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E-Business, Airport Development and Its Impact on the Increasing of Information of Communication Development in Indonesia

MI Setiawan^{1*}, C Hasyim², N Kurniasih³, D Abdullah⁴, D Napitupulu⁵, R Rahim⁶, A Sukoco⁷, I Dhaniarti⁸, J Suyono⁷, IN Sudapet⁷, RD Nasihien¹, DAR Wulandari¹, Reswanda⁷, SW Mudjanarko¹, Sugeng⁹, MBN Wajdi¹⁰

¹Narotama University, Department of Civil Engineering, Surabaya, Indonesia

²Universitas Darul Ulum, Jombang, Indonesia

³Universitas Padjadjaran, Faculty of Communication Science, Bandung, Indonesia

⁴Universitas Malikussaleh, Department of Informatics, Aceh, Indonesia

⁵Research Center for Quality System and Testing Technology, Indonesian Institute of Sciences, Indonesia

⁶School of Computer and Communication Engineering, Universiti Malaysia Perlis, Malaysia

⁷Narotama University, Department of Management, Surabaya, Indonesia

⁸Narotama University, Department of Law, Surabaya, Indonesia

⁹Universitas Islam "45", Bekasi, Indonesia

¹⁰STAI Miftahul 'Ula, Nglawak Kertosono, Indonesia

E-mail: *ikhshan.setiawan@narotama.ac.id

Abstract. The increasing number of the internet usage by households have an effect on the tourism sector. On the other hand, the aviation industry is growing as one of the development centers. This study aims to analyze the impact of information and communication development to airport performance in Indonesia. This is a correlation research with 151 of airports in Indonesia as a population. The sampling technique was done by using total sampling. The results of correlation (R) indicates the Gross Regional Domestic Product (GRDP) of Information and Communication has a relatively strong relationship with the Airport Performance. Meanwhile the results of Adjusted R test shows that they are other factors in increasing GRDP of Information and Communication besides Airport Performance. It shows the low impact of Information and Communication GRDP to the Airport Performance.

1. Introduction

Currently Air transport has developed into an economic centre. It is supported by an increase in local travelers and foreign tourists reached 11.519 million tourists, with 2,387 five-star hotel accommodation, with a five-star hotel room occupancy rate reached 54.34%. Wherein, the share of foreign tourists to the total national tourists reached almost 23%, while the share of domestic tourists reached 16%. Increased tourism competitiveness is achieved through improved quality of public



facilities infrastructure, IT technology, promotion of tourism, conducive business climate, integration connectivity and accessibility. For example there are many tourism objects in Lembang West Java Indonesia use website and social media as their promotion. It shows how potential social media to spread information widely, including information regarding tourism objects[1]. Bank Indonesia estimate shows that any increase in the number of foreign and domestic tourists by 10% will be able to increase the regional growth of 0.31% and encourage increasing the number of workforce of around 0.68% [2].

Electronic era changing industry competition and regional development emphasizing on information management and supply chain network. To be able to compete in regional and global markets required speed and agility. Modern logistics technology and infrastructure based on low to be important for many companies in the new development era. Companies need to manage e-commerce strategy B2C (Business to Consumer) B2B (Business to Business) and B2B appropriately. Industry profits earned by companies that respond flexibly and quickly to their domestic and global customers by delivering products quickly and efficiently.

Flights, digitalization, globalization and competition time-based architecture interact to create new competition while positioning the airport as an international logistics gateway. Airports became the center of commercial activity concentration as a new urban form aero city[3]. The developmental advantages gained by countries that combine digital technology and trade of air through the logistics infrastructure to optimize their position in the global network of information flow and product.

Indonesia has 296 official airport that most ASEAN, covering 13 airports managed by PT Angkasa Pura I, 13 airports managed by PT Angkasa Pura II, 53 airports managed by TNI, 178 airports managed by the Ministry of Transportation Unit Operator Airport and 39 airports managed by the Local Government Unit[4], The use of the airport consists of an international airport and the domestic airport. International Airport is the airport that serves the domestic flights and routes from and to foreign countries. Determination international airport is to consider: (a) The master plan of the national airport; (B) defense and security; (C) The growth and development of tourism; (D) Interest and ability of national air transport; (E) The development of national economy and foreign trade. Determination airports internasional determined by the Minister after coordination with the minister duties and responsibilities in the field of immigration, customs and kekarantinaan in the framework of work units and personnel placement. Meanwhile, the domestic airport is an airport that serves the domestic flights[5].

Other air transport role in supporting development growth not only in serving the passengers but also cargo services. There are three factors that can increase the positive impact of air cargo, namely liberalization of air services, improve the quality of customs, and reduce corruption[6], This study aims at analyzing the development effects of information and communication on airport performance in Indonesia.

2. Methodology

This is a quantitative research with correlational approach. Correlational research is used to describe the relationship between two or more variables that occur naturally among these variables[7][8]. In this study, Airport Performance is X variable and information and communication development is Y variable. The population of this research include 151 of airports in Indonesia. By using a total sampling, there are 151 of airports as sample. The data of 151 of airports was analyzed by using Person Correlations, R test and multiple linear regression equations.

3. Result and Discussion

The increasing number of internet usage by households has an effect on tourism. The role of information technology in an area can be seen in the increasing investment realization at home and abroad in 2016, where transportation, storage and communication reach Rp. 27.5 trillion[9]. The impact of increasing internet usage is to facilitate the public to access information so that the impact on the growth of development.

Analysis of the impact of GRDP of information and communication to the airport development Performance used multiple linear regression formula. The data include 151 of districts/ cities in Indonesia with research variables and sub-variables as follows:

Two variables in this study are Y variable (the GRDP of information and communication) and X variable (airport performance). Sub-variable X consists of:

X1 = Aircraft Arrival

X2 = Aircraft Departure

X3 = Passenger Departure

X4 = Passenger Arrival

X5 = Baggage Unloaded

X6 = Baggage Loaded

X7 = Cargo Unloaded

X8 = Cargo Loaded

The results of the analysis of 151 regions using Pearson Correlations, R test and multiple linear regression equations can be seen in Table 1, Table 2 and Table 3 below:

Table 1. Pearson Correlation.

No	Variable	Value
1	Aircraft Arrival (X_1)	0.401
2	Aircraft Departure (X_2)	0.405
3	Passenger Departure (X_3)	0.379
4	Passenger Arrival (X_4)	0.375
5	Baggage Unloaded (X_5)	0.378
6	Baggage Loaded (X_6)	0.365
7	Unloaded Cargo (X_7)	0.217
8	Cargo Loaded (X_8)	0.211

Table 1 shows a sub-variable of Departure Arrival Aircraft and Aircraft have the highest impact to increase of Information and Communication GRDP in Indonesia, while sub-variables of Cargo Loaded and cargo unloaded do not have a significant impact to increase of Information and Communication GRDP in Indonesia.

Table 2. Model Summary.

Model	R	R Square Adjusted	R Square	Std. Error of the Estimate
1	0.572a	0.327	0.288	1989.21673

Predictors: (Constant), Cargo Loaded, Unloaded Cargo, Baggage Unloaded, Aircraft Departure, Passenger Arrival, Baggage Loaded, Passenger Departure, Arrival Aircraft.

Dependent Variable: GRDP of Information and Communication.

Table 2 shows that the correlation coefficient (R) is 0.572, which means that the GRDP of Information and Communication variable has relatively strong correlation with variable of Airport Performance. Adjusted R Square is 28.8%, which means the impact of Airport Performance variable in increasing GRDP of Information and Communication, The increased of 71.2% in the GRDP of Information and Communication influenced by others factors aside from Airport Performance variable. It shows the low impact of Information and Communication GRDP to the Airport Performance.

Table 3. Regression Equations

(Constant)	84.159
Aircraft Arrival (X_1)	-0.888
Aircraft Departure (X_2)	1.199
Passenger Departure (X_3)	0.005
Passenger Arrival (X_4)	-0.003
Baggage Unloaded (X_5)	2.563E-05
Baggage Loaded (X_6)	0.000
Unloaded Cargo (X_7)	-5.661E-05
Cargo Loaded (X_8)	-4.724E-05

a. Dependent Variable: PDRB of Information and Communication

Table 3 shows the Multiple Linear Regression Equations with the following details:

$$Y = 84.159 - 0.888X_1 + 1,199 X_2 + 0.005 X_3 - 0.003 X_4 + 2.563E-05 X_5 - 5.661E-05X_7 - 4.724E-05 X_8$$

with:

Y = the GRDP of Information and Communication

X_1 = Aircraft Arrival

X_2 = Aircraft Departure

X_3 = Passenger Departure

X_4 = Passenger Arrival

X_5 = Baggage Unloaded

X_6 = Baggage Loaded

X_7 = Cargo Unloaded

X_8 = Cargo Loaded

Based on the multiple linear regression equation above, it appears that the X_2 , X_3 , X_5 , X_6 (aircraft departure, passenger departure, Unloaded baggage, baggage loaded) Have a positive impact in increasing GRDP of Information and Communication, Meanwhile the variable X_1 , X_4 , X_7 and X_8 (aircraft arrival, passenger arrival, cargo Unloaded and cargo loaded) Have a negative impact to the GRDP of Information and Communication.

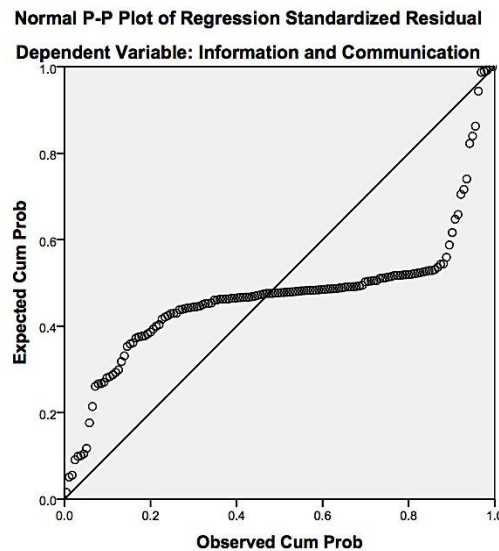


Figure 1. SPSS Analysis-Normal P-P Plot of Regression.

4. Conclusion

The results of correlation (R) indicates the Gross Regional Domestic Product (GRDP) of Information and Communication has a relatively strong relationship with the Airport Performance. Meanwhile the results of Adjusted R test shows that they are other factors in increasing GRDP of Information and Communication besides Airport Performance. It shows the low impact of Information and Communication GRDP to the Airport Performance.

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