

[DOI: 10.20472/IAC.2024.064.007](https://doi.org/10.20472/IAC.2024.064.007)

OLGA KUTNOHORSKÁ

VŠCHT Praha, Czech Republic

DANA STRACHOTOVÁ

VŠCHT Praha, Czech Republic

MAREK BOTEK

VŠCHT Praha, Czech Republic

STANISLAVA GROSOVÁ

VŠCHT Praha, Czech Republic

THE INFLUENCE OF THE FIELD OF BUSINESS ON THE DEVELOPMENT OF PRODUCTIVITY IN SELECTED COMPANIES OF THE CZECH CHEMICAL INDUSTRY

Abstract:

This study analyzes the productivity of selected chemical industry companies in the Czech Republic through Data Envelopment Analysis (DEA). The selection of companies for analysis was based on the amount of turnover and also according to the field of business. The enterprises were grouped into groups of consumer chemistry, inorganic and organic commodity chemistry, qualified chemistry, technical gases, processing of plastics or rubbers, and distribution of raw materials. The Malmquist productivity index (MPI) was used to analyze changes in the productivity of companies, and the statistical significance of these indices was tested using the bootstrap method. This procedure helped identify the influence of various factors on the efficiency and productivity of companies, including the influence of the area of business. The study showed other possibilities of using this procedure. E.g. in the case of inclusion of environmental costs or investments in the field of the environment.

Keywords:

Field of business of chemical industry company, data envelopment analysis, Malmquist productivity index, bootstrapping, financial statements

JEL Classification: C10, D20