

Determining the System of Performance Measures through BSC and the Importance of Performance Measures in terms of Quality in the Production Company

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Abstract

This study emphasizes the importance of the BSC model in a production company with a view to improve the process of measuring performance. Balanced Scorecard (BSC) is a newer method, which has been used in the strategic management of the companies, in regulating activities according to the determined mission, vision, strategy and strategic goals.

Looking for the new ways to improve business performances and competitive position, production companies in Serbia accept a new approach to quality management – TQM (Total Quality Management), which has also been presented in this study in the example of the joint - stock company “Soko Stark”, a production company from Belgrade. Quality management means managing the activities which overall enable the creation of a quality product and managing the results of these activities. Just as in the case of BSC, TQM must also be connected to the company’s mission, vision, strategy and business goals.

Key words: *performances, measures, BSC, TQM*

JEL Classification: *M10, M11, M21*

Introduction

Even before BSC (Balanced Scorecard), most of the successful production companies have formulated the goals and measures of performance on different bases, usually for short - term needs, for taking business decisions, but also in terms of the long - term orientation on management towards the goals. However, these systems of performance measures were not balanced.

BSC provides this balance as follows: 1. balance between external measures relating to the shareholders and customers and internal measures relating to internal business processes, learning and growth, 2. balance between the measures of success – achieved results and measures of future performances, 3. balance between objective (quantitative) measures of success and subjective (qualitative) performance measures. Therefore, BSC is the management’s tool for valuation and directing of company’s performances (results).

Balance Scorecard is based on the TQM approach. Nowadays, customers expect not only a quality product, but demand a proof that the company is able to make a quality product or render a quality

service. That should be a priority goal for every production company that keeps up its image and has high pretensions on new markets.

Subject Matter and the Research Importance

A system which complements the conventional financial reporting and financial measures with nonfinancial measures (scale drivers of future performance), is called the Balanced Scorecard (BSC) or a map of balanced goals, which is a subject matter of this research. In addition, a subject matter of this work is the TQM approach, i.e. a quality management approach. TQM must be related to the mission, goals and plans of the organisation which confirms the quality policy of "Soko Stark" joint - stock company from Belgrade (Republic of Serbia).

The fundamental aim of this research is to point out the importance of using BSC measures and TQM concept to help improve production company management performances. A new business philosophy also secures competitor's position on home and international markets.

Work Objectives

The basic work goals are: 1. to point out the significance of BSC as an instrument of choice balanced system of measurement performances, which determines the effective and efficient system of measurement performance in the production company; 2. to point out the significance of management in the production company by total quality – TQM as an approach to improve competitiveness, efficiency and effectiveness of the whole business activity. TQM has the following results: 1. fulfilling the expectations of customers/buyers/service users and all interested stakeholders (owners, syndicates, etc.); 2. realisation of business excellence and business results excellence; 3. development of attractive world class quality products/services; 4. responsibilities and authorisations of all the employees; 5. development and inclusion of all the employees in the study process, 6. orientation to the customers/buyers/service users and partnership, especially suppliers; 7. managing the resources and processes; 8. continuous control, analysis, measuring, improvements and inovations. Therefore, some important organizational changes and changes in organizational culture become obvious by introducing TQM into an organization.

Setting the Hypothesis and Method of the Research

In this paper we started from the following hypothesis H0: Balanced Scorecard as an instrument of choice the balanced system of measures performance and TQM are used with a view to improve the quality management of a production company. In the attempt to prove the hypothesis, the case study method has been used.

Determining the System of Measures Performance through BSC

In literature and praxis, managing a company (Novicevic, B., etc., 2006, 53) is generally determined through three dimensions such as: 1. formulation a strategy, 2. adaption or/and creation of an organisation and 3. determining the system of performance measures. Managing a company in contemporary business conditions implies designing an adequate system of performance measures.

The choice of performance measures for a particular company depends on: 1. formulated strategy; 2. particular organisational form and 3. identified action variable. The choice of performance measures (Novicevic, B., etc., 2006, 79-80) in a particular company includes:

1. to solve specified problems (a problem of determining a number of performance measures) and

2. to investigate and identify a system of driving forces that create value in the company.

A number of performance measures differ in determined spheres. There are three to four performance measures, i.e. forecast financial results linked to financial perspective. Customers' perspective is linked to five to eight performance measures. The perspective of internal business processes is linked to ten performance measures. The perspective of learning and growth lights up three to six performance measures.

Identifying the system of driving forces which creates company's values includes the following perspectives: 1. physical driving forces (ground, business buildings, equipment, supplies etc.), 2. financial driving forces (cash, assets, long - term and short - term investments, sharings and shares etc.), 3. customers (customers, a group of customers, distribution channels etc.), 4. employees and suppliers (employed highly qualified sellers, engineers, suppliers and other business partners), 5. the process itself, driving the process and the organisational environment (processes of direct and indirect sale, segmented and flexible organisational structure, constant inovations such as patents). It is of great importance to investigate the causes of driving forces consumption and creators of main purpose of business activity, i.e. creating values for the customers. It is also important to recognise certain activities or their combinations which will provide the competitive advantage for the company.

BSC determines the effective and efficient system of performance measurement. In each of the Balanced Scorecard's perspectives (areas), was developed a great number of measures performance, which represents a milieu from where to carefully choose the specific measures that are immanent to any particular company.

Measuring the success of modern production company in many cases includes nonfinancial performance measures. Modern development of the operational management, development of new technologies, managing the quality system emphasizes the non-financial indicators. In the financial sector, efficiency is measured by the amount of cash and economic value added. In the area of customers demand satisfaction, efficiency is determined by the circle of time from the order's admission to the full product and customers' remarks about the relation between quality and expenditures. Efficiency of internal processes is measured by a per cent of supplier's defects, time period in the cash cycle and limit of allowable error in the purchase forecast. The performance measures in the sphere of learning and growth are linked to the number of innovative processes in cooperation with customers, the number of inovations to improve direct sales.

The main performance measures from the financial perspective are: 1. return to equity, 2. cash - flow, 3. income and profit growth, 4. market share. The main performance measures from the customer's perspective are: 1. timely delivery, 2. level defects, 3. competition and price. In the area of internal business, the main performance measures are: 1. time of production, 2. a quality standard, 3. time-to-market, and for the area of managing innovations, the main performance measures are: 1. introduction of a new product, 2. percentage of new products in total sales, 3. success programme of continuous improvement.

The primary goal of the process of measuring performance (Sekulic, V., 2003, 60) is the continuous monitoring of the activities and results which lead to the creation of stakeholders' values, with adequate financial and nonfinancial measures of corporate performance. The results of the process of measuring performance present an important informational basis for managers at all levels and this helps them analyze the achieved performances with regard to the forecast, with regard to the competitors or to the dynamics of point and on that ground to make adequate decisions.

Balanced Scorecard was made on TQM management approach basis. Managing the quality means managing the activities which overall make the creation of quality products possible and helps to manage their results. More quality products increase the pleasure of the customers, so they become more ready to pay higher selling price. Higher quality product (Nacic, M., 2008,

206) keeps the existing costumers and attracts the new ones, so that the company's market share increases, which in turn increases the volume of production. Through the economies of scale, all this has the effect on the reduction of the product price. Lower product price, with the same or lower selling price (lower selling price – higher number of costumers) increases the company profit. Influence of improved product quality on the improvement of company's profitability by profitability factor can be recognised over Deming's cycle: quality – expences – profit.

The Measures Performance in terms of Quality in the Production Company

Total quality management – TQM is a new philosophy and a new challenge for those business systems that aim at the business excellence of the organisation, process, products and high level of employees' competence. This approach needs numerous quantative, qualitative, financial and nonfinancial indicators that have the task to exactly determine the organisation's quality, together with some of its functions, i.e. to measure contribution of certain productional functions to the success of the company itself (JUS ISO 9004, 22-40).

The process for determining the performance measures (quality level of the company and its functions) is (Jovetic, S., 2007, 100) as follows:

1. the mission and vision of the company is defined;
2. strategic, tactical and operational goals of the company originating from the mission and vision are defined;
3. strategic, tactical and operational goals of some functions are defined. Thereat, tactical goals at company's level are usually strategic ones at certain functions level;
4. the goals are reviewed and horisontaly and vertically harmonised,
5. the performance measures are defined at the company level;
6. the performance measures are defined at the level of special processes and functions (JUS ISO 9004, 22-40).

After the analysis of numerous home and international publications there are some indicators that can be used for determining the performance measures in the area of quality management and its subsystems:

1. *At the level of the whole company*: the number of employees, the number of production and administration workers, qualification structure of employees by their functions, the use of workers, employees quality work, direct and indirect productivity of labor, internal and external failures of work
2. *Marketing and selling*: raise in market involvement, measuring costumers' satisfaction at home and international market by surveys, the share of marketing costs in total costs of the company, the elapsed time from production to sales in the days, the distribution of products, development of trade networks, the number of stores and territorial representation.
3. *Research, project making and development*: participation costs for the research, design and development companies in the total costs, the cost of research, design and development per employee, the cost of buying technology per employee, the cost of purchase of patents, licenses and trademarks in employee costs for the purchase of scientific and professional books, journals per employee, the cost of staff training per employee, number of registered patents per employee, the frequency of new products during the launch of new products to market, analysis of quality competition.
4. *Quality sector*: managing the cost of quality. Quality control is impossible without information on the costs of disposal of qualities, and their preparation must be embedded in

the accounting information system, subsystem management information system. Modern approach to management costs (Nacic, M., 2008, 206) in contrast to conventional, says higher costs (quality), can lead to increased company profits and vice versa.

5. *Financial sector*: involves economical, rentability, effectivity and efficiency indicators.
6. *Technical sector*: relation between supplies (material, unfinished production, finished products) and optimal level of supplies (material, unfinished production, finished products), value of spoilage in the value of total production, coefficient of capacities exploitation, coefficient of employed workers and working hours exploitation, duration of production process, duration of installation, stagnation in production process, expenses of admission, interfaces and final quality control.
7. *Supply and service*: a ranking list of suppliers by their evaluation (quality, price and delivery deadlines), a ranking list of complaint value towards the supplier, a ranking list of average waiting time for the repair towards the customer and the product.

Quality performance measures within the organization may be criteria for the quality reward. Basically, each reward is a method of benchmarking - comparing the best to choose the best. In our companies, as operating in adverse and uncertain external and internal economic conditions, it is necessary before comparisons with the best, to make a detailed analysis of the achieved levels and trends of selected parameters for comparison in the company itself.

The Measures Performance in terms of Quality in the Joint - Stock Company “Soko Stark”

The joint - stock company “Soko Stark” from Belgrade is one of the biggest confectionery industries in the region and a leader in the domestic market, 85 (eighty-five) years. After a majority ownership of “Grand coffee”, a leading producer and distributor of coffee in the region, and strategic bonding with “Droga Kolinska”, a joint - stock company “Soko Stark” is a part of “Droga Kolinska” Group. This synergy has enabled members of the Group to open new markets, and the joint - stock company “Soko Stark” has brought stronger distribution, better position and better standing than before. Within the “Droga Kolinska” Group, the joint - stock company “Soko Stark” does business as Business unit salty and sweet. “Soko Stark” has a lot of product items, more than a hundred of them. The essence of the new organisation is the division into production programs, sales areas and local administration which means accelerated development of the Group` s key brands.

The mission of the company is to become a regional leader in confectionery industry – a synonym for sweet and salty in every family. The company` s vision is to satisfy the needs of customers, employees and the whole of society. The company` s values and goals are: 1. tradition, quality and customers` trust, 2. strog brands and the image of the joint - stock company “Soko Stark”, 3. knowledge, skills and abilities of the employees, and finally 4. high performances and high quality in doing the job (<http://www.stark.rs/CMS/index.aspx?pageid=78&menuid=30>).

In the joint - stock company “Soko Stark”, as a separate business unit, inherent organizational units are: marketing, strategic development and investments and operational business. Return to the old markets and conquering the new ones is just a typical consequence of a primary orientation from which the joint - stock company “Soko Stark” doesn` t step back and that is quality above all else, including the implementation of all necessary measures for the recognition of the company's reputation.

Respecting standards of quality and food safety, the company expanded range of products using modern technology and knowledge. Companies' relationships with business partners are based on mutual trust and respect. Employees creates a friendly and open attitude, taking into account their needs and expectations. In this way ensures their satisfaction and identification with the company. The company encourages team work, because it believes it is time that everyone

contribute to the success of the company with their professional knowledge. Respecting the ethical principles, they actively participate in projects that contribute to improving life in the communities.

The main goal of the company is to fully meet the needs of customers, markets and legislation. Preserving a high level of product quality builds trust and fosters the tradition and development and application of advanced technological processes and skills in accordance with applicable laws and regulations of the competent institutions improves the quality and safety of the products.

The Quality of the products and business processes as well as customers` satisfaction are the primarily interest of the joint - stock company "Soko Stark". Its tendency to be the best is the direction which creates the principles and quality policies of the joint - stock company "Soko Stark". Consistency in building the best business praxis, the joint - stock company "Soko Stark" shows in the development and usage of quality standards principles JUS ISO 9001: 2001 and HACCP food safety control system. Preference for a quality system is the condition of its efficiency. The company has a constant task reexamination of actual quality, identifying and implementing corrective and preventive measures to improve business processes

The company lead target the defined processes and measures their performance according to HACCP food safety and control system, as well as demands of international standard ISO 9001: 2001. International standard ISO 9001 is a set of related documents which define international standards in achieving quality system. ISO 9001: 2001 standard is a part of standards` family for ISO 9000 series and is mostly used in the standard of the joint - stock company "Soko Stark". It is focused on the management of process and organisation. This standard contains requirements that organizations must fulfill: 1. to identify needs and expectations of customers and other stakeholders, 2. to establish the policy, goals and working environment that needed to motivate the organisation and satisfy needs and expectations of customers, 3. to identify, establish and manage the system of interconnected processes to realise the policy and fulfill the goals. Purpose of these standards is to help the company set and use the effective quality system management. (<http://www.stark.rs/CMS/index.aspx?pageid=82&menuid=31>).

The most important factor of quality product is its health safety, and to achieve that, it is necessary to use prevention in all preparatory phases and production process itself. The joint - stock company "Soko Stark" is paying attention to its customers and their needs and for that reason it has fulfilled all prerequisites and got HACCP (Hazard Analysis Critical Control Point) certificate towards CAC/RCP 1-1969 standard, which confirms quality system food safety, from the raw material to the finished product (<http://www.stark.rs/CMS/index.aspx?pageid=188&menuid=31>).

The employees of the joint - stock company "Soko Stark" are aware of the fact that food safety is number one priority, for the health prevention of people who consume Stark`s products on a daily basis. Expert services for quality control have done special training for this job and are conscientious in fulfilling their tasks. The company has constant activities on education of all the members of the distribution chain, so that products of unchanged quality could arrive to the customers. A very important element of constant quality is good cooperation with the suppliers. The company has respect for the determined standards which reduce the risk and improve the safety of its products. The company`s suppliers are asked for the same thing.

Production and development are in accordance with the environmental goals and policy. This prevents pollution, which satisfies the laws and local community expectations.

Throughout the business of permanent technological advancement and marketing activities, the company works on constant inovation of products, follows the trends in modern technologies and relations towards markets and consumers. Continuous investment in quality and development are the basis of business strategy of the joint - stock company "Soko Stark" and regards the modernization of the existing production lines with the new elements of authomatic packaging, as well as new production programmes. There are some new products on the market:

1. chocolate smoki – chocolate dragee flips, alluring, crunchy, with the original combination of flips and milk chocolate, 2. prima – salty sticks, 3. prima – sticks with peanut butter etc.

All the employees are involved in the realisation of the set goals, which includes system quality usage and good production praxis. This attitude is confirmed by more than 1.000 (a thousand) awards for quality in the 85 (eighty-five) years long tradition of doing business. The quality of the product is the main reason why "Soko Stark" continues to be a national leader and becomes a leader in the Balkans.

A number of acknowledgements in home and international fairs endorse their merit. Three times in a row the joint - stock company "Soko Stark" was "An absolute champion of quality at Novi Sad Fair" and in 2005 it won 106 Big gold and Gold medals for quality. For the quality of chocolate and flips programme "Soko Stark" was winning Big champion cup for chocolate and flips programme three years in a row (2006, 2007, 2008) and confirmed its primacy in these categories among confectionery producers. With the awards, "Soko Stark" proved that quality is one of the essential and recognisable elements of the values that "Soko Stark" supports.

Conclusions

The management of business performances is a significant aspect of the competitiveness of modern company. It contributes to the development of new management frameworks, such as is BSC model (concept). BSC is a management tool for assessing performance of the target company. It is a system that provides a framework for understanding performance of the companies from the financial perspective, customer`s perspective, internal business process` perspective and perspective of learning and growth, which contributes to the fundamental understanding of business and upgrading of traditional financial reporting.

BSC is very popular in the praxis of large companies. However, it also has to be even more popular and present in the praxis of small and medium enterprises that are less strategically oriented, i.e. they have a shorter time horizon of planning. BSC model can give help to small and medium enterprises to improve their vital management activities, such as: clearly define the strategy and the strategic priorities, proper alignment of the organization's strategy, develop culture and awareness of employees about the necessity to carry out continuous change.

BSC is the result of Deming`s TQM approach and it represents a continuous cyclic process of adjusting business activities towards the strategy through the control of attaining strategic goals. In the attempt to find the new ways of improving the competitor`s positions, a new point of view in quality management was accepted – TQM (Total Quality Management), which confirms the quality policy of the joint - stock company "Soko Stark" from Belgrade (Republic of Serbia).

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Determinarea sistemului măsurilor de performanță prin BSC și importanța măsurării performanței în termeni de calitate în cadrul companiei de producție

Rezumat

Studiul de față subliniază importanța modelului BSC în compania de producție cu funcția de a perfecționa procesul de măsurare a performanței. Balanced Scorecard (BSC) este o metodă relativ nouă utilizată în managementul strategic al companiilor, în reglarea activităților în conformitate cu misiunea, viziunea, strategia și obiectivele strategice.

Căutând noi modalități de a perfecționa performanțele din afaceri și poziția competitivă, companiile de producție din Serbia acceptă o nouă abordare asupra managementului calității – TQM (Total Quality Management), care de asemenea a fost prezentată în acest studiu în cadrul exemplului companiei cu capital social “Soko Stark”, o companie de producție din Belgrad. Managementul calității înseamnă organizarea activităților care în ansamblu permit crearea unui produs de calitate, precum și administrarea rezultatelor acestor activități. Ca și în cazul BSC, și TQM trebuie corelat cu misiunea, viziunea, strategia și obiectivele strategice ale companiei.