

## **The study of consumers' attitude towards the perception of ease of use and usefulness for GPS**

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### **Abstracts**

Modernization technology tools all emphasize its feature to percept the ease of use and usefulness by users. Whether it's traveling or looking for some specific location, GPS navigation has become the most popular search tool for people.

Therefore, the aim of this study explores whether the GPS system is easy to use, or whether its functionality makes the user feel effective, which affects the attitude the user wants to use.

This study used to the questionnaire to interview the GPS users. The analysis methods are including reliability analysis, validity analysis, path analysis. The results found that the respondents perception had a positively and significantly the relationship which between ease of use and attitude for the GPS use. Also found that the respondents perception had a positively and significantly the relationship which between usefulness and attitude for the GPS use.

**Keyword:** ease of use, usefulness

### **Background**

The utility of GPS has gradually shifted from early military use to people's daily lives. With regard to the rise of GPS, with the evolution of technology in the times, there is a considerable relationship with the changes in people's lifestyles.

GPS devices can be divided into smart phones using GPS navigation, or car-mounted GPS systems. In any case, this study would to discussion whether the user is acceptable for such a technology model. In addition to the market consumers' demand factor, it is an important to explore whether such a technology model makes the user feel that it is easy to use, and makes the user feel that it is a useful technology. This will to determine the attitude of the user whether accepts this technology of mode.

### **Literature and Hypotheses**

A technological invention must be widely circulated, and it must be made a sure that for consumers are percept easy for users to use, and that the technology is functionally useful after use.

Davis (1986) proposed a model developed by the theory of cost-benefit theory and rational behavior theory. The purpose of this model is to assess and predict user acceptance of new IT systems.

Perceptual ease of use is defined as the ease with which potential users can

operate while learning a particular information system (Davis, 1989). There are higher the level of perception for ease to use, the higher the willingness to use the system or new technology. That is, the extent to which a person thinks that using a technology tool is easy to use.

Perceptual usefulness is defined as an extrinsic motivating factor that influences user intent (Davis, et al., 1992). Luo and Strong (2000) study to explore the users to used social software, found that perceptual usefulness, perceived ease of use, and clustering effects have a positive impact on users' use.

In terms of smart phones, Davis (1989) believes that if users can feel that smart phones then the usefulness of the system will be more positive, there are the following effects, such as: can help with learning, can shorten working hours at work, and improve work efficiency; in addition, the navigation system can assist driving will not be lost.

Therefore, this study proposed the two hypotheses that according the literatures:

H1: Consumers perception the GPS is ease of use have a positively and significantly affect their attitude.

H2: Consumers perception the GPS is usefulness have a positively and significantly affect their attitude.

## Analysis Results

This study is use tool AMOS software to process analysis the research hypotheses for the research model. The results showed that the each indicators of the model are:  $\chi^2_{/df}=3.518$ , CFI = 0.923, GFI = 0.890, AGFI = 0.848, RMR = 0.042, RMSEA = 0.086. All of these indicators are to an acceptable level after examines. Therefore, showing this mode is an acceptable mode.

Next, the reliability and validity of this mode are to verification. As shown in Table 1, in terms of internal reliability, the ease of use, usefulness, and attitude their Cronbach's  $\alpha$  value for each: 0.824, 0.834, and 0.896, respectively.

The value of CR ease of use, usefulness, and attitude are 0.834, 0.835, and 0.896; and the AVE value are: 0.509 \cdot 0.506 \cdot 0.63, respectively. Which are reached to the levels of reliability and validity.

Table1 The reliability and validity of research model

Construct	Cronbach's $\alpha$	CR	AVE
ease of use	0.824	0.834	0.509
usefulness	0.834	0.835	0.506
attitude	0.896	0.896	0.634

Moreover, this study process to test the research hypotheses.

First, the H1 was tested. As shown in Figure 1, the ease of use of GPS had a positively and significant on the attitude ( $\beta = 0.0.256$ ,  $p=0.000$ ). The H1 was accepted.

To test the H2, whether the usefulness of GPS had a positively and significant on the attitude by path analysis, also was reached the verified ( $\beta = 0.654$ ,  $p=0.000$ ). The empirical results of research hypotheses as flowing:

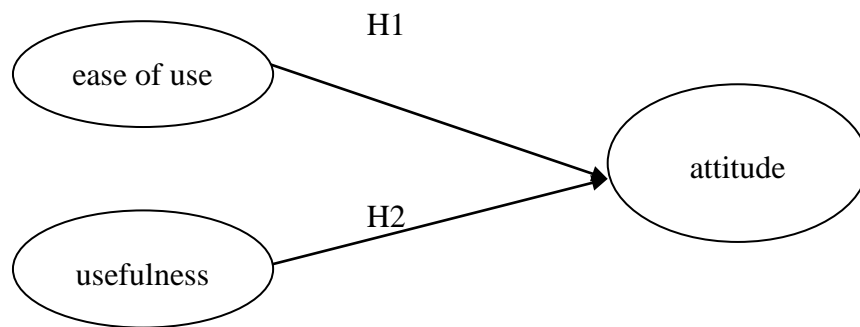


Figure 1 the model of research

Table 2 Summaries of value of hypotheses

Constructs	Standardization $\beta$	Standardization Error	t-value	p-value
ease of use→attitude	0.256	0.078	3.806	0.000
usefulness→attitude	0.654	0.071	8.735	0.000

**Conclusion**

In this study, were to explore and analysis the relationships regarding the two factors of ease of use and usefulness with attitude of users.

For the empirical research hypotheses are all obtain supported. According to empirical results found that the  $\beta$  is the most high of the usefulness had a positively

and significant on the attitude ( $\beta = 0.654$ ) than the  $\beta$  of ease of use. This shows that factor to affect user they considers the important whether use the attitude of GPS regarding the usefulness than the ease of use. The other words, although, the user will consider whether they will use the attitude of intention for these two factors; however, the most to influential the attitude is that the user perceives whether the GPS system is effective for itself, not simply easy to use the system that be produce the preference attitude.

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