

The design of performance measurement for balanced scorecard method integrated with six sigma (A case study in PT Jasuindo Tiga Perkasa, Tbk.)

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ABSTRACT

The purpose of this study is to design a Balanced Scorecard performance measurement that is integrated with Six Sigma methods in PT Jasuindo Tiga Perkasa, Tbk. Balanced Scorecard is a performance measurement method that includes the measurement of four perspectives; financial perspective and the other three non-financial perspectives (customer perspective, internal business processes perspective, and learning and growth perspective). This measurement method is integrated with DMAIC process (definition, measurement, analysis, improvement, control). Analysis technique is to identify the vision, mission, objectives, SWOT analysis and company strategy. Based on the measurement using key performance indicators of each perspective, the analysis is done in case of the decrease in performance, and focuses on finding control and solution to improve the performance. This study also measures the level of Six Sigma, where the company managed to achieve sigma level of 6.20, or 99.999869%. The results obtained from the measurement are in accordance with the key performance indicators in which 1) there is an increase in financial perspective 2) there is a decrease in customer perspective, 3) there is an increase in internal business process perspective, and 4) there is a decrease in learning and growth perspective.

ABSTRAK

Penelitian ini bertujuan untuk merancang pengukuran kinerja Balanced Scorecard yang terintegrasi dengan metode Six Sigma di PT Jasuindo Tiga Perkasa, Tbk. Balanced Scorecard merupakan suatu metode pengukuran kinerja yang meliputi pengukuran empat perspektif; perspektif keuangan dan tiga perspektif non-keuangan lainnya (perspektif pelanggan, perspektif proses bisnis internal, dan perspektif pembelajaran dan pertumbuhan). Metode pengukuran ini terintegrasi dengan proses DMAIC (definisi, pengukuran, analisis, perbaikan, kontrol). Teknik analisis untuk mengidentifikasi visi, misi, tujuan, analisis SWOT dan strategi perusahaan. Berdasarkan pengukuran dengan indikator kinerja utama dari masing-masing perspektif, analisis dilakukan dalam kasus penurunan kinerja, dan berfokus pada menemukan kontrol dan solusi untuk meningkatkan kinerja. Penelitian ini juga mengukur tingkat Six Sigma, dengan kondisi perusahaan berhasil mencapai tingkat sigma dari 6,20, atau 99,999869%. Hasil yang diperoleh dari pengukuran yang sesuai dengan indikator kinerja utama sebagai berikut: 1) ada peningkatan dalam perspektif keuangan 2) ada penurunan dalam perspektif pelanggan, 3) ada peningkatan dalam perspektif proses bisnis internal, dan 4) ada penurunan dalam perspektif pembelajaran dan pertumbuhan.

1. INTRODUCTION

In the competitive and global era, business people have increasingly recognized the importance of maintaining the continuity of life and growth of their business by getting a support from the development

of technology and good management control system. The main component of good management control system is the measurement of the company performance that is to determine their performance.

Performance measurement plays an important

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role in determining the strategy and implementation within a certain time. Performance measurement can detect the weaknesses or deficiencies existing in the company. Performance measurement using Balanced Scorecard method enables the company to record the financial performance results and to monitor the progress needed for future growth. Balanced Scorecard is a method used to record the score of the performance result either for present condition or future planning.

Balanced Scorecard can lead to a financial value that continues to increase (perspective of financial). PT Jasuindo Tiga Perkasa, Tbk. is engaged in integrated commercial document printing, in which the company is handling the process printing production of security documents, VISA and Master Card and commercial documents. PT Jasuindo Tiga Perkasa, Tbk. has broad business segments, such as the government, banks, flight corporations, and others that will surely require the performance measurement that can determine how well the performance of both financial and non-financial.

In addition to providing the best service in manufacturing its products, the companies should focus on improving the quality of products by making use of the development of technology, good human resources, and proper strategy, in this case, the perspective of internal business process. By doing so, they can help the company to find an efficient way to generate innovative products and to give more attention to the relationship between the company and its suppliers and customers. Internal business process is directly related to the Six Sigma approach.

Six-Sigma is one of the methods to improve quality by reducing defected products. Business people are required to always try to improve and control the quality on the process undertaken, so that the image of PT Jasuindo Tiga Perkasa, Tbk. in maintaining and focusing customer satisfaction can be achieved. The quality of the products, goods/services, influences the preference, perception and behavior of customers towards the products. Low quality products (goods/services) will be left and the customers will seek a better quality product. Conversely, if the quality of the products (goods/services) is higher than the competitors, the customers will choose and keep on using the products (goods/services).

PT Jasuindo Tiga Perkasa also requires the role of employees to improve the quality, because in a production process there is a possibility that the resulting product does not conform to the standards established by the company. The design of the Balanced Scorecard is one alternative that is able to

assist the company in determining a strategy. The company's strategy can be determined by identifying the vision, mission, internal analysis (strengths and weaknesses) and external analysis (threats and opportunities) in PT Jasuindo Tiga Perkasa, Tbk. Performance measurement allows PT Jasuindo Tiga Perkasa, Tbk. to be able to recognize the performance in a perspective of which quality that should be improved, especially for external users, or customers, by using Six-Sigma method. The tools used in Six-Sigma method are Define, Measure, Analyze, Improve, and Control (DMAIC).

Maria (2012) conducted a study entitled *"Perancangan Balanced Scorecard sebagai Alat Ukur Untuk Review Strategi Perusahaan (Studi Kasus pada PT "SBP" di Surabaya)"* ("Balanced Scorecard Design as a Measuring Instrument to Review the Company Strategy (A Case Study in PT "SBP" in Surabaya)"). This study was designed using the Balanced Scorecard approach to review the performance of PT SBP. The result of the research is that PT SBP has increased its net profit and profit margin as a result of the expansion of the company's market share. The strategy adopted is to introduce light brick products to contractors having large project, so that the focus and priority are getting larger and larger.

Chauliah (2011) conducted a study entitled *"Pengukuran Kinerja Dengan Menggunakan Metode Balanced Scorecard dan Six Sigma (Studi Kasus pada PT TR)"* ("The Measurement of Performance Using Balanced Scorecard and Six Sigma Method (A Case Study in PT TR)"). The research objective was to measure the performance evaluation using the method of Balanced Scorecard and Six Sigma in order to provide good service to consumers. Especially on the perspective of internal business that moves dramatically towards zero failure rate (Zero Defect).

The result shows that financial perspective has the highest achievement level, followed by customer perspective, internal business process perspective, and learning and growth perspective. Based on some of the above results, the writer is interested in doing the same research but not using OMAX (Objective Matrix) with the different subjects and study period. This was done to design the measurement of company performance using the Balanced Scorecard method integrated with Six Sigma.

2. THEORETICAL FRAMEWORK

Performance

Mathis and Jackson 2002: 78) argued that performance is what is done and what is not done by the employees. Employee performance has an effect on how much the employee contributes to the organiza-

tion. The standard of employee performance can be seen through quantity of output, quality of output, time period of output, attendance at work and cooperative attitude.

Performance Assessment

The performance assessment can be used to suppress improper behavior and to stimulate as well as to enforce proper desired behavior, through feedback in time performance results, and to give reward. Performance measurement is a process that must be done in management control. The measurement is intended to obtain accurate and valid information about the behavior and performance of the organization, Balanced Scorecard.

Objectives and Benefits of Performance

Performance measurement has the ultimate objective to motivate employees to achieve the objectives of an organization and to comply with the standards of behavior that have been defined in order to produce the desired actions and outcomes.

Mulyadi (2001) stated that the benefits of performance measurement system are as follows:

1. To manage the organization's operations effectively and efficiently by motivating employees to the maximum.
2. To help decision making concerned with employees such as promotion, dismissal and mutation.
3. To identify the need of employee training and development, to provide selection criteria, and to evaluate employee training programs.
4. To provide feedback to employees on how their superiors assess their performance.
5. To provide a basis for the distribution of awards.

Balanced Scorecard

Balanced Scorecard, according to Kaplan and Norton (2000: 7), is a method of assessment that includes four perspectives to measure the performance of companies, namely financial perspective, customer perspective, internal business process perspective, and learning and growth perspective.

Balanced Scorecard consists of score card and balanced. Score card is used to record the scores of individual's performance result. In addition, the score card is also used to plan the scores to be realized by personnel in the future. Through score card, the score that will be realized by the personnel in the future is compared with the actual performance result. The comparison that has been done is used to evaluate the performance of the individual concerned.

While the balanced word is intended to show that, the performance of the personnel is measured in a balanced way by the existing two aspects, that is financial and non financial, short-term and long-term, internal and external. Balanced Scorecard consists of a financial perspective, customer perspective, internal business process perspective and learning and growth perspective.

Four Perspectives in Balanced Scorecard **Perspective of Financial**

In the measurement of financial perspective, Balanced Scorecard has two important roles. Kaplan and Norton (2000: 41) describe, first of all, that all perspectives depend on the measurement of the financial which shows the implementation of the strategy that has been planned, and the second is to give a boost to the other three perspectives concerning the targets to be achieved in achieving the organizational goals.

Financial performance measurement can provide clues as to whether the implementation of company's strategy can give contribution to increase profits generated by the company or not.

Perspective of Customer

The first thing to do in connection with the customer's perspective is that the company must be able to identify the customer, to define the market and customer segments that will become the target for the organization or business entity. Then, Research and Development Division investigate, understand and meet the needs of customers. In addition, the managers must determine the best measurement tool to measure the performance of each operating unit in an effort to achieve the financial target, and to evaluate whether the customer satisfaction has been in line with the level of performance. A product or service is said to be worth if it can give advantage which is relatively higher than the sacrifice that has been incurred by the customers. In this case, the customer services are able to deal with the customers' complaints by providing the best service to customers.

Perspective of Internal Business Process

In this perspective, it shows a striking difference between the performance measurement system using Balanced Scorecard and the performance measurement system using traditional way. Traditional performance measurement system focuses on the control and improvement of various responsibility centers and departments of the company. Departmental operation control relies on the measurements

of monthly financial and variance reports that have many limitations.

In this perspective, the company must identify the critical internal processes in which the companies must do it well, because the internal processes have the values desired by customers and will be able to provide a return expected by shareholders.

Perspective of Learning and Growth

The function of the perspective of learning and growth is as the driver of the other three perspectives of Balanced Scorecard to generate a special performance. This perspective illustrates the company's efforts to continuously innovate.

Benefits of Balanced Scorecard

The benefits of Balanced Scorecard for companies according to Kaplan and Norton (2000: 122) are as follows:

1. Balanced Scorecard integrates the vision, mission and strategy into a comprehensive performance measurement framework that can provide employment framework as measurement system and strategic management.
2. Balanced Scorecard enables managers to see business in the financial and non-financial perspectives (customer, internal business processes, and learning and growth).
3. Balanced Scorecard enables managers to align the measurement of performance outcomes in the future.

The Excellences and the Weaknesses of Balanced Scorecard

The excellences of Balanced Scorecard approach according to Mulyadi (2011:18-24) are:

1. Comprehensive
Balanced Scorecard extends the perspectives covered in the strategic planning, which was previously confined only to the financial perspective, now it has extended to the other three perspectives: customer, internal business processes, and learning and growth. The extension from strategic perspective to non-financial perspective results in benefits, promising the doubled and long-term financial performance as well as to make a company able to enter the complex business environment. The comprehensiveness of strategic target is an appropriate response to entering complex business environment.
2. Coherent
Coherent means that Balanced Scorecard requires the personnel to establish a causal relationship between the various strategic objectives resulting

in strategic planning. Each of the strategic objectives set out in the non-financial perspective should have a causal relationship with the financial targets, either directly or indirectly. The coherence of the strategies, generated in strategic planning system, motivates the personnel to be responsible in seeking strategic initiatives that are useful for generating financial performance.

3. Balanced

The balance of the strategic targets generated by the system of strategic planning is important for generating long-term financial performance. The strategic objectives which are more focused on one of the perspectives make the other perspectives neglected. It will affect the company's ability to generate long-term financial performance. Therefore all existing perspectives of Balanced Scorecard should be treated equally.

4. Measured

The measurability of the strategic targets generated by the system of strategic planning promises the achievement of various strategic targets generated by measuring the strategic goals that are difficult to measure. Strategic targets of non-financial perspectives are targets that are not easily measured, but in the Balanced Scorecard approach, the size of the target of the three non-financial perspectives is determined so as to be able to be managed and realized. Besides having the advantage, Balanced Scorecard also has weaknesses.

The weaknesses of Balanced Scorecard approach according to Anthony and Govindarajan (2005: 180) are:

1. Poor correlation between the size of the non-financial and its result
There is no guarantee that the future profitability will follow the target achievement in the field of non-financial targets anywhere. This becomes a problem because of the inherent assumption that the future profitability follows the individual achievement.
2. Fixated on financial results
In general, the managers are accustomed and well trained to financial measures, but they also often get pressure from shareholders relating to the financial performance of their companies. Incentive programs can create an additional pressure on senior managers because of the compensation which is granted based on the financial performance.
3. The measures that are not renewed
There are still many companies that do not have a formal mechanism to update these measures to keep pace with changing strategies.

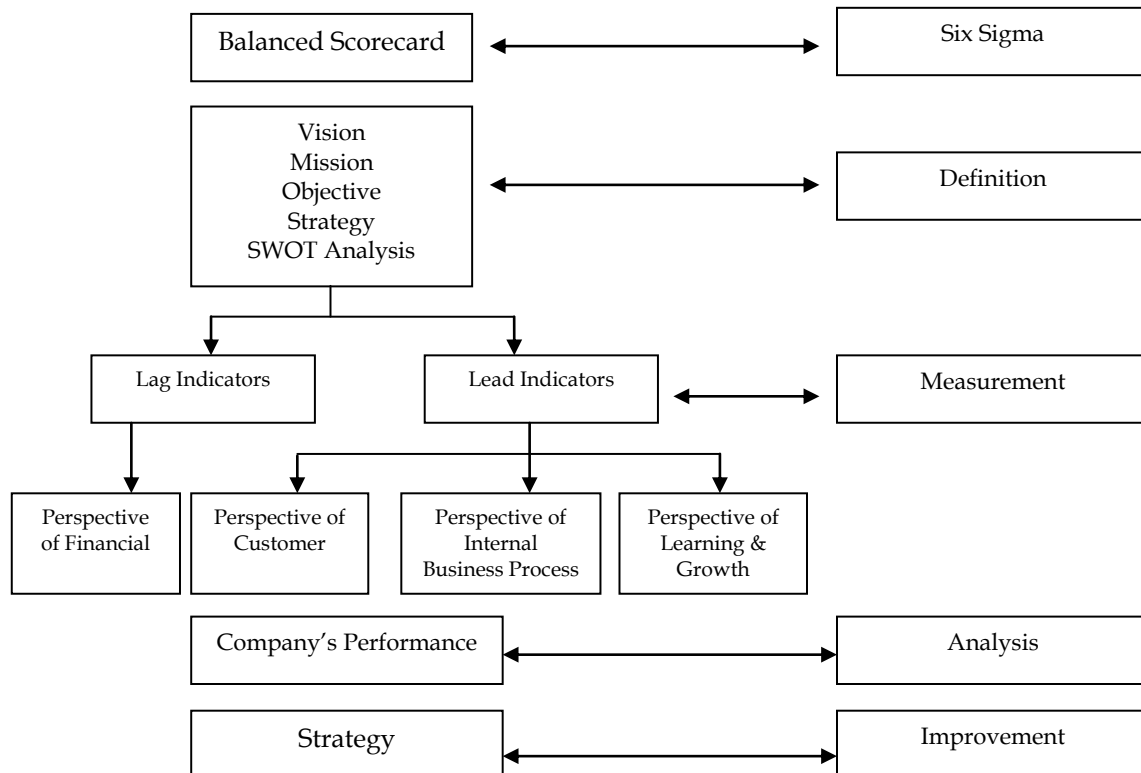


Figure 1
Research Framework

4. Too many measurements made
This can make managers less focus because they for try to do many things at the same time.

The Design Phases of Balanced Scorecard

Some phases in designing Balanced Scorecard according to Freddy Rangkuti (2011:93) are as follows:

1. To formulate mission, value, vision, objective, SWOT analysis and company strategy
2. To determine the perspectives
3. To formulate the strategic goals
4. To determine the strategic measures
5. To determine the targets
6. To formulate the strategic initiatives
7. To determine the key performance indicators (KPI)
8. To implement Balanced Scorecard.

SWOT Analysis

SWOT analysis is a method used to evaluate the strengths, weaknesses, opportunities and threats in a program process or organizational units (Vincent Gaspersz 2012: 11).

Six Sigma

Vincent Gaspersz (2012: 375) stated that six sigma is a continuous improvement effort to reduce the variation of the process in order to improve process ca-

pability in providing error-free products (goods/ services) to give customer value.

The Six Sigma has been widely used by a large part of the manufacturing companies. The Six Sigma is used to measure the number of zero-defect production. However, at present the measurement system using Six Sigma has been widely used also by service companies to measure customer satisfaction.

The Relationship between Balanced Scorecard and Six Sigma

Balanced Scorecard is divided into two sides, namely the financial (financial perspective) and non-financial (customer perspective, internal business perspective, learning and growth perspective). Six Sigma does not see from a quite comprehensive perspective, as Six Sigma focuses on improvement process and defect reduction, especially in areas that have an important effect on the customer's perspective and internal business processes. Six Sigma sets the focus to improve the quality of the process by always trying to push the existence of variations in process while reducing the frequency of defects generated by each of the processes undertaken.

The role of the manager is very important to provide motivation and training to improve the skills of the employees so that they can produce flawless products. If the customers are satisfied with

the results of production (goods/services), they will likely come back and even can give a good image to the new customers to use the products (goods/services) provided by the company. This will be beneficial for the companies to conduct the company's asset turnover. Six Sigma is a disciplined process that helps to develop a near-perfect product.

Six Sigma can be used as a measure of performance targets of industrial systems about how well a product transaction process between suppliers (industry) and customers (market). The higher the Six Sigma targets achieved, the more it can improve quality. If the quality continues to increase, the performance of the industrial system will get better. Thus, both management systems, Balanced Scorecard and Six Sigma, can be integrated into an integrated performance management system.

The theoretical framework of this study is shown in Figure 1.

3. RESEARCH METHOD

Research Design

Based on the problem and research objectives, this study uses qualitative methods. Qualitative method, according to Sugiyono (2009: 15), is a research method that examines the condition of a natural object, where the researcher is a key instrument. The sampling of data source is done using purposive and snowball sampling method, gathering techniques by combining, inductive data analysis, and research results emphasizes qualitative meaning rather than generalization. This study emphasizes the understanding of the performance improvement through the four perspectives of the Balanced Scorecard and Six Sigma approaches.

Research Focus

The researchers focused on the measurement of the Balanced Scorecard integrated with Six Sigma on the business unit of PT Jasuindo Tiga Perkasa Tbk. by measuring the four perspectives, performing analysis for the betterment of performance when there is a decline in the company's performance from each perspective in 2013 by calculating the value of six sigma in the production of cards (ATM, Visa, Credit Card, driver's license and ID card).

Analysis Unit

The analysis unit is concerned with the determination of cases in the study. The analysis unit in this study is the procedure of performance measurement design of the Balanced Scorecard which is integrated with Six Sigma methods to improve the performance quality of the business unit of PT Jasuindo Tiga Per-

kasa Tbk. involving Production Division Manager and Personnel Division Manager.

Types of Data, Source of Data, Data Collecting Method

1. Types of Data

a. Primary Data

The primary data in this study are general overviews of a company obtained from seeing the production process and interviewing the Production Division Manager and Personnel Division Manager of PT Jasuindo Tiga Perkasa Tbk., concerning internal analysis (strength and weaknesses) and external analysis (opportunities and threats of the company).

b. Secondary Data

Secondary data are obtained by way of reading, viewing, or listening to recording results as additional data to support the main data obtained from seeing, listening, and asking. The secondary data in this study are in the form of financial report with the visions, missions, goals, and strategies set forth in the company.

2. Source of Data

The source of data is information of the company obtained through the process of documentation and interview with the parties related to the company such as Production Division (Mr. Triono) and Personnel Division (Mr. Bambang Pramusinto) of PT Jasuindo Tiga Perkasa, Tbk.

3. Method of Data Collecting

The method of data collecting used in this study is:

- a. Preliminary Survey: conducting an initial visit to PT Jasuindo Tiga Perkasa, Tbk., with the purpose of obtaining a general overview of the situation and condition of the company relating to the problems to be investigated.
- b. Documentation Study: collecting data from archives and documents. The documents obtained are in the form of financial statements of the company with the vision, mission, objective, organizational structure, and strategy set by the company.
- c. Direct Observation: collecting data by way of observing the company's operating activities directly.
- d. Interview: conducting interview by providing some questions related to the information of internal and external environment analyses.

Research Phases

Case study analysis technique is used in this research by disclosing the fact of the company and evaluating

whether it has covered all elements contained in the concept of Balanced Scorecard to measure the performance. The research phases are as follows:

1. Survey

The writer conducted an initial visit to PT Jasuindo Tiga Perkasa, Tbk, with the purpose of obtaining a general overview of the situation and condition of the company relating to the problems to be investigated.

2. Interview with the Manager of PT Jasuindo Tiga Perkasa, Tbk.

It is conducted by the writer to identify or define:

a. The Vision of PT Jasuindo Tiga Perkasa, Tbk.

The purpose of the identification of the vision is to find an overview to be achieved by the company in the future.

b. The Mission of PT Jasuindo Tiga Perkasa, Tbk.

The mission of an organization is needed to direct the program, planning and implementation of activities, so that each activity or product of organization always leads to the achievement of the vision.

c. The Objective of PT Jasuindo Tiga Perkasa, Tbk.

Objective is something to be achieved. To achieve this objective, the company must have a vision, mission and strategy. Managers and employees must be committed to achieve the common objective.

d. Internal and External Environmental Analysis

Internal analysis of the company is used to consider the strengths and weaknesses of the company, while the external analysis aims to consider the opportunities and threats to be faced by the company.

e. Strategy

Strategy is used by PT Jasuindo Tiga Perkasa, Tbk. to achieve the company's objectives.

3. Measurement

The writer provided several key performance indicators that respond to each perspective of Balanced Scorecard.

a. Perspective of Financial

The indicators used in the perspective of financial are as follows:

1. Return On Assets (ROA)

$$ROA = \frac{\text{Net Profit}}{\text{Total Assets}} \quad (1)$$

2. Net Profit Margin Ratio

$$\text{Net Profit Margin Ratio} = \frac{\text{Net Profit}}{\text{Sale}} \times 100\% \quad (2)$$

3. Network Capital

$$\text{Network Capital} = \text{Current Assets} - \text{Current Liabilities}. \quad (3)$$

4. Debt Ratio

$$\text{Debt Ratio} = \frac{\text{Total Debt}}{\text{Total Assets}} \times 100\%. \quad (4)$$

b. Perspective of Customer

The indicators used in the perspective of customer are as follows:

1. Customer Acquisition

$$COA = \frac{\text{The number of new customers}}{\text{The number of customers}} \times 100\%. \quad (5)$$

c. Perspective of Internal Business Process

The indicators used in the perspective of internal business process are as follows:

DPMO =

$$\frac{(\text{number defect} \times 1000000)}{(\text{number of units} \times \text{number of opportunities})}. \quad (6)$$

d. Perspective of Learning and Growth

The indicators used in the perspective of learning and growth are as follows:

1. The level of employee productivity

$$\text{Productivity Improvement} = \frac{\text{Sales in 2013} - \text{Sales in 2012}}{\text{Sales in 2012}} \times 100\%. \quad (7)$$

2. Average Training Hours per Full Time Equivalent

$$ATH \text{ per FTE} = \frac{\text{Total Training Time}}{\text{The Number of Full-Time Employees}}. \quad (8)$$

Performance measurement is carried out in 2013. The company's performance result could be obtained after conducting measurements with each perspective. Given these measurements, it will be seen an increase or decrease of each perspective.

4. Analysis

The interview at this phase was done by providing some questions to the competent source according to which perspective the decline occurs. The questions were given to the company to identify if there is a decrease in the performance.

5. Improvement

At this phase, the researchers helped the company to find solutions to the problems using perspective of Balanced Scorecard.

4. DATA ANALYSIS AND DISCUSSION

After doing observation and interview process, the researcher obtained results of the analysis based on conditions on the field as well as other supporting data. The analysis is used to design the measurement of the Balanced Scorecard performance and to measure the value of Six Sigma.

Define (Identification)

To identify the vision, mission, objective, SWOT analysis and strategy of PT Jasuindo Tiga Perkasa

Tbk. Every company has difference vision, mission, objective, internal analysis and SWOT analysis. And these differences make every company has different policies.

The Vision of PT Jasuindo Tiga Perkasa Tbk.

The vision of PT Jasuindo Tiga Perkasa Tbk. is to be the best provider of document solutions and card technology in Indonesia.

The Mission of PT Jasuindo Tiga Perkasa Tbk.

The mission of PT Jasuindo Tiga Perkasa Tbk. is to continue to improve customers' business performance.

The Objective of PT Jasuindo Tiga Perkasa Tbk.

The objective of PT Jasuindo Tiga Perkasa Tbk. is to provide the right solution in cooperation with partners by offering the best developing concept not only in manufacturing products, but also in offer efficient products. One of the examples is in providing national exam documents. For this, PT Jasuindo Tiga Perkasa Tbk. offers a completely different concept, in which the exercises are different for each student. In the banking sector, if a company needs a product from its headquarters as stock, the company makes orders sent through PT Jasuindo Tiga Perkasa with direct distribution to the branch office.

The SWOT Analysis of PT Jasuindo Tiga Perkasa Tbk.

Strength

PT Jasuindo Tiga Perkasa Tbk. has a strength, that is a skill which is developed by the managers for every human resource as the basic strength of the company.

Besides, organizational culture that integrates the Indonesia's virtuous culture with Management ISO is as follows:

1. Working hard
2. Respect, appreciate and polite
3. Highly committed to customers
4. Working objectively and quantitatively
5. Having sensitivity and social responsibility to the community

Weaknesses

To identify the weaknesses of PT Jasuindo Tiga Perkasa Tbk. that always emphasizes more on the quality products includes the awareness of customers to seek cheaper products. This sometimes makes the customers get difficulty to accept the high cost.

Opportunity

After knowing its own weaknesses, PT Jasuindo Tiga Perkasa should be aware of the market oppor-

tunities. To help manage the country to be better, PT Jasuindo Tiga Perkasa offers some innovative products that are different from the others for the government and public sectors. The awareness of the government to order the guaranteed product quality and confidentiality makes PT Jasuindo an appropriate solution. The awareness of the public that concerns on quality, PT Jasuindo tries to manufacture products desired by customers.

Threats

PT Jasuindo Tiga Perkasa is a printing company that produces not only the public products but also security products that confidentiality must be kept, such as: its databases and authenticity. This confidential product stores information, which cannot be widely publicized, and its confidentiality must be kept.

Strategy of PT Jasuindo Tiga Perkasa Tbk.

1. To increase the volume of exports, which can generate foreign currency, and to reduce dependence on imported raw materials to offset the needs of foreign currency in order to reduce the risk of IDR exchange rate fluctuations.
2. To increase the production capacity on an ongoing basis through the operation of the new plants for the document security division, the card division and business documents, and will always make innovation for new products.

Measuring the Four Perspectives

Perspective of Financial

1. Return on Assets

ROA produces the value of 0.0708 or 7%, which is higher than the company ROA standard of 2%, so that the company's ability to generate earnings from asset utilization activities is considered good, especially in managing efficiency of its capital use. Thus the position of the company is considered good in terms of asset utilization.

2. Net Profit Margin Ratio

Net Profit Margin Ratio produces the value of 6.83%, indicating that the income earned from the sale resulted in a profit of 6.83%. This can be improved by efforts to minimize the expense so as to raise substantial profit.

3. Network Capital

Based on these calculations, it can be known that the network capital has a positive value, i.e. current assets are greater than current liabilities. In a positive network capital, the company is likely able to pay all its debts well.

4. Debt Ratio

This ratio informs that 58% of the company's assets are financed by debt or creditors. It can be said

that the company is good, especially in obtaining loan capital used in assets to generate profits for the company because it is more than 50%.

Perspective of Customer

The value of customer acquisition is 17.2413%. This indicates that the company is able to grab the attention of new customers to be added to its customers by way of offering or providing information about the variant and the latest technological developments of the products that can be seen through the media such as brochures that list the product offers and presentations on several projects of various sectors (banking, tourism, government, and others).

Perspective of Internal Business Process

From the calculation result, the Defects Per Million Opportunities (DPMO) of the card production of PT Jasuindo Tiga Perkasa Tbk. in 2013 is 1.175, approaching DPMO value of 1.3. This means that the level of Sigma of PT Jasuindo Tiga Perkasa Tbk. is 6.20 with 99.999869% defect-free results in accordance with the table in the appendix. The awareness of the importance of maintaining product quality makes the employees who are responsible for Quality Control always examine the results of their work, ranging from checking the quality of the materials used (paper, ink, plate, etc.), examining the feasibility of machinery and equipment on a regular basis to checking the process of production.

Perspective of Learning and Growth

The company views employees as an important asset and a decisive factor to achieve the company's objectives and the smoothness of the company's business. Therefore, there should be a special attention to improve the capability and expertise of the employees continuously by providing opportunities to participate in training programs. Sales from 2012 to 2013 increased, with the increase in productivity of 42.4655%, which indicates that the company is making efforts to improve productivity, which is marked in an increase in sales in the following year.

Average Training Hours per Full Time

Full-time employees in this study are assumed as permanent employees. From the results of the calculations, the researchers saw that the training hours for employees are enough, so that it is expected to be able to achieve the desired objectives. Supports are always given for the improvement of skills, abilities and knowledge for employees through training held by the company. Freedom of expression among the teamwork of a division is always given to motivate in generating innovation.

Improvement

Based on the measurement and analysis process in the design of performance measurement by using the Balanced Scorecard method, which is integrated with Six Sigma on the business unit of PT Jasuindo Tiga Perkasa Tbk., the researcher would like to show some of the things that should be corrected to improve the quality of company management.

In the perspective of internal business process, there should be an improvement in control and evaluation by the leaders, so that the employees can carry out their duties in accordance with the working procedures and are responsible for their work including the safety of employees. In the perspective of learning and growth process, the corporate leaders need to improve supervision in the activeness, creativity, work spirit, social behavior and psychology of the employees by providing forms so as to make each report can be well documented. For employees, it is necessary to follow the development of the legislation governing employment as a function of the control of the company.

Success in achieving the target takes the role of each division, starting from the manager of marketing and sales who provide the required information on specifications of printing products, which are planned to be marketed. Production Manager, Personnel Manager, and General Manager are responsible for overseeing and preparing some activities that are useful to enhance the ability of each employee, such as seminars, training, etc. The draft design of the Balanced Scorecard can be seen in Figure 2.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

It can be concluded as the following:

1. From the perspective of financial, the company does not encounter significant obstacles in terms of the collection of accounts receivable from customers, the use of working capital and so forth.
2. From the perspective of internal business processes, the level of Six Sigma is at 6.2, with 99.999869% defect-free, which is in accordance with the table in the appendix. This shows that the company strives to keep the defective products produced up to six sigma standards.
3. From the perspective of customer, the company still needs to make improvements to zero complaint through the measurement of the learning and growth process perspective, the identification of the need for maintaining the training and seminar held annually which are enhanced with new training activities tailored to the renewal of the company's productivity requirements.

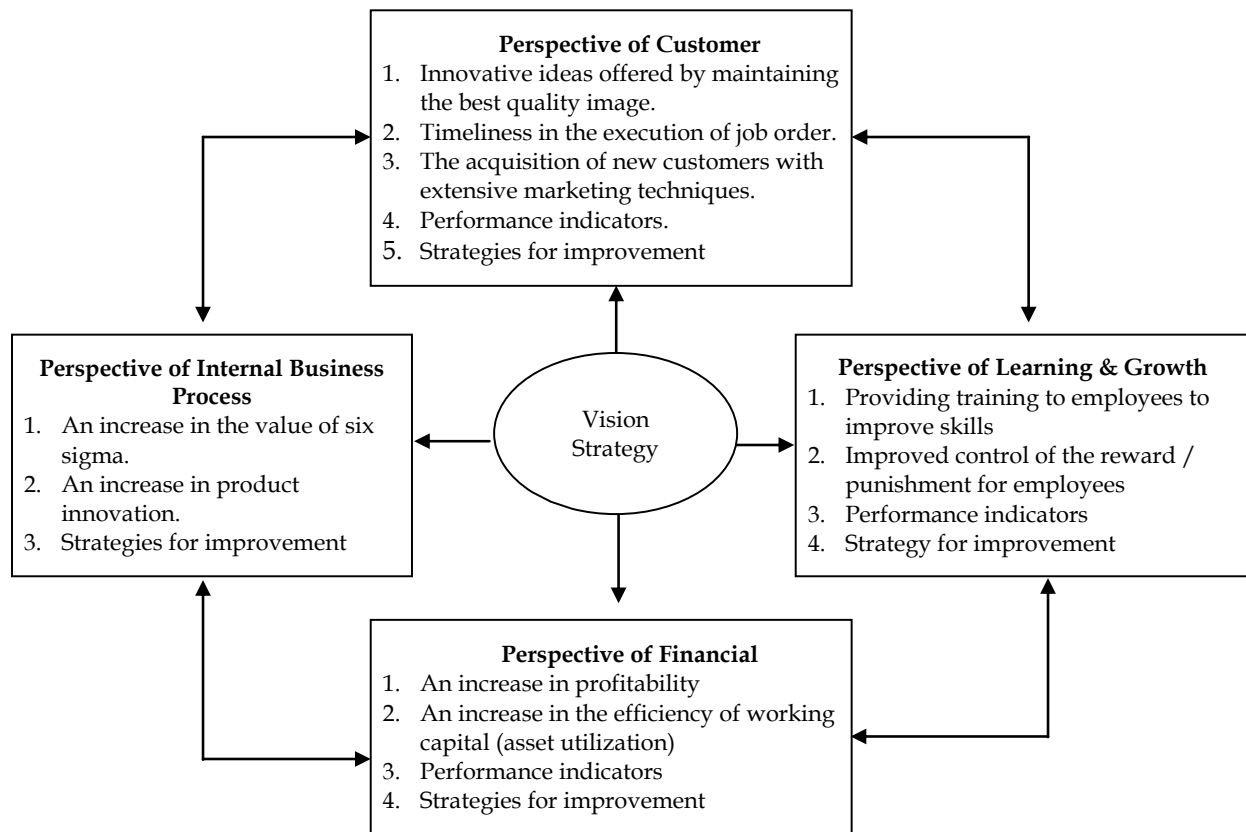


Figure 2
Draft Design of Balanced Scorecard

Source: From the Researcher.

This study has limitations in obtaining complete data concerning the detailed data of customers, human resources data and defective product record because they are the company's secret that cannot be published. The researcher did not do controlling stages because the researcher currently only focused on making the design of measurement of the performance of Balanced Scorecard method and Six Sigma on business unit of PT Jasuindo Tiga Perkasa Tbk.

Based on the research results and conclusions that have been described, there are several things to be considered. First, for the company, it is advisable to carry out improvement efforts to improve performance in the coming year while maintaining the quality and all matters relating to the services that have been received a good rating from consumers. Second, for further researches, it is advisable to use KPI, which is in accordance with the company so that the research could be more accurate.

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