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# Implementation of the Balanced Scorecard as an Instrument of Strategic Controlling in the Brewing Industry

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## Abstract

*Companies, nowadays, face numerous obstacles when it comes to developing a success-measuring system, which would actually monitor the right things and balance the financial figures with the drivers of future performance, simultaneously directing energy of intangible assets and helping organizations implement strategies. Balanced Scorecard is a tool that meets the set requirements, because in its basis it combines a communication tool, a measuring system and a strategic management system. This is a carefully selected set of measures obtained from an organization's strategy which can be quantified. The selected measures may be used in order to present results and performance drivers to employees and external stakeholders. Using these, organizations can achieve their mission and strategic objectives.*

**Key words:** Strategy, objectives, performance, success rate

## 1. INTRODUCTION

In the process of developing the BSC concept, the Kaplan-Norton strategy map was created. It enables managing an entire company by connecting the strategy of the company with the operative measurable figures, which facilitates strategy deployment and equips the management with the necessary tool for business success. Also, BSC has simplified the often strenuous choice between using operative and financial indicators. Using both types of indicators gives an advantage in business because independent use of operative or financial indicators cannot give a clear strategic focus on the critical areas of business and lead the management to a position to achieve success. BSC has a dominant role as a instrument of strategic controlling, because: „Controlling is very useful help in the investment decision process”[14]

Unlike traditional financial measures, BSC provides a blend of traditional financial indicators and creating a competitive advantage. Traditional financial indicators used to suffice for traditional instruments of controlling (in industrial production). However, today, in information technology age, these are insufficient. BSC supplements financial indicators of past performances

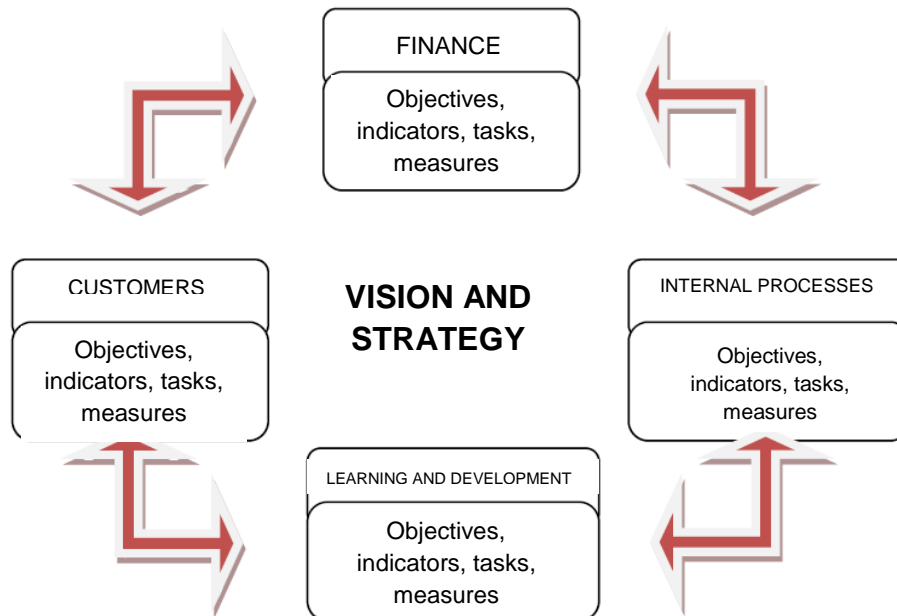
with success factors of future performances, and inherently it extends the goals of the company over the limits of financial indicators [4].

High performance and value are particularly derived from the position that intangible assets (among other things education level and motivation along with knowhow of employees in a company) represent the basis for creating potential in successfulness of operations. Starting point in the designing of the model was to include non-financial factors along with the financial indicators.

The term “Balanced Scorecard” could be understood as a “*balanced table of measurements of company's success.*” Balanced Scorecard enables vision and strategy to be translated into a system of specific objectives and measurements, realisation of which is systematically monitored and measured. It also enables all business functions to subject their actions to realising a unique vision and strategy, through a unique list of goals, critical success factors, strategic initiatives and measurements. In this way, each business function is able to perceive the overall perspective and what it is supposed to do in order to realise objectives identified in all perspectives. Business functions of a company are therefore prevented from working towards the interest of only their own functional goals, neglecting at the same time the goals set on the level of the organisation.

It should be noted that BSC is not an accidental collection of measurements set in balanced perspectives; it is primarily part of the system of strategic management which enables the transformation of vision and strategy into measurable quantitative and qualitative objectives with the inclusion of financial and non-financial parameters. As all contemporary business success measurement systems, the Balanced Scorecard cannot be perceived without IT support.

The complexity of the business environment, as well as the company itself, today is such that companies need to use numerous pieces of information and process huge amounts of data in order to measure their success[15]. This can only be done by using adequate software. A well-built information system has proven to be one of the most important factors of successfully building and deploying BSC.



**Figure 1.** Vision, strategy and the four perspectives according to Kaplan and Norton

When designing this concept [3], objectives, indicators, tasks and actions to be taken for the four perspectives/tool development were taken into account – finances, customers (users), internal processes, learning and development (staff).

What Norton and Kaplan tried to do in specific companies was to reach a transformation of strategy into action. Namely, this was for them a starting point in the development of the BSC idea.

They used the “*strategic matrix*” [4] [5] [6], in order to be able to perceive the perspectives of a company and choose the most relevant and significant for a company out of the large number of possibilities.

## 2. APPLICATION OF THE BSC MODEL IN THE BREWING INDUSTRY

### 2.1 Balanced Scorecard Model in the brewing industry

When talking about the factors of success, we cannot fail to mention that the basic idea of Norton and Kaplan when considering the benefits from the introduction of BSC was “if you can’t measure it, you

can’t manage it,” or what we cannot understand, we cannot adequately set control mechanisms for it and master it.

Put bluntly, if we do not monitor realisation of the set objectives, they will not be of any use to us. Large number of companies does not have sufficiently clearly set objectives, and if they have them, they do not implement them. In order for a company to function completely, it is necessary to overcome the obstacles of failing to translate the vision of the company, which means that by using BSC, strategic objectives are transformed into concrete operative objectives.

These objectives must rely on real, strategic positions of the company, where one can see the transformation of a vision into strategic and operative objectives in a vivid way.

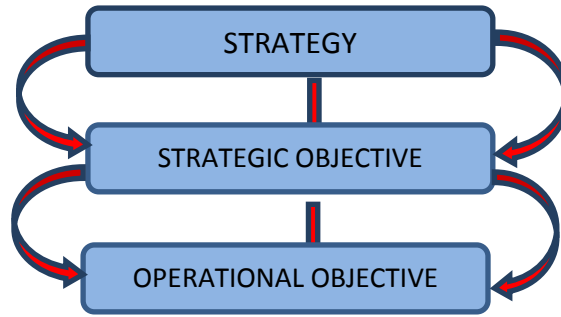


Figure 2. Vision, strategic and operative objective [7]

Prior to making the success measurement model for a brewery, strategic analysis was carried out. SWOT analysis was used as the first step of making the model. This analysis gives clear insight into realisation of strategic objectives, using analytical methods. In the first phase of the SWOT analysis[11], it is necessary to collect key operating parameters of this company and its business environment. In the second phase of the strategic analysis, these parameters were categorised into several groups such as strengths and opportunities of the company itself, opportunities and threats in relation to the competition [17].

The environment of the company is observed three levels, as follows:

- Macro-environment
- Micro-environment and
- Internal environment

After doing the analysis of the company in the environment, based on which, current position of the brewery on the market was established, position of this company in future time from the aspect of its production, environment in which it does business, as well as target markets, was presented which will enable determining adequate strategies of the company. Special attention needs to be given to the

competition, because over the last decade, major changes have taken place in the beer market. Large manufacturers entered the Serbian market, and hence, significant changes to the volumes and assortment of produced beers and accompanying products have taken place. It should not be neglected that increasing volumes of beers are being imported, also affecting the performance of local companies.

Specifics of this BSC analysis reflect in the fact that a modification to the usual BSC analysis was made. In addition to the four perspectives, the supplier perspective, as one important perspective in the brewing industry, was also included.

When analysing beer production, the mostly season demand for this product was taken into account as well as the important issue of shelf life of these products. Based on all mentioned, the following structure of the BSC analysis was reached: [15]

1. Financial perspective,
2. Customer perspective,
3. Internal processes and development perspective,
4. Supplier perspective,
5. Learning and development perspective.

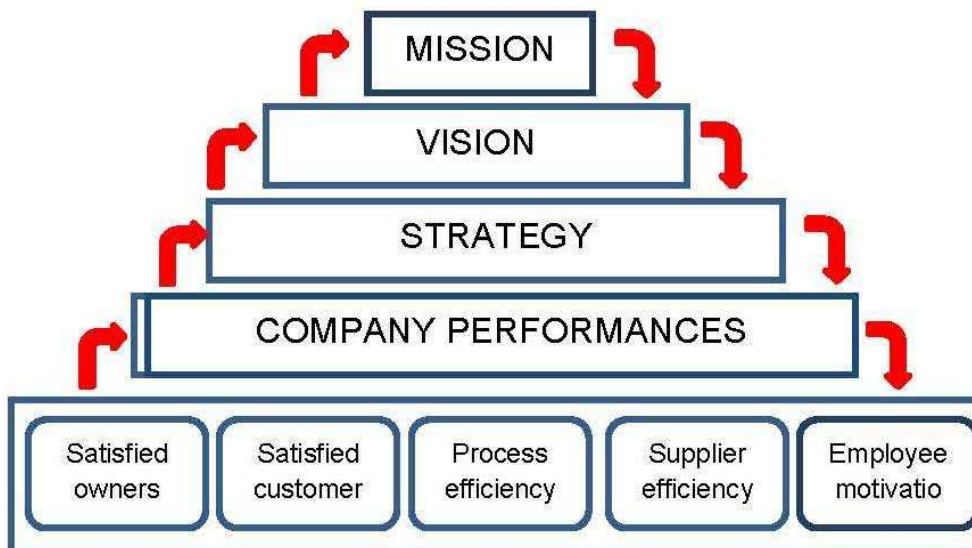


Figure 3. BSC process in a brewery [8]

Business success of a brewery's operations is presented through five balanced perspectives, which is a deviation from the classic BSC model. In order to realise the vision of a brewery, these five perspectives need to give answers to the following questions:

- Which financial results must we achieve from the viewpoint of the capital owner?
- How are we perceived by our customers?
- What innovations must we work on?
- How do we motivate our employees?
- How can we have at all times all the necessary raw materials of appropriate quality for the uninterrupted ongoing of internal processes?

In order to obtain answers to these questions, success factors and measurements in the brewery are as follows:

- **Financial perspective** was shown through the following success factors:
  - Stable increase of profit (measurements: income per employee, working capital cycle)
  - Increase of collection of receivables (measurements: receivables turnover ratio, bad debts share)
  - Reduction of costs (measurements: share of distribution costs in the product unit price, share of packaging costs in the product unit price, costs of production per unit)
- **Customers perspective** is viewed through two success factors, i.e.:
  - Customer satisfaction – retailers (measurements: satisfaction index, on time delivery)
  - Customer satisfaction – consumers (measurements: pricing index, number of justified complaints, product on shelf availability)
- **Internal processes perspective** is viewed through two factors, specifically:
  - New brands (measurements: costs of new product introduction, market share of individual brands, income from new brands against total)
  - Marketing activities (measurements: share of costs of marketing activities, increase of sales after marketing activities)
  - New technologies (measurements: presence of new technologies when producing products, manufacturing lead time, costs of complaints (damaged products...))
- **Suppliers perspective** as a new perspective in BSC model, it will be viewed through two success factors:
  - Raw material suppliers (measurements: timely delivery – by the supplier, quality of delivered goods, share of raw material costs in total costs)
  - Packaging material suppliers (measurements: number of damaged products,). On time delivery and planned stock are measurements for both success factors.
- **Learning and development perspective** is shown through the following success factors:
  - Employee motivation (measurements: average costs of education per employee, compensation of employees)
  - Mastering new technologies (measurements: investment in production development),, *the purpose of enterprise existence has to give the answers to the questions of what picture of us should our customers have to have... The goals are practically achieved by the employees"* [13]

We can see from the suggested model that we modified the classic model; that our model has one additional perspective and that is the supplier perspective because they are an important factor in the production of beer. Suppliers affect efficiency of internal processes, but in the brewing industry customer satisfaction as well. The effect on customer satisfaction is primarily reflected through the quality of packaging, because customers want the product packed in packaging that fits the occasion. So, one product may be found in different types of packaging such as cans, glass bottles, PVC, as well as draft in HORECA outlets (metal and plastic kegs). Effect of the suppliers on other perspectives will be shown in the strategic map.

## 2.2 Strategic map of measuring performances of the brewing industry

Strategic management is, among other things, related to successful implementation of corporate strategy, as well as creation and maintenance of competitive advantage of an organisation. Strategic management is often considered an abstract academic notion precisely because of the demanding implementation of organisational strategy which in its early appearances did not yield adequate results. Only after the introduction of the BCS concept, a helping tool was given in order to define business strategy with special accent on its implementation, i.e. monitoring the execution of defined strategic objectives. BSC concept translates

strategy into clear and measurable objectives on all organisational levels. Because of the precise measuring of the fulfilment of strategic objectives, BSC concept is at the same time a tool for the implementation of business strategy and set of measurements of success.

Strategic maps for BSC make strategic hypothesis accurate. Each size described by the BSC concept is connected, through strategic maps, in a cause and effect chain of logical thinking which gives the desired strategic results, with those which will lead to such results. Strategic maps describe the process of transformation of non-material, intangible assets into material, tangible financial results. They represent a framework for determining and implementing a strategy within one company [4]. A strategic map represents the architecture, i.e. manner of presenting and describing one strategy. It describes critical elements of a strategy and its inter-relations. Strategic maps are formed top-down, i.e. they start with top management, and then the strategy and its implementation cascades all the way to operative levels of the company.

Strategic mapping helps organisations redefine the existing situation in the process of strategic planning or to set completely new strategies and strategic objectives. This involves defining activities in which the company will engage in the future and the manner in which such plans will be fulfilled. In the process of strategic development planning, objective of the company is to use the advantages in terms of competitive companies, specifically through precise defining of strategic objectives translated into strategic and action plans. By analysing the environment and the company itself, the purpose of strategic mapping is to define priorities and key strategic objectives, as well as action plans on all company levels, starting from top management to operative units.

At the time of industrial society, companies created value by turning raw materials into finished products. The entire economy was based on measurable, material values such as facilities, goods, factories, equipment, machines, etc. Value of the company itself was measured through financial gain. As the society changed from an industrial to an information one, some other, often immeasurable, sizes such as ability to solve problems, internal processes in the company, knowhow and values which employees possess became relevant. However, a problem which could not be solved arose. How to measure all those immeasurable figures and how to define values which the company has through them? „*The basic elements of calculation costs are costing types, cost calculation of their origin and calculation of cost centers*” [12]. The main difficulty is that values of immeasurable sizes depend on the organisational assembly of the company and defined strategy.

In order to understand how organisations create value in information society and to conduct analysis of these values, the BSC concept was developed. Through a joint visual framework called Strategic Maps, it further develops the connection between desired results and the manner of achieving them [9].

Kaplan and Norton with the aim of describing the importance of strategic maps give an example of conduct of war. In order for a general to successfully lead a battle, to take timely actions and lead the troops through unknown terrain, it is necessary for him to have a map of that terrain: drawn roads, hills and valleys, bridges, gorges, cuttings, houses, buildings and everything else. Without this information, a battle cannot be led and decisions related to actions of the troops in the field cannot be made. In the same way, a company cannot be run successfully if it does not have a successfully drafted strategy map. The importance of strategy maps originates from here. Many companies which do not have them make futile attempts to implement often well-developed strategy.

The importance of strategic maps lies in the fact that they represent comprehensive architectures for describing one strategy of a company, because you can see the entire strategy of one company on a single page. Strategic maps describe the process of creating values through series of cause and effect links between the objectives of the company represented in BSC. In this way, we can observe how measurements, e.g. of the learning and development perspective, affect the financial perspective. BSC perspectives in strategic maps are arranged in such a way that the first one is the financial perspective, followed by customers, internal processes and learning and development is at the end. This does not mean that they are arranged according to relevance for success of the company because each perspective is equally important, but according to the manner they affect the bottom line of a company, i.e. profit. First perspectives represent result of labour, and the perspectives internal processes and learning and development are activities in the company from which this result is derived.

Changes in the financial perspective firstly reflect in the increase/decrease of profit, and changes in learning and development need time in order for their effect on profit to be seen. However, if we notice the effect of this perspective only after there is a change in profit, it is already too late for such a company.

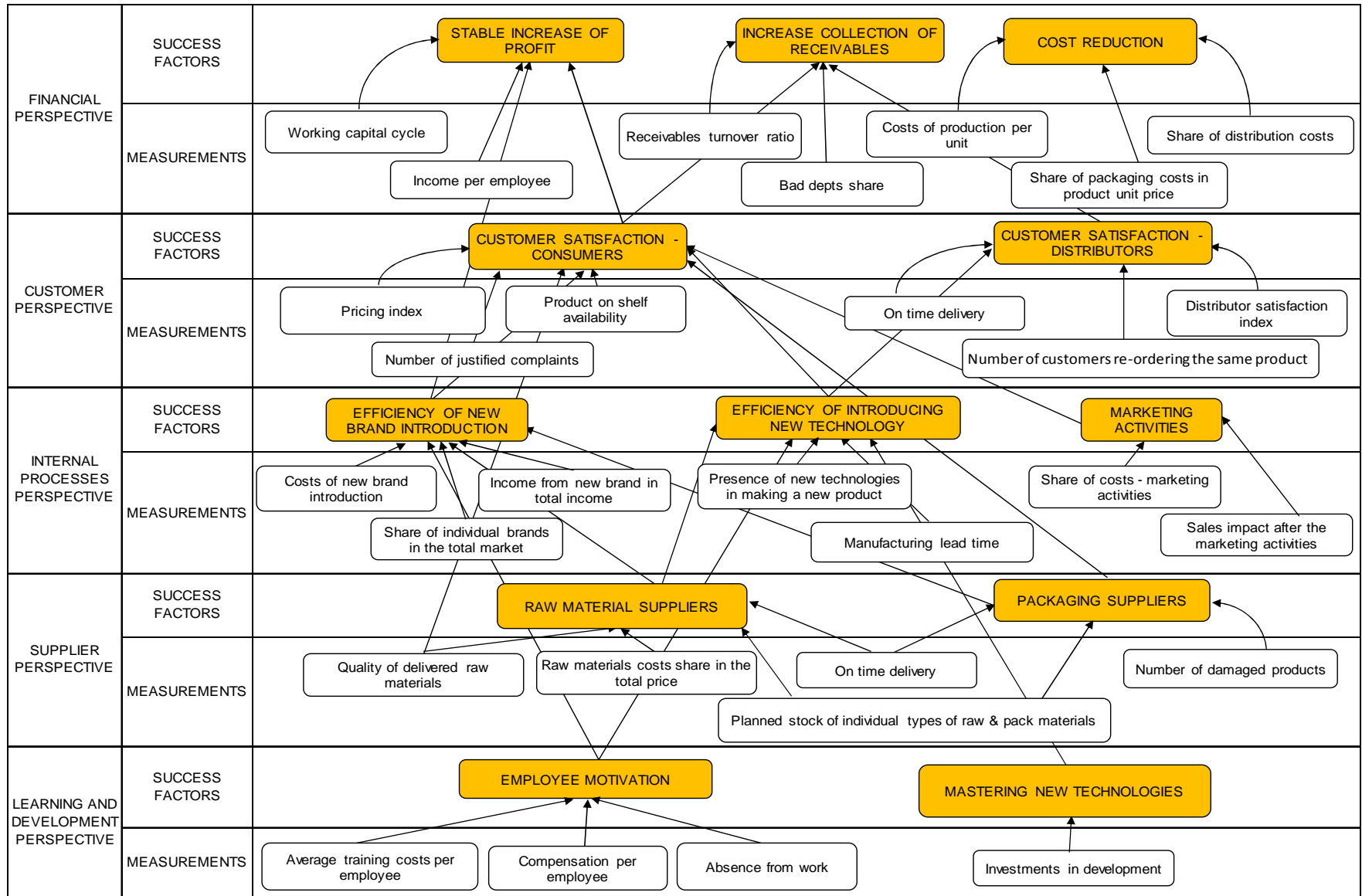


Figure 4. BSC Strategic map of a beer manufacturer

### 3. CONCLUSION

The specifics of this BSC analysis reflect in the modification of the usual BSC analysis (which is usually found in theory and practice) which has four perspectives and an analysis of the suppliers, as one of the major perspectives in the brewing industry, has been included. This paper prompts the conclusion that with companies which are engaged in beer production, a much clearer image of the success of operations can be provided through a BSC analysis with five perspectives. In strategic mapping, four perspectives mostly show four perspectives linked in a cause and effect chain. This paper deviated from that approach and attempted to show how the supplier perspective at the same time affect the customer perspective (we took the example of timely delivery which directly affect the delivery to the customers), and also internal processes in the company which in this case directly rely on the suppliers.

How to successfully eliminate this interdependence, i.e. to avoid having customers depend on the supplier but rather on our ability to produce and distribute to customers in time? This can be attained by planning optimal stock, because only in this way, beer manufacturers can successfully react to each change on the market. Ratio of optimal stock was not the topic of this paper and we did not cover it separately.

Another question raised by this BSC analysis is the question of customers, i.e. who the beer customer from the viewpoint of the manufacturer is, whether these are end users – consumers or retailers (distributors). Consumers are the creators of demand and hence they represent a more important category. Monitoring demand and timely reaction of the company to deviations in demand (both positive and negative) represent an important segment of business operations. This does not mean that distributors are not also relevant. As an important link in the supply chain, they enable the product to find its way to the consumer. This is why various researches are done and satisfaction of the end user and the retailer-distributor is monitored.

In this BSC analysis, 31 measurements have been used in order to measure the success factors which we set in our strategy. One must admit that this is a lot because usually between 20 and 25 measurements are used in order to obtain a clear image. However, if this module was to live and be deployed in a brewery, further control and analysis of obtained data would lead to the best BSC analysis structure. No BSC analysis gave the best results immediately upon introduction. It usually takes years to adjust to the processes which are relevant for a given company because in the implementation of the BSC analysis itself one of the steps is control and analysis where all the strengths and weaknesses of the analysis are seen and

further improvements are made to it. All this gives opportunity to continue with researching this topic in some future papers.

### 4. REFERENCES

- [1] Deyhle, A.; (2007), *Controlling & Controller*, Management Service Verlag, Gauting/Munchen.
- [2] Horvath, P.; (2003), *Das Controlling konzept*, Beck DTV Verlag, Stuttgart, 2003.
- [3] Kaplan R., Norton D.;(1996), *Balanced Scorecard, Translation Strategy into Action*, Harvard Business Press.
- [4] Kaplan R., Norton D.; (2008), *The Execution Premium: Linking Strategy to Operations for Competitive Advantage*, Harvard Business Press, p. 47.
- [5] Kaplan R. Norton D.; (1992), *The Balanced Scorecard-Measures that Drive Performance*, Harvard Business Review.
- [6] Kaplan R.,Norton D.; *The Strategy Focused Organization*, Harvard Business School, Boston, 1999.
- [7] Kaličanin Đ.; (2003), *Balanced Scorecard i strategijski fokusirana organizacija*, Ekonomski anali br. 158.
- [8] Maksimović R.; (2008), *Primena "Balanced Scorecard" metodologije u malim preduzeću*, Infoteh-Jahorina, Vol. 7, Ref. C-5, p. 280-284, March 2008
- [9] Niven P.; (2008), *Balanced Scorecard Step-by-Step* , J. Wiley & Sons.
- [10] Olve N.G., Roy J.; (2010), *Performance Drivers* , J. Wiley & Sons.
- [11] Osmanagić N.B.; (2004), *Kontrolong*, Zagreb.
- [12] Perović V.; *Kontroling Koncept preduzeća*, (2004),Privredna izgradnja, XLVII: 1-2, str. 113-135
- [13] Perović V., Nerandžić B.,Todorovic A.; (2012) *Controlling as a usefull management instrument in crisis times, African Journal of Business Management*, Vol 6 (6), p. 2101 – 2106 ISSN 1993-8233
- [14] Perovic, V., Nerandzic, B., Bojanic, R., Zivkov, E., Bulatovic, B. (2013). *Influence of controlling the investment projects in ERP(M) with primary focus on the cash flow in the company*. Metalurgia International, 18 (4).
- [15] Leković, B., Ivanišević, A., Marić, B., Demko-Rihter J., (2013), *Assessment of the Most Significant Impacts of Environment on the Changes in Company Cost Structure*, Economic research, Vol. 26 no. 1, pp. 225 – 242
- [16] Porter M.E.; (2000), *What is a Strategy?* , Harvard Business School Press, 2/2000 .
- [17] Porter M.E.; (1980), *Competitive Strategies*, Free Press, New York.

# Implementacija balanced skorekarda kao instrumenta strateškog kontrolinga u pivarskoj industriji

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## Rezime

*Današnja preduzeća se susreću s mnogim preprekama kada je u pitanju razvoj sistema merenjau speha koji bi zaista pratio prave stvari, a koji bi uravnotežio finansijske brojke s' pokretačima budućeg učinka, istovremeno usmeravajući energiju nematerijalne imovine i pomažući organizacijama u sprovođenju strategije. Balanced Scorecard je alat koji odgovara postavljenim zahtevima, jer u svojoj osnovi čini kombinaciju komunikacijskog alata, sistema merenja i sistema strateškog upravljanja. Ovo je pažljivo odabran skup mera dobijenih iz strategije neke organizacije koje se mogu kvantifikovati. Odabrane mere mogu se koristiti kako bi se zaposlenima i eksternim zainteresovanim grupama prezentovali rezultati i pokretači učinka pomoću kojih organizacije pokušavaju postići svoju misiju i strateške ciljeve.*

**Ključne reči:** Strategija, ciljevi, performanse, uspešnost.