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Abstract: The issue of social responsibility is one of the most discussed contemporary topics. It is closely related to the financial management of the company. The social area is one of the three main topics integrated in the concept of corporate social responsibility. In addition to the social interactions of the company and its surroundings, there is also included a wide range of internal relations. The largest group within the range of internal relations consists of employees. Employees' satisfaction, loyalty, fluctuation, sick leave of employees, as well as accident rate has a direct impact on labour productivity. This has a direct impact on the economic performance of the company.

In the Czech Republic, the highest number of accidents and the highest number of fatalities are in the construction industry. The summary of duties related to the occupational health and safety of workers at workplace, given the acronym OHS, is based on legislative regulations. OHS is regulated primarily by the Labour Code and Law. 309/2006 Sb. The standard for occupational health and safety management systems is currently OHSAS 18001. When a company is certified, it is demonstrating an occupational health and safety management at high level and its continuous improvement. This article deals with the measurement of economic performance of enterprises in connection with the implementation of OHSAS certificate 18001. Economic performance will be measured by both traditional and modern methods of performance measurement on 50 enterprises operating in the construction sector in the Czech Republic.

Key words: accident rates · construction · corporate social responsibility · economic performance · occupational health and safety · OHSAS 18001

JEL Classification: M14 · L25

1 Introduction

Corporate Social Responsibility (CSR) is a phenomenon of recent years. Implementation of the rules of social responsibility in the company and its impact on economic performance in recent years was a topic of a large number of international authors. The conclusions of these experts are ambiguous. Authors such as Calabrese et al., (2013), Amalendu (2012), and Fauzi Idris (2009), Iqbal et al. (2012) and Tyagi (2012) clearly demonstrate the positive impact of CSR on the economic performance of the company. For others, CSR is not an important variable for the performance.

In the Czech Republic, the implementation of CSR in the form of a certificate SA8000 and its subsequent impact on economic performance was dealt with by Basovníková, Abramuszkinová Pavlíková and Vavřína (2013). The results of this research suggest rather neutral impact on the implementation of the CSR on the economic performance of the company. It also resulted in a fact, that CSR is implemented mainly by financially stable businesses. Other surveys done by Doane (2005) and Reich (2007) confirm, on the contrary, that the investments associated with obtaining a certificate does not guarantee a hundred percent return and these authors are strongly against the introduction of the CSR rules in companies.

One of the three areas of CSR is the internal social business environment, which consists mainly of employees. Any business, respectively business management, has an obligation to workers based both on the employment relationship and partly defined by a law. In the Czech Republic, the principles of corporate social responsibility and related to some statutory obligations, such as the right compliance with occupational safety and health (OHS below).
Implementation and compliance of OHS leads to the reduction of risks and accidents in the workplace. This reduces staff turnover and leads to a decline in the number of days of paid leave. Among the indirect positive effects of OHS we can mention staff loyalty, greater productivity based on the feeling of safety in the workplace and others. As indicated by Hyršlová and Bednářková (2007), these consequences through labour productivity directly affect the economic performance of a company by the positive rate.

Employers, who consistently prevent accidents at work and occupational diseases through the implementation of OHS and regularly train their employees in this area, obtain long-term benefits such as the increase of the level of motivation, collaboration and staff ethics, reduced or limited possibility of criminal or civil lawsuit (European Agency for Safety and Health at Work, 2008). Veber (2007) ranks OHS management systems into the section of the Health and Safety Management System, which refers to one of the three foundation stones of quality control. Other includes the Quality Management System and the Environmental Management System.

By Branská (2003), the focus on occupational safety and health brings the company not only a competitive advantage, but also increase in economic efficiency. Blašková (2005) adds that the emphasis on occupational health and safety leads to a significant reduction of economic costs associated with accidents and sick leave. Hyršlová and Bednářková (2007) as the cause of the increase in productivity and a consequence of the introduction of quality management of occupational health and safety report, among others, employee satisfaction by knowing that the employer cares about their safety in the workplace.

The initial implementation of the measures which are necessary for compliance with the standards and rules of safety and health at work is relatively costly activity for a business, especially in certain sectors. The costs associated with compliance with occupational health and safety rules can be reduced by the quality management defined in the standard OHSAS 18001. The basic rules of OHS and the resulting responsibilities of employees and employers are clearly defined in the Labour Code. On this basis OHSAS 18001 is operates, which establishes the procedure for the formation and implementation of OHS management system in the enterprise. The standard provides guidance on enterprise mapping hazards, manage risks and improve its economic performance. Šenk (2012) in his book states, that "OHSAS is the best known way to control occupational health and safety."

OHSAS 18001 provides the company management with guidance, how efficiently and at lower cost to implement in practice the rules set by legislation. Although implementation of the standard itself is not completely free of cost, its long-term use is beneficial to company management, among others also financially. The reduction of financial costs and increased revenue from principal operations, due to increased productivity, lead directly to increased economic performance of the company.

Construction is one of the sectors with the highest injury rate, as confirmed by Milan Pavelčík of Bureau Veritas certification company. As he says: "A construction worker is probably the most endangered profession in our country. In construction, there are also the most fatal injuries because the most fatal accidents are often caused by falls from height." The statistics presented by the Magazine Safety (2015) shows that in 2014, from the total number of 45,358 work injuries with subsequent working disablement in the Czech Republic, there were 7% of accidents in the construction. The number of fatalities was 106 and 20 of them were caused by falling from a height in the construction. Accidents at work are significantly lower than in 2008, but the trend is rather stable. In 2014 in comparison with 2013, there were 950 cases more, as stated by the Czech News Agency (2015). The numbers of fatalities are slightly declining.

Occupational accidents are largely caused by the inattention of employees and failure to comply with the principles of safety in the workplace. A significant percentage of injuries are also caused by the employer's desire to save money on safety measures. The employer intentionally saves on the purchase of personal protective equipment, both in its quantity and quality. This will lead to immediate and significant cost savings only until the moment of the occurrence of occupational injury. The administration associated with the reporting and subsequent disablement of employees or activities related to the need to find immediate replacement, ultimately increases the cost of the employer.
2 Methods

The research goal is to quantify the impact of the implementation of OHSAS 18001 on labour productivity in the company from a specified research sample. A partial objective is to evaluate the significance of labour productivity indicators on the economic performance of the company in a defined group. Based on this goal, the following research question is suggested: "Does the ownership of the certificate OHSAS 18001 influence the economic performance of enterprises?" The object of the research is a homogenous group of companies with a legal obligation to comply with occupational health and safety rules, fulfilling the conditions defined in the selection of the research sample. The subject of the research is the evaluation of the economic performance in the construction sector.

The research sample includes companies that meet the following criteria. They are registered in the Czech Republic, their area of business is construction (section F according to the CZ-NACE), they are owners of OHSAS 18001 certificate and they are available in the databases with data about financial statements of the business necessary for the determination of economic performance from 2004 to 2013. A list of companies that own certificate OHSAS 18001 was acquired on ISO.cz. Based on the analysis of secondary data from financial statements of individual companies, we selected 50 of those where financial statements were available including all necessary data for the period 2004 – 2013 under study.

The research sample consists of the following companies: AGC Automotive Czech a.s., Agromeli spol. s.r.o., AKIT s.r.o., APASON s.r.o., ARCADIS Projektmanagement s.r.o., BLÁHA s.r.o., BONTRANS, a.s., BPS-Prastav, s.r.o., Brněnské vodárny a kanalizace, a.s., BS Vsetin, s.r.o., CS CABOT spol. s.r.o., DAICH spol. s.r.o., Dopravní stavby Brno, s.r.o., DOSTA Tábor s.r.o., ELPREMO, spol. s.r.o., FIRESTA-Fišer, rekonstrukce, stavby a.s., FLECK-CS Elektroengineering spol. s.r.o., GEMO OLOMOUC, spol. s.r.o., HALKO stavební společnost, s.r.o., H-INTES s.r.o., Ing. Bronislav Vala, IP - TRADING, s. r. o., JIHOSPOL jihočeská obchodní a stavební společnost a.s., JIMI CZ, spol. s.r.o., JP GASECO s.r.o., Jurica a.s., LABIMONT BRNO a.s., LENIA spol. s.r.o., Leonhard Moll Railway & Tower Systems, s.r.o., MEGA TRUCKING BOHEMIA spol. s.r.o., MERTASTAV s.r.o., METROSTAV a.s., Navlácí stavební firma, s.r.o., PARTR spol. s.r.o., Petr Březina - APB Plzeň, PMP Prostějov, s.r.o., POZEMSTAV Prostějov, a.s., Průmyslové stavitele Brno a.s., První KEY - STAV, a.s., PSJ, a.s., Společnost T.A.Q.s r.o., STAFIN a.s., Stavební řemesla - Zeman s.r.o., Strojní Podzimek s.r.o., Suntel Group, s.r.o., TELE DATA SYSTEM, spol. s.r.o., THERMOSERVIS - TRANSPORT s.r.o., UNIGEO a.s., VW WACHAL a.s., Zlinstav, a.s.

The economic performance of selected companies is represented by the return on equity indicator (ROE below). Return on equity was chosen primarily for its easy access to sector values. Sector values were obtained from benchmarking diagnostic system of financial indicators of the Ministry of Industry and Trade (INFA). Another reason for choosing ROE was superiority of the use of equity in the capital structure of selected companies. Labour productivity is determined by the share of value added and personnel costs. The first step performed was correlation analysis and the relation between the economic performances of companies on labour productivity. Subsequently, a comparison of economic performance and labour productivity of selected companies with sectoral levels was analysed. Higher average values of a specific group of companies than the industry average may indicate that the ownership of OHSAS 18001 certificate is an economic advantage. Furthermore, there were series in time analysed for the entire industry. The results obtained by correlation analysis and binary comparison of ROE and labour productivity were subsequently confronted with specific data of the individual companies financial statements. The cause of extreme values was investigated, with significant annual increase and decrease in monitored indicators with their potential causal connection with other items of financial statements.

3 Research results

To answer the research question, the research process was defined in the methodological part, predicting a causal relationship between labour productivity and economic performance of the company. Surprisingly, the results of the correlation analysis suggest that the measure explaining the labour productivity is not significant for the economic performance of selected companies. As seen in Figure 1, it is evident that the highest degree of correlation is represented by a correlation coefficient in 2008. This value was only about 0.422, not even reaching the level of 0.5. In the given year, from the whole period, the highest degree of correlation was between labour productivity and economic efficiency of enterprises reported from the research sample.

Moreover, a binary comparison of the average values of labour productivity of selected enterprises and the average labour productivity for the entire construction industry was conducted. The results reported in Figure 2 show that in the period of the observed period, the value of labour productivity is higher than 1. Due to the nature of the formula, it can be said that for the most of the observed years the added value exceeds of the personal cost. The only exception is 2013, when labour productivity is only reaching the coefficient of 0.98. In the given year, personnel expenses slightly exceed the added value.
From Figure 2 it is also clear that in most of the periods under study, the selected group of companies is declaring higher average labour productivity than the average in the sector. Apart from 2004, the difference is not so significant, reaching only 0.4 units. Additionally, in 2009, 2012 and 2013, the average values of sectoral labour productivity were even higher than the average values in the sample of enterprises under study. In 2013, the difference was almost the entire 1 unit.

The table 1 was created to complement the average values. It contains a percentage of the number of enterprises which reached in each of the years under study the values of labour productivity higher than the average in the sector. Table 1 shows that not even a third of companies from the research sample do not declare higher sectoral labour productivity than the average sector productivity. Only in 2006, the productivity was higher in more than in 50% of selected companies. In other years, the labour productivity was lower in more than two-thirds of companies in comparison with construction sector.

For the indicator of return on equity, which represents the economic performance of enterprises, the similar binary comparison was conducted, as results display in Figure 3. The average values of ROE in selected businesses achieved positive values. The highest average return on equity from the research sample was between 2007 and 2012; the lowest ROE was in 2013. It can therefore be concluded that both the sectoral values and average value of the selected group of companies achieved a satisfactory level.

The average ROE from the research sample declares higher values than the average sectoral values in almost all cases, excluding only one. In 2004, 2007, 2008, 2011 and 2012 the ROE for selected enterprises was markedly higher than ROE in the sector. The exception in this positive trend is year 2009, when the sectoral value of ROE reaches its peak.
in the period. The average value of return on equity was only 18.7% in the research sample; the sectoral value was nearly 19.4%.

**Figure 3** The average value of ROE from companies from the research sample

![Graph showing the average value of ROE from companies from the research sample](source)

Furthermore, the values were supplemented by a percentage of the number of enterprises in each of the monitored years to show the values of economic performance which were higher than the average in the sector. Table 2 shows that in five out of the eleven monitored periods, more than 50% of selected companies declare higher ROE values than the average value for the construction industry. In the remaining years, more than a third of companies have a higher economic performance than the sectoral average in a given year.

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<td>Percentage</td>
<td>47.73%</td>
<td>42.22%</td>
<td>39.58%</td>
<td>56.25%</td>
<td>59.18%</td>
<td>32.00%</td>
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<td>50.00%</td>
<td>35.29%</td>
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**4 Conclusions**

The first surprising conclusion of the research is insignificant correlation between economic performance and labour productivity in a selected group of companies. Low correlation coefficients are probably caused by the insignificance of personal expenses to the amount of return on equity. It is not possible to replace the added value which was used in the calculation of labour productivity, but the replacement of an indicator of personnel costs for different types of costs would be likely to lead to a greater explanation of the extent of economic performance. For example, we can assume that the costs associated with the human factor in the company are not as important as the costs associated with managing equipment and other tangible assets.

Enterprises which have OHSAS 18001 certificate, achieve higher average labour productivity than the average for the construction sector. This statement can be concluded from the data shown in Figure 2. On the other hand, Table 1 clearly shows that in most of the monitored period, less than the majority of enterprises from the research sample, does not reach the average values for the sector. From the collected data we can therefore conclude that the selected group of companies include companies with significantly higher levels of labour productivity, which significantly affect the average values of labour productivity of the entire research sample.

The labour productivity of companies in the survey sample does not achieve clearly better values than the average values in the construction industry. However, at the beginning of the research it was demonstrated by correlation analysis that the selected indicator of economic performance does not depend on the level of labour productivity. If the research would finish at this point, it would not be possible to determine the impact of the ownership of the certificate OHSAS 18001 on the economic performance of selected companies.

The average return on equity has been greater in the reporting periods than sectoral values in the construction industry, as shown in Figure 3. Again, by supplementing this with Table 2, we conclude that in most of the periods under study it is less than the majority of enterprises of the research sample not even the average values for the sector. On the other hand, the values of economic performance reach higher values the values of indicators of labour productivity.

On the basis of the percentage of companies from defined groups that achieve at selected times higher values of selected indicators than the average value in the construction sector recorded in Tables 1 and 2, an interesting conclusion was obtained. As for economic efficiency and labour productivity it is true, that in the research sample, there is majority of those companies with below average values and only a few companies that are achieving values significantly above average. The companies which are declaring much better economic results can influence average values of the selected group to that extent that the average values seem to look higher than the sectoral values.
In the context of the research question, it can be concluded that the ownership of certificate OHSAS 18001 has an influence on the economic performance of the company, which is not very significant but positive. The influence of the OHSAS 18001 standard on the labour productivity in a company is also less important, but still has a positive effect.

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References


