Highly Process-Focused Organizational Performance Measurement Model

Hai-Qing BAI[1,a], Jin CHENG[2,b,*] and Zi-Ping LI[3,c]

[1]School of Journalism and Communication, Xiamen University, 422 Siming South Road, Xiamen 361005, China

[2]School of Management, Xiamen University, Xiamen 36005, China

[3]China National Electronics IMP.& EXP. CORP., Beijing, China

[a]Haiqing.bai@yahoo.com, [b]Chengjin1025@xmu.edu.cn, [c]Lizp1357@163.com

*Corresponding author

Keywords: Process-focused, Organizational performance, Measurement model.

Abstract. By analyzing the most popular performance measurement systems, the paper develops a new high process-driven performance measurement system which measures the organizational performance from five perspectives: vision, customer, strategy, process and staff. The system suggests that the enterprise is controllable, and its future result is determined by the present state, so it can achieve the future performance through controlling the most important elements of today with focusing on the best goals. In the model, people are valued deadly and regarded as the first thing. The model also can be viewed as a managerial tool, and it can appraise the performance of non-profit organization or functional units because there is no financial indicators.

Introduction

"Performance measurement and performance management has become a critical management process to many leading U.S. companies over the last several years" [1]. The performance is related to the personnel level and organizational level. It is not a "staff-driven rating scale and forms", but a crucial management tool and process; not "measuring generic aspects of people or jobs", but "measuring those crucial success factors" that assure goal attainment, strategy execution [1][2]. It's the engine of the company. It tells what's the first thing of the company, what enjoys the more priorities and it induces the efforts of the staff through its incentive system. Therefore, it is significant for an organization to choose an appropriate performance measurement system. Fortunately, Many performance measurement systems have been developed for the past few years, and It is continuously developing and it has evolved from a mostly financial system to a balanced system (including financial indicators and non-financial indicators). Even so, prior systems have had many shortages of guiding organization. Then a fully integrated one — the needs from all relevant stakeholders are considered and information from different parts are aligned — will be a trend [3].

This study, from the perspective of process, attempts to develop a comprehensive organizational performance measurement model which is more in tune with today's complex business environment [4]. We begin by reviewing the literature on performance measurement systems such as Balanced Scorecard, Skandia Navigator, and Performance Prism. After this, we present a new performance measurement model. We end with a model appraisal.

Literature Review

Balanced scorecard

The BSC (Balanced Scorecard), developed by Kaplan R. S., Norton D. P [5], is a milestone in performance measurement system, as shows a business panorama to top managers. Once emerging, it receives hot welcome from managers. According to Kaplan and Norton, in the information age, the

drives of value creation of enterprises have shifted from tangible assets (e.g., buildings, capital, fixed infrastructure, distribution cannel) to intangible assets (e.g., intellectual capital, innovation, creativity, company culture) and the non-financial indicators should be included in the performance measurement to measure intangible assets. BSC is such a tool and it measures performance from four major perspectives: financial, customer, internal process and learning growth, as put emphasize on intangible assets rather than tangible ones. Also, BSC gives a clear causality between process and result, input and output. Briefly summarized, BSC tells that the knowledge, skills and systems that the employees will need (their learning and growth) to innovate and build the right strategic capabilities and efficiency (the internal process) that deliver specific value to the market (the customers), which will eventually lead to higher shareholder values (the financial) [7]. To make it carry out easily, Kaplan and Norton [6] suggest four managerial process: the first is translating the vision; the second is communicating and linking; the third is business planning and the fourth is feedback and learning. To enable an organization to describe and illustrate its objectives, initiatives and targets in a more clear and general language, Kaplan and Norton [7] further put forward the "strategy map", mapping the flows and transformations of dynamics of value chain.

The balanced scorecard is not only a very useful performance measurement tool, but a management tool [4]. It focuses not only on the results of actions, but on three sets of operational measures which can control the results effectively. Moreover, BSC thinks much of intangible assets, giving a more useful and effective viewpoint of business reality and it also notices the importance of learning and growth, as is very important for the organization.

However, BSC has lack of strategy dimension which tells the destination of organization, breaking out the principle that effectiveness is always the first thing and efficiency is behind. Therefore, this management tool is incomplete. Besides, other scholars say it’s failure to consider the importance of measurement of the Human Resource Perspective/Employees satisfaction [11]. It emphasizes on customer capital rather than human resource capital, as is a critical ignorance. It also downplays the interests of stakeholders, just taking care of the interests of shareholders [4][14], and the latter’s influence nowadays is too great to neglect. For BSC, it should consider interests of critical parties and focus more on people.

Skandia navigator

Skandia Navigator is invented by Leif Edvinsson, the director of intellectual capital of Skandia, the largest insurance company in Sweden. He developed a dynamic and holistic intellectual capital (IC) reporting model named Navigator. According to Skandia’s model, IC was categorized into human capital and structural capital [12]. Human capital can be described as the employee’s competence, inter-relationship ability and values. Structural capital can be described as "what remains in the company when employees go home for the night", such as brands, patents, process, organizational structure and concepts. This categorization of IC, named the distraction tree [13].

Skandia Navigator is an important tool and it gives complete emphasis on the intellectual assets and thinks it as the only source of the future success of the organizations, as goes along with the demand of knowledge economy era and information era.

However, Skandia Navigator neglects many contents of IC that is also very important in creating values, such as company’s culture, organizational learning, and employee’s creativity. Besides, although it emphasizes on intellectual capital, especially human capital, it doesn’t give the clear causality of different factors which will reduce its practicability. In addition, among more than 100 indices recommended in the Skandia’s model, there are some mistaken assumptions. For example, employees showing up for work and sitting in front of their computers do not necessarily mean they are investing knowledge which can be transformed into their company’s competitive advantages, so Skandia’s structural capital variables, including the number of processed computers, can be criticized. For Navigator, it should rethink the key elements of the organizational success and make clear the logic relationships of the different factors. Also, it needs simplification.

Performance prism

Andy Neely and Chris Adams put forward a new performance measurement system — performance prism. It cares the interests of stakeholders and encourages organizations to address the following questions: (1) Who are our key stakeholders and what do they want and need? (2) What strategies do we have to put in place to satisfy these needs? (3) What process do we need to have in place to execute our strategy? (4) Which capabilities do we need to perform our processes? (5) What do we expect from our stakeholders in return?[4] So the performance prism measures the performance from five aspects: stakeholder satisfaction, stakeholder contribution, strategies, capabilities and process. For Neely and Adams, those organizations aspiring to be successful in the long term within today's business environment must have an exceptionally clear picture of who their key stakeholders are and what they want. Then they should define what strategies they will pursue to ensure that value is delivered to the stakeholders. They also should know what process the enterprise requires to deliver the above strategies and they should define what capabilities they need to execute the processes. The most sophisticated of them also should think carefully about what it is that the organization wants from its stakeholders—employee loyalty, customer profitability, long term investment, etc[17][19].

The performance prism gives a clear way to think business and an explicit understanding of what constitutes and drives good performance. It starts with the key stakeholders, goes along the way to achieve the needs of stakeholders and locates in the capabilities of the organization. But it will distract the attention of the organization. There are so many different stakeholders that it will take much to consider them all. Besides, in performance prism, capabilities include not only the capabilities from the employees, but the ones from the tangible assets, as information infrastructure, factories, machine and soon. This is more comprehensive, but doesn't highlight the key factor — people.

In a word, there are different performance systems that are all valuable for enterprise. But differences really exist. It is important for an organization to choose one good performance system. The above successful performance measurement systems have some common traits: to value the intangible capital, especially human resource capital; to focus on the drivers of performance; to consider more about external and internal environmental factors. Comparing the other performance system, the performance prism is more comprehensive and more directive for the organization.

We analyze the above systems to polish them and improve them. The paper will try to build a new performance measurement model.

Model Construct

The principles of constructing the model

Before introducing our model, we will first clarify the principles of constructing the model. These principles come from the above successful performance measurement systems and other literatures as follows.

Highly process-focused view. Kaplan and Norton argue that the full potential of the balanced scorecard will only be realized if an organization links its measures clearly identifying the drivers of performance[6]. Our model absorbs this thought and polish it further. Comparing with BSC in which financial indicators account for much, our model is highly process—focused and there are no financial indicator, that is in similar with Performance Prism. while focusing on the results, an organization, can not always get the expected results, It is only to control some process variables that can bring the ideal result. The organization is shaped, created and controlled by people through process variables. The result is the natural development of the process.

To aim at the best conditions. Our model emphasizes the process variables in order to make the organization to get the results better and it also aims at the best conditions of the organizations all along and its fundamental factors are the most important factors to achieve the best conditions of the organizations. The best conditions of the enterprise include not only the high economic achievements, but social responsibilities. For the enterprises, it also should become the good citizens of the society except for achieving profit. So, our model should consider the interests of stakeholders.

People-first view. Sveriby regards people as the only profit generators in an enterprises. [14][15] "The powerful performance management system is one that is built on: give autonomy to individuals with their span of control; empower and involve individuals and so on"[18]. Our model emphasizes the extremely importance of the people. "The motivation, the potential for development, the capacity for assuming responsibility, the readiness to direct behavior toward organizational goals are present in human. Management does not put them there. It is a responsibility of management to make it possible for people to recognize and develop these human characteristics."[20] Our model always aims at spurring the motivity of the employee, absorbs the wisdom of the staff, and improves their learning abilities, thinking abilities and creative abilities.

Mathematical expressions

Our model can be expressed with mathematics:

Any organization has its possible best result which starts with the present state and go along the best way to get to.

The organizational state depends on some key factors and the best condition of the organization is the function of these factors that can be considered as the best way for the organizations to go and vary with time. So:

The best condition is $F(x_{t1}, x_{t2}, ...x_{tn})$

Remark: x_{t1}, x_{t2}, x_{tn} mean the key factors to affect the organizational performance, they are the function of time variable and they are called process variables; n means the number of key factors; F means the function of process variables, i.e., F is the expression of the relations of different key factors.

Thus, the organizational need to find the key factors of performance success and their relations control its process. Our model is to find these key factors and take them as the indicators to direct the organization.

Key factors of the model

Our model is based on the above principles and has absorbed the performance measurement experiences of some enterprises just as China IM& EX company and Taijing steel and iron company. The key factors of our model are as following:

1) Vision: Vision is the best condition designed by the organization and accepted by all the staff .It is a flag of the organization and describes the most valuable development direction of the organization. It includes two parts: one is economic achievements; the other is social responsibilities. Both are very important for the organization and both should be considered comprehensively.

2) Customer: Customer is the shortened form of "customer condition". Customer is the basis of existence of the enterprises. For anything, its value lies in its utility to others. The utility you have given to others decides your position. In all the stakeholders enterprise should give utility, customer is the most important. "The purpose of the enterprise is to create customer."[21] For enterprise, you must decide who is your customer? And what are the ideal conditions of the customer? To answer the first question, you must think the external demand and internal capabilities. The interests of stakeholders, the possible questions concerning creating customer all should be included. To answer the second question, customer satisfaction and customer loyalty are in. The basis of the high performance is the customer satisfaction and customer loyalty. Customer condition indicators are the sub-final goals. Once the sub-final goal is achieved, the final goal (vision) of the enterprises can be achieved. Through controlling this goal, the enterprise can control the final goal.

3) Strategy: strategy is the direction, the path to get to the sub-final goals. To own stable and loyal customers, the organization must meet the demand of the customer and make sure the direction, the path to get the aim. Only along with the paths which can get to the expected destination, can the enterprises get the expected destination. The indicator of direction and the path is the indicator of strategy. Strategy indicator is the causal indicator of the "customer indicator".

4) Process: process indicator is the indicator which carries out the strategy. Strategy is a plan, an idea which can come true only through practical execution. Even though the enterprise has the direction and

path to meet the demand of customers, the stably or loyal customers cannot be attained with low efficiency of execution. Only the process executes the strategy high efficiently, the stable or loyal customers can be achieved. Of course if direction is wrong, high efficiency only can bring great losses. So, the right direction and high efficiency of the execution are all the necessaries of the "customer indicator". Thus, the process indicator is also the causal indicator of the "customer indicator".

5) Staff: staff is the fundamental indicator. The right strategy and efficient execution depend on the person of high caliber. People is everything of process, the fundamental indicator. The person of high caliber comes from learning and thinking sticking to the realities. Thus, the staff quality depending on learning and thinking is the most fundamental

indicators which decides the success or failure. The staff indicators are briefly called "staff".

The logical relations of five indicators are as Figure 1.

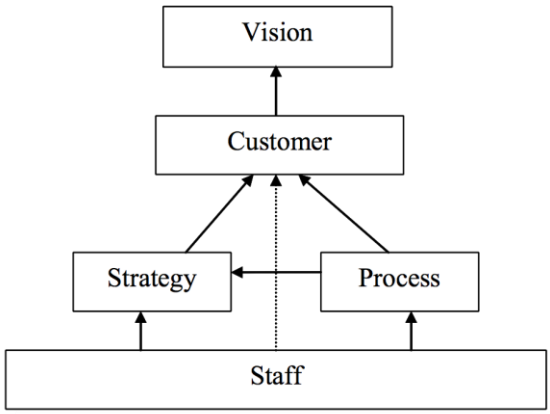

Fig. 1. Relations of five factors.

Of five factors, vision is result variable and the others are process variables.

The relations of four process factors

Now we analyze the relations of four process factors. Just as the above said, the customer is the sub-final goals, the strategy and process are the causal indicators of the customer and the staff is the fundamental indicator, the relations of four factor seems very clear ,i.e.,

Customer = F{strategy [staff (learning, practice)], process [staff (learning, practice)]}

That means: customer depends on strategy and process which depend on staff. Meanwhile, staff is an independent variable depending on its learning and practice, being unrelated to any other variables. Of course, the learning and practice of the staff are related to their learning will and practice abilities, on the other hand, it depends on the encouragement and training coming from the enterprise. It's the result of interactive function of enterprise and staff.

But in fact the reality is not so. The staff is not just a bookworm, to think far from subject, but to learn from practice and use the learning results to reality. The training given by the enterprises is not the training far form the reality of the enterprises, but closely related to the customer, strategy and process of the enterprises. So, the learning and practice of the employee is related to the conditions of customer, strategy and process, the conditions of themselves and their colleagues. i.e,

Staff = *Staff* [learning, *practice* (customer, strategy, process, employee)]

So:

Strategy = *Strategy*{customer, strategy, process, *staff* [learning, *practice* (customer, strategy, process, staff)]}

Process＝*Process* {customer, strateg, proces, *staff* [learning, *practice* (customer, strategy, process, staff)]}

Customer = *Customer* {customer, strategy, process, *staff* [learning, *practice* (customer, strategy, process, staff)]}

In fact, the indicators of customer, strategy, process are not related to the realities of customer, strategy, process and staff just through the learning of staff, but related to them originally.

Thus, the staff, customer, strategy, process have mutual causalities and every element is connected closely with other factors. So, when analyzing the customer, strategy, process and staff, we must think

them systematically, not individually. Also, as we all know, the relations of the factors are not linear, but dialectic, complex and non-linear.

The path of organizational optimization

For organization, it can go from one condition into a more bright condition continuously through improving or changing the customer, strategy, process or staff. Sticking to this, the enterprise can gain the sustainable high performance and extensive social acknowledgement. The graph of the organizational change is as follows:

The conditions of the next time depend on the present conditions of the four elements. Only when the present conditions of the four elements are the best, can the best conditions of next time be achieved by the organization.

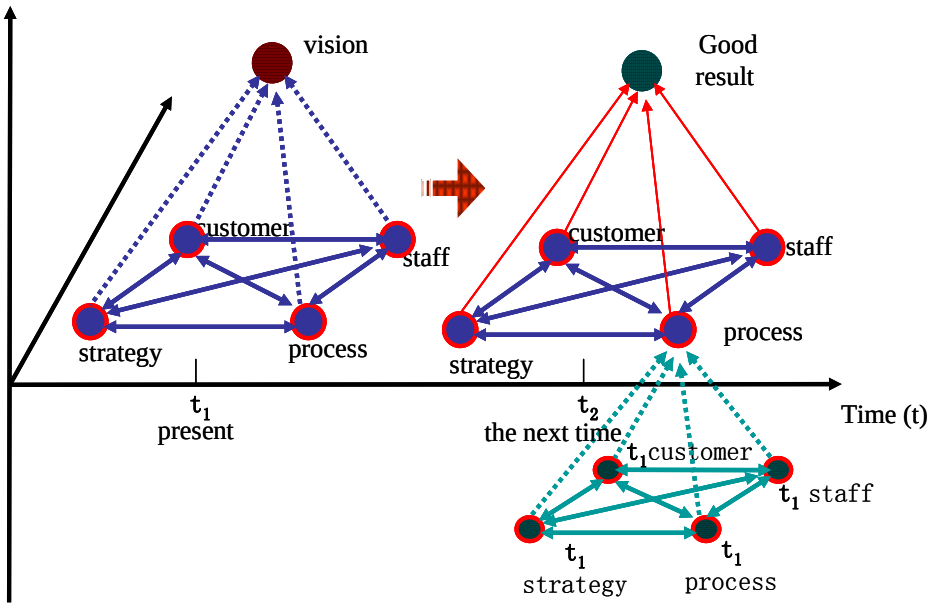

Fig. 2. The path of organizational optimization

Model Appraisal

For our model, it is constructed with three basic principles: process-oriented, aiming at good conditions and people-first view. In contrast with BSC, our model highlights people-first; comparing with Skandia Navigator, it is more process-oriented; in contrast performance prism, our model is more simply and more people-first. So, it can be used not only the performance measurement, also an effective management tool.

Besides, it can also be used to measure the performance of the non-profit organization or the unit of the organization. Because in our model there are no financial indicators and only is "customer", for every organization or every unit, they all have their customers. For example, "customer" of the nation is its people, "customer" of the hospital is its patients, "customer" of the manufacture unit is the sales unit and "customer" of human resource management is its service people and service unit. So, we can find all the customers of every organization or every unit. Then, how to meet the demand of customers, is the strategy. The execution of strategy is process and the basis is the staff. Four process factors of our model can grasp the key of the organizational management.

Meanwhile, there are many limitations for our model. First, the reality basis of our model is not sound. There are only three enterprises that try and support our model and there is a far way for the model to be practical and perfect. Second, our model is only conceptional model, not practical model. We should do more to design and test concrete indicators.

Acknowledgement

This research was financially supported by the National Science Foundation of China (71272080; 71302070).

References

[1] Craig Eric Schneier, Douglas G.Shaw, and Richard W.Beatty, "Performance Measurement and Management: A Tool for Strategy Execution, Human Resource Management," Fall 1991

[2] E. Schneier, D. G. Shaw, and R. W. Beatty, "Performance Measurement and Management: A Tool for Strategy Execution," Human Resource Management, Fall 1991.

[3] S. Tangen, "Analyzing the requirements of performance the performance system, measuring business excellence," Sep.2005.

[4] A. Neely, B. Marr, G. Roos, S. Pike, O. Gupta, "Towards the Third Generation of Performance Measurement," Controlling, April 2003

[5] R. S. Kaplan, D. Norton, "The balanced scorecard--measures that drive performance," Harvard Business Review, 1992

[6] R. S. Kaplan, D. Norton, "Using balanced scorecard as a strategic management system(J)". Harvard Business Review, 1996, pp.75-85.

[7] R. S. Kaplan, D. Norton, Having trouble with your strategy? Then map it, Harvard Business Review, Sep.2000.

[8] R. S. Kaplan, "Management in Non profit Organizations," Nonprofit Management Leadership, 11(3), spring 2001.

[9] S. Bose, K. Thomas, "Applying the balanced scorecard for better performance of intellectual capital," Journal of Intellectual Capital, 8(4), pp.653-665, 2007.

[10] K. Keong, "Manage value to get projects on track.," InTech, 54(12), pp.80, Dec.2007.

[11] M. G. Lipe; S. E. Salterio, "The Balanced Scorecard: Judgmental Effects of Common and Unique Performance Measures," The Accounting Review, Vol. 75, No. 3, pp. 283-298, Jul. 2000.

[12] L. Edvinsson, M. S. Malone. "Intellectual Capital Realizing Your Company's True Value by Finding its Hidden Roots (M)," Harper Collins, 1997.

[13] N. Bontis, "Assessing knowledge assests: a review of the models used to measure intellectual capital(J)," International Journal of management Reviews,2001,3(1), pp.41-60.

[14] K. E. Sveiby, "The knowhow company: strategy formulation in knowledge-intensive industries," International Review of Strategic Management, 1992

[15] K. E.Sveiby, The invisible Balance Sheet," Ledarskap Stockholm, 1989.

[16] S. Wesley Changchien, Pi-Yu Tsai, "Measuring return on investment of intellectual capital-ROIC(J)," International Journal of Learning and Intellectual Capital,2005,2(3):219-245

[17] A. Neely, C. Adam, "Perspectives on performance: The performance Prism," Journal of cost management, Vol. 15, No1, 2001, pp.7-15

[18] M. J. Lebas, "Performance measurement and performance management," "International Journal of Production Economics," 1995, p41.

[19] M. Kennerley and A. Neely, "performance measurement frameworks—a review", www.scholar.google.com.

[20] D. McGregor, "the human side of enterprise," McGraw-Hill Companies, 2000.

[21] P. Drucker, "Management Tasks, Responsibilities, practices", Harper Row, 1973.