLOGY

3.0.1. Questionnaire.

Here are three steps to building a survey questionnaire.

Step 1: Create a preliminary questionnaire.

The content of the preliminary questionnaire will be formulated based on the theoretical foundations in chapter 2 and the scale used in this research paper as well as reference to the questionnaires in the research papers. before.

Step 2: Preliminary survey.

To complete the questionnaire, the questionnaire above will be used to conduct a test survey with a certain number within the target audience to identify the errors in the questionnaire. In addition, to improve the quality of the questionnaire, the author will consult the opinion of university lecturers.

Step 3: Complete the official questionnaire.

Based on the results from the preliminary survey, the author discovered errors and corrected to finalize the official questionnaire to serve the actual survey.

3.0.2. Methods of sampling and data collection.

Sample size: according to the probability method, the sample size is at least 5 times the number of observed variables. With the number of observed variables is 24 because the minimum sample size of the study will be 120 samples.

Google Form is a tool that will be used to design this research questionnaire because of its convenience and usefulness.

Convenient sampling method will be applied to this study, the survey forms will be sent online with Facebook tools for the survey subjects who are, will and will use Grab service in Thanh area Ho Chi Minh City, mainly in District 1, District 5, District 6 (because the area where the author can easily survey for research). The author will perform online survey via Facebook thanks to a familiar relationship.

3.0.3. Information about samples.

200 survey samples were sent to carry out the survey. During the survey, 4 people did not know about Uber, there were some votes with the same answers and some unsatisfactory survey samples were removed before being included in SPSS software. After eliminating unsatisfactory survey samples, the total number of valid samples was 150. All valid samples will be processed by SPSS 20 software to conduct data analysis

3.0.4. Methods of data analysis.

After collecting sufficient data and eliminating unsatisfactory data, the next step will be to analyze the required data through the support of SPSS 20. Include the following analysis here.

3.3.5.1. Descriptive statistical analysis.

3.3.5.1.1. Frequencies.

Survey samples after being collected will be tabulated to describe these data according to categorical variables according to classification criteria such as gender, age, occupation, and income. The purpose of descriptive statistics is to help describe the basic characteristics of the data, determine the level of influence of different groups of customers on customers' decision to use the service.

3.3.5.1.2. Descriptive.

In this section, the author will carry out descriptive statistics for each observed variable of each group of factors. The purpose of this section is to help the author determine which observational variables are affecting the user's intention to use through the Mean value in the Descriptive Statistics table. If any observed variable has this value greater

than 0.3, then the observed variable affects the intention to use, if this value is greater than 0.4, it will have a strong effect on the intention to use.

3.3.5.2. Reliability analysis.

To assess the reliability of the scale, the coefficient Cronbach's Alpha is the tool that this study used. This coefficient measuring the reliability of the scale, not calculated reliability for each observed variable. This coefficient is used to remove unsuitable variables before implementing EFA factor analysis.

Criteria used when assessing the reliability of a scale:

According to Nunnally, J. (1978) if a measurement variable is to be qualified, it needs a Corrected Item - Total Correlation coefficient ≥ 0.3 .

The value level of Cronbach's Alpha coefficient:

1. The value of α coefficient greater than or equal to 0.8 is a very good measurement scale.
2. The value of the coefficient α from 0.7 to nearly 0.8 is a good measurement scale.
3. The value of α coefficient from 0.6 upwards, the scale is eligible.

3.3.5.3. Explore factor analysis.

The exploratory factor analysis, referred to as the EFA method, is used to eliminate the observed variables to shorten the independent variables, but the meaning and information of the factor group will not be lost.

3.3.5.4. Pearson correlation analysis.

Pearson correlation analysis is used to test the linear relationship between variables through the Pearson correlation coefficient, this coefficient is denoted by the letter "r". This coefficient is used to quantify the degree of strictness of a linear relationship between two quantitative variables.

3.3.5.5. Multivariate regression analysis.

Multivariate regression analysis to help the study can determine the extent to which the dependent variable is affected by the independent variables as well as the degree of explanation of the model.

The regression equation to test hypotheses in the research model:

$$IU = \beta_1*PU + \beta_2*SN + \beta_3*TB + \beta_4*AP + \beta_5*PV$$

Dependent variable: Intention to use (IU).

Independent variables (6 elements): Perceived Usefulness (PU), Subjective Norm (SN), Technical barriers (TB), The appeal of alternative vehicles (AP), Price Value (PV).

4. DATA ANALYSIS AND EMPIRICAL FINDINGS

From the data obtained from the survey process, this section will present the analysis in turn including descriptive statistical analysis, reliability analysis, factor analysis, correlation analysis, multivariate regression analysis, and finally test hypotheses of the research model.

4.1. Descriptive statistical analysis.

4.1.1. Descriptive analysis.

Table 4.2 gives the results of the statistical analysis performed a general description for each group of factors.

4.2. Reliability analysis.

The table below shows the Cronbach's Alpha coefficient for each factor group

Results analyzed through Cronbach's alpha coefficient shows six groups of factors are reliable because they have Cronbach's alpha coefficients greater than 0.6. In the results table, the group element "Price value" Cronbach's alpha coefficient of less than 0.8, but it is still a big factor 0.6 so this group is still reliable. Besides, 5 groups remaining elements meet the requirements of larger alpha coefficients of 0.8 and no observation variables were excluded because all the observed variables have correlation coefficients greater than 0.3 are variable total as well as Cronbach's alpha value if Deleted items of the observed variables are smaller than Cronbach's alpha coefficient of each factor group.

TABLE 1: Descriptive Statistics.

	Observed variables	Mean
Perceived Usefulness	PU1	3,79
	PU2	3,45
	PU3	3,61
	PU4	3,49
	PU5	3,42
Subjective Norm	SN1	2,53
	SN2	2,97
	SN3	3,15
Technical barriers.	TB1	2,59
	TB2	2,28
	TB3	2,64
The appeal of alternative vehicles.	AP1	3,29
	AP2	3,45
	AP3	3,42
	AP4	3,53
	AP5	3,62
	AP6	3,55
Price Value	PV1	3,49
	PV2	3,28
	PV3	3,72
	PV4	2,71

Source: The author's analysis results

TABLE 2: Analyzing reliability Cronbach's Alpha.

Group of factors	Cronbach's Alpha	Initial observation variable	Observed variables remaining	Variable excluded
PU	0,907	5	5	-
SN	0,833	3	3	-
TB	0,789	3	3	-
AP	0,927	6	6	-
PV	0,686	4	4	-
IU	0,868	3	3	-

Source: The author's analysis results

4.3. Explore factor analysis (EFA).

The results of exploratory factor analysis with 5 independent variables in Varimax rotation are presented as follows:

TABLE 3: Test results of KMO and Bartlett's.

	1st time	2nd time
KMO	0,858	0,856
Sig Bartlett's Test	0,000	0,000

The results show that both runs have KMO value from 0.5 to 1, and Sig Bartlett's Test coefficient = 0.000 < 0.005. Thus, both times, it is possible to conduct a factor analysis phase because the conditions meet the requirements of this analysis

TABLE 4: Results of Eigenvalue value and total variance extract.

	1st time	2nd time
Eigenvalue value	1,010	1,005
Total variance extract	71,954	73,902

Source: The author's analysis results

Conducting the first EFA analysis, there were 22 observed variables included in the Eigenvalue standard analysis greater than 1, then 5 factors were drawn. And the total variance extracted = 71,954% > 50% shows the suitable EFA model.

Results after the second EFA analysis, the Eigenvalue value = 1,005 > 1 and extracted 5 factors and the total variance extracted = 73,902% > 50% means that the 5 extracted factors were condensed 73,903% variability observed.

Result of the first rotation matrix, 22 variables were collected into 5 factors, of which PV3 does not appear in the factor rotation matrix, so this variable will be removed and will continue to proceed factor analysis the 2nd time.

After the second analysis, the rotation matrix results showed that 21 observed variables were grouped into 5 factors, all observed variables had Factor Loading greater than 0.5, so will not remove any observed variables at this second run.

After exploring factor analysis, the PV3 variable will be removed from the research model and will use the remaining 21 observed variables to perform correlation analysis.

4.4. Pearson correlation analysis.

TABLE 5: Result of correlations.

	IU - IU	IU - PU	IU - SN	IU - TB	IU - AP	IU - PV
Pearson Correlation	1	0,648	0,189	0,144	0,449	0,526
Sig. (2-tailed)		0,000	0,21	0,079	0,000	0,000

Source: The author's analysis results

The independent variables PU, SN, AP, and PV with the dependent variable IU have a linear relationship with each other because the Sig index of Pearson correlation of these independent variables with the dependent variable IU is less than 0.05. Since the highest r coefficient is 0.648, the PU variable and the IU variable will have the strongest correlation, and between the SN and IU variables will have the weakest correlation because it has the smallest r coefficient of 0.894.

Between the TB independent variable and the IU dependent variable, the Pearson Sig correlation value is greater than 0.05, so there is no linear correlation between the two variables. At the same time, the TB variable will be removed before the linear regression analysis is performed.

4.5. Multivariate regression analysis.

Results of linear regression analysis are presented below:

TABLE 6: Summary table of results of Model Summary and ANOVA.

	Coefficient	Table
Adjusted R Square:	0,472	Model Summary
The sig value of F-test	0,000	ANOVA

Source: The author's analysis results

Adjusted R Square of this research is 0.472, it means that during the linear regression run, the variation of the dependent variable will be affected 47.2% by the independent variables, the remaining 52.8% is due to the variables outside the model and random errors.

Sig test F is 0.00 < 0.05, the multiple linear regression model is suitable for data sets and can be used.

TABLE 7: Coefficients.

	Standardized Coefficients (Beta)	Sig.	VIF
PU	,454	,000	1,609
SN	-,041	,527	1,182
AP	-,162	,025	1,446
PV	,240	,001	1,409

Sig tests the regression coefficients of independent variables PU, AP, PV are all less than 0.05, so these independent variables are all meaningful explanations for the dependent variable. However, the SN variable will be removed due to its regression coefficient of 0.05.

The coefficient VIF of independent variables is less than 2 so no multi-collinear phenomenon occurs

Regression coefficients of three variables PU, AP, and PV are greater than 0. Thus, all these variables included in the regression analysis have the same impact on the dependent variable.

Based on the magnitude of the standardized beta regression coefficients, the order of the impact level from strongest to weakest of independent variables on the dependent variable IU is: PU (0.454) > PV (0.240) > AP (-0.162).

From the results of the regression analysis, the intention to use the Grab service is expressed by the following formula:

$$\Rightarrow IU = 0,454*PU + 0,240*PV - 0.162*AP$$

The importance level of factors in each factor group is assessed by the Mean coefficient of each factor in the statistical analysis results described in section 4.1.2. Accordingly, some typical factors with the most important level in each group are **Convenient** (3.79) for **Perceived Usefulness** group, **The reasonableness of the price** (3.49) for **Price Value** group, **Costs of use of personal vehicles lower than Grab** (3.62) for **the appeal of alternative vehicles** group.

5. CHAPTER V: DISCUSSION

From the results obtained in chapter IV, in this section, the author will proceed to discuss issues related to these results. This includes the presentation of factors that cause the groups of factors influencing the intended use and that causes the groups of factors excluded from the research model.

5.1. Modified research models and accepted hypotheses

After regression analysis, the two factors Subjective Norm and Technical barriers will be removed from this research model and the model is adjusted to only 3 factors that will influence Grab's intention to use Grab's service, those are Perceived Usefulness, Price value, Alternative vehicles. Below is a revised research model.

Accepted hypotheses:

H1: *Perceived Usefulness impact covariates (+) to the intended use of Grab*

H2: *Price value impact covariates (+) to the intended use of the Grab.*

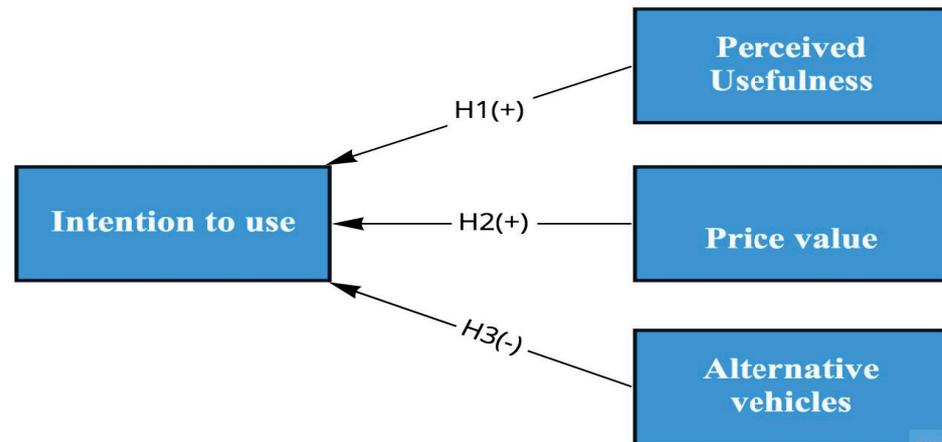


Figure 2: Modified research model.

H3: *The appeal of alternative vehicles impact covariates (-) to the intended use of the Grab.*

Based on the Standardized Coefficients (Beta) in linear regression analysis to determine these factors have a positive and negative impact on the intention to use Grab services, including two factors with large Beta coefficient more than 0 is Perceived Usefulness, Price value, so these two factors will have a positive impact on the intended use. On the other hand, the factor Alternative vehicles have a Beta less than 0 so it will impact negatively with the intention of using.

5.2. Discuss groups of factors influencing Grab's intention to use Grab.

Perceived Usefulness is a group of factors that most impact the intention to use Grab services, which means that when Grab offers a lot of usefulness, the user's intention to use will increase. This is entirely consistent with previous studies. In fact, consumers always want to use the services that are useful for them, they always need the services that help their lives and work can be done quickly and easily. Their lifestyle becomes better and more modern. This group of factors has a strong impact on the intention to use because Grab offers users many useful services such as Grabcar, Grabbike, delivery service, carpooling service. In addition, Grab also creates a sense of security for users because they provide full information related to the driver and provide a clear and transparent travel route.

Price value is a positive group with the intention to use Grab, which means that the intention to use the service will increase when Grab offers consumers attractive and

reasonable prices. This result is completely consistent with previous studies. In fact, consumers tend to choose to use services that are reasonably priced according to their economic conditions as well as the price they pay will be consistent with the value they pay. This factor affecting users' intent is that Grab offers users reasonable prices for each type of service. Although this factor has an impact on its intended use, it does not have a strong impact. The reason is that in Ho Chi Minh market today, many companies with business models like Grab have been established such as Go Viet, Bee, Fast Go ... they have provided users with levels The price is lower than Grab's price. This will make it possible for users to consider and change their decision to switch to companies' services.

The appeal of alternative vehicles is the inverse element group with the intention of using the Grab service, which means that the intention to use the service will increase as the attracts of personal vehicles fall. In fact, most of the people living in Ho Chi Minh City are using personal means to move because it saves them the cost and they can master their time, this is the cause of the reduction in intent to use their Grab services. Although this factor has an impact on the use of the Grab service, its impact is not as high, because of the participants who responded to the majority survey that is the student. These subjects will tend to both use private vehicles and use Grab depending on the case, especially for students who do not have personal means, they will use Grab as a tool to help them move, by its convenience, reasonable price as well as ensuring safety and not waste costs arising as owning a motorcycle.

5.3. Discuss the factor groups excluded from the research model.

Subjective Norm is a group of factors that are excluded from the model, this means that the factor does not affect the intention to use Grab. This result is contrary to previous studies. The reason for this factor is not the impact that the research is conducted in the context of the Vietnam market, at this time the progress of society leads to the level of each person increasing, each person can decide his or her own behavior without being influenced by others. Besides, the media has gradually lost credibility due to more and more false advertisements that lead to the loss of consumer trust. As a result, consumers' intention to use is based on their own knowledge and experiences without being influenced by opinions from family, friends and the media.

Technical barriers are a group of factors that are removed from the model, this means that this factor does not affect the intended use. As for the results of previous studies, it will be contrary to the results of this research paper. The reason that this factor does not

cause an impact is that this study is conducted in the context of technology 4.0 being developed in Vietnam. According to dammio.com statistics, the number of Internet users in Vietnam in 2018 reached 64 million users, accounting for 67% of the population. Of these, 55 million people regularly access the Internet with their mobile phones, accounting for half of all Internet users. In addition, most of the survey respondents have used Grab, because they will not have much difficulty using it. This shows that consumers will not have difficulty in using technology, especially in using smartphones to use Grab services. As a result, technological barriers will not affect the intention to use Grab.

In summary, this chapter will discuss and explain the reasons why groups of factors influence the intention to use Grab as well as understand the reasons that the two Subjective Norm factors and Technical barriers being excluded from the research model are equivalent to their having no impact on user intent.

6. CONCLUSION AND RECOMMENDATIONS.

6.1. Conclusion

Based on the results obtained from the analysis in chapter 4, the study has identified the factors and the influence of factors on the intention to use Grab services, which means that the study Having answered the two research questions presented in chapter 1. Through analysis, three independent factors affect the intention to use Grab service and are arranged in descending order as follows: (1) Perceived Usefulness, (2) Price value, (3) Alternative vehicles.

The contribution of the topic is to identify the model of factors affecting the Intention to use Grab service in Ho Chi Minh City. Through the factor analysis and regression method, the study has formed 3 groups of factors that affect the intention of using the Grab service of people in Ho Chi Minh City. Other research can use this scale and research model in areas similar to Grab or repeat studies to check and confirm research results.

This is a new contribution, highly practical and can be applied in practice. Grab as well as other businesses in the same industry, can apply the results of this study to come up with appropriate solutions for sustainable development in their businesses.

6.2. Recommend solution

To accomplish the objective of the study, the author will make some suggestions to improve Grab services, thereby promoting users' intention to use Grab services in Ho Chi Minh City. Firstly, for Perceived Usefulness factor group, this is the group of factors that have the greatest impact on the intention to use Grab, so it needs to be most concerned about making appropriate strategies. The research results show that the convenience factor has the highest impact level and the time-saving factor has the lowest impact level in the factor group. Therefore, it is recommended that Grab should further optimize the distribution area of the service, making it easier for customers to book a car, choose the appropriate vehicle in terms of distance and time of pickup. Thereby improving the autonomy of customers on time, as well as helping them to save waiting time. In addition, Grab should improve and optimize Grab's system to help improve the convenience for users when using Grab service by improving the map system to accurately update prohibited routes and one-way roads, making trip fares more accurate.

Secondly, for the price value factor group, the factor of the reasonableness of the price which is the factor with the highest level of influence. In fact, consumers also appreciated Uber on the competitive angle of price, especially the promotions that Grab has launched. Therefore, it is recommended that Grab company should maintain the current approach in terms of the service price, but Grab needs to regularly update the information on the market to take reasonable steps to compete against the main competitors of Grab. Because there are now many service companies that have a model similar to Grab and they offer lower prices with Grab, it is also the reason for the price factor of Grab lower than Go Viet, Fast go that is the factor with the lowest level of influence. Grab needs to build a fair pricing mechanism, based on studies of user willingness to pay to both offset operational costs and attract more Grab users.

Finally, for the appeal of alternative vehicles, this is a group of factors that have a negative impact on the intention to use Grab. Therefore, the proposed proposal to Grab should develop a plan to reduce the attractiveness of personal vehicles. In fact, for many years, the traffic situation in Ho Chi Minh City, personal vehicles, especially motorbikes, are the means to help people be proactive in their time and flexibility, and it also helps them to easily travel during peak hours. However, with the characteristics of Grab, it also brings convenience and flexibility to users with advanced features thanks to carpooling, choosing multiple destinations, diverse payment methods and no need to spend a lot of time searching for parking spaces and don't need to pay the extra parking fee.

References

- [1] 123. doc.org. CÁC YẾU TỐ ẢNH HƯỞNG ĐẾN QUYẾT ĐỊNH CHỌN GRABFOOD CỦA KHÁCH HÀNG TẠI TP.HCM. 2019. [online] Available at: <https://123doc.org/document/5174734-cac-yeu-to-anh-huong-den-quyet-dinh-chon-grabfood-cua-khach-hang-tai-tp-hcm.htm> [Accessed 7 May 2019].
- [2] Ahern A. The potential impact of new urban public transport systems on travel behaviour. [online] Ethos.bl.uk. 2019. Available at: <https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.248204> [Accessed 27 Jun. 2019].
- [3] Alley J. The Impact of Uber Technologies on the New York City Transportation Industry. [online] ScholarWorks@UARK. 2019. Available at: <https://scholarworks.uark.edu/finnuht/31/> [Accessed 13 Apr. 2019].
- [4] Chen C, Chao W. Habitual or reasoned? Using the theory of planned behavior, technology acceptance model, and habit to examine switching intentions toward public transit. 2019.
- [5] DAMMIO.COM. Số người sử dụng Internet ở Việt Nam vào tháng 01/2018 thật sự là bao nhiêu? | DAMMIO. [online] 2019. Available at: <https://www.dammio.com/2018/04/07/so-nguoi-su-dung-internet-o-viet-nam-vao-thang-01-2018-that-su-la-bao-nhieu> [Accessed 27 Aug. 2019].
- [6] ĐÀN D, NGHỆ T. Những ưu điểm, lợi thế giúp Grab Taxi ngày càng phát triển. [online] TECHBIKE.VN: Cộng đồng Tài xế Công Nghệ Việt Nam. 2019. Available at: <https://techbike.vn/threads/nhung-uu-diem-loi-the-giup-grab-taxi-ngay-cang-phat-trien.103/> [Accessed 10 Apr. 2019].
- [7] Grab VN. Ứng dụng đặt xe: Xe hơi riêng, taxi và xe máy | Grab. [online] 2019. Available at: <https://www.grab.com/vn/> [Accessed 5 May 2019].
- [8] Heath Y, Gifford R. Extending the Theory of Planned Behavior: Predicting the Use of Public Transportation1. 2019.
- [9] I, A. The theory of planned behaviour: reactions and reflections. - PubMed - NCBI. [online] Ncbi.nlm.nih.gov. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/21929476> [Accessed 17 Apr. 2019]. 2019.
- [10] Ibm.com. SPSS Software. [online]. 2019. Available at: <https://www.ibm.com/analytics/spss-statistics-software> [Accessed 30 Jul. 2019].
- [11] Lay-Yee K. Kok-Siew and Yin-Fah. Factors affecting smartphone purchase decision among Malaysian Generation Y. 2019. [online] Ideas.repec.org. Available

- at: <https://ideas.repec.org/a/asi/ijoass/2013p2426-2440.html> [Accessed 25 Aug. 2019].
- [12] Mark Conner L. Extending the Theory of Planned Behavior: A Review and Avenues for Further Research. [online] Citeseerx.ist.psu.edu. 2019. Available at: <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.474.9090> [Accessed 24 May 2019].
- [13] Pdfs.semanticscholar.org. 2019. [online] Available at: <https://pdfs.semanticscholar.org/a4dd/ce87edaa6d2bf14d0bd362e1c9beb24b030b.pdf> [Accessed 30 Mar. 2019].
- [14] Scholarworks.uark.edu. [online]. 2019. Available at: <http://scholarworks.uark.edu/cgi/viewcontent.cgi?article=1032&context=finnuht> [Accessed 10 Apr. 2019].
- [15] Scirp.org. Ajzen, I. The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211. doi [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T) - References - Scientific. Research Publishing. 1991. [online] Available at: <https://www.scirp.org/reference/ReferencesPapers.aspx?ReferenceID=679902> [Accessed 10 Apr. 2019].
- [16] Spacey J. What are Switching Barriers? 2019. [online] Simplicable. Available at: <https://simplicable.com/new/switching-barriers> [Accessed 30 Mar. 2019].
- [17] Statistics Solutions. Exploratory Factor Analysis - Statistics Solutions. [online]. 2019. Available at: <https://www.statisticssolutions.com/factor-analysis-sem-exploratory-factor-analysis/> [Accessed 16 Aug. 2019].
- [18] Thúc K. PHƯƠNG PHÁP NGHIÊN CỨU KHOA HỌC- NGUYỄN ĐÌNH THỌ. 2019. [online] Sachcaohoc.blogspot.com. Available at: <https://sachcaohoc.blogspot.com/2014/11/phuong-phap-nghien-cuu-khoa-hoc-nguyen.html> [Accessed 25 Aug. 2019].