Evaluation of the Quality of Accounting Data in the Regions of the Czech Republic based on Audits by the Tax Offices

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Abstract: The quality accounting data (QAD) allows manage many processes in a business. The main goal of this paper is evaluate the quality of accounting data in companies and analyze if this quality has interdependence with numbers of audits by the Tax Offices. Data quality is one of the decisive factors in making the right decisions and the overall functioning of the company. It's not the only one, but a very important factor. In practice, there is proved data quality relationship with the successful management of the company – non quality data costs companies around the world each year hundreds of billions dollars. The paper will confront the impact of the numbers of audits by the Tax Offices with the quality of accounting data. These audits are performed under on-the-spot investigations. On-the-spot investigations are conducted by experts from all units of the Tax Offices, most often by experts from tax audit units. This units provide activities such as: carry out the administration of taxes, payments and advances for these revenues, administer subsidies, conduct the offence proceedings, collect and enforce the payments, charges, settlements, considerations, fines and penalties, impose fines, decide on authenticity and amount of claims on taxes, payments and other revenues administered by them in the bankruptcy proceedings and others activities.

A survey on the quality of accounting data was conducted on 5,489 enterprises, for each company were calculated individual indicators identified according to used model for determination the quality of accounting data and were calculated QAD by this model. Subsequently, values of quality of accounting data were compared and analyzed with information about financial audit provided by the Tax Offices. It was found that, because the used model is compiled especially for evaluating the quality of accounting data for management, there is no dependency between the various variables.

Key words: Quality of Accounting Data · Regions of the Czech Republic · Tax Offices · Audits

JEL Classification: M41

I Introduction

Accounting is defined as a system which is characterized by using the accounting principles and methods. Nenadál, Noskievicová, Petříková, Plura and Tosenovsky (2002) like Easton, & Jarrell (1998) say that if the quality control is carried out effectively the company can have considerable results especially from the financial point of view. Enterprises that have successfully established management systems achieve higher performance and better financial results. Users of accounting information are generally interested in assessing current performance as well as estimating future performance. Some of a company’s transactions require only a mechanical application of accounting rules while other types depend on the judgment of the managers and accountants. This can introduce intentional and unintentional errors. Those errors reduce the quality of accounting information (Parsley, Chaney, & Faccio, 2011).

Qualified accounting information is a source of information for managers in their decision making. Poor quality of data and information causes serious problems almost everywhere. Most significant problems are reflected in repeated processes and activities, where is created extra work due to poor information inputs, inconsistent, poor or even conflicting data or reports. Regarding intentional errors, it should also be minimized with respect to the number of audits by the Tax Offices.

According to the Tax Code, a tax subject is a taxpayer, a payer and a legal successor of a natural person or legal entity. A taxpayer is a person whose revenues, property or activities are subjected to tax. A payer is a person who, under own proprietary liability, transfers the tax collected or deducted from taxpayers to the tax administrator (Act no. 280/2009 Coll., Law the Tax Code as amended).
During the search activity the tax administrator especially focuses on the detection and analysis of tax operations of high-risk legal entities or legal entity groups. Detecting new types of tax evasions has besides the preventive effect also a direct fiscal impact. During the search activities are used technologies that enable to search risks indicating possible tax evasions in internal and external information sources, subsequently evaluate these risks and consider next steps. The searching activity is organized by the Tax Offices. Concurrently, nationwide search actions are directed by the General Financial Directorate in cooperation with the Police of the Czech Republic and the Customs Administration of the Czech Republic (Financial Administration of The Czech Republic, 2013). As a risk cases were by Financial Administration of The Czech Republic (2013) especially considered this three cases:

- tax subjects whose only economic activity was acquisition of goods from the European Union and its subsequent delivery to the EU with zero tax liability,
- cases of fictitious transactions in order to declare tax liability,
- cases where both received and realized taxable supplies were of the almost same value and therefore with very low tax liability ascribed.

The used model still has not used for any similar research based on evaluation the quality of accounting data in the regions of the Czech Republic based on audits by the Tax Offices.

2 Methods

The main goal of this paper is, based on the quality of accounting data formula, evaluate the quality of accounting data in companies and analyze if this quality has interdependence with numbers of audits by the Tax Offices. The concentration of interest is to determine the quality of the financial data of companies on the basis of established criteria and then determine whether there is a correlation between the quality of accounting data and numbers of audits by the Tax Offices.

Opinion on what is actually the quality of the data and how to measure it is constantly evolving. Because this is not an exact discipline, there are multiple attitudes to how to define data quality and how to measure it. Data quality has a variety of dimensions - you cannot simply say that good quality data is error-free or that the most accurate or the most up to date. Data quality cannot be assessed only by one indicator. Very often cited opinion about the quality of accounting data is that it should be credible, it should be prepared on the basis of the accounting methods and applicable laws and it should be reliable.

The output of financial accounting information for management is often inadequate for several reasons. These are primarily the possibility of influencing accounting data in the context of determined by law regulations and insufficient financial information needed for management. Quality of proceedings depends on the quality of accounting information and statements and their conformity with reality and legislation, as well as their presentation. For certain decisions may be enough available financial information, but the same data can be inadequate for a different decisions (Neely, &Cook, 2011).

Accounting should be a valuable information system and could be a valuable source of data for further analysis. This is mainly because of its accessibility, understandability and clarity, persuasiveness and a high truth value. From the perspective of the user requirements, the quality is defined as suitability to use in the economic calculations (Juran, 1992).

The main attribute of successful managers is that they can access the data they need and their ability this data correctly and timely analyze (Drury, 2012). The area of interest of managers is focused on profitability and financial stability (as opposed to the interests of the owners, who are interested primarily to appreciation of invested capital) and they are the target of manager decisions. The basis for the use of financial information, however, is its utility. Management commitment should be engage in and maintain behaviors that others achieve the goals (Cooper, 2006).

The quality of accounting information is a complex concept, containing the value relevance of accounting information, accounting conservatism, and earnings management. Information will be useful if it is understood and used by the user (Schiper, & Vincent, 2003).

In the application part, model compiled to determine the quality accounting data is used. The model was compiled based on indicators that are primarily based on the accounting information (especially on information from the balance sheet and profit and loss statement) and the indicators of financial analysis. The cornerstone of most indicators was the value of cash flow. The cause of using cash flow indicator is that this indicator is widely perceived as an indicator that
can be (compared to a profit) only difficult to falsify. Indicators based on the cash flows are used for deeper analysis of different situations in a company. Initially was determined 20 indicators what were used for analysis and further investigated. The indicators cover all major areas of accounting, for example income and expenses, assets and liabilities, equity and debt, profit and tax (Vlčková, 2014).

The model for determining quality of accounting data is:

\[ QAD = 1,746 + 1,326x1 + 0,002x2 - 0,236x3 - 0,378x4 + 0,075x5 \]  

(1)

where:
- \( x_1 \) is the value of indicator (Adjusting items + Reserves) / Total assets,
- \( x_2 \) is the value of indicator Cash flow / Earnings before interests and taxes,
- \( x_3 \) is the value of indicator Sales / Total assets,
- \( x_4 \) is the value of the indicator Cash flow / Liabilities,
- \( x_5 \) is the value of indicator Interests / Cash flow.

The formula for standard deviation is:

\[ s = \sqrt{s^2} = \sqrt{\frac{\Sigma(x_i-\bar{x})^2}{n-1}}, \quad \bar{x} = \frac{\Sigma x_i}{n} \]  

(2)

where:
- \( n \) is the number of data points,
- \( x_i \) is each of the values of the data,
- \( \bar{x} \) is the mean of the \( x_i \).

Standard deviation is a measure that is used to quantify the amount of variation or dispersion of a set of data values (Hendl, 2012).

The formula for coefficient of determination is:

\[ R^2 = \frac{\Sigma(x_i-\bar{y})^2}{\Sigma(x_i-\bar{y})^2} \]  

(3)

Coefficient of determination is a number that indicates the proportion of the variance in the dependent variable that is predictable from the independent variable (Hendl, 2012).

3 Research results

The research was applied to companies from 13 regions of Czech Republic and Capital city Prague, what have number of employees from 10 to 1999, with annual sales from 10 to 1000 mil. CZK and principal activity is in according to CZ NACE Section C – Manufacturing. The higher the value of QAD is the worst quality of accounting data in the company is. It is on base that the criteria by which was model compiled have negative impact to the company. The value of QAD could be from 0 to 4. Zero means that the accounting data quality is on the best level and four means that the accounting data quality is on the worst level.

Figure 1 Quality of accounting data in regions of the Czech Republic

Source: Společnost e-office Czech Republic s. r. o. (2014), Own processing
The analysis was performed in the year 2014 at 5,489 enterprises, for each company were calculated individual indicators identified according to the model used to determination the quality of accounting data and were calculated QAD by this model. For determination the data for the calculation of financial indicators was used data of the balance sheet and profit and loss of individual companies obtained from the database Albertina CZ Gold Edition. The summarized results from research in regions are:

a) the average value of QAD is 1.1316,
b) the minimal average value of QAD is 0.1208,
c) the maximal average value of QAD is 1.1451,
d) the standard deviation is 0.0080.

The comparison of the quality of accounting data in the regions of the Czech Republic is on the figure 1.

Financial inspections and tax collections in the Czech Republic are performed by the system of Tax Offices that consists of Financial Directorates, Tax Offices and General Financial Directorate. The Financial Administration of the Czech Republic statistically monitors number of tax subjects registered at the tax administrators’ and the number of entities. In 2014, the tax administrators registered 2,448,733 legal entities and natural people. The numbers of legal entities and natural people assorted by regions of the Czech Republic, number of audits per year 2014 and number of employees at audit department are shown in the following table. The research was conducted on the audit of income tax.

Table 1 Audits by Tax Offices in regions of the Czech Republic

<table>
<thead>
<tr>
<th>Tax Offices</th>
<th>Number of employees at audit department</th>
<th>Number of companies</th>
<th>Number of companies per one employee</th>
<th>Number of audits per year 2014</th>
<th>Number of audits per one employee</th>
<th>Number of audits per one company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital city Prague</td>
<td>488</td>
<td>505 151</td>
<td>1 035</td>
<td>2 427</td>
<td>5</td>
<td>0.0169</td>
</tr>
<tr>
<td>Central Bohemian region</td>
<td>349</td>
<td>279 312</td>
<td>800</td>
<td>7 119</td>
<td>20</td>
<td>0.0076</td>
</tr>
<tr>
<td>South Bohemian region</td>
<td>218</td>
<td>147 994</td>
<td>679</td>
<td>1 612</td>
<td>7</td>
<td>0.0048</td>
</tr>
<tr>
<td>Příbramský region</td>
<td>180</td>
<td>138 844</td>
<td>771</td>
<td>2 345</td>
<td>13</td>
<td>0.0255</td>
</tr>
<tr>
<td>Karlovarský region</td>
<td>86</td>
<td>62 137</td>
<td>723</td>
<td>564</td>
<td>7</td>
<td>0.0192</td>
</tr>
<tr>
<td>Ústecký region</td>
<td>198</td>
<td>151 053</td>
<td>763</td>
<td>1 316</td>
<td>7</td>
<td>0.0204</td>
</tr>
<tr>
<td>Liberecký region</td>
<td>130</td>
<td>100 849</td>
<td>776</td>
<td>1 078</td>
<td>8</td>
<td>0.0070</td>
</tr>
<tr>
<td>Královéhradecký region</td>
<td>173</td>
<td>118 146</td>
<td>683</td>
<td>828</td>
<td>5</td>
<td>0.0091</td>
</tr>
<tr>
<td>Pardubický region</td>
<td>148</td>
<td>104 772</td>
<td>708</td>
<td>798</td>
<td>5</td>
<td>0.0166</td>
</tr>
<tr>
<td>Region Vysočina</td>
<td>140</td>
<td>100 924</td>
<td>721</td>
<td>2 494</td>
<td>18</td>
<td>0.0087</td>
</tr>
<tr>
<td>South Moravian region</td>
<td>330</td>
<td>267 291</td>
<td>810</td>
<td>5 120</td>
<td>16</td>
<td>0.0109</td>
</tr>
<tr>
<td>Olomoucký region</td>
<td>155</td>
<td>121 114</td>
<td>781</td>
<td>2 014</td>
<td>13</td>
<td>0.0163</td>
</tr>
<tr>
<td>Moravian-Silesian region</td>
<td>274</td>
<td>221 587</td>
<td>809</td>
<td>3 601</td>
<td>13</td>
<td>0.0247</td>
</tr>
<tr>
<td>Zlínský region</td>
<td>169</td>
<td>129 559</td>
<td>767</td>
<td>2 648</td>
<td>16</td>
<td>0.0107</td>
</tr>
<tr>
<td>Total</td>
<td>3 038</td>
<td>2 448 733</td>
<td>806</td>
<td>33 964</td>
<td>11</td>
<td>0.1984</td>
</tr>
</tbody>
</table>

Source: Společnost e-office Czech Republic s. r. o. (2014), Own processing

Results of statistical analysis of relationship between the quality of accounting data and:

- number of employees at audit department $R^2 = 0.138$,
- number of companies per one employee $R^2 = 0.0897$,
- number of audits per year 2014 $R^2 = 0.0561$,
- number of audits per one employee $R^2 = 0.0002$,
- number of audits per one company $R^2 = 0.0041$.

When the quality of accounting data was compared with the number of audits by the Tax Offices no correlation was found between the variables. This may be caused primarily because the quality of accounting data model is compiled especially for evaluating the quality of accounting data for management, respectively it serves as a support model for companies’ managers. It is based on the evaluation of information in terms of:
errors and fraud — accounting fraud by management, unethical behavior of managers, accounting fraud by employees, unethical behavior of employees, creative accounting, accounting errors arising out ignorance, human error accounts,

accounting methodology — methods of depreciation, methods of valuation, methods of accounting organization, processing technique, internal directive, internal control,

influence of information system — lack of information, poor internal communication, legislation — too wide or narrow, confusion, frequent changes, requirements for managers in the enterprise's information system.

As you can see, audits by Tax Offices are focused on different criteria. Those audits focus especially on detecting fraud in tax reductions and it is the reason why there is not statistical significant relationship with the quality of accounting data.

4 Conclusions

The article is primarily concerned with the comparison the accounting data quality and the number of audits by the Tax Offices. The analysis was performed on 5,489 companies from 13 regions of Czech Republic and Capital city Prague in the year 2014, for each company were calculated individual indicators identified according to the model used to determination the quality of accounting data and were calculated QAD. Then the numbers of companies assorted by regions of the Czech Republic, number of audits per year 2014 and number of employees at audit department were founded out and statistical analysis was performed. It was found that there is no dependency between the various variables. It is because the quality of accounting data model is compiled especially for evaluating the quality of accounting data for management and audits by Tax Offices focus especially on detecting fraud in tax reductions.

References


