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The Influence of Business Environment and Organizational Culture on Management Accounting Information System

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ABSTRACT

Management Accounting Information System (MAIS) is an application used to connect, control, evaluate, and monitor employees in doing their work based on the standard and reach the work performance's target. MAIS is a tool to identify, measure, collect, process, and interpret a company's information. It is also used as a medium to spread information and help the manager in the decision-making process. This study aims to know the effect of the business environment and organizational culture in hotels in Surabaya on the management accounting information system. Also, to analyse the moderation influence of gender, age, and job period in the business environment and organizational culture. The research results showed a positive influence between the business environment and organizational culture on MAIS and no influence on gender, age, and job period. The application of MAIS will be more effective if the environment and corporate culture are enhanced.

Keywords: *Accounting Information Systems, Business Environment, Organizational Culture*

INTRODUCTION

The success of an organization determines from its managerial performance. The better the managerial performance, the higher the organizational outcomes (Febrianti & Fitri, 2020). The performance achievement can be evaluated by comparing the targets or the plan that have been previously set with the current conditions. One of the tools used in evaluating work performance is a management accounting information system (MAIS). MAIS is an application used to connect, control, evaluate, and monitor employees in doing their work based on the standard and reach the work performance's target (Suprantiningrum & Lukas, 2021).

According to Yosep & Indriasih (2020), MAIS is a tool to identify, measure, collect, process, and interpret a company's information. It is also used as a medium to spread information and help the manager in the decision-making process. The manager can share information on management accounting that has been arranged based on the comparison between actual events related to performances in the form of the company's budget and target (Suprantiningrum & Lukas, 2021). In order to improve managerial performance, managers can use management accounting information to recognize problems, find solutions, and assess performance. The suitability of management accounting information with the needs of decision makers can improve the quality of decisions to be taken and will improve the performance of business units (Ugalde Vásquez & Naranjo-Gil, 2020).

According to Febrianti & Fitri (2020) there are four MAIS characteristics that might help in making decisions, including: broad scope, timelines, aggregation, and integration. The study on MAIS implementation through the impact of business environment and organizational culture has been done by Astuty & Pasaribu (2021). They found that the business environment does not affect MAIS, but the organizational culture does. This finding contrasts with Fratiwi's (2018) study, which found that the business environment influences MAIS, whereas organizational culture does not. Another study by Purwanto & Lindrawati (2018) showed that both business environment and organizational culture influence MAIS implementation through external factors, such as competitors, political conditions, regulation, and employees. They also found that the organizational value shared by each employee will become a component of the organizational culture that benefits the implementation of MAIS.

Based on the previous studies, this study aims to know the effect of the business environment and organizational culture in hotels in Surabaya on the management accounting information system. Also, to analyze the moderation influence of gender, age, and job period in the business environment and organizational culture.

LITERATURE REVIEW

Management accounting information system is a type of information system that generates output using input and a variety of necessary procedures, producing a product that can satisfy management's demands for decision-making to accomplish organizational objectives (Ramadhan, 2018). Management accounting information systems have a positive influence on business performance, the resulting information is needed by managers in appropriate and effective decision making to improve business performance and survive in competition (Hariyati et al., 2022). The measurement of MAIS is using DeLone and McLane's model are involving six elements:

1. System quality is a characteristic that MAIS users need, including ease of use, system flexibility, ease of learning, and response time.
2. Information quality is measured from the system output, such as reports and management information.
3. Service quality or the quality of the information system department's user support system
4. System usage measures how users take advantage of information system capabilities. The use of information systems can be measured by the amount of use, frequency of use, nature of use, the intensity of use, suitability for use, and purpose of use.
5. User satisfaction is the level of user satisfaction with information systems and support services. For example, one can find the most widely used multi-attribute tool to measure user satisfaction with information.
6. Benefit assesses how information systems help people, groups, and organizations succeed by enhancing decision-making, increasing productivity, boosting sales, improving market effectiveness, lowering costs, boosting profitability, fostering job development, and more.

Moreover, the use of MAIS is usually affected by the environment, such as internal environment or environment that can be controlled by an organization and external environment or an outside organization that cannot be controlled or is hard to control. The internal environment can be human or other physical resources that directly influence business performance. The internal environment control components are resources, ability, primary competence, and continuous competitiveness.

External environment is an outside power that has the potential to affect organizational performance. It consists of two components: the public and the industrial environment. Public environment covers the parts and elements that directly connect to the organization's goal, including demography, economy, politics, social culture, and technology. The industrial environment reflects the industry's competitive condition that influences the company's current and future growth. This situation can be threats from new competitors, supplier power, buyer

power, substitute products, and competition intensity. Explains that there are three major components in the industrial environment, such as objective facts or the form of reality that is measured and defined according to organizational characteristics, subjective facts, in which organizational characteristics are following individual interpretations and perceptions, and the vague distinction between the business and organizational environments because it is based on human characteristics.

Organizational culture is a set of values and norms that exist for a relatively long time or a behavioural norms in solving problems, and are shared by members of the organization. The values are socialized and internalized in members with the aim to motivate them. It is a social power yet pressure that can motivate people within to do the activities based on the standards. Unconsciously, everyone in the organization will interact with the culture that exists within it. For example, if there are new people, they try to know everything around them, such as what is prohibited and what is necessary, what is good and what is bad, and what should and should not be done in the workplace organization. Therefore, organizational culture is socialized and internalized by the members of the organization itself. Organizational culture frequently depicts the common place activities occurring in an organization. More specifically, it refers to the shared set of values and behaviors inside an organization (Aboramadan et al., 2019). A strong and positive culture greatly influences the behaviour and effectiveness of company performance, such as key values that interact with each other, socialization, internalization, and attachment to employee souls.

Furthermore, the design of the business environment influences the implementation of MAIS. The simpler the business environment, the easier to implement MAIS within the organization (Purwanto & Lindrawati, 2018). The business environment provides a stimulus for acceptance of MAIS, which can be in the form of "opportunity or threat" or awareness of organizational members against pressure from the business environment. Culture is related to the values, expectations, and attitudes of members of the organization in carrying out organizational operations to achieve goals. Organizational culture involves the individual as a person in the operational implementation, where the individual's condition will influence how the person responds to existing activities. Thus age, gender, and job period can affect MAIS implementation.

RESEARCH METHODOLOGY

This study is quantitative research with a correlation design that examines the relationship between two or more variables. The quantitative technique is a type of research approach that uses statistical analysis to attempt to quantify the data (Natalina & Wahyuni, 2022). The variables used in this study were divided into three categories, such as management accounting information system as the dependent variable, business environment and organizational culture as the

independent variable, and gender, age, and job period as the moderating variables. The object of the study is hotel industries in Surabaya. According to the data from 2019, Surabaya has 276 hotels dominated by *Melati* hotels or low-priced hotels that do not meet international standards. The study's population is the hotel industry employees in Surabaya. The sample was obtained through a purposive sampling method and got 30 employees as the research respondents. Most of the respondents are women (53.3%) with age 21-30 years (60%) and worked less than five years (73.3%). The data are taken from the questionnaire that spread to the respondents. The questionnaire used is a close-typed document. The collected data then divided into categories based on gender, age, and job period. After that the data is analyzed using the Likert scale to measure the answers based on the research indicator and arranged numerically. The data is also analyzed using SPSS and double linear regression. Double linear regression is a statistical method to explain the correlation between related and independent variables and predict the sequence of independent and dependent variables.

RESULTS AND DISCUSSION

The analysis started with the score from the validation and reliability test on the questionnaire. The validity test showed that the business environment, organizational culture, and MAIS had corrected item-total correlation greater than r table 0.361, which means all questions/statements are valid. Similar to the validity test, the reliability test also showed that all questions/statements are valid, with Cronbach's alpha score greater than 0.60 (>0.60).

The results of the respondents' answers to each item of the business environment variable statement show a high level of agreement. The statement items with a very high level of approval are X1.1 and X1.4 with an average value of 4.37 and 4.47. This means that each division in the hotel industry in Surabaya has very clear targets and goals in the application of high technology in developing new products. Meanwhile, the item statement that was assessed with the lowest level of agreement was X1.6 with an average value of 4.00, about the dependence of employees on one another in carrying out their duties.

Similarly, responses to each item of the organizational culture variable statement also revealed a very high level of agreement, on statement items X2.2, X2.5, X2.6, and X2.10, with an average value ranging from 4.50 to 4.60. It means the hotel employees in Surabaya prioritize the mutual respect and have very good relationship between employees. Moreover, the company's culture on standard operational procedure (SOP) is very detail for each job. The company is also able to produce very high quality products. Whereas, there are two statement items that have the lowest level of agreement but are still in the agree category, that is X2.1 and X2.4, with average values of 4.17 and 3.87, about the use of the same language/terminology in the company and the application of strict rules in interacting within the company.

For the MAIS variable, the respondents' answers showed a very high level of agreement on the statement item Y.6 with an average value of 4.40. This demonstrates that the system's information capabilities have been effectively used by both employees and users for their intended purposes. Furthermore, the item statement that is assessed with the lowest level of approval is Y.3 with an average value of 4.10, about the ability of the company's system to respond to necessities.

Regression Analysis

Regression analysis is a parametric statistic that produces BLUE (Best Linear Unbiased Estimator) regression parameter estimation results if the assumptions are fulfilled. Assumptions in regression analysis include; the relationship between the independent and dependent variables is linear, errors or residuals are normally distributed, there is no heteroscedasticity, no multicollinearity between independent variables, and no autocorrelation in the data.

Linear Regression Analysis

The results of the linearity test between the variables of the business environment and organizational culture with MAIS show that the significance values of linearity on the variables of the business environment and organizational culture are all less than $\alpha=5\%$, while the significance values for deviation from linearity are all greater than $\alpha=5\%$, so it is concluded that there is linear relationship and the assumption of linearity is fulfilled/met.

Normality Test

The normality test results showed the normal plot, which the data is spread around the straight line followed the diagonal line. The Kolmogorov-Smirnov test also showed significant value for 0.200 or bigger than $\alpha=5\%$, thus the residual in the regression model are normally distributed or the normality test can be fulfilled.

Heteroscedasticity and Multicollinearity Test

Heteroscedasticity detection uses a scatterplot and does not have a specific pattern like an upward or a downward trend. The results of heteroscedasticity detection with the Glejser test also found a significance value on business environment and organizational culture variables, that is greater than $\alpha=5\%$, thus the assumption of non-heteroscedasticity has been fulfilled. While the results of the multicollinearity test indicate the VIF value for all independent variables is less than 10. Also, the tolerance value is bigger than 0.10, which means the non-multicollinearity assumption is met

Autocorrelation Test

The results of the autocorrelation test showed a Durbin Watson value of 2.266, which means the DW value was in the range of 1.57-2.43. Hence, it can be said that the assumption of autocorrelation is met. The next step is to carry out a linear regression analysis to determine the significance influence of the business environment and organizational culture on MAIS. The linear regression analysis

was performed using $Y = 0.019 + 0.420 X_1 + 0.568 X_2$ formula, and the results can be seen in table 1 as follows:

Table 1. The result of regression analysis

Dependent variable	Independent variable	Regression coefficients	Std Error	t	Sig.	Hypothesis
MAIS	Constanta	0,019	0,649	0,029	0,977	-
	Business environment	0,420	0,132	3,189	0,004	accepted
	Organizational culture	0,568	0,139	4,093	0	accepted
	Correlation	0,785				
	R-squared	0,617				
	F-statistic	21,720				
	Sig. F	0,000				

Source: Processed Data

The result on correlation coefficient (R) showed a value of 0.617 which mean that the relationship between business environment and organizational culture on MAIS implementation in hotel industry in Surabaya is strong. The determinant coefficient (R-square) also showed value of 0.617 or 61.7% for MAIS variable can be explained by the variables analysed in the model, while the remaining 38.3% is explained by other variables. In other words, the percentage on the influence of business environment and organizational culture toward MAIS implementation in hotel industry in Surabaya is 61.7%.

The results of the F test show a F value of 21.72 and a significance value of 0.000 (smaller than 5%), thus it can be concluded that the business environment and organizational culture simultaneously have a significant effect on the application of MAIS in the hotel industry in Surabaya. It is also indicate that the regression model in this study is fit or having a good level of fit.

The partial test results with the t test on the effect of the business environment on MAIS produce a regression coefficient value of 0.420, because the significance value is less than $\alpha = 5\%$, the business environment has a positive and significant effect on the application of MAIS (H1 is accepted). The results of the t-test for the effect of organizational culture on MAIS showed a regression coefficient of 0.568 with a significance value of 0.000 (positive). Since the significance value was less than $\alpha = 5\%$, then it was decided that organizational culture also had a positive and significant effect on MAIS (H2 accepted).

The next stage is to examine the moderating effect of gender, age, and job period on the influence of the business environment and organizational culture on MAIS. Hair Jr et al. (2014) explained that the moderating effect with the interaction technique is formed by multiplying the independent variable with the moderating

variable, which is included in the regression equation. The tests are carried out in stages and separately for each moderating variable to reduce the impact of multicollinearity. Testing the moderation effect uses a polynomial effect approach by comparing the main equation and the interaction equation, if a change in R2 (R2 Change) results in a statistical significance value of $F \leq 5\%$ then there is a significant moderating effect. The results of testing the moderating effect of gender, age, and job period on the influence of the business environment and organizational culture on MAIS are presented in Table 2 below:

Table 2. The test on moderation effect using Multi-Group Analysis (MGA) approach

Moderator effect	Coefficient	R-Square Change	F Change	Sig.	Description
X1 * Gender	0,111	0,004	0,076	0,927	Not significant
X1 * Age	0,011	0,008	0,159	0,854	Not significant
X1 * Job Period	-0,038	0,168	4,807	0,017	Significant
X2 * Gender	0,065	0,002	0,040	0,961	Not significant
X2 * Age	0,030	0,111	3,476	0,046	Significant
X2 * Job Period	0,022	0,009	0,235	0,792	Not significant

Source: Processed Data

Table 2 above showed that the influence of business environment on MAIS with gender as the moderation is not statistically significant. Gender is not moderating the effect of the business environment on MAIS implementation, as there is no differentiation between men and women employees in the business environment. In the same way, gender did not moderate the influence of organizational culture on the implementation of MAIS since there is also no distinction in culture between men and women.

Furthermore, the regression analysis result on the influence of business environment on MAIS with age as its moderating variable showed no significant result, which means age did not moderate the effect of business environment on MAIS. In contrast, the result on the effect of organizational culture with age as the moderating variable is significant. The coefficient showed a positive score which means the moderation strengthens the variables. The older the employee, the stronger their role in organizational culture. Employees over thirty (≥ 30 years old) have more experience than young employees. They tend to be wiser regarding compliance with applicable regulations and discipline in carrying out company SOPs. This situation will have an impact on strengthening the application of MAIS.

Next, the influence of business environment on MAIS with job period as the moderating variable showed significant results with a negative coefficient. It means that a long working period will weaken the influence of the business environment in the implementation of MAIS. Employees with more than four years (≥ 4 years) will start to feel bored with their job, and sometimes they have their motivation

down to finish their duties. This condition will have an impact on weakening the application of MAIS. In contrast, the influence of organizational culture on MAIS and job period as a moderating variable is not statistically significant since there is no effect on the organizational culture and employees' work period.

CONCLUSION

The research results showed a positive influence between the business environment and organizational culture on MAIS and no influence on gender, age, and job period. The application of MAIS will be more effective if the environment and corporate culture are enhanced. The hotel management can improve MAIS application to employees and customers by building a competitive business environment, such as providing better services, increasing cooperation between employees in carrying out tasks, and training employees with technical skills. While for organizational culture, the hotel management can focus on the improvement of interaction quality and the respect behaviour for each employee to enhance the organization's performance. Therefore, increasing employee cooperation and interaction leads to a positive work environment and corporate culture.

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