

MANAGEMENT OF THE ORGANIZATION BASED ON BALANCED SCORECARDS

Jelena Jovanovic

*Faculty of Mechanical
Engineering, Podgorica*

Abstract: *This paper deals with the analysis of the Strategic Management System approach called Balanced Scorecard. At the very beginning of this article, the basic model of this system is presented with the detailed description of its function followed by a deep analysis of the numerous reference sources in order to test the wider capacities of this system. The particular attention is paid to determine the number of BSC perspectives. In this sense, we investigate the literature concerning the integration of the issues related environmental protection into the basic concept of Balanced Scorecard.*

Keywords: *Balanced Scorecard, environmental management system, perspectives*

1. INTRODUCTION

In order that an organization survives and after that develops and conquers the market, it is necessary to broaden its development goals further than the basic financial ones. Although it gives an excellent review of past events, the financial measure represents only necessary but not enough condition of the successful development of the organization [1]. The financial measures are also called “*final indicators*” [2] because they represent the result of earlier undertaken activities. Therefore, to develop successfully an organization need to add these final indicators to the initiators of the future successfulness, i.e. “*direction-finding indicators*” [2]. This raises the question in what manner “*final (late)*” and “*direction-finding (early)*” indicators of the organization’s success are determined. The answer is: from the defined strategy of the organization. It is obvious that organizations after the strategy definition, in order to improve the relations with the customers, have to execute its effective implementation. The implementation of the defined strategies represents the problem which demands adequate solution.

The statistical data indicates the difficulties that emerge in the process of implementation of a new strategy. The management needs an instrument which will serve to effectively transfer the strategy to the employees and motivate them to direct their activities toward the accomplishment of given strategic goals and which will simultaneously enable the continual measuring of the success of a given strategy. This includes the measurement of the activities that are in relation to the set of organizational strategic goals. Additionally, it includes the adoption of the eventual changes to organizational strategy where the traditional system of measurement is directed only to the financial indicators what is not very useful due to numerous shortages.

In accordance with that, the organizations, at the time of constant changes and more and more strict demands of the market, must spend the important amount of time and resources in order to measure own activities during the strategy implementation. Many organizations really perform it, but, despite the important efforts, as the researches show, only 35 % of tested organizations estimate the existing implementation systems and measuring of the performances as efficient one [3].

2. THE BASIS OF STRATEGIC MANAGEMENT SYSTEM BALANCED SCORECARD

Balanced Scorecard (BSC) represents the system of strategic management and the system of management by the performances which attempt to transform the organization’s strategy into the goals and measures at all organizational levels [1]. In that way, each individual in the organization has an opportunity to give his personal contribution to the accomplishment of the strategy, also having an insight into his personal performances.

BSC is the best solution in the process of the mission translation, vision and the strategy of the organization into visible system for the measuring of performances-result what is presented by the Top-Down trajectory in Figure 1 [1,4,5,6]. Then, the strategy must be transformed into the goals for every perspective and, after that, for all of them, the indicators (measures), aimed values and activities for the accomplishment of these goals, are defined. However, the significant role of BSC is mirrored in the Bottom-Up trajectory where, through the activities aimed to the directions of planned values of measured indicators, the degree of the fulfillment of goals set is estimated, and also the efficacy of the organization in the implementation of the strategy is ascertained.

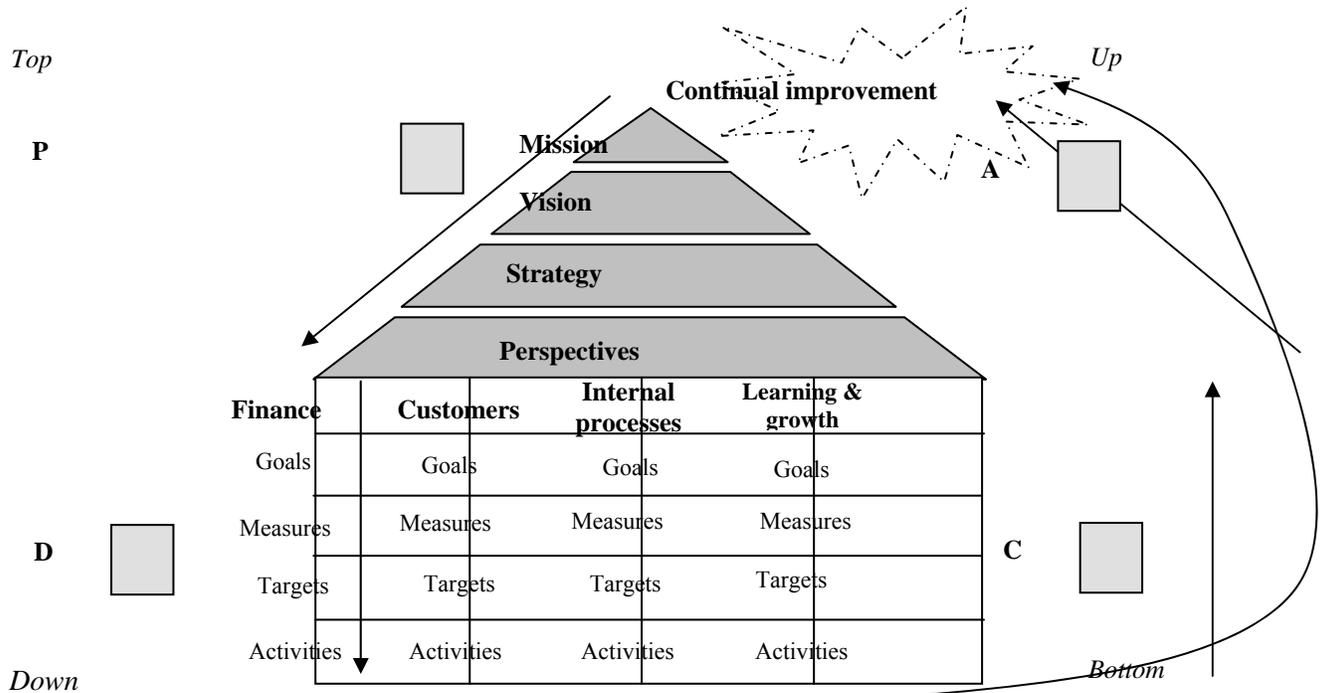


Figure 1. Mission, vision and strategies translation approach with BSC-a

In that way the operation inside the organization in the direction of the constant improvements through PDCA-cycle is constantly triggered, because today, in very changeable environment, is not possible to define a

strategy and apply it incessantly without the reconsideration and development. The advantages of such an approach and the benefits of the adoption of BSC are given in Table 1 [7].

Table 1. The benefits of BSC implementation

<i>The state before BSC implementation</i>	<i>The state after BSC implementation</i>
Non-harmonized management	The organization takes into consideration several different aspects
Accent of financial indicators	Accent of indicators that underline development
During the strategy definition general and non-measurable goals are created; With the strategy the organization only defines direction of the development	The strategic goals are transformed into the measurable goals of each individual; If the goals do not fit in the defined values, the organization undertakes certain measures
Based on the information, it is possible to determine the places where the planned results are not reached	Based on the indicators, it is possible to predict future results
Organization does not know where should undertake certain measures; It only knows which result is not satisfactory	The information indicates which indicators influence the most the financial results

Therefore, BSC basically represents the harmonic correlation of the short-term results of the business strategy and its background causes and, in that way, best depicts the management system. Seen in that way, BSC seems as the stimulant for the efficacy accomplishment in an organization, since the more is known about the trends in an organization the better is motivation at

work. Four perspectives (finances, customers, learning and growth, internal processes) are recommended by the BSC creators, but because the different organizations operate in different environments and hence have the different visions and strategies, the activities of all organizations cannot be embedded into a universal frame. For these reasons, it is allowed that the number

of perspectives is broadened or eventually modified what is less possible, but organizations should have in mind the harmonization of these perspectives. In [8] the evaluation of the perspectives has been performed on the basis of group decision and it has been found that in no organization the perspectives are not evenly balanced into the practice. So, the perspective related to the satisfaction of customers is the worst ranked even that the perspective of customers is treated as the most important. Additionally, it could have been expected that the financial perspective is the most important because these were profit organizations. However, here is important that BSC is just a good method because it tends to the equilibrium of these perspectives

3. THE STRATEGIC MAP OF BALANCED SCORECARD

The measurement of non-financial indicators represents the advancement in relation to traditional measurement of the financial indicators only, since it retains the dilemma how to perform the changes in an organization and to improve the business. This is accomplished by the creation of a strategy through the casual relations of the indicators which creates strategic map and, after that, by the implementation of such a

created strategy.

The goals linking and then, in accordance with them, adequate measures through the casual relations represents a very demanding task through which the defined strategy is described. *“The indicators of result, without their causes, do not tell about the way how to accomplish the results and therefore, these do not represent the degree of success in the strategy implementation. Also, the emphasis on the indicators without the result indicators does not tell about the change of business result”* [9].

The meaning of BSC is best visible from the strategic map [10, 11] that is characterized by the explicit articulation of the strategic assumptions in the architecture of a metric what makes BSC to be an insurmountable tool for the strategic learning. In order to transform the strategy into the strategic map, it is, as a first step, necessary to define the strategic goals in such a manner that they carry the complete knowledge of a strategy, and then link them into casual chain of hypothesis in order that the strategy be more comprehensively elaborated and, at the same time, tested. After the creation of casual relation of strategic goals, the link of casual relations is being created and it represents the way of implementation of set strategy, as presented in Figure 2 [2,6,9,12,13].

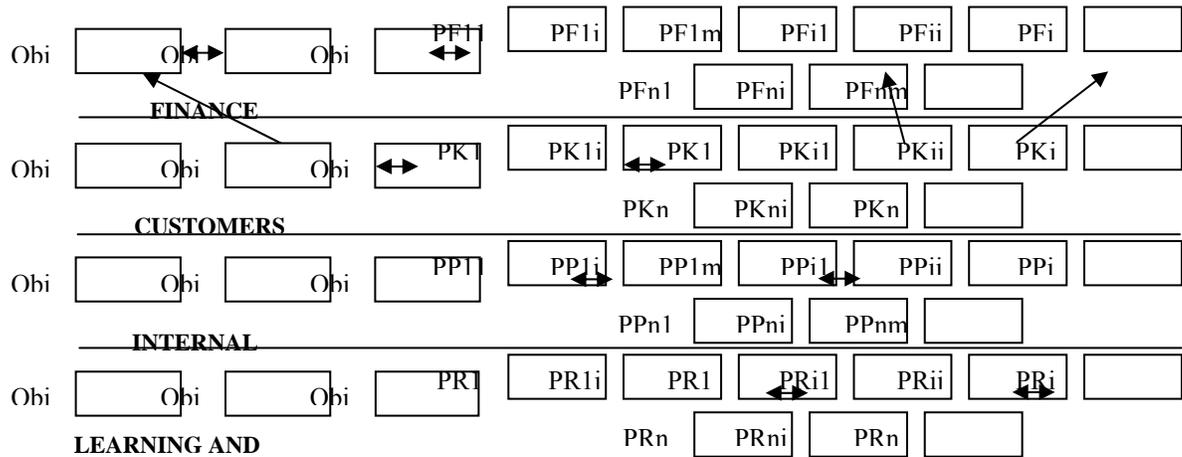


Figure 2 Causal-effect relationship between goals and indicators of profit organizations

Causal-effect relationship could be created in the following manner [7, 13, and 14]:

- Inside one perspective
- Between non-financial perspectives
- Between financial and non-financial perspectives

In [131], it is underlined causal-effect relationship metrics that differentiate BSC from other management systems.

4. BALANCED SCORECARD IN PROFIT AND NON-PROFIT ORGANIZATIONS

Balanced Scorecard was originally intended for profit organizations, but, as a successful system it was modified also for public and non-profit organizations. The differences in BSC conceptions for profit and non-profit organizations are represented by the figure 3[7, 15, and 16].

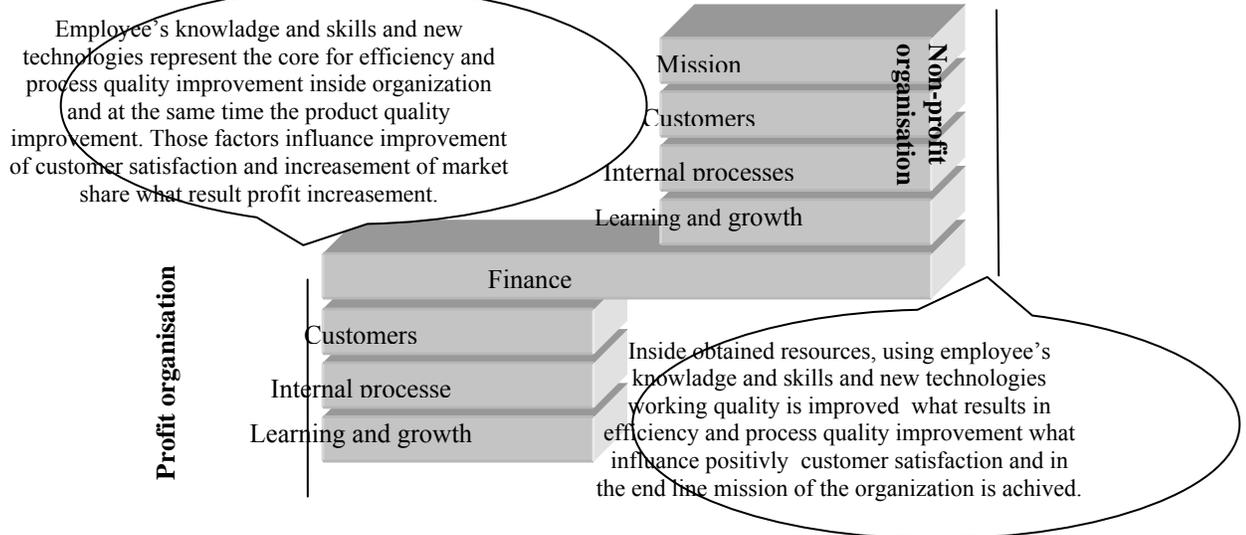


Figure 3. BSC in profit and non-profit organization

Through the casual relations, the perspective presented in Figure 3, it can be seen that non-profit organizations base their work on a financial perspective while profit organizations have this perspective as their goal. Then, the philosophies of the operation of organizations on which are based their models, are different:

PROFIT: *The knowledge and skills of the employees and new technologies represent the base for the increment of efficacy and the quality of the process in an organization and, therefore, the quality of the*

process. These influence the increase of customer satisfaction and the market broadening what results in profit increase.

NON-PROFIT: *In the frame of given means, using the knowledge and skills of the employees. Using such technologies increases the way of work what leads to the efficacy and quality improvement and, after all, fulfillment of organization's mission.*

Conceptual differences at the price level by the perspectives of these two concepts of Balanced Scorecard are presented in Table 2 [4,15].

Table 2 the differences between profit and non-profit organizational approaches

	PROFIT ORGANISATION	NON-PROFIT ORGANISATION
Financial perspective	<i>Financial success</i>	<i>Realize the mission</i>
Customers	<i>Customer satisfaction</i>	<i>Forecast the interest of customers</i>
Internal business processes	<i>Optimize business processes</i>	<i>Increase process realization</i>
Learning and growth	<i>Planed whole organizational resources</i>	<i>Learning management</i>

Then, the basic differences between profit and non-profit organizations are in the fact that the first are strategic oriented and former (non-profit) are mission oriented.

For this reason, and in relation to the direction, the perspectives are established and the belonging goals have been described.

5. BALANCED SCORECARD FROM THE STANDPOINT OF ENVIRONMENTAL PROTECTION MANAGEMENT

Broadly prevailing books about BSC [4, 14, 17, and 18] are not oriented to the possible ways of

implementation of ecological aspects into BSC model, but only represent strategic maps of organizations that contain several ecological goals inside existing perspectives of BSC.

Integration of ecological and social measures into 4 perspectives

Ecological and social measures can be comprised

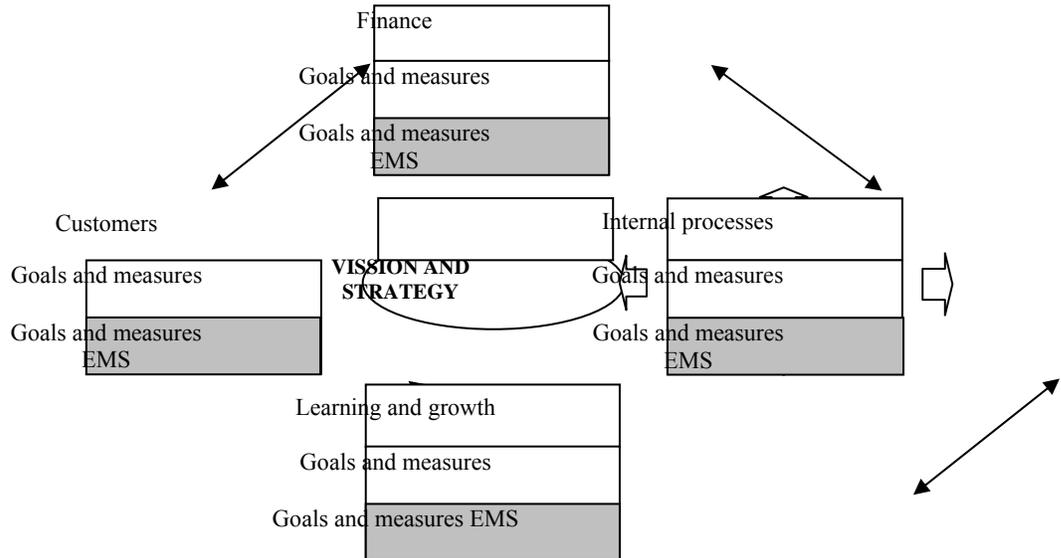


Figure 4. Integration of ecological and social measures into 4 perspectives

in the framework of four existing perspective through the goals and measures. In this way, ecological and social measures become an integral part of conventional BSC and are automatically integrated into the casual chain which is hierarchically oriented to the goals of the financial perspective in the profit organizations. These measures must be integrated into market system and underlined the ecological sensitive customers, Figure 4.

However, the number of goals and measures oriented to the environmental protection using this approach, included into BSC, is fairly limited and insufficient to comprise whole issue.

Even though a large number of organizations accept only this concept, insufficient strategic orientation to the environmental protection the excuse that they comprised key elements of this issue through the goals are defined by BSC model.

The creation of a new ecological /social perspective

In the previously described approach, the large number of ecological and social measures can be completely integrated into the market changes because it is not so simple to express them explicitly. By creating a new perspective, a clearer image about the integration of ecological and social measures into BSC model is created and, at the same time, it is created an opportunity for the metric broadening which includes these issues. The metric of the ecological/ social perspective must be linked to all other perspectives, not only with financial perspective. Also, it is possible to create the two perspectives which include social and

especially ecological demands, Figure 5. Yet, in practice it is the most used approach of implementation of goals of environmental protection into the conventional BSC model and less by additions of perspectives which connect these goals, because for the majority of organizations the protection of the environment is not strategically relevant. Therefore, there are numerous advocates of this concept which argue that addition of a new perspective depends on a strategic relevance [14,19,17,18,20,21,22,23,24]. It is important to note that ecological and social measures can be included in the framework of the four existing conventional BSC while, at the same time, an additional perspective can be created. Therefore, these two approaches are mutually exclusive and the relation of the ecological to the total number of measures and goals of BSC model indicates the importance of the issue related organizational environmental protection.

However, two previous concepts always create justifiable concern for managers from EMS (Environmental Management System) area that, because of a small number of ecological goals oriented to the financial perspective inside BSC model needs to replace other management systems of an organization, this issue will be more neglected.

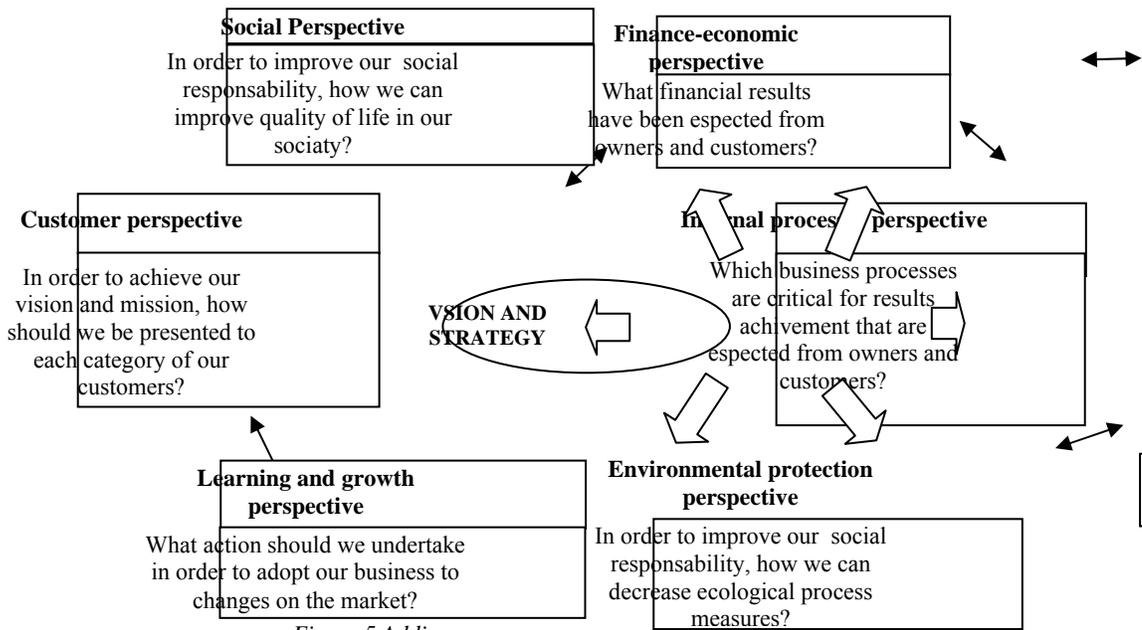


Figure 5 Adding one or more new perspectives

The creation of derived ecological/social scorecard

The third approach of integration of ecological and social measures into BSC suggests the creation of a separate ecological/social scorecard in parallel with the conventional BSC. Derived ecological/social scorecard

is not independent on the conventional BSC and it can and it must be linked with it in order to strength ecologic directions of organization's development. The example of the scorecard strategically oriented to the environmental protection for a hypothetical map of causes and consequences of all perspectives is presented in figure 6.

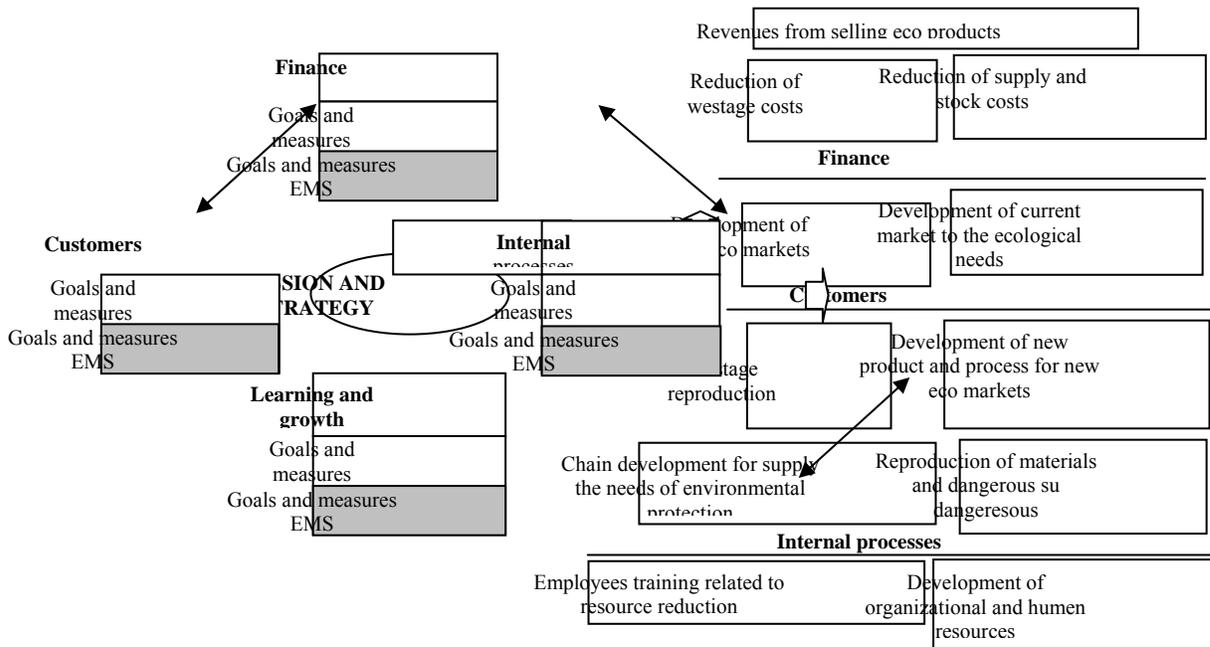


Figure 6. The creation of derived ecological/social scorecard

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Learning and growth

The core is in that this separate scorecard, which will achieve to include entire issue of the environmental protection, be profit-oriented as represented in figure 6. The justification for the rare use of this model in practice is the possibility of a parallel system creation in relation to the conventional model BSC [25, 26]. Yet, by good linkage with the conventional BSC model it can be possible to enable efficient management in an organization through the attainment of important improvements both in entire business and in the area of the environmental protection. This is because a separately created scorecard in this way completely includes all the aspects of the environmental protection through the overall management system.

The scientific works are neither explicitly oriented to the efficiency and effectiveness of the creation of such, separately created scorecards in an organization, nor the way of their linking with conventional scorecards was analyzed. Only rare literature s presents some examples from the practice of the special SBSC (Sustainability BSC) model inside organizations, but always of profit-oriented organizations [22, 23, 27, 28]. Then, for example, in papers [4,19,29,18,22,23,30,31,32] the casual relations of SBSC with the elements of a sustainable development, and beside that with the elements of EPS , were defined as in Figure 7.

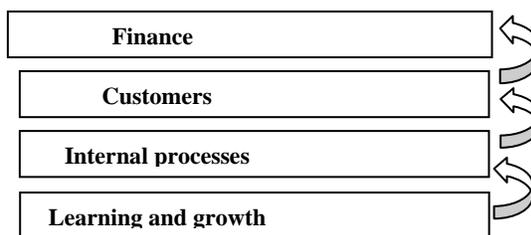


Figure 7 Cause-effect relations SBSC based on the concept of profit organization function

The casual chain in Figure 7 is defined in the following way: “The learning of the employees can lead to the prevention of the pollution and the reduction of incident situations in the neighbourhood, what is directly linked with the internal processes. The improved internal processes lead to the reduction of law infringement and, of course, to the increase of the organization’s prestige in the public. The satisfied stockholders reduce the expenditures for the penalties and improve the organization’s prestige leading to the financial success.

neglected, while the demands of the owners are too pronounced. Although, from the standpoint of such a creation, separate SBSC maps oriented to the sustainable development, and it is very easy to enable its inclusion into the existing conventional BSC model of profit-oriented BSC because both the schedule and perspective direction are completely identical.

The point of this concept is that the strategic map should be set in the manner where any investment into the environmental protection leads to a financial benefit, and all the investments into the environmental protection that do not lead to a financial benefit are not sustainable. Investigating the literature review, it can be shown that small number of organizations and some managers consider that this link between the ecological and economic indicators is too strong and is not easily sustainable in practice. Namely, the stockholder’s demands mainly direct an organization to the ecologic improvements [35] are, by this approach, very

On the other side, the BSC concept for non-profit organizations is oriented to the fulfillment of planned organization’s mission inside the disposable budget and in that sense; the perspectives of the stakeholders and customers represent the aimed perspective [14, 19, 33, 34]. When talking about the creation of the separate scorecard oriented to the environmental protection, such an approach will surely enable the efficient management of the environmental protection in an organization because that means the existence of a budget which would enable the fulfillment of the goals of other perspectives. The key demand in such orientation of the perspectives is the satisfaction of the ecological demands of the stakeholders and customers and not the profit as in case of profit-oriented organizations, Figure 8.

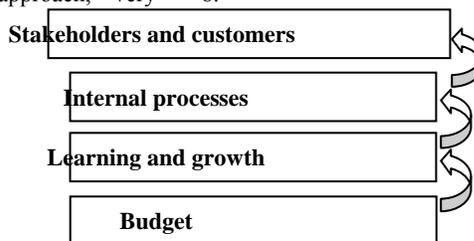


Figure 8. Cause-effect relation ECO BSC based on the concept of non-profit organization function

Such a form of ECO BSC is not so simple to be included into the existing conventional model of BSC because of somewhat different conception of the strategy and the order of the perspectives. Then, the strategic map of such defined ECO BSC does not establish links as a conventional BSC of profit organization. Yet, by a good linking of these two models, that is possible to be realized, the more efficient approach of the management of the protection of the environment oriented only to the financial benefit, can be enabled.

6. CONCLUSION

This paper presents the basic assumption in the world of broadly disseminated model of the strategic management system such as Balanced Scorecard, which is in the early developmental phase in some organizations in our areas. In that sense, the numerous reference sources were analyzed in order to observe the possibilities of this system that, at the same time, represent also a measurement system which enable tracking and improvement of organization's performance.

Having this in mind, the particular attention is paid to the possibility of the extension of number of perspectives of Balanced Scorecard system and to the possibilities of this system in the area of the environmental protection. Reference sources indicate to

the existence of an approach 3 for the implementation of goals of the environment protection into Balanced Scorecard system. Each of these approaches includes the issue of the environmental protection in a different manner and in range, giving, in that way, greater or smaller importance. Two of three approaches that imply the inclusion of the environmental protection goals into the existing perspectives and the creation of an additional perspective are most frequently used in practice. Yet, this paper shows that the third approach which suggests separately created scorecard, oriented only to the environmental protection, can be of a basic importance for the creation of a model which will enable efficient management in the area of the environmental protection in the framework of entire management system by an application of Balanced Scorecard. This model is based on the concept of the functioning of non-profit organizations what assume the existence of a certain budget which would enable not only the fulfillment of some goals related to the environmental protection but also the efficient functioning of the management of the environmental protection as whole.

This paper, on the basis of the analysis of numerous reference sources, actually firstly gives the overview of the possibilities of Balanced Scorecard system and then a particular insight of the estimation of the efficiency of the approach in order to incorporate the environmental protection issues into the strategic management system-Balanced Scorecard.

REFERENCES

- [1] J. Jovanovic, Model of improvement of environment protection using multi – software, Doctoral dissertation, Faculty of Mechanical Engineering, Podgorica, Montenegro, 2009 (in Montenegrin).
- [2] Bjorn Andersen, Business process improvement, ASQ Quality Press, Wisconsin, 2007.
- [3] Kaplan R, Norton D, On Balance, CFO, 2001.
- [4] Paul R. Niven, Balanced Scorecard - Step by step, John Wiley and Sons, New York, 2002.
- [5] D. Dvorski, Indicators of business success using balanced goals model, Master thesis, Faculty of Mechanical Engineering, Zagreb, Croatia, 2005 (in Croatian).
- [6] Wayne W. Eckerson, Performance dashboards, Measuring, Monitoring and Managing your Business, John Wiley and Sons, 2006.
- [7] T. Lesko, Mjerenje performanci informatičkog sektora državne uprave metodom uravnotežene tablice rezultata, Magistarski rad, Zagreb, 2005
- [8] DeWayne L. Searcy, "Aligning the BSC and a Firm's strategy using the Analytic hierarchy process", 2004
- [9] Osmanagić-Bedenik, Nidžara, "Balanced Scorecard-uravnotežena karta ciljeva", Računovodstvo, revizija i financije, broj 5/2002
- [10] Kaplan Robert, Norton David, "Balanced Scorecard - Strategien erfolgreich umsetzen", aus dem amerikanischen von P. Horvath u.a., Verlag Schäffer-Poeschel, Stuttgart, 1997
- [11] Bjorn Andersen, "Business process improvement", ASQ Quality Press, Wisconsin, 2007
- [12] Kaplan R, Norton D, "The Balanced Scorecard – Translating strategy into action", Harvard Business School press, Boston, Massachusetts, 1996
- [13] Kaplan Robert, Norton David, "The Balanced Scorecard - Measures That Drive Performance", Harvard

- Business Review, January - February 1992
- [14] Nils-Goran Olve, Jan Roy, Magnus Wetter, "Performance drivers, A Practical Guide to using the Balanced Scorecard", John Wiley and sons, 2004
 - [15] Niven R. Paul, "Balanced Scorecard step by step for government and nonprofit agencies", John Wiley & Sons, INC 2003
 - [16] Lončarević M, "Implementacija strategije primjenom sustava uravnoteženih ciljeva", Magistarski rad Zagreb, 2005
 - [17] Kaplan R, Northon D, "Alignement (Using the BSC to create Corporate synergies)", Harvard Business school, 2006
 - [18] Frank Figge, Tobias Hahn, Stefan Schaltegger, Marcus Wagner, "The Sustainability Balanced Scorecard - Theory and Application of a Tool for Value-Based Sustainability Management", 2002
 - [19] Kaplan Robert, Norton David P, "The Strategy-Focused Organization", Harvard Business School, 2000
 - [20] Epstein M.J, Wisner P.S, "Using a Balanced Scorecard to implement sustainability", Environmental Quality Management, 2001
 - [21] Bieker T, Waxenberger B, "Sustainability Balanced Scorecard and business ethics", Paper presented at the Greening of Industry Network Conference, Göteborg, Sweden, 2002
 - [22] Thomas Bieker, Carl-Ulrich Gminder, "Towards a sustainability Balanced Scorecard", University St Gallen, 2002
 - [23] Carl Ulrich Gminder, "Environmental management with the Balanced Scorecard", Institute for economy and the environment, Switzerland, 2005
 - [24] Michalis Sidiropoulos, Yannis Mouzakitidis, Emmanuel Adamides, Stavros Goutsos, "Applying Sustainable Indicators to Corporate Strategy: The Eco-Balanced Scorecard", University of Patras, 2004
 - [25] Z. Krivokapić, J. Jovanović, "Using Balanced Scorecard to improve Environmental management system", Strojniški vestnik, Journal of Mechanical engineering, Vol 55 Number 4, 2009
 - [26] J. Jovanović, Z. Krivokapić, S. Ramović, "Upravljanje zaštitom životne sredine primjenom Balanced Scorecard-a na modelu AD Barska plovidba", 2009
 - [27] F. Zingales, K. Hockerts, "Balanced Scorecard and Sustainability: Examples from literature and practices", CMER, 2003
 - [28] T. Bieker, "Sustainability management with the Balanced Scorecard", University of St Gallen, 2003
 - [29] Johnson D.S, "Identification and selection of environmental performance indicators: application of the Balanced Scorecard approach", Corporate Environmental Strategy, 5(4): 34-41, 1998
 - [30] S. Schaltegger, M. Wagner, "Integrative management of sustainability performance, measurement and reporting", Int. J. Accounting, Auditing and performance Evaluation, 2006
 - [31] T. Bieker, T. Dyllick, C. U. Gminder, K. Hockerts, "Towards a sustainability Balanced Scorecard linking environmental and social sustainability to Business strategy", Institute for economy and the environment, Switzerland, 2001
 - [32] Graciela Maria Scavone, "Challenges in internal environmental management reporting in Argentina", University in Argentina, 2005
 - [33] J. Jovanović, Z. Krivokapić, M. Perović, A. Vujović, "BSC u profitnim i neprofitnim organizacijama", Časopis Kvalitet, Beograd, 2007
 - [34] Central procurement Directorate, "Corporate Balanced Scorecard 2006-2007, Helping the public sector deliver better public services", 2008
 - [35] Massimiliano Bonacchi, Leonardo Rinaldi, "Sustainable development performance and sustainability: are stakeholders the missing link?", 2007

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