THE INFLUENCES OF TASK-TECHNOLOGY FIT, UTILIZATION, AND USER SATISFACTION TOWARDS EMPLOYEE PERFORMANCE IN USING ACCOUNTING INFORMATION SYSTEM 
(Study on the Employee of Small and Medium Industries in Malang)

Fariz Achmad S
Noval Adib, SE., M.Si., Ak., Ph.D.

International Undergraduate Program in Accounting. Faculty of Economics and Business, University of Brawijaya
Jl. Mayjen Haryono 165, Malang 65145, Indonesia
Telp. 0341-555000 (Hunting), 551396 Fax 0341-553834
E-mail: info.feb@ub.ac.id, Website: http://www.feb.ub.ac.id

Abstract

This study is aimed to provide evidence related to the influences of Task Technology Fit (TTF), utilization, and user satisfaction towards employee performance in using Accounting Information System (AIS) in Small and Medium Industries (SMIs) Malang. This study uses a model combining the Technology to Performance Chain (TPC) and End-User Computing Satisfaction (EUCS) to analyze the factors that may affect the implementation of AIS. This research is a quantitative research. The sample used is 40 employees of SMIs in Malang registered as an active company in Department of Industry and Commerce year of 2016/2017 obtained using nonprobability sampling. Data collection method in this research is done by conducting survey with a paper questionnaire as its instrument. This data analysis is conducted using multiple regression analysis. The result shows that task technology fit do not affect the employee performance in SMIs Malang. However, utilization, and user satisfaction positively affect the employee performance in SMIs Malang. The variable that has the most influence on employee performance of using AIS is user satisfaction.

Keywords: Accounting Information System (AIS), Task technology fit, utilization, user satisfaction, employee performance

A. INTRODUCTION

In this era of globalization, the flow of economic resources are goods, services, technologies and informations increasing sharply. One of the main evidence is the launch of ASEAN Economic Community (AEC) on January 1st, 2016. It started from January 4th, 2016. AEC is a form of integration of ASEAN community about their free trade among of ASEAN countries that have been agreed by ASEAN countries. The free trade requires companies to be more
competitive. The increasing of company’s competition triggers improving performance of the company. Furthermore, it will encourage every company to improve their technology and performance by harnessing the information system.

Hashim, et al. (2012: 181) stated that no doubt technology plays an imperative role for development, and when it is used to improve employee’s performance. One of departments that need a utilization of technology is the Accounting Department, especially when a company is growing rapidly. One of the results from information system development to support the company performance in this globalization era is Accounting Information System (AIS). The information is generated by the AIS will be communicated to the parties who has role as decision makers in an organization (Bodnar & Hopwood, 2010). The objective and quality of accounting information will help the management's decision makers to harness all the power and the opportunities that exist (Financial Accounting Standard Board, 1980).

According to Edison, et al. (2012), information technology few years ago only adopted by large company, in fact it can be reached by SMIs (Small and Medium Industries). Nowadays SMIs are required to more pay attention to information technology, thereby increasing their competitive advantages. SMIs is one of the industrial sectors that have an important role for the Indonesian economy, because this sector can address equity in the distribution of income among regions. The number of SMIs in Indonesia at 2016 reached 3 million units with 15 million employees. The contribution of non-oil industry includes the SMIs reached 20.65% of the total Indonesia’s GDP, the highest contribution among the other sectors (Kementerian Perindustrian Republik Indonesia, 2016). Because of that, SMIs are required to increase their performance to gain the development of country. An inability to provide and use of accounting information are the main factors that cause problems and lead to the failure of SMIs in business development. Astuti (2007) said those problems are the weaknesses in management perspective. These weaknesses are a major factor that led to the failure of SMIs in developing the business.

The dependent variable in this study used 6 criteria by Bernardin and Russel (2001: 283) to assess employee performances. Then, for independent variable is used the Technology to Performance Chain (TPC) model to analyze the factors that may affect the implementation of AIS. Based on that theory, there are two independent variables that affect the Employee performance in this study. The variables are Task-technology fit and Utilization on used an AIS. Moreover, this study has other independent variables called User Satisfaction. User Satisfaction variable in this study used End-User Computing Satisfaction’s (EUCS) factors by (Doll & Torkzadeh (1988).

The rationale underlying the development TPC model of is the IT which has a positive impact on the performance of the individual, if the technology can be utilized in accordance with the tasks and supports on it (Goodhue & Thompson, Task-Technology Fit and Individual Performance, 1995). Furthermore, Hou (2012) used those five components to study the user satisfaction of information system towards individual performance. The result showed that user satisfaction has positive effect and significantly towards individual performance. Every user is more satisfied if the quality of information fulfills all of five components.
B. LITERATURE REVIEW

THEORITICAL FRAMEWORK

Technology to Performance Chain (TPC)

There are two major models or research streams linking technology to performance on TPC model. The first is the task-technology fit (TTF) model. The TTF model indicates that performance will be increased when a technology provides features and support that fit with the requirements of the task (Goodhue & Thompson, 1995). The second is the utilization model. Utilization research is based on the level of the utilization on the information system itself. The implication of this model is that increased utilization will lead to positive performance impacts.

Goodhue and Thompson (1995: 213) suggested Technology to Performance Chain (TPC) is basically a combination of Technology Acceptance Model (TAM) and Task-Technology Fit (TTF) Model. TAM focuses more on aspects of utilization, while TTF lead to the suitability of technology aspects. TPC is consistent with the model proposed by DeLone and McLean (1992) that the use of technology and consumer attitudes toward technology has an impact on individual performance.

User Satisfaction

According to Davis (1998) User satisfaction is regard to the recipient's response with the output of used the information systems. Gupta, at al. (2007: 10) stated that user satisfaction in the use of information systems is used as a measure of the effectiveness of information systems. Information systems user is influenced by information systems staff and internal party organizations than the external party organization. User satisfaction is very important to improve productivity, efficiency, and accuracy of the manufacturing organization reports.

According Supriyatna and Jin (2006), the user satisfaction reveales a correspondence between expectations with the results. Generally, Doll and Torkzadeh (1988) developed the model to measure user satisfaction. The model is called End-User Computing Satisfaction (EUCS). There are five components which compare between traditional data processing environment and end user computing environment. Those components are content, accuracy, format, ease, and timeliness.

Employee Performance

According to Mangkunegara (2008), performance is the result of the quality and quantity of work accomplished by an employee in performing their duties in accordance with the responsibilities that given to them. Individual performance is the foundation of the company's performance. Therefore, it is important to understand some of the behavior of individuals in the company before assessing the individual performance of an employee.

According Simamora (2008), performance assessment is the process used by the organization to evaluate the implementation of the work of individual employees According Bernardin & Russell (2001), there are six primary criteria into employee performance measurement tools; quality, quantity, timeliness, cost effectiveness, need for supervision, and interpersonal Impact.
HYPOTHESIS DEVELOPMENT

Task-technology fit and Employee Performance

Goodhue and Thompson (1995) stated that the suitability of tasks with technology will lead individuals to achieve better performance. The Implementation of information systems that are not in accordance with the needs of users will not provide the benefits for the improvement of individual performance. The result of the study conducted by Setianingsih and Surpriantna (2009) provides empirical evidence that the Task-technology fit has a significant relationship with the Individual Performance.

H1: The Task-technology fit on AIS has positive effect on the Employee performance.

Utilization and Employee Performance

According to Thompson, et al. (1991) Individuals would use information technology if know the positive benefits over its use. According to Thompson, et al. (1991) Individuals would use information technology if know the positive benefits over its use. The Utilization of information technology is the benefits expected by users of information technology in their duties. The measurement of Utilization is based on frequency of use and the diversity of applications carried on.

In the study conducted by Sunarta (2005) has result the utilization technology significantly effect on the individual performance. In other study, Lindawati and Salama (2012) examined the Utilization of technology on the performance for the long-term consequences. It has significant effect on individual performance.

H2: The Utilization of AIS has positive effect on the Employee performance.

User Satisfaction and Employee Performance

DeLone and McLean (1992) stated that the impact of the use of information systems to the individual performance with a degree of user satisfaction has a reciprocal relationship. Other study by Hou (2012) stated that user satisfaction has a positive effect on individual performance. Positive value can be interpreted if user satisfaction is better, then individual performance increases. The role of User Satisfaction is needed to improve the performance of employee. As in the previous study by Perdanawati (2014) stated that the elements of user satisfaction will affect the effectiveness of users of the Accounting Information System. Study by Istianingsih (2007) also stated the company should pay attention to the priority criteria in selecting a programming package it will optimize the user satisfaction that will ultimately improve the individual performance.

H3: The User Satisfaction in using AIS has positive effect on the Employee Performance.
C. RESEARCH METHOD

Type of Research

This study will use quantitative methods. It is a research that emphasizes on the phenomena studied objectively and quantitatively. Maximizing the objectivity of the research design quantitative done using figures, statistical processing, structure, and controlled trials.

Population and Sample

According to Sekaran and Bougie (2010: 262), population refers to the entire group of people, events, or things of interest that the researcher aims to investigate. Researchers usually concern only on a particular size designed as the representative of population, or usually known as a sample. In this study, the population is SMIs active and listed in Department of Industry and Trade Malang. The total SMIs active and listed in Ministry of Industry and Trade in Malang is 291 companies. After non-probability sampling techniques process, it can be seen that SMIs which use Accounting Information System are 50 SMIs.

Type and Data Source

Primary Data, the data is obtained from the questionnaires of Technology to Performance Chain (TPC): Task-technology fit and The Utilization of Accounting Information System and The User Satisfaction of Accounting Information System granted to employee at financial department of Small Medium Industries (SMIs) in Malang. The secondary data used in this research is the data of SMIs that active and listed in Malang obtained from Ministry of Industry and Trade Malang.

Dependent Variable

Dependent variable in this study is the Employee Performance (Y). Employee performance is a real behavior displayed by everyone as the resulting performance by employees in accordance with their role in the company. This study uses an Employee Performance variable based on the concept of Rizaldi (2015) that uses Bernardin & Russell (2001), there are six primary criteria into employee performance measurement tools; quality, quantity, timeliness, cost effectiveness, need for supervision, interpersonal Impact.

Independent Variable

1. Task-technology Fit

This variable shows how high-tech help individuals through a series of their task, it is measured with an instrument developed by Goodhue (1998). This study use a Task-technology Fit variable is based on the concept of Goodhue (1998) with 6 indicators. The indicators are the right data, accessibility, meaning, systems reliability, locatability, and training
2. Utilization

The Utilization of information systems is related to the behavior of using the information system to complete the task. The measurements such as frequency of use or diversification of used the program application (Thompson, et al, 1991). This study adopted the measure of utilization system that has been developed and tested by Thompson, et al. (1991). The measurements of utilization are the intensity of use, the frequency of use, and the numbers of software type are used.

3. User Satisfaction

Gupta, et al. (2007: 10) stated the user satisfaction with IT use is important for the organization for its productivity, efficiency, and accuracy in the reports. This study uses User Satisfaction variable based on the concept of End-User Computing Satisfaction (EUCS) by Doll & Torkzadeh (1988). There are five components which compare between traditional data processing environment and end user computing environment. Those components are content, accuracy, format, ease, and timeliness.

D. DATA ANALYSIS AND RESULT

DATA ANALYSIS

The numbers of questionnaires are 50. As for the number of questionnaires returned are 40 or not all of the questionnaires are returned. Thus, the level of respondents’ rate in this study is 80% and questionnaires that can be processed are 40 as sample of this study.

Descriptive Statistics

The analysis using descriptive statistics was conducted on 40 respondents who have met the criteria for further data processing. The purpose to have descriptive statistics before analyzing the data is to determine the values of variables in this study. Below is the Table 1 that describes the minimum, maximum, mean, variance and standard deviation.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task-Technology Fit (X1)</td>
<td>40</td>
<td>3.00</td>
<td>5.00</td>
<td>3.9625</td>
<td>0.54497</td>
</tr>
<tr>
<td>Utilization (X2)</td>
<td>40</td>
<td>2.33</td>
<td>5.00</td>
<td>4.5167</td>
<td>0.71193</td>
</tr>
<tr>
<td>User Satisfaction (X3)</td>
<td>40</td>
<td>2.40</td>
<td>5.00</td>
<td>3.8650</td>
<td>0.60998</td>
</tr>
<tr>
<td>Employee Performance (Y)</td>
<td>40</td>
<td>2.50</td>
<td>5.00</td>
<td>4.1833</td>
<td>0.60952</td>
</tr>
</tbody>
</table>

Classical Assumption Test

The result of normality test from the entire overall regression model produces Asymptotic Significance value greater than 0.05 that is 0.965. These results indicate that the data is normally distributed. It can be concluded that the data is normally. Multicollinearity test result shows that the VIF value of each variable is different, but the VIF value of entire regression model is less than 10 (<10), so there is no multicollinearity among the independent variables. From the result of Heteroscedascity Test significance values of all variables are more than 0.05. So, there is no
heteroscedasticity in regression model. In other words, the independent variables in this model have a similar or homogeneous variance distribution.

**Coefficient of Determination**

The regression model of this study has a coefficient of determination (adjusted R2) of 0.720. It can be concluded that the contribution of independent variables consist of variables Task-Technology Fit (X1), Utilization (X2), and User Satisfaction (X3) can affect the dependent variable of Employee Performance (Y) by 72% while other 28% of the dependent variable influenced by other factors outside this study.

**HYPOTHESIS TEST**

**Partial Individual Test (T-test)**

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>0.529</td>
<td>0.402</td>
<td>1.315</td>
<td>0.197</td>
<td></td>
</tr>
<tr>
<td>X1</td>
<td>0.003</td>
<td>0.170</td>
<td>0.003</td>
<td>0.019</td>
<td>Rejected</td>
</tr>
<tr>
<td>X2</td>
<td>0.318</td>
<td>0.096</td>
<td>0.371</td>
<td>3.324</td>
<td>Accepted</td>
</tr>
<tr>
<td>X3</td>
<td>0.571</td>
<td>0.161</td>
<td>0.571</td>
<td>3.538</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

From the Table 2 above, the regression model is tested partially to know whether each of independent variables has significant influence on dependent variables. The t-test is conducted by comparing the t-statistics with t-table of each independent variable and also comparing the p value with α = 0.05. If the t-amount is > 1.688 (based on t-table) and significance value is less than 0.05 then Ha is accepted. It means that the respective independent variable has significance influence on dependent variable.

**Overall Significance Test (F-test)**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>10.746</td>
<td>3</td>
<td>3.582</td>
<td>34.448</td>
<td>0.000</td>
</tr>
<tr>
<td>Residual</td>
<td>3.743</td>
<td>36</td>
<td>0.104</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>14.489</td>
<td>39</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on Table 3, hypothesis testing regression models simultaneously using the F-test shows that F-count is larger than F-table (34.448 > 2.870) and significance of 0.000 which is smaller than alpha (α) = 0.05. It is concluded that H0 is rejected and Ha is accepted. This means that there are significant simultaneously between Task-Technology Fit (X1), Utilization (X2), and User Satisfaction (X3) to variable of Employee Performance (Y).
E. DISCUSSIONS

The Task-technology in Using AIS on Employee Performance

Task-technology fit (X1) variable proved has insignificant effect to the employee performance. It can be seen that task-technology fit factors in using AIS at SMIs in Malang is unable to improve employee performance. This result is in line with the studies by Sunarta (2005) and Retriana (2013) about task-technology fit measured by TTF factors by Goodhue (1998) that it does not influence significantly towards the employee performance. Based on Sunarta (2005) is very difficult to improve the performance of employees in the Income Office Region in Bali despite being supported with Task-technology fit in doing their task. The reason is employee performance of The Income Office Region in Bali is very difficult to be improved even though it has been given allowance.

From the result of this study, the respondents have not been aware about the important of the application of information technology. Many of them prefer the cost of efficiency rather than improve effectiveness by implement information technology while running their business. Those statements are line with Fakhrana (2016) who stated that SMI in Indonesia has poor willingness toward information system. Some of them felt that is not suitable to use information system, thus its impact to their work is low.

The Utilization of AIS on Employee Performance

This study reveals that The Utilization (X2) of AIS has a significant influence to the employee performance. This is evidenced by the results of the primary data processed using several research trials. It is proved that the employee performance in SMIs in Malang is influenced by the utilization of AIS. When the employee has higher level of the AIS utilization, it can improve their performance. According Sunarta (2005), the users of information systems should increase the intensity or frequency of use and improve the type of software used so that it can improve their performance. In this study, it is also noted that the utilization of AIS has a direct effect to individual performance.

Other study that supports the results of this finding is the study by Goodhue and Thompson (1995) and Maulina et al. (2015). The study by Goodhue and Thompson (1995) said that to achieve the performance impact in using Information Technology it should has a high level of utilization. While, the result study by Maulina et al. (2015) is indicate that the higher the Utilization will improve the individual performance. Maulina et al. (2015) also stated that if the company has high competence human resource, it will be easy to take advantage of technology to obtain good performance.

The User Satisfaction of AIS on Employee Performance

This study reveals that User Satisfaction (X3) of AIS has a significant influence to the employee performance. As can be seen in Table 2, User Satisfaction (X3) of AIS has the highest t-statistics and the least significance value. It means that this independent variable is the most influencing variables among others. This study is in line with the study by Hou (2012) who said that the factor of user satisfaction has a stronger effect on individual performance than system usage. He also stated that the higher levels of user satisfaction lead the individual performance by using information system.
F. CONCLUSION AND RECOMMENDATION

Conclusions

This study is aimed to provide evidence related to the influences of Task Technology Fit (TTF), utilization, and user satisfaction towards employee performance in using Accounting Information System (AIS) at Small and Medium Industries (SMIs) Malang. The object of this research is the employee of Small and Medium Industries (SMIs) that are active and listed in Malang at 2016. The Accounting Information System usage factors shows significant influence on the employee performance when the independent variable is tested simultaneously. On the tests performed partially the Accounting Information System implementation factors, the utilization and user satisfaction shows significant influence of the employee performance.

These findings can be a meaningful input for the Small and Medium Industries (SMIs) to improve and give more attention to the implementation of Accounting Information System. However, although the task-technology fit is found to have no influence, it is still necessary to consider and maintain the task-technology fit factors of Accounting Information System for effectiveness purposes.

Research Limitations

The limitations of this study the first is Sample used in this study is only employees who work in companies listed as Small and Medium Industries (SMIs) in Malang, so the results obtained are less capable of representing employees in companies listed as small and medium industries in other areas. The second is not all companies willing to fill out a questionnaire voluntarily and requires considerable time to wait for the return of the questionnaire.

Suggestions for Future Research

Due to limitations above, the followings are some suggestions for future researchers who will conduct research with similar topics. They are expected to can be done by using larger samples and do not restrict the sampling area to just one area so that it can represent a wider population. Then, be more active to persuade and remind the participant to take time in participating on the survey.

REFERENCES


