THE IMPORTANCE AND APPLICATION OF THE BALANCED SCORECARD MODEL IN ENTERPRISES

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Abstract

The application of a model for studying the achieved results and managing the company changes in line with the requirements coming from the market, and the demands of the customers that are now more sophisticated. The aim of this paper is to show which models are used in the world today for the evaluation and management of a company's performance, as well as to show the increasing application of the Balanced Scorecard model in companies worldwide. The research conducted on the territory of the Republic of Slovakia shows the connection between the introduction of innovations in the business and the importance of applying models for performance evaluation, as well as the connection between the introduction of these models and the improvement of the business. The introduction of the Balanced Scorecard model into business operations is an important factor for gaining success in today's demanding and competitive market.

Keywords: *Balanced Scorecard model, competitive market, innovations, new technologies*

JEL Classification: *L10, L21, P40*

Introduction

The application of models for measuring performance and business is gaining importance in the digital era. Models differ according to the complexity of their application, and the object of their measurement. Various measurements can create a gap between customers and management, or customer expectations and experience, a lack of communication among employees, or a lack of communication with customers. Studying effective enterprise management is gaining in importance, whether it is based on a well-defined strategy or on opportunities and requirements coming from the market, or it is conducted to ensure the survival of an enterprise. Business changes and the new digital era require adaptation to the market and the application of new business methods and innovation in business. Inadequate models that measured company's performance solely on the basis of financial indicators are no longer applicable. Proper business management requires a more sophisticated approach. Observing the company as a whole, not only through financial indicators, requires new models. Therefore, keeping track of all the performance in the company is crucial. The most important thing for these models is the performance they measure, so it is very important to choose the indicators that enable measuring the most important areas of the business in order to respond appropriately to market events, but also to gain competitive advantage. Performance management is very important to track the progress of the business. It is important to select key performance indicators or measures that define performance in order to manage it as efficiently as possible. Most companies use some model to measure performance, and identify the problems that need to be solved in order to improve their business, attract new customers, or make the production process cheaper. Traditional measurement, on the basis of financial indicators, has been replaced by new models, which have developed a new way of measuring performance. They have retained a financial component, but the emphasis is on other perspectives. The aim of this paper is to show which models exist for measuring enterprise performance and to describe the advantages and disadvantages of the most widely used Balanced Scorecard model, but also to investigate the linkage between introducing these models and process improvement in enterprises.

Material and Methods

There are various models that measure enterprise performance. Some famous models are: TQM, ISO9000, Six Sigma, Lean, Business Process Reengineering, Deming, EFQM, Balanced scorecard (BSC), Malcolm Baldrige (MBNQA). The most frequently used tools to help companies do better and get better results are reported by Bain (in the publication: <http://www.bain.com/publications/-articles/management-tools-and-trends-2015.aspx>). But, more and more companies have started using the BSC model, especially since 2002, and there are more and more users who are satisfied with its results in enterprises. It aims to create synergy across the whole enterprise. This model is constantly evolving and improving. The BSC model involves reviewing the performance of an enterprise from four perspectives that are equally important, and among which there is a strong interdependence. In earlier years finance was the most important aspect. According to the BSC model, finance depends on the perspective of the customers, which is strongly linked to the perspective of internal processes and the perspective of learning and development, but also of innovation (Dudić, 2018).

Numerous studies attempt to measure the efficiency and effectiveness of business operations, and link non-financial metrics to financial performance (Banker et al., 2004; Ittner & Larcker, 1998a, 2003a, 2003b). European research shows that the companies in Germany - 98%, the UK - 83% and Italy - 72% are familiar with the BSC model and its application (Gehrke & Horvath, 2002). Another survey conducted in Norway shows that 27% of the companies apply BSC, 61% of the companies intend to implement BSC in their business over the next two years (Kald & Nilsson, 2000). On the other hand, BSC is not common in France due to the use of a similar tool called the French "Tableau de Bord" (Bourguignon et al., 2004).

There are authors (Bezdrob & Car, 2012) who advocate a simplified BSC model, which is applicable to developing and underdeveloped countries. The authors Lipe and Salterio (Lipe & Salterio, 2000) concluded that decision making and management in enterprises are significantly related to the BSC model, that the model itself is gaining in importance and is being examined (Ax & Bjornenak, 2005). The authors Prabhu and Hegde (Prabhu & Hegde, 2012) described the problems that small companies face when introducing BSC model into their business. They concluded that conflict resolution and change management are the most important aspects for introducing and implementing BSC in business and increasing the success of a company, but also that leaders play the most important role in this process (Dudić, 2018).

Results and Debate

Performance evaluation and management models

In recent years, a number of models for assessing and managing a company's performance have appeared on the market. In order to achieve successful business operations of a company, it is necessary to manage the company adequately, which requires constant measurement of the company's performance. However, various tools that have appeared on the market look at the company's performance from different perspectives and seek to link the processes with the strategic plans of the company, to evaluate both non-financial and financial aspects, but also to respond to their customers' requirements and requirements that come from the market. Among other things, these performance measurement models can offer improvements that a company has to make in order to innovate its processes and deliver the best possible service / product to meet the customers' needs.

Model	The aim	Authors
Data Envelopment Analyses (DEA)	DEA is a nonparametric method. It is a linear programming model, assuming no random mistakes, used to measure technical efficiency. It was developed with the aim of measuring the efficiency of the service non-profit sector, where the focus is on the volume and quality of the service provided and received, rather than on the financial aspect. The purpose was to get a clearer view into the processes and to evaluate the characteristics. This model is not comparable because it does not observe performance differences. It is flexible and usable in different companies, but only at the process level. Indicators related to efficiency are specified.	Charnes, Cooper, Rhodes (1978)
Theory of Constraints (TOC)	A concept, which is the theoretical base of supply chain management. TOC is a model that explains the impact on profitability from decision-making by a supply chain in terms of time. TOC is also a method of managing bottlenecks. A systematic process for businesses to successfully continue their operations in order to increase productivity, to determine the weakest point. It has specified indicators for measurement, it is flexible, applicable in different companies.	Goldratt, Cox (1984)
EFQM Excellence Model	EFQM Excellence Model provides a holistic view of the organisation and it can be used to determine how these different methods fit together and complement each other. Excellent organisations achieve and sustain outstanding levels of performance that meet or exceed the expectations of all their stakeholders. The EFQM Excellence Model allows people to understand the cause and effect relationships between what their organisation does and the results it achieves. The model is based on nine criteria that link performance measures, five of which represent chances or opportunities and four results, which provide an objective overview of the situation in the enterprise. It is a complex model, flexible and applicable in different companies.	EFQM (THE EUROPEAN FOUNDATION FOR QUALITY MANAGEMENT) /http://www.efqm.org/the-efqm-excellence-mode/
Total quality management (TQM)	The TQM model is based on total quality measurement. It consists of five levels and it measures performance at each level using a well-defined procedure. This identifies areas for process improvement. It is complex, there is a hierarchical link between different types of performance of a company, it is not flexible.	Deming (1982), Juran (1993), Feigenbaum (1991)
KANJI'S BUSINESS EXCELLENCE MODEL (KBEM)	Kanji's Business Excellence Model is based on the principles of Total Quality Management. The basic idea of this model is to highlight the relationship that exists between each TQM principle and improved organizational performance in the company. KBEM consists of four key dimensions: top management, basic principles, concepts, and business excellence. The purpose of this model is to highlight the company's chances and to suggest a strategy improvement. The model is complex, flexible, it allows comparison with the competition.	Kanji (1998)
KANJI'S BUSINESS SCORECARD (KBS)	Kanji's Business Scorecard is mainly directed towards the external evaluation of companies and measures the performance of companies from the external perspective, through the key areas. Performance measures are defined, based on the key factors of business excellence and values of the organization.	Kanji (2002)

Source: Author with data from literature

Balanced Scorecard model

The Balanced Scorecard Model (BSC) originated in the USA in 1992 from a research study by two authors Kaplan and Norton, and has become a tool used by companies worldwide. The following table shows only some of the industries the authors have written about and the implementation of the BSC model.

Automotive	Volkswagen	Kaplan, Ricardo (2010, 2014)
Banking	TD Canada Trust	Campbell, Brent (2009, 2014)
Electronics	Philips Electronics	Gumbus, Lyons (2002)
Technology	Apple, Microsoft Latin America	Kaplan, Ballve, Davila (2000)

Source: Author with data from literature

For the first time, this tool brought together and viewed multiple perspectives, not just the financial one. It combined the customer perspective, internal processes, learning and development and the financial perspective. The financial indicators used earlier to measure the success of a business are inadequate and do not give a clear picture to all employees of what needs to be improved in order to increase business performance. Knowledge and human capital are becoming more and more important in the digital era, and it is difficult to measure them. Tangible, easily measurable financial metrics are data collected from a company, but on the basis of which it is not possible to determine exactly what needs to be changed to improve the business, the company's strategy to facilitate innovation. The authors Kaplan and Norton (2000) state that only 10% of the companies implement their strategy as planned. The main drawback is that only 5% of the employees understand the strategy of the company, therefore they do not have a clear vision. Another drawback according to these authors is that only 25% of the managers are motivated to execute the strategy, so human resources are cited as another important obstacle. 85% of the managers discuss their business strategy for less than an hour a month, and 60% of companies do not connect their results with the strategy. The BSC model is an adequate model for measuring a company's performance because it contains all necessary elements and displays all dimensions, quality, flexibility, time, finances, customer satisfaction and human resources (evaluation of the typology of performance measurement appears in the work of Hudson (Hudson et al., 2001)).

A Balanced Scorecard defines an organization's performance and measures whether management is achieving desired results. The Balanced Scorecard translates Mission and Vision Statements into a comprehensive set of objectives and performance measures that can be quantified and appraised¹. These measures typically include the following categories of performance: financial performance (revenues, earnings, return on capital, cash flow), customer value performance (market share, customer satisfaction measures, customer loyalty), internal business process performance (productivity rates, quality measures, timeliness), innovation performance (percentage of revenue from new products, employee suggestions, rate of improvement index) and employee performance (morale, knowledge, turnover, use of best demonstrated practices).

¹ <http://www.bain.com/publications/articles/management-tools-balanced-scorecard.aspx>

Figure 1. Usage BSC model and satisfaction among survey respondents

Source: <http://www.bain.com/publications/articles/management-tools-balanced-scorecard.aspx>

For many years the most popular management tool worldwide was Strategic Planning. With this tool, companies established what needed to be changed in order to reach their goal. However, the age of digitalization has also brought changes in companies and the implementation of tools to make them more successful. Customers and business environment gain importance, and companies have to apply different models in order to respond quickly to their demands. The importance and application of the BSC model have increased, as it responds to the needs of companies brought by the changes in the market and customer demands.

Model	Usage	Satisfaction clients
Strategic Planning	48%	4.03
Customer Relationship Management	48%	4.01
Benchmarking	46%	3.94
Total Quality Management	34%	4.09
Balanced Scorecard	29%	3.93

Source: Bain Management Tools and Trends survey, 2017

Research on the application of BSC model in the companies in the Slovak Republic

When it comes to the size of companies in the Republic of Slovakia (shown in the table below), in 2017 there was a larger number of micro companies and a smaller number of small companies compared to the EU, but in accordance with the general global trend in the forthcoming period.

Size of company	Micro	Small	Medium	Large	Total
Slovak Republic	96,9%	2,4%	0,5%	0,1%	100%
EU	93,3%	5,5%	1,0%	0,2%	100%

Source: http://www.sbagency.sk/sites/default/files/msp_v_cislach_v_roku_2017_infograf_sep2018.pdf

The most commonly used benchmarks are those from a financial perspective, and they usually show whether there are changes for a given period, but also how much funding is foreseen to carry out innovative activities in companies for the coming period. Also, it is important to plan the next steps and development of the company and planning is based on a financial aspect. Market benchmarks, such as total shareholder returns (the sum of stock price growth and dividends paid), are a direct measure of generating shareholder value. Therefore, performance measurement cannot be based solely on simple stock price change data. One of the most important indicators of a company's success in the process of generating shareholder value in the developed countries is the concept of Economic Value Added - EVA. In the Republic of Slovakia, the European Small Business Act (SBA) has been used as a tool for measuring the entrepreneurial climate of SME development since 2008, with the aim of improving SME competition in the global market and thus contributing to the objectives of the Europe Strategy 2020. In the framework of the Competition and Economic Growth (CEG) project, through which the Slovak Government supported SMEs in the form of grants, 1600 projects were realized, representing 69% of the total number of planned projects. The support of SME through these projects aimed to foster innovation, research and development, to increase energy efficiency and renewable energy in the field of technology.

The authors (Tidd, Bessant, & Pavitt, 2005) have been researching enterprise innovation for years, as well as many other aspects, performance of the companies and their links to innovation. They have set a good theoretical basis for numerous research in this area and based on this, a questionnaire was created on the application of BSC model in companies with a focus on factors related to innovative aspects of business for all dimensions of the model. This is a model that provides the ability to observe and evaluate four different perspectives in companies, namely: learning and development, customer relationships, internal processes and financial perspective. The questionnaire used in this study provided the respondents with a five-point Likert-type scale. The questionnaire constructed for this survey was answered by more than 150 companies, of which 121 completed the whole questionnaire. Therefore, the survey included 121 different companies in the territory of the Slovak Republic. The questionnaire was conducted electronically or by in-person interview. By induction, a general conclusion can be drawn if the following conditions are met (Richter, 2003): that the sample is representative and that the results presented assume the accuracy of the whole sample. Therefore, it is important that the sample is reliable and valid. The database was created in EXCEL and the data was processed using the AMOS statistical package. Using the various functions of this program, the data was processed, i.e. the respondents' answers to the questions from the survey questionnaire, the reliability and validity of the sample was confirmed and a detailed analysis of the data was made. The survey was conducted during the previous two years. There was an equal number of domestic companies and those with both foreign

and mixed capital, as well as production and service activities. There are most SMEs. In most of the companies surveyed in the Slovak Republic, the companies focus on the acquisition of other knowledge, such as licenses, patents, employee education for the introduction of new products / services and processes, and the introduction of innovation in the market. The results of the conducted research are given in the following table.

Activity	Using in the companies in RS (%)	Activity description
Internal R&D activities	87,1	Improvement of existing and development of new products, services and processes
Supply of equipment (includes software)	81,2	Purchase of machinery and equipment for the purpose of modifying existing and developing new products, services and processes
Purchasing other forms of knowledge	69,3	Licenses, patents, unpatented inventions, procedures and other forms of knowledge
Education and training for innovative activities	90,1	Employee education aimed at acquiring new knowledge to introduce new products, services and processes
Bringing innovation to the market	79,2	Marketing activities aimed at developing markets for existing as well as new products and services
Other	43,6	Other innovative activities

Source: Author with data from the research

The companies in the Slovak Republic invest significant resources in training the employees, in activities to develop and improve their skills. Saving energy and materials costs for companies in the Slovak Republic is very important, as environmental standards and EU laws are rigorous and impose compliance with standards and pay more attention not only to ecology but also to the health of their employees and occupational safety. By applying and selecting the factors appropriate for the territory where companies operate, the BSC model can help to implement innovative activities that would improve the business of the company. It is important for companies to clearly define their goals, their strategy. Many aspects of a company do not depend directly on finances, but on the changes in the way the company approaches the business, encourages and implements innovative activities, and creates innovation. The compliance of the business with the environment and monitoring of the changes in the market can increase financial profit.

By using the BSC model, the data is collected and documented more efficiently, and in this way the company can achieve its goals, exchange data among the company's employees, develop better communication and cooperation among employees. Since successful business of a company depends not only on internal factors

but also on external ones, analysis of external and internal environment needs to be done. External analysis involves the study of macroeconomic factors, i.e. it observes all enterprises regardless of which activity they are engaged in or what branch of economy they belong to. Also, the size of the company should not affect the improvement of business processes. However, a survey conducted in the territory of the Slovak Republic has shown that the size of the company influences the improvement of business processes and the application of models in the business operations of the company. They are generally used in medium-sized and large companies, while small and micro companies do not use models to assess their performance to a great extent.

The size of the company influences the improvement of business processes and the application of new technologies in companies, which is shown by this research and statistics given in the following tables.

Innovations in technology, skills, techniques, systems and procedures are needed in order to transform inputs into desired products / services outputs (Ivanov & Avasilcai, 2014). In manufacturing industries, process innovations can take the form of new or improved techniques, tools, or a new way of decision making (Oke, 2007). Therefore, changing the way a business operates and introducing new tools, such as the BSC model, into micro and small companies is more than necessary. But the biggest obstacle to the introduction of the model to measure the performance and success of a company is finance. The survey shows that mostly foreign companies introduce novelties into their business, and therefore foreign owned companies improve their processes more. The following tables show that the origin of capital matters.

The results presented here show that mainly foreign and mixed companies innovate and refine existing processes. Modernization of business operations is generally most represented in foreign companies. The research shows that for process innovation it is very important that all four perspectives are included, because in order for processes to improve, it is necessary to listen to the customers to whom the product is being marketed, i.e. their requirements. Customers buy new products / services, and if they are not satisfied, they will not make a repeat purchase. Customer loyalty is very important. Satisfied customers will keep buying the product / service and consequently they will recommend it to others. In this way companies attract new customers. In order to achieve success, internal processes are important, the way a company comes up with new products and services and how it is organized. It should be noted that the knowledge gained by learning and mastering new technologies, which require financial support, should be given prominence in the business of the enterprise, since this would introduce more new technologies. Innovative companies encourage and leverage new knowledge to enhance their competitive advantage, which has been identified as a key mediator of enterprise innovation, the relationship between learning orientation and innovation (Parmentier et al., 2014). New technologies reduce the cost and duration of experimentation, and contribute to making companies more innovative (Ramani et al., 2008).

Conclusion

With the BSC model, we cannot only evaluate the current state of the company, but also predict and evaluate what steps need to be taken in the future to improve the company's position in the market. The BSC model is a practical tool that facilitates the work of enterprise management by providing it with the opportunity of information and communication between perspectives. Management can focus on improving the business performance if the parameters by which the performance is judged are appropriately selected. The BSC model is considered as an important model used in the field of strategic management as a basis for strategy creation and revision of strategic assumptions. Inability of introducing and implementing the latest IT solutions, due to very expensive costs of implementation and maintenance, is one of the obstacles to achieving better results, as well as eliminating and documenting mistakes in business operations, and avoiding them in the future period. The introduction of the BSC model in a large number of SMEs is conditioned by financial resources, which is why determining the identifiers in performance in the BSC model is important, because on the basis of them we can identify and improve the business performance, determine the critical factors whose modification can influence the improvement of the position and competitiveness of the company and successfully modify the business strategy.

Bibliography

1. Ax, C., Bjornenak, T. (2005). Bundling and Diffusion of Management According in Sweden. *Management Accounting Research*, 16 (1), 1-20
2. Banker, R., D., Chang, H., Pizzini, M., J. (2004). The balanced scorecard: judgmental effects of performance measures linked to strategy. *Accounting Review*, 79 (1), 1-23
3. Bezdrob, M., Bičo Ćar, M. (2012). Performance Measurement Model – Developing and Testing a Measurement Model Based on the Simplified Balanced Scorecard Method. *International Review of Economics and Business*, 15 (SI), 79-98
4. Bourguignon, A., Malleret, V., Nørreklit, H. (2004). The American balanced scorecard versus the French Tableau de Board: the ideological dimension. *Management Accounting Research*, 15 (2), 107-134
5. Campbell, D., Kazan, B. (2009). TD Canada Trust. Boston: Harvard Business School, 110-149
6. Charnes, A., Cooper, W., W., Rhodes, E. (1978). Measuring the efficiency of decision making units. *European Journal of Operational Research*, 2 (6), 429-444
7. Deming, W., E. (1986). *Out of Crisis*. Cambridge: Massachusetts Institute of Technology, 156
8. Dudić, Z. (2018). *Razvoj modela za ocenu inovativnih aktivnosti malih i srednjih preduzeća*. Novi Sad: Fakultet tehničkih nauka, 69
9. Feigenbaum, A., V. (1991). *Total Quality Control*. New York: McGraw-Hill, 26
10. Gehrke, I., Horvath, P. (2002). Implementation of performance measurement: a comparative study of French and German organizations. In Epstein MJ, Manzoni JF (Eds), *Performance Measurement and Management Control: A Compendium of Research*, Studies in Financial and Management Accounting, London: JAI Press, 159-180

11. Goldratt, E. M., Cox, J. (1984). *The Goal*. Croton-on-Hudson. New York: The North River Press, 36
12. Gumbus, A., Bridget, L. (2002). The Balanced Scorecard at Philips Electronics. *Strategic Finance*, 84 (5), 14-24
13. Hudson, M., Smart, A., Bourne, M. (2001). Theory and practice in SME performance measurement system. *International Journal of Operation and Production Management*, 21 (8), 1096-1115
14. Ittner, C., D., Larcker, D., F. (1998). Innovations in performance measurement: trends and research implications. *Journal of Management Accounting Research*, 10 (1), 205-238
15. Ittner, C., D., Larcker, D., F. (2003a). Coming up short on non-financial performance measurement. *Harvard Business Review*, 70 (11), 88-95
16. Ittner, C., Larcker, D., Randall, T. (2003). Performance implications of strategic performance measurement in financial service firms. *Accounting, Organizations and Society*, 28, (7-8), 715-741
17. Ivanov, C., I., Avasilcai, S. (2014). Measuring the performance of innovation processes: A Balanced Scorecard perspective. *Procedia - Social and Behavioral Sciences*. 109 (1), 1190-1193
18. Juran, J., M., Gryna, F., M. (1993). *Quality Planning and Analysis*. New York: McGraw-Hill, 57
19. Kald, M., Nilsson, F. (2000). Performance measurement at Nordic companies. *European Management Journal*, 18 (1), 113-27
20. Kanji, G., K. (1998b). Measurement of business excellence. *Total Quality Management*, 9 (7), 633-643
21. Kanji, G., Moura, P. (2002). "Kanji"s Business Scorecard", *Total Quality Management*, 13 (1), 13-27
22. Kaplan, R., Norton, D. (2006). *Alignment: Using the Balanced Scorecard to Create Corporate Synergies*. Boston: Harvard Business School Press, 211
23. Kaplan, R., Norton, D. (2008). *The Execution Premium: Linking Strategy to Operations for Competitive Advantage*. Boston: Harvard Business Scholl Press, 89
24. Kaplan, R., S., Ballve, A., Davila, A. (2000). *Microsoft Latin America*. Boston: Harvard Business School, 100-140
25. Kaplan, R., S., Reisen de Pinho, R. (2010). *Volkswagen do Brasil: Driving Strategy with the Balanced Scorecard*. Boston: Harvard Business School, 111-149
26. Kaplan, R., Norton, D. (2004). The strategy map: guide to aligning intangible assets. *Strategy & Leadership*, 32 (5), 10-17
27. Lipe, G., Saletrio, S. (2000). The balance score card: judgemental effects of common and unique performance measures. *The Accounting Review*, 75 (2), 283-298
28. Oke, A., Burke, G., Myers, A. (2007). Innovation Types and Performance in Growing UK SMEs. *International Journal of Operations and Production Management*, 27 (7), 735-753
29. Parmentier, G., Mangematin, V. (2014). Orchestrating innovation with user communities in the creative industries. *Technological Forecasting & Social Change*, 83 (1), 40-53
30. Prabhu, D., Hegde, S. (2012). Design and implementation of performance management systems, KPIs and responsibility centers: A case study. *South Asian Journal of Management*, 19 (2), 121-133
31. Ramani, G., Kumar, V. (2008). Interaction orientation and firm performance. *Journal of Marketing*, 72 (1), 27-45

32. Richter, T. (2003). Epistemologische Einschätzungen beim Textverstehen, Epistemic validation in text comprehension. Lengerich: Pabst Science Publishers, 136
33. Richter, T. (2006). What is wrong with ANOVA and multiple regression? Analyzing sentence reading times with hierarchical linear models. *Discourse Processes*, 41 (3), 221-250
34. Tidd, J., Bessant, J., Pavitt, K. (2005). *Managing Innovation: Integrating Technological, Market and Organisational Change*. London: John Wiley and Sons Ltd., 411

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