

REVIEWING MANAGING THROUGH PERFORMANCE MEASUREMENT

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Received: 28 August 2007, Revised: 13 October 2007, Accepted: 13 October 2007

ABSTRACT

This is a peer-reviewed article

Performance measurement is a control of a company for track progress. In traditional measure that focus only financial measure and ignore all factors that not associated with financial. According to Kaplan and Norton (1996), the balanced scorecard emphasizes that financial and non-financial measures must be part of the information system for employees at all levels of the organization. The process of blending all measures is the most important factor in managing the organization performance measurement system. First of all, this conceptual will explained regarding the main performance measurement, the need of performance measurement, the roles of performance measurement, critics of having performance measurements, and types of performance measurements that including financial and non-financial measures. Because of in this new era, the non-financial measurement will be significantly used in management and measurement. It will focus on usefulness and deficiency of financial and non-financial measures. Financial measures are stressed on using profit, Return on Investment (ROI), Economic Added Value (EVA) and the applicant in Just In Time (JIT) practices. Non-financial measures will stress on JIT practices, manufacturing, investor and analyst, and management compensation. This is because not all management use financial as a main measure. Further research will be done regarding performance measurement system in Government Link Companies (GLCs).

Keywords: *Performance measurement, accounting*

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1. Introduction

Performance measurement is the formal routine in management accounting. This measurement must be implementing as company want to guide or conduct their business performance. From the article, it means quantitative tools that gauge an organization's performance in relation to a specific goals or an expected outcome. Measurement consists of rules for assign a value to object or events in such a way as to represent quantities, qualities or categories of an attribute (Jusoh, 2003). Performance means quality of work or result achieved by an organization (Jusoh, 2003). Other meaning of performance measurement is indicator of how well an organization or program is doing.

By its concept, performance measurement means as the ways in which the performance of whole organizations or parts of organizations, such as profit centre, cost centre, division, department, and section and the managers responsible for these parts of business, can be measured. Performance measures, which may be in the form of quantitative, qualitative or financial measure, include measures based on profitability or comparison with budgets and standard cost based measures as well as the figures for previous periods. All companies need this performance because it suitable and best practice to improve the bottom line in all kinds of companies. Performance measurement should relate with company control system in a business because once the activity is measured that it should be control to make sure the activity always follow the rules and show the better performance standard. Without performance measurement, company can't manage and know whether their company work very well or poor. The continuous measurement is also needed which supply feedback about action or outcomes.

1.1. Reason in having performance measurement

Now, the researchers would like discover the reason of why the organization needs performance measurement in their day-to-day implementation. I'm relatively sure that all management wants their company get benefit and success in their way of being the best or good condition organization. They do not allow their company to be the lowest than their competitors. Therefore, management must build and create measurement system and control organization performance. From Jusoh (2003), she told seven reasons. Firstly, it needs to support better and faster decision-making and control processes. This is because from the result of the performance measurement organization sufficiently.

Secondly, it allows organization to align its strategic activities with its strategic plan and permit real deployment and implementation of the strategy on continuous basis and also provide feedback to guide the planning efforts. Because of that, company will know whether the management has succeeded to follow their own strategic plan by using one indicator to determine it. Thirdly, performance measurement will provide a rational basis for selecting what business process improvement must be reviewed and rectified. Whenever there are any existences deficiencies in business process, performance measurement will give a signal and the variance will be covered. Fourth, it will provide accountability and incentive based on real data and not on anecdote and subjective judgment. So, decision will be correct when company relies on some evidence that come from the measurement. Without any measurement, organization won't know how far the activity of the company works well and whether they need any correction or gateway. Fifth, it can allow manager to identify the best practice in an organization and expand their usage to any department that needs it as reference. Sixth, it could permits

benchmarking of process performance against outside organization. Therefore, it will always rely on competitors too.

Lastly, organization can reduce their process cost and improve productivity and mission effectiveness. It can be done when organization measured their productivity and costing. They also could eliminate any waste and inefficiencies in operating activities. It can be detected from analyzing the measurement of organization performances. Therefore, now every organization can understand that measurement is important for management to determine the successful of their activities.

After this, let discuss the problem in implementing performance measurement. The reason is not all types of performance measurement are appropriate in management. First, it comes from those who claim that performance measures may be used by powerful minorities to marginalize some interests and to construct false realities. There are also those who claim that disclosing performance measures is dangerous because they may be used to define the content and goals for an organization in ways which are not seen as relevant from the point of view of those who are involved. From the other view, some people even commented the management might misuse or misinterpret the performance measure results in the way they like (Jusoh, 2003). It also need for a balanced mix of several measures. It is important to widen the framework of reference and encourage the use of measures, which reflect broad stakeholders' interest (Peursem et al., 2000). Performance measurement must be properly manages. It would not be used by others to get higher incentive or compensation.

Another problem is related to the precision of measures. Precision is the refinement of a measure, or the range to which confidence can be attached to the accuracy of an amount. Imprecision creates problems for accountability for it make comparison more difficult or deceptive (Peursem et al., 2000). Imprecision also give idea that performance measures have questionable reliability or representational faithfulness (Peursem et al., 2000). If the measure is not precision, it did not reflect the true performance for organization. Then, other plans to improve it will be incorrect. So, the future performance can't be achieved successfully.

There are two suggestions by the author. First, the performance measures used must be considered in their totality to obtain a richer understanding of the organization so that precision and reliability problem implicit to all measures may be offset to some degree by the holistic impression that is presented by a breadth of indicators (Peursem et al., 2000).

Secondly, performance measures reported to the public probably be viewed as no more that indicators which exist to focus attention towards an issue of interest (Peursem et al., 2000). It means that it will not been chosen based on their presumed precision and reliability for public report because they want to avoid any interest to their management when organization performance is good. Accurate measure may be suitable for assessing progress in critical areas and determining accountability, but may not provide sufficient motivation if target are too difficult or measures too complex for employees to understand (Langfield et al., 2003).

According to Kaplan and Norton (1996), when he first developed the Balanced Scorecard in the early 1990s to solve a measurement problem. In knowledge-based competition,

the ability of organizations to developed, nurture and mobilize their intangible assets was critical for success. But financial measurement could not capture the value-creating activities from an organization's intangible assets: the skills, competencies, motivation of employees; databases and information technologies; efficient and responsive operating processes; innovation in products and services; customer loyalty and relationships; political, regulatory and societal approval. All measures that being plans, must be suit with its strategic and mission objectives and should include traditional and current measures.

1.2. Roles of performance measurement

Performance measurement plays important role in organization. Normally, performance measurement can be used to instill, responsible, accountable among managers and employees, and accountable for achieving performance targets. Besides that, it also allows managers to monitor their own progress by comparing performance targets and to take corrective action if necessary. It also being a basis for payment of rewards or bonuses because any payment will be measured based on performance of the activities.

On top of that, performance measurement will motivate employees to pursue the goals and strategic objective of the firm. This is because when organizations achieve their target and get profit, employees well get incentive and they will always motivate and do the work well according to the requirement of the organization.

After this, we can see many examples of important roles in certain sector that help organization achieve their target by using financial and non-financial measure such as in manufacturing, compensation, investment and others. This will support by many authors that stress the usefulness of the financial and non-financial measures.

1.3. Criteria of performance measurement

The following are considered selecting the criteria's of performance measurement.

Firstly, whether the company is in the manufacturing or service sector, the choice should depend on the companies strategic objectives that have been plan to suit the competitive environment it is in. The measurement should consider the criteria that important in competitive environment. For example, they do not only consider the traditional factors. They must focus all factors such as productivity and quality because technology always changes. For example, when the market becomes more competitive, particularly with high quality product and competitively priced of product, a company often reacts by changing the performance measures that are suitable for the new market in which it operates (Bhimani, 1993).

Secondly, the choice of performance measure also must be balanced to make sure that no one dimension or set of dimensions of performance is stressed to the detriment of others. All measures must be related and the consequences of each measurement must be concerned. For example, if a company stresses on profitability measures and less emphasis on the customer responsiveness, that company would end up with overall performance dissatisfaction.

Lastly, the manufacturing processes and management philosophy adopted by manufacturing companies also influence the choice of performance measures according to their operation activities and reflect the actual activities for organization.

1.4. Steps in having performance measurement

In that case, the organization must follow three steps to create performance measurement. This step is defined by Meyer (1996) research. First, organization on their own must try to understand the essential differences between financial and non-financial measures. They must also know appropriate measures that suitable in their organization and need to know the reason of “why organization needs these measures in their management according to their environment”. After that, management needs to grasp how their measures should be configured to be performance measurement that can measure all aspects in company without any deficiencies. Finally, appreciate the organization conditions that contribute to effective measurement. This is when organization such as production department that suitable to use numbers of breakdown machine. If organization follows this step, it will be more useful in measuring their organization achievement.

1.5. Types of performance measurement

Now, I will describe about types of performance measurement. There are financial measures and non-financial measure. Firstly, let me discuss about financial measures. Financial measures are normally used in all organization and known as traditional measurement. Organizations always rely on this measure such as profit, return on investment and return on asset. Formerly, management thinks that this measurement is accurately and reflect all organization achievement but it may changes now because the evolution of organization environment and behavior. It has internal and external performance measures, both internal such as budget or variance reports and external such as income statement or cash flow reports, there likely as scoreboard that tell users whether lose or get profit. The roles of accounting reports had been limited to provide period, ex post facto statements of financial performance without the expectation that they can provide insight into the factors causing that performance. It did not come into future expectation because past performance did not reflect the future achievement and can't be survive in competitive environment. In such manner, it need to be change in some aspect that consider others factors.

There are two reasons for the widespread use of financial performance measures. First, financial performance measures such as profit articulate directly with the organization's long run objectives, which almost always purely financial. Second, properly chosen financial performance measures provide an aggregate view of an organization performance. Currently, organization is not too suitable to rely only on financial measures and they need to focus on other measures because of there are many things that must be stressed on if one organization has desired to be successful in this new condition of millennium.

Hereafter, the researchers introduce about non-financial measures afterward focus on these two types of measurement in some scope. Non-financial measures are a measure that include all aspects rather than financial measures such as quality of product, customer satisfaction, flexibility, timely delivery and numbers of break down machine. These all measures are most important to management. Such authors that give an opinion can prove it. Bhimani (1993) said that factory operators for example are more concerned with non-financial aspects of their work such as production rates, reject rates, and on time deliveries. This is support by Maskel (1989) too in Bhimani (1993), that said day-to-day control of manufacturing and distribution operations are better handled with non-financial measures. Therefore, managers must also realize the importance of non-

financial types of performance measurement. But Bhimani (1993) also said that financial and non-financial performance measurement could be combined in complementary ways because if organization wants to use non-financial measures, doesn't mean that they should ignore financial measures. Both of them are too important and always relate each other because non-financial measures have their deficiencies too.

Fisher (1992) said that by using non-financial measures; managers attempt to track progress on the actionable steps that lead to a company's success in market. Whereby managers must always focus on processing activities that been implemented rather than always focus only on financial results because difficult to know how the progress of achieving it. Ideally, common indicators for world-class performance should be including quality, time, productivity, flexibility and innovation (Stivers and Covince, 2002). One of the example tools is balance scorecard. Kaplan and Norton (1992) had discussed the need for and provision of a scorecard of measures to provide balance presentation, including both financial and operating measures focusing on strategy rather than on meeting current period budgets. They also said that most of skills and competencies could be better measured by non-financial measures. However, management needs balanced between financial and non-financial measures because financial measures signal the results of past action and non-financial measures are the drivers of future financial performance.

Meyer (1996) had given essential differences between financial and non-financial measures and he also told rule of thumb for combine financial measure and non-financial measure. Firstly, there should be between three to five measures for tracking progress towards strategic objectives. It does not require too many measures because if there is a lot of measures and can confuse and the gaming of measures will be too difficult. Secondly, all the measures might include non-financial measure and financial measure because it will be more accurate and reflect organization performance. Thirdly, management must prepare a space for improvement of the measurement if the measures are too difficult or cannot be used in management. Fourth, measures must be within the control of those being measured to take the appropriate action to make improvement on it. Lastly, there should be a clear linkage between non-financial performance and financial results so that improvement in one feed through to improvement in the other. This is too difficult because of the complication involved in establishing the clear cause and effect of all types of measurement that been build. If all measures are suitable for implement, management should start to use it.

1.6. Challenges blend all the measures

Combinations of these two types also give a challenge to management accounting. Management accountant should also focus on other factors than financial. They need to know the processing of manufacturing and production. This is because if management select to use quality and production; they need to know how product is done, how manufacturing processing is implement and whether the product meet higher quality or not. They must also be a leader to get information for organization in make improvement after measurement is done. Management accountant need to conduct measurement well and accurately, if not later improvement cannot be achieved. That's why all measures must be grasped very well and understands by all employees and contribute in organization. After this, the researchers will stress on financial measures and non-financial measures in scope of high-level industries, disclosure, management compensation, investment, manufacturing, just in time practices and incentive plan. The

researchers will also focus the advantages and disadvantages of financial and non-financial measures.

2. Measurements

2.1. Financial measures

The most popular measures are profit, return on investment and economic value added. Management will prefer to use profit as a measurement for evaluating organization performance. Management thinks that profit is a summary measure of the success of the organization strategies and operating tactics. It means that if profit below expectation, it will provide signal to organization that organization do not achieve the aim and organization strategies and tactics is not properly achieved. But such signal can't be covered and reason can't know accurately. However, this measure have little problem that might be faced when management always rely only on it. Firstly, profit provide only on aggregate indication of the firm ability to achieve the goals that are crucial to success because when profit always reflects good performance of the organization activities. It provides no direct indication to the organization members of what they can do individually to improve performance.

Then, profit has short orientation and can be manipulated. Where, everybody always focus on short run performance rather than long run performance because of management interest. Managers can take steps to improve short run performance at the expense of the long run profit consideration. They prefer to make small expense on the first phase and do not think for the future performance. In effect, they must spend lots of money in other years. Managers will sacrifice long-term profitability to improved short-term reported profit. For example, answering quality control and maintenance standards. Other examples are providing insufficient funding for research and development (R and D) and employee training and insufficient attention to customer relations and employee morale.

Let us discuss about return on investment. It is suitable for investor to analyze. But it has danger in measurement and control. The better profitability will provide better return on investment. These measures attempted to manipulate performance measurement because profit can be manipulated too. Therefore, it would not reflect true performance. One important thing is any leasing asset cannot be including in this measure same as their interest expense. So, their asset will be understated and profit will be overstated because this measure is related to profits. In many diversified corporation, the ROI measure gave the illusion of insight and control, when, in fact, managers were taking actions that increased ROI but decreased the long run value of their business units. Management has point out that excessive focus on any single short run measure.

Another measure is EVA. This measure had overcome return on investment problem. In this measure, corporate managers must specify an additional parameter, the risk-adjusted cost of capital for the division; this is then multiplied by division's net investment base to obtain a capital charge for the division. The capital charge is subtracted from net income before taxes. These measures also correspond closely to the economist measure of income. It will always increase when we add investment earning above the cost of capital or eliminate investment earning below cost of capital. It produces goals congruence that maximizes the economic wealth. This measure does not ignore any asset or investment. Therefore, it really reflects organization performance. It

is more flexible because of different percentage can be applied to investment of different risk. It also allows manager to recognize different risk adjusted capital cost that the ROI measure can't. Besides that, cost of capital is based on industry and risk characteristics of individual divisions rather than use Weightage Average Cost of Capital ACC (average). It also being calculates after adjusting for any distortions introduced by General Accepted Accounting Principle (GAAP) that required for financial reporting. All above reason made EVA is better than ROI.

2.2. Deficiencies of financial measures

Although the financial measures are good to evaluate organization performance, it also has some deficiencies that cannot be avoided. It needs to support by non-financial measure (Fisher, 1992). Firstly, perception that says a variance is not actionable at the operating level because there is various departments on one plant had difficulty in interpreting a variance and search their specific problem on that variance. There is no counter track progress on operating organization activities. The unfavorable variance may have multiple causes that the causality is very difficult to determine. Any action that needed to bring the variance under control was not easily to resolve (Fisher, 1992).

Secondly, production managers seldom saw a direct connection between action they took on the factory floor and numbers in the monthly standard cost report (Fisher, 1992). A reason for this problem was that numbers were summarized on such an aggregate level that managers did not feel individually responsible for the variances. They always ignore the variances. Employees on the floor were controlled based on variances.

Thirdly, lack of action ability on a variance was a recurring theme in all firms interviewed (Fisher, 1992). Because do not easy to select or make an action to correct the variance. For example, on machine hour's variances, however occurs because of numerous activities. The variances may have indicated whether machine hours were efficient of inefficient. To trace the direct cause or solution was difficult. Fourth, problem of over reliance on labor or machine hours (Fisher, 1992). It occurs when the cost accounting system relied excessively on volume-based allocation rules. This over reliance on the information will generate resulted in dysfunctional activities.

Fifth, bring to the dysfunctional activities. The maximization of a single variance, in isolation from firm results, may be giving a bad effect on firm profitability (Fisher, 1992). An example is the maximization of a positive price variance. In order to maximize a favorable price variance, purchasing department will brought low price input, low-grade material but it will give effect in increased manufacturing cost because of quality problem caused by low quality input.

Sixth, when using costing; it difficult to set of standard and important step in well functioning standard cost system due to the environment changing. In very dynamic environment, the proper update standard was a difficult and costly process. It must be updated instantaneously. Besides that, standard conflicts with continuous improvement. If standard not properly set, standard have effected of setting norms rather motivating improvements. Standard cost system in the firms we examined did not give timely signals. For example, it takes at least two weeks for accounting department to collect and monetary the results were disseminated, people on factory floor considered the information is expired. This happened when manufacturing process is change rapidly. It is not suitable for measurement in operating activities. Prompt reporting is most important in a dynamic environment where the manufacturing process and operating

environment are rapidly changes.

Now, let we discuss traditional measurement disadvantages in Just in time practices and manufacturing process. Whether it will be very useful or have declining need. From the article, firm with higher level of emphasis on JIT practices were found to focus less on traditional financial measures and more on contemporary or non-financial measures (Azmi et al., 2002). Increase focus by manufacturers on manufacturing processes instead manufacturing results. This argument suitable for mass production manufacturers but not for mass customization manufacturers because mass production system products are produced with primary goal of minimize operating costs with little focus on performance indicator. That's mean it ignore performance indicator and always minimizing cost to get good results at the end of the production. Critical measures that could be used to reflect the overall system performance are generally ignored (Fry and Cox, 1989; Kaplan, 1990). It is more to critics for their inadequacy in providing performance indicator that can clearly help as companies achieve it goal. Measures sometimes produce conflicting and misleading information that could undermine the achievement of a company strategic objective. This measurement is key elements in determine whether or not an improvement effort will succeed because actions of individuals in manufacturing are driven by the measures used to evaluate performance. The old measures is useful in evaluating the operating performance of mass production company and new measures do not focus more on cost minimization rather focus also on quality, flexibility, time, innovation and customer service. This old measures also not inappropriate for today practice of just in time because of manufacturing process that have changed and it produce irrelevant or outdated feedback. It lack of appropriate performance measurement that will be a barrier to a successful JIT implementation. Company should not claim a complete JIT if use traditional measuring of efficiency and productivity. Maskell (1986) in Bhimani (1993) argued that traditional cost accounting measures may lead to decision conflicting with JIT goal. This is because it does not reflect overall condition in manufacturing. Traditional cost accounting also tend to impair JIT implementation since the feature of cost accounting measure rely on standard emphasize variances and efficiencies with direct labor. He also said that decreasing labor today can also be used to justify the declining need for measurement that focus on labor cost and related standard. JIT must be designed to reflect the new production philosophy. Other authors said that traditional measures should be eliminated. Labor and machine efficiency are indicators that becoming obsolete and clearly not suitable for manufacturing firms in JIT environment (Neely, 1995). In overall, it shows that a higher level of JIT implementation would force a firm to give greater emphasis to the new performance measurement than traditional. Whatever it is, for me not all traditional measures should be eliminated but there must be reduced their uses because of many changes in manufacturing and use balance with new measurement and must be strategic.

2.3. Non-financial measures

Non-financial have also their implementation process. There are sixth processes take must be followed (Fisher, 1992). Firstly, shock to operating environment. Management will shock with their management and they will think that current management did not lead to desired results. This is happen when there are many changes in operating environment. Although, there is a shock, management has motivated management to find new ways of managing, measuring and controlling the manufacturing process. They need to change according to new environment.

Secondly, when management concludes current control system was deficient and need new method of control. Management needs to determine all factors might carry them into competitive advantage. Thirdly, management must defined potential key success factors that allow the firm to survive and thrive in its market. Fourth, find objective and quantifiable measures of those factors. The measures should balance and do not contain only financial measures. That is mean non-monetary measures must be considered because not all measures are quantifiable measures. Fifth, the control through non-financial measures is implemented. In this stage, they must find benchmarks for acceptable performance. Lastly, they need to evaluate this new measure. It must be paralleled with new control system that leads to new outcome, whether the results are positive or negative.

Management must determine the key success factors. Firms were under pressure to implement more effective manufacturing methods and ways of controlling and measuring the effectiveness of modern manufacturing methods. This is determined in order to compete successfully and link it with quantifiable measures. Firstly, firms determined measuring reliability. One of these factors is delivery dated. It is important aspect that a quantitative measure of on time delivery was a non-financial measure that needs attention in competitive advantage. Secondly, responsiveness to customer is important aspect in competitive advantage too. This measure must be correlated with time but previously, it is difficult to measure of responsiveness because number of new products do not correlate with time required to fill customer's needs. Lastly, most important is quality because this is relevant in manufacturing process. After link this, management can find the effective non-financial measures but we must make sure that all aspect of this measures must be multifaceted. All the key success factors must be linked to quantifiable measures, so the efficient non-financial measures will be defined.

2.4. Non-financial measures in controlling

After this, we must know how non-financial measures will use in controlling. There are two issues that come through this measures (Fisher, 1992). Firstly, determine the acceptable performance in term of non-financial measures. That's mean the processes that firm used to categorize performance. Firms need to stress continuous improvement through learning curve and compared actual results with predicted results from the learning curve. Nevertheless, it required longer learning curve. Secondly, we must know how to place responsibility for these measures at the plant or management level. In a company, committee were organized and charged how to implement them. Company can bring people that contribute to the identification of problem, underlying causes and possible solutions. They might build team for problem solving too to solve specific problems. The team should start to solve it after that. It should start with identification of the appropriate metric to use to measure performance. Then, collect data and analyze the sources of the failure. After that, corrective actions were select and implement the best solution. The team will also hold to a target learning curve. Other firm delegated this responsibility to the various departments with department that had most influence on those particular measures.

2.5. Non-financial measures in JIT practices

Now, let we focus non-financial measures in JIT practices. Because of the deficiency of financial measures use in JIT, non-financial measures are need too. This is because new technology that adapt in JIT need non-financial measures especially associated in processing such as quality. Now, many manufacturing companies suggest this new

performance measurement to support entire JIT system and must linked with company key success factors, strategy and corporate mission. The study done by Azmi et al. (2002), said that relationship between performance measurement and JIT implementation should be done to raise awareness among managers and firms. The important of having the appropriate performance measures to support new manufacturing environment. In this study also mentioned that quality, time, flexibility, delivery, customer, environmental, cost and obsolete are the success suitable factors for measuring new environment but labor and machine efficiency is not suitable in this new era. Support by Neely, (1995) said that labor and machine efficiency becoming obsolete and clearly not suitable for manufacturing firms in JIT environment. This study realizes that non-financial operating measure and place greater emphasis in daily operations and its say that whenever to retain it performance and competitive effectiveness, performance measures must be change to support JIT.

2.6. Non-financial measures in reporting disclosure

After this, let us see the non-financial measure in reporting disclosure. According to Kaplan and Norton (1996), these individual grouped argued that traditional measure has reduced relevance due to changes in business models to reflect new economy. This is because of the business environment changes and they said that this measure provide little insight in to a company future performance. Because of the changes of environment Kaplan and Norton (1996) said that the demand for external reporting of non-financial measures also have driven by company adoption of internal performance evaluation framework that incorporate of non-financial measures such as Balance Scorecard. These non-financial measures reports are appropriate in evaluate long-term performance of a firm rather than financial measures report. Besides that, the customer complaint and returning customers are leading indicators of revenues and profit in the hotel industry reporting. Those indicators are useful for company to set their strategies in process of hotel development and the improvement of their services. In management, customers are one of the important stakeholders and from balanced scorecard shows the important of customers' measurement.

2.7. Non-financial measures in prediction

Non-financial measure and financial measure significantly predict one quarter a head sales. However, non-financial measure dominate the effect of financial measure (Nagar and Rajan ,2001). Luft and Shield (2001) also said that non-financial measures attend closely to relations involving future financial measure and increase accuracy of their prediction of these measures. I understand that forecasts are more accurate when based on current non-financial measures rather financial measures. Now, we must know whether non-financial measure is reliability or not. In this scope, we use user perception. First perception is rational investors incorporate non-financial measure in their equity value only if these measures are relevant and reliable predictors of future performance. Second perception if non-financial measures disclosures are audited, investor will reliable and rely on this measure. However, that non-financial measures are relevant and useful in predict future financial measures but possess a minimal level of reliability. Lastly, we can know whether non-financial measures are comparability and consistency. Lipe et al. (2000) said the lack of framework for understanding implication of the non-financial measures, investor will revert to financial measures for which they have a framework and could compare across divisions. What we know non-financial measures is not easy to compare between one organization and others. They do not have clear framework that guide users.

2.8. Non-financial measures in scope of shareholder and analyst

PWC survey said that non-financial is more important in creating long-term shareholder value. This will be proving by a survey that told company that attempt to link business performance factors to future financial outcomes had greater revenue growth and company that do not link measurement and performance do not growth higher. Although financial results are highest and important for day-to-day decision-making, executives find them less important than others in predict future shareholders returns. They also said that the important non-financial measure in determined how the market values their companies. That is mean non-financial measure is better in predict future value of shareholder because it associate not only minimizes cost in order to get higher profit. Actually, if management always focuses on minimize cost it will affect future value because in next time management needs more cost to obligate other changes in operating but these two measures must be combined.

Analyst actually needs company to include non-financial measure in their financial statement because it will be easier to analyst measure financial statement and can understand management operating and track progress of company. In this article, it said it will determine the link between the use of non-financial and accuracy of earning forecast. There were three non-financial that mattered most to analysts, the quality of management, the quality of the product or service and market position of the firm. But, Siesfield (1996) in Ittner et al. (1998) said that analyst has no use in force non-financial measure because knows that customer satisfaction and strength of corporate culture have a low influence on allocate decision. But finance executive said that market evaluates a company based on the perception of its non-financial measure for investor are strategy execution, management credibility, quality of strategy, innovativeness and ability to attract talented people. Besides that, those investors are increasingly seeking non-financial measures to make accurate and comprehensive assessment of past and future performance and improve in corporate non-financial reporting. Related to the financial statement, it is analytical procedures in audit. According to the Waddington et al. (2001), they said that such non-financial measures provide alternative, independent measures of business or economic events that will reflect in the financial statement. From these measures, it can determine the adequacy of evidence gathered to identify amounts that are considered unusual and detect other unexpected amounts. For example, change in product defect rate along with sales volume would provide evidence whether there is an unexpected balance in products.

2.9. Non-financial measures in management compensation

The last scope is use of non-financial measure in management compensation and incentive plan. From Kaplan and Norton (1992), they said that firm should evaluate performance based on "Balance Scorecard" of financial and non-financial measures rather than focus only on current profit that does not reflect future profits. They said a vital component of implementation is to link incentive compensation to the scorecard measures and this measure on customer satisfaction measure and profit measures. It says contracting on customer satisfaction improve the principal's welfare even if customer satisfaction does not give direct value. However, he also said that the use of customer satisfaction measure from the compensation contract is important but this is not only important. Although customer satisfaction measures give benefit in agent, contract but it would reduce firm profits. According to the Holmstrom (1997) in Ittner et al. (1998), the informativeness principle implies that the customer satisfaction

performance measure always incremental value. Managers will get higher incentive if satisfaction increases for future profit. There are multifarious link between operational activities and long term financial outcome is essential to the success of BSC approach. When all aspect are links, then it will be sufficient in achieve the strategies. But using customer satisfaction is not good enough because costly to measure the customer satisfaction in this advance technology and sometimes might be error that current profit. But when use profit in management compensation, manager can sacrifice long run performance to do well on short measure to maximize their bonus and better to use non-financial measure that will affect long run profit.

From Ittner et al. (1997), said firm use non-financial measure to evaluate and reward managerial performance use because these measures are better indicator of future financial performance and value in evaluate managerial performance. He also said that customer satisfactions are related to the future financial performance and improve implementation of an incentive plan. Kaplan and Norton (1992) said that customer satisfaction; internal process improvement and organization innovation and improvement activities reflect affect current managerial action. This supported by Feltham and Xie (1994); Hemmer (1996) said non-financial measure is also consistent in compensation in agency setting and it can add value by induce long run focused effort. Ittner et al. (1997) had examined the use of non-financial measure in compensation plans by analyzing a sample of firms that explicitly determine CEO compensations as a function of performance measure. It shows 36% employ non-financial measures and find evidence that innovation-oriented strategy place higher weight on non-financial measures in executive compensation. Bushman et al. (1996) had investigated the importance of individual performance evaluation of CEO in their compensation plans that increase with growth opportunities and product time horizons. That is mean firm may improve incentive by raise current variable compensation. All strategic activities can be achieved when introduce non-financial measure with BSC. Every aspect on BSC does not focus only financial but also rely on non-financial measures too. Then, managements will get profit and executive will get incentive or bonus.

2.10. Measurement usage in Tenaga Nasional Berhad

Previously, Malaysian companies did not really focusing on Balanced Scorecard usage. They more prefer to use financial indicator than multiple indicator. Based on the interview with Dato' Che Khalid Mohamed Noh (The Star Online, 2006), the Tenaga's Key Performance Indicator (KPIs) are reveal mainly in financial terms such as recovery of debt, reduction in general expenses, value creation from land bank, recovery from delinquent accounts, average collection period, return on asset, procurement process time. They also focusing on other indicators generation availability and productivity KPI like staff response time and number of kilowatt or megawatt produced per staff. Dato' Che Khalid Mohamed Noh (The Star Online, 2006) further reveal that for senior management, they have four quadrants of KPIs are financials (45%), customers (25%), internal process (15%), and reduced total cost per unit (15%). With financial cover 45% that do not really shown balanced in dividing the indicators. Besides that, he also trying to reduce the cost per unit and increased the internal process or customers perspective. He also mentioning that "we need the customer more than the customer needs us". However, customers cover 25% is reasonable. He never reveals what comprise customer KPI. It should include number of complaint received, number of compliment letter received or published on newspaper and customer waiting time. But, he feels that financial indicator should reduce to 25% to 30%. One thing left out from the [Balanced](#)

Scorecard system is Innovation. There is no KPI in Innovation. More emphasis should be place on Customer, Internal Process and Innovation.

The researchers agree with Dato Che Khalid Noh regarding Tenaga Nasional Berhad should more focus on customers because they give service to customers and the increasing of customers' satisfaction will bring of revenue increasing.

Another organization that implements the good indicators is Employee Provident Fund and Public Bank Berhad. EPF however, has a reputation of best customer service among all the government institution after it implementing a Balance Score Card management system. Balance Score Card System is a new management system that measure management performance in a more balance manner. Not so, concentrate on financial performance. It measures other performance of a company like customer satisfaction, Internal Efficiency, Innovation. Besides Tenaga Nasional Berhad and EPF, Public Bank Berhad is one of the Malaysia's bank that has low customer waiting time and good customer service.

I am choosing the Tenaga Nasional Berhad because it is the one of the well-established Government Link Companies (GLCs) and government suggests all the GLCs are set to reveal their key performance indicators.

3. Conclusion

Overall, non-financial measures are more directly traceable to the strategies. It will directly affect the success of firm strategy and do not require the monetary step. Secondly, these measures were actionable. If a use financial measure, the unfavorable variance was not always easy determined and non-financial measure were actionable at the plant level. For example, any drop in quality was quickly determined and correct it. Thirdly, it can work very well in high technology manufacturing systems because non-financial measures include many factors that cost accounting cannot do. Cost accounting statement did use for overall objective in manufacturing because it done for the purpose of GAAP and cannot be used to control processing rather than non-financial measure that have multiuse in measurement process. Fourth, in using non-financial measure; it will help to increase profit when the product quality is highest then it will affect the highest sales.

It also difficult to assign dollar amounts to improve the non-financial measurement. This is because the tie between improvement in non-financial measures and profit was unclear. This is not easy to quantifiable measures that indicate successes in attain the strategy of innovation and it do not have direct link with profit. Secondly, all the changes that discover by non-financial measures are inability to quantify their affect on profit. Thirdly, the tied up financial and non-financial measure is difficult because non-financial measure do not involve dollar and it needs to modify in their measurement system. So, it will be a conflict in a short time horizon because of inconsistent measures that use in management. Fourth, Meyer. (1996), he said that tendency for non-financial measures to run down with use and variances found in such measures tend to reduce over the time, lose their capacity to differentiate good performance from bad performance and can't get genuine improvement according to the cause of variances. Therefore, managers will get difficulties in assess the solution for reduce variances. Lastly, he also said that stress the importance of looking at internally generated criteria in the light of external value. Measurement will always needs to use internal criteria although there want to achieve

external value. Therefore, company can't ignore 100% the financial criteria because it brings the company to the new measures.

From the overall view, in this new era not only financial measures should be used but also non-financial measures. This is because of the changes of technology in business environment. If company still uses only one measure, they might be losing one day. Although non-financial measures have deficiency, it cannot be modified or manage in good condition in order to achieve higher profit in future. It does not mean to ignore financial measure but combine those two measures in measure and control management. In our future research, we will continue to further in focusing the usage of financial and non-financial indicator according to balanced scorecard in Malaysian Government Link Companies (GLCs) because some of GLCs are disclose their items of balanced scorecard in annual report. We are supposing to analyze the impact towards GLCs performance after and before all four items of balanced scorecard are being implemented. Then, we know accurately which indicators play the crucial role in organization.

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