

APPLICATION OF BALANCED SCORECARD METHOD IN THE EVALUATION OF E-BUSINESS STRATEGY⁵⁶

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Abstract

Given the fact that today business entities operate in dynamic and unpredictable environment it is necessary the monitoring and evaluation of e-business strategy in order to adjust to the same and at the same time to achieve the goals of the business entity. The strategic assessment is a continuous process of evaluation of the progress of the business entity in relation of strategic objectives resulting with corrective measures.

The current changes in the environment and new work patterns that are continuously complementing and changing impose an integrated approach to evaluate the strategic performances which in addition to indicators for financial data will also include indicators for customers that in e-business evolution have a central place.

The goal of this paper is to show Balance Scorecard (BSC) method with its elements and features and to present its capabilities and elements of the application in the evaluation of e-business strategies in today's turbulent environment.

⁵⁶ review scientific paper

Key words: BSC method, e-business, strategy, strategic planning

INTRODUCTION

The digital revolution has dramatically changed the environment. Those changes as a memory had impact on the behavior of consumers and business entities. Consumers are constantly searching on the Internet, they search for information, products and services, communicate, buy, sell etc. Business entities change their way of operation, they change the entire process of production and service delivery.

Many business entities, without much thinking, in particular without strategic approach, are participating at e-market as a result or response to their competition which leads to many errors and deficiencies in the operation and ultimately, failure of their performance. Business entities for success at e-market need to develop a strategy with a clear focus. Considering the fact that today business entities operate in dynamic and unpredictable environment it is necessary monitoring and evaluation of e-business strategy in order to adjust to the same and at the same time to achieve the goals of the business entity.

The process of strategic planning of e-business follows the same stages as in traditional business, such as: strategic initiation, formulation strategy, implementation strategy and evaluation strategy. In addition to the paper is covered the final phase of the process of strategic planning in e-business - a strategic assessment.

The strategic assessment is a continuous process of evaluation of the progress of the business entity in relation of strategic objectives resulting in corrective measures in certain cases and reformulation strategy.⁵⁷

The strategic evaluation includes observation of the progress towards achieving the set standards. Process control is realized by setting standards, comparison of the realized with the standards, taking corrective action and achieving feedback. This process involves six phases: identification of the object of control, setting control standards, measuring performance, comparing

⁵⁷ Turban, E., et al., "Electronic Commerce- a managerial perspective", Pearson Education, Prentice Hall, 2008, p. 643

achieved results with standards, determination of the causes of deviations and taking corrective actions.⁵⁸

Through the assessment of e-strategy should be achieved several objectives as:⁵⁹ measuring the level of e-strategy or whether the strategy is realized as planned or otherwise should be taken corrective measures; determining whether the e-strategy is still achievable in the current business environment; revising the strategy as a result of perceived errors and appropriate improvement and timely identification of failed projects and the reasons for them.

According to Combe⁶⁰ the process of evaluation of e-business covers evaluation of the organization, finance, technology, human resources, website and accepted business model. The organizational control allows proper regulation of internal activities of the business entity in order for performances of the entity to interact with established goals. The financial control includes the following elements: cash flow, assets, accounts of customers (loans, terms of payment), suppliers (risks associated with supply chain), stocks, etc. The balance sheet and income statement are two important financial statements (indicators) of each business entity. Each e-business entity is necessary to follow the technological changes because they are the main guide of the development of e-business. The acceptance of certain technological applications should be towards achieving the goals, but according to finances and skills of the business entity. From the aspect of computer hardware evaluation process includes capacity, costs, adaptability, scalability, obsolescence and risks. Also in e-business is important the evaluation of human resources because new technologies reduce the need for staff but they are in need of a small number of employees, but with specific and specialized knowledge. Design and applications of the website are important for business entity so it can adequately be included in e-business activities. Therefore it is necessary an appropriate monitoring and evaluation of the website of the business entity. The evaluation of the accepted business model is an integral part of the overall evaluation

⁵⁸ Shuklev B., Drakulevski L., "Strategic management", Faculty of Economic - Skopje, 2001, pp.263-275.

⁵⁹ Turban, E., et al., "Electronic commerce - a managerial perspective", op.cit., p. 662

⁶⁰ Combe C., "Introduction to E-business - management and strategy", first edition, Elsevier Ltd., Oxford, 2006, pp. 274-293

process from the aspect of activities and opportunities for achievement of income with the accepted model. The final part of the evaluation refers to the long-term aspirations of the business entity. The evaluation of e-business strategy should determine whether the business entity is moving in the right direction for achieving the set goals.

For evaluation of e-business strategy can be applied classical financial indicators such as: the rate of return on investments, profitability index, a review of costs, market participation, discount, dividend rate etc. For each business entity it is important how fast they return the initially invested funds in the project because they can be reinvested and help the further development of the business entity.

In e-business are quite significant the non-financial indicators due to the fact that many benefits of e-business are of immaterial nature and cannot be transferred in finance, such as, for example, the case of consumer services, consumer satisfaction, etc.

BALANCED SCORECARD METHOD – FEATURES AND ELEMENTS

In a dynamic environment of the business entity it is necessary completely monitoring and evaluation of selected strategies in order to achieve the goals and mission of the business entity and timely adjustment to it. The strategic assessment is a continuous process of evaluating the progress of the business entity in terms of strategic objectives that results in corrective measures, in certain cases also the reformulation of the strategy. Although financial indicators are the main measure of success of the business entity, however, and non-financial indicators should not be excluded in the evaluation because they give their contribution in the success of business entity and creation of long-term values.

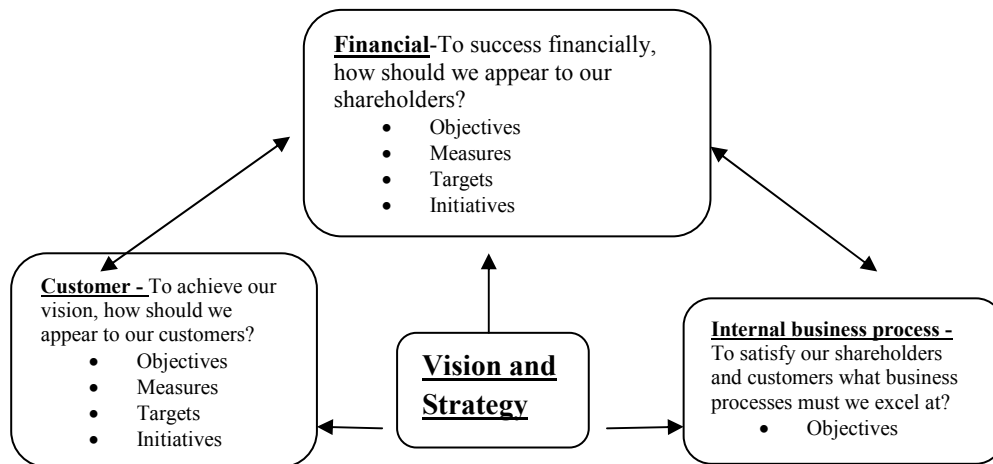
One of the most known methods for measuring the strategic performances of business entity is the method known as Balanced Scorecard (BSC). This method was developed by Robert Kaplan and David Norton and relies on the following principles:⁶¹ a single measure cannot focus on all critical areas of the business;

⁶¹ Elkin P., “Mastering Business Planning and Strategy”, The power and application of strategic thinking, Thorogood, 2007, p.135

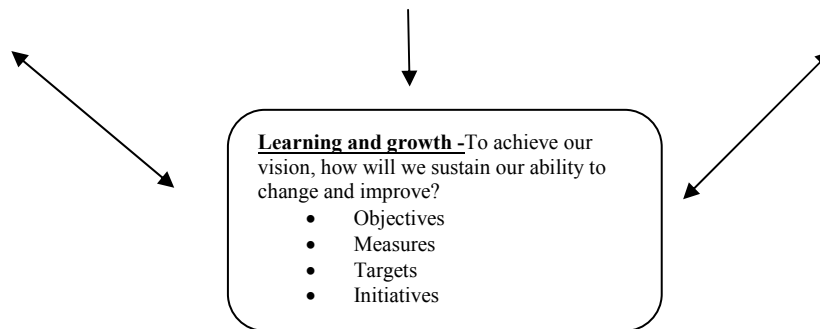
reducing information overload to managers by limiting the measures that are used; and the approach is a way of clarification, simplification and operationalization of the mission. Kaplan and Norton in 1992 presented⁶² the concept of the BSC, since they recognized the need for companies to develop the ability for utilization of intangible assets against investment capability and management of natural resources. The representation of this concept does not make replacement of financial measures, but only supplemented the process of measuring the performance of companies, that in addition to the financial perspectives, companies will be able to put emphasis on the non-financial perspectives as consumers, internal business processes and learning and growth. According to Kaplan and Norton the financial parameters will increase, if they improve other performances of companies.

This method involves four main perspectives of corporate efficiency so that, despite the financial perspective includes a non-financial perspective. Each perspective refers to a specific area relevant to the development of business including: financial perspective, customer perspective, a perspective that relates to learning and growth and internal perspective. Figure 1 shows the original structure of the method known as Balanced Scorecard.

Figure 1 Four perspectives of the Balanced Scorecard method



⁶² Kaplan R.S., Norton D.P., Using the Balance Scorecard as a Strategic Management Systems. Harvard Business Review, 2005, p.2



Source: Kaplan, R.S., "Conceptual Foundations of the Balanced Scorecard", Working Paper 10-074, Harvard Business School, 2010, p.4.

In table 1 is shown this method of measuring the performances described by Elkin.⁶³ He made minor changes in the basic concept in the area of business development and internal perspectives. In the original model of the perspective of business development is shown as perspective of learning and growth.

Table 1 Method of measuring the performances

<u>Perspectives/Business objectives</u>	<u>Strategic Keys Performance Indicators (SKPIs)</u>
Financial perspective: profitability, shareholder income, growth, stability	Net profit margin, return of total funds, dividend level, dividend cover, sales trend-growth, gearing ratio, interest cover and so on.
Customer perspective: customer care, quality, availability, brand value	Customer satisfaction, number of complaints, product/services lead time (days), management daily quality (number of failures).

⁶³ Elkin P., "Mastering Business Planning and Strategy", op.cit., pp.135-137

Business development perspectives: innovation/ creativity, effectiveness, investment	Overall sales per head, unit sales, market penetration (%), customer retention (%), new products/services, number of new ideas, capital spend, profit retained in business and so on.
Internal perspective: staff retention, personal development, performance, commitment, communication	Staff turnover rate, (%), training days (no), evaluation of the performance, centre for development, sickness/ absence level (no of days), meetings, workshops, no formal meetings (days) and so on.

Source: adjusted to Elkin P., “Mastering Business Planning and Strategy”, The power and application of strategic thinking, Thorogood, 2007, pp.135-137

This method stresses the use of measurable goals and measurement of strategies to drive it, framed within a three-tiered structure.⁶⁴

1. The mission as conceived as the overarching and driving force (e.g. to be the industry’s preferred supplier).
2. Objectives derived from the mission (e.g. to introduce appropriate products as needed and before our competitors).
3. Performance indicators (e.g. proportion of profits derived from products less than two years old).

The use of the BSC method will enable the business entity to evaluate all four levels of organizational interactions and to create an integrated system for evaluating the effectiveness in achieving the new e-business mission.⁶⁵

APPLICATION OF BALANCE SCORECARD METHOD FOR EVALUATING E-BUSINESS STRATGIC PERFORMANCE

However, today e-business implies new business goals and strategies and the old measures for success cannot be applied in long term. Many authors have applied and adapted the methodology of BSC method for e-business projects.

⁶⁴ Janice B., Peter M., Martin B., “e-Business Strategies for Virtual Organization”, Butterworth-Hainemann, First edition 2002, p.176.

⁶⁵ Ibid., str. 186

They built models to evaluate the strategic effectiveness in e-business where the basic concept of the BSC method was adapted to e-business activities. Therefore, Grembergen and Amelinckx⁶⁶ the general framework of the BSC method have adapted to the needs for evaluating of e-business performance and the model consists of the following four perspectives: business contribution, orientation intended for the customers, operational perfection and future orientation (Table 2).

Grembergen and Amelinckx⁶⁷ highlighted the need to follow a few steps in the construction of specific e-business Balanced Scorecard: firstly, the concept of the techniques of e- business Balanced Scorecard to be presented to the top management, IT management team and project management team and determine the project team for e-business Balanced Scorecard; second, the phase of data collection, information to be collected for e-business metrics, which should be SMART or specific, measurable, actionable, relevant and timely and third, e-business Balanced Scorecard should be based on principles developed by Kaplan and Norton.

Table 2 Generated e-business Balanced Scorecard

<p><u>Customer orientation</u> What is the company's success in acquiring and retaining customers through the web site? Mision To be the preferred supplier through the internet Objectives</p> <ul style="list-style-type: none"> • customer satisfaction • customer retention • acquiring new customers • effective internet marketing 	<p><u>Business contribution</u> How should the E-business project appear to the Board in order to be considered as significant contribution to company success?? Mission To enable and contribute to the achievement of business strategies through effective application of Ebusiness Objectives</p> <ul style="list-style-type: none"> • E-business strategic plan achievements • business value of E-business project • compliance with budget.
<p><u>Operational excellence</u> At which services and processes must the E-business application excel to satisfy the stakeholders and</p>	<p><u>Future orientation</u> How will IT develop the ability to change and improve in order to better achieve the company's</p>

⁶⁶ Grembergen W., Amelinckx I., "Measuring and Managing E-business Project through the Balanced Scorecard", 2002.

⁶⁷ Ibid.

customers? Mission To deliver timely and effective E-business services at targeted service levels Objectives <ul style="list-style-type: none"> • fulfillment process • availability of the E-business system • improvement of system development • security and safety 	strategy through E-business application? Mission To enable and contribute to the achievement of business strategies through effective application of E-business Objectives <ul style="list-style-type: none"> • E-business expertise of developers • E-business staff management effectiveness • independence of consultants • reliability of software vendors
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Source: Grembergen W., Amelinckx I., “Measuring and Managing E-business Project through the Balanced Scorecard”, 2002.

In fact, the transformation of traditional BSC to e-business BSC can be illustrated as follows:⁶⁸

- Financial perspective → Perspective of corporate contribution
- Consumer perspective → Perspective oriented towards consumers
- Perspective of Internet business process → Perspective of operational perfection
- Perspective of learning and growth → Perspective of future orientation

Measures of consumer orientation describe the success of the business entity in attracting and retaining customers. Also they measure customer satisfaction and effective Internet marketing of the business entity. Characteristic measure for *customer satisfaction* is the result of the online or offline research of business entity for online customer satisfaction and number of complaints from consumers compared with the number of decisions in an acceptable time. To measure the *retention of consumers* is important the rate of retention of customers which should strive to increase and consumers to be more attached to the relevant brand. For this purpose also, an important indicator is the percentage of consumers who again made an order. *Attracting new customers* is measured by the number of new customers and/or new ones deriving from the website. Also, for this purpose, as a general measure appears the number of sales generated from the website of the business entity. The measures for *Internet marketing* indicate the effectiveness of Internet marketing activities in order to achieve business and marketing goals of the business entity. As important to the

⁶⁸ Available at <http://www.isaca.org/Journal/Past-Issues/2000/Volume-2/Pages/The-IT-Balanced-Scorecard-A-Roadmap-to-Effective-Governance-of-a-Shared-Services-IT-Organization.aspx>, Accessed on 21.01.2014

business entity are the traditional measures as well as web-measures. Web-measures are collected automatically from the web server and allow marketers to identify the advantages and disadvantages of the website. Online metric represents the number of hit-s. Hit is any element, including graphics, text, interactive section that are located on the web site recorded by the web server. More reliable measure for this purpose is the number of page impressions. In fact, this measure is equal to how many times a particular web page is presented to visitors. When consumers visit the site they can access only on the homepage, can search for the site or at the same time visit multiple pages. If the marketers are not interested in these results separately, then useful measure is the number of visits to the site. But this measure is not the most reliable for the following circumstances: the visitor can access the site and also to search through other sites, and after a certain period to return to the original site that will be registered as a new visit because of the time period in clicks. Therefore, the most important measure in this case will be the number of visitors. And there are certain disadvantages as more Internet users can have the same IP address, or a user can have multiple IP addresses. But this can overcome by identifying the user with name and password.

The contribution to e-business project in the overall business performance is measured by several measures: profitability of the website which is defined as direct incomes from the website minus operating costs for the site and the rate of return on investment; direct online sales contribution or through the web site; cost reduction as a result of the website (operating, acquiring new customers, promotion, maintaining relationships with customers).

Operational perfection refers to the internal conditions of a business entity to meet the expectations of consumers. The fulfillment of the process is measured by the time of delivery of orders, the number of errors in the ordering and delivery and so on. Also from this perspective is measured the availability of e-business system, improving system development, safety and security.

The perspective for future perfection examines the ability of the business entity for effective use and enhance the functions of e-business project in the present and the future. Number of trainings for professionals for the development, made expertise, rate of absence from work, satisfaction of the members of the project team are just some of the measures that are used for achievement of the objectives of this perspective.

Depending on the level of e-business activities, the implemented applications in the business entity, etc., can bring new perspectives for BSC. As an example of new perspectives of BSC for e-business evaluation can be:⁶⁹

- Perspective of information technology: To achieve the vision of the business entity, how may be adjusted hardware and software that are used?
- Perspective of corporate identity: To achieve the vision of the business entity, how should be presented the business entity?
- Perspective of integration: In order to have maximum benefit, which process should be adjusted for full integration?

According to Stephen⁷⁰ the evaluation of e-business opportunities and e-business models is done through the following analysis: ratio cost-earnings, rates of sale prices, analysis of theoretical earnings (TEMA), number of visitors, price per engineer, choice between different approaches, real options and game theory, etc.

In literature can be found authors⁷¹ who do not divide non-financial performance indicators in three categories, but integrate them, including: consumer loyalty, attracting new customers, customer satisfaction, on-time delivery, quality of products and services, reputation of the business entity, satisfaction and employee morale etc.

CONCLUSION

Strategic planning in e-business is imposed as a result of turbulence in the environment, the dynamics of changes and uncertainty arising therefrom. Changes that are constantly occurring in the external environment are becoming a critical factor for the operation and success of business entities and therefore

⁶⁹ Ronaghi, F., "E-Business-Controlling using the Balanced Scorecard", Proceedings of the 1st Balkan Conference on Informatics, 2003, p.96, <http://delab.csd.auth.gr/bci1/Balkan/94Ronaghi.pdf>, Accessed on 22.01.2014

⁷⁰ Stephen Chen, "Strategic Management of e-Business", Second edition, John Wiley & Sons, Ltd, 200., p. 244-250

⁷¹ Available at <http://www.eis.ktu.lt/index.php/EIS/article/view/1099/1175>, Accessed on 10.02.2017, p.215

there is a need for continuous study of the environment and consideration of the possibilities that it can enable to the business entities or threats that can come out. The current changes in the environment and new patterns of work that continuously complement and change impose an integrated approach for evaluation of strategic performances - indicators for financial and indicators for consumers that in e-business evolution have a central place.

Using Balance Scorecard method are not replaced the financial measures, but only complements the process of measuring the performances of the business, in a way that in addition of the financial perspectives, businesses can put emphasis on the non-financial perspectives as customers, internal business processes and learning and development. Therefore, the financial parameters will increase, with previous improvement of other performances of companies. When evaluating the e-business strategies it is necessary modifying of the standard model of Balance scorecard method, which should include the following perspectives: customer orientation, business contribution, operational perfection and future orientation.

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