

## Models of value creation measurement in different manufacturing industry sectors in the Czech Republic

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### Abstract

**Purpose of the article** The subject of this article is the construction of a model which is able to measure whether an enterprise is creating or destroying value. However, in the light of our previous research, we are not seeking to create a universal model, instead we want to create a set of special models that consider the specificities of different sectors. Therefore, we have created three models especially for the food industry, engineering and transportation. In addition to the differences found within the model structure, we also want to discuss their causes, including more general cross-sectoral differences.

**Methodology/methods** Based on the EVA ratio, we divided each of the surveyed sectors into three groups (creating value, destroying value and enterprises where it cannot be decided whether they create or destroy value – so called “grey zone” enterprises). Based on a study of the literature, about 32 financial ratios were selected which are commonly used to evaluate the performance of a company. Using logistic regression, statistically significant differences were identified between the selected financial indicators within the groups of enterprises creating and destroying value. The statistically significant regression functions represent models capable of distinguishing enterprises that create or destroy the value. By retrospectively comparing them with the EVA ratio, it is possible to set the limits of the relevant models so that they divide the enterprises under examination into three groups (value-creating enterprises, value-destroying enterprises and “grey zone” enterprises).

**Scientific aim** The aim of the article is to construct value-measuring models in various sectors of the manufacturing industry. We start from the premise that it is very difficult to construct a universal model that is able to measure the value in different sectors equally well. Therefore, using the example of three manufacturing industries (namely the food industry, engineering and transportation), we constructed three models and then compared and discussed the differences observed.

**Findings** The results confirmed that there are significant differences between the models of value creation within the three sectors which we studied. The main difference in each sector is its capital structure. For each model, we selected a different number of indicators using statistical methods to create the optimal model. It was also discovered that each model has different limitations among the groups. This is a result of the fact that the models are created from different indicators.

**Conclusions** The first research limitation is that the focus is only on three sectors. As part of further research, it will be necessary to construct different models in other sectors as well. The second limitation of the research is that it focuses purely on finance, which does not allow many options to identify and discuss the internal and qualitative differences of the enterprises and sectors under examination, which could contribute to increasing the accuracy of the model. The model is constructed from publicly available data, which is both a limitation and an advantage. On the one hand, it limits the ability to inform the user, while on the other, it allows for wide usage without having to know internal data.

Keywords: EVA ratio, value creation model, financial analysis, performance, food industry, construction industry, engineering

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