Factors affecting satisfaction and reuse intention of customers using online motorbike service

Nguyen Thuy Quynh Loan¹, Ngo Quang Hung¹*

¹Ho Chi Minh City University of Technology, Vietnam National University HCMC, Vietnam
*Corresponding author: ngoquanghung610@gmail.com

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ABSTRACT

The paper’s objective was to identify and measure factors impacting on satisfaction and reuse intention of customers using online motorbike service. The research model proposed five factors affecting customer satisfaction such as perceived service quality, perceived value, transaction convenience, perceived ease of use and perceived usefulness as well as two factors affecting reuse intention such as satisfaction and habit. The study analyzed data of 269 suitable questionnaires collected from customers aged 18 and older who have used the online motorbike service in HCM City. The results indicated that all the five factors affected customers’ satisfaction and that reuse intention was impacted by satisfaction and habit. The research also proposed managerial implications for enhancing online motorbike service quality.

1. Introduction

Nowadays, with the development of technology, Internet and smartphone devices, the integration of technology applications into passenger transportation services in Vietnam is no longer something new. Thanks to the development of tracking technology, especially the Global Positioning System (GPS), transportation services using online booking applications are becoming more and more popular. Several companies such as Grab, Uber, Mai Linh and even Go-Jek from Indonesia are offering customers various ride-hailing transport services. These services provide customers with more choices between either a car or a motorbike based on the purpose and the price. A BMG survey of GrabBike Service Analysis (M. T. Nguyen & Tran, 2016) showed that 77% of respondents chose a motorbike as the key means of transport because of its convenience, flexibility and cost savings. In Vietnam, motorbikes are also considered the most common means of transportation. Thanks to its cheaper price and convenience, online motorbikes are making a big difference from traditional ones and preferred by most users.

Competition in the online motorbike market among GrabBike, Uber, Mai Linh and other Vietnamese brands has recently become a hot topic and received much attention from the media and public. However, most previous studies on the online transportation service merely focused on technology adoption (T. D. Nguyen, T. M. Nguyen, & Huynh, 2015) or on taxi service...
without paying much attention to motorbike service (Isradila & Indrawati, 2017; Khairani & Hati, 2016). Therefore, this study aimed to identify and measure the factors affecting satisfaction and reuse the intention of customers using online motorbike service in Vietnam. Then, the study proposed some managerial implications for companies to enhance online motorbike service quality to meet their customers’ demands.

2. Literature review

2.1. Concepts

Global Positioning System (GPS) is a satellite navigational system, predominantly designed for navigation. GPS uses these "man-made stars" or satellites as reference points to calculate geographical positions, accurate to a matter of meters. A GPS can help us to determine exactly where we are at any given moment (Uddin, Islam, Afjal, & Nadim, 2013).

Online transportation service is defined as a company that provides customers with a unique service as its core business. These companies use two means for their services: cars for transportation and mobile applications to reserve the trip. Strict competitiveness in this industry made online transportation providers feel the need of maintaining both their service quality and e-service quality. Using this service, customers are easy to switch from one company to their competitors without paying any switching cost on the internet (Barutcu, 2010). According to Jenita (2012), it is defined as a transportation service that all transactions are done through an online base, using smartphones, related applications and the Internet.

Satisfaction is the customer’s evaluation of a product or service in terms of whether that product or service has met their needs and expectations (Zeithaml & Bitner, 2003). According to Kotler and Keller (2006), customer satisfaction is defined as a person’s feeling of pleasure or disappointment in the comparison between products’ perceived performance to their expectations.

Reuse intention is defined as the individual’s judgement about buying again a designated service from the same company, taking into account his or her current situation and likely circumstances (Hellier, Geersen, Carr, & Rickard, 2003).

2.2. Factors impacting on customer satisfaction

Perceived service quality

Perceived service quality is viewed as the degree and direction of a discrepancy between consumers’ perceptions and expectations (Parasuraman, Zeithaml, & Berry, 1988). In other words, perceived service quality is consumer evaluation of service efficiency that they received and compared with their expectation (Jiang & Wang, 2006). Previous studies indicated that service quality of providers is a factor that can influence customer satisfaction through their perception of actual experiences after using these services (Sureshchandar, Rajendran, & Anantharaman, 2002). Murray and Howat (2002) proved that perceived service quality had a positive impact on customer satisfaction in sport and leisure centers. Then, Malik (2012) confirmed the positive relationship between perceived service quality and customer satisfaction in service industries in Pakistan. Thus, hypothesis H1 is suggested as follows:
H1(+): Perceived service quality positively impacts on customer satisfaction

Perceived value

Perceived value is consumers’ overall assessment of the product or service utility based on perceptions of what is received and what is given (Zeithaml, 1988). Besides, it is defined as consumers’ cognitive trade-off between the perceived benefits of the applications and the payment for them (Dodds, Monroe, & Grewal, 1991). With the growing competition of the market and changes in customer perceptions of products and services, previous researchers have determined that perceived value and customer satisfaction are correlated with each other (Patterson, Johnson, & Spreng, 1997). The research of Khairani and Hati (2016) in the field of online transportation service also confirmed that perceived value positively influences customer satisfaction. Thus, hypothesis H2 is suggested as follows:

H2(+): Perceived value positively impacts on customer satisfaction

Transaction convenience

Transaction convenience is defined as the customer’s perception of the time and effort to make a transaction (Berry, Seiders, & Grewal, 2002). It is a component of service convenience, it affects consumers when they decide to purchase a service and must complete a transaction for that service. The study of Khazaei, Manjiri, Samiey, and Najafi (2014) in the banking sector has also demonstrated that convenient services which include transaction convenience also have a positive influence on customer satisfaction. Besides, Kin and Farida (2016) argues that transaction convenience has a positive impact on customer satisfaction in online shopping. In motorbike service, more flexible payments through card or cash offer customers more choices and help them to save time. Thus, hypothesis H3 is suggested as follows:

H3(+): Transaction convenience positively impacts on customer satisfaction

Perceived ease of use

Perceived ease of use is defined as the degree to which a person believes that the use of a particular system would be free of effort (Davis, 1989). In other words, it is the degree to which using technology will provide benefits to consumers in doing certain activities (Venkatesh, Morris, Davis, & Davis, 2003). Perceived ease of use was also found to have a positive effect on customer satisfaction (Pappas, Pateli, Giannakos, & Chrissikopoulos, 2014). Thus, hypothesis H4 is suggested as follows:

H4(+): Perceived ease of use positively impacts on customer satisfaction

Perceived usefulness

Perceived usefulness is the degree to which a person believes that the use of a particular system would enhance his or her job performance (Davis, 1989; Venkatesh et al., 2003). It is argued that perceived usefulness has a positive influence on customer satisfaction in applying online technology in purchase and transportation services (Isradila & Indrawati, 2017; Pappas et al., 2014). Thus, hypothesis H5 is suggested as follows:
**H5(+)**: Perceived usefulness positively impacts on customer satisfaction

### 2.3. Factors impacting on reuse intention satisfaction

There are several studies on the relationship between customer satisfaction and intention. Some previous studies have found that satisfaction is a direct antecedent of behavioral intention (Cronin, Brady, & Hult, 2000; Dodds et al., 1991; Petrick & Backman, 2002). Studies of online shopping services also show that satisfaction has a positive influence on customer repurchase intention (Hellier et al., 2003; Pappas et al., 2014; Suhailey & Soelash, 2017). In addition, customer satisfaction has also shown a positive influence on reuse intention in the field of airline service (Saha & Theingi, 2009; Yeoh & Chan, 2011). Therefore, hypothesis H6 is suggested as follows:

**H6(+)**: Customer satisfaction positively impacts on reuse intention of customers

**Habit**

According to Limayem, Hirt, and Cheung (2007), habit is the extent to which people tend to perform behaviors automatically through learning. Habit is equivalent to automatic. If a person’s behavior is repeated many times, it becomes habitual and automatically reminds them whenever they intend. In studies of Isradila and Indrawati (2017), and Ngo and Le (2017), habit is the factor directly influencing customer reuse intention. Thus, hypothesis H7 is suggested as follows:

**H7(+)**: Habit positively impacts on reuse intention of customers

### 2.4. Research model

Based on the above hypotheses, the research model is proposed in Figure 1.

![Figure 1. Research model](image)

### 3. Research methodology

The research process consisted of two main steps: preliminary research and formal research. *Preliminary research* was conducted using qualitative research to correct and supplement the variables suitable for online motorbike service in the Vietnamese context. In this step, the face-to-face discussion was conducted by interviewing 10 people who have used online motorbike service in Ho Chi Minh City. Based on the characteristics and regulations of
online motorbike service in Vietnam, the interviewees suggested adding twelve variables in the final questionnaire (Table 1). As a result, the number of variables increased from 26 to 38. In the formal study, a convenient sampling survey using a closed questionnaire was used to collect the data. Revised measurement scales consisted of 38 variables of eight factors (Table 1). The minimum sample size was planned 190 (= 38x5). Then, 269 suitable questionnaires were collected from customers aged 18 and older who have used online motorbike from GrabBike, Uber Moto, Mai Linh Bike in Ho Chi Minh City. Techniques used for data analysis were descriptive statistics, Cronbach’s Alpha reliability test, Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) in testing the reliability and validity of the measurement scale, and Structural Equation Modeling (SEM) in testing hypotheses of the research model.

Table 1
Final measurement scale

<table>
<thead>
<tr>
<th>Code</th>
<th>Measurement scale</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Perceived service quality</strong></td>
<td></td>
</tr>
<tr>
<td>PC01</td>
<td>Online motorbike service makes me feel safe (*)</td>
<td>Morton, Anable, and Caulfield (2016)</td>
</tr>
<tr>
<td>PC02</td>
<td>Online motorbike service goes quickly.</td>
<td></td>
</tr>
<tr>
<td>PC03</td>
<td>The time of picking up and dropping off passengers of online motorbike service is on schedule.</td>
<td></td>
</tr>
<tr>
<td>PC04</td>
<td>Online motorbike service is available when I have a need.</td>
<td></td>
</tr>
<tr>
<td>PC05</td>
<td>The driver compliances with the traffic laws (do not cross the red lights, take the right lane, wear a helmet).</td>
<td>Qualitative research</td>
</tr>
<tr>
<td>PC06</td>
<td>The attitude and communication of driver with me is enthusiastic and polite. (*)</td>
<td></td>
</tr>
<tr>
<td>PC07</td>
<td>Transportation (motorbike) and support (helmet, jacket) facilities are fully equipped.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Perceived value</strong></td>
<td></td>
</tr>
<tr>
<td>PV08</td>
<td>The price of online motorbike service is suitable.</td>
<td>Dodds et al. (1991)</td>
</tr>
<tr>
<td>PV09</td>
<td>The value of online motorbike service is commensurate with the amount of money I spend. (*)</td>
<td></td>
</tr>
<tr>
<td>PV10</td>
<td>The price of online motorbike service fits my affordability.</td>
<td></td>
</tr>
<tr>
<td>PV11</td>
<td>The quality of online motorbike service is commensurate with the amount of money I spend.</td>
<td>Qualitative research</td>
</tr>
<tr>
<td></td>
<td><strong>Transaction convenience</strong></td>
<td></td>
</tr>
<tr>
<td>TC12</td>
<td>The payment method of online motorbike service is simple.</td>
<td>Pham (2015)</td>
</tr>
<tr>
<td>TC13</td>
<td>The payment method of online motorbike service is quick.</td>
<td></td>
</tr>
<tr>
<td>TC14</td>
<td>The payment method of online motorbike service is convenient (credit card, digital wallet or cash...).</td>
<td></td>
</tr>
<tr>
<td>Code</td>
<td>Measurement scale</td>
<td>Sources</td>
</tr>
<tr>
<td>------</td>
<td>-------------------</td>
<td>---------</td>
</tr>
<tr>
<td>TC15</td>
<td>I have not encountered any difficulties in interacting with this service. (*)</td>
<td>Qualitative research</td>
</tr>
</tbody>
</table>

**Perceived ease of use**

| PE16 | I am easy to book online motorbike service. | Pappas et al. (2014) |
| PE17 | Online booking application helps me find a motorbike quickly. | |
| PE18 | The online booking application tells me the amount payable in advance. | |
| PE19 | I can change the schedule or pick-up/drop-off place easily. (*) | |
| PE20 | It’s easy for me to learn how to book online motorbike service | Qualitative research |
| PE21 | The interface of online booking application is simple and easy to use. | |

**Perceived usefulness**

| PU22 | Online motorbike service makes my traveling more convenient. | Pappas et al. (2014) |
| PU23 | Online motorbike service makes my traveling faster. | |
| PU24 | Online motorbike service gives me more options when moving. (*) | |
| PU25 | Motorbike driver’s information shown on the application clearly helps me feel safe and confident. | Qualitative research |
| PU26 | Online booking application helps me save time. | |

**Habit**

| HT27 | I usually use online motorbike service when needed. | Agag and El-Masry (2016) |
| HT28 | I only choose online motorbike service when needed. | |
| HT29 | The use of online motorbike service has become familiar to me. | |

**Satisfaction**

| CS30 | Online motorbike service meets my travel needs. (*) | Pappas et al. (2014) |
| CS31 | Online motorbike service meets my expectation. | |
| CS32 | I feel comfortable using online motorbike service. (*) | |
| CS33 | The switchboard of online motorbike service often supports and resolves my troubles fast and exactly. | Qualitative research |
| CS34 | I would advise my friends/relatives/colleagues to use online motorbike service. | |

**Reusedention**
Note: Variables (*) were removed in Cronbach’s Alpha reliability analysis and Exploratory Factor Analysis.
Source: The researcher’s data analysis

4. Results and discussions

4.1. Descriptive statistics

The information on survey samples is presented in Table 2.

Table 2

Summary of the sample description

<table>
<thead>
<tr>
<th>Sample information</th>
<th>Frequency</th>
<th>Percent</th>
<th>Sample information</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Company</td>
<td></td>
<td></td>
<td>2. Career</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GrabBike</td>
<td>186</td>
<td>45.5%</td>
<td>Employee</td>
<td>70</td>
<td>26.0%</td>
</tr>
<tr>
<td>Uber Moto</td>
<td>156</td>
<td>38.1%</td>
<td>Student</td>
<td>8</td>
<td>3.0%</td>
</tr>
<tr>
<td>Mai Linh Bike</td>
<td>67</td>
<td>16.4%</td>
<td>Housewife</td>
<td>34</td>
<td>12.6%</td>
</tr>
<tr>
<td>Total</td>
<td>409</td>
<td>100%</td>
<td>Freelancer</td>
<td>68</td>
<td>25.3%</td>
</tr>
<tr>
<td>3. Time for using service</td>
<td></td>
<td></td>
<td>Unskilled labor</td>
<td>41</td>
<td>15.2%</td>
</tr>
<tr>
<td>Under 3 months</td>
<td>38</td>
<td>14.1%</td>
<td>Others</td>
<td>48</td>
<td>17.8%</td>
</tr>
<tr>
<td>From 3 to 6 months</td>
<td>60</td>
<td>22.3%</td>
<td>Total</td>
<td>269</td>
<td>100%</td>
</tr>
<tr>
<td>From 6 to 9 months</td>
<td>59</td>
<td>21.9%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From 9 to 12 months</td>
<td>55</td>
<td>20.4%</td>
<td>Under 5 mil. VND</td>
<td>55</td>
<td>20.4%</td>
</tr>
<tr>
<td>Over 12 months</td>
<td>57</td>
<td>21.2%</td>
<td>From 5 to 10 mil VND</td>
<td>78</td>
<td>29.0%</td>
</tr>
<tr>
<td>Total</td>
<td>269</td>
<td>100%</td>
<td>From 11 to 20 mil VND</td>
<td>71</td>
<td>26.4%</td>
</tr>
<tr>
<td>5. Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>115</td>
<td>42.8%</td>
<td>Over 20 mil VND</td>
<td>65</td>
<td>24.2%</td>
</tr>
<tr>
<td>Female</td>
<td>154</td>
<td>57.2%</td>
<td>Total</td>
<td>269</td>
<td>100%</td>
</tr>
<tr>
<td>Total</td>
<td>269</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 6. Age

<table>
<thead>
<tr>
<th>Sample information</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 - 29 years old</td>
<td>109</td>
<td>40.5%</td>
</tr>
<tr>
<td>30 - 39 years old</td>
<td>88</td>
<td>32.7%</td>
</tr>
<tr>
<td>40 - 49 years old</td>
<td>72</td>
<td>26.8%</td>
</tr>
<tr>
<td>Total</td>
<td>269</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: The researcher’s data analysis

### 4.2. Cronbach’s Alpha and Exploratory Factor Analysis (EFA)

Cronbach’s Alpha reliability analysis measured the internal consistency of the constructed items to assess the reliability of each factor in measurement scales. The results of the Cronbach’s Alpha reliability test showed that 35 variables were retained and 3 variables were eliminated (Table 1) as PC06, PV09 and CS32 because their corrected item-total correlation was less than 0.3. The reliabilities of the measurement scales after deleting all three variables have Cronbach’s Alpha coefficients of 0.816 to 0.913, which were greater than 0.8 (Table 3). Therefore, the measurement scales are reliable.

EFA was used to test the validity of measurement scales by using Principal Axis Factoring and Promax rotations. Five variables were eliminated as PE19, PU24, TC15, CS30 and PC01 (Table 1) because their factor loading coefficients were less than 0.5. The KMO (0.838 > 0.5) and Bartlett’s test (p < 0.05) were satisfactory to confirm the appropriateness to use factor analysis. The total variance extracted of 69.3% (> 50%) was satisfactory for retention based on the total variance criterion (Table 3). The variables on the same factor had a high factor loading coefficients (> 0.5) so that the measurement scales were convergent. In addition, eight factors were extracted in accordance with the original eight concepts and they all were discriminated. Thus, the measurement scales were valid. Cronbach’s Alpha reliability test and the final EFA are presented in Table 3. As a result, 30 variables of eight factors will be used for CFA in the next step.

### Table 3

Cronbach’s Alpha and the final EFA

<table>
<thead>
<tr>
<th>Perceived ease of use</th>
<th>Perceived usefulness</th>
<th>Reuse intention</th>
<th>Perceived quality</th>
<th>Perceived value</th>
<th>Transaction convenience</th>
<th>Habit</th>
<th>Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC02</td>
<td>0.771</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC03</td>
<td>0.721</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>PC04</td>
<td>0.761</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>PC05</td>
<td>0.696</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC07</td>
<td>0.693</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Perceived ease of use</td>
<td>Perceived usefulness</td>
<td>Reuse intention</td>
<td>Perceived quality</td>
<td>Perceived value</td>
<td>Transaction convenience</td>
<td>Habit</td>
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</tr>
<tr>
<td>PV08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.831</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PV10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.940</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PV11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.866</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TC12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.831</td>
<td></td>
</tr>
<tr>
<td>TC13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.921</td>
<td></td>
</tr>
<tr>
<td>TC14</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>0.849</td>
<td></td>
</tr>
<tr>
<td>PE16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.733</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.793</td>
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<td></td>
</tr>
<tr>
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<td></td>
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<td></td>
<td>0.822</td>
<td></td>
<td></td>
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<tr>
<td>PE20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.888</td>
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<tr>
<td>PE21</td>
<td></td>
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<td></td>
<td>0.879</td>
<td></td>
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<tr>
<td>PU22</td>
<td></td>
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<td>PU23</td>
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<td></td>
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<td></td>
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<td></td>
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<tr>
<td>PU25</td>
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<td>0.757</td>
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<td>PU26</td>
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<td></td>
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</tr>
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<td>HT27</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>HT28</td>
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<td></td>
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<td></td>
<td>0.774</td>
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</tr>
<tr>
<td>HT29</td>
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<td></td>
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</tr>
<tr>
<td>CS31</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td>0.831</td>
<td></td>
</tr>
<tr>
<td>CS33</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
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<td>0.860</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IR36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.836</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IR37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.794</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IR38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.825</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cronbach's Alpha</td>
<td>0.885</td>
<td>0.859</td>
<td>0.898</td>
<td>0.913</td>
<td>0.816</td>
<td>0.844</td>
<td>0.879</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>7.855</td>
<td>3.253</td>
<td>2.862</td>
<td>2.758</td>
<td>2.376</td>
<td>1.642</td>
<td>1.417</td>
</tr>
</tbody>
</table>

Total variance extracted: 69.3%

Source: The researcher’s data analysis
4.3. Confirmatory Factor Analysis (CFA)

The CFA was used to confirm the factor structure extracted in the EFA. The CFA was performed using the Maximum Likelihood Estimate (MLE) method, which is a very commonly used method (Hair, Black, Babin, & Anderson, 2014). The results of CFA are presented in Table 4 and Figure 2.

Table 4

Goodness-of-Fit Indices - CFA measurement model

<table>
<thead>
<tr>
<th>Criteria</th>
<th>CMIN/DF</th>
<th>GFI</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threshold</td>
<td>&lt; 3</td>
<td>&gt; 0.9</td>
<td>&gt; 0.9</td>
<td>&gt; 0.9</td>
<td>&lt; 0.08</td>
</tr>
<tr>
<td>Actual value</td>
<td>1.767</td>
<td>0.861</td>
<td>0.937</td>
<td>0.945</td>
<td>0.053</td>
</tr>
</tbody>
</table>

Source: The researcher’s data analysis

The Goodness of Fit Indices (GFI) were less than 0.9, however, according to D. T. Nguyen and T. M. T. Nguyen (2011), if a model has TLI and CFI values from 0.9 to 1, CMIN / df less than 3, and RMSEA smaller or equal 0.08, it is still permissible. Therefore, it is concluded that the GFI for the proposed model indicated the overall model fits.

Testing validity and reliability in the CFA

It is absolutely necessary to establish convergent and discriminant validity, as well as reliability, when doing a CFA. There are a few measures that are useful for establishing validity and reliability (Hair et al., 2014) as Composite Reliability (CR) and Average Variance Extracted (AVE).

In the CFA, CR values were 0.747 ÷ 0.914 higher than 0.5, so all measurement scales achieve reliability. Because AVE values were 0.528 ÷ 0.783 greater than 0.5 and all variables have a standardized regression weight of 0.665 to 0.933 which was greater than 0.5 and statistically significant (p < 0.05), the scales get convergent validity. The scales also get discriminant validity because of the square root of AVE greater than inter-construct correlations. Thus, it is concluded that the CFA measurement model achieves reliability and validity.
Figure 2. CFA measurement model

4.4. Structural Equation Modeling (SEM)

The results of SEM are presented in Table 5 and Figure 3. The Goodness of Fit Indices for the proposed model indicated the overall model fits.

Table 5

Goodness-of-Fit indices - SEM structural model

<table>
<thead>
<tr>
<th>Criteria</th>
<th>CMIN/DF</th>
<th>GFI</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threshold</td>
<td>&lt; 3</td>
<td>&gt; 0.9</td>
<td>&gt; 0.9</td>
<td>&gt; 0.9</td>
<td>&lt; 0.08</td>
</tr>
<tr>
<td>Actual value</td>
<td>1.805</td>
<td>0.855</td>
<td>0.934</td>
<td>0.941</td>
<td>0.055</td>
</tr>
</tbody>
</table>

Source: The researcher’s data analysis
**Figure 3.** Research model and hypothesis testing results

**Hypothesis testing**

**Table 6**

The results of hypothesis testing

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Standardized Regression Weights</th>
<th>P</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived service quality $\rightarrow$ Satisfaction</td>
<td>0.161</td>
<td>0.024</td>
<td>Support H1</td>
</tr>
<tr>
<td>Perceived value $\rightarrow$ Satisfaction</td>
<td>0.279</td>
<td>0.001</td>
<td>Support H2</td>
</tr>
<tr>
<td>Transaction convenience $\rightarrow$ Satisfaction</td>
<td>0.323</td>
<td>0.002</td>
<td>Support H3</td>
</tr>
<tr>
<td>Perceived ease of use $\rightarrow$ Satisfaction</td>
<td>0.165</td>
<td>0.033</td>
<td>Support H4</td>
</tr>
<tr>
<td>Perceived usefulness $\rightarrow$ Satisfaction</td>
<td>0.315</td>
<td>0.002</td>
<td>Support H5</td>
</tr>
<tr>
<td>Satisfaction $\rightarrow$ Reuse intention</td>
<td>0.446</td>
<td>0.002</td>
<td>Support H6</td>
</tr>
<tr>
<td>Habit $\rightarrow$ Reuse intention</td>
<td>0.332</td>
<td>0.001</td>
<td>Support H7</td>
</tr>
</tbody>
</table>

Source: Data analysis result of the research

**Model testing by Bootstrap method**

To ensure that the results from SEM can be generalized to the whole population, the Bootstrap technique is used with N = 1000. All relationships are statistically significant. Consequently, it is concluded that the SEM structure model is reliable and can be generalized.

**4.5. Discussion**

The results showed that all seven hypotheses were supported. Here is the discussion for each hypothesis:

*Transaction convenience* ($\beta = 0.323$) is the most positive factor influencing customer
satisfaction (H3). The online motorbike service now provides customers with convenient, safe and fast payment methods. Besides paying by cash, customers can pay by card or electronic wallet. Although these payment methods are becoming popular and compatible with the cash replacement strategy implemented by many countries, it’s not easy for Vietnamese to use such methods instead of cash payment at the moment. However, this service will be popular for customers in Vietnam in the near future.

*Perceived usefulness* ($\beta = 0.315$) is the second most positive factor influencing customer satisfaction (H5). Customers only use a new service if they perceive the benefits brought about by such service. For online motorbike service, the benefits not only lie on the travel but also on other additional values such as clear driver and vehicle information, and time-saving booking.

*Perceived value* ($\beta = 0.279$) is the next positive factor affecting customer satisfaction (H2). Consumers are always looking for a more affordable and competitive price in choosing transportation services. And when the value of online motorbike service meets customers’ expectations, their satisfaction will increase.

*Perceived ease of use* ($\beta = 0.165$) is also a positive factor affecting Customer satisfaction (H4). This shows that it is easy for customers to learn the usage of the online booking application.

*Perceived service quality* ($\beta = 0.161$) has an impact on customer Satisfaction (H1). The more serious the traffic jams in the city are, the more popular the online motorbike service becomes. Factors such as fast, on-time, legal and comfortable vehicles can contribute to customer perception of better service quality.

Testing results also show that reuse intention was impacted by *customer satisfaction* ($\beta = 0.446$) (H6) and *habit* ($\beta = 0.332$) (H7). The impact of Satisfaction is greater than Habits, which means the more customers are satisfied with the service, the more likely they will reuse it.

In comparison with previous studies on online transportation services by Khairani and Hati (2016), and Isradila and Indrawati (2017), this study focuses on online motorbike service instead of an online taxi (four-wheeled vehicles). This study is different from previous research in terms of research object in the context that online motorbike services have gradually become more popular in Vietnam’s big cities. The results of this study are similar to those of the two previous studies. However, this study adds a *transaction convenience* factor and tests whether it has the greatest impact on customer satisfaction. This factor also indirectly affects the reuse intention of customers using online motorbike service.

5. Conclusion

Online motorbike is becoming more and more popular in Vietnam besides online taxi. It offers a variety of transportation options for people to meet their travel needs and save their time and money. There are many factors that affect customer satisfaction and reuse intention. The findings of this study show that five factors affecting the satisfaction of customers using online motorbike services in the descending order are transaction convenience, perceived
usefulness, perceived value, perceived ease of use and perceived service quality. Reuse intention is influenced by satisfaction and habits. The study then proposes some managerial implications to increase customer satisfaction and thereby increase the intention to reuse the online motorbike service:

**Transaction convenience:** Payment via card or electronic wallet is increasingly popular in many developed countries. However, based on the current situation in Vietnam, companies had better maintain cash payment and combine ATM card or Member card for this method. Besides, businesses must improve their network quality and security to make customer’s online transactions safe, convenient and fast.

**Perceived usefulness:** Companies need to focus on information frequently searched by customers and displayed on the application to update and improve the booking application. If customers’ thoughts and demands are met, companies can set accurate, timely targets and action plans to better serve the customers.

**Perceived value:** Special attention should be paid to the development of price strategy because it is a very important factor in this competitive service industry. Companies should also launch promotions, membership discounts or discount codes to increase the satisfaction of loyal customers and encourage the experience of potential customers.

**Perceived ease of use:** Advantages and disadvantages of online booking for customers should also be taken into account to design a process suitable to the majority of users including old customers not well versed in online technology. Therefore, simple and visual interface design will help customers easier in using the online booking service.

**Perceived service quality:** Companies need to improve the service quality of online motorbike by organizing training courses on communication and customer handling skills for drivers, supervising drivers’ compliance with traffic laws and their use of company uniform while on duty, checking the safety of motorbikes, and quickly and satisfactorily receiving and handling customers’ complaints. Besides, they also need to listen to customers’ feedbacks about drivers’ attitudes, behaviors and service quality to draw valuable lessons, overcome limitations and promote service benefits.

Although the study has achieved certain results, there are still some limitations. First, a generalization of the results is not high due to the convenient sampling method. Second, data collection process occurred before the official acquisition of Grab over Uber’s operations in Southeast Asia. The merger of these two transportation services giants might have a significant impact on the competitiveness of domestic transportation companies and, above all, on customer satisfaction and reuse intention when offers and discounts are cut off to self-determination of the service price. Therefore, further research is needed after this acquisition.

**References**


Pham, H. P. T. (2015). *The impact of convenience in online shopping on consumer intentions*. Ho Chi Minh City, Vietnam: Ho Chi Minh City University of Technology, VNU HCMC.


