

IT COMPANY BUSINESS PROCESSES EFFICIENCY ASSESSMENT

Chernova N.L., Serhiienko O.A.

National Technical University «Kharkiv Polytechnic Institute» Kharkiv

The task of management activities efficiency improvement is of core importance for a modern IT company. The two main management concepts are functional and process, and the latter is most often implemented in modern IT business. The analysis of business processes as a theoretical entity confirms their relationship with strategic management and the need to apply business processes as a management tool. The problem of assessing the efficiency of business processes is sufficiently studied, but the issue of modeling the relationships between individual indicators characterizing business processes and general indicators of efficiency still needs to be refined.

The proposed algorithm for evaluating and analyzing business processes efficiency includes the following core steps:

Step 1. Business process quantitative parameters assessment

The stage involves determining the list of resources necessary for the business process execution, as well as the execution results. It is proposed to consider the final result of the business process as an integral indicator.

Step 2. Dependence assessment of business process results and resource indicators.

At the current stage, it is proposed to choose the Cobb-Douglas production function as a modeling tool. Time costs (zp) and capital costs (zm) for the business process execution play role of exogenous variables. The integral indicator of the business process results satisfaction level is considered as endogenous factor.

$$e^t = Ae^{\rho t} zp^{\alpha} zm^{\beta},$$

α, β - output elasticity by factors; $Ae^{\rho t}$ - characterizes the level of technical progress.

Step 3. Evaluation of business process management efficiency indicators.

Such basic characteristics of production functions as average productivity, marginal productivity, elasticity according to production factors, marginal rate of resource replacement are calculated and analyzed.

Step 4. Synergistic effect evaluation from the implementation of subsidiary business processes.

Synergy resulting from the implementation of subsidiary business processes depends on the efficiency of subsidiary business processes and on the effectiveness of their management within the tactical business process. Therefore, the task of the fourth stage is to build a model for assessing the synergistic effect from the implementation of subsidiary business processes.

Thus as a result of the algorithm implementation a system of quantitative indicators is obtained. It allows to rank business processes according to the level of efficiency, determine the degree of influence of individual components of the business process on the overall efficiency indicator, and evaluate the synergistic effect from the implementation of subsidiary business processes.