

Analysis Of Effect Of Performance Of Public Works Department In Jepara With Balanced Scorecard Method And Regression Analysis Method

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Abstract- As a government agency with the largest budget utilization in the Government of Jepara, the Public Works Department of Jepara is required to demonstrate its performance optimally in meeting the needs of the community in the field of development. One of the efforts to monitor performance and maintain consistency in performing the task is performance measurement. The Balanced Scorecard (BSC) method and regression analysis method are used to design performance measurement systems to determine performance indicators appropriate to the organization's vision and mission. The purposes of this study are 1) to measure the performance of DPUD Jepara with Balanced Scorecard concept and concept of linear regression analysis with four perspective. 2) analyze the most dominant variable that affect the performance in DPUD Jepara. This study uses descriptive method with quantitative qualitative approach. Data collection is done by distributing questionnaires. The sample of study is 88 respondents. The results of study through Balance scorecard analysis with 4 perspective indicates that (1) Finance perspective include effectiveness, efficiency, and also budget transparency in good value (2) Customer prespectives include employee quantity, employee competence can reach optimum. (3) Internal business process perspective is considered good. (4) Learning and growth perspective is good because of salary conformity with work load, the existence of reward and punishment system. While through linear regression analysis showed that the four perspectives have an effect on Performance In DPUD Jepara. This result can be seen from result of ANOVA test or F test that show value of F arithmetic equal to 345.860 while value of F table equal to 2.48. The most dominant variables are finance perspective, internal business process perspective, learning & growth (infrastructure) perspectives.

Keywords: *Performance, Balanced Scorecard, Regression Analysis*

1. Introduction

In carrying out the main duties and functions, Department of Public Works (DPUD) in Jepara expected to carry out each activity in accordance with plan as the embodiment of obligation to account for success or failure of implementation of vision, mission and organizational strategy in achieving the goals and objectives that have been set in meeting needs of community in period that has been determined.

As a government agency with the largest budget utilization in the Government of Jepara, the Public Works Department of Jepara is required to demonstrate its performance optimally in meeting needs of community in the field of development. One of the efforts to monitor performance and maintain consistency in performing the task is performance measurement.

The design of this performance measurement system using the Balanced Scorecard (BSC) method as the framework in implementing the Strategic Plan (Renstra) of DPUD Jepara that has been made to determine the priority of performance indicators to be used. The use of BSC methods in government organizations is a strategic management tool that translates vision, mission and strategy which contained in the Strategic Plan into a Strategy Map. Besides that, BSC can be used as a tool that generates feedback to revise the established Strategic Plan.

Managing performance with consider strategic and risk factors, is a requirement for a company, because by managing performance in this way, the company can use all of the available resources optimally to maximize the wealth of business owners and create value for stakeholders (Rangkuti, 2015).

The strategic and risk factors in the Balanced Scorecard are important because they can determine the pattern of action in the form of selected programs to achieve a particular goal, and measure the risks that will arise in the activity or invasion (Rangkuti, 2015).

Balanced scorecard is a strategic management system that defines the responsibility accounting system based on the strategy. Balanced scorecard translates the mission and strategy of the organization into operational goals and performance measures in four perspectives, namely: finance perspective, customer perspective, internal business process perspective and learning and growth (infrastructure) perspective. The finance perspective explains the economic consequences of action taken in three other perspectives. Customer perspective defines the market and customer segments where the unit will compete. The internal business process perspective explains the internal processes needed to deliver value to customers and owners. The learning and growth perspective (infrastructure) defines the capabilities required by an organization to achieve long-term growth and improvement. This last perspective refers to three main factors that enable it, namely: the ability of employees, the ability of information systems, and employee behavior (motivation, empowerment and learning) (Hansen and Mowen, 2006).

According to Rivai (2005), the word “performance” is a translation of the word “performance” that comes from the word “to perform” with some entries:

1. to do or carry out, execute
2. to discharge of fulfil; as vow
3. to execute or complete an understanding
4. to do what is expected of a person machine

2. Method

This study is a case study, which is about the variables that affect the performance of DPUD in Jepara. The case study is a study that aims to investigate in depth on a particular subject to give a complete picture of a particular subject (Indriantoro and Supomo, 2000).

The approach method used is quantitative and qualitative descriptive method. Sigit (2001) defines descriptive research methods as an activity that includes data collection in order to answer questions concerning the current state of the course from the subject of a study. This study is also a correlational study conducted to determine whether there is a relationship (relationship) between the variables that affect the performance of DPUD Jepara.

2.1. Population and Sample

Target population of this research are employees of Public Works and Spatial Planning of Jepara, contractor and consultant in Jepara district. In order for the sample size to be representative then calculated using Slovin formula. So the number of respondents who meet the criteria determined by researchers as follows: 88 respondents of Government agencies.

2.2. Instrument

The instrument used in this study can be seen in Table 1. The independent variables X consist of 4 variables (four perspectives) namely (1) finance, (2) customers, (3) internal business processes (4) learning and growth. While the dependent variable Y is the performance of DPUD in Jepara.

Table 1. Instrument

Variable	Kode	Indicators	Reference
Finance Perspective (X1)	X1.1	1. Investment Profit	(Hansen dan Mowen 2006)
	X1.2	2. Increased sales	
	X1.3	3. Income mix	
	X1.4	4. Utilization of assets	
	X1.5	5. Cost efficiency	
Customer Perspective (X2)	X2.1	1. Number of new customers	(Hansen dan Mowen 2006)
	X2.2	2. Number of customers	
	X2.3	3. Customer loyalty	
Internal Business Processes Perspective (X3)	X3.1	1. Processing time	(Hansen dan Mowen 2006)
	X3.2	2. Delivery on time	
	X3.3	3. Effective processes	
Learning and Growth Perspective (X4)	X4.1	1. Level of human resources	(Hansen dan Mowen 2006)
	X4.2	expertise	
	X4.3	2. Human Resources Commitment	
Performance (Y)	Y1	1. Quality	(Mangkunegara, 2000)
	Y2	2. Quantity	
	Y3	3. Punctuality	
	Y4	4. Effectiveness	
	Y5	5. Independence	

3. Analysis

3.1. Regression Analysis Method

3.1.1. Determination Coefficient

The test of R^2 determination coefficient is used to find out how well the sample uses the data. R^2 measures the amount of reduction in the dependent variable obtained from the user of the independent variable. R^2 has a value between 0 and 1, with a high R^2 ranging from 0.7 to 1.

Table 2. Table of Determination Coefficient Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.971 ^a	.943	.941	.413	1.848

a. Predictors: (Constant), learning growth perspective, customer perspective, internal business process perspective, finance perspective

b. Dependent Variable: Performance At Regional Public Works Department Jepara

Source: Primary data, 2017

R^2 used is adjusted R square value which is R^2 that has been adjusted. Adjusted R square is an indicator to determine the effect of adding time to an independent variable into the equation. The coefficient of determination test results can be seen in the attachment.

From the output looks the correlation value is 0.971 with the coefficient of determination 0.941. Thus 94.1% variation in change in road maintenance performance variables explained by variables Construction equipment, Material, Labor resources, Allocation of funds. and 5.9% are influenced by other factors we do not care about.

3.1.2. Multiple Linear Regression Analysis

Table 3. Table of Results of Multiple Linear Regression Analysis Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-2.359	.518		-4.555	.000
Finance Perspective	.325	.046	.298	7.075	.000
Customer Perspective	.105	.039	.087	2.652	.010
Internal Business Processes Perspective	.164	.040	.151	4.116	.000
Learning and Growth Perspective	.852	.058	.590	14.600	.000

a. Dependent Variable: Performance At Regional Public Works Department Jepara

Source: Primary Data, 2017

Multiple linear regression analysis aims to determine the effect of independent variables on dependent variable. With these variables can be arranged in the following equation:

$$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + e$$

Based on table 4.4, it can be seen the equation of multiple linear regression is as follows:

$$Y = -2.359 + 0,325x_1 + 0,105x_2 + 0,164x_3 + 0,852x_4 + e$$

The multiple linear regression equation can be explained as follows:

1. The constant of -2.359 can be interpreted if the finance perspective (X1), customers perspective (X2), internal business process perspective (X3), Learning & Growth perspective (X4) and Dependent variable is Performance of DPUD Jepara (Y) with 2,359.-2.359.
2. The coefficient of regression of Finance Prespectives (X1) of 0.325 means any change in one unit of Finance Prespectives (X1) will result in changes in Performance of DPUD Jepara of 0.325 units, assuming other variables are fixed. The increase of one unit in variable of Finance Perspective (X1) will improve Performance In DPUD Jepara 0,325 unit, on the contrary, decrease one unit in variable of Finance Perspective (X1) will decrease Performance In DPUD Jepara equal to 0,325 unit.
3. The coefficient of regression of customers Prespectives (X2) of 0.105 means any change in one unit of customer Prespectives (X2) will result in changes in Performance of DPUD Jepara of 0.105 units, assuming other variables are fixed. The increase of one unit in variable of customer Perspective (X2) will improve Performance In DPUD Jepara 0,105 unit, on the contrary, decrease one unit in variable of customer Perspective (X2) will decrease Performance In DPUD Jepara equal to 0,105 unit.
4. The coefficient of regression of Internal Business Processes Prespectives (X3) of 0.164 means any change in one unit of Internal Business Processes Prespectives (X3) will result in changes in Performance of DPUD Jepara of 0.164 units, assuming other variables are fixed. The increase of one unit in variable of Internal Business Processes Perspective (X3) will improve Performance In DPUD Jepara 0.164 unit, on the contrary, decrease one unit in variable of Internal Business Processes Perspective (X3) will decrease Performance In DPUD Jepara equal to 0.164 unit.

- The coefficient of regression of Learning and Growth Perspectives (X4) of 0.852 means any change in one unit of Learning and Growth Perspectives (X4) will result in changes in Performance of DPUD Jepara of 0.852 units, assuming other variables are fixed. The increase of one unit in variable of Learning and Growth Perspective (X4) will improve Performance In DPUD Jepara 0.852 unit, on the contrary, decrease one unit in variable of Learning and Growth Perspective (X4) will decrease Performance In DPUD Jepara equal to 0.852 unit.

3.1.3. Partial Hypothesis test (Uji t)

Table 4. Table of Result of t Test Coefficients^a

Model	t	Sig.
(Constant)	-4.555	.000
Finance Perspective	7.075	.000
Customer Perspective	2.652	.010
Internal Business Processes Perspective	4.116	.000
Learning and Growth Perspective	14.600	.000

Source: Primary Data, 2017

1. Test Statistic t Customer Perspectives Against In Regional Public Works Office of Jepara Regency

Financial perspective (X1) has a positive and significant impact on Performance at the Public Works Department of Jepara Regency so that the test results are obtained as follows: Table 4.19. above obtained t value for variable Financial perspective (X1) is equal to 7,075 while t table value equal to 1,662 ($df = 88-3-1 = 84$) using one-sided test. As for the significance value is 0.000. From the data can be interpreted that $t_{arithmetic} > t_{table}$ and the result is positive ($7.075 > 1.662$) and the significance value shows smaller than the significance level of 0.05 ($0.000 < 0.05$).

2. Test Statistic t Customer Perspectives Against In Regional Public Works Office of Jepara Regency

The customer's perspective (X2) has a positive and significant effect on the performance at the Public Works Department of Jepara Regency so that the test results are obtained as follows: Table 4.19. above obtained by value t arithmetic for variable Perspective of customer (X2) is equal to 2,652 while value of t table is equal to 1,662 ($df = 88-3-1 = 84$) using one-sided test. As for the significance value is 0.010. From the data can be interpreted that $t_{arithmetic} > t_{table}$ and the positive result ($2.652 > 1.662$) and its significance value show smaller than the significance level of 0.05 ($0.010 < 0.05$).

3. Test Statistic t Internal Business Process Perspective Against In Regional Public Works Office of Jepara Regency

Internal business process perspective (X3) has a positive and significant impact to the Performance in the Regional Public Works Agency of Jepara Regency to obtain the test results as follows: Table 4.19. above obtained t value for variable Internal business process perspective (X3) is 4,116 while t table value is equal to 1,662 ($df = 88-3-1 = 84$) using one-sided test. As for the significance value is 0.000. From the data can be interpreted that $t_{arithmetic} > t_{table}$ and the result is positive ($4.116 > 1.662$) and its significance value shows smaller than the significance level of 0.05 ($0.000 < 0.05$).

4. Test Statistic t Learning and Growth Infrastructure (Infrastructure) Against In Regional Public Works Department of Jepara

Learning & Growth (Infrastructure) perspective (X4) has a positive and significant impact on Performance at the Public Works Agency of Jepara Regency to obtain the following test results: Table 4.19. above obtained value t arithmetic for variable Prespective of Learning & Growth (Infrastructure) (X4) is equal to 14,600 while value of t table is equal to 1,662 (df = 88-3-1 = 84) using one-sided test. As for the significance value is 0.000. From the data can be interpreted that t arithmetic > t table and the result is positive (14.600 > 1.662) and its significance value shows smaller than the significance level of 0.05 (0.000 < 0.05)

3.1.4. Simultaneous Test (Uji F)

Table 5. Table of Result of F Test ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	236.268	4	59.067	345.860	.000 ^b
Residual	14.175	83	.171		
Total	250.443	87			

a. Dependent Variable: Performance At Regional Public Works Department Jepara

b. Predictors: (Constant), learning growth perspective, customer perspective, internal business process perspective, finance perspective

Source: Primary Data, 20

Based on ANOVA test results or F test in Table 4.7. indicated that the value of F arithmetic is 345.860 while for the F table value is 2.48 (df 1 = 3 dan df 2 = 88-3-1 = 84). Also obtained the significance value of 0.000 is smaller than the significance level of 0.05. Thus the value of F arithmetic > F table (345.860 > 2.48) and significance value is less than its significance level (0.000 < 0.05).

3.2. SWOT Balance Scorecard Analysis

3.2.1. Performance Measurement DPUD Jepara District with Financial Perspective

Measurement of performance with financial perspective on DPUD Jepara District using indicator of effectiveness and efficiency of budget, and budget transparency.

1. Effectiveness & budget efficiency

Effectiveness and efficiency of DPUD budget of Regency of Jepara which is assessed based on interview result of employees is considered good. DPUD Jepara, financial performance is considered good because the absorption is good, although not reach 100%.

2. Budget transparency

In general, not all employees know the details of budget information. This attitude is still contradictory to Law No. 14/2008 on Public Information Disclosure which states that "every Public Agency or State-Owned Enterprises and BUMDs financed by APBN / D are required to transparently budget

3.2.2. Performance Measurement DPUD Jepara District with Customer Perspective

This perspective identifies the targeted customer and market segment as well as the size of the company's success in that segment. This research focuses on the quantity of employees, the competence of employees with the purpose of relationships between customers in this case consultants, contractors can achieve optimal

1. Quantity Of Employees

An inadequate number of employees will result in a sluggish task execution process due to an imbalance between work and the number of employees.

Moreover, there are some areas that must monitor and take care of the internet network in all SKPD and Dinas that are included in the Government of Jepara Regency.

2. Competence Of Employees

The employees of DPUD Jepara have been very good. Competence is a skill that a person needs that is demonstrated by his ability to consistently provide a high level of performance and high to the work he does. The suitability of employees' competence to their work is very influential on the resulting performance.

3.2.3. Performance Measurement DPUD Jepara District with Internal Business Process Perspective

Basically the size of the internal business process focuses on various internal processes. To measure the performance of DPUD of Jepara Regency, used operational facilities & infrastructure indicators, technology support and informatics system, innovation development, recruitment with merit system, and also ease of information

1. Operational Facilities & Infrastructure

DPUD Jepara Regency is enough to support the activities of employees in the work. But there are some small things that are considered still annoying by the employees of the internet is sometimes slow and also the parking area is still narrow. Almost all employees complained about the parking area. The narrow parking lot makes the employees sometimes forced to find a paid parking lot around the office building. The location of the office of DPUD Jepara Regency which is one roof with the Jepara municipal office makes the number of employees became not the least..

2. Support technology and informatics systems

DPUD Jepara District is an agency that takes care of electronic information, requires that this institution has the latest technology that can accelerate the performance and follow the development of the existing era. In this case the Government of Jepara district assisted by the DPUD of Jepara Regency strives to provide better service, faster, and easier with the help of technology.

3. Innovation development

Development of innovations conducted by DPUD Jepara District is very good. Technological innovations have been made. Innovative programs that are conducted relate to technology-based public services such as the application of the service of auction submission using LPSE. DPUD Jepara District has done development and also development in the field of communication and informatics.

3.2.4. Performance Measurement DPUD Jepara District with Learning and Growth Perspective

To measure the performance of DPUD of Jepara Regency, several indicators are used, namely salary suitability with work load, reward and punishment system, employee involvement in decision making process, peer support, employee training, turn over employees, and adaptation to new technology.

1. Salary Conformity With Workload

Employees are satisfied with the salary they received so far. Employee satisfaction on the amount of salary received is a reflection that DPUD Jepara District has been able to manage its employees well. Regardless of civil servants with civil servants status, the ability of DPUD of Jepara Regency to manage outsourced personnel is the most important thing because the outsourced power is highly dependent on the DPUD of Jepara Regency.

2. The existence of Reward System and Punishment
DPUD Jepara has implemented Reward and Punishment system. Punishment is often done to give consequences to employees who are often late. The penalty is usually a salary deduction made at a certain delay limit accumulated within a month.
3. Involvement of employees in the decision-making process
Involvement of employees in the process of making good organization decisions so as to make employees feel needed and responsible for what has been decided.
4. Peer support
The results of the assessment that has been done that the support of colleagues in the work environment DPUD Jepara District has been very good. This is shown by the assessment results on the points of support of colleagues who get very good value. The better the relationship between coworkers, then the possibility of organizational productivity will increase.
5. Employee training
employee training conducted by DPUD Jepara Regency is good enough. Training is needed by someone to improve the ability and quality himself. In an organization, employee training is done to improve employee's ability to work in order to increase the productivity of the organization.
6. Turn Over Employees
Based on assessments for turnover and staffing. Frequent civil servant mutations occur suddenly. This mutation is considered a little inconvenient because the head of the field whose employees are transferred must reorganize the tasks and also the responsibilities that have been abandoned by employees who are transferred elsewhere.
7. Adaptation to New Technology
The ability of employees of DPUD Jepara in adapting to new technology is good enough. Although there are still some employees who still have difficulties. It is known that some employees still need training to be able to adapt to the changes.

4. Conclusion and Suggestion

4.1.1. Conclusion

1. Through Balance scorecard analysis with 4 perspectives shows that (1) Finance perspective is considered good. This assessment is derived from the assessment indicators of effectiveness, efficiency, and also budget transparency. This value indicates that performance (2) The customer's perspective is considered good, because this perspective can achieve its objectives. But in this study focused on the quantity of employees, the competence of employees, with the aim of relationships between customers (consultants, contractors) can achieve optimal. (3) Internal business process perspective is considered good. This value indicates that the performance of Public Works Department of Jepara is considered good in terms of internal business processes of the organization. (4) Learning and growth perspective is considered good. This assessment is derived from indicators of salary adjustment with workload, reward and punishment system, employee involvement in decision-making process, peer support, employee training, turnover and employee mutation, and employee adaptability to new technology usage. This value indicates that the performance of the Public Works Department of Jepara is considered good in terms of learning and growth.
2. Through linear regression analysis Simultaneously and partially indicated that finance perspective (X1), customer perspective (X2), internal business process

perspective (X3), Learning & Growth (Infrastructure) perspective (X4) have an effect on Performance at Public Work Department of Jepara (Y). This can be seen from ANOVA test result or F test in Table 4.20 indicates that the value of F arithmetic is 345,860 while for F table value is 2.48. Also obtained the significance value of 0.000 is smaller than the significance level of 0.05.

3. The most influential variable (dominant) to performance of Public Works Department in Jepara is a finance perspective, Internal business process perspective, Learning & Growth Presentation (Infrastructure). This can be seen from the significance value is 0,000.

4.1.2. Suggestion

1. Research can be expanded by comparing Balanced Scorecard performance measurement theory with other performance measurement theories, to get more indicators that ultimately the measuring tools can be used generally.
2. Determination for range of signs is further investigated by statistical methods so that each sign can represent inputs entered.
3. Take measurements with tools that have been generated in the relevant projects.

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