THE INFLUENCE OF CORPORATE SOCIAL RESPONSIBILITY ACTIVITIES ON ECONOMIC RESULTS IN AUTOMOTIVE INDUSTRY IN THE CZECH REPUBLIC

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Abstract

The paper focuses on the influence of activities in the field of corporate social responsibility on economic results of the organizations in the automotive industry in the Czech Republic. The analysis of economic results of the companies in years 2008 – 2012 is conducted using DEA (Data Envelopment Analysis) method. The goal of the paper is to prove or reject the positive influence of CSR on economic results.

Introduction

Corporate Social Responsibility has become an increasingly important topic for organizations based in the Czech Republic in last few years. An increasing number of organizations incorporate activities in the area of corporate social responsibility in day to day operations. Along with that also grows public interest in this issue, and in organizational behavior. With a greater focus on issues of social responsibility there have been developed several models for evaluating and certification of social responsibility of organizations (Statman, 2005). The question remains, however, what is the real impact of the adoption of the concept of social responsibility on the results of the organization (McPeak, 2012).

The aim of this paper is to analyze the financial results of companies in the automotive industry in the Czech Republic. In the past, several research studies on corporate social responsibility in the Czech Republic were made. The vast majority, however, were aimed at identifying the extent of awareness about the concept of the social responsibility in organizations and the public. Recent research realized in connection with the efforts of the European Union to support the implementation of the concept and develop national social responsibility action plans social responsibility of organizations showed increasing interest in the behavior of organizations and the public perception of positive corporate social responsibility activities. But there is again lack of insight on the impact of implementation of the concept on the organization itself.
Research in Automotive Industry

The results of international research provide ambiguous information about the relationship of socially responsible behavior and performance of organizations (Vergalli, 2009). Therefore the research has focused on the analysis of the impact of social responsibility on the results of companies in the Czech Republic.
Sampling and General Characteristics of the Sample

For this analysis were chosen organizations in the automotive industry based in the Czech Republic. Study population was reduced to one industry in order to facilitate the sampling. In order to avoid an excessive reduction in the size of the entire population, the automotive industry, which is in the Czech Republic well developed, was selected. In the sample could therefore get organizations that are somehow involved in the operation of the automotive industry in the Czech Republic. The sample was not further stratified and the selection of individual companies in the sample was randomized.

The sample size was not determined in advance, there was an effort to ensure the largest possible sample size so that the resulting information from the analysis of the data was as accurate as possible.

Information from 112 companies was collected and the sample was subsequently reduced to 93 companies. The reason for such reduction was the incompleteness of information from several organizations. For individual companies, information was collected about their financial results for years 2008 to 2012 (source data have been published financial statements and annual reports) and information about their activities in the area of corporate social responsibility (source of data was websites of the organizations and annual reports).

The information was then coded for the realization of the analysis of the impact of corporate social responsibility on business results.

Based on the information gathered, organizations were classified according to the degree of implementation of the concept of social responsibility based on the classification in Table 1.

Table 1

classification	description	frequency
0	no activities	37
1	activities in one area of CSR	33
2	activities in environmental management and occupational health and safety	9
3	activities in more areas of CSR outside of the Czech Republic	6
4	individual activities in more areas of CSR in the Czech Republic	5
5	complete concept of CSR in the Czech Republic	3
		93

The breakdown of CSR activities into three basic pillars (economic, environmental and social) was used (Chandler, 2014). Because most organizations do not have a problem with the implementation of activities in the economic pillar, the pillar of this classification is omitted. The social pillar was divided into two areas, namely the area of internal (employees of the organization) and external (local community) activities. Because it would impossible to conduct the analysis based on this detailed classification (because of the low frequency in certain categories), categories 2-5 were merged in one group. The resulting classification of the organizations is displayed in Table 2. In addition, the classification was shifted by 1 so as to better utilize the classification in the analysis.

Table 2

| classification	description	frequency
1	no activities	37
2	activities only in the area of environmental management	33
3	activities in more areas of the CSR concept	23
		93

Analysis of the Results of the Organizations

For analyzing the links between the degree of implementation of corporate social responsibility activities and effectiveness of the results of the organizations was chosen method of DEA. The method seeks to determine the technical efficiency of comparable production units and divide them into effective and ineffective (Ray, 2004). The method requires the specification of inputs and outputs so that the efficiency can be assessed (Vincent, 2012). For the purpose of this paper one input (the rate of implementation of activities in the area of corporate social responsibility) and one output (average results of operations for the years 2008 to 2012) was chosen.

The basic information about the sample is displayed in Table 3.

input	frequency	average	standard deviation
1	37	18172,57	70722,3
2	33	69584,13	129069
3	23	154990,8	177326,3

The next step of the analysis was to adjust the average earnings by use of the resources. The assumption that the more the organization implements activities in the area of social responsibility the more resources it is using was used. We assume a linear increase in the consumption of resources among various groups. Dividing the average earnings with inputs identifies the efficient company. According to the results of the identified effective company we can determine the boundaries of efficiency for all other companies. The results are presented in graphical form in Figure 1. The boundary of efficiency was supplemented by the individual confidence intervals (with parameter alpha level of 0.05) in order to take into account the shift in the boundary that will be caused by the expansion of the sample.
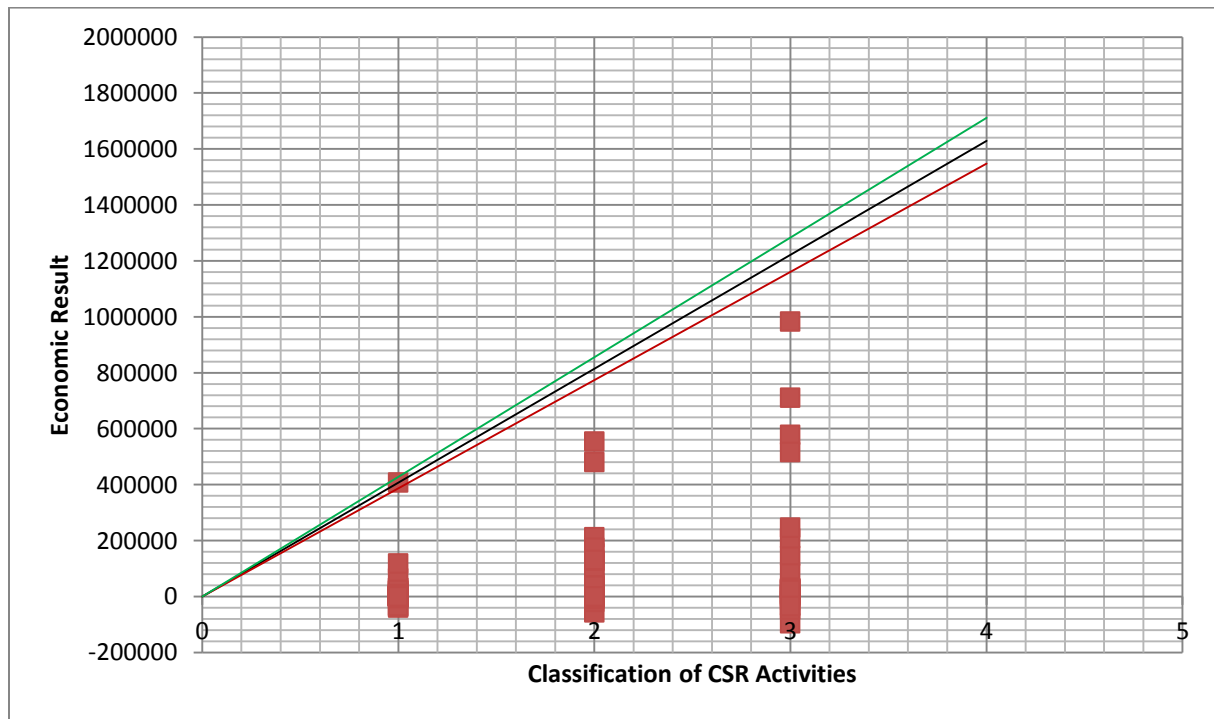

From Figure 1 it can be seen that the effective organization is from the group 1, a group of companies not realizing the CSR activities. Other companies are inefficient. For these firms to become effective they have to use the output oriented model (increase the generated output), input oriented model (decrease the input) or a combination of these models. Displaying the confidence intervals does not change the results, because the interval does not include any other organization. As we know the boundary of effectiveness, we can calculate the effectiveness of all companies included in the sample. Table 4 shows the average effectiveness of organizations by individual groups.

group	average effectiveness
1	0,044617454
2	0,08542177
3	0,126844942

From the results we can see that the average efficiency is the lowest in the group of organizations not realizing any social responsibility activities, the highest in the group of organizations with the largest scale of implementation of CSR activities.

Since the assumption of a linear increase in input between different groups could be wrong, the weight of the input in each group was determined in another way. The first group was left to a value of 1, the second group was assigned a value of 1.3 (the organizations carry out activities in one of three areas of CSR), the last group was assigned a value of 2 (the organizations are implementing activities in more areas of CSR). The results are shown in Figure 2.
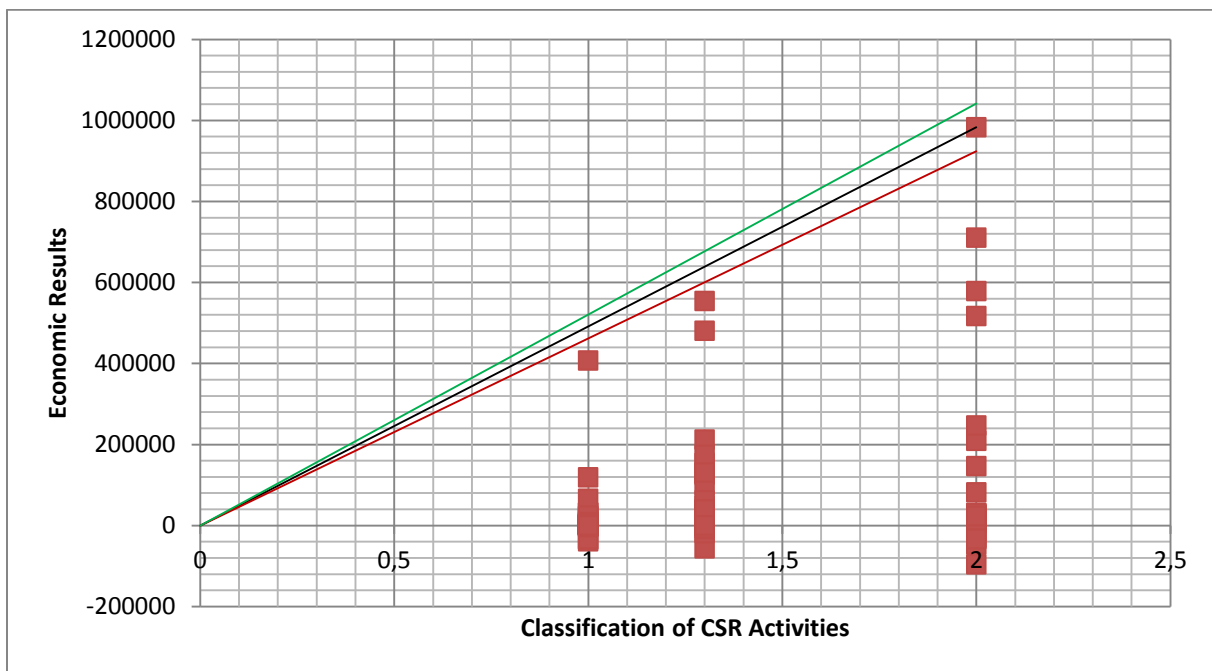
After changing the valuation of inputs a company from the group of companies implementing activities in several areas CSR becomes the effective one. Confidential intervals were used in the same way as in the first analysis and they do not change the results.

Table 5 shows the average effectiveness of organizations by individual groups.

Group	Average Effectiveness
1	0,036977679
2	0,108915595
3	0,157688229

The average effectiveness has decreased in the first group of companies and has increased for the other two groups. The average effectiveness still remains the highest for the third group (companies realizing activities in more areas of CSR).

Conclusion

The paper analyzed the relationship of activities in the field of social responsibility of organizations and production effectiveness of the organizations operating in the automotive industry in the Czech Republic. The method DEA was used. The results show that the lowest average effectiveness has the group of organizations that do not implement any activities in the area of social responsibility. With the growth of the rate of implementation of these activities, the average efficiency of organizations also grows and organizations that have the widest implementation of activities in the area of social responsibility of organizations have the highest average effectiveness. The results of the research allow us to claim that the level of implementation of activities of social responsibility has a positive effect on the average effectiveness of organizations classified into groups according to publicly proclaimed CSR activities.

Brief Biography of Author

Ondrej Hyks is currently with the department of management of the University of Economics in Prague. He focuses on corporate social responsibility and quality management. He has previously worked for Czech Standardization Office, where he has been responsible for the cooperation of development and adoption of ISO 9000 family of standards in the Czech Republic.

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