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Young Researches and Scientist Paper / \* Supervisor, Mentor

## VALUE CHAIN OF VIRTUAL ENTERPRISE - POSSIBLE MODERN MANAGEMENT CONCEPTS AND VALUE DRIVERS IDENTIFICATION

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Abstract: The paper focuses on the process of value chain creation in a virtual enterprise formed by linking chains of involved companies in order to achieve maximum value added. This also results in a proposal model of value-creating chain for virtual enterprise, using synergies of selected management concepts (EFQM, Balanced Scorecard, ABC / M, EVA indicator).

Key words: virtual enterprise, value chain, balanced scorecard

### 1. INTRODUCTION

The paper focuses on value-chain for virtual enterprise and its measurement and management possibilities. Main goal of article is identification and description of virtual enterprise's value chains and refers to measurement and management possibilities following from synergy usage of selected concepts (EFQM, Balanced Scorecard and Economic Value Added). Simplified process model of virtual enterprise will be created.

The introductory part of the paper defines the term of virtual firm and value chain. Second part describes the selected management models. The following part is aimed in the formation of value-creation chain in virtual enterprises. Concepts of the Economic Value Added (EVA) and Balanced Scorecard (BSC) are used in more complex view and in an effort to help us to search for synergies and suggestions of efficient measurement and management system especially for the virtual enterprise and all its processes.

## 2. CONCEPT OF VIRTUAL ENTERPRISE AND VALUE CHAIN CHARACTERISTICS

Virtual enterprise (VE) does not exist as a physical subject it is more electronic network that represents the existence of company partners their relations and interconnections creating virtual enterprise. Inside this network partners share information needed for efficient functioning of VE, sources, abilities, costs and liabilities connected with existence of VE. In the VE, partners do not lose completely their autonomy as well as in this temporary connection does not rise new legal entity. After using business purposes VE dissolves on the basis of set scenarios (Hongmel et al., 2003).

Value chain includes information systems management, identification and inputs purchase, schedule and production plan, orders processing, control of stock, stock, customer service, backward wraps and material buyout etc. (Šmída, 2007)

## 3. SELECTED MODELS OF PERFORMANCE MANAGEMENT OF VIRTUAL ENTERPRISE

Economic Value Added as an indicator measures the difference between the return on company's capital and the cost of that capital (Lawrie, 2001). EVA works with cost of capital as well as cost of shareholder capital in terms of opportunity costs. EVA indicates profit of the company in its economical value.

The EFQM Excellence Model was introduced at the beginning of 1992 as the framework for assessing organisations

for the European Quality Award. EFQM model is a practical tool that can be used in a number of different ways as: a tool for self-assessment; a way to benchmark with other organisations; a guide to identify areas for improvement; the basis for a common vocabulary and a way of thinking; a structure for the organisation's management system.

Balanced Scorecard is a strategic planning tool and modern management system that is used extensively in business and industry, government, and nonprofit organizations worldwide to align business activities to the vision and strategy of the organization, improve internal and external communications, and monitor organization performance against strategic goals (Kaplan & Norton, 1996). The balanced scorecard suggests that we explore the organization from four perspectives, and to develop metrics, collect data and analyses it causal chain through all four perspective each of these perspectives.

### 4. VALUE CHAIN CREATION OF VIRTUAL ENTERPRISE

For the purpose of this paper was designed common simplified model of value-chain processes of virtual enterprise. For the needs of the model creation and processes identification, we came out of the selected concepts (approaches). On the basis of individual assessment of each approach according to the selected criteria and analysis of their advantages and disadvantages is proposed common model of value-chain processes for virtual companies. The scheme of model and the model itself is described in figure 1.

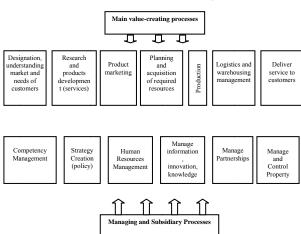


Fig. 1. Value-creation chain of virtual enterprise

## 5. USAGE CONCEPTS EFQM, BSC, EVA AND ABC/M FOR PERFORMANCE MEASUREMENT

In this chapter will be described the possible usage of selected management concepts (EFQM, Balanced Scorecard, EVA and ABC / M) used together in their synergy as a convenient tools for the measurement and management of virtual enterprise value chain and its processes. Diagram of suggested application is shown in following Figure 2.

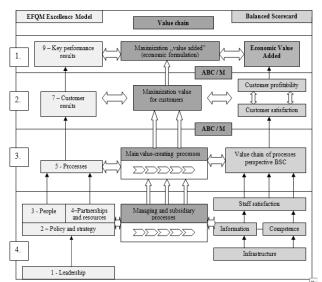


Fig. 2. Design usage of selected concepts (EFQM, BSC, EVA, ABC/M) for processes measurement and value chain management

Numbered and identified processes are broken up and comment below

# 5.1 Financial perspective of BSC and EFQM model interconnection and their usage for measurement and virtual enterprise management

The self-assessment according to the EFQM model represents a tool how to view performance in terms of its quality (TQM). As part of the model is the criterion 9 – the results of financial performance, which reflects the success of the activities carried out (management, development strategies, human resource management, partnerships and resources, processes), i.e. In contrast, the Balanced Scorecard evaluates the performance of its financial outlook in terms of strategic objectives. As an appropriate measure of financial performance indicator can be used EVA, which is achieved on the economic value of reduced capital costs (the costs associated with the creation of value). By interconnecting these concepts together we can obtain an effective tool for measurement and operative management of the value in value-creating chain.

# 5.2 Customer's perspective of BSC and EFQM model interconnection and their usage for measurement and virtual enterprise management, expressing level of customer satisfaction

Each firm seeks to meet the needs of customers in terms of the quality of their products (services provided) with minimal time and cost requirements. These performance parameters are assessed by EFQM model and its results criterion 7 - Results of customer satisfaction. Another suitable instrument is the concept of Balanced Scorecard and its customer perspective, which focuses on the strategic success of customer satisfaction (Kaplan & Norton, 1996). These two concepts are appropriately complemented and their current connections can be used to evaluate the performance, which is expressed by satisfaction with the quality of production (services), pricing adequacy and time consumption.

# 5.3 Process perspective of BSC and EFQM model interconnection and their usage for performance management and measurements within virtual enterprise

The effective creation and subsequent management of measurement value-creation processes are major activities of all the cooperating agencies of virtual enterprise in terms of making strategy and fulfilling strategic goals. You can use the concept of Balanced Scorecard and its procedural perspective, using the defined strategy and setting up required performance objectives of value-creation processes. In the case of self-assessment according to EFQM model we get the necessary information about the suitability of the selected processes and their performance in terms of their quality. The cost-performance of processes is another important parameter of performance. Proper instrument of measurement is the concept of ABC/M, whose basic feature is the identification and mapping of the costs of activities (processes) (Staněk, 2003). We can thus obtain an effective tool for identifying costs of individual processes and then use this information for the management of the entire value-creation chain.

# 5.4 Learning and Growth perspective of BSC and EFQM model interconnection and their usage for measurement and value chain performance

The implementation of self-assessment in accordance with the criteria of EFQM model can help in addition to achieve the required information on the performance from different areas of management and support processes. So that we will be able to identify any weaknesses or strengths of existing processes. The output of EFQM self-assessment provides us information on the suitability and performance management processes. It supports us to define the strategic objectives in the areas focused on competencies, information, knowledge, training and technological support for staff, which constitute a prerequisite for effective management and value-creation main processes support.

#### 6. CONCLUSIONS

Main goal of the paper was to identify and describe value chain of virtual enterprise and refer to measurement and management possibilities using selected concepts. Simplified process model of virtual enterprise was created. Above was designed scheme of mutual interconnection of selected concepts (EFQM, Balanced Scorecard, indicator EVA, ABC/M) and their usage for measurement and virtual enterprise management.

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