

ANALYSIS OF PERFORMANCE PARAMETER FROM BALANCED SCORECARD PERSPECTIVE IN INDONESIAN CONSTRUCTION FIRM

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This research examines the relationships between variables in each balanced scorecard perspectives in Indonesian construction firm. Questionnaires were distributed through offline (sales intercept) and online (freeonlinesurveys.com) basis. We use Cronbach's Alpha, Pearson Correlation, and Regressions to test the validity and relationship between variables in the model.

Abstract

From 162 questionnaires processed, the results show that there are positive correlation between hard & soft skills and SERVQUAL (tangibility, reliability, responsiveness, assurance, and empathy), SERVQUAL and customer perspectives, and customer perspective and sales. The firm should improve the non-financial perspectives to increase the sales (financial perspectives) since It is proven that there are significant effects between variables.



Balanced Scorecard, Hard Skill, Soft Skill, SERVQUAL, Customer Satisfaction, Customer Retention, Sales, Construction Firm, Indonesia.

I. INTRODUCTION

The increasing budget provided by the government of Indonesia for infrastructure, followed by the rising of spending for the infrastructure industry should affect the sales of construction company in Indonesia. However, one of construction company in Indonesia, PT. XYZ had failed to grow the sales of the company. The sales of the company kept decreasing from 2012 – 2015. Although, PT. XYZ is not one of the biggest construction company in Indonesia, it is believed that PT. XYZ will still be able to experience an increase sales or at least maintain the sales volume.

By having this problem, it is interesting to find out the performance of the company by using balanced scorecard as a tool and to find out which parameters should be defined and how the relationship between perspectives should also be hypothesized. Since, PT. XYZ provides service to the customers, then the Engineering Operational department in PT. XYZ should be the concern in determining the relationship between perspectives in relation to the performance of the company.

In addition, this study represents an effort (1). To assist construction company, especially PT. XYZ to define parameters in each perspectives of balanced scorecard and provide the linkages between perspectives in balanced scorecard, (2). To aid the company to identify which skills considered to be important in providing service quality to increase customer satisfaction and retention, and thus increasing the sales of company, (3).

To enable PT. XYZ to compete better with the competitor and finally achieve sustainable success by the increasing sales.

II. LITERATURE STUDY

Kaplan and Norton (1992, 1996) described that balanced scorecard is a tool to evaluate the performance and acts as strategic management tools which expresses the vision, mission, and objectives of the company by transforming them into more understandable performance management criterion which eventually may assist the company to establish a framework that are appropriate and aligned with the strategic measurement and management of a company.

According to Kaplan and Norton (1996), balanced scorecard can be analysed from four different main perspectives, which includes financial, customer, internal business, and learning and growth. Through the implementation of those four perspectives in balanced scorecard, it allows manager to see the company from different point of view or angle. In other words, balanced scorecard may not only assist the manager to evaluate the performance of the company from one perspective, but the performance of the company may also be assessed from multi-dimensional aspects. In addition, since every industry has different concentration to be evaluated on, Kaplan and Norton (1996) suggested that of those four perspectives, company may reduce or add perspectives, depending on the industry that the company is operating on or the business strategy of the company.

When should we refer to the four perspectives: Kaplan and Norton (1996) address the question “To succeed financially, how should we appear to our shareholders?” in the financial perspective. For customer perspective, the question that should be addressed is “To achieve our vision, how should we appear to our customer?”. In the internal business process perspective, the question that should be answered is “To satisfy our shareholders and customers, what business processes must we excel at?”. Finally in the learning and growth perspective, Kaplan and Norton (1996) suggested to answer the question of “To achieve our vision, how will we sustain our ability to change and improve?”

1.The learning and growth perspective.

According to Kaplan and Norton (1996), the organizational learning and growth are divided into three sources, which includes people, systems, and organizational procedures. There are large gaps between the existing capabilities of people, system, and procedures with the goals of the financial, customers, and internal business process. In order to reduce the gap between them, in learning and growth perspective, there will be a need for companies to provide training for its employees to improve their skills and performance, enhance the use of information technology and systems, and standardize its organizational routine and procedures (Kaplan and Norton, 1996).

2.The internal process perspective.

Internal business perspective plays an important role in improving the result of customer perspectives (Kaplan and Norton, 1992). Elements that relate to the internal business process include processes, decisions, and actions that are done internally throughout the

organizations. Internal business processes are measured from operational or day-to-day activity in producing and delivering the products of the company (Kaplan and Norton, 1992). Hence, managers need to focus on achieving the internal business process in effective and efficient ways aiming to satisfy the needs of those customers. Furthermore, internal business perspectives should be translated to measurement on what the organization needs to do internally in order to meet the customer’s expectations.

3.The customer perspective.

The extended study of Kaplan and Norton (1996) stated that the outcome of customer perspective that can be applied in all types of industry might include customer acquisition, customer retention, customer satisfaction, customer profitability, and market share. These general outcomes depend on the targeted groups of customers in which the organizations are expecting their greatest growth and profitability to be achieved.

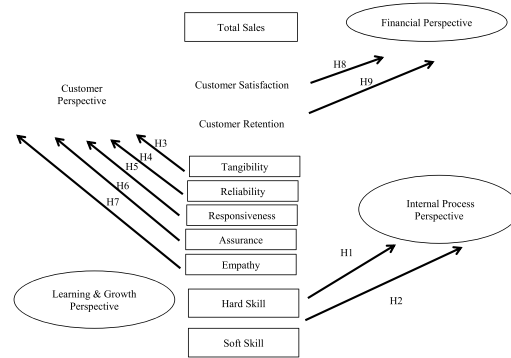
4.The financial perspective.

Kaplan and Norton (1996) identify three stages of financial and three financial themes to achieve the business strategies. Financial stages include rapid growth, sustain, and harvest. Whereas, revenue growth and mix, cost reduction / productivity improvement, and asset utilization / investment strategy are part of financial themes.

Moreover, as each of perspectives should have parameter(s) in order to measure whether there are relationship between perspectives, then the study will provide parameter(s) that are alligned with the needs of PT. XYZ. Below are the definition for each paramater assigned in

each perspective:

PERSPECTIVE	PARAMETER	DEFINITION	SOURCES
Learning & Growth Perspective	Soft Skill	Personality traits which characterize one's relationship with others	Wikipedia (n.d.)
	Hard Skill	Task – oriented competencies which is needed in order to perform the complete task or job of the company	James & James (2004) in the study of Mitchell (2008)
Internal Process Perspective	Tangibility	Physical aspects (equipment, facilities, personnel appearances, etc.) where humans may use their five senses to feel, smell, see, hear, and taste	Parasuraman et al., 1988
	Reliability	The ability of the company to provide and perform the service promised	
	Responsiveness	The willingness and readiness of the company to deliver services	
	Assurance	Concerns the skill and knowledge of the employees in gaining customers trust and building believability	
	Empathy	The ability of the company to fulfill the needs and requirements of the customers	
Customer Perspective	Customer Satisfaction	The feeling that the customer receives from the results of an overall service experience	Anderson, Fornell, and Lehmann, (1994)
	Customer Retention	Customer's stated continuation of a business relationship with the firm	Keiningham, Cooil, Aksot, Andreassen, and Weiner, (2007)
Financial Perspective	Sales	The act of selling something, the exchange of goods, services, or property for money	Webster (n.d.)



As it can be seen clearly in the figure above, the hypotheses for the model framework will be as follow:

H1: Hard Skill (learning and growth perspective) will have positive correlations to the SERVQUAL (internal process perspective)

H2: Soft Skill (learning and growth perspective) will have positive correlations to the SERVQUAL (internal process perspective)

H3: Tangibility of SERVQUAL (internal process perspective) will have positive correlations to the customer perspective

H4: Reliability of SERVQUAL (internal process perspective) will have positive correlations to the customer perspective

H5: Responsiveness of SERVQUAL (internal process perspective) will have positive correlations to the customer perspective

H6: Assurance of SERVQUAL (internal process perspective) will have positive correlations to the customer perspective

H7: Empathy of SERVQUAL (internal process perspective) will have positive correlations to the customer perspective

H8: Customer satisfaction (customer perspective) will have positive correlation to sales (financial perspective)

In addition, there are some studies that previously has been conducted by some researchers in order to figure out whether there are relationship existed between perspectives of balanced scorecard. Thus, table below lists the author and results of their research:

NO	AUTHORS	REMARKS
1	Cohen, Thiraios, and Kandilorou (2008)	Most lead BSc perspectives are correlated with each other
2	Huang, Chu, and Wang (2007)	Learning and growth positively affect internal process perspective
		Internal process perspective positively affects both customers and financial perspective
3	Banker, Potter, Srinivasan (2000)	Learning has positive correlation to customer satisfaction and sales
NO	AUTHORS	REMARKS
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3	Banker, Potter, Srinivasan (2000)	Learning has positive correlation to customer satisfaction and sales

III.1. Development of Hypotheses

Furthermore, in regards to the study, the parameter used in each perspective will be explained in the model diagram below:

H9: Customer retention (customer perspective) will have positive correlation to sales (financial perspective)

III. METHODOLOGY

The study obtained primary data through the distribution of questionnaires with the customers of PT. XYZ as the targeted respondents to fill out the questionnaires. The structure of the questionnaires consisted of two parts which are multiple questions for the demographic data and 5 point likert scale with 1 as the lowest performance and 5 as the highest performance for the performance evaluation. The questionnaire will be distributed using Indonesian language to make the respondents easier and easily understand the questions.

Furthermore, pretest will be conducted in order to acquire reliable and valid measurement. In this case, the questionnaires will be distributed to around 30 respondents, where the results of the questionnaires will be tested using SPSS through the calculation of Cronbach's Alpha and Product Moment Correlation (Pearson Correlation).

The study uses the non-probability of judgmental sampling in conducting the research. Judgmental sampling, which also popularly known as purposive sampling, according to Babbie (1999) in the study of Farsi, Imanipour, and Salamzadeh (2012) is a type of non – probability sampling in which it is based on the researcher's judgment or point of view in selecting the respondents for which the respondents are considered to be expert or appropriate to be selected in the study. So, in this case, the respondents will be the customers of

PT. XYZ with 130 respondents needed for the hypothesis testing. The approach will be sales intercept in which the salesperson will visit customers and ask for fill in the questionnaires. Aside from that, the questionnaires are also distributed via online where the salesperson will send the link through email and the customers fill it electronically

The analysis method will be divided into 3 testing, which include:

1. Descriptive Analysis – It consists of basic information of the respondents,
2. Reliability and Validity Tests – Pretest will be measured and examined through Cronbach's Alpha and Pearson Correlation
3. Hypotheses Testing – Regression analysis will be used to measure the results of the hypotheses testing.

IV. RESULTS AND DISCUSSIONS

In order for the research to be properly conducted, as mentioned earlier, the sample size should at least reach 130 respondents collected through both online and offline mediums. The research of the study has been successfully collected from 140 respondents, from which only 7 of them were considered to be invalid leaving 133 data to be used for further hypothesis testing. In detail, total data that is being collected were from 163 respondents, which consisted of 133 valid respondents for further testing and 30 valid pre-test respondents.

The demographic data resulted that those respondents are ever purchase services and products from PT. XYZ with majorly private company located in Bogor area as the customers of PT. XYZ. The position of the customers who deals with PT. XYZ

is mainly staffs in purchasing department. Those respondents are majorly working for more than 7 years with the company and having more than 300 employees in their company. Most of the respondents are having relationship with PT. XYZ for more than 5 years with more than 3 suppliers bidding for the job. When should consider to use the service from PT. XYZ, from those 133 respondents, 21 respondents reject to use the service provided by the PT. XYZ.

In regards to the hypotheses testing,

Hard Skills and Soft Skills (Learning and Growth Perspective) to Internal Process Perspective						
Method	Link/Path	R2	B.Coefficient	Significance	Value	Hypothesis Tests
Single Regression	ALL	0,638		,000	-	
	Constant		1,092			
	Hard Skills		0,164		0,010	Reject H0
	Soft Skills		0,549		0,000	Reject H0

Internal Process Perspective = 1.092 + 0.164 Hard Skills + 0.549 Soft Skills

Regression Result on Hard Skills and Soft Skills (Learning and Growth Perspective) to Internal Process Perspective
Source: SPSS

Detailing the result of learning and growth perspective’s components, which are hard skills and soft skills, the results shows that both hard skills and soft skills have POSITIVE correlation to internal process perspective. The correlation is seen from the significant result in which the outcome for both skills are less than 0.05. Furthermore, the positive correlation relates to the result of coefficient, which shows no negative sign. The coefficient of “Internal Process Perspective = 1.092 + 0.164 Hard Skills + 0.549 Soft Skills” explains that soft skills play the most important rules to the internal process perspectives. In addition to correlation, the R2 indicates that hard skills and soft skills have strong association to the internal process perspective

SERVQUAL to Customer Perspective						
Method	Link/Path	R2	B.Coefficient	Significance	Value	Hypothesis Tests
Single Regression	ALL	0,861		,000	-	
	Constant		0,024			
	Tangibility		0,203		0,020	Reject H0
	Reliability		0,209		0,013	Reject H0
	Responsiveness		0,259		0,001	Reject H0
	Assurance		0,168		0,033	Reject H0
	Empathy		0,186		0,029	Reject H0

Customer Perspective = 0.024 + 0.203 Tangibility + 0.209 Reliability + 0.259 Responsiveness + 0.168 Assurance + 0.186 Empathy

Regression Result on Service Quality to Customer Perspective
Source: SPSS

In depth analysis of the regression analysis shows that the five dimensions of service quality (tangibility, reliability, responsiveness, assurance, and empathy) are correlated to the customer perspective. “Customer Perspective = 0.024 + 0.203 Tangibility + 0.209 Reliability + 0.259 Responsiveness + 0.168 Assurance + 0.186 Empathy” means that customer perspective has POSITIVE correlation to those five service quality dimensions, where responsiveness has the most significant role affecting the customer perspective, followed by reliability, tangibility, empathy, and assurance. Finally, the R2 is 0.861, shows that the five dimension of service quality has strong association to the customer perspective.

Customer Satisfaction and Retention to Financial Perspective						
Method	Link/Path	R2	B.Coefficient	Significance	Value	Hypothesis Tests
Single Regression	ALL	0,607		,000	-	
	Constant		1,231			
	Customer Satisfaction		0,233		0,013	Reject H0
	Customer Retention		0,483		0,000	Reject H0

Financial Perspective = 1.231 + 0.233 Customer Satisfaction + 0.483 Customer Retention

Regression Result on Customer Satisfaction and Retention to Financial Perspective

Source: SPSS

Further analysis of aspects used to measure customer perspective, which are customer satisfaction and customer retention, the

results indicate that customer satisfaction and retention do have relationship to financial perspective which can be shown through the significant value of 0.013 and 0.000 that is lower than 0.05. The coefficient presented by “Financial Perspective = 1.231 + 0.233 Customer Satisfaction + 0.483 Customer Retention” clarifies that customer satisfaction and retention do POSITIVELY correlate, where customer retention is considered more significant. In addition, customer satisfaction and retention have quite strong association to financial perspective, which can be seen through the result of R^2 of 0.607 that is greater than 0.5.

V. CONCLUSION

The outcome of the study reveals that hard skill, soft skill, have positive relationship to SERVQUAL tangibility, reliability, responsiveness, assurance, empathy have positive relationship to customer perspective while customer satisfaction and customer retention have positive relationship to sales.

Moreover, the results of this research are expected to be able to assist PT. XYZ and other construction company in Indonesia to identify the relationship of those balanced scorecard's perspectives and elements in each perspective. In this case, it is believed that PT. XYZ will be able to increase the total sales in the financial perspective by improving the customer satisfaction and retention in the customer perspective through providing better service quality, which can be achieved when the company increases both the hard skills and soft skills of the employees.

After knowing that there are relationship between perspectives, it is also crucial for the company to take note that in the learning and growth perspective,

soft skill is more important to develop compared to hard skill and also the result shows that the responsiveness is more crucial in improving the internal process perspectives, followed by reliability, tangibility, empathy, and assurance. In regards to customer perspective, maintaining customer should be the concern of the company since the customer retention produces higher result than customer satisfaction in increasing the outcome of financial perspective.

Managerial Implication

When refer to the results of the study, it is important to take note that both hard skill and soft skill are having important relationship with the produced of service quality. Thus in this case, the company should be able to provide training and seminars in order to enhance the capability and knowledge of the employees and thus better service quality can be achieved.

Similarly with the improved service quality, PT. XYZ should also suggested to be able to pay more attention on the schedule, since the customers put on time schedule as their priority in purchasing the services. Thus thorough report regarding the condition during the working process and some of problems arise should also be noted for the explanation. Beside, the use of reminder may also assist PT. XYZ to give warning about the deadline.

In addition to improve the customer satisfaction and retention, it is recommended that PT. XYZ may also provide internal marketing. It is believed that when the employee feels satisfied with the company, the employees are able to provide better services and finally customer satisfaction and retention can be achieved. Aside from that, PT. XYZ should also get continual feedback from the customers in order to continuously

improve the services provided.

Limitation and Recommendation for Future Research

There are, indeed, some limitations in the study. The first limitation is the samples collected in this research are limited to those respondents who only use the service of PT. XYZ. Thus, it is recommended for further study that the respondents should cover broader and wider coverage of customers who have used the service of any construction company.

Secondly, the research was only conducted from the point of view of the customer. In this case, it is believed that the company may also have their own perspective and perception regarding the value of the services provided by them. Hence, it is suggested that future research should also collect data from the company's point of view in order to minimize bias to the results.

Thirdly, the parameter used in the perspective should be added. As employees' satisfaction and loyalty would also results in the quality of the services performed by the employees, it is also recommended that employee satisfaction and loyalty should also be included. Therefore, it is expected that future study will be able to measure whether there is stronger relationship in the learning and growth perspective when employee satisfaction and loyalty are included as parameters.

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