

## ANALYSIS OF TECHNOLOGY ACCEPTANCE MODEL USERS OF FLIGHT TICKET RESERVATIONS SERVICES OF PT LION MENTARI AIRLINE

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### Abstract

*PT Lion Mentari Airline seeks to create innovations that pay more attention to the intensity and ease for their service users ie the airline ticket reservation system online or commonly known e-ticketing is a way of documenting the process of selling airline tickets from the user's travel activities without issuing physical evidence. This study aims to: (1) Perceived ease of use correlates to the perceived usefulness of the Airline Reservations Reservations Service at PT Lion Mentari Airlines online. (2) Perception of the perceived usefulness of the system has a positive effect on the attitude toward the use of the system (attitude toward using) Flight Booking Service at PT Lion Mentari Airlines Online (3) Perceived ease of use has a positive effect on attitude toward the use of the system (attitude toward using) Airline Booking Service at PT Lion Mentari Airlines Online (4) Attitude toward the use of the system (attitude toward using) positively influence the behavioral tendency to keep using the system (behavioral intention to use) Services Airline Ticket Reservation At PT Lion Mentari Airlines Online. This research uses four modified variables from previous Technology Acceptance Model (TAM) research model, namely: perceived usefulness perception as first independent variable (X1), perception ease of information system (perceived ease of use) as the second independent variable (X2), the perception of attitude toward the use of information system (attitude toward using) as the third independent variable (X3) and behavioral interest of the use of information system (Behavior Intention To Use) as dependent variable (Y).*

**Keywords:** Information Systems, TAM, Path Analysis, Multiple Regression, e-ticketing, transportation services

### 1. INTRODUCTION

In the era of technological and information development that has reached a significant stage so that it can cover almost all business sectors. The development of the internet has become one of the real forms of technological and information development from the present. Almost all of the business activities are competing to take advantage of the convenience of the internet for their business transactions..[1][2][3][4]

Now the internet has dominated the progress in the business sector, including the internet has been widely applied for the use of online systems.[5][6][7] Including the transportation business sector is now beginning to utilize the online system in ticket reservation services, in the increasingly tighter air transport industry, especially PT Lion Mentari Airline seeks to create innovations that pay more attention to the intensity and convenience of their service users, namely the airplane ticket reservation system online or commonly known as e-ticketing is a way of documenting the process of selling airline tickets from a user's travel activity without issuing physical evidence. So all relevant information is recorded digitally on a computer system so that it minimizes errors in recording when flight ticket reservations can harm the service user.

### II. LITERATURE

#### Technology Acceptance Model (TAM)

This study will use the Technology Acceptance Model (TAM) analysis introduced by Davis in 1986, TAM is one of the theories in information systems that explain how users can receive and use a new technology to improve the ease and practicality of their activities.[8][9][10][11], [12]

The TAM model places the attitudinal factors of each user behavior with two variables namely Usefulness and ease of use (Ease of Use) as instruments to explain the variance in user interest (User's intention). Usefulness is defined as the level of trust of users that by using a system, it will improve their performance. While the ease of use (Ease of Use) is defined as the level of trust of users that the system can be used easily and can be learned on their own. The two TAM model variables can explain the behavioral aspects of users (Davis, et al., 1989). TAM focuses on attitudes towards the use of information technology by users by developing it based on perceptions of usability and ease of use of information technology. TAM is one of many influential research models in the study of information technology acceptability determinants.

### III. RESEARCH METHODS

Path analysis is a technique for analyzing causal relationships that occur in multiple regression if the independent variables affect variables depending not only directly, but also indirectly.[13][14]

In path analysis there are two variables, namely:

- Exogenous variables in a path model are all variables which have no extractive causes or in the diagram there are no arrows going towards them, other than in the measurement error section. If between exogenous variables are correlated, the correlation is indicated by a two-headed arrow that connects these variables.
- Endogenous variables are variables that have arrows towards the variable. Variables included include all intermediate and dependent variables. The endogenous intermediate variable has an arrow that leads to it and from the direction of the variable in a path diagram model. As for the dependent variable, only the arrow has a menu towards it.

#### IV. RESULTS

##### Descriptive Research Variables

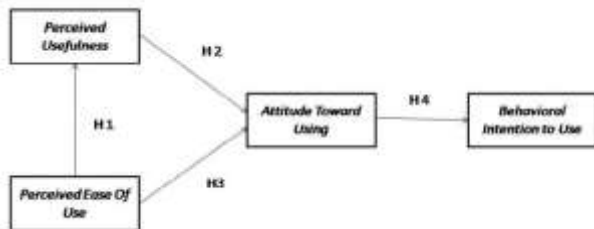


Figure 1. Variables in research

In Figure 1, there are 4 indicators to measure convenience variables, namely: Easy to use, easy to learn, flexible, easily accessible.

- Ease Variable (Peceived Easy Of Use). In this study convenience variables are related that someone believes that using information technology can provide convenience to users.
- Variable Use (Perceived Usefulness). In this study usability variables as a measure where the use of information technology is believed to bring benefits to those who use it.
- Variable User Attitudes (Attitude Toward Using). In this study the user attitude variable is related to the user's attitude towards the use of the system in the form of acceptance or rejection in using information technology. There are 4 indicators to measure user attitude variables, namely: Comfort, wise choice, good idea, user satisfaction.
- Variable Interest in Use (Behavioral Intention to Use). In this study variables There are 3 indicators in measuring the variables of real conditions of use, namely: Always used, intentions, expectations.

##### Descriptive Respondents

This study aims to analyze the data using the TAM method in measuring behavioral interest in the use of online airplane ticket reservation service systems from sales data using the system as many as

122 people. The method of determining the sample was carried out by the Non probability Sampling method, through Accidental Sampling techniques using the Slovin formula so that a sample of 93 people was obtained.

Correlation test aims to determine the direction and strength of the relationship between two or more variables. In table 1 this is a correlation test result can be observed.

Table 1. Correlation Test Result

|           |                     | kegunaan | kemudahan |
|-----------|---------------------|----------|-----------|
| kegunaan  | Pearson Correlation | .1       | .497**    |
|           | Sig. (2-tailed)     |          | .000      |
|           | N                   | 93       | 93        |
| kemudahan | Pearson Correlation | .497**   | 1         |
|           | Sig. (2-tailed)     | .000     |           |
|           | N                   | 93       | 93        |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Based on table 1. above, the correlation value between two independent variables has a sufficient correlation with the results of 0.497. It can be concluded that all ease variables and utility variables are sufficiently correlated.

Furthermore, a regression test is conducted which aims to determine the significance of the influence of independent variables on the dependent variable, so that it can contain the right predictions. Substructure Regression Test 2.

Table 2. Substructure Regression Test Results 1

| Model Summary |                   |          |                   |                            |
|---------------|-------------------|----------|-------------------|----------------------------|
| Model         | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1             | .634 <sup>a</sup> | .402     | .389              | 1.197                      |

a. Predictors: (Constant), kemudahan, kegunaan.

| ANOVA <sup>a</sup> |            |                |    |             |        |                   |
|--------------------|------------|----------------|----|-------------|--------|-------------------|
| Model              |            | Sum of Squares | df | Mean Square | F      | Sig.              |
| 1                  | Regression | 118.021        | 2  | 59.010      | 30.231 | .000 <sup>b</sup> |
|                    | Residual   | 175.678        | 90 | 1.952       |        |                   |
|                    | Total      | 293.699        | 92 |             |        |                   |

a. Dependent Variable: sikap  
 b. Predictors: (Constant), kemudahan, kegunaan.

| Coefficients <sup>a</sup> |            |                             |            |                           |  |       |      |
|---------------------------|------------|-----------------------------|------------|---------------------------|--|-------|------|
| Model                     |            | Unstandardized Coefficients |            | Standardized Coefficients |  | t     | Sig. |
|                           |            | B                           | Std. Error | Beta                      |  |       |      |
| 1                         | (Constant) | 4.263                       | 1.159      |                           |  | 3.682 | .000 |
|                           | kegunaan   | .219                        | .085       | .242                      |  | 2.572 | .012 |
|                           | kemudahan  | .463                        | .091       | .478                      |  | 5.092 | .000 |

a. Dependent Variable: sikap

Based on table 2. above the results of the regression test substructure 1 explains that the effect of ease and usefulness on the attitude of users simultaneously or together is 40.2%. While the remaining 59.8% is influenced by other factors outside of this model. Partially, convenience does not have a significant effect on the attitude of users with a large direct effect of 0.242. And usability has

a significant effect on the attitude of users with a large direct effect of 0.478.

Then in table 3 is the result of the Substructure Regression Test 2

Table 3. Substructure Regression Test Results 2

| Model Summary |                   |          |                   |                            |
|---------------|-------------------|----------|-------------------|----------------------------|
| Model         | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1             | .488 <sup>a</sup> | .219     | .193              | 1.496                      |

a. Predictors: (Constant), sikap, kegunaan, kemudahan

| ANOVA <sup>a</sup> |            |                |    |             |       |                   |
|--------------------|------------|----------------|----|-------------|-------|-------------------|
| Model              |            | Sum of Squares | df | Mean Square | F     | Sig.              |
| 1                  | Regression | 56.022         | 3  | 18.674      | 6.339 | .000 <sup>b</sup> |
|                    | Residual   | 199.290        | 88 | 2.239       |       |                   |
|                    | Total      | 255.312        | 92 |             |       |                   |

a. Dependent Variable: minat  
 b. Predictors: (Constant), sikap, kegunaan, kemudahan

| Coefficients <sup>a</sup> |            |                             |            |                           |        |      |
|---------------------------|------------|-----------------------------|------------|---------------------------|--------|------|
| Model                     |            | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig. |
|                           |            | B                           | Std. Error | Beta                      |        |      |
| 1                         | (Constant) | 3.466                       | 1.330      |                           | 2.605  | .011 |
|                           | kegunaan   | .115                        | .095       | .535                      | 1.211  | .239 |
|                           | kemudahan  | -.142                       | .111       | -.158                     | -1.287 | .202 |
|                           | sikap      | .443                        | .113       | .476                      | 3.920  | .000 |

a. Dependent Variable: minat

Based on table 3. above the results of the regression test substructure 2 explains that the effect of convenience, usability and attitudes towards real conditions simultaneous use or together is 21.9%. While the remaining 78.1% is influenced by other factors outside of this model. Partially, the user's attitude has a significant effect on the actual conditions of use with a large direct effect of 0.475.

**CONCLUSION**

Based on path analysis, it can be concluded that:

- 1) Perception of usefulness (Perceived usefulness) correlates and is significant to the perception of ease (Perceived ease of use) as evidenced by the significance of 0.497 which can be concluded that Perceived usefulness correlates significantly with Perceived ease of use.
- 2) Perception of perceived usefulness has a positive effect on attitudes toward system use (attitude toward using) is evident from it can be shown by the regression coefficient of 0.012 <0.05. It can be concluded that perceived usefulness has a positive and significant effect on attitude toward using.
- 3) Perceived ease of use has a positive effect on attitudes toward system use (attitude toward using) with a regression coefficient of 0,000 <0.05. It can be concluded that Perceived Ease Ofo Use has a positive and significant effect on Attitude toward using.
- 4) Perception of usage attitude (attitude toward using) has a positive effect on interest in use (Behavioral Intention to Use) with a regression coefficient of 0,000 <0.05. It can be concluded that Attitude Toward Using has a positive and

significant effect on Behavioral Intention to Use.

**SUGGESTION**

Based on the results of the discussion and conclusions obtained, the research team hopes that future research can conduct research with the same aspects by adding variables related to these aspects to better know other variables that affect user interest, excluding variables that have been studied.

**THANK-YOU NOTE**

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**REFERENCES**

- [1] P. Toko, S. Jaya, E. Pacitan, I. N. Indah, dan K. Kunci, "Pembuatan sistem informasi penjualan pada toko sehat jaya elektronik pacitan," vol. 10, no. 2, 2013.
- [2] U. Hasanah, "Sistem Informasi Penjualan Online pada Toko Suncom Pacitan," *IJNS – Indones. J. Netw. Secur.*, vol. Volume 2, hal. 40–48, 2013.
- [3] S. Heripracoyo, "Analisis Dan Perancangan Sistem Informasi Akuntansi Pembelian Dan Persediaan Pada Pt . Oliser Indonesia," *Semin. Nas. Apl. Teknol. Inf. 2009 (SNATI 2009)*, vol. 2009, no. Snati, hal. 93–100, 2009.
- [4] P. D. Astuti, "Sistem Informasi Penjualan Obat Pada Apotek Jati Farma Arjosari," *Indones. J. Comput. Sci. - Speed 16 FTI UNSA Vol 10 No 1 – Mei 2013 - ijcss.unsa.ac.id*, vol. 10, no. 1, hal. 142–147, 2013.
- [5] R. J. Harrington *et al.*, "Assessing your organization ' s digital transformation maturity," *MIS Q.*, vol. 37, no. 2, hal. 1–5, 2017.
- [6] N. P. S. D dan S. Sriyanto, "Perancangan Sistem Informasi Pemesanan Berbasis Sms Gateway Untuk Memperbaiki Informasi Persediaan (Studi Kasus : Pt. Indotirta Jaya Abadi Semarang)," *Ind. Eng. Online J.*, vol. 2, no. 2, hal. 143–152, 2013.

- [7] Ragil Sapto Aji Winoto, "Pembangunan Aplikasi Penjualan Online pada Toko Jam Tangan AMPM Watch," *Seruni - Semin. Ris. Unggulan Nas. Inform. dan Komput. FTI UNSA*, vol. 2, no. 1, hal. 43–47, 2013.
- [8] H. Hamrul, B. Soedijono, dan A. Amborowati, "Mengukur Kesuksesan Penerapan Sistem Informasi Akademik ( Studi Kasus Penerapan Sistem Informasi Stmik Dipanegara Makassar )," *Semin. Nas. Inform. 2013*, vol. 2013, no. semnasIF, hal. 140–146, 2013.
- [9] B. Santoso, "Pengaruh Perceived Usefulness, Perceived Ease of Use, dan Perceived Enjoyment Terhadap Penerimaan Teknologi Informasi," *J. Stud. Akunt. Indones.*, no. 1998, hal. 1–15, 2012.
- [10] M. Ariandi, "PENERAPAN METODE TECHNOLOGY ACCEPTANCE MODEL ( TAM ) TERHADAP PENERIMAAN KRS ONLINE ( STUDI KASUS : Mahasiswa Ilmu Komputer Universitas Bina Darma Palembang )," *J. Imiah MATRIK*, vol. 16, no. 2, hal. 1–9, 2014.
- [11] Fauzi, "Modified TAM with Inducing the Reinforcement Institutional Theory (Facilitating Conditions, Institutional Enforcement and Insentive) toward SIPKD's Individual Users Performance," 2016.
- [12] Fauzi, "TAM Modifikasian dengan Pengimbuhan Teori Penguatan Institusi ( Kondisi yang Memfasilitasi , Tekanan Institusi dan Insentif ) terhadap Kinerja Pengguna SIPKD Modified TAM," Universitas Gadjah Mada, 2016.
- [13] T. Tiraada, "Kesadaran Perpajakan,Sanksi Pajak,Sikap Fiskus Terhadap Kepatuhan WPOP Di Kabupaten Minahasa Selatan," *Emba*, vol. 1, no. 3, hal. 999–1008, 2013.
- [14] M. Mona, J. Kekenusa, dan J. Prang, "Penggunaan Regresi Linear Berganda untuk Menganalisis Pendapatan Petani Kelapa Studi Kasus: Petani Kelapa Di Desa Beo, Kecamatan Beo Kabupaten Talaud," *JdC*, vol. 4, no. 2, hal. 196–203, 2015.