ARISTA HAKIKI_EJBMR_THE EFFECT OF TECHNOLOGICAL ADVANCES TO THE ACCOUNTING INFORMATION SYSTEM PERFORMANCE

by Arista Hakiki

The Effect of Technological Advances to the Accounting Information System Performance

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ABSTRACT

The study aims to determine the effect of technological advances to the accounting information system performance on hospitality industries. The theory used is the Technology Acceptance Model (TAM) to test the acceptance of technology by users. The thesis uses primary data collection through questionnaire distribution to users of accounting information system at three-star and four-star hotels in Tangerang Area, Indonesia. The study indicates if technological advances affect the accounting information system performance. The results shows if users of accounting information system agree that technological advances affect AIS performance. This study has implication that hotels should try considering the importance of improvement and development in technology of accounting information system. The improvement may vary and adjusted with the needs of the hotels, in order to develop a suitable and effective accounting information system.

Keywords: Accounting Information System Performance, Technological Advances, Technology Acceptance Model (TAM).

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I. INTRODUCTION

Romney and Steinbart (2013) explain if a proper AIS would raise business effectiveness by enhancing the quality of products or services and decreasing the costs, lifting up efficiency, sharing knowledge, effectivity of its supply chain, etc. Previous research indeed has shown the benefits of using AIS on businesses and organizations. Putri *et al.* (2020) for example, explained that AIS significantly affect the quality of financial statements on regional work unit (SKPD) of Central Lombok Regency. Research by Mulyanti (2021) also conclude if AIS has significant effect to employees' performance on a logistic company in Jakarta. The AIS has been an important concern to the business community, as it is not only helping firms recognize the potential benefits from investments in IT, but also improves business performance (Al-Dmour *et al.*, 2017).

Tjen (2002) explains that AIS performance could be measured by two factors: user satisfaction of AIS and the usage of the system. Factors' affecting the systems are top management support, end user ability, user involvement of IS development, held of training and education for users, steering committee existence, the need of establishing IS department, formalization of IS, and the scale of the organization. Research by Joshua and Jimmy (2017) included technological advances as an element that affect AIS performance, since it matters to increase a company's performance.

Technological advances have helped human on inventing wide variety of useful system to provide the best information and quality. The actualization of technological advances towards business may be recognized on tourism industry. According to Zsarnoczky (2018), digital innovations and technological novelties such as peer-to-peer communication and the development of smart devices, provide benefits to the industry in many aspects for example, a better scheduling, finance and administration, and innovation on sales and marketing. As a result, the trends have opened the way for novel solutions like cloud-based booking sites or information and experience sharing via digital platforms, be in accordance with the market and customer preference which are shifting to digital, and their behavior is getting mobile. It could be distinguished on how people do their reservation using online travel agent, find their destinations using online maps, and how do they share the experience via social media (aptika.kominfo.go.id, 2019).

The differences this study from previous research with targeted subject is workers that use Accounting Information System on hospitality industries in Tangerang area, specifically 3-Star and 4-Star hotels. The consideration of using only 3-Star and 4-Star hotels is because they already represent the whole facilities and systems have by 1-Star, 2-Star, and 5-Star hotels, also the implementation of integrated information system to help the run of their business (Ratnaningsih & Suaryana, 2014).

Tangerang area, including south tangerang municipality, tangerang municipality, and tangerang regency, as regions in Indonesia that have been affected by the covid-19 pandemic are grantees of Tourism Grant Fund (*Dana Hibah Pariwisata*) on the end of 2020 provided by Ministry of Tourism and Creative Economy.

The region has approximately received more than Rp 100 billion (inews.id and wartakota.tribunnews.com, 2020) as one of the stimuli to arouse tourism, with target including hospitality industries. The funds are distributed to each of hotels in the region and later be used as a support to their operation. The phenomenon may be seen as a consideration of using Tangerang as the locale, because researcher would like to see how the utilization and improvement of latest technology and end user ability of their accounting information system.

The study aims to determine the effect of technological advances to the accounting information system performance on hospitality industries. The thesis uses primary data collection through questionnaire distribution to users of accounting information system 5 hotel at three-star and four-star hotels in Tangerang Area Indonesia.

II. Literature Review and Hypotheses

A. Technology Acceptance Model

Technology Acceptance Model (TAM) is widely used in information system research to explain and predict how technology users accept and use technology in their work. It was developed by Fred Davis in 1989 to explain the main factors of information technology user behavior to accept and use technology. The factor is perceived usefulness and perceived ease of use. Perceived usefulness (PU) is a degree of people beliefs on using the system. PU assess about personal perspective, when by using certain application system will enhance their work and life quality, also improve their quality. The definition of PU is also about how user believes by using information technology will increase working ability of the user. It reflects that PU directly affects user intention to use technology. Perceived ease of use (PEOU) refers to a degree of people expectation that using system doesn't need so much effort. In other words, user expects if there will be no significant difficulties to learn and to apply the technology in their life. PEOU could also be defined as level of trust to IT usage, that to apply technology doesn't need hard effort on its use and its application. Harder usage means least utilization. Harder technology is being applied means lower user intention to use it, and also will make the technology least adapted in the community. Behavioral intention to use (ITU) refers to behavioral motive towards technology usage. It measures people desire to do certain thing. ITU means probability of using application by the user. The measurement of the ITU includes performance expectancy, effort expectancy, social influence, and facilitating condition.

Technological advances would be useful if it is applied to meet the company needs and if user has proper ability also understanding towards the system and how to operate it, that finally will affect the intention to use and be able to fulfill the performance expected. Technology which is applicable and relevant to the job will be led to the increase of technology utilization and productivity. The intention to use technology is expected to evolve and enhance AIS performance by having these kinds of advances and ability by user, so it will help company on reaching the advantage and lead the market.

B. Accounting Information System

Institute of Indonesia Chartered Accountants (IAI) defines accounting as a science of recording, analyzing, and communicating transaction or economic events of a business, that aimed to provide and to report relevant information to users. It also refers to the process of providing reports to users about the economic activities and condition of a business. Accounting is interpreted as the language of business, because accounting means by which businesses' financial information is communicated to users. Munteanu *et al.* (2020) explain that Information System (IS) is an integrated set of methods, procedures and means used in order to collect, transmit and process data, analyze, store, disseminate and capitalize information and knowledge. IS provides information and information services to its environment in order to control and adjust the subsystem's activity of at least three subsystem such as collecting information, providing information and information services, also adjustment and control. The content of IS supports the functioning of the organization and comprises three operating systems namely operating system, management system, and information system that ensures connection of operating and management. The development of processes is ensured by a component of the organizational structure in which specialists, scientific instruments, accounting technique and an information flow between information sources, system's components and decision levels are involved. From the functional view, IS within an organization could be classified in IS for production, IS for commercial activity, accounting information system, and IS for the management of human resources.

C. Technological Advances

Technological advances play a role in AIS performance, because the more up to date a technology is, the bigger impact it has to help users' job, and it could be seen from data processing time and output produced. The more advance a technological is, the easier it could be, and it is saw by the design of technology, whether it is user-friendly or not (Joshua and Jimmy, 2017). Technological advances help information system performs better, as well as improve the compatibility and communication in the network used.

Based on research conducted by Al-Eqab and Adel in 2013, the dimensions of measuring the advances of information technology are technological sophistication, informational sophistication, functional sophistication, and managerial sophistication. Technological Sophistication, using of sophisticated (advanced) IT leads to relevant information being reported upon request which in turn leads to increase in information accessibility and reliability. Therefore, it is expected that companies with more advanced technologies will have AIS performance. Informational Sophistication refers to the type of application portfolio and integration of these applications. Use of advanced applications such as order entry, budget variances, production variances, budgeting, production planning and control, and activity-based accounting leads to more available and more quickly retrieved information. Functional sophistication, accountants' active participation in the IS implementation would contribute to greater AIS performance because they will be able to provide significant inputs and suggestions to

the AIS design to the advantage of the organizational performance. Managerial Sophistication, the most dominant managerial dimension found to have implication on IT implementation was top management commitment.

Considering the amount of resources such as financial and human effort invested in IT project among large businesses, commitment from top management is crucial to ensure successful IT implementation such as AIS.

D. Accounting Information System Performance

Performance is the action or process of performing a task or function in relation to how well it is performed, refers to the results of an organization or investment over a given period of time (Taiwo, 2016). Higher performance involves a combination of increasing efficiency, effectiveness, productivity or increasing quality. Good performance can be achieved if individuals meet their needs in completing tasks. Performance is the accomplishment of a given task measured against pre-set known standards of accuracy, completeness, cost, and speed. Joshua and Jimmy (2017) explained that information system performance is measured by user perspective on fulfill user needs and user satisfaction on the usage of Accounting Information System. The usage of the system is measured by how often the user utilize the Accounting Information System and the availability on using the exist AIS. Moreover, the AIS performance is measured by user satisfaction towards AIS used in the business. In accordance, Romney *et al.* (2013) stated that the measurement of AIS could be seen by user satisfaction and the usage of AIS itself. The success of AIS application is determined by the user satisfaction, intensity of system use (intended use) in the daily work and the satisfaction of users, also the efficiency of information systems to meet the needs (Rehab, 2018). From the explanation, it concludes that AIS performance is a set of achievement by individuals on doing their tasks while using Accounting Information System, and it mainly measured by user satisfaction and usage of the system.

Some research finding that the accounting information system performance has a positive effect on operational performance of small and medium-sized firms (Van Dung, 2020). Other results show that information accounting system performance has positively linked with the performance of the management (Al-Delawi & Ramo, 2020). Study from Alawaqleh (2021) show that management accounting information system and internal process performance mediate the223elationnship between innovation strategy and financial performance. AIS plays an important role (Alawaqleh, 2021). Latifah *et al.* (2020) found that both innovation and AIS performance positively mediate the relationship between business strategy and MSMEs' performance.

E. Research Development

Along with Technology Acceptance Model (TAM), usefulness of the technology will let users perceived about the necessity of technology and its development, so the AIS will be intensely used on daily basis and perform as expected to help users' daily activities. According to Joshua and Jimmy (2017), technological novelty has an influence on creating and running a well-performed system to assist management in the way of processing, changing, storing, producing data and information required by the company in carrying out its business processes. A good and capable system needs technology that supports the system itself. In conclusion, technological advances will help an improvement of the AIS performance, and it is supported by Al-Eqab and Adel (2013), also Joshua and Jimmy (2017) that mention if there is a correlation between technological advances and AIS performance. By the explanation, the hypothesis could be developed as follows. Thus, the hypothesis proposed is technological advances affect the AIS performance. The use of latest technology will certainly create impacts to the performance of AIS, since it matters on helping the industry adjust with the digitalization and providing better information. Based on the theory of TAM and previous research, the conceptual framework describes the relation between each of antecedent in this study, which is technological advances, to AIS performance as the dependent variable.

III. RESEARCH METHOD

The study is conducted using quantitative method (Sekaran & Bougie, 2016) and will analyze the effect of technological advances to accounting information system performance. The research is conducted to workers who operate and use accounting information system on three- and four-star hotels in Tangerang area. This research will use primary data through survey using questionnaire that will be spread online and offline to users of accounting information system in hospitality companies around Tangerang area and focusing on three-star and four-star hotels.

Data from Statistic Indonesia (BPS) shows number of accomodations in classified hotel by regency/municipality in Banten Province for 2020, and Tangerang area has in total of 78 classified hotels from one-star hotels to five-star hotels. Researcher then purse the lists and it results that Tangerang Municipality has 20 three-and-four-star hotels, South Tangerang Municipality has 13 three-and-four star hotels, while Tangerang Region has 12 three-and-four star hotels. In total, there are 45 three-star and four-star hotels around Tangerang Area.

Based on researcher's observations at 5 different hotels in Tangerang area, Accounting Department has several functionals, including Accounts Payable (A/P), Purchasing (PCH), Storekeeper (STO), Receiving (RCV), Cost Control (CC), Accounts Receivable (A/R), General Cashier (GC), Income Audit (IA), Night Audit (NA), also General Accounting/Book Keeper (BK). But the allocation of HR on these positions is vary, depend on the regulation and policy applied on every hotel. Numbers of workers in Accounting Department that researchers have gathered are 84 respondents. Related to the research, the respondent is workers at Accounts Payable, Purchasing, Storekeeping, Receiving, Cost Control, Accounts Receivable, General Cashier, Income Audit, Night Audit, also General Accounting/Book Keeper divisions on Accounting Department in three-star and four-star hotels in Tangerang area. The data used to test the validity and quality of the data. This research use analysis which are Linear Regression.

TABLE I: DESCRIPTIVE STATISTIC

		Frequency	Percentage
Gender	Male	47	55,95%
	Female	37	44,05%
Hotel's Classification	3-Star Hotel	56	66,67%
	4-Star Hotel	28	33,33%
Age	<20	0	0,00%
	20-25	11	13,10%
	26-30	26	30,95%
	31-35	24	28,57%
	36-40	14	16,67%
	>40	9	10,71%
Academic Background	High School	31	36,90%
	D3	12	14,29%
	D4	1	1,19%
	S1	38	45,24%
	S2	2	2,38%
	S3	0	0,00%
Hotel's Classification	3-Star Hotel	56	66,67%
	4-Star Hotel	28	33,33%
Working Experience	<1 Year	5	5,95%
	1-5 Year	48	57,14%
	6-10 Year	21	25,00%
	>10 Year	10	11,90%
Used Application	Powerpro	26	30,95%
	Micros	11	13,10%
	Maxial	2	2,38%
	VHP	34	40,48%
	Other	11	13,10%
Hotel's Location	Tangerang Municipality	41	48,81%
	Tangerang Region	21	25,00%
	South Tangerang Municipality	22	26,19%

IV. RESULTS AND DISCUSSION

A. Descriptive Statistics and Demographics

Data is collected through questionnaire distribution by contacting hotels across Tangerang Area via phone, e-mail, and direct approaching. Data compiled is then classified and tested using statistics application presented in Table I.

B. Results of Data

This research will use item validity tests by calculating the correlation or acceptance from each of item score to item total score, using Bivariate Pearson Correlation (Pearson Product Moment) which resulting a coefficient of correlation (r count). The r count is later compared with r table, distributed in product moment table, and if r count > r table, the item of questionnaire is considered valid.

The r table of the research is based on df or degree of freedom, where N-2 (84-2), and the value of r table is 0,187. Based on the result, all items on questionnaire remain valid and it shows if the data could be further proceeded to the next data testing. Reliability is seen as the consistency of instrument used in the measurement over time. Certain methods are used to determine the reliability of the instrument, but this research is using Cronbach's Alpha to test internal consistency. The internal consistency is considered high or reliable if the coefficient has value above 0,70 ($\alpha >$ 0,70). The results shows that both independent variables, a dependent variable, and the moderator are valid and reliable for further tests since the Cronbach's Alpha values are bigger than 0,70.

Previous tests have shown if the data used on the research remains valid and reliable. It could later proceed to the next step of the research, which is regression analysis to test the hypothesis. Linear Regression is used in the study, and the output is as follows.

TABLE II: COEFFICIENT OF DETERMINATION TEST RESULT FOR LINEAR REGRESSION

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,570[a]	0,325	0,308	3,840389

a. Predictors: (Constant), Technological Advances

Table II presents a result for coefficient of determination test on linear regression. The R value reflects the coefficient of correlation as it shows the strength between relation of independent and dependent variables, and it marks 0,570 points. It means the correlation of predictors to dependent variable are strong because the point exceeds 0,5. Furthermore, the contribution of independent variables to dependent variable in this research (R Square) is 0,325 or 32,5%. Based on the table, the Adjusted R Square has value of 0,308 points or 30,8%. It means Technological Advances is contributed as much as 30,8% on determining the AIS performance, and the rest 69,2% is by any other factors excluded on this research.

TABLE III: LINEAR REGRESSION

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	17,295	4,479	-	3,861	0,000
	Technological Advances	0,869	0,193	0,453	4,498	0,000

a. Dependent Variable: Accounting Information System Performance

Table III show the coefficient of constant is 17,295. It means if the independent variables, Technological Advances, assume 0 then the value of Accounting Information System Performance (Y) is 17,295. The regression coefficient of technological advances (X) marks positive with 0,869.

It implies a positive correlation among technological advances and AIS performance, where latest technology applied in AIS will cause an increase of AIS performance. The coefficient also shows that every increase of 1 value on technological advances will affect an increase to accounting information system performance as much as 0,869. Table III shows the effect of independent variables to dependent variable may be seen by looking at t value and probability of significance level. It is said to be significant if the level is below 0,05 ($\alpha < 0,05$) and t count > t table (df=84-3=81; so t table is 1,989). Therefore, the result is used to examine the hypothesis built on the research. Technological advances (proxied with TechA) have t value of 4,498 > 1,989 and probability p < 0,05. The result shows if technological advances have a significant effect towards the performance of accounting information system.

C. Discussion

Result of hypothesis test on this research says if technological advances variable has a positive and significant effect towards performance of accounting information system. Therefore, hypotheses is accepted. The novelty used in information technology is proven helping users of accounting information system in three-and-four-star hotels across Tangerang Area to work productively, as it affects the output of their work. The hyphotesis is then become relevant with theory of TAM, which explained if factors such as technological advances may increase the intention to use an information system because of its usefulness and suitability for helping the works of users. The result of the study is consistent with research from Joshua and Jimmy (2017), and Ratnaningsih and Suaryana (2014) who mentioned if technological advances have significant effect to AIS performance. According to Joshua and Jimmy (2017), technological advances is seen as the tool for assisting human on their work, and every upgrade of technology may lead to a better output for decision making process. The result of the study also talks about the importance of implementing updated technology and adjustment of AIS for users because it will improve the performance and further affect the reporting process to enhance the decision making of a business. Hence, it will contribute to create a competitive advantage for companies (Mutma'inah *et al.*, 2021).

According to the following result and discussion regarding the effect of technological advances to the accounting information system performance on hospitality industries in Tangerang Area, the conclusion of the study that technological advances affect the AIS performance. The novelty used in information technology is proven helping users of accounting information system in three-and-four-star hotels across Tangerang Area to work productively so it would increase the performance of accounting information system. The results shows if users of accounting information system in three-and-four-star hotels across Tangerang Area agree if technological advances affect the AIS performance.

The study shows there are certain factors that is impacting the performance of accounting information system, as it is not only limited to technological advances. Based on the result, further study may consider adding any other factors to determine the performance of accounting information system. Hotels should try considering the importance of improvement

and development in technology of accounting information system. This study shows the factor are partially affecting the accounting information system performance significantly. The improvement may vary and adjusted with the needs of the hotels, in order to develop a suitable and effective accounting information system.

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