

Influence of Economic Development Paradigm on Enterprise Performance Measurement and Management System

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Abstract: There is no enterprise management area which has not changed thanks to global economy development. Also the enterprise financial management is no different case. Still more intensive attention of academic and business sector is devoted to enterprise performance measurement and management. Performance measurement and management in accordance with strategic decisions – decisions about goals, strategies in an enterprise together with enterprise value creation and management is considered to be a key factor for the stakeholders which determines the competitiveness level of an enterprise in a long-term period. The target of this paper is to present the results obtained by qualitative research which was focused on mapping, identification, analysis and generalization of key changes in economic development paradigm and their reflection in financial management – specifically in enterprise performance measurement and management. The current shape and future development directions of concepts, methods and tools for enterprise performance measurement and management are discussed in worldwide context. The most significant advantages and benefits are taken into account and compared to the weaknesses and limitations of the most often used ones. The paper summarizes the results of a partial research within the project SGS-2013-40 „Paradigm of Development in the 21st Century and its Impact on the Behaviour of Economic Entities“.

Key-Words: Balanced Scorecard, economic development paradigm, enterprise performance, European Foundation for Quality Management, financial management, Value Based Management.

1 Introduction

There are a lot of phenomenons and tendencies determining the up to now development and form of macro environment – world economy and society [1], [30]. The academic sector (as well as the professional public) emphasizes the phenomenons and tendencies connected with globalization and internationalization of the environment and with integration tendencies. So-called age of discontinuity has occurred since the 90's of the 20th century – a turbulent time when the dynamism of changes and development is so high that it is impossible to predict the future state and direction of development based on the trends and events from the past. Thanks to the intensive development of information technology and means of communication, technical and technological progress the economic borders have been wiped and the barriers in motion and production factors “flowing” have been reduced to minimum across economies. We are going through the period of hyper competition when offer extremely exceeds demand for products and services of businesses.

Not only thanks to the increase of significance and boom in new technologies and systems (including information technologies) there has been digression from industrial society primarily based on transforming raw materials and natural wealth, inputs into outputs to knowledge society. Despite this the discussions and negotiations lasted many years before the economy model and business style in enterprise practice was put through and which would protect the natural wealth, capacity and variety of natural sources given to the mankind. On the international level in this matter an actual reaction came as far as in the 1980's when in 1987 the United Nations Committee for Environment and Development published a document which declared the support measures helping to “secure the needs of present generations without threatening to secure the needs of future generations without acting at the expense of other nations.” [2]

As Fig. 1 (see Appendix) demonstrates not only the macro environment but also the viewpoint on business and businesspeople is

changing [3], [4], [30].

Dynamic market development especially in the second half of the last century led most of the developed countries (economies) of the world to value oriented (consumption) society for which it was typical not to consider the business activities influence on the environment, workers (work environment) etc. The business subjects target and their priority was to make the maximum volume of production which led to overproduction. Then they tried to remove the overproduction by searching for saving measures, hidden reserves, introducing new technologies, new information system development which would enable increasing transactions' speed, reducing the costs. In the 1980's the offer predominance over demand led to massive marketing techniques and tools development, more intensive perception of the customers, their needs and expectations. Quality, productivity, speed, customers' feedback and satisfaction started to be emphasized. On the contrary the 1990s were in the sign of still more intensive realizing of the good relations importance inside and outside the company which can be documented by following examples:

- building and strengthening relationships of an enterprise towards its suppliers, purchasers, creditors (banks and others – so-called inter-environment) etc.,
- creating positive relationships among workers, work motivation on enterprise results, identifying with company goals, elements of enterprise culture and ethics, functional enterprise organization, manager's personality – requirements about his professional and human qualities.

A great part of the last century was in the sign of state protective policies, communication and geographic barriers, there was not such a significant pressure on productivity increase, business activities economy and effectiveness, pressure to improve managerial methods and processes or costs minimization as it is happening at present.

We can recognize a few continuously strengthening tendencies in enterprise management development in the last few decades. At growing number of enterprises regardless their size or economical sector we can see the effort to:

1. improve communication and cooperation with the stakeholders of enterprise;

2. strengthen its ability to create long-term value for shareholders and other interested parties and subjects;
3. analyze strengths and weaknesses (internal potential) and identify areas which represent new opportunities or threats/risks;
4. increase operating effectiveness and reduce negative business impacts on environment;
5. create or further develop and elaborate enterprise sustainability strategies;
6. measure and report activities in sustainability area.

2 Problem Formulation

Business entities (public and private sector representatives [5], [25]) still more realize the necessity to plan, monitor, coordinate and manage the development direction of their business future – i.e. manage not only the present effectiveness (performance) but also their long-term performance (so-called competitiveness) [6].

One of the suitable concepts which can be used in this context is the concept of Value Based Management (further just VBM). It meets the expectations of all interested parties (not only the owner – the main business risk holder). The authors of this paper consider the VBM concept to be suitable for enterprise performance measurement and management in short-term and long-term periods although even the VBM concept is not flawless as is proved by experience from the end of the last century as well as the period of the last financial crisis when a major part of financial (often strategic) decisions was made according to predicted (often slightly manipulated) values of enterprise future performance.

This paper summarizes the results of the qualitative research performed in 2013 with the target to map, identify, analyze and generalize the key changes in economic development paradigm. The paper presents the key areas which are the top of interest of financial management. It defines the changes in enterprise financial management which were made in financial department thanks to economic development paradigm change. The changes in significance, roles and functions of enterprise financial management are illustrated – specifically the form and future challenges in the area of enterprise performance measurement and management concept, methods and tools. The potential of traditional and modern

concepts, methods and tools for enterprise performance measurement and management is analyzed in details including their future development directions.

The results presented in this paper are based on qualitative research of literary and also electronically processed sources by academic sector and enterprise practice authors. Specifically they are monograph publications, research reports, professional studies, papers and review articles in professional magazines published to the topics of financial management and enterprise performance, specifically to value based management within national and international framework.

3 Problem Solution

The importance, role and function of the enterprise financial department have significantly changed since the half of the last century. The financial department workers (financial directors, financial experts, financial consultants and others) have become much more important persons in the enterprise management – those whose activities considerably determine the success or failure of the business.

The results of the performed research which analyzed the development of enterprise financial department focus according to their changes in time are illustrated in following subsection 3.1. It presents the changes impacts on financial management in economic development paradigm in the second half of the last century, specifically on concepts, methods and tools in enterprise performance measurement and management. The results of the second half of the research are stated in subsection 3.2. Its target is to summarize analysis results of current focus of traditional and modern concepts, methods and tools of enterprise performance measurement and management and to suggest potential directions of their development in theory and also in practice in financial management and performance evaluation areas. Subsection 3.3 completes the presentation of performed researches results by a clear classification of concepts, methods and tools which are suitable and the most often used for performance measurement (management) of an enterprise as well as its parts.

3.1 Financial Management

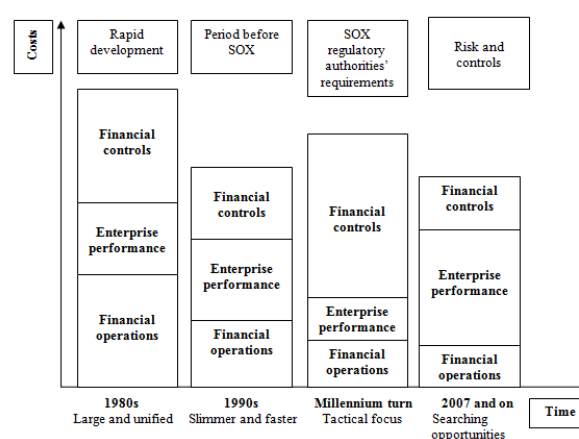
Financial management – financial economy and management although it is the key area of enterprise management and a determining element of enterprise success and competitiveness, it still does not have its stable and generally accepted definition and delimitation even at the beginning of the 21st century. The most often the financial management is understood as management of financial processes and cash flow in an enterprise. Process – its course and success is determined by four following consecutive, sometimes even mingling and also influencing activities:

- financial planning,
- financial decision-making,
- financial processes organizing,
- financial analysis and control.

Financial management of an enterprise is an area which penetrates all levels of business management – from strategic to tactical and even to operative. It includes following problem areas:

- Financial Accounting;
- Management Accounting;
- Controlling;
- Treasury Management (Cash Management, financing of business activities, company assets, cash pooling, capital management) and
- Enterprise performance measuring and management which gains still more importance.

Fig.2 Costs share development in main enterprise financial management areas in terms of time



Source: own processing according to [7]

Enterprise financial management provides methods and tools which document and help to quantify economic phenomena and events from past, over present to future. The most widely used ones are illustrated in following Fig.3.

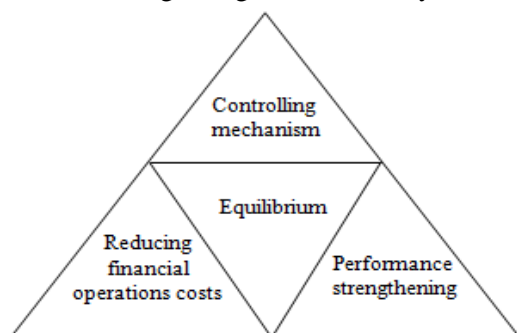
Fig.3 Financial management areas focus in terms of time

PAST	PRESENT	FUTURE
<ul style="list-style-type: none"> •Financial Accounting •Controlling- control •Reporting •Financial analysis 	<ul style="list-style-type: none"> •Management Accounting – plans, budgets •Controlling •Treasury Management •Organizing •Treasury management – receivables management, and others •Short-term investment – cash management models, liquidity management automated systems, cash pooling •Sustainable performance 	<ul style="list-style-type: none"> •Treasury Management •Strategic investment decision-making •Strategic financial decision-making •Capital structure determination and optimization (financial planning) •Sustainable development

Source: [30]

We can agree with the conclusions published in 2010 by international advisory company KPMG. In the presented report [7] KPMG states that the target of financial departments efforts in current economic conditions is to find a sustainable balance, an imaginary equilibrium. Thus, as Fig.4 illustrates, to reach balance among controlling activity – controlling processes and mechanisms, strengthening of enterprise performance and reducing financial operations costs.

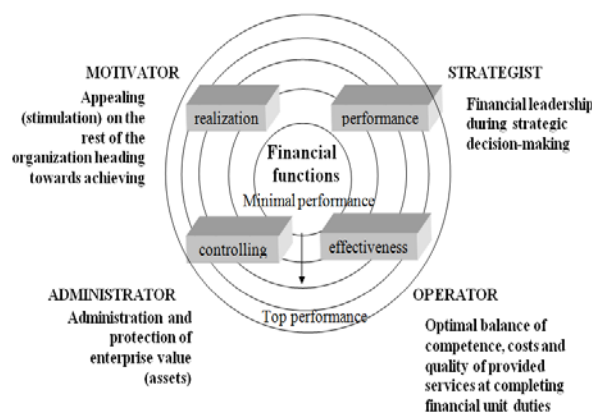
Fig.4 Targets of enterprise financial department at the beginning of 21st century



Source: [30]

At the millennium turn not only the targets and functions of enterprise financial department but also the requirements laid on financial department workers – their professional side are changing (Fig.5).

Fig.5 Financial function role and requirements laid on financial managers



Source: own processing according to [8]

Although the financial management is a varied group similarly to business subjects to whom it provides methods and tools for monitoring and following financial economy management (optimization) we can identify a few similarities among enterprises across business lines in financial management area:

- Enterprise managers perceive the enterprise performance measurement and management methods and tools (financial management) as one of the factors which significantly determine the enterprise competitiveness.
- Despite the undisputable significance of financial management (enterprise performance measurement and management methods and tools) the enterprises are dealing with problems how to introduce economic information system which would provide correct, complete, in-time, customer-tailored information and data for enterprise financial or economic performance management as a whole and also its divisions, departments, workers, processes, operations and activities in a specific form and at the most effective and cheapest manner.
- Problems with formulation and subsequent enforcing of strategic decisions and completing the targets and strategies occur quite often. Targets are often interchanged with indicators.

However targets define just the direction, indicators already set an exact measurable form of milestones. One or more indicators can be matched to one target, in other words metrics or indicators. As [9] states performance measurement process includes creation of measurable indicators and their use in enterprise activity effectiveness and efficiency quantification, or for enterprise operative, tactic and strategic targets completion evaluation. Another suitable

solution is so-called balanced evaluation on which e.g. the Balanced Scorecard [10] concept is based – balanced results cards and strategic maps.

Nevertheless in a lot of enterprises the external function based on statutory accounting, completing tax duties and obtaining external financing sources is still considered to have a dominant role in financial management. However such an approach prevents the financial units to become partners to other managers in decision-making because they are not able to provide information necessary for effective management.

3.2 Enterprise Performance Measurement and Management

The enterprise performance measurement and management researches performed in national [11], [13-15], [18], [23], [26-28], [30], [33], and international framework [12], [16-17], [20-22], [24-25], [29], [35] resulted in conclusions that there is a wide portfolio of methods, tools, models, concepts and approaches whose meaning is to quantify and analyze enterprise performance development and current state.

Performance is researched from lot viewpoints:

1. Management level – strategic, tactic [10], [26] and operative performance [11], [15];
2. Enterprise research range – enterprise performance as a whole [15], [17], branches or divisions of the enterprise, departments, workplaces, workers, process;
3. Focus on produced performance – product, service, project [18 - 19], process performance;
4. Focus on business subject type – production enterprise performance [34], services providing enterprise performance [11], [20], performance evaluation with focus on banking sector [21], public sector [25] and state administration institutions [5];
5. Performance bearer – manager, worker, work group;
6. Management process realization stage – measurement, feedback, learning (or planning stage – analysis stage of use and need of indicators sets, scales, performance indicators, realization stage – stage of measurement, indicators, scales, performance indicators quantification, evaluation, feedback – reaction, request for a change indicators set, scales, performance indicators, improving the current state).
7. Focus on modern tendencies – sustainable business and sustainable performance [3].

8. Time – short-term, medium-term and long-term performance [26];
9. Evaluation way – performance indicator can be evaluated objectively (so-called scaling), subjectively (expert value evaluation), in a balanced way (detected value of performance indicator is evaluated in defined system of mutual connections and dependencies). [26], [32-33].

During enterprise performance measurement, evaluation and management we always assume that what we measure:

1. has the ability to complete defined targets
 - if the targets respect and correspond with the range of company activities – a company should be devoted to strictly defined activities which will complete its future targets;
 - if the targets respect and correspond with company activities adjusted to environment where the company is operating – requirement for knowledge of the environment and prediction, environment development and development trends prognosis;
 - if the targets respect and correspond with the range and structure of sources which the enterprise has or plans to have in the future;
 - if the targets respect and correspond with the values, expectations and targets of all who influence the selected strategy – the company is under pressure of suppliers, purchasers, competitive subjects, wide public, state and its authorities and offices.
2. is correct (expediency aspect).

We will restrict the following text only to concepts, methods and tools for enterprise performance measurement and management as a whole. The reason is that although authors use various terms they usually work with only one of the categories.

Financial theory in context with enterprise performance measurement and management focuses on several areas of this issue, looks for answers to following kinds of questions:

- Can traditional enterprise performance measurement and management concepts, methods and tools „survive“ even in 21st century economy conditions? Do enterprise performance measurement and management concepts, methods and tools still show a trustworthy enough picture of enterprise financial performance?

- Have the enterprise performance measurement and management concepts, methods and tools managed to adjust to new economic development paradigm?
- Can traditional enterprise performance measurement and management concepts, methods and tools compete the new concepts, methods and tools for enterprise performance measurement and management?

3.3 Concepts, Methods and Tools for Enterprise Financial/Economic Performance Measurement and Management at the Beginning of 21st Century

The financial theory offers a wide range of various concepts, methods and tools in connection to enterprise financial or economic performance measurement and management [12-13], [15], [17], [22-23], [25], [33]. The most often applied concepts, methods and tools in enterprise practice are summarized in the Fig.6 (see Appendix).

Enterprise performance evaluation as well as other areas of financial management goes through a never-ending development process and related changes. In the past the primary indicators of enterprise financial performance, whose achieved levels determined the management's decisions about further running of the enterprise and its future activities, were mainly the profit variables (Earnings After Taxes, EAT, Earnings Before Interest and Taxes, EBIT, Earnings Before Interest, Taxes, Depreciation and Amortization, EBITDA). On the contrary at present the effort to maximize the owners' wealth and the company market value in a long-term horizon is still more considered to be the main target. Not only for this reason in the last decades in enterprise practice except the profit indicators also the modern indicators of enterprise performance are observed and they support the general opinion direction of economic management whose primary objective is to ensure that decision-making at all management levels will lead to a final result to value maximization for owners/shareholders (so-called Value Based Management, VBM) – e.g. Economic Value Added indicator (EVA) [1], [23-24], [27-28], [30], [33], in various modifications (see Fig.6) or discounted cash flow (DCF).

A gradual shift and enforcement of new economic performance measurement and management

- Is the contribution of modern enterprise performance measurement and management concepts, methods and tools significant enough to substitute the traditional ones in the enterprise management use (see financial analysis)? [13], [23-24].

Table 1 (see Appendix) summarises the most important assumptions and benefits of enterprise performance measurement and management.

concepts, methods and tools from classical indicators and financial position evaluation and enterprise financial performance methods (e.g. takings growth, profit growth, accounting capital rentability and profit per share etc.) is a natural outcome and a result of a response:

- to changes not only in mid- but also in macro environment,
- to changes in attitude towards enterprise stakeholders,
- to changes in main enterprise objectives.

Although the traditional concepts, methods and tools based on profit (heading to achieve the main enterprise target to maximize the economic result, i.e. profit) are still used by enterprise practice for their simplicity and speed of use in enterprise practice the following limitations and weaknesses are reproached to them. Traditional approaches to enterprise financial performance measurement and management:

- 1) during the revenue quantification of invested capital do not take into account the time money value or the risk level taken by investors;
- 2) do not much correlate with value creation for shareholders;
- 3) are based on work with data which are generated by enterprise financial accounting. The decisions made about near or more distant future on the basis of data value and their trends in the past obtained from accounting reports of this enterprise information subsystem can be burdened by mistakes. Also the risk of possible manipulations with the achieved economic result within legal accounting processes cannot be omitted.

The study [28] published by the authors in 2013 confirmed that currently the traditional indicators of financial performance (EBIT, ROE and others) cannot always reflect the ability of value creation for shareholders and therefore they present a distorted image about the enterprise economic performance. The results of the case study performed at an example of a randomly selected

business entity showed a significant discordance between measured values of selected traditional financial performance indicators (EBIT, ROE) and a selected economic performance method of an enterprise (EVA). While EBIT was showing positive values, EVA value was negative during most of the monitored period at the enterprise.

Enterprise performance evaluation at the basis of economic value added (EVA) reflects the enterprise ability of value creation for shareholders better because EVA takes the time factor and market risk into account which provides a more credible image of financial but mainly of economic performance of an enterprise. However the disadvantages and limitations associated with economic value added have to be considered too.

The most often discussed issue related to VBM applicability, specifically EVA method (indicator) in enterprise practice is mainly the absence of a standardised process of input accounting parameters adaptation into economic model which brings an undesirable element of subjective evaluation into the enterprise evaluation concept according to EVA [24]; however apart from standardised process of EVA quantification by the authors of this method (Stern and Steward) who have carefully protected this method as their know-how since they brought it on the market in 1993 and for which designation the trade mark is owned by their consulting company Stern Steward & Co. Problems are caused not only by the excessive amount of accounting reports data adaptation in a certain period when the EVA indicator is identified but also the measurement period determination itself because activities of one period can affect the following period.

Problems arise also during the quantification of a key variable of economic value added calculation, during quantification of weighted average cost of capital (WACC). The final value of WACC variable is the average of various financing manners in time – average of individual operating units in an enterprise, thus the enterprise as a whole too. Every new investment influences the capital costs and therefore to make the enterprise EVA quantification correct there should follow an update of EVA, its recalculation, after each investment portfolio modification. Furthermore both WACC components (cost of own and other capital) are almost impossible to determine accurately. The expected cost of other capital is not the same as the current bonds interest or a common interest rate

offered by banks. It does not include the credit risk evaluation – risk of potential non-fulfilment of obligations. The expected level of own capital profitability is even more difficult to determine because of the different expectations of individual owners. And last but not least – in practice the expected return ability is determined by the willingness of a company to accept the risk as a whole. The more risky projects the investors invest in, the higher return ability they will demand. Therefore the risk connected to company activities determines the expected profitability and also the WACC value.

The possibility to integrate concepts like Balanced Scorecard [32] (BSC), Excellence Model [31] (European Foundation for Quality Management, EFQM) or Total Quality Management (TQM) across enterprises to increase the quality of enterprise management and processes which help to improve enterprise performance, its mid-term success and long-term competitiveness is redeemed by following disadvantages. Implementation process of mentioned measurement concepts, but especially management, economic performance in an enterprise and its parts:

- is time-consuming,
- is financially costly – the reasons are necessary costs for professional preparation before the concept(s) implementation in an enterprise, costs on the introduction itself and implementation in enterprise activities, operations and processes, their setting and suitable, correct and effective information security,
- can be complicated from the aspect of necessity to (re)define the objectives, (re)set the strategies, (re)define the scales and target values,
- might not be suitably combinable with so far used management systems which have proved themselves to be useful in enterprise practise,
- can encounter the unexecutability of a vision and strategy.

Despite all this the Balanced Scorecard (BSC), Excellence Model (EFQM), Activity Based Management (ABM), Value Based Management for shareholders (VBM), TQM and others abound with such potential for improving enterprise performance and competitiveness that they find still stronger support and more stable position in enterprise practice in the area of management ideology despite the initial uneasy implementation. In enterprise practice the implementation of two

or more concepts at the same time is still more often, e.g. concepts:

- BSC and TQM,
- BSC, TQM and ABM,
- BSC, ABM and benchmarking,
- BSC and EFQM [16], [29],
- BSC, EVA, ABC/M [17].

4 Conclusion

This paper is an analysis and generalization of knowledge acquired on the basis of qualitative research performed in the form of literary search, analysis and critical evaluation of available sources connected to enterprise performance measurement and management. The authors do not focus on an exact group of business subjects or a business area. The target was to summarize the key changes in economic environment which happened in the second half of the last century and the beginning of the 21st century. Based on the current form of economic development paradigm another target was to map and analyze changes in enterprise financial management.

The authors focused especially on enterprise performance measurement and management concepts, methods and tools. The modern approach to meaning, functions and tasks of this financial management area of an enterprise was introduced – thus the challenges which the business subjects perceive as one of the key factors in short-term effectiveness and long-term competitiveness of an enterprise.

In this paper the authors developed the idea that failure, problems and non-effectiveness of financial measurement and management (enterprise performance measurement and management) cannot be matched with insufficient amount or imperfect content of enterprise data and intercompany information but usually to:

- insufficient adaptation of economic information to enterprise needs,
- insufficiently accurate definition on quantitatively detectable and therefore well measurable value indicators.

Enterprises still more realize the necessity to manage the direction of their business future development – manage not only the present effectiveness (performance) but also their long-term performance (so-called) competitiveness) and not to be just a passive recipient but on the contrary and an active creator of events in economy. A suitable

concept which can be used in this context is the concept based on enterprise value management – Value Based Management. Together with enterprise performance measurement and management and Balanced Scorecard concept business subjects across business areas and legal forms are assumed to be successful and competitive in a long-term horizon.

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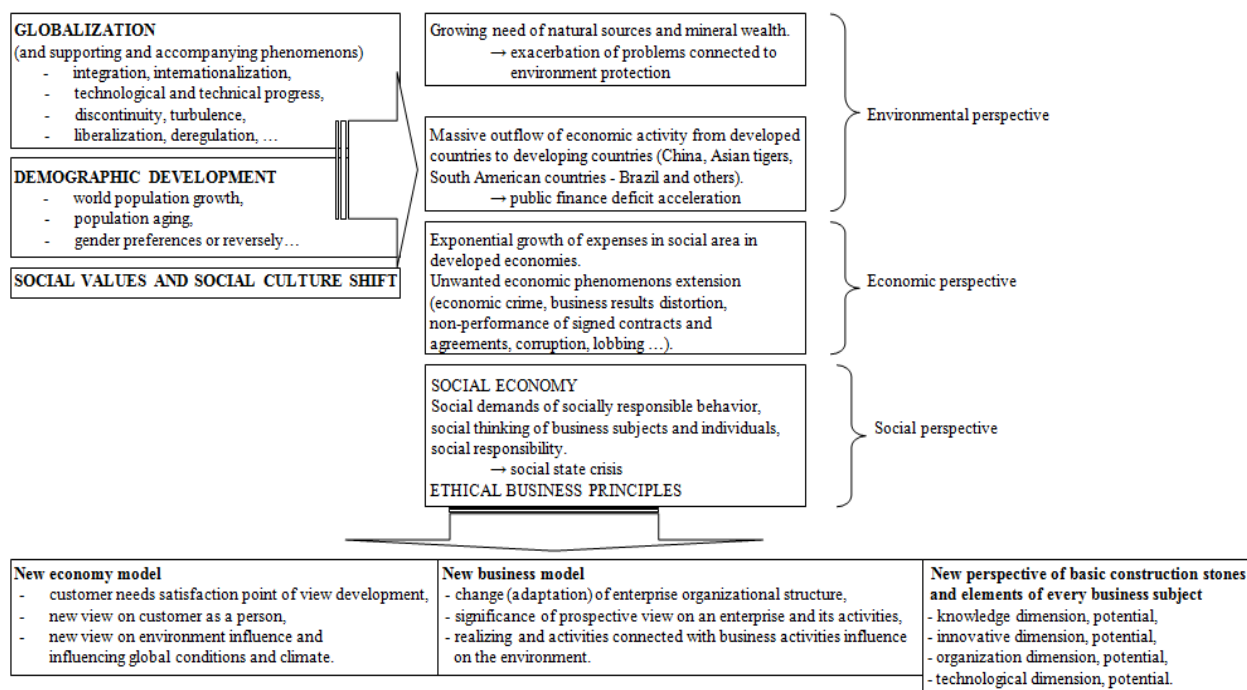
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Appendix

Fig.1 Economic development paradigm changes impact on business and enterprise management in the last century



Source: [30]

Table 1 Assumptions and benefits of enterprise performance measurement and management

Assumptions	Benefits
Focus on customer's needs and requirements	Understanding and adequate response to customer's needs, requirements and wishes.
Comprehensively formulated enterprise missions and visions which not only the enterprise management but also all the employees of the enterprise can identify themselves with.	Understanding the meaning of business and its future direction.
Transformation of business vision into goals and strategies which help to achieve the goals.	An employee confirms his importance, position and benefit for the enterprise – as every worker of the enterprise takes part at achieving the goals and results. Improving internal and external enterprise communication. Motivational factors. Enterprise as a whole is more result-oriented.
Focus on processes, key activities, operations and processes identification.	Production quality improvement. Elimination or outsourcing of activities/ operations/ processes which do not bring sufficient value.
KPIs setting.	

Source: [30]

Fig.6 Enterprise financial/economic performance concepts, methods and tools classification at the beginning of 21st century

CONCEPTS OF ENTERPRISE PERFORMANCE MANAGEMENT	INDICATORS OF ENTERPRISE PERFORMANCE MEASUREMENT	TOOLS OF ENTERPRISE PERFORMANCE MEASUREMENT AND MANAGEMENT
Balanced Scorecard (BSC) Total Quality Management (TQM) Value Based Management (VBM) European Foundation for Quality Management (EFQM) Activity Based Management (ABM) Business Process Reengineering Lean Management (Just-In-Time, JIT) Six Sigma (6S) Continuous Improvement (CI) Kaizen	TRADITIONAL INDICATORS OF ENTERPRISE PERFORMANCE EVALUATION Indicators based on Earnings Earnings before Interest and Taxes (EBIT) Earnings before Interest, Taxes and Depreciation and Amortisation (EBITDA) Indicators based on Cash-Flow Indicators using data from stock market Price-to-Earnings Ratio (P/E) Earnings Per Share (EPS) Indicators based on Rentability Return on Investment (ROI) Return on Equity (ROE) Return on Assets (ROA) Return on Capital Employed (ROCE) Productivity, Liquidity, ... MODERN INDICATORS OF ENTERPRISE PERFORMANCE EVALUATION Discounted Cash Flow (DCF) Market Value Added (MVA) Excess Return Total Shareholder Return (TSR) Cash Flow Return on Investment (CFROI) Cash Return on Gross Assets (CROGA) Economic Profit Gross Margin Economic Value Added (EVA) Shareholder Value Added (SVA) Cash Value Added (CVA) Adjusted Economic Value Added (AEVA) Refined Economic Value Added (REVA) IN Economic Value Added (INEVA)	Benchmarking Decision Rights Tools Controlling, Management Accounting (Direct Costing, Variable Costing etc.) Financial planning, Scenario And Contingency Planning (business plans, budgets) Activity Based Costing (ABC), Activity Based Budgeting (ABB) Zero-Based Budgeting (ZBB) Firm self-assessment

Source: own processing, 2014