

## THE STUDY OF FACTORS AFFECTING INTENTIONS TO USE CAR SHARING SERVICES IN THAILAND

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**Abstract:** *This research is conducted to explore the factors affecting intentions to use car-sharing service in Thailand. There are six hypotheses and seven variables which are perceived quality, emotional value, consumer uncertainty, product image, consumer aspiration, attitude towards service, and intention to use. The primary data were gathered from 100 respondents who are living in Thailand and have experienced in carpooling service before at least one time. The questionnaires were distributed online through social networks. The five-point Likert scale was employed to measure the relationship among the determinants. Pearson Correlation Coefficient Analysis was applied as an instrument to estimate all hypotheses according to the research objectives. The finding of this study demonstrated that all hypotheses were supported, which showed the correlation among the variables used in this study.*

**Keywords:** *Attitude, Car-sharing, Customer aspiration, Customer uncertainty, Emotional value, Intention to use, Perceived quality, Product image*

### 1. INTRODUCTION

Transportation is a one of the basic infrastructure required in human daily life. Similar to others big city around the globe, Bangkok have gradually growing number of transport user each year. According to information from Transport Statistic Sub-Division, Ministry of Transport, the number of new registered cars in Bangkok from Jan - May 2016 is 137,650 cars which cause the accumulated number of all vehicle in Bangkok reach 9,000,000 at the end of May 2016 while the road capacity can support up to only 1,600,000 cars (Transport Statistic Sub-Division, 2015). Due to unbalance amount of cars and road capacity mentioned above, Bangkok is ranked by TomTom Traffic Index Measuring Congestion Worldwide as the 2nd most congested city in the world with congestion level or extra time to spend on traffic as 57% (TomTom International BV, 2015).

Government sectors aware of this problem have tried to initiate several campaigns to address and reduce traffic problem in Bangkok. For example, Bangkok Metropolitan Administrator (BMA) arranges Car Free Day campaign to raise awareness of traffic problem and influence people to use public transportation. Another campaign is Same Way Same Car (Tang-deaw-kun-Pai-duay-kun) or EppoHan2 (Ruam-pa-lang-han-song), which are campaigns, arranged by Ministry of Energy in order to introduce car pool system to Thai people (Energy Policy and Planning office, 1999).

Importantly, BlaBlaCar is a good example for a successful car-sharing platform. It creates a fast growing community in France and spread out in many countries. The idea of BlaBlaCar was built on trust to connect the driver and the passengers who want to go for a ride in the same destination. Now, there are more than 10 million people using BlaBlaCar. It claims that BlaBlaCar is a network for social traveling and money saving for people.

## 2. PURPOSE OF THE STUDY

The objective of this study is to examine the variables impacting the intention to use car-sharing service in Thailand. Based on some previous researches, the researcher chooses to focus on seven factors and five hypotheses, which are intention to use car-sharing, perceived quality, emotional value, consumer uncertainty, car-sharing image, consumer aspiration, and attitude towards the car-sharing service. Moreover, The purpose of this study is to explore the consumer behavior for a car-sharing system which aim to create sharing economy model for urban car-sharing.

## 3. METHODOLOGY

### Hypothesis (H)

*H1: There is a significant relationship between the perceived quality and intention to use*

Perceived quality refers to the perception of an individual towards the performance of that given products or services regarding to its intended objectives (Aaker and Gray, 1982). The study of Yoo et al. (2000) tested the selected marketing mix factors and quality of brand; it was found that there is a positive correlation between perceived quality and intention to purchase. As well as the research of Naing and Chaipoopirutana (2014), who studied about factors affecting the purchase intention of smartphone in Yangon, Myanmar, the finding also showed the positive relationship between perceived quality and purchase intention. In addition, Aaker and John (1989) concluded that a high level of perceived quality towards a specific product or service and encourage consumer's positive assessments towards that product and can lead consumer to buy that product. However, Knight and Calantone (2000) argued that, in their study, there is a negative relationship among perceived quality and purchase intention in terms of intention to buy a US apparel brand of generation Y in Japan. Also, Lee et al. (2008) showed the findings from their study that perceived quality is negatively impact the purchase intention.

*H2: There is a significant relationship between emotional value and intention to use*

Based on the statement of Bagozzi et al. (1999), emotion term is a psychological statement of individuals to judge anything from the their own thinking or experiences. Several studies found that emotional value has a positive effect towards customer intention (Lee et al., 2008, Knight and Calantone, 2000, Stauss and Neuhaus, 1997, and Yu and Dean, 2001). Together, the research of Naing and Chaipoopirutana (2014), who studied about factors affecting the purchase intention of smartphone in Yangon, Myanmar, the finding also stated that there is a positive relationship between emotional value and purchase intention.

*H3: There is a significant relationship between product image and intention to use*

As Keller (1993) stated that product image is perceived image which show the experiences or expectations of consumer towards that specific brand. Moreover, the image of the product is a crucial factor affecting the estimation and evaluation of consumers before they want to purchase or use the product (Laroche et al., 2005). Product image also has a direct impact to consumer intention in the study of Souiden et al. (2011) in term of high technology products. Hsieh et al. (2004) also confirmed that product image is a significant key on consumers' purchase decisions. Chen et al. (2009) mentioned that there was a difference between the level of impact between product image of high technology product (such as mobile phones) and non-high technology product (such as shoes and clothes). And the significant effects of high technology product tend to be higher than non-high technology products. Also, the research of Naing and Chaipoopirutana (2014), who studied about factors affecting the purchase intention of smartphone in Yangon, Myanmar, the finding also stated that there is a positive relationship between product image and purchase intention.

*H4: There is a significant relationship between consumer aspiration and intention to use*

Consumer aspiration is the future plan or goal of consumer in order to invest in any products or services in terms of money, time, or effort (Sherwood, 1989). From the study of Souiden et al. (2011) about the marketing of products with high technology in emerging markets, it was found that consumer aspiration in high technology products is positively related to purchase intention. Also, the research of Naing and Chaipooipirutana (2014), who studied about factors affecting the purchase intention of smartphone in Yangon, Myanmar, the finding also stated that there is a positive relationship between consumer aspiration and purchase intention. From those studies, this researcher implies that if the companies or marketers can arrange and manage the aspiration of consumers in a positive way, it can lead the consumer's intention to buy or to use a specific product or service in the future.

*H5: There is a significant relationship between attitude towards service and intention to use*

Attitude is a crucial role in several theories which related to the estimation and measurement of social psychology, for example, the consumer behavior (Ajzen and Fishbein, 1980). Steenkamp (1990) explored the correlation among purchase intention and remanufactured products and found that attitude is directly impact the purchase intention. Huang et al. (2004) investigated about the attitudes of consumers towards the products in gray market and discovered that there is a positive relationship between two antecedents; attitude and intention. Likewise, the Li et al. (2013) found a positive correlation between attitude and purchase intention in luxury brands purchasing context in China. The research of Naing and Chaipooipirutana (2014), who studied about factors affecting the purchase intention of smartphone in Yangon, Myanmar, the finding also stated that there is a positive relationship between attitude and purchase intention.

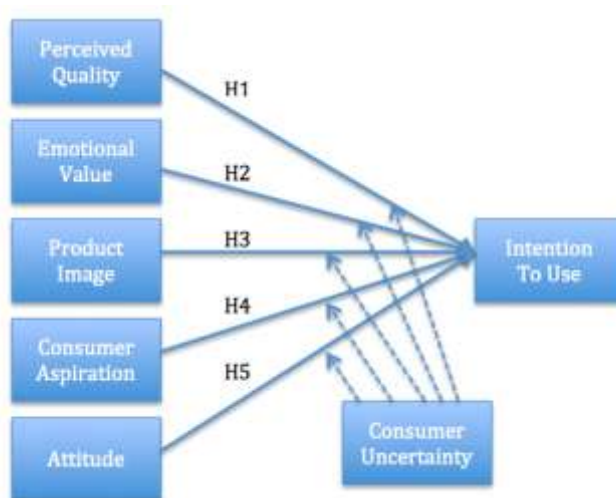


Figure-1: The modified conceptual framework for the study of factors affecting intention to use car-sharing service in Thailand.

Based on Figure 1 given above, this is the developed conceptual framework to explore the correlation between the determinants affecting intention to use car-sharing service in Thailand. There are six independent variables, which are perceived quality, emotional value, consumer uncertainty, product image, consumer aspiration, and attitude towards service. The dependent variable is an intention to use car-sharing service in Thailand.

In order to generate the research framework and questionnaire, together with the lack of previous studies about car-sharing service, the researcher decided to do a small focus group

to examine the attitude of respondents towards car-sharing service. This experimental test is designed to explore perception and mindset regarding eco-sharing of the target group. A small group of volunteers (up to 10 people) were asked to bring up their mobile phone out, unlock the screen, and hand it to the person who sits on the left hand side. By this step, it means each volunteer will have mobile phone of person who sits on the right with them. Let the volunteer to hold other's mobile (or in the other hand leaving their mobile with others) for couple minutes. During that time, the experimental conductor will give information about eco-sharing. After couple minutes passed, ask the following questions to the volunteers:

1. Do you feel comfortable or insecure to leave your unlocked phone in others hands?
2. How do feel about having other properties in your hands? And how would you take care of them?

The answers of these questions are showing perception and mindset that each has with eco-sharing concept. Experimenting result from executing this test with shows that 90% of the participants feel insecure when they have to leave their mobile with others. And 100% of the participants feel that they have to take a good care of others' properties.

Furthermore, the five-point Likert scale to examine the value of relationships among each variable. Also used as a research tool in this study to collect the primary data of respondents concerning about their intentions to use car-sharing service in Thailand. There are 35 questions in total. In this study, a hundred of people living in Thailand and have used a car-sharing service and have the intention to utilize in the future would be asked to complete a survey. All questionnaires were distributed online. The author chose to use judgment and convenience sampling to choose target population. A statistical software program or SPSS was used to analyze the data.

#### 4. RESULTS AND DISCUSSION

For the demographic factors, the researcher gathered five personal information of respondents, which are gender, marital status, age level, monthly allowance, highest education level. The majority of the respondents are female (60%), and most are single (79%). The highest age level group is between 26 - 35 years old (64%) and the largest monthly income is between 15,001 to 25,000 THB (63%) and highest education level group is bachelor degree (51%).

For inferential analysis, Pearson correlation was selected to test five hypotheses. The results appeared that all five hypotheses have the significance value at 0.000, which is less than 0.01. This means all of the hypotheses in the study of factors affecting intention to use car-sharing service in Thailand were supported.

Table 1: Summary of hypotheses testing using Pearson Correlation Coefficient (Bivariate)

Hypotheses	Significant value	Correlation Coefficient	Testing result
H1 There is a significant relationship between perceived quality and intention to use.	.000	.567	Supported
H2 There is a significant relationship between emotional value and intention to use.	.000	.651	Supported

H3 There is a significant relationship between product image and intention to use.	.000	.538	Supported
H4 There is a significant relationship between consumer aspiration and intention to use.	.000	.578	Supported
H5 There is a significant relationship between attitude towards product and intention to use.	.000	.755	Supported

Based on the *hypothesis 1*, it is indicated that if the perceived quality of the product is high, the purchase intention of that product will also be high. If the marketers can increase the perceived quality of car-sharing that it is more convenient and more useful than other transportations, the intention of people to use this service will increase. For instance, the interesting idea should be spread out through several media such as social media to make people feel like this car-sharing service is a good choice to choose when they want to go on a road trips and it is a new way to meet new people and share the cost. Many scholars also supported this finding that perceived quality plays the crucial role in consumer behavior (e.g. Zeithaml et al., 1996). Commonly, consumers may want to use a given service if they perceived the product or service could offer the right features, quality, or performance benefits. Marketers can ensure the customers that car-sharing service is a great and safe choice to choose compare to other transportations especially for females, which are the majority of respondents, want to feel safe when using the service. Moreover, the perspective of sharing economy should be encouraged to attract the younger customers.

Based on the *hypothesis 2*, a strong positive relationship between emotional value and intention to use car-sharing service in Thailand was found. Some previous studies presented that emotional value can motivate the intention to use or buy something (Babin and Babin, 2001 and Morris et al., 2002). Besides the quality of product or service, the emotional thinking can impact directly to the decision making process. Therefore, if the marketer can make the customers satisfy or have positive feelings with the car-sharing service, the customers will tend to use the service more and more. The marketing campaign to promote the impressive experience of car-sharing service should be conducted through social media to catch the attention of people, especially, to make they feel like traveling by car-sharing can generate the enjoyment with new atmosphere and also help to save energy for the world.

For *hypothesis 3*, product image, in this case, refers to the image of car-sharing service, directly impact the decision making to use a high technology service. In this case, car-sharing service involved with the technology platforms, so it is very important to make customers believe in the company, for example, the company should be well known enough or have a trustable partner (e.g. payment process). Moreover, the application should have a good feature and easy to use with high quality.

Based on *hypotheses 4*, a moderate positive relationship between consumer aspiration and intention to use car-sharing service in Thailand was found. The service providers can promote the better lifestyle of car-sharing (such as the benefit of sharing economy) to attract the customers especially young people who want to experience the new experience and new challenge. However, the safety of transportation should be taken into account.

For *hypothesis 5*, high level of consumers' attitude towards products plays a crucial role for the antecedent of future use. The company should create the overall positive attitude to the consumers' mindsets.

## 5. CONCLUSION

For the intention to use car-sharing service in Thailand, the consumer uncertainty seems to be important to the decision-making. It can be said that managing consumer uncertainty can contribute in stimulating consumer intention to use. For example, marketers could promote and give more information to customers or provide a good quality of the application, which are stable and reliable to customers. These can help to reduce the level of customer uncertainty towards car-sharing service. Moreover, E-word of mouth can be promoted in the campaign.

Therefore, creating customer involvement and engagement through social media or marketing campaign can make the customers interested in the service. However, Thai people may hesitate to try new things but if the company promotes and gives enough information to public, people might be want to try. And the idea of collaborative consumption should be involved to create an image of what company wants to do to present.

For the limitation and future study, this research focused on the car-sharing service to explore the idea of sharing economy. Further researches could examine in other category services. The researcher focused only seven variables in this study according to the limited time and the cost. Moreover, the lack of previous researches occurred. Further studies could focus on other variables such as risk. Further studies should conduct the in-depth interviews and focus group for more insights. This study is conducted in Thailand, and it can represent the only intention to use of customers who lived in Thailand and had little experience in car-sharing service, as it is a developing country. Further research could be conducted in other developing countries such as Myanmar, Cambodia and other members of ASEAN.

## REFERENCES

- Aaker, D.A., and Gray, J. S. (1982). Positioning Your Product. *Business Horizons*, May-June, 1982
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211
- Babin, B. J., Chebat, J-C., and Michon, R. (2004). Perceived appropriateness and its effect on quality. *Journal of Retailing and Consumer Services*, 11(5), 287-298
- Babin, B. J., Darden, W. R., and Griffin, M. (1994). Work and/or fun: Measuring hedonic and utilitarian shopping value. *Journal of Consumer Research*, 20(4), 644-656
- Bagozzi, R. P., Gopinath, M., and Nyer, P. U. (1999). The role of emotions in marketing. *Journal of the Academy of Marketing Science*, 27, 184-206
- Baker, D. A., and Crompton, J. L. (2000). Quality satisfaction and behavioral intentions. *Annals of Tourism Research*, 27(3), 785-804
- BlaBlaCar. About Us. [Online] Available at <<https://www.blablacar.co.uk/about-us>> [Accessed 13 October 2016]
- Energy Policy and Planning Office. Thailand Energy Efficient Development Plan. [Online] Available at <<http://www.eppo.go.th/index.php/en/policy-and-plan/en-tieb/tieb-eeep>> [Accessed 13 August 2016]
- Fishbein, M. and Ajzen, I. (1975). Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research, Addison-Wesley, Reading, MA.

- Hong, S. J., Thong, J. Y. L., and Moon, J. Y. (2008). Understanding the behavioral of mobile data services consumers. *Information Systems Frontiers*, 10(4), 431-445
- Keller, K. L. (2003). *Strategic Brand Management: Building, Measuring, and Managing Brand Equity*, (2<sup>nd</sup> ed.), Prentice-Hall, New York, NY
- Knight, G. A. and Calantone, R. J. (2000). A flexible model of consumer country-of-origin perceptions. *International Marketing Review*, 17(2), 127-145
- Laroche, M., Papadopoulos, N., Heslop, L. A., and Mourali, M. (2005). The influence of country image structure on consumer evaluations of foreign products. *International Marketing Review*, 22(1), 96-115
- Lee, Y. M., Kim, K. Y., Pelton, L., Knight, D., and Forney, J. (2008). Factors affecting Mexican college students' purchase intention towards a US apparel brand. *Journal of Fashion Marketing and Management*, 12(3), 294-307
- Miller, J. A. (1976). Store satisfaction and aspiration theory: a conceptual basis for studying consumer discontent. *Journal of Retailing*, 52(3), 65-84
- Ministry of Transportation. *Transportation data*. [Online] Available at <<http://www.mot.go.th/statmot.html?id=4>> [Accessed 13 August 2016]
- Naing, K. W. and Chaipooipirutana, S. (2014, August). The factor affecting purchase intention of a smart phone in Yangon, Myanmar. International conference on trends in Economics, Humanities, and management (ICTEHM'14), Pattaya ,Thailand
- National Energy Policy Office. *Car-sharing Project*. [Online] Available at <<http://www2.eppo.go.th/vrs/VRS44-08-CarPool.html>> [Accessed 13 August 2016]
- Sherwood, R. A. (1989). A Conceptual Framework for the Study of Aspirations. *Research in Rural Education*, 6(2)
- Souiden, N., Pons, F., and Mayrand, E. M. (2011). Marketing high-tech products in emerging markets: the differential impacts of country image and country-of-origin's image. *Journal of Product & Brand Management*, 20(5), 356-367
- Steenkamp, J. B. E. M. (1990). Conceptual model of the quality perception process. *Journal of Business Research*, 21(4), 309-333
- TomTom. *Traffic Index*. [Online] Available at <[http://www.tomtom.com/en\\_gb/trafficindex/](http://www.tomtom.com/en_gb/trafficindex/)> [Accessed 13 August 2016]
- Yoo, B., Donthu, N., and Lee, S. (2000). An examination of selected marketing mix elements and brand equity, *Journal of the Academy of Marketing Science*, 28(2), 195-211
- Yu, Y. T., and Dean, A. (2001). The contribution of emotional satisfaction to consumer loyalty. *International Journal of Service Industry Management*, 12(3), 234-50
- Zeithaml, V. A. (1988). Consumer perceptions of price, quality and value: A means-end model and synthesis of evidence, *Journal of Marketing*, 52(3), 2-22