Performance Measurement Analysis Using The Balanced Scorecard Method for Government Institution in Aceh

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Abstract. The public and non public company have the same goals in adjusting their technology and system for competition. The performance measurement is one way to control the company to achieve their vision and mission. This research aims to determine whether or not the performance of a government institution in Aceh is according to their standard. The first step is to identify the problems using the Balanced Scorecard method, with four perspectives, namely financial, customer, internal business processes, and growth and learning. The result shows that there are 18 Key Performance Indicators (KPI). The next step is to calculate the values of each indicator. Finally, the result is compared with the KPI standard. The final result shows that the lowest value of indicator in 2017 is the simple work procedures with a score of 47 and a final score of 0.015. Meanwhile, the highest value of indicator in 2017 is the budget utilisation with a score of 124 and the final score of 0.245. Overall, the Disperindagkop has a very low value of 13% which means the condition is very bad. Therefore, the company needs further improvements to increase their overall performance value.

1. Introduction
The globalisation era force company to adjust themselves with the latest technology and management system. Each company has their own values, visions, and missions. It is necessary for the company to measure the productivity rate of their employees to ensure its within the same scope. One of the most recommended and sufficient framework to manage firm is the balanced scorecard [1].

Balanced scorecard has been used as a tools for management and business for over 20 years [2]. The concept of balanced scorecard is flexible to use in the wide range of areas. The researches show that the balanced scorecard is beneficial to measuring the performance index in the health care service [3] and the academic sector such as polytechnic in Malawi [4] and higher education in Malaysia [5]. It shows that the balanced scorecard is not rigid to profit-oriented business only but useful for other form of organisation and company as well.

There are four perspectives in the balanced scorecard framework. Every part of the company works and contribute in harmony for reaching the company’s goals with the adjustment of balance scorecard accordingly [6]. The case study for this research take places in one of the Government Institution in Aceh, we named it A company in this paper. Based on the observation, there are several problems in this institution such as employees arrived late, no regular meetings, untidy work management, messy parking area, not clear space partition, and messy documents management.

This study aim to measure the performance of this institution using the Balanced Score Card and provide possible improvement based on the analysis.
2. Methodology

2.1. Data Collection
The data consists of two main data. The primary data is the questionnaire that distributed to 18 experts in the department. They are the high-level employee who knows the real situation in the department. The secondary data are other related documents such as the department hierarchy, the employee schedule, and others.

2.2. Data Processing
There are several process on this research including:
1. Determine of strategic plan based on four perspective of Balanced Scorecard
2. Determine of Key Performance Index (KPI) for each components on four perspective of Balanced Scorecard
3. Calculation of the Balance Scorecard

The result of the Balance Scorecard is the reflection of institution’s performance. The analysis aims to understand which performance need an improvement. The last step will be a proposed strategic to improve the poor performance in the company.

3. Results and discussion

3.1. Strategy Map
Table 1 shows the strategic map of the department. There are four perspectives on the Balanced Scorecard which are financial, customers, internal business process, and learning and growth. For each perspective, there will be different number of components distinct to the situation in the department.

Table 1. Strategy Map of A company

| Vision : |
| --- |
| Creating a safe, prosperous, and independent society based on the UUPA through enhancement guidance for cooperatives and industry. |

| Missions : |
| --- |
| 1. Improve the service quality of the employees through the reformation of efficient, clean, orderly and authoritative bureaucratic |
| 2. Accelerate economic growth and reduce poverty by maximising the utilization of regional resource potential and expanding employment opportunities |
| 3. Increase the quality of education and health services |
| 4. Increase the distribution of infrastructure to support basic services and the economy in an integrated manner |
| 5. Create life that based on empowerment and social protection which values the Islamic law. |

| Goals and Objectives : |
| --- |
| 1. Develop a conducive business climate and partnerships |
| 2. Optimizing the potential of local and international markets through increase competitiveness by utilise the export product market through quality control by institution |
| 3. Competency-based training |
| 4. Increase supervision, protection and law enforcement of occupational safety and health |
| 5. Increase the number of new business units and various products in the industrial sector |
| 6. Improve the quality of export goods through goods testing and quality certificates. |
### Table 2. Key Performance Index (KPI) Values (percentage).

| Perspectives                | No. | Indicators                                    | Source | Value | Value (%) |
|-----------------------------|-----|-----------------------------------------------|--------|-------|-----------|
| **Financial**               | 1   | Budget growth                                 | Company| 0.184 | 18.4%     |
|                             | 2   | Budget Utilisation                            | Company| 0.198 | 19.8%     |
| **Financial Perspectives Value** |     |                                               |        | 0.382 | 38.2%     |
| **Customer**                | 3   | Customer Service                              | Survey | 0.056 | 5.6%      |
|                             | 4   | Simple Registration Procedure                 | Survey | 0.043 | 4.3%      |
|                             | 5   | Information Access                            | Survey | 0.052 | 5.2%      |
|                             | 6   | Resolve Complaints                            | Survey | 0.055 | 5.5%      |
| **Customer Perspectives Value** |     |                                               |        | 0.206 | 20.6%     |
| **Business Process**        | 7   | Work Facilities                               | Company| 0.045 | 4.5%      |
|                             | 8   | Simple Work Procedure                         | Survey | 0.032 | 3.2%      |
|                             | 9   | Activity According to Company’s Targets       | Company| 0.045 | 4.5%      |
|                             | 10  | Evaluation and Continues Improvement on Work Program | Survey | 0.042 | 4.2%      |
| **Business Process Perspectives Value** |     |                                               |        | 0.206 | 20.6%     |

3.2. Key Performance Index (KPI) values

The general manager with the approval of the head of department determine the Key Performance Index (KPI) values and targets. The values are the reference of the performance measurement. The highest the manager set the values standard, the more important that KPI for the company, vice versa.
### Learning and Growth

| No | Perspectives | Indicators | KPI Values | Percentage | Target (%) | Realisation (%) | Score | Final Score | Percentage | Means |
|----|--------------|------------|------------|------------|------------|----------------|-------|-------------|------------|-------|
| 12 | Employee Training | Company | 0.032 | 3.2% |
| 13 | Number of Employee | Company | 0.035 | 3.5% |
| 14 | Number of Resigned Employee | Company | 0.025 | 2.5% |
| 15 | Number of SMEs | Company | 0.025 | 2.5% |
| 16 | Technology Procurement and Utilisation | Survey | 0.025 | 2.5% |
| 17 | Work Procedure on Latest Technology | Survey | 0.032 | 3.2% |
| 18 | Compensation and Appreciation | Survey | 0.032 | 3.2% |

### Learning and Growth Perspectives Value

| Total | 1 | 100% |

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### 3.3. Balance Scorecard calculation result

For a financial perspective and growth and learning perspective, the data comparison is from the institution's performance from 2016 to 2017. For the customer perspective and the perspective of internal business processes, the questionnaire instrument is the tools for assessing the performance of A company's employees. Table 3 shows the performance calculation results.

**Table 3. Performance measurement calculation result.**

| No | Perspectives | Indicators | KPI Values | Percentage | Target (%) | Realisation (%) | Score | Final Score | Percentage | Means |
|----|--------------|------------|------------|------------|------------|----------------|-------|-------------|------------|-------|
| 1  | Financial    | Budget growth | 0.184 | 18.4 | 85 | 85 | 100 | 0.184 | 18.4 | Very Good |
|    |              | Budget Utilisation | 0.198 | 19.8 | 80 | 99 | 124 | 0.245 | 24.5 | Very Good |
|    | Total Values |            | 38.2 |        |        |        |       |     |       | 42.9 |
| 2  | Customer     | Customer Service | 0.056 | 5.6 | 5.6 | 4.7 | 84 | 0.047 | 4.7 | Good |
|    |              | Simple Registration Procedure | 0.043 | 4.3 | 4.3 | 3.0 | 79 | 0.030 | 3.0 | Good |
|    |              | Information Access | 0.052 | 5.2 | 5.2 | 2.5 | 48 | 0.025 | 2.5 | Bad |
|    |              | Resolve Complaints | 0.055 | 5.5 | 5.5 | 3.8 | 69 | 0.038 | 3.8 | Enough |
|    | Total Values |            | 20.6 |        |        |        |       |     |       | 14.0 |
| 3  | Business Process | Work Facilities | 0.045 | 4.5 | 4.5 | 3.2 | 71 | 0.032 | 3.2 | Good |
|    |              | Simple Work Procedure | 0.032 | 3.2 | 3.2 | 1.5 | 47 | 0.015 | 1.5 | Bad |
|    |              | Activity According to Company’s Targets | 0.045 | 4.5 | 4.5 | 4.1 | 91 | 0.041 | 4.1 | Good |
|    |              | Evaluation and Continues Improvement on Work | 0.042 | 4.2 | 4.2 | 3.7 | 88 | 0.037 | 3.7 | Good |
Two indicators labelled bad which are information access and simple work schedule. For the enough label, there are three indicators including in this label. Then, there are seven indicators in label good. Finally, the indicators for label very good are as much as six indicators.

### 3.4. Conversion of Final Performance Values Calculation

The final calculation values of performance measurement is the initial value for calculating the overall performance value. The calculation of overall performance value refers to Likert Scale. Table 4 shows the conversion result.

#### Table 4. Conversion of final performance value calculation.

| Perspective          | Indicators                  | Criteria     | Score |
|----------------------|-----------------------------|--------------|-------|
| Financial            | Budget growth               | Very Good    | 5     |
|                      | Budget Utilisation          | Very Good    | 5     |
| Customer             | Customer Service            | Good         | 4     |
|                      | Simple Registration Procedure | Good     | 4     |
|                      | Information Access          | Bad          | 2     |
|                      | Resolve Complaints          | Enough       | 3     |
| Business Process     | Work Facilities             | Good         | 4     |
|                      | Simple Work Procedure       | Bad          | 2     |
|                      | Activity According to Company’s Targets | Good | 4     |
| Learning and Growth | Frequency |
|---------------------|-----------|
| Evaluation and Continues Improvement on Work Program | Good |
| Information Access | Good |
| Employee Training | Very Good |
| Number of Employee | Very Good |
| Number of Resigned Employee | Very Good |
| Number of SMEs | Enough |
| Technology Procurement and Utilisation | Good |
| Work Procedure on Latest Technology | Enough |
| Compensation and Appreciation | Very Good |
| Total Score | 71 |
| Total Respondent | 18 |
| Higher Score | 540 |
| Lowest Score | 72 |
| Total Score Percentage | 13% |
| Means | Very Bad |

The determination of the calculated performance score's weight is using several elements, namely, KPI weight, target value, and year-end realization. The scoring item refers to the Likert scale. The highest Likert scale value is 124 divided by five scales. The scale value is 24.8. The Likert scale value from 1 to 5. Value 1 is very bad (0-24.99%), value 2 is bad (25-49.99%), value 3 is enough (50-74, 99), score 4 is good (75-99.99%), and score 5 is very good (100-124%).

3.5. Proposed Improvement

Simple work procedures is an indicator that has the lowest score and realization value. The correction planning is to have concrete remedial steps and clear work description in the form of chart, map or simulation image. Information access also has a low score. It is only one point different from the score of simple work procedures which are 48 and 47 respectively. The future suggestions are to do the initial repairs for website to access update information.

Resolve complaints gets a score of 69 out of a total score of 124. Therefore, the service is labelled enough. The improvement of this indicator is not necessary but need consideration. The suggestions for improvements are to increase special services for resolving community complaints, accommodating all complaints in the quickest best way, service for every public complaint should be transparent. Indicator with the name of number of SMEs gets a score of 50 out of a total score of 124, so the service is enough. It is necessary to increase the number of SMEs by providing services and regular skills training for them. The work procedure on latest technology has labelled enough as well. The future suggestion for this indicators is to upgrade the technological equipment and software in the institution.

4. Summary

In conclusion, the institution has a 'very bad' performance overall. The indicators for this study is eighteen in total. After the calculation, there are two, three, seven, and six indicators labelled bad, good, enough, and very good respectively. Considering the result, we only suggest the corrective plan for indicators with label bad and good. The suggestion for simple work procedures is to have concrete remedial steps and clear work description in the form of chart, map or simulation image. Then for information access, we suggest doing the initial repairs for the website to access update information. Next, the suggestions for resolve complaints are to increase special services for resolving community complaints, accommodating all complaints in the quickest best way, service for every public complaint should be transparent. After that, to improve the number of SMEs, it is necessary to
increase the services and regular skills training for them. Finally, the future suggestion for work procedure on the latest technology is to upgrade the technological equipment and software in the institution.

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