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Impact of Investment, Use of Information Technology on Organizational Performance. Study on the Tourism Industry in the Special Region of Yogyakarta)

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Abstract

This research aims to analyze the impact IT investment, usage, perception of IT, technology orientation and future orientation on against organizational performance. The object of research in the Tourism Industry, Tourism manager in Yogyakarta. This research model uses mediation regression. Explanatory factor analysis using the SEM - PLS model statistical tools. The results showed that: 1) The use of information technology has an effect on organizational performance. 2) Information technology for decision making affects organizational performance. 3) Future orientation affects organizational performance. 4) The level of investment has an effect on future orientation. 5) Perceptions of information technology have an effect on future orientation. 6) The use of information technology has an effect on future orientation. 7) Technology orientation affects organizational performance. 8) The level of investment has an effect on technology orientation. 9) Perceptions of information technology affect technology orientation.

Keywords: IT investment, use, IT perception, future orientation, technology orientation.

I. INTRODUCTION

The number of tourism objects in the Special Region of Yogyakarta was recorded in 2018 including natural tourism objects, cultural tourism objects, artificial tourism objects, and tourism villages / villages, totaling 185 tourism objects. The total number of foreign tourist visits to tourist objects is 600,102 people, national tourists reach 25,915,686 people, bringing the total to 26,515,788 people (Tourism Statistics, DIY Tourism Office, 2019). Professional management, government and community support are the main keys to the progress of this business. Quick response to change, the development of information technology is needed in an era of turbulent competition and the digital era.

Besides having a beneficial impact, the rapid development of technology also increases competition. Technology has significantly changed the nature of competition due to the spread of technology, the information and digital age, and increased knowledge intensity (David & David, 2016; Hitt, et. al., 2013). A review of the strategic management literature reveals that the company's unique resources play an important role for competitive advantage in order to win the competition (David & David,, 2016; Hitt, et.al, 2015; Zehir, et.al, 2010; Pang, 2018; Feng & Wu, 2019). Information technology is a company's unique resource. IT-based resources can be classified as: tangible and intangible resources. Tangible resources consisting of physical IT infrastructure components, IT human

resources consisting of technical and managerial IT skills. IT resources are intangible, such as knowledge assets, customer orientation, and synergies. The survival of the company is closely related and much determined by the ability to use, managing information technology-IT in today's harsh and fast-changing business environment (David & David, 2016; Turban, et.al., 2013; Loudon & Loudon, 2012). IT is the fastest growing sector in the economy (Feng & Wu, 2019).

The company has invested funds in large proportions in procurement and use information technology during the last few decades (Pang, 2018; Feng & Wu, 2019). Reasons for growth IT investment because some factor. First, IT is no longer limited to backroom operations. In many companies, technology has been integrated with every aspect of the business. Second, the role of CIO has been upgraded from the back office to the board room. The company emphasizes the capability of CIO to contribute outside the IT function. Third, the use and misuse of IT has become fertile ground for more opportunities to gain a competitive advantage or existence unfavorable position (David & David, 2016; Turban, et.al., 2013; Zehir, et.al, 2010). Organizations and services must follow trends development IT. This trend is about investing in hardware, software and globalization into information technology networks.

Regardless of investment that substantial in TI, direct relationship between technology investment, increased productivity and performance is still controversial and ongoing research is needed. The benefits of investing in technology include reduced costs, improved quality, increased flexibility, increased customer satisfaction, higher productivity and financial performance. Because of the enormous expenditure on IT in organizations, researchers and practitioners through investigations, research trying to understand impact and the relationship between IT and performance company. To determine impact, researchers trying to find solid evidence of the impact IT and organizational performance (Zehir, et.al. 2010; Feng & Wu, 2019).

For more than a decade, researchers have studied the impact of IT investment on company performance. The results of these empirical studies not yet consistent (Zehir, et.al, 2010; Turban, et.al, 2013; Pang, 2018; Feng & Wu, 2019). Several studies have found a positive relationship between investments IT and performance organization. Pother studies have found a negative relationship, and many other studies have shown no relationship (Ta Byrd & Te Marshall; 1997). To overcome these various findings, Lots researchers TI has used a more rigorous and scientific research framework. Some steps are carried out such as:large sample data set, including additional factors such as lag time, intensity of industry information, new methodologies and new theories (Zehir, et.al. 2010; Kim, Xiang & Lee, 2009). The relationship between IT and enterprise performance differs from developing to developed countries. Because, economic growth, level of regulation, labor costs, IT skills and availability, and heterogeneity, competition, innovation and organizational culture that different in different countries (Kim, Xiang & Lee, 2009; Feng & Wu, 2019).

The purpose of this research to analyze the impact IT investments, usage, perception of IT, technology orientation, future orientation in IT investment on organizational performance. The object of this research is the tourism industry, especially the tourism object management in Yogyakarta.

The formulation of the problem in this study is as follows: 1) Is level of IT investment, use of IT, perceptions of IT and IT for decision making have an effect on organizational performance? 2) Is level of IT investment, use of IT, perceptions of IT and IT for decision making have an effect on future orientation? 3) Is level of IT investment, use of IT, perceptions of IT and IT for decision making have an effect on technology orientation? 4) Does technology orientation, future orientation affect on organizational performance?

The targeted findings of this study are: 1) Finding empirical evidence of the influence level of IT investment, use of IT, perceptions of IT and IT for influential decision making, technology

orientation, future orientation on organizational performance. 2) Finding empirical evidence of a research model that is able to explain impact evel IT investment, use of IT, perceptions of IT and IT for influential decision making, technology orientation, future orientation on performance tourism organizations or industries in the Special Region of Yogyakarta. 3) This study is aimed at making several useful contributions, namely the contribution of empirical evidence, managerial contributions and methodological contributions.

II. LITERATURE REVIEW

Research it wants to test, analyze impact IT investment, use of IT on performance organization. The effects of IT can be seen at various levels of analysis that include individuals, groups, organizations, industries and society. The level of analysis in this research is at the organizational level. This research to test behavior of employees and managers that builds long-term interactions between information technology and organizational performance.

Information Technology Investments

View the economy confirms that IT is an input in the production process and there are interactions between IT and other inputs. Thus, IT provides benefits to organizations more than capital and labor. The benefits of IT can be evaluated at the organizational, industry and country level (Zehir, et.al, 2010; Hu & Quan, 2004). To give and improve performance, the organization must invest and use, coordinate, control and evaluation IT effectively (Turban, et.al., 2013); RMS, 2008, Hitt, et. al., 2015).

In this study the factors that affect company performance, will be tested and analyzed in four main topics. These factors is the level of IT investment, IT use, IT and IT perceptions of the decision making process. In the first stage, we study of the effects of these four factors on orientation technology and future orientation. In the second stage, we do a study effect orientation technology and future orientation on company performance.

Research (Zehir, et.al. 2010; Feng & Wu, 2019) reveals that IT enables organizational transformation, different branches of industry. This is proven to improve company performance. This impact is mainly on finance, production, marketing and customers. This impact will increase the overall performance. In general, a lot of research has proven that IT investment has an impact on economic growth. The consequences of consistent innovation and use of technology right, development new process will increase the company's output (Artzeni & Carboni, 2001; Zehir, et. al., 2010). Information technology regulates the communication platform in the world by connecting people and getting access to appropriate information via the World Wide Web and its kind (Zehir, et.al. 2010;Kraut, 1998; Turban, et. all., 2013). Hypothesis 1: The level of IT investment take effect on company performance.

The company description right daily problems encountered in activities company by using TI. Guidelines for using IT to formulate policies will stimulate economic growth and development. It also provides a very significant foresight for regulators working in specific sector development areas (Zahir, et.al. 2010; Esselaar, 2006). Product quality standards keep increasing regularly with the use of IT. The computer-supported design model improves machine and product performance by using advanced simulation techniques. It also reduces tolerance levels during the production process through an effectively regulated feedback mechanism (Zehir, et.al. 2010; Turban, et.al., 2013; Feng & Wu, 2019). Hypothesis 2: The use of information technology effect on company performance.

In a technological context, perceptions of technology differ from individual to individual. Model Technology Admit Model reveal that individuals decide to accept or reject the new technology.This model focus on the use and effectiveness of the facility. The level of confidence a person has about

using the system with ease or difficulty can be defined as the use of facilities (Zehir, et.all. 2010; Pang, 2018).The perception of using IT that is easy, useful and safe will improve organizational performance (Turban, et.al., 2013). Hypothesis 3: Information technology perception effect on company performance.

Decision making process is a important role of managers in the organization (David & David, 2016; Hitt, et.al, 2015). The survival of the organization depends on ability and manager's decision. A manager can obtain the necessary information for the production process with a complex ERP system or a simple software matrix program (Zehir, et.al. 2010; Pang, 2018; Tanolu & Basolu, 2005). Hypothesis 4: Information technology for decision-making process effect on company performance.

Company that future orientation provides attention specifically to potential customers and competitors in addition to current customers. Company future orientation considering the future market and its customers, competitors and current customer needs in order to win the competition (Zehir, et.al. 2010; Pang, 2018; Chandy & Thelis, 1998).Future orientation allows the organization to be able to seize opportunities and obstacles as well as policies that may be carried out in order to win the competition. Companies must take advantage of technological developments appropriately. The use of technology requires organizations to invest with great precision. Investment, management, use of information technology require organizational support (David & David, 2016; Turban, et.al., 2013; Zehir, et.al, 2010). Hypotheses 5, 6, 7, 8, 9 that we want to test are:

H5: Future orientation effect on company performance.

H6: IT in the decision making process effect on future orientation.

H7: The level of IT investment take effect on future orientation.

H8: IT perception effect on future orientation.

H9: The use of IT take effect on future orientation.

Technology can be conceptualized as a source sub unit power strategies used by the company To use current and future innovations. High company performance depends on capability make use of technology information for productivity, efficiency company. Company should predict and follow technological developments, using progression the to improve products and high company performance (Turban, et.al., 2013; Zehir, et.al, 2010; Pang, 2018). Hypotheses 10, 11, 12, 12, 13, 14 that we want to test are:

H10: Technology orientation effect on company performance.

H11: Decision making process take effect on technology orientation.

H12: The level of IT investment take effect on technology orientation.

H13: IT perception take effect on technology orientation.

H14: The use of IT effect on technology orientation.

Company performance

Measure success is a a fairly broad concept that evaluates the ability to successfully achieve organizational targets (Feng & Wu, 2019; Zehir, et.al. 2010; Pang, 2018). Performance can be evaluated by qualitative criteria such as job satisfaction, organizational commitment, perceived fairness and quantitative criteria such as profitability, return on investment ratio, sales growth in the study. In this study, quantitative criteria such as financial performance, markets and innovation are used. Financial performance measures the economic targets of the organization. This target is important for practitioners and researchers.Profitability, income, return on investment ratio are

usually used in studies and are called financial performance evaluation criteria. Apart from financial performance, also using market performance. Customer satisfaction and commitment, changes in market share, communication with customers through advertising or sales are commonly used in studies this as market performance criteria. Practitioners and academics began to learn about the concept of innovation. The innovation performance criteria are about the level of R & D in the company budget, new products, new projects, new project quality.

Research this guidelines on literature review and previous empirical research. Model research was developed to predict impact from the level of IT investment, IT use, IT and IT perceptions of the decision making process, future orientation and technology orientation on company performance.

This study is aimed at making several useful contributions, namely theoretical contributions, managerial contributions and methodological contributions. The differences in previous research can be explained as follows:

1) Contribution to the empirical literature. This research expands the determinant the benefits of using IT and performance organization, especially for the tourism industry in Yogyakarta.
2) Contribution managerial, that is: a) Provide managerial input in management the tourism industry and the use of IT to win the competition. b) Provide managerial input regarding the importance of paying attention to conditions competition and use of IT in the Tourism Industry.
3) Methodological contribution, namely the use of regression models mediation in testing the research hypothesis to be tested.

III. RESEARCH METHODOLOGY

This research is a model of causality research. The research design refers to the theory and results of empirical studies that support the hypothesis to be tested. Researchers conduct theoretical studies and empirical studies in order to map theories according to the objectives and conceptual framework of research.

Collecting data using a questionnaire to the manager or manager of tourism objects in Yogyakarta. Tourist attractions in Yogyakarta. The number of tourist objects that are professionally managed is 95 tourist attractions (DIY Tourism Statistics, DIY Tourism Office, 2019). There are 56 questionnaires worth using. The main reason for choosing object This is: 1) Business competition and turbulent IT developments in the digital era require fast and precise anticipation and prediction in order to win business competition. 2) Tourism object requires professional management and requires the use of IT or IT investment at the same level right. 3) Tourism objects in DIY are experiencing rapid development, both in the number of tourism objects, tourist visits and income.

Measurement Research variable

Measurement of research variables using the Likert scale questionnaire data. The research variables used are: level investment, to assess the level of investment IT actual with using Steve Esselar's (2006), Zehir, et.al. (2010). Use IT, to assess usage IT in fact, we used Steve Esselar's (2006). 6-item size. Perception IT, to assess employees' perceptions of product services, we use model Tanoglu and Nuri Basoglu (2006), Zehir, et.al. (2010). 7-item size. IT used decision making process, to assess employee decisions on issues and take advantage of IT technology, we use model Tanoglu and Basoglu (2006), Zehir, et.al. (2010). 7-item size. Orientation technology, to measures technology orientation using a 7-item measure model Zehir, et.al. (2010). We measure future orientation using future orientation levels and future orientation behavior levels. 3-item size model Zehir, et.al. (2010).

Company performance: to assess the performance of a company construct a measure by combining model Antoncic (2003), Zahra (1993), Alpkan (2005), Zehir, et.al. (2010).

IV. FINDING AND DISCUSSION

Factor Analysis

The econometric model in this study uses multiple regression and mediation regression (Jogiyanto, 2014; Ghozali, 2014; Wooldridge (2014). Varimax rotational, explanatory factor analysis uses statistical tools using the SEM-PLS model. We use Cronbach's Alpha to measure reliability. Factor loading to see the validity. The measurement results can be seen in table 1.

Table. 1 Contruct Reliability and Validity

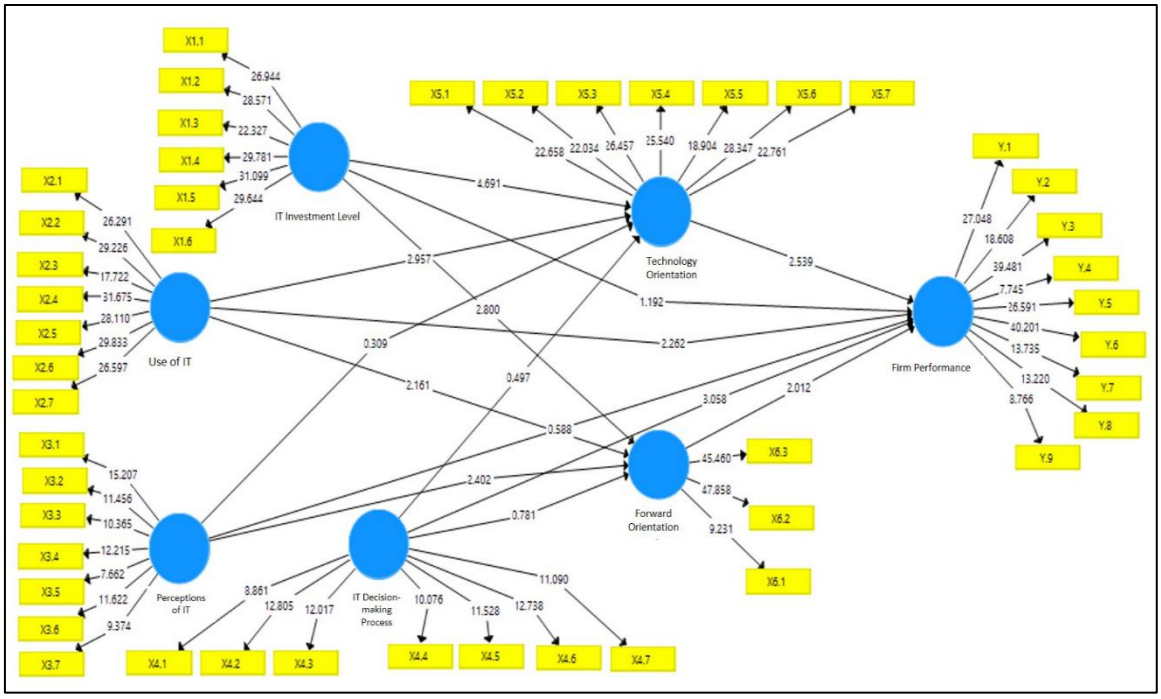
	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
IT Investment Level	0.946	0.946	0.957	0.786
Use of IT	0.951	0.953	0.960	0.775
Perceptions of IT	0.914	0.920	0.931	0.659
IT Decision-making process	0.888	0.897	0.912	0.598
Technology Orientation	0.927	0.929	0.941	0.695
Forward Orientation	0.833	0.847	0.901	0.752
Firm Performance	0.943	0.946	0.952	0.689

The results of the reliability test in table 1. indicate that the question items in the questionnaire for each research variable are reliable and. This is indicated by the magnitude of Cronbach's Alpha and rho_A $\geq$ 0.800. The results also show the amount of Composite Reliability $\geq$ 0.9, Average Variance Extracted $\geq$ 0.500.

Test of the Hypotheses

Based on the results of statistical tests in table 2 it shows that the technology orientation has an R Square of 0.653. Meanwhile, the future orientation has an R Square of 0.676. These results indicate that technology orientation and future orientation can be explained by variables of investment level, IT use, IT perceptions, and IT for decision making. Organizational performance has an R Square of 0.845. These results indicate that organizational performance can be explained by variables of investment level, IT use, IT perceptions, IT for decision making, technology orientation, and future orientation.

Table 2. The Result of Structural Equation Model



Based on the results of statistical tests in table 3, it is found that the level of IT investment has no effect on organizational performance. This can be seen from the t-stat of 1.192 and the p value of 0.234. There are indications that the level of actual IT investment has no impact on performance. It is possible that the performance of the organization is influenced by other factors. The results of this study differ from the findings Artzeni & Carboni (2001), Zehir, et. al., (2010).
Hypothesis 2 test shows that the use of IT affects on organizational performance. This can be seen from the t-statistic magnitude of 2.362 and p value of 0.024. The use of appropriate and efficient information technology will improve performance. These are consistent findings Zehir, et.al. (2010), Turban, et.al., (2013), Feng & Wu, (2019).

Table 3. Hypothesis Testing

Hypothesis	Path	t-statistics	P values	Conclusion
H1	IT Investment Level→Firm Performance	1,192	0,234	H1 rejected
H2	Use of IT→ Firm Performance	2,262	0,024	H2 accepted
H3	Perceptions of IT→ Firm Performance	0,588	0,557	H3 rejected

H4	IT Decision-making Process → Firm Performance	3,058	0,002	H4 accepted
H5	Forward Orientation→ Firm Performance	2,012	0,045	H5 accepted
H6	IT Decision-making Process → Forward Orientation	0,781	0,435	H6 rejected
H7	IT Investment Level→ Forward Orientation	2,800	0,005	H7 accepted
H8	Perceptions of IT→ Forward Orientation	2,402	0,017	H8 accepted
H9	Use of IT→ Forward Orientation	2,161	0,031	H9 accepted
H10	Technology Orientation→ Firm Performance	2,539	0,011	H10 accepted
H11	IT Decision-making Process → Technology Orientation	0,497	0,620	H11 rejected
H12	IT Investment Level→ Technology Orientation	4,691	0,000	H12 accepted
H13	Perceptions of IT→ Technology Orientation	2,957	0,003	H13 accepted
H14	Use of IT→ Technology Orientation	0,309	0,757	H14 rejected

The results also show that IT perceptions have no effect on organizational performance. This can be seen from the t-statistic of 0.588 and a p value of 0.557. Hypothesis 3 is rejected. There is a tendency for tourism object managers to consider information technology as a difficult and expensive product. These findings are different from the findings (Zehir, et.al. 2010; Feng & Wu, 2019)
Information technology for decision making affects on organizational performance. This can be seen from the t-statistic of 3.058 and a p value of 0.002. Hypothesis 4 is accepted. Decision making with IT will make it easier and more efficient in making decisions and improve performance (Zehir, et.al. 2010; Pang, 2018; Tanolu and Basolu, 2005).
Hypothesis 5 test results reveal that future orientation affects on organizational performance. This can be seen from the t-statistic of 2.012 and p value of 0.045. Managers tend to think that the future

is a challenge that must be faced by utilizing information technology. The results of this study are consistent with Pang (2018); Tanolu and Basolu (2005). Future orientation allows organizations to adopt new things to improve performance

Information technology for decision making has no effect on future orientation. This can be seen from the t-statistic of 0.781 and a p value of 0.435. Hypothesis 6 is rejected. This result contradicts the findings of Zehir, et.al. (2010), Tanolu and Basolu (2005).

Hypothesis 7 test results reveal that the level of investment has an effect on future orientation. This can be seen from the t-statistic of 2,800 and p value of 0.005. IT perceptions influence future orientation. This can be seen from the t-statistic of 2.402 and a p value of 0.017. An understanding of information technology will open discourse to see the challenges ahead. Hypothesis 8 is accepted. The findings are in line with the results of research by Turban, et.al., (2013), Zehir, et.al, (2010).

The use of information technology has an effect on future orientation. This can be seen from the t-statistic of 2.161 and p value of 0.031. Hypothesis 9 is accepted. Hypothesis 10 test results indicate that technology orientation affects organizational performance. This can be seen from the t-statistic of 2.539 and a p value of 0.011. In the era of globalization and intense competition, the use of information technology has become very urgent and vital (Turban, et.al., 2013; (Kim, Xiang & Lee, 2009; Feng & Wu, 2019).

Information technology for decision making has no effect on technology orientation. This can be seen from the t-statistic of 0.497 and a p value of 0.620. Hypothesis 11 is rejected. The results of this study differ from the findings of Artzeni & Carboni, (2001); Zehir, et. al., (2010).

The level of investment has an effect on technology orientation. This can be seen from the t-statistic of 4.691 and a p value of 0.000. Hypothesis 12 is accepted. Hypothesis 13 test results indicate that IT perceptions have an effect on technology orientation. This can be seen from the t-statistic of 2.957 and a p value of 0.003. The results of the hypothesis test are consistent with the findings of Xiang & Lee (2009), Feng & Wu (2019). The use of IT has no effect on technology orientation. This can be seen from the t-statistic of 0.309 and a p value of 0.757. Hypothesis 14 is rejected. The results of this study differ from the findings of Artzeni & Carboni (2001), Zehir, et. al., (2010).

V. CONCLUSION AND FURTHER RESEARCH

This study uses a sample of tourism object managers in the Yogyakarta Special Region. The results showed that the use of information technology has an effect on future orientation and organizational performance. Information technology for decision making affects organizational performance. Future orientation affects organizational performance. The level of investment has an effect on future orientation and technology orientation. Perceptions of information technology affect future orientation and technology orientation. Technology orientation affects organizational performance.

It takes education, understanding, information technology applications to improve the performance of tourism objects. The government, academics, managers or managers must be able to take the strengths, opportunities from the development of information technology. An appropriate investment is required, right on target in developing information technology.

The use of technology and information is an effort to eliminate the limitations of the community. The information available through the internet today is very diverse. This can provide inspiration and opportunities to develop a business. The internet is an effective and inexpensive marketing medium, but it can also provide information about products that can be produced by the community. Marketing via the internet or e-Commerce, whether B2B, B2C or C2C is currently developing rapidly. The economic potential contained in e-Commerce is enormous. In addition, marketing by optimizing

social media availability can be a trigger for effective development. The opportunity to use e-Commerce and social media can also be used by the community.

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