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# Travel Mobile Technology Applications and Domestic Tourist Behavior: Analyzing the Reliability and Validity of Instruments

# Travel Mobile Technology Applications and Domestic Tourist Behavior: Analyzing the Reliability and Validity of Instruments

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**ABSTRACT:** The Internet plays a significant part in the lives of people in the modern age of globalization as it influences the way people travelowing to its cheaper, easier, and efficient prices. Nevertheless, limited research has been conducted on the use of mobile phones or android among young tourists in booking and planning their travels. By taking the approach of quantitative methods, this pilot study aims to evaluate the reliability and validity of the instruments used to assess the factors influencing the use of travel mobile applications among domestic tourists in Klang Valley. In this study, atotal of 200 data samples were statistically analyzed using IBM SPSS 25. Preliminarily, experts' evaluation was employed to examine the data content as well asthe reliability, validity, and normality of the data. Based on the findings, the reliability of the measuring instruments used in this study has beenassured and the data were proven to be rationally normal. Additionally, this study supports the instruments proposed for further research.

**Keywords:** Mobile Application, Domestic Tourist, Technology, Behavior

## 1. INTRODUCTION

The waystravel companies engage with clients have been changing along with the exponential progress, distribution, and growth of mobile advancements. Correspondingly, travel mobile technology apps havenot only modified the waydomestic tourists travel presentlybut they have also changed the way travel companies contact their clients (Hashim et al, 2019, Fatt et al., 2020; Hashim et al., 2020).As such, it cannot be denied that mobile technology applications have impactedthe youth, adventurers, andeven business travelers alike. Despite the growing popularity and immensity of mobile applications, it was reported that more than 50% of tourists were not interested in using mobile applications for trips (AARP real responsibilities, 2017). Instead of charting holidays and purchasing flight tickets via travel sites on computers,a small percentage of travelerswould rather use their mobile phonesfor these purposes (Parker, 2017, Bakar et al., 2020).Corroboratinga study by (Google Research, 2018) 65% of travelersopt for mobile sites for travel planningcompared to 58% of those who use apps for traveling activities. The reason is that travelersoften find travel mobile apps useless or occupy too much memory on mobile devices(Google Research, 2018).

As the majority of tourists in the market travel occasionally, they would rather not download travel applications to their mobile devices because they would use the booking service only a few times a year (Benady&Hadwick, 2016; Hashim et al., 2019), Besides, the use of such apps is also influenced by the types of tourists. For instance, teenage touristswould opt forlow-cost options such asAirasiaGo, Traveloka, Skyscanner, and Airbnb when planning their travels. As they may just get started with little travel budgets, they would not chooseluxury applications such asAmerican Airlines, Emirates Airlines, United Airlines, or Marriott (Michael Barris, 2019). Additionally, there is limited literature ontravelers'interest inusing or practicing travel mobile applications.Studies have mostlyexamined apps usage in M-banking (Koksal,2016; Evon& Lau, 2016; Zain, Ghazali&Wan Daud, 2020) and M-commerce (Gitau&Nzuki, 2014)however,some other research areas remain unexplored.As such, it is essential to examine the reliability and validity of the proposed measuring instruments relative to the influentialdeterminants that might affecthow domestic travelersaccept the use of travel mobile apps. Reliability, also termed as soundness and fidelity,ishence the key to avoidingproblems that may undermine significant research projects.

## 2. METHODOLOGY

The present study outlined three sections (Sections A, B, and C) for the necessary collection of data in accordance with the study's requirement. Section A emphasizes the construct of the independent variables, whereas Section B highlights the respondents' intended behaviors in adopting travel mobile apps. Finally, Section C focuses on the socio-demographic background. Table 1 outlines the assessment tools for each variable included in the study. A five-point Likert scale was used for every item in Sections A and B ranging from 1 with "Strongly Disagree" to 5 with "Strongly Agree". The survey employs the five-point Likert scale to obtain more improved expressions by the respondents as well as to raise their response frequency and data value.Thedata collection was conductedin KlangValley during weekdays and weekends. Approximately 200 respondents answered the questionsin the pilot test. Meanwhile, IBM SPSS version 25 was used for data analysis. The data analysis in this study was performed by calculating the Cronbach's Alpha value. Theanalysis also includes testing for skewness and kurtosis,whichrecorded positive scores, thus suggesting that the data were relatively sloped and had a leptokurtic distributionrather thana normal distribution (Std error), withskewness and kurtosis values of 0.406 and 0.787, respectively. Additionally, the values are both confined to the range of $\pm$ 1.96; hence, thisimplies that all of the combined formations are normally distributed with no extremely excessive normality deviation. Table 3 lists the details of the data values.

Table 1: Details of the Research Variables

| Section | Construct | No. of Items | Source of Scales |
|---------|-----------|--------------|------------------|
| A | - Performance Expectancy<br>- Effort Expectancy<br>- Social Influence<br>- Facilitating Condition | 5<br>4<br>5<br>5 | Ventakesh et al., 2003<br>Bakar et al, 2020 |
| B | Behavioral Intention | 4 | Ventakesh et al., 2003<br>Nik Hashim et al., 2019 |
| C | Demographic Profile | 4 | Researcher |

## 3. RESULTS

### 3.1 Demographic Profile

Table 2 presents the respondents' demographic profile.Based on the table,the respondents comprise 90 females and 110 males. In terms of income, the majority ofthe respondents earn from RM3,001 to RM4,000 with 30%,while the respondents from the lowest income group earn less than RM1,000 with 6%. Additionally, the respondents mostlybelong to the age groupof 31-40 years old, which makes up to98 respondents in total;however, only 5% of the respondents areabove 50 years old.Finally, most of the respondents are Bachelor's degree students with 55%,whereas those who are primary schoolers represent the lowest proportion with 1%.

Table 2: Demographic Profile

| Variable | Frequency | Percentage (%) |
|----------|-----------|----------------|
| **Gender** | | |
| **Male** | 110 | 55 |
| **Female** | 90 | 45 |
| **Income** | | |
| **< RM 1,000** | 12 | 6 |
| **RM 1,001 – RM 2,000** | 22 | 11 |
| **RM 2,001 – RM 3,000** | 40 | 20 |
| **RM 3,001 – RM 4,000** | 60 | 30 |
| **> RM 4,000** | 66 | 33 |
| **Age** | | |
| **21-30 years old** | 52 | 26 |
| **31-40 years old** | 98 | 49 |
| **41-50 years old** | 40 | 20 |
| **50 years old and above** | 10 | 5 |

| Educational | | |
|---|---|---|
| **Primary** | 2 | 1 |
| **Secondary** | 8 | 4 |
| **Diploma** | 60 | 30 |
| **Bachelor's** | 110 | 55 |
| **Postgraduate** | 20 | 10 |

### 3.2 Reliability and Validity

study tested for reliability and validity earlier before running the actual data collection process. To enhance reliability, the researchers followed four criteria: (1) configure all variables, (2) improve measurement stages, (3) use several indicators, and (4) conduct pilot studies. Taking from the rule by [8] in Table 2, values lower than 0.6 are considered weak, whereas 0.70 is considered good and 0.8 is better, while values above 0.9 are considered excellent. Scores for items lower than 0.70 have been deleted or refined.Additionally, essential precautions were ensured by the researchers so that the content validity of the scales is applied. Therefore, experts from different universities had been invited to scrutinize and authenticate the content. Table 2 shows the outcome gained from the pilot study. Based on the obtained data, all measures clearly display high values of reliability: Performance Expectancy (0.832), Effort Expectancy (0.876), Social Influence (0.822), Facilitating Condition (0.881), and Behavioural Intention (0.956), all of which have shown good internal constancy. Instruments with coefficients of 0.60 and above are deemed to possess regular liabilities [10]. Consequently, the questionnaires can be regarded as an endorsed document and may be employed in conducting future research.

Table 3: Alpha Coefficient Score of Each Construct

| Factors Affecting the Adoption of Travel Mobile Apps Technology | Cronbach's Alpha | No. of Items |
|---|---|---|
| **SECTION A**<br>Performance Expectancy | 0.832 | 5 |
| Effort Expectancy | 0.876 | 4 |
| Social Influence | 0.822 | 5 |
| Facilitating Condition | 0.881 | 5 |
| **SECTION B**<br>Behavioral Intention | 0.956 | 4 |
| **SECTION C**<br>Demographic Profile | - | 4 |

### 4. CONCLUSION

This pilot study primarily aims to ensure the reliability (suitability) and validity (robustness) of the measuring instruments prior to actual research relative to the factors influencing the use of travel mobile technology applications among travelers. Preliminary, pre-tests wereconductedbefore progressing with evaluation from the experts regarding the authenticity of the content andthe accuracy of the itemsin the questionnaires. Based on the reliability test results, the questionnairesare consideredentirely reliable witha Cronbach's Alpha value of more than 0.7; hence, no items were deleted. Besides, the normality test resultsaffirmed the normality of the data,thusdeeming the research procedure feasible.Fundamentally, a "reliable and constructive" analysis is what validates a questionnaire.Hence, the actual research, which expects to gather more than 300 respondents, would be able to elucidatehow the travel mobile technology applications give an impacton travel and tourism

alike.Anticipatively, the findings of this study wouldadd to the body of knowledge in relevant areas, specifically in the fields of technology and tourism.These findings will also benefit the governments, non-governmental organizations, retailers, and practitioners indeveloping marketing strategies in the technology and tourism industry. It is further anticipated that this study will become a standard for future research.

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