The effect of organizational and manager's individual characteristics on the use of balanced scorecard and performance (evidence from local government of Indonesia)

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Abstract

The purpose of this study was to investigate the factors that motivated managers to use the Balanced Scorecard in public sector organizations in local government in Indonesia and how the impact of BSC usage on the performance improvement. We use survey method to collect the data with a total of 45 respondents. This study uses a SEM-PLS analysis to test the research hypothesis. Survey technique was through a questionnaire to determine the motivation of the head of department in utilizing BSC. The results indicate thatorganizational factors (availability of IT resources) and individual characteristics of managers(flexible manager evaluation styles) were positively and significantly related to motivation to use BSC which then had a positive impact on improving organizational performance. Meanwhile the rigid evaluation style of the manager (rigid evaluation) was negatively and significantly related to the motivation to use BSC, which then had an impact on the decline ofthe organization performance.

Key words: Organizational factors; manager characteristics; balanced scorecard

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INTRODUCTION

One key and indicator of a company's success is how the management can controls and manages the company effectively and efficiently as a whole. Therefore, companies need to have a good management control system (MCS). MCS itself is a process that managers go through to ensure that resources are obtained and used effectively and efficiently in order to achieve organizational goals (Langfield-Smith, 1997). In addition, the success of the company will also be determined from the success of the company in implementing its strategy and then evaluate it well. One of the MCS tools that has become phenomena in the world of organizations in helping management communicate and implement strategies is the Balanced Scorecard (BSC).

The BSC is usually used by profit-oriented enterprises to measure their employees' performance. However, the use of BSC has developed. At the present, many not profit organizations including government agencies utilize the BSC to identify the performance quality of the people within the organizations. Public organizations must be able to interpret their vision into strategies, goals, sizes, and targets so that they can be achieved. Furthermore, it is communicated to existing units to be implemented so that all units have the same goal, namely the achievement of the organization's mission. Given the differences between business and public organizations, the BSC must be modified first to suit the needs of public organizations (Rohm, 2003).

Public organizations often find it difficult to implement their vision, mission, and strategies. The consecuences and impact are not achieving the targets of the strategic plans that have been made. So that, we need an appropriate management control system to improve organizational performance. And balanced scorecard can help Public organizations to interpret their vision into strategies, goals, sizes, and targets so that they can be achieved more effective and efficient implementation of actions. Difficulties in achieving the target can also be caused there are barriers that cause organizations to fail in implementing these strategic plans, among others: 1) vision barriers, where not many people in the organization understand the strategy their organization 2) people barriers, many people in the organization have goals unrelated to organizational strategy 3) resource constraints, time, energy, and money are not allocated to things that are important in organization 4) management barriers, management spend too little time for organizational strategy and too much time for creation short-term tactical decisions (Gaspersz 2003).

There have been many studies that examined the benefits of this BSC on company performances. Malina and Selto (2001) found evidence that the use of management control functions with BSC had an effect on improving performance at BSC size. In addition, Malmi (2001) also conducted research by interviewing managers from several organizations about the use of BSC. The results he found revealed that everyone interviewed in the study had a positive attitude towards the BSC. These studies indicated that the use of BSC was very beneficial for managers, specifically in order to achieve the company goals.

In contrast to previous studies which only examined the relationship between BSC use of company performance, this study aimed at examine the factors that motivate managers to use the BSC and then it also tested its impact on organizational performance. The factors that influenced the use of the BSC in this study focused on organizational factors represented by the availability of company IT resources. Clemons et al (2004) argue that As the unprecedented development in information technology (IT) continuously produces great opportunities that are usually associated with significant uncertainties, IT adoption has become more and more crucial to organizational success in the information era. IT adoption is not only a technological process but also a social process and many factors contribute to its success in companies (Wenbo and Lihua, 2006)

In addition, what makes this study different from the previous ones was the addition of identified variables that could indicate the motive of the utilizing BSC, namely the individual characteristics of managers consisting of managers' evaluation styles (evaluative style of managers) in the organization. Realizing corporate goals however does not depend on only the requisite physical resources available but also on the right leadership coupled with the appropriate balance of corporate intellectual resources (Abubakari & Mohammed, 2013)

Furthermore, investigating how these factors could affect their decision to use the BSC and see its impact on organizational performance.

The formulation of the problem in this study was about how the role of organizational factors (the availability of IT resources) and the individual characteristics of managers (manager evaluation style) motivated the utilization of BSC and how it would affect on organizational performance. This study aimed at examining the relationship between the variables of organizational factors represented by the availability of company IT resources and manager's evaluation styles and later investigating the evaluative style of the managers (ESM) which were rigid towards the motivation to use BSC. Moreover, the study alsoinvestigated the impact obstructed performance.

Literature Review
Balanced Scorecard and Management Control System

The concept of the balanced scorecard was first introduced by Kaplan and Norton (1992) which is a company performance measurement tool that not only consists of financial aspects, but also consists of non-financial aspects, such as customers, internal processes, and learning and development. growth. Before the Balanced Scorecard was developed,performance measures were usually only measured using a financial perspective. However, financial measures have several weaknesses, namely inconsistent with current business realities, lack of predictive power, strengthen functional control, sacrifice long-term thinking, and are not relevant to many levels of the organization (Niven, 2002). This weakness has triggered the idea that performance measures should not only be based on the financial side, but should also consider the non-financial side.

This balance then becomes the basic point for the development of the Balanced Scorecard which consists of four perspectives, namely financial, customer, internal process perspective, and learning and growth perspective. In addition, Kaplan and Norton (2006) alsostated that the BSC has a very important role in translating and communicating strategy to all parts of the company, by not only involving senior managers but also involving employees to be able to play an active role in achieving aligning and executing strategies to achieve overallcompany goals.

Armesh and Kord (2010) defined MCS as a system used in organizations to collect and to use information to evaluate the performance of organizational resources which would ultimately influence organizational behavior to implement its strategy. In simple terms, Otley (1994) defined management control as a process where managers ensured that resources wereobtained and used effectively and efficiently to achieve organizational goals. From the two definitions, it can be concluded that the BSC is part of the management control system (MCS), where BSC itself is a series of measures aimed at helping managers to control the organization and to implement the company's strategy more effectively and efficiently. Thisis reinforced by the statement of Otley (2003) who argued that BSC was a new management control tool designed for managers.

The Purposes of BSC uses in Organization

Kaplan and Norton (1996) explained that most companies used BSC for various reasons, such as to improve control, to achieve efficiency and to make it as learning strategiesin organizations. In addition, it was also used to improve communication and understanding among organizational stakeholders, to implement changes in organizations and to measure non-financial aspects of business. It can be concluded that every use of the system in the company was always based on the benefits it generated. Therefore, many studies had examined the usefulness of using this BSC in organizations. In relation to this, Malmi (2001) identified the reasons that influence company managers' decisions in Finland to adopt BSC, among which were to get quality awards such as Total Quality Management (TQM) certification, difficulties in implementing strategies, problems implementing implementation changes in organizations, changes from budgeting practices to the BSC framework, and because BSC is perceived to have become a fashion in the world of organization. The usefulness of BSC is also reinforced by the results of research by Malina and Selto (2000) who stated that in the manufacturing companies they researched, BSC was an effective tool for communicating organizational goals to all members of the organization. In addition, Crabtree and DeBusk (2008) also found that most companies adopted BSC as a way to implement strategies and improve their company's performance.

In relation to other organizational factors, Wu et al. (2008) stated that other factors suchas leadership style, organizational learning, and the availability of IT resources were internal organizational factors that could influence the application of MIS) adding other factors such as the expertise of IT staff, management support, business process redesign, and compatible IT infrastructure can have an impact on the adoption of Enterprise Resource Planning Systems (ERP) and BSC. Diffusion and adoption of a

new technology are affected by its characteristics such as its superiority, compatibility, and complexity (Rogers, 1995). Zhu etal. (2006) developed a firm-level framework for IT adoption which shows that the three significant components of this adoption are related to the technology, organization, and environment.

The company adopted BSC with the aim of increasing control, efficiency and learning strategies in the organization, increasing communication and understanding among organizational stakeholders, implementing changes in organizations and measuring non- financial aspects of business (Kaplan and Norton, 1996). Malina and Selto (2001) found evidence that there was an indirect relationship between BSC management control functions and performance improvements in BSC size. This was also reinforced by the evidence found

by Burges, Ong, and Shaw (2007) which showed that foreign companies with large numbers of employees would use a more contemporary management performance system to improve the performance of their company.

H1: Availability of adequate IT resources is positively related to motivation for using   BSC.

H2: Companies that have greater availability of IT resources will be more motivated toadopt BSC which has an impact on improving organizational performance

Evaluative Styles of the Managers

One of the tasks of the manager was to plan, to implement the plan into action, and then to evaluate the activities that have been carried out. Regarding manager evaluation, evidence was found that it turned out that the way mangers evaluate subordinates could influence the way they used management control systems. This was reinforced by Otley and Fakiolas (2000) who argued that the way managers conduct evaluations of subordinates could also be used as motivation for them in usingthe BSC. In their findings, the manager's evaluation style consists of four types, namely budget- constraint style (BC), profit conscious style (PC), none accounting style (NA) and budget-profit (BP) style. From the research, it could be concluded that most managers evaluate subordinates only interms of finance. For this reason, in this study, the manager's evaluation style used was the evaluation that only focused on financial aspects (rigid evaluation) and evaluations based on financial and non- financial aspects (flexible evaluation). In this case, BSC would be very necessary for managers who had flexible evaluation compared to rigid evaluations, because BSC provides financial and non- financial information in their decision making which then affected on performance.

H3: A more flexible manager evaluation style is positively related to motivation to use BSC. H4: Manager's evaluation style that is less flexible (rigid evaluation) is negatively related to motivation to use BSC

H5: Managers who conduct evaluations based on financial and non-financial aspects (flexible evaluations) will be more motivated to adopt BSC which has an impact on improving company performance

H6: Managers who conduct evaluations based on financial aspects only (rigid evaluation) will be less motivated to adopt BSC which has an impact on decreasing company performance

METHOD

Data and Sample

This research was conducted employing a survey method in which the subject data was in the form of opinions, attitudes, experiences, characteristics, or inclinations of a person whois the subject of research. These data were collected and then used as a basis for analysis. Thesurvey was conducted by using questionnaires distributed directly to the research subjects. The samples used as respondents in this study were SKPD leaders (minimum Echelon III) who were in the Government of East Kalimantan Province in the city of Samarinda. The reason for choosing the sample was because at the provincial level, Echelon III could be considered as the Intermediary Work Unit Manager (Agency) which functioned as the person in charge of the preparation and realization of programs derived from agency strategies determined by Echelon II or above. The questionnaires that were successfully distributed and returned were 60, but only 45 questionnaires and data that could be processed.

Variable Measurement
Availability of IT Resource
The availability of IT resources was measured by seeing a lot or at least competent IT staffs andthe presence or absence of IT facilities in the company. To get this information, researchers attached questions in the questionnaire sent in relation to these two things.

Evaluative Style of the Managers
To obtain information about whether the way managers conduct evaluations of their subordinates could influence them to use the BSC, researchers provided questions taken from Wiersman's research (2009). The questions aimed at measuring the suitability of the use of financial versus non-financial measures by managers in carrying out their functions and it was also aimed at performance evaluation. In addition, it was also intended to see whether managers placed more emphasis on evaluations based on quantitative or qualitative measures and whether they preferred the use of rigid evaluations or flexible evaluation styles (flexible evaluation).

Performance
Organizational performance was measured by using self-rating instruments developed by Mahoni et al (1965). Some researchers in the field of Management Accounting revealed that these instruments were measurements for performance variables that were widely accepted and used in studies in management accounting (Law and Tan, 1998; Law and Sholihin, 2005; Hall, 2008). Respondents were asked to show their organization's performance on a Likert scale consisting of five points, where the highest point (point 5) indicated a higher performance score.

RESULTS AND DISCUSSION
This research was conducted by distributing questionnaires to SKPD leaders in Samarinda City with a minimum rank of Echelon III. Questionnaires were distributed to 60 respondents. The questionnaire that succeeded returned as many as 60, but only 45 questionnaires could be analyzed. The level of response can be seen in table 1.

Table 1.
Response Rate

	Total	Percentage
Questionnaire Spread	60	100%
Return Questionnaire	60	100%
Questionnaire Can Be Processed	45	75%
Respon Rate		75%

Respondents analyzed in this study were 45 respondents, and in groups based on gender, age, and working length. Of the total respondents were 45 people, female respondents were 18 people (40%) and male respondents were 27 people (60%). Furthermore, respondent with the age ranging from 36 to 40 years old was 1 person, 41-45 years were 12 people, and respondents with age> 45 years were 32 people. Respondents in this study were old employees with 6-10 years of work age of 1and 44 years of work> 10 years.

Measurement Model
The evaluation of the measurement model (outer model) for reflective construct indicators was done by inspecting convergent validity, discriminant validity, and internal consistency reliability as seen from the value of Cronbach's alpha and composite reliability. Hair et al. (2014) explained that in evaluating a measurement model for a reflective indicator of a construct, it usually began with testing the reliability of internal consistency. The results of internal consistency reliability testing for constructs with reflective measurements indicated that the research instruments for reflective constructs were reliable. This was inferred from the Cronbach's alpha value which resulted in estimation of reliability based on inter-correlations of measured construct indicators (Hair et al., 2014)that have met the reliability requirements of> 0.70 (see Table 2). In addition, the SEM-PLS analysis used evaluation of composite reliability values as a complement to the research construct reliability test. The composite reliability value was declared to meet the requirements when showing a value> 0.70.

Table 2.
Discriminant Validity

	TI	FLEK	RIG	BSC	KIN
TI	(0,789)	0,403	0,396	0,543	0,427
FLEK	0,403	(0,849)	0,378	0,475	0,562
RIG	0,396	0,378	(0,813)	0,529	0,441
BSC	0,543	0,475	0,529	(0,794)	0,384
KIN	0,352	0,425	0,552	0,483	(0,756)

Testing the discriminant validity of the reflective construct of the next research was done by looking at the value of the correlation coefficient between latent variables and the significant value (p-value) shown. Table 3 showed the results obtained indicated that discriminant validity for all reflective constructs of the study had met the specified criteria, namely the AVE square root value in the diagonal column and given parentheses greater than the correlation between latent variables in the same column (Sholihin and Ratmono, 2013)

Structural Model

The coefficient of determination (R^2) as a prediction-oriented measure was a value that showed the percentage of the relationship between construct variance which was explained by its totalvariance (Chin, 1998; Ringle and Hansmann, 2004) or in other words how well endogenous construct variance could be explained by constructs hypothesized to influence it (Sholihin and Ratmono, 2013). High R^2 values interpreted greater predictive power for structural models.

Tabel 3.
Structural Model Evaluation

Panel A. Coefficient Determination (R2) and Q-squared		
Construct	R2	Q-Squared
BSC Use	0,320	0,259
Performance	0,433	0,500
Panel B. Model Fit Indicator		
APC	0,304***	
ARS	0,371***	
AVIF	1,219	

Predictor variable = IT, EMS-Flexible and EMS-Rigid ***p < 0,01

Table 3, showed that the use of BSC had R2 value of 0.320, meaning that 32% of BSC variables(mediation) were explained by predictor variables in this study, the remaining 68% was explained by variables outside the research model. The Performance had a R2 value of 0.433, meaning that by 43.3% the Performance variable was explained by predictor variables in this study, the remaining 56.7% was explained by variables outside the research model. Evaluation of the next structural model was by looking at the Q-squared values obtained. Q-squared value (Q2) was used for interpretation of the assessment of predictive validity or relevance of a set of latent predictor variables on the criterion variable (Sholihin and Ratmono, 2013). The model with predictive validity must have had a Q2 value greater than 0. The results of the estimation model of this study indicated good predictive validity because all values of the Q2 construct BSC (0.259) and Performance (0.500) were above 0 (see Table 4, Panel A).

In addition to evaluating the value of R-squared and Q-squared, in the structural model it was also necessary to estimate the fit indicator of the research model by looking at the average path coefficient (APC), Average R-squared (ARS), and Average Variance Inflation Factor (AVIF) values. Although the model fit indicator was less important because this study only aimed at testing the hypothesis of the relationship between the variables strictly (strictly confirmatory), but the researchersdecided to keep reporting the fit model indicators to convey that the goodness of fit research model was fulfilled and multi-colourity indicators were met through the AFIV value shown. Table 4 in PanelB presented a report on the evaluation of fit indicators of the research model which showed that the APC value = 0.304 and ARS = 0.371 and both were at significance p <0.001 and AVIF value = 1.219. The three indicators of the fit model were considered to have met the criteria because they showed significant values of APC and ARS which were below 0.05 and AVIF values that were smaller than 5 (Sholihin and Ratmono, 2013).

Hypothesis Testing

The decision regarding the support of the research hypothesis was based on the results of the evaluation of the structural model in the next SEM-PLS, namely by looking at the path coefficient value (β) and the indicated significance (p-value). Supporting the research hypothesis was stated when the results of the study rejected H0 (Ha supported) with p-value <0.01 (for 1% significance level) and p <0.05 (for the 5% significance level). Following the steps taken by Lau and Roopnarain (2014) and Sholihin et al. (2011), testing of the mediationhypothesis in the structural model of the study that was carried out through the approach of Baron and Kenny (1986) which was commonly called the step-wise approach. To test the research mediation model, Baron and Kenny (1986) and Sholihin and Ratmono (2013) stated that there were two steps that needed to be done in the test, namely:

Making estimates for the direct relationship between the dependent variable and the independent variable of the study;

Estimating indirect relationships by including research mediation variables.

In Figure 1, the estimation results for the direct relationship between the availability of IT resources and performance showed the path coefficient value of β = 0.42, p <0.01, and the estimated direct relationship between flexible manager evaluation styles (FLEK) and performance showed the β value = 0.37, p <0.01, while the estimation of the direct relationship between rigid (rigid) manager evaluation styles and performance showed the value of β = - 0.34, p <0.01. The estimation results of the direct relationship in Figure 1 indicated that public sector organizations that had the availability of IT resources and managerial evaluation styles that are more flexible were positively related to performance andshowed significant results at α <0.01. While the rigid evaluation style of the manager actuallyhad a negative correlation with performance with a significance value at α <0.01.
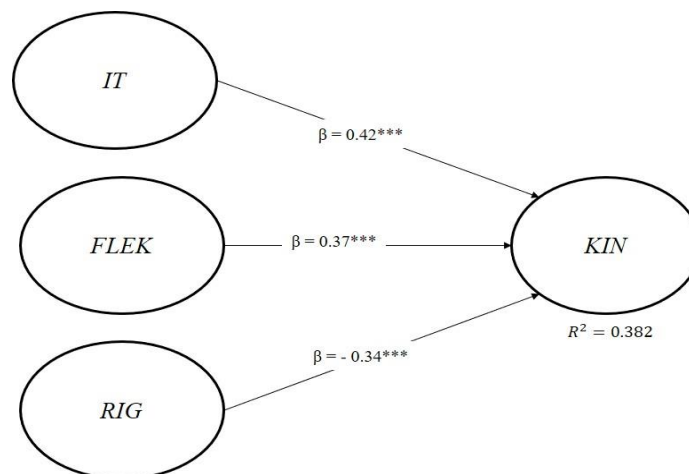

Figure 1.
Direct Path Estimation

The estimation in this second step was then used to see empirical results as the basis fordecision support for all research hypotheses (H1-H6). Figure 5.2 gave the estimation results for all path coefficients in the research model (full model) and the significance valuesindicated. Figure 5.2 showed that the path coefficient for IT resource availability (IT) variables with motivation for using the Balanced Scorecard (BSC) was positive with significance at α <0.01 (IT → BSCt: β = 0.44, p <0.01), flexible manager evaluation style relationship (FLEK) with motivation to use Balanced Scorecard (BSC) also showed positive and significant results with β = 0.52 and significant p <0.01, while the relationship between rigid manager evaluation style (RIG) and motivation to use the Balanced Scorecard (BSC) showed negative and significant results with the value of β = - 0.31 and significant p <0.01. These results indicated that the proposed hypothesis (H1, H3, and H4) related to the relationship between the availability of IT resources and the manager's evaluation style(flexible and rigid evaluation) were accepted. (Hair et al, 2017; Kock, 2011;2013)

The results of the comparison between estimated direct relationships and estimates of indirect relationships indicated that the path coefficient for IT relations with Performance had decreased from 0.42 to 0.32 and remains significant after BSC mediation variables were present (see Table 5. Panel

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B) The path coefficient for the direct relationship and the indirect relationship between the more flexible manager evaluation style (FLEK) and Performance also changed and decreased from 0.37 to 0.26 and remained significant, so did the path coefficient value for the direct relationship and indirect relationship between manager's evaluation style the rigid (RIG) with performance also changed and decreased from -0.34 to -0.29 and remained significant (p <0.01 to p <0.05) when the mediation variable BSC was included (see Table 5. Panel B). These results indicated the support for the mediation hypothesis that the use of BSC had a role in the relationship between the availability of IT resources and the manager's evaluation style (flexible evaluation and rigid evaluation), so thatH2, H5, and H6 were accepted. However, according to Baron and Kenny (1986) and guidance from Sholihin and Ratmono (2013), the results of the comparison then provided empirical evidence indicating the influence of mediation which was only partial (partial mediation) because even though the value of the path coefficient decreased but it still showedthe significant value.
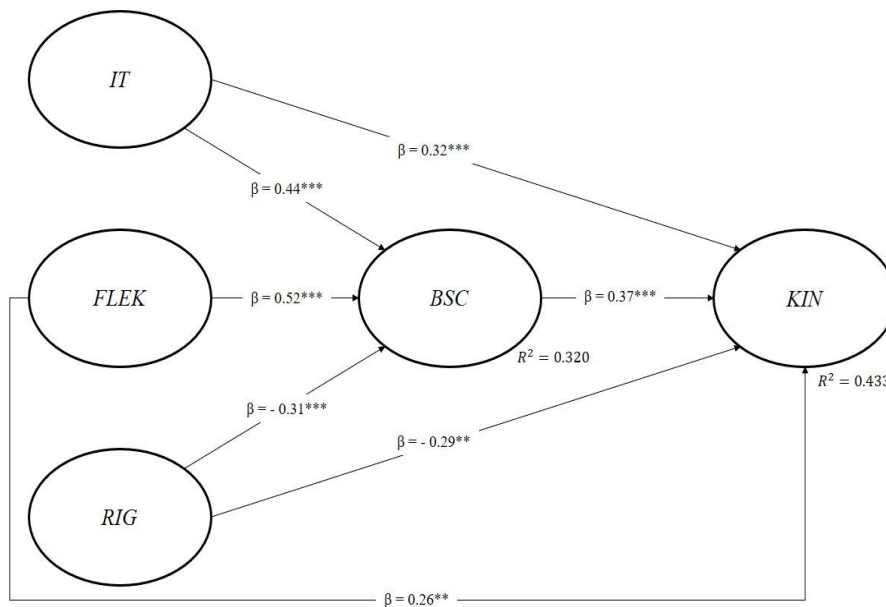

Figure 2.
Indirect Path Estimation (Full Model)

Table 4, provided all the summaries for the results of testing all the research hypotheses.In Panel A reported the estimation of the direct relationship between the availability of IT resources and manager's evaluation style (flexible and rigid) with organizational performance while Panel B summarized all hypothesized relationships and estimated the indirect relationship between IT resource availability and manager's evaluation style (flexible and rigid) with organizational performance after the BSC usage variable was entered.

Table 4.
Recapitulation of Hypothesis Test

Hypothesis	Correlation	Mark	Path coefficient	Remark
H1	IT → BSC	+	0,44***	Supported
H2	IT → BSC → KIN	+	0,42***(0,32***)	Supported (Partial Mediation)
H3	FLEK → BSC	+	0,52***	Supported
H4	RIG → BSC	-	-0,31***	Supported
H5	FLEK →BSC→KIN	+	0.37***(0,26***)	Supported (Partial Mediation)
H6	RIG → BSC → KIN	-	-0,34** (-0,29***)	

***p-value < 0,01 (level 1%)
**p-value < 0,05 (level 5%)

CONCLUSION

Based on the results of analysis and discussion, it could be concluded that organizational factors such as the availability of adequate IT resources and manager's evaluation styles (flexible evaluation and rigid evaluation) were related to the motivation of using the Balanced Scorecard which then affected the performance. Organizations that had adequate IT resources would be more motivated to use BSC. Collaborative use of IT that was

qualified and thorough evaluation with the use of BSC as an MCS tool in the organization would have an impact on company performance. Similarly, managers who have a more flexible evaluation style by paying attention to all aspects, both financially and non- financially, would also be more motivated to use the Balanced Scorecard compared to rigid managers who only carry out evaluations based on their financial aspects. The use of BSC asa mediating variable between the availability of adequate IT resources and the style of evaluation of managers with organizational performance turned out to be proven by obtainingpartially mediation results. This was because with the Balanced Scorecard as an organization leadership tool in conducting evaluations, the evaluation process carried out would be more comprehensive from all aspects, so that the decisions taken and strategies prepared based on the results of the evaluations that had been carried out would be more accurate. The use of an effective BSC would certainly have an impact on organizational performance because improvement strategies were implemented in all elements and all organizational components evaluated for their performance would strive to improve their performance.

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