

Analysis of Technology Acceptance Model: Case Study of Traveloka

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Abstract

One of the factors that can influence users' desire to use technology, especially online applications, is the perception of the usefulness and ease of use of the technology offered. This is a reasonable action in the context of the use of technology, where one will first see the benefits and ease of use of technology. This context makes the behavior of the person a benchmark for accepting technology. This study seeks to explain the application of Technology Acceptance Model theory by one of the largest travel companies in Indonesia, Traveloka, which connects the psychological aspects of users to obtain convenience in the use of technological application of Traveloka. This study used the case study supported with extensive literature review in terms of online platform development and of the theory of Technology Acceptance Model. The results show that perceived ease of use and perceived usefulness are the two most important considerations in the adoption and use of an application by the users. These two considerations have become the inherent concept of Traveloka services, which offer complete online booking features for flights and hotels.

Keywords

Technology Acceptance Model, perceived ease of use, perceived usefulness, internet marketing, Traveloka.

1. Introduction

The presence of information technology is one of the interesting phenomena, that not only facilitates all work, but also is able to accelerate the dissemination of information. This allows the access to information in all corners of the world can be quickly and easily received. Based on some sources, internet users in Indonesia is the fourth largest in Asia, with the most users being in the Java provinces, which is 52 million. The determination the level of acceptance of an information system can be analyzed using the Technology Acceptance Model (TAM). Before the TAM model emerged, there was a theory that was first known, namely Theory of Reasoned Action (TRA) developed by Martin Fishbein and Icek Ajzen (1975; 1980). Derived from previous research that began with attitude and behavioral theory, TRA's emphasis at that time was on attitudes viewed from a psychological point of view. The principle is to determining how to measure the components of relevant behavioral attitudes, differentiating between beliefs or attitudes, and determining external stimuli. The TRA model causes reactions and perceptions of users of information systems that will determine the attitude and behavior of the users.

The Technology Acceptance model was first introduced by Davis (1986) in his dissertation. Then in 1986 Davis conducted a dissertation research by adapting the TRA. Subsequently, TAM theory was extended with an emphasis on the perception of ease of use and usefulness that has a relationship to predict attitudes in using information systems. Thus, in its implementation, the TAM model is clearly much wider than the TRA model. Like other new emerged theories, the TAM theory was also built from several predecessors to construct perceived benefits and perceptions of ease of use. Some of these theories are self-efficacy theory, cost-benefit paradigm, adoption of innovations, evaluation of information reports, and channel disposition model. These theories are the theories underlying TAM which are generally psychological theories commonly used in research in economics to study behavior of users. By emphasizing the aspects of the compilation of the TAM theory, this study seeks to explain the application of TAM theory by one of the largest travel companies in Indonesia, Traveloka, which connects the psychological aspects of users to obtain convenience in the use of technological application of Traveloka.

2. Literature Review

Nowadays, many entrepreneurs run their businesses using the internet, to support business interests in terms of advertising, promotion, product marketing or even in terms of establishing relationships with consumers. This is a special proof of an internet function, which greatly distinguishes its functions from the past only as a means of communication between individuals and between organizations. For now the function of the internet itself is a strategy that must be used by an organization or company to make it easier to face competition in an increasingly competitive business environment. A conventional marketing must go through various stages when sending goods in a large party, for example, it must pass through a guarantee

institution, importers and even banking institutions to reach consumers. On the other hand, internet marketing can be said to be direct marketing, where the relationship between consumers and sellers can be done directly even though they are in a different country.

With the convenience that has been obtained through the internet, many entrepreneurs take advantage of the business opportunities that exist on the internet by creating a platform as a business start-up for them. There are many start-up businesses in Indonesia. According to *dailysocial.net*, there are now more than 1,500 more business start-ups in Indonesia, and this number is rapidly growing. Start-up businesses in Indonesia are currently very developed and are sought after by job seekers. This is inseparable from the increasing number of internet users in Indonesia every year, and is also an opportunity to establish a start-up business. One of the start-up businesses in Indonesia that is already known by many people, namely Traveloka, is widely known by many as a reliable and innovative online travel application

3. Methods

Technology Acceptance Model (TAM) is one of the models built to analyze and understand the factors that influence the acceptance of the use of computer technology that was first introduced by Fred Davis in 1986. TAM is the result of the development of the Theory of Reasoned Action (TRA), which first developed by Fishbein and Ajzen in 1980. TAM uses TRA as a theoretical basis for specifying a causal relationship between two key beliefs, namely Perceive Usefulness and perceptions of ease of use (Perceived Ease of Use). TAM is far more specific than TRA, because TAM is intended only for the behavior of using computer technology (Davis et.al, 1986). This TAM model can not only predict, but can also explain so researchers and practitioners can identify why a factor is not accepted and provide the right steps.

TAM aims to explain and estimate user acceptance of an information system. TAM provides a theoretical basis for knowing the factors that influence acceptance of a technology in an organization. TAM explains the causal relationship between beliefs (the benefits of an information system and the ease of use) and behavior, goals / needs, and actual use of users / users of an information system. TAM is designed to achieve this goal by identifying several basic variables suggested in previous studies that agree with factors that affect cognitively and affectively on computer acceptance and use TRA as a theoretical basis for determining the model of research variable relationships. TAM positions two beliefs, namely perceive usefulness and perceived ease of use as the main factors of computer acceptance behavior.

Research in information technology (IT) is something new that attracts the attention of academics and practitioners. The main purpose of IT research is to assess the value of IT for an organization and to understand the factors that influence (determinant) that value. The aim is to help organizations use and manage existing

IT resources and increase their overall effectiveness. The various information systems literature is full of modeling of factors associated with IT use or acceptance by workers, decision makers, and managers (Ives & Olson, 1984). One of them is the Technology Acceptance Model (TAM). Davis et al. (1989: 320) defines perceived usefulness as "a degree to which a person believes that using the system can improve his performance at work". Hamner et al. (2008) then added Perceive Personal Utility, which refers more to the benefits obtained for the person while Perceive Usefulness refers to benefits for the organization. Perceived ease of use, in contrast, refers to a degree to which a person believes that using the system would be free of effort (Ong, 2004). This follows the definition of "ease" as a freedom from difficulty or great effort or no difficulty or hard effort.

Behavior in use in TAM is conceptualized as an attitude towards the use of a system in the form of acceptance or rejection as a result if someone uses a technology in his work. Other researchers stated that the attitude factor is one aspect that affects individual behavior. A person's attitude consists of cognitive and affective, and components related to behavior. Whereas, behavioral intention to use is the tendency of behavior to use a technology.

4. Results

4.1. Some Important Considerations in TAM

The TAM model is actually adopted from the Theory of Reasoned Action (TRA) model, which is a theory of reasoned action with a premise that a person's reaction and perception of something will determine the person's attitude and behavior. The reactions and perceptions of users of information technology will influence their attitude towards acceptance of these technologies. One of the factors that can influence users' desire to use technology, especially online applications, is their perception of the usefulness and ease of use of the technology offered. This is a reasonable action in the context of the use of technology, where one will first see the benefits and ease of use of technology. This context makes the behavior of the person a benchmark for accepting technology.

The first consideration that is widely used in TAM testing is perceived usefulness. Perceived usefulness is defined to what extent a person believes that using a technology will improve his work. Second is concerning perceived ease of use, which is defined as to the extent to which a person believes that using a technology will be free from effort. Third, attitude towards behavior in using technology which is defined as positive or negative feelings from someone if you have to do the behavior to be determined. Fourth is behavioral to use technology. Intention of behavior is a desire for someone to do a certain behavior. Someone will do something if there is intention. Finally, consideration is focused on behavior that reflects actual technology use.

4.2. Some Important Considerations in TAM

The use of technology in the activities of individuals and organizations is currently growing rapidly, starting from government institutions, private sector, education, up to one's activities, now it is very dependent on the use of technology. The use of technology by various elements of society is intended to facilitate their daily activities and work. However, there are several factors that must be considered so that the technology offered or wanted is in accordance with the needs and benefits. Based on the TAM theory from Davis (1986) as a measure of the level of acceptance of technology by consumers, it can be found out what factors can make the technology selected and used by consumers. There are two main groups of factors that influence the user's desire to use information systems or technology through the TAM theory. The two main groups of factors were mainly expressed in perceived ease of use and perceived usefulness.

The first is perceived ease. Davis said that "ease" means freedom from high difficulty or effort, defined as the degree of someone who believes in using a system that will be free from effort. Davis's (1989) study shows that perceptions of convenience can explain the user's reasons for using the system and can explain that the new system can be accepted by the user.

Table 1. Comparison of measurements of constructs of perceived ease in the studies

Preliminary Studies	Advanced Studies
<i>Controllable</i>	<i>Cubersome</i>
<i>Cumbersome</i>	<i>Ease of Learning</i>
<i>Rigid & Inflexible</i>	<i>Frustrating</i>
<i>Frustrating</i>	<i>Controllable</i>
<i>Understandable</i>	<i>Rigid & Inflexible</i>
<i>Mental Effort</i>	<i>Ease of Remembering</i>
<i>Confusing</i>	<i>Mental Effort</i>
<i>Ease of Remembering</i>	<i>Understandable</i>
<i>Dependence on Manual</i>	<i>Effort to be Skillful</i>
<i>Provides Guidance</i>	<i>Easy to use</i>
<i>Error Recovery</i>	
<i>Unexpected Behavior</i>	
<i>Error Proneness</i>	
<i>Overall Ease of Use</i>	

Second is perceived usefulness. Davis mentions that someone's degree believes that the use of systems can improve their performance. It is intended that the use of technology can facilitate the work of a person or organization in carrying out its activities. The current development, we can see perceived ease of use in our daily lives. At first Davis (1986) used as many as 14 measures as indicators that exist in "perceived usefulness and perceived ease of use". Furthermore, Davis (1986)

conducted an initial trial conducted to find out the reliability and validity and obtain results in the form of 10 kinds of indicators.

Table 2. Comparison of measurements of constructs of perceived usefulness

Preliminary Studies	Advanced Studies
<i>Effectiveness</i>	<i>Quality of work</i>
<i>Job Performance</i>	<i>Control over work</i>
<i>Quality of Work</i>	<i>Work more quickly</i>
<i>Increase Productivity</i>	<i>Critical to my job</i>
<i>Accomplish More Work</i>	<i>Increase productivity</i>
<i>Work More Quickly</i>	<i>Job performance</i>
<i>Reduces Unproductive Time</i>	<i>Accomplish more work</i>
<i>Saves Me Time</i>	<i>Effectiveness</i>
<i>Critical to My Job</i>	<i>Makes job easy</i>
<i>Makes Job Easier</i>	<i>Useful</i>
<i>Addresses My Needs</i>	
<i>Job Difficult Without</i>	
<i>Control Over Work</i>	
<i>Overall Usefulness</i>	

5. Discussion

Example of Using TAM in the Traveloka Online Application

Ferry Unardi established Traveloka.com in 2012. The presence of Traveloka is to answer the people's needs for the easy and practical process of booking travel tickets and hotel bookings. The establishment of Traveloka originated from the personal experience of the man born in Padang, January 16, 1968, who had difficulty finding flight tickets to Padang from Indianapolis, United States. This experience later became a business opportunity to provide online travel agent services. Ferry wants to open a business that can provide travel convenience that suits the needs of consumers. Assisted by two colleagues while working at Microsoft, Derianto Kusuma and Albert, Traveloka.com was established.

This Purdue University graduate man took about 6 months to build his travel agent. Initially, online travel moved on a small business scale as a flight ticket search engine and hotel reservation. When the internet in Indonesia is developing, many people start to strive for their business. Within a few months, its customers are increasing and the business is growing. Even so, in pioneering his business, he also found obstacles in gaining trust. Everything is done by giving the best service and optimism. The obstacle that is still felt at this time is that many airlines have not been able to provide large numbers of tickets, but according to him all can be overcome by the development of information and communication technology in Indonesia. Currently, Traveloka is supported by many professional experts with educational

background from within and outside the country. That way, they are increasingly able to create various innovations to develop services so that they are better. In order for the public to become more familiar with Traveloka, Ferry is actively launching promotions and marketing, using social networks such as Websites and Twitter and television media.

This site has been accessed by more than 150,000 visits and has sold tens of thousands of tickets every day. Traveloka managed to excel and became the number one flight booking site in Indonesia with various attractive offers. Among them are providing price options without imposing costs on transactions to consumers, 24-hour service via e-mail, telephone and social media and various payment methods to make it easier for customers. The focus of Traveloka today is to maintain and grow the business of travel agents by making web design as attractive as possible so that it is more easily understood by consumers. At the beginning of the concept Traveloka functioned as a search engine to compare the prices of airplane tickets from various other sites. In mid-2013 Traveloka later turned into an airplane ticket reservation site where users can place an order on the official website. In March 2014, Ferry Unardi stated that Traveloka would soon enter the hotel room reservation business. In July 2014, hotel booking services were available on the Traveloka website.

The procedure for using Traveloka is through several mechanisms. For the booking mechanism, Traveloka presents a complete online booking feature with procedures and instructions for prospective buyers by searching for flights, selecting and ordering flights and hotels. Second is the feature of hotel services and flight details covering airline names, schedules, ticket prices, etc.. It requires consumers to fill in contact and passenger data. Furthermore, after choosing a hotel of a flight, the consumer fills out the customer data that can be contacted and the data for hotel or of the departing passengers. Here, for flight booking, consumers can add travel insurance directly to the order. For payments, a variety of payment methods are available on this application that are selected according to consumer needs. The latest innovation, Traveloka provides on-site payment methods for hotel bookings. After the payment process is done, the e-ticket will be sent by the applicator to the customer via email and short message.

6. Conclusion

The rapid development of a technology allows competition in a business environment to be increasingly competitive. Therefore, entrepreneurs today inevitably have to have a good strategy to face increasingly competitive competition and be able to survive in carrying out the business they have been engaged in. One proof of technological development that is increasingly rapid at this time is the internet. In the past, the internet was only used as a means of exchanging information or as a means of communication non-verbally, but to date, the benefits of an internet have been very influential on changes in competition in the business

environment. The presence of Traveloka as a hotel ticket booking site and online travel proves that technological developments especially in the internet sector are very well developed in Indonesia, and capable of being run by local entrepreneurs. Traveloka emphasizes the ease of use of applications by offering many practical and easy ordering and payment features.

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