

IMPROVING CORPORATE GOVERNANCE THROUGH APPLICATION OF BALANCED SCORECARD: THE CASE STUDY OF BOSNIA AND HERZEGOVINA

Elvir Čizmić

School of Economics and Business Sarajevo

Anes Hrnjić

School of Economics and Business Sarajevo

Abstract

From the very beginning of management concepts development, a great number of authors tried to find a comprehensive and systematic solution for managing different types of organizations. Nowadays in vivid and extremely competitive business markets, corporations must dedicate substantial amount of time, human capital and financial funds in order to adequately measure organizational performance as well as to evaluate progress in achieving strategic goals. Consequently, corporations are required to execute a suitable strategic management approach and organizational performance measurement system for capturing the value of intangible assets (which in today's business environment constitute a large portion of total assets value) such as employee satisfaction, innovation, customer as well as supplier relationships. In that sense, balanced scorecard concept has emerged as a verified and effective business management tool in quest to capture, define and interpret intangible assets into real value allowing corporations to implement differentiating strategies successfully. The purpose of this paper is to present results of the investigation conducted in companies in Bosnia and Herzegovina. The research model is associated with certain familiar operational managerial concepts to each balanced scorecard concept perspective. The intention of the investigation is to measure the impact intensity of the balanced scorecard model variables to the effectiveness, efficiency and the financial results of domestic companies. The logic of the model is that knowledge management, total quality management and customer relationship management represent main elements of first three balanced scorecard customer perspectives and the intensity of using its postulates has a positive influence to the other balanced scorecard perspectives and specially, to the strategy implementation and better financial results.

Keywords: Balanced Scorecard Concept, Business Measurement System, Strategy Implementation, Strategy Cause-Effect Map, Partially Mediated Model

JEL classification: M10, M16, M21

1. INTRODUCTION

From the very beginning of management concepts development, a great number of authors tried to find a comprehensive and systematic solution for managing different types of organizations. Nowadays in vivid and extremely competitive business markets, corporations must dedicate substantial amount of time, human capital and financial funds in order to adequately measure organizational performance as well as to evaluate progress in achieving strategic goals.

Consequently, corporations are required to execute a suitable strategic management approach and organizational performance measurement system for capturing the value of intangible assets (which in today's business environment constitute a large portion of total assets value) such as employee satisfaction, innovation, customer as well as supplier relationships. In that sense, balanced scorecard concept has emerged as a verified and effective business management tool in quest to capture, define and interpret intangible assets into real value allowing corporations to implement differentiating strategies successfully (Niven, 2002).

Balanced scorecard application as a strategic planning and management system is very broad and it can be used extensively in business and industry, government as well as nonprofit organizations to align organizational operations to the vision and strategy at the same time improving internal and external communications as well as monitoring organization performance against strategic goals (Narayanamma & Lalitha, 2016).

This management concept can also have an important role in corporate governance responsibilities because organizational performance indicators and accuracy of other organizational data can have a significant impact on corporate board decision-making process, including executive and corporate boards. Strategic feedback is assigned to present the status of organization from various perspectives aiming to improve forthcoming business decision-making process. Diagnostic feedback on numerous business processes is supposed to guide continuously organization's improvement of both, non-financial and financial results.

Quantitative inputs in forecasting methods and models for decision support systems represent the platform for using management by objectives systems.

Table 1 Five major responsibilities of corporate board in affecting organizational performance

Responsibilities of corporate board that are critical for performance of organization:
(1) approving and monitoring the organization's corporate strategy
(2) approving the most important financial decisions
(3) selecting the chief executive officer (CEO), evaluating hers/his work and senior executive team as well as ensuring succession plans implementation
(4) providing consultation and support to the CEO
(5) ensuring compliance in corporate reporting, including compliance with legal, accounting and regulatory requirements as well as adherence to ethical and community standards

Source: Kaplan, R. S. & Nagel, M. (2004). *Improving corporate governance with the Balanced Scorecard*. Division of Research, Harvard Business School.

A vigorous and involved corporate board is one of critical segments of shaping and accomplishing an effective strategy too. When a corporate board executes successfully its five major responsibilities (see Table 1), it can have a positive contribution to the performance of organization. Those five responsibilities can be carried out successfully using the balanced scorecard and include following: (1) approving and monitoring the organization's corporate strategy, (2) approving the most important financial decisions, (3) selecting the chief executive officer (CEO), evaluating hers/his work and senior executive team as well as ensuring succession plans implementation, (4) providing consultation and support to the CEO and (5) ensuring compliance in corporate reporting, including compliance with legal, accounting and regulatory requirements as well as adherence to ethical and community standards (Kaplan & Nagel, 2004).

1. *Approving and monitoring corporate strategy*

Even though members of the corporate board do not usually participate in creating and formulating corporate strategy (it is the activity carried out by the CEO and hers/his Executive Leadership Team), it is highly important that they have a good understanding of how company is intending to conquer the market in strategy approval process because it greatly affects long-term shareholder value creation. Once they approve a certain corporate strategy, members of the corporate board are also responsible to continually monitor implementation and performance of it. In order to execute this activity effectively, they must understand what are the key values as well as risk factors for the business. However, majority of corporate boards have a limited exposure to corporate operations, technology, employees as well as customers and, thus, they have insufficient understanding of key values and risks (Nagel & Rigatuso, 2003).

McKinsey survey (2002) has showed that 44% of board members do not fully understand the key drivers of value for the corporations they govern. This is a so-called visibility issue that can be addressed by an automated usage of the balanced scorecard providing timely, relevant and accurate information (Marcos et al., 2012).

2. *Approving major corporate financial decisions*

In order to fulfill strategic objectives of the organization, the corporate board must ensure the effective and efficient use of financial and other resources. Some of the responsibilities of the board in this context are approving the annual operating and capital budgets, authorizing major capital expenditures, new financing or repayments as well as acquisitions, mergers and divestitures (Kaplan & Norton, 2006). A lot of elements of these expenditures and financing plans can be described as highly strategic. However, it is not always clear its requirements for financing approval are aligned to the corporate strategy, so it is critical that the corporation has a well-structured strategy in order to determine advantages or disadvantages of a certain strategic expenditure. Another issue that can be solved using the balanced scorecard is related to activities post-approval of expenditures in which directors can obtain information about whether the particular, previously approved expenditure has produced the projected benefits.

3. *Selecting and evaluating the CEO and hers/his Senior Executive Team*

The activity of hiring the chief executive officer and approving hers/his members of the senior executive team is carried out by the corporate board. Members of the board also have the responsibility to assess the performance of the CEO and hers/his team and based on the assessment to approve suitable compensation and incentives. Another responsibility of the board is to assure that succession plans exist for each senior executive. However, directors on the board seldom have the necessary information that enables them to distinguish between specific executive performance and performance of the entire organization. A common tactic to provide incentives in cases when it is difficult to specify all aspects of a particular job (such as being a senior executive) is the application of subjective performance evaluation, in addition to some objective assessments. For instance, subjective assessments have the benefit that they can be a more fully rounded and realistic measure of performance (Webb & Blandin, 2006).

4. *Counseling and supporting the CEO*

The corporate board has an important role in counseling and supporting the CEO. Specific members of the board can contribute particular knowledge of the industry, management expertise and guidance based on corporation's past and

competitive positioning. However, the relationship between the board and the CEO is a two-way communication and it is interesting to look at it from both sides. Instead of reporting to a single boss, the CEO of the corporation usually has ten or 12 directors of the board to whom he directly reports and one of them is so-called "lead director," who by the virtue of that position is meant to balance the CEO's authority. Though the board is likely to be composed of experienced and capable individuals, in reality some members will have limited knowledge of the company's industry. Thus, the CEO along with the management team has to educate the board about what is happening in the corporation and the industry. While the CEO may also have difficulties in obtaining relevant and accurate information, the worst thing for hers/his relationship with the corporate board is for the directors to feel uninformed or surprised. Because board members have many demands on their time, information must be transmitted to them in a way that is easy to understand (Porter et al., 2004). One of the most effective ways in which CEO can deal with these issues is usage of balanced scorecard that will enable her or him to have relevant and accurate information as well as measure the performance, both of entire corporation and specific initiatives, but also members of the board will be better informed in their decision making.

5. *Ensuring compliance*

In the end, the corporate board is responsible for ensuring compliance in corporate reporting, including compliance with legal, accounting and regulatory requirements as well as adherence to ethical and community standards. In other words, directors of the board must be focused on monitoring certain risks, verifying an appropriate risk management practices as well as ensuring that corporate reporting and disclosure is representing the underlying economics of the corporation performance, including key risk factors. In case when members of the board receive insufficient information to effectively address key compliance issues and business risks, corporation can fail in achieving its strategic targets. Previously mentioned McKinsey survey (2002) found out that 36% of corporate board members do not understand what are the biggest risks that enterprise is facing and 43% do not have the competence to effectively identify, safeguard against and plan for key risk factors (Rayner, 2003).

In the past, we have seen that the results of corporate boards have not often been brilliant, especially in the context of present challenging business climate which makes board performance even more difficult. Characteristics of effective corporate boards include members of the board who actively participate by taking the initiative in designing clear and focused future agendas in which board energy is concentrated on specific value drivers of the corporation while at the

same time using management tools and ICT systems that will aid them in monitoring enterprise performance. Hence, we have witnessed evolution of the balanced scorecard as a tool that enables corporations to create greater value at all organizational levels, including business units, executive team and corporate board (Kaplan et al., 2003). This can be carried out using three balanced scorecards that are connected and work together, including the Enterprise Scorecard, the Board Scorecard and the Executive Scorecard. These scorecards simplify objectives, priorities, business processes, ownership as well as define the relationships between anticipated financial results and the actions needed to achieve them.

The Enterprise Scorecard is the foundation of essential information for executive management team as well as board containing a brief, but thorough understanding of the business and its key drivers. This management tool defines corporate strategy, measures and targets identifying key processes, capabilities, and resources as well as defining milestones and risks. *Board Balanced Scorecard* is a tool that is based on balanced scorecard methodology with aim to clarify specifically how the board intends to contribute to the corporation. It includes clear statements about which entities (such as board committees or management) own specific results. The Board Scorecard contains details on assignments which are carried out as a part of the board's basic mission, including approving and monitoring funding for strategic initiatives, evaluating and rewarding executive performance and actively monitoring risk and regulatory compliance. Executive Balanced Scorecard is created by collaborative actions of boards and management. This helps postulate expectations for senior management, describe senior management priorities and recognize exactly how they will contribute to the corporation. Because Executive Scorecards is stating the exact professional role that managers are to execute, they are very useful in assessing the skills needed to fill open positions and can be part of succession planning.

2. THE BALANCED SCORECARD MEASUREMENT SYSTEM

Contemporary organizations depend on measurement and analysis of various performances indicators, so it is critical that management team and board have a good understanding of corporate functions and strategy. Corporate metric systems must be derived from the corporate strategy, which also needs to provide critical information about key processes, outputs and results (Toru & Hiroshi, 2003). Data which is needed for performance measurement can be of different type in relation to customer, product and service performance,

operations, business, competitive advantages, suppliers, employees' relation as well as costs and financial aspects of the business. Business analytics are used to determine tendencies, forecasts and cause-effect relationships that might not be obvious. These activities also support various operations of the corporation, such as process of strategic planning, performance evaluation as well as comparison analysis of performance with major competitors or with best practices using benchmarking concept (Cobbold & Lawrie, 2003).

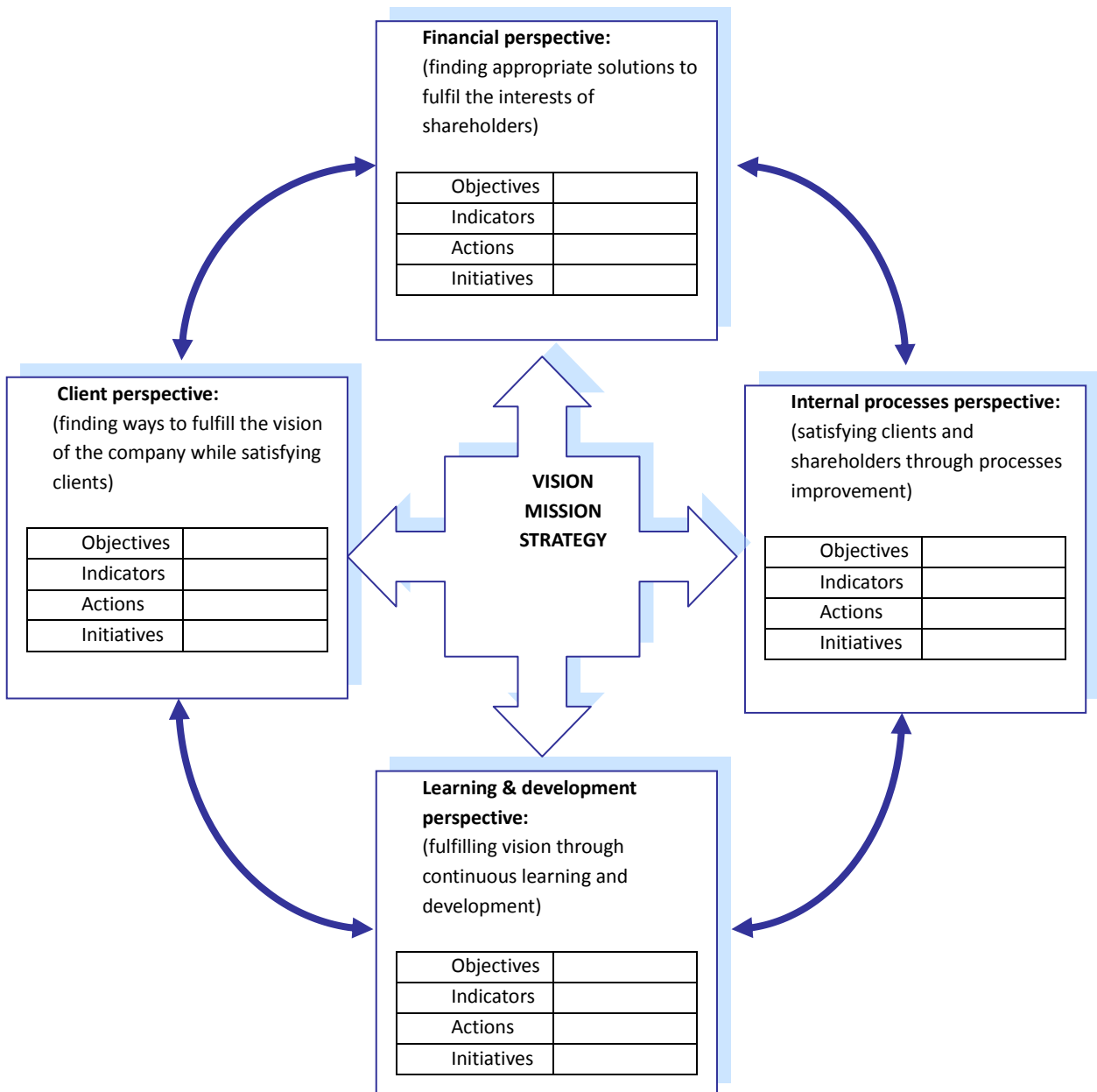
Performance measures (or so-called performance indicators) are quantifiable features of products, services, processes and business operations which corporations use to track and improve performance of various organizational units and their employees. The measures should be carefully selected to represent relevant factors which can lead to enhanced customer relationships, organizational operations as well as financial performance. The balanced scorecard approach is a conceptual framework which permits an organization to clarify its vision and strategy, thus, enabling effective translation of previously mentioned elements into concrete strategy actions and metrics (Kaplan & Norton, 2004). A comprehensive set of indicators tied to customer and/or corporation performance represents a basis for lining up actions with the corporate goals. Through the analysis of data from the tracking processes, indicators themselves may be evaluated or changed with aim to better support corporate strategy and operational goals.

If a corporation wants to achieve solid results within the market, it must be willing to adapt its operations to variety of changes currently affecting the business environment. A contemporary strategic management system should be based on measuring areas which are vital for future success and performance measurement system should make the accurate balance between financial and non-financial indicators (Toru & Hiroshi, 2003). Previously mentioned new approach to strategic management has been developed in the early years of 1990's by two authors Robert Kaplan and David Norton. They named this strategic management system the balanced scorecard concept and at the very beginning they solely described it as a new measurement system. They have recognized some of weaknesses and vagueness of previous management approaches of measuring corporate performance, hence the balanced scorecard strategic management approach was aimed to provide a clear prescription of how business entities should measure their market results in order to create more balanced measurement system.

The equilibrium between financial and non-financial indicators of success, between internal and external perspectives of the organization and between lag and lead indicators of performances of the business is the key precondition for corporations intending application of balanced scorecard concept (Niven, 2002). The balanced scorecard concept represents nowadays a systematic strategic management approach, not solely a measurement system, enabling corporations to clarify their vision and mission statements as well as strategy translation into concrete managerial actions which help employees to state and implement corporate strategy. This approach provides double loop feedback around both aspects the internal organization business processes and external outcomes in order to continuously improve organization strategic performance and individual and organizational knowledge and business results.

At the very beginning, it is extremely important to emphasis main elements of current problems that corporation face in the contemporary business. Since strategy is a complicated issue, executive management in many corporations now use the balanced scorecard methodology to map the key drivers and consequences of doing business and set the cause-effect relationships between those mentioned elements. Once the cause-effect relationship has been established, managers can identify appropriate means to measure those business drivers. The balanced scorecard translates the organization's strategy into understandable goals and objectives, which can be communicated to everybody in the organization in a way that they can understand it (Kaplan & Norton, 2001). The balanced scorecard provides management with a comprehensive picture of business operations and their most current performance. Every key business driver and sub measure, used to measure drivers, must have a person with assigned responsibility for the performance of such driver. The balanced scorecard allows organizations to recognize key areas in their business and assign key responsible persons for maintaining the best performance and processes for those areas. Lastly, it is important to highlight the financial perspective metrics elements of balanced scorecard concept because it does not represent the cause of well doing business, but consequence of well posted main aspects of the first three balanced scorecard perspectives. In the picture below (Figure 1), the generic balanced scorecard concept is presented (Cizmic & Trgo, 2010).

Figure 1 – Main perspectives of the balanced scorecard concept



3. THE BALANCED SCORECARD PERSPECTIVES EXPLANATIONS

The balanced scorecard concept suggests that management has to observe the organization from four perspectives in order to develop metrics, collect data and analyze it in an appropriate manner. Its methodology has been built on some key concepts of previous management ideas and number of perspectives in it is not fixed. The balanced scorecard methodology is composed of Total Quality Management (TQM), Business Process Reengineering (BPR), Economic Value Added (EVA), Value Based Management (VBM), Activity Based Costing (ABC), Customer Relationship Management (CRM) and Knowledge Management (KM), including customer-defined quality, continuous process improvement, cause-effect relationships, employee empowerment and primarily by measurement based management and double loop feedback (Cobbold & Lawrie, 2002). Each one of those concepts are connected to the balanced scorecard methodology in a unique way. Double loop cycle feedback is very important part of this methodology too. In traditional industrial activities, "quality control" was mainly used to describe internal product quality (Shim & Siegel, 1999). The balanced scorecard incorporates feedback around internal business process outputs, as in TQM, but also adds a feedback loop around the outcomes of business strategies and client satisfaction. This creates a "double loop feedback" process in the balanced scorecard concept and it is very important for an organization strategic management.

Even though there are diverse understandings of what constitutes balanced scorecard concept and how to interpret this phenomenon, we can state that in general key characteristics are following: four perspectives, strategy focused organization, knowledge management aspect, operational efficiency, cause effect linkages and strategy map (Kaplan, 2010; Chapman et al., 2009; Toru & Hiroshi, 2003). All of the balanced scorecard concept perspectives will be explain, in short, in the next part of the paper with aim to better understand the model which has been used during research process. The main perspectives from which balanced scorecard concept is comprised are *The Learning and Growth Perspective*, *The Internal Business Process Perspective*, *The Customer Perspective*, *The Financial Perspective* and *The Strategy Implementation*.

The Learning and Growth Perspective is the main perspective of balanced scorecard concept. It includes employee education and training in order to develop employee potential and manifest high degree of performance setting up corporate cultural attitudes related to both individual and corporate behavior and improvements. In a knowledge-driven organization in contemporary context

conditions, people are the only drivers of change and they are the main resource. In the current atmosphere of rapid technological change, it is becoming necessary for employees to be in a continuous learning and education mode (Schneider, 2005). Learning and education also includes developing mentors and tutors within the organization as well as that improvement of communication among employees which will allow them to be ready to help solving various issues when it is needed. It also includes technological tools and criteria, which could be called "high performance work systems" and other elements, which are content of knowledge management activities and human resources management. The next perspective is internal business process perspective and the metrics based on this perspective allow managers to know how well their business is running and whether its products and services satisfy customer requirements and fulfill organization's mission. These metrics have to be carefully chosen and designed by those who are very familiar with these processes which correlate with organization's unique mission. It is important to note that these cannot be developed external persons such as outside consultants. In addition to the strategic management process, two kinds of business processes may be identified: mission-oriented processes and support processes (Kaplan & Norton, 2006). The mission-oriented processes are the special functions of management offices and many unique, business-specific problems are encountered in these processes. The support processes are more routine and repetitive activities and, hence, easier to measure and benchmark using generic metrics according to the total quality management and business process reengineering. The first two perspective metrics represents driving performance and activities indicators, which are very important for organizational future success. The internal processes assess a company's efficiency in areas such as productivity and quality in order to decrease business expenditures.

The customer perspective is the third perspective and it represents recent management philosophy which has shown an increasing importance in context of customer focus and customer satisfaction. These metrics represent set of "final" indicators because if customers are not satisfied, they will eventually find other suppliers that will better meet their needs. Poor performance from this perspective is, thus, a leading indicator of future decline even when the present financial portrait may look good. In developing metrics for customer's satisfaction, corporation should analyze kinds of customers and the kinds of processes by which organization is providing a product or service to those customer groups, including the Sales Force Automation concept development (Chen & Popovich, 2003). In this case, the main elements and activities of customer relationship management are very important to understand and describe this perspective, in

which customer relationship management is assigned to measure customer satisfaction and company market share.

The financial perspective is the next balanced scorecard perspective, but it does not represent the end of journey in understanding and explaining the balanced scorecard. This perspective is very important because it represents clear quantitative aspects of business (Lawrie, 2003). Kaplan and Norton do not disregard the traditional need for financial data. Timely and accurate funding data will always be a priority and managers will do whatever necessary to provide it. With the implementation of a corporate database, there is an expectation that more of the processing can be centralized and automated, but the point is that the current emphasis on financial indicators leads to the "unbalanced" situation with regard to other perspectives. There is, perhaps, a need to include additional financial related data, such as risk assessment and cost benefit data, in this category. This financial perspective could have been explained through the prism of two concepts such as value based management and economic value added elements, activities and indicators.

Strategic aspects or fifth perspective of the balanced scorecard concept is explaining how organization is doing business in a specific region. In contemporary conditions, strategic aspects of an organization should be part of balanced scorecard model. It can be stated that the balanced scorecard methodology translates strategy into concrete business action through added value chain propositions (Kaliski, 2007). Balanced scorecard process enables management to define key perspectives and their indicators that will drive the business to success as well as to define how to measure them. The balanced scorecard concept helps organizations align multiple strategies, from various units, to the organizational strategy by linking their deliverables to those key perspectives that represent drivers of success. Balanced scorecard provides a clear understanding of the corporate strategy and how it is supported by the commitment to objectives from various lower organizational units according to the cascade relationships (Kaplan & Norton, 2001).

Communication of strategic objectives is very important for every organization. Not just the strategic statement, but also how strategy can influence reaching the vision of company in the future presents equal importance for business successful functioning. The balanced scorecard concept allows an organization to define strategy in terms of key business objectives with agreed targets for reaching such objectives in a defined period. Objectives are then supposed to be communicated to all other persons involved in managerial strategic and

operational processes (Niven, 2002). Since balanced scorecard is cascaded from the top of company to the lower organizational unit, this concept generally involves all employees' contribution to reaching the objectives and, hence, they need to understand strategy as well. To maximize effectiveness of a strategy map's communication, it is needed to create accompanying story that brings the map to life in the minds of your employees. Because of that balanced scorecard concept is appropriate tool that will allow to communicate understandable information to all employees on all levels of an organization.

4. METHODOLOGY

The primary objective of this paper is to clarify the potentials of developing a measurement system which would enable executive management teams and members of corporate boards in Bosnia and Herzegovina to observe their organizations more clearly from various perspectives and, consequently, to be able to make wiser long-term decisions for successful business operations regardless if the organization is corporate entity, public institution or non-governmental organization. We hope that findings presented in this paper will motivate different type of managers in Bosnia and Herzegovina to improve or initiate the creation and usage of performance measures in their organizations. It has been often discussed in recent years how understanding of strategy implementation impacts organizational success. In order to understand what drives organizational success, managers have to develop strategic management systems designed to capture information on all aspects of the business operations.

Many organizations, especially business companies worldwide, are harnessing the balanced scorecard strategic management concept that tracks various measures across four or five hierarchical perspectives mentioned above. Investigation questionnaires were built according to perspectives of the balanced scorecard concept. The investigation included more than 100 organizations in Bosnia and Herzegovina of different type, companies and local self-governing institutions. The model was structured so that strategy implementation is a dependent variable of first three balanced scorecard perspectives with presumption that there is significant impact on strategy implementation quality and financial position in domestic companies as well as public institutions. In the conceptual and theoretical sense, the study has mainly been built on the model related to balanced scorecard concept, although it had not entirely followed the logic of testing all the constructs of this original generic balanced scorecard approach. Balanced scorecard concept application intensity represents

the determinant of economic development of the country itself and different level results in more or less evident dynamics in the development of companies/institutions or their competitive advantages regardless if the goal is set to satisfy the needs and requests of customers or to provide the best possible services to citizens. However, what is already known is that many developing countries insufficiently accept and use studies dedicated to the business strategy to develop business and institutional performance and define developmental strategies as well as that the business decisions are mostly made based upon the experience and intuition. So, this fact was also taken in consideration since our sample was collected on organizations based in Bosnia and Herzegovina which is classified as developing South-eastern European country which is in the process of EU accession and going to a vast number of systematic and comprehensive reforms in different aspects of society, including economy.

Even though some empirical studies show that the theory of business strategy concepts in the organizations of Bosnia and Herzegovina is somewhat known, but in practice the behavior of the companies and institutions is far from taking advantages of that knowledge related to business concepts and the benefit of implementing balanced scorecard concept. Such a situation partially results from the circumstances connected with the long-term privatization and post privatization processes in the country and because the domestic managers are lacking the necessary knowledge as well as because of their conformism mental model, but inside the private organizations the situation is much better. This study has focused to answer the following research questions:

- How high is the intensity of using the balanced scorecard concept of the companies doing business and institutions providing services to citizens in Bosnia and Herzegovina?
- What effect generates intensity of using of balanced scorecard concept on organizational or institutional performance in the companies doing business in Bosnia and Herzegovina?
- What effects the balanced scorecard concept has on profitability, service quality and the other business performances of the companies/institutions?
- What kind and how significant is effect of the top-management emphasis on the balanced scorecard concept and the knowledge dissemination and responsiveness of the companies doing business and institutions operating in Bosnia and Herzegovina?
- What are the strategic organizational areas in which problems exist in companies /institutions in Bosnia and Herzegovina according to the balanced scorecard concept?

- How to find the answer to the question as to how and what can or must the domestic top-managers do to increase balanced scorecard concept usage in their organizations?

For the purpose of analysis of the balanced scorecard concept in domestic organizations, it was necessary to do some empirical researching using a sample of organizations in Bosnia and Herzegovina. The main goal of the researching process was to define the intensity of usage in various aspects of balanced scorecard concept in organizations in Bosnia and Herzegovina and relationship between balanced scorecard model variables (perspectives). Because it is evident that there are many problems in strategic managing of organizations in Bosnia and Herzegovina, the additional goal has been to promote this concept as helpful tool for better strategic managing in every basic type of organization. There are very few organizations from Bosnia and Herzegovina which decelerate that they use balanced scorecard concept already. Organizations which already use the balanced scorecard concept in Bosnia and Herzegovina are usually domestic branches of international corporations. It means that during first phase of researching process it was evident that very few organizations in Bosnia and Herzegovina introduce and use balanced scorecard concept, advisedly or non-advisedly, and they were considered as an outlier and were excluded from this investigation.

5. THE BALANCED SCORECARD RESEARCH MODEL

For the purpose of testing the balanced scorecard using possibilities, we have used adapted structural equation model called Partially Mediated Model which was initially developed by Norton and Kaplan. The main researching goal was to investigate whether better strategy implementation appears as a result of simple mechanism beginning with the employee's education and resulting in better financial outcomes in Bosnian-Herzegovinian organizations. The research model represents a mix of the Partially Mediated Model as well as the Fully Mediated Model, which allows us to use complex cause-effect relationships using structural equations system (Morard, 2005). The main different between two balanced scorecard models is that the first model considers only strict vertical hierarchy defined cause-effect relationships between balanced scorecard perspectives. The second model considers estimating of multi-perspective impacts, so this model allows existence of a positive impact from first perspective, not only to the second, but also to the third and fourth perspective (Kaplan& Norton, 2001). This later model is more acceptable for contemporary business and institutional context which requires multi-perspective indicators and multiple interrelations

between them. These models have different names because of different contents and way of working. As a base for research model, we have used mix of these two models so the research structural equation system can be state in a following way:

$$(1) \left. \begin{aligned} SKN_{TQM} &= a_0 + a_1 KMG + \varepsilon_1 \\ QIP_{CRM} &= b_0 + b_1 TQM + b_2 SKN + \varepsilon_2 \\ CSF_{SIM} &= c_0 + c_1 CRM + c_2 SKN + c_3 QIP + \varepsilon_3 \\ SIM_{VBM} &= d_0 + d_1 BSC + d_2 SKN + d_3 QIP + d_4 CSF + \varepsilon_4 \end{aligned} \right\} \Rightarrow FIN = e_0 + e_1 SIM$$

The model, which is represented above is a complex, adapted and mixed model. This model works in a way so that every independent variable, which include following:

- Skills and Knowledge of employees (SKN_{TQM}),
- Quality of Internal Processes (QIP_{CRM}),
- Customer Satisfaction (CSF_{SIM}),
- Strategy Implementation (SIM) or as consequences first four variables,
- Financial aspects (FIN_{VBM}), depend successively from some number of variables which correspond to the balanced scorecard perspectives. For example, The Learning and Growth Perspective which, in general, represents Knowledge Management activities (KMG), The Internal Business Process Perspective which, in general, represents Total Quality Management (TQM), The Customer Perspective which, in general, represents Customer Relationship Management (CRM). Furthermore, the way of strategy implementation and strategy frame for organizational managing is defined according to the balanced scorecard concept (BSC) and The Financial Perspective as depend variable of strategy implementation quality is defined by the Value Based Management (VBM).

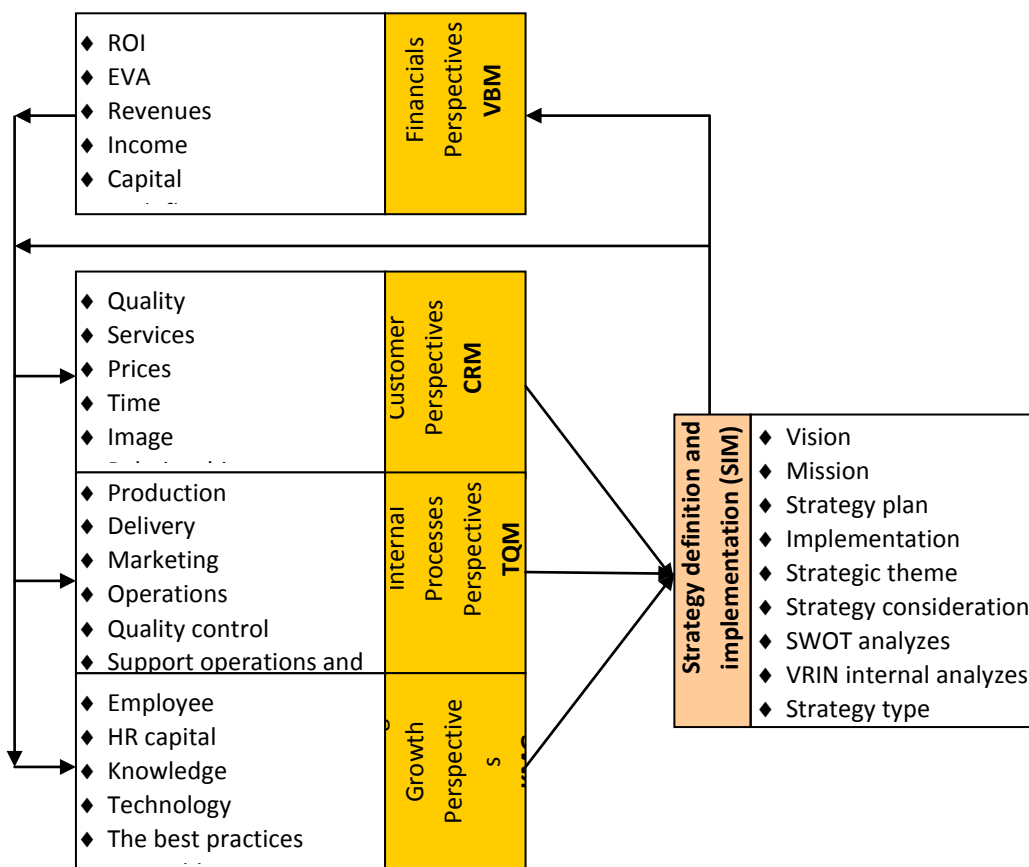
Letters a_0 , b_0 , c_0 , d_0 and e_0 represent parameters of the regression equations of the model or excerpts of the independent variables of the model posted on a vertical axis of coordinate system. The operator ε represents the residual of the structural model equations and is not especially explained, while the coefficients a , b , c , d , and e , which are more than null, with some index numbers represent intensity of changing dependent variable when some of the independent variables has changed for one. It means that the coefficients

mentioned above represent partial coefficients of regression associated to every independent variable in concrete model and they represent the slant of the regression line. In this way, we have created the structural model of linear equations using multiple regression and correlation during analyzing of these variables for proving of researching hypothesis.

Kaplan and Norton (2006) describe the balanced scorecard concept as forming a series of causal relations, both within and between perspectives, which result in achievement of financial objectives. Hierarchy lowest perspective is The Learning and Growth Perspective and its main goal is increasing knowledge and skills of the employees. Higher organizational and individual knowledge level has a positive correlation to The Internal Business Process Perspective generating innovation processes in sense of new products and services development or even new business operational concepts. Processes have an impact on performances of the rest balanced scorecard perspective in a way that new business ideas, products and services increase customer satisfaction and organizational market share growth. The third perspective is connected to the customers or clients which affects better strategy implementation in an organization resulting in growing revenue, return of investments, cost reducing and profitability increase.

The researching model is aimed to associate certain well-known managerial concepts to every balanced scorecard perspective. The logic of the model is that knowledge and human resources management represent the main composite elements of BSC learning and growth perspectives, so intensity of using postulates of knowledge management in an organization defines learning and growth perspective as an integral independent model's variable. Consequently, the same logic is used to other BSC perspectives, so, for example, the total quality management defines internal processes perspective and customer relations management concept defines customer perspective. All these three perspectives represent independent integral variables of the research model and it is necessary to observe all the balanced scorecard perspectives in terms of the strategy map tool. The dependent variable, with the leading indicators, is strategy implementation and finally, it is very clear that the better strategy implementation provides better financial results, which has described using specific kind of cause-effect strategy map tool with double feedback loop, which can be seen in the figure below.

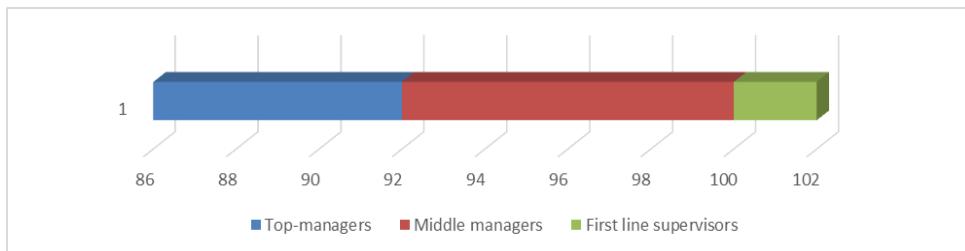
Figure 2 – Cause-effect Relationship Between Variables of the Balanced Scorecard Model



6. RESULTS

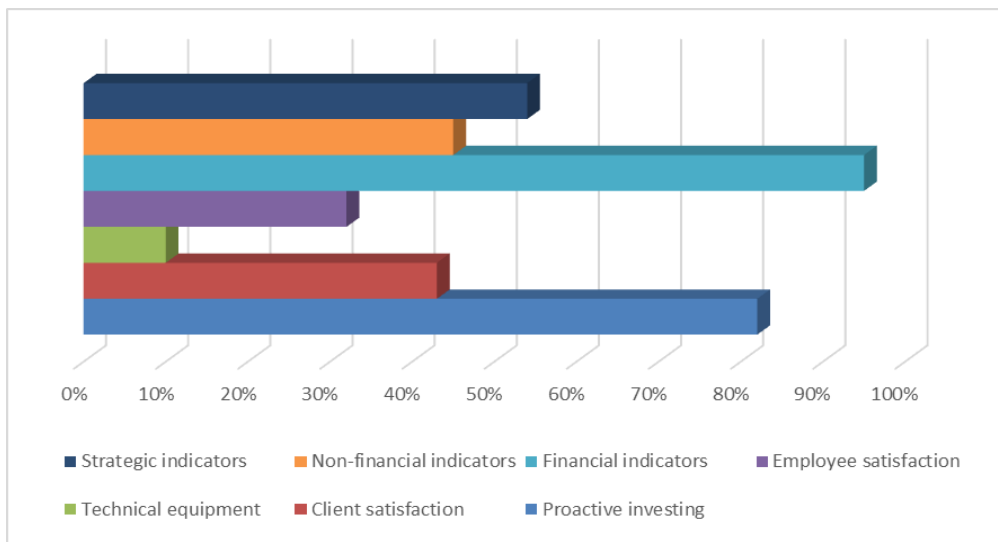
The questionnaire that was used during research process was consisted of general information about companies and sixteen questions associated with strategy implementation and other balanced scorecard concept perspectives. The questions were mostly of closed type and managers could choose one or more available answers. The response rate was about seventy percent and it is acceptable for this kind of researching. The majority of examinees were top-managers, followed by middle managers and very small number of first line supervisors which can be seen in the figure 3.

Figure 3 – Hierarchy Structure of the Examinees (Managers)



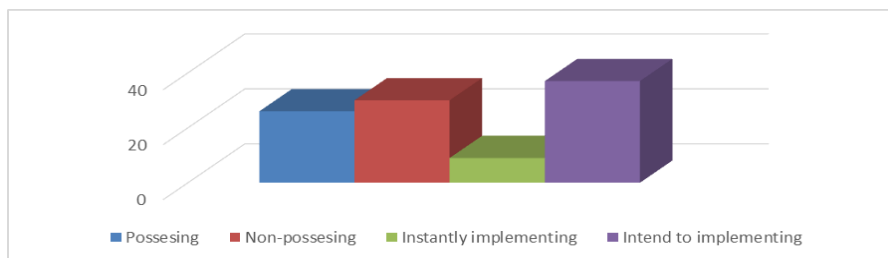
The analysis shows that the majority of the companies track wide scope of indicators (figure 4), but they do not fully understand cause-effect relations between them during business decision making. It means that balanced scorecard can be implemented in Bosnian-Herzegovinian companies to help managers to make better business decisions.

Figure 4 – Indicators of Performance Measurement in Bosnian-Herzegovinian Companies



The majority of Bosnian-Herzegovinian companies have positive attitude according to the quality question and they have either instantly implementing some quality control system or larger part of them have a serious notion to implement quality control system and standards (figure 5).

Figure 5 – Companies referring to the Quality Question



The research shows that 67% of domestic organizations measure performance to define accomplishment of organization strategy with the goal of changing their content. Approximately one third or 31% managers consider that vision and mission were defined too generally, so measure and quantification of them is difficult. At least 85% of the sample organizations measure their performances in a systematic way, but the results of those measures do not influence strategy implementation and only 15% organizations do not connect measure of business performance and strategy implementation. During additional analysis, we have found direct correlations between balanced scorecard concept using intensity and organizational financial success. It means that organizations, which invest more in first three balanced scorecard concept perspectives such as The Learning and Growth Perspective, The Internal Business Process Perspective and The Customer Perspective, implement their strategy more effective and have better financial results. From this preliminary analysis, we can state that research indications affect strategy implementation and organization's efficacy. According to the research model, it is necessary to determine relations of the variables of the first equation. Thus, we have researched impact of knowledge management (The Learning and Growth Perspective) on the potential and performance of employees connected with their knowledge and skills for creating new product, services or defining the new business models (presented by the first equation from the research model as follow):

$$SKN_{TQM} = a_0 + a_1 KMG + \varepsilon_1 \quad (2)$$

According to data which were analyzed and tested using statistical software package SPSS, results confirm an existing significant impact of knowledge management on the employee and organizational potential and to the quality of internal processes, so the first stochastic equations of the model can be apprehended as an auxiliary hypothesis of research. This relationship is showed via scatter plot diagram which indicates existing a linear expected dependency

between variations of the independent and dependent variable with very small standard error of regression and significant value of coefficient of determination and coefficient of correlation (Table 2).

Table 2 – Impact of The Learning and Growth Perspective to The Internal Business Processes Perspectives

		Multiple correlations				
		KMG	VIZTQM	CRM	SIM	FINVBM
KMG	Pearson Correlation	1	,806(**)	,633(**)	,524(**)	,647(**)
	Sig. (1-tailed)	.	,000	,003	,000	,000
	N	102	102	102	102	102
VIZTQM	Pearson Correlation	,806(**)	1	,563(**)	,409(*)	,397(**)
	Sig. (1-tailed)	,000	.	,000	,017	,000
	N	102	102	102	102	102
CRM	Pearson Correlation	,633(**)	,563(**)	1	,514(**)	,545(**)
	Sig. (1-tailed)	,003	,000	.	,001	,006
	N	102	102	102	102	102
SIM	Pearson Correlation	,524(**)	,409(*)	,514(**)	1	,610(**)
	Sig. (1-tailed)	,000	,017	,001	.	,000
	N	102	102	102	102	102
FINVBM	Pearson Correlation	,647(**)	,397(**)	,545(**)	,610(**)	1
	Sig. (1-tailed)	,000	,000	,006	,000	.
	N	102	102	102	102	102

** Correlation is significant at the 0.01 level (1-tailed upper relation).

* Correlation is significant at the 0.05 level (1-tailed upper relation).

The investigation and testing show that there is a linear regression and enough high intensity of correlation, so we can confirm correlation of two variables variation and the line is positive with increasing shape and show an existing positive relationship between knowledge management and skills and knowledge of employees with positive impact on internal business processes. So, first model equation is:

$$SKN_{TQM} = 1,264 + 0,678KMG + 0,0125 \quad (3)$$

From this equation derived from analysis of our data, we can state that parameter a_0 equals 1,264, while parameter a_1 equals 0,678, so it means that every increase in implementation knowledge effort inside The Learning and Growth Perspective for one results with 67,8 percent of improving employee potential and using of principles of TQM and progress of internal business process. Coefficient of determination is $r^2 = 0,65$ and it means that the variations of the mean, which

describes potential of employees and their skills and knowledge, have significant influence on TQM and internal business processes and determine it with 65%. It is possible to infer that there are enough high coefficients of correlations and it means that there is good stochastic relationship between independent and dependent variable meaning that the first researching auxiliary hypothesis, which assumes existing positive correlation relationship between variables stated before, can be accepted. Through analysis of data, using the multiple regression and correlation, results also showed that there exists a significant impact of total quality management and knowledge management to the quality of internal organizational processes apropos customer perspective elements of the model, which can be seen through the equation:

$$QIP_{CRM} = b_0 + b_1TQM + b_2SKN + \varepsilon_2 \quad (4)$$

After data testing through SPSS software, scatter plot diagram showed the linear relationship between independent variables and dependent variable. It means that there is a positive correlation relationship between quality of internal processes and client satisfaction, presented in the equation:

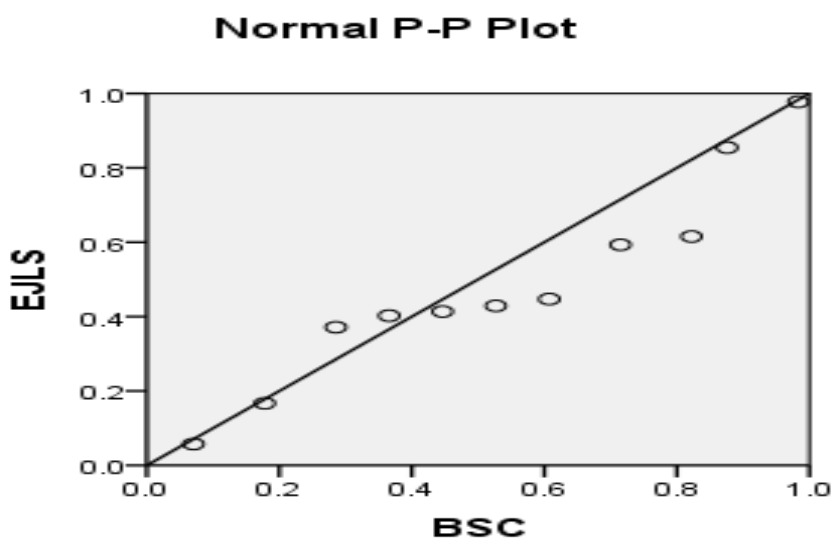
$$QIP_{CRM} = 0,243 + 0,333TQM + 0,563SKN + 0,0118 \quad (5)$$

From the equation, it can be concluded that every change in improving of TQM for one, generate improving quality of internal processes for 33%, apropos customer satisfaction "ceteris paribus". Furthermore, every change of knowledge management through skills and knowledge of the employees for one generate 56% percent of improving internal processes quality apropos customer satisfaction "ceteris paribus" and it means that there is significant correlation between independent and dependent variables in this equation of the model. The integral coefficient of the determination is $r^2 = 0,77$ and it means that the variation of features which describes quality of internal processes, apropos customer satisfaction determined by 77% with the features variations which describe the employee potential which are consisted of the skills and knowledge of employees and intensity of TQM implementation apropos customer perspective elements. The same proceeding is simultaneously repeated with all other variables in a cascade way according to the balanced scorecard model because every of variables of the model represent one of the balanced scorecard perspectives with their content.

We have also carried out regression analysis only on the institutional entities which are non-profit organizations aimed at offering best quality services to

citizens and the applicability of Balanced Scorecard Concept on this type of organizations, specifically local government units were evaluated. Analysis of Spirman coefficients confirmed a positive correlation between the dependent variable (the improvement of the effectiveness of local government) and independent (Balanced Scorecard model). With the aim of determining whether independent variables (the perspective of the Balanced Scorecard model) are good predictors of the dependent variable, multiple linear regression was conducted. The degree of variation between development of the BSC model and effectiveness of local government from the regression model will enable the evaluation of the effectiveness of municipal management depending on changes in the development of each of the perspectives of the Balanced Scorecard model. In order to access the model relationship between independent variables (the perspectives of BSC model) and the dependent variable (the effectiveness of local government), it was necessary to check the linearity using diagrams wastage and analysis of P-P chart. Looking at the overall data of all local governments in the sample for independent and dependent variable, we can state that it is asymmetric to the right distribution and application of multiple regression is not possible due to disrupted criteria of multi collinearity. Consequently, we analyzed those local governments in which there is a strong positive correlation between the development perspectives of BSC model and effectiveness of local government. The assumption of linearity for these eleven local governments has been verified by analysis of P-P graph for normally distributed residuals shown in the diagram below (Figure 6).

Figure 6 – Scatter Diagram



The results of multiple linear regression (Table 3) in which all dimensions (perspectives) of development of the BSC model were observed and included as predictors of effectiveness of municipal management and local government are shown below. All five perspectives (Perspective of learning and growth-PUR, Perspective of internal processes-PIP, Perspective of citizens' relationship-PGR, Perspective of strategic integral action-PSD and Financial perspective-PF) provide a contribution of 91.5% in explaining the variance of the effectiveness of local government. Also, the results show that the development perspectives of BSC model have strong and positive impact on the effectiveness of local government (municipal management). The coefficient of linear regression between the value of the dependent variable (the effectiveness of local government) and the corresponding regression values of perspective Balanced Scorecard indicated that there is a very strong positive influence $r = 0.915$ between all five perspectives BSC model and effectiveness of local government. The coefficient of determination (R Squared) or r^2 indicates the percentage of variation in the dependent variable (the effectiveness of local government), which can be explained by the regression model. Looking at selected local governments, which have developed the perspective of the BSC model, 88.10% of the variation in the effectiveness of local government can be explained by changes in the five perspectives of Balanced scorecard model, while the rest of 11.9% is due to changes in activity other factors.

Table 3 – Multiple regressions results (The effectiveness of local government)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.915 ^a	.881	.860	4.452	.881	40.817	1	53	.000	.350

a. Predictors: The development of the BSC (PUIR, PIP, PGR, PSID, PF)

b. Dependent variable: The effectiveness of local government

So, based on the results in Figure 7, we can conclude that in local governments that have developed the perspective of the BSC model changes in the level of development perspectives (learning and growth, internal processes, attitudes towards citizens, strategic integrated activities and financial management) explained 91.5 % variance in effectiveness of local government and are valid in 88% of cases (R Square = 0.881). To determine which of the variables of Balanced Scorecard model contributes most to the effectiveness of the local government, stepwise regression was carried out. This method corresponds to BSC model which is based on the principle of cause-effect. Perspectives involved

in the research model were put in the following order: Perspective of learning and growth (PUR), Perspective of internal processes (PIP), Perspective of citizens' relationship (PGR), Perspective of strategic integral action (PSD) and Financial perspective (PF), which is shown in Table 4 below.

Table 4 – Results of regression analysis (Stepwise method)

Model	Standardized Coefficients	T	Sig.	Correlations	Collinearity Statistics	
					Beta	Tolerance
1	(Constant)	3.485	,000			.137
	PUR	.220	2.711	,002	.232	.305
	PIP	.245	1.432	,015	.134	.266
	PGR	.280	1.424	,022	.126	.309
	PSD	.201	.053	,132	.002	.438
	PF	.009	1.257	,000	.159	.341

To determine the intensity of variables and their impact on the effectiveness of local government, we have used the beta coefficient and analysis of Tolerance. Tolerance shows how much of independent variables are not explained in variances in other independent variables of the model and the value must not be less than 0.10. Through analyzing Beta coefficients, it can be concluded that the development prospects of relations with citizens ($\beta = 280$) of all other perspectives BSC model contributes most to the explanation of the dependent variable (the effectiveness of local government). As shown in the table, the second most significant impact on the effectiveness of local government has a development perspective called internal processes ($\beta = 245$), then the perspective of learning and growth ($\beta = 220$), then perspective strategic integrated action ($\beta = 201$), while financial perspective at least contributes to the explanation of the effectiveness of local government.

The value of standardized coefficients Beta indicates the number of standard deviations for which the values dimension of BSC model change if a predictor is changed for one unit of standard deviation. So, if the amount of variable (perspective) learning and growth is increased by one standard deviation, the results corresponding to improving the effectiveness of local government is likely to have increase to 0,220 units of standard deviation (beta coefficient). Constant build value perspective of the citizens of one standard deviation has the most significant impact on improving the effectiveness of local government (0,280), while the least influential perspective of finance (0,007). On the basis of results in Figure 9, we can conclude that all variables and perspectives of BSC models

have a positive direction and the effect on improving the effectiveness of local government. Durbin-Watson test for autocorrelation shows acceptable values (0,350) in the multiple regression analysis, which means that the model has no significant connection errors. Based on the analysis presented in Figure 9, we can conclude that all variables of BSC model have a significant statistical contribution to the explanation of the dependent variable (the effectiveness of local government) at significance level of 0.05.

7. Conclusion and Recommendations

The most significant findings confirm the hypothesis of a direct positive influence of the balanced scorecard concept implementation to better business/institutional performance. That is proving balanced scorecard concept practical justifiability in the acceptance and implementation by domestic companies and institutions "ceteris paribus" and it can be stated that findings of this study could be interesting for various users and public. Apart from the domestic managerial practice and strategic management theoreticians and economic academic circles, the results may be interesting to the creators of and participants in the implementation of the business policy and macro-economic policy in Bosnia and Herzegovina. Additionally, study gives support to the continuous creation of better economic ambience based upon the business postulates and in particular to the selective policy of further encouragement of foreign direct investments, promotion and development. The additional benefits of this investigation resulting from the determination of the existing level of balanced scorecard concept usage evident in domestic companies/institutions for the managers are multiple. They depict possibility of measurements of the using BSC concept. The results of study also confirm the key managing implication for the managers and usefulness of the balanced scorecard concept implementation for the business performance.

Taking into account that balanced scorecard showed direct positive effect of the financial performances of domestic companies, the signal has been forwarded to organizations to intensively get involved into the preparations, acceptance and implementation of the above strategic approach. Through the results of analysis, we can also conclude that there is a significant statistical difference between the level of development of BSC model perspectives and the effectiveness of municipal management – local government units. The municipal leadership is much more effective in local governments with higher level of development of the BSC management model compared to local government with less intensity of development of the BSC model, which also confirmed the hypothesis that the

usage of the Balanced Scorecard model has a positive effect on improving operations of local governments in Bosnia and Herzegovina and that it is applicable not only on corporate entities, but also in governmental institutions.

The results of this research are very important for business practice and managers of domestic companies who are constantly searching for methods and resources of the sustainable competitive advantages. This model can help in finding strategic answers to the continuous pressures put on efforts to improve the business performance. In the applicability sense, the investigation contribution could be seen through following: The systematic survey and available literature in the scientific field of strategic management, especially the balanced scorecard concept presented in the study, represents a very solid basis for familiarizing with and understanding of the importance of this issue for the top-managers and thus for raising the overall awareness of the potential implications on companies' results. Thus, formulation and putting in practice of business and strategic studies, in particular investigation of the balanced scorecard concept implementation, has never been more evident or more necessary for domestic managers and companies as it is in today transition processes.

The findings of the empiric analysis, according to the tested balanced scorecard conceptual model, bring up the existing problems in its working, thus, bringing issue closer to the average manager in Bosnia and Herzegovina. According to the antecedents of the balanced scorecard concept, the significance of the top-management in the creation of the ambience, organizational culture, acceptance and implementation of the above concept has confirmed as inviolable contemporary business wisdom. The diagnosis of the problem in this field simultaneously initiated a whole range of concrete actions and activities from the organizational managing and strategic performances, which would be necessarily undertaking and scrutinizing for improving the intensity of using balanced scorecard concept of domestic companies. The range of possible interventions is large and covers educational as well as organizational strategic activities that can give a great number of clear answers to the question with regard to efficient usage of the balanced scorecard concept aimed at developing of companies.

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