

Do Firm in the Tourism Sector Manage Earnings? The Case of the V4 Countries

Tomas Kliestik

Faculty of Operation and Economics of Transport and Communications, University of Zilina, Zilina, Slovak Republic

Lenka Hrosova

Faculty of Operation and Economics of Transport and Communications, University of Zilina, Zilina, Slovak Republic

Katarina Valaskova

Faculty of Operation and Economics of Transport and Communications, University of Zilina, Zilina, Slovak Republic

Lucia Svabova

Faculty of Operation and Economics of Transport and Communications, University of Zilina, Zilina, Slovak Republic

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Abstract

We study whether the presence of earnings management in the period of 2016-2019 occurs in companies operating in the tourism sector in the V4 countries, as the issue of earnings management in the tourism sector is not developed in these countries. To identify the presence of earnings management, we apply the Jones model in each V4 country to assess the occurrence of earnings management and its direction, degree, and extent. We use regression analysis in our paper. The existence of earnings management is verified using a non-parametric Mann-Whitney test. The direction, degree, and extent are verified through discretionary accrual percentages and average discretionary accruals. The data are drawn from the Amadeus financial database. The selection of companies is based on a set criterion, where the value of total assets in the period 2016-2019 will reach at least one million euros. Our analysis shows that companies in the tourism sector in the V4 countries manipulate profits. Discretionary accrual analysis reveals different positive and negative discretionary accrual values in the V4 countries. Enterprises in Slovakia achieve lower values of positive discretionary accrual compared to negative discretionary accrual. On the contrary, in the Czech Republic, Poland, and Hungary, companies achieve higher values of positive discretionary accrual. We also found that companies in Slovakia manage their profits by decreasing compared to those in the Czech Republic, Poland, and Hungary, which in turn manage their profits by increasing.

Key Words: earnings management, tourism sector, manipulation of earnings, accrual, detection capability of earnings models.

JEL Classification: M41

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1. Introduction

Manipulating accounting data is one of the main problems in business practice, as the lack of transparency results in the provision of false information to third parties who make important decisions

in the performance of their activities. This issue also creates information asymmetry between lenders and borrowers. Thus, getting bank loans, the main foreign source for companies, becomes more difficult (Kutac et al., 2013).

Profit is an important indicator of the company's business activities and the implementation of the necessary decisions by the company's executives (Novak et al., 2021). Price changes are also crucial for businesses especially in the sectors that use a high level of raw materials (Janovska et al., 2012a; Janovska et al., 2012b). The business environment also represents an essential indicator of a country's competitiveness in general and in the tourism field in particular (Vasanicova et al., 2021). Therefore, the business environment also determines the performance of businesses (Dvorský et al., 2020; Dvorský et al., 2021) and firms' financial conditions (Hyránek et al., 2021). According to Valaskova et al. (2021) are the financial health of enterprises, and their continued profitability and competitiveness influenced considerably by the level of earnings achieved. This is because earnings (per share, earning before-after interest or tax etc.) are some of the determinant factors of the financial performance of companies (Tudose et al., 2022; Stefko et al., 2019). Firms lacking financial resources and operating in a competitive market are more likely to stay behind their rivals (Krajčík, 2022). Since firms in small and medium-sized enterprises (SMEs) segment have a lower amount of financial sources and assets (Civelek et al., 2021a; Ključnikov et al., 2022; Kliuchnikava, 2022) compared to their larger-sized rivals, they can be a good example for this issue. Being competitive, in this context, involves being innovative (Civelek et al., 2021b) and being able to place on international markets (Civelek & Krajčík, 2022), that is why earnings management can be used in the tourism sector (Mira and Breda, 2021). Profit is a specific indicator (Zvarikova et al., 2021) for investors (Priem, 2021). The relevance of the profit may be reduced due to the manipulation of accounting numbers (Durana et al., 2021). The management of the enterprises must select the best solutions for future development in any condition (Kral et al., 2019). In this regard, companies' financial security increases their competitiveness and investment attractiveness (Dokiienko, 2021).

It is the level of profit that is the primary motive for the use of earnings management in business practice. Earnings management is one of the most challenging, debated, and controversial topics in finance and financial management (Kliestik et al., 2020). Earnings management, or profit management, is considered to use various accounting techniques (Vagner et al. 2021). This phenomenon belongs to the integral and fundamental part of business finance of every company in the world (Durana et al., 2020). Earnings management can be defined as a tool that purposefully interferes with the company's financial statements to achieve its objectives in the area of profit or loss through various accounting practices and procedures (Valaskova et al., 2021). In general, it can be stated that this is an activity carried out in such a way that the legal regulations in the field of accounting are not violated, while this activity benefits from the possibility of managerial decision or choice in the given political system and accounting system. It is very important to understand the meaning of earnings management by the users of the accounting information contained in the financial statements that make up the enterprise's financial statements, as it is the primary informant about the financial situation and performance of the enterprise. In this regard, the financial literacy of the executives of enterprises is very crucial since higher level of financial literacy contributes to the financial conditions of companies (Nguyen et al., 2021). Understanding the meaning of earning management is also one of the reasons for its use (Cunningham, 2021). Higson (2003) and Rosner (2003) believe that earnings management is not only a manipulation of data within accounting limits but can also be a form of financial accounting fraud. The issue of earnings management is attracting more and more attention from scientific researchers, as evidenced by their extensive studies, which can be found in the literature. The studies of scientific researchers are mainly focused on explaining the concept of earnings management, the motives that stimulate its emergence, techniques that can be used in the business environment, or models that can be used to measure and detect its presence in companies operating in countries.

Despite the existing large number of studies in the literature, the definitions of earnings management are inconsistent and the opinions of individual authors dealing with the issue differ.

The primary objective of the existing studies was to provide evidence of the existence of earnings management in the various industries in which companies in the world operate. Given the complexity and topicality of earnings management, the subject of this paper is to determine the existence of earnings management in companies operating in the tourism sector of the V4 countries and determine its direction, degree, and scope, as in these countries the issue of earnings management in the tourism sector has not been developed. Research can thus contribute to the expansion of scientific research in this area.

2. Literature review

Healy (1985) used discretionary accruals to detect earnings management in his study. His study examined managerial accounting decisions, based on which it was decided that executive employees working in the company would be rewarded with profit bonuses. This decision prompted the choice of accounting policies by which managers can increase their compensation. The author further noted that the accrual policies of the company's executives are associated with special remuneration related to profit recognition, while these remunerations result from bonus agreements and changes in the accounting procedures of executives are associated with the adoption or modification of their bonus regulations. Another of Watts and Zimmerman (1986) believes that company executives with profit-based compensation agreements are more motivated to manipulate profits to maximize their remuneration. DeAngelo (1986) also deals with the issue of earnings management in the professional literature, who in her study explains that executives buying their shares on the stock exchange are motivated to mitigate the reported profit to reduce their redemption value. Later, in 1988, the author discovered that executives, through their free accounting practices, sought to create a more favorable picture of their performance, as in most cases they tended to blame previous management for poor and inadequate operating performance. McNicholson and Wilson (1988) also addressed the issue of earnings management in their study. These authors investigated whether bad debts could trigger earnings management. The results of their study differ from those of previous scientific researchers, as McNicholson and Wilson work in their research with only one accrual, which is a bad debt reserve. Jones (1991) introduced the concept of accrual for-profit management purposes in the field of earnings management, while the accrual consists of a discretionary and non-discretionary component. In her study, the author presented a regression approach to managing non-discretionary factors affecting accruals, specifying a linear relationship between total accruals and changes in sales and assets. In their study, Myers and Skinner (2007) examined whether the number of consecutive gains was higher than expected or not. The results of their study point to the fact that many existing companies are increasing their profits every quarter to practice earnings management. Researchers such as Leuz, Nanda, and Wysocki (2003) believe that earnings management is more common in countries with lower external investor protection than in countries with higher investor protection, due to stronger incentives to reduce firm performance. Hadani, Goranova, and Khan (2011) examined the effect of shareholder activism and earnings management monitoring. The results of their study showed that the number of proposals received by shareholders and subsequent monitoring is directly related to earnings management and seeks to eliminate it. Rodrigues, Margues, and Craig (2011) dealt with earnings management and tax planning. The results of their study pointed to the fact that the effort to minimize income tax is a motive for practicing earnings management, while companies that have a higher income tax rate are trying to reduce their profits to almost zero. In Slovakia, the authors Valaskova, Klietnik, and Kovacova (2019) dealt with the issue of earnings management, who dealt with the application of the Jones model and the modified Jones model in the automotive industry. The results of their study

showed higher efficiency of measuring earnings management in Slovak companies operating in the automotive sector. Cugova, Cug, and Lazaroiu (2019) again examined the impact of profitability indicators in companies operating in the engineering sector, while their study pointed to the growing tendency of profitability indicators of the analyzed companies. Valaskova et al. (2021) examined the country's influence in assessing the direction and extent of manipulation, and their study pointed to significant differences in profit manipulation in V4 companies. In the Czech Republic, the authors Derviz and Podpiera (2008) focused on the determinants of the development of capital asset management and earnings management, taking into account market risks and long-term ratings, at a time when the three largest Czech banks were first privatized. The scientific study of Jiraskova and Molina (2015) explains the introduction of IFRS accounting standards for accounting and tax purposes. In Hungary, the issue of earnings management was addressed by the author Beke (2010) examining the possibility of supporting accounting standards in the implementation of business decisions. His study showed that the higher level of demand for more informative and conservative revenues is the result of evaluating the performance of companies operating in a global business environment. Poland is one of the V4 countries that examines the issue of earnings management on a larger scale compared to other V4 countries. Tokarski (2009) believes that the company's financial statements represent an imperfect source of financial information about the company under investigation. In his study, Wojtowicz (2010) focused on the theoretical aspects of earnings management and suggested that the term earnings management be used in Poland in the sense of "shaping financial results". Wilson (2011) points to the theoretical apparatus of earnings management in Australian companies. Brzeczynski, Gajdka and Schabek (2011) focused on companies listed on the Polish stock market in order to determine the occurrence of earnings management. The results of the study confirmed the existence of earnings management in Polish companies. Zang (2012) examined whether managers use economic or accrual management practices. Remenaric et al. (2018) presented in their publications the main incentives for manipulating financial data, the most used creative techniques and also the steps needed to eliminate the use of creative accounting procedures. Falcon, Sanchez, and Vizcaino (2019) analysed the incentives through which accounting information is modified for the purpose of presenting financial results that do not correspond to reality. Another of the authors, Renu and Sharma (2020), focused their attention on creativity in the field of human resources. Their study sought to identify the extent of creative accounting in the company as well as the influence of auditors representing a key human factor. Saleh, Jawabreh and Abu-Eker (2021) focused on identifying the motives leading to the use of creative accounting in hotels operating in Jordan and their impact on financial statements. Olojede and Erin (2021) examined the impact of corporate governance on the use of creative accounting in Nigeria. They included a sample of 70 companies in the analysis, and their study pointed to the elimination of the use of creative accounting through corporate governance mechanisms, which are significantly affected by regulation. Other authors' studies look at the countries in which earnings management is most prevalent, to what extent this phenomenon can be measured and whether company managers are involved in its practice. In his professional study, Sohn (2016) examined the impact of activities performed by company managers on the area of profit management, while management activities were influenced by accounting comparability with other companies operating in the business environment. To find out, the author used American companies as a sample and, based on the results of the study, pointed out the different behaviour of both forms of profit management. Economic profit management increases with the degree of comparability of a company's accounting system in relation to other entities compared to profit management, where there is a different situation and thus this form of profit decreases. In addition, the author pointed to the transition from accounting to economic profit management in order to increase the quality of the audit and the information environment. Author Welc (2011) investigated the existence of earnings management in listed companies. Its results confirmed the existence of earnings management in companies listed on the Warsaw Stock Exchange around zero revenue growth. This finding points to an increase in profits due to a positive growth rate

just above zero for uncontrolled profit firms to show a more modest decline. Other researchers, Lizinska and Czapiewski (2019), explain in their study that if investors are misled by erroneous financial data from the company's financial statements and manipulated profits, this could create a very high price risk and would be a negative situation in the long run. for businesses that could suffer a loss.

3. Methods

The main aim of the articles is to verify the existence of earnings management in the tourism sector of V4 countries. As part of the analysis, it was also necessary to select companies in the tourism sector for individual V4 countries. The selection of companies was carried out based on a set criterion, where the value of total assets reaches at least one million euros in the period 2016-2019. We focused only on all active companies in V4 countries. Within the size of companies, small, medium, large and very large enterprises were selected. The total number of companies in the V4 was 2250 companies. Of these, 410 were Slovak companies, 345 Czech companies, 720 Polish companies, and 775 Hungarian companies. The total number of enterprises in the V4 countries, after removing the missing values, was 932 enterprises. Of these, 359 were Slovak companies, 192 Czech companies, 272 Polish companies, and 109 Hungarian companies. The total number of enterprises in the V4 countries, after removing the extreme values, was 835 enterprises. Of these, 333 were Slovak companies, 164 Czech companies, 242 Polish companies, and 96 Hungarian companies. The extreme values in the analysis were tested using the Z-score method, which includes two statistical characteristics, namely the mean value and the standard deviation.

The existence of earnings management in the V4 countries is assessed based on Jone's model. This model is applied to each country to assess earnings management, its direction, degree, and also scope. We used regression analysis in our paper. The existence of earnings management was verified using a non-parametric Mann-Whitney test, verifying the following hypotheses H0: Businesses in a given country acting in the tourism sector do not manipulate profit, and H1: Businesses in a given country acting in the tourism sector manipulate profit. The direction, degree, and extent were verified through discretionary accrual percentages and average discretionary accruals. All the data needed to verify earnings management in the tourism sector of the V4 countries were drawn from the Amadeus financial database.

4. Results

The V4 countries were selected for earnings management research because of their many similarities and, in particular, for closer cooperation in the areas of the economy, infrastructure, energy, digitization, and innovation. The selection of companies was carried out based on a set criterion, where the value of total assets reached at least one million euros in the period 2016-2019.

The total number of enterprises within the V4 countries generated by the Amadeus financial database was 2550 enterprises, of which Slovak enterprises were 410, Czech enterprises were 345, Polish enterprises were 720, and Hungarian were 775.

Within the sample selection of enterprises, these enterprises were selected according to missing values of individual financial items needed for further calculations. The sample size of the companies decreased as follows. 932 companies remained after the missing values were removed. Of these, 359 were Slovak companies, 192 Czech companies, 272 Polish companies, and 109 Hungarian companies.

Furthermore, companies were selected based on reporting the extreme values of variables entering the Jones model to determine the existence of earnings management in companies in individual V4 countries. Extreme values were those that reached a value higher than 3. After the

identification of extreme values, a total of 835 companies remained in the sample of companies in the V4 countries. Of these, 333 were Slovak companies, 164 Czech companies, 242 Polish companies, and 96 Hungarian companies.

The following table shows a clear selection of the sample of companies in the V4 countries.

Table 1. Selection of companies of V4 countries

Total number of companies of V4 countries	2250
Slovak Republic	410
Czech Republic	345
Poland	720
Hungary	775
Missing values	932
Slovak Republic	359
Czech Republic	192
Poland	272
Hungary	109
Extreme values	835
Slovak Republic	333
Czech Republic	164
Poland	242
Hungary	96

Source: own processing

After selecting a sample of companies in individual V4 countries, a statistical analysis was performed, based on which the occurrence of earnings management in the analyzed companies in the V4 countries in the monitored period 2016-2019 was further examined and assessed. Jones's model was used to detect earnings management, into which the following variables enter.

Table 2. Variables of Jone's model

Variable	Explanation of the variable
TA/At-1	Total accrual
1/At-1	Intercept
$\Delta\text{REV}/\text{At}-1$	Change in sales
PPE	Tangible fixed assets

Source: own processing

As part of the procedure of applying the Jones model to the analyzed companies of the V4 countries in the observed period 2016-2019, it was necessary to estimate the discretionary parts of

accruals. These discretionary parts of accruals were estimated by using statistical regression for each of the analyzed enterprises in the surveyed enterprise and each V4 country, ie Slovakia, the Czech Republic, Poland, and Hungary.

The following tables provide a clear view of the results of statistical regression, which was used to achieve the values of descriptive characteristics of discretionary parts of current affairs for individual enterprises of countries V4 in the period 2016-2019.

Table 3. Descriptive characteristic of DA of companies of countries V4 in the period of 2016-2019

Year	Descriptive characteristic of DA	Slovakia	Czechia	Poland	Hungary
2016	Average	-0.01887	0.13350	0.17460	-0.01275
	Median	0.01296	0.13195	0.21108	0.02800
	Standard deviation	0.03852	0.19826	0.19536	0.18139
2017	Average	-0.00075	0.19232	0.06284	0.05748
	Median	0.01447	0.19985	0.09845	0.06537
	Standard deviation	0.19005	0.18337	0.16088	0.13943
2018	Average	0.06035	0.02773	0.02016	0.02211
	Median	0.08393	0.06608	0.03494	0.03217
	Standard deviation	0.19824	0.19654	0.11594	0.11335
2019	Average	0.00906	0.06082	0.02229	-0.00589
	Median	0.02829	0.09274	0.04855	0.03090
	Standard deviation	0.15763	0.17433	0.12817	0.13267

Source: own processing

In 2016, the lowest average value of discretionary accruals was achieved in companies operating in Slovakia, with a value of -0.01887. The second-lowest average discretionary accrual was achieved for companies in Hungary. In 2016, companies operating in the Czech Republic achieved an average discretionary accrual value of 0.13350, and in Poland an average discretionary accrual value of 0.17460. Negative values of the average parts of discretionary accruals indicate that companies try to manage their profits by decreasing them, and conversely, positive values of average discretionary accruals indicate that management of profits in companies increases. In 2016, companies operating in Slovakia and Hungary managed their profits by reducing them, while companies in Poland and the Czech Republic managed their profits by increasing them. In 2017, the lowest average value of discretionary accrual reached the level of -0.00075 in Slovak companies. Within other countries, the average values of discretionary accruals were positive. In 2018, the average values of discretionary accruals turned out to

be positive, so companies in the V4 countries tried to manage their profits by increasing them compared to 2019 when the average values of discretionary accruals also reached positive values in Hungary, where the average value of discretionary accruals was negative. Based on the above, it is possible to say. That countries such as the Czech Republic and Poland managed their profits by increasing them throughout the period under review, while Slovakia and Hungary managed their profits by reducing them for two years and by increasing them for two years. The development of median values in the period under review was not subject to significant changes in individual V4 countries. The standard deviation values also did not change significantly between countries.

Table 4. Results of earnings manipulation of companies of countries V4 in the period of 2016-2019

Year	Indicator	Slovakia	Czechia	Poland	Hungary
2016	Significance level	0.05	0.05	0.05	0.05
	P-value	0.00026	0.00026	<0.0001	<0.0001
	Accepted Hypothesis	H1	H1	H1	H1
	Result of manipulation	Manipulation of earnings	Manipulation of earnings	Manipulation of earnings	Manipulation of earnings
2017	Significance level	0.05	0.05	0.05	0.05
	P-value	0.00044	0.00026	<0.0001	<0.0001
	Accepted Hypothesis	H1	H1	H1	H1
	Result of manipulation	Manipulation of earnings	Manipulation of earnings	Manipulation of earnings	Manipulation of earnings
2018	Significance level	0.05	0.05	0.05	0.05
	P-value	<0.0001	0.00026	<0.0001	<0.0001
	Accepted Hypothesis	H1	H1	H1	H1
	Result of manipulation	Manipulation of earnings	Manipulation of earnings	Manipulation of earnings	Manipulation of earnings
2019	Significance level	0.05	0.05	0.05	0.05
	P-value	<0.0001	0.00026	<0.0001	0.03308
	Accepted Hypothesis	H1	H1	H1	H1
	Result of manipulation	Manipulation of earnings	Manipulation of earnings	Manipulation of earnings	Manipulation of earnings

Source: own processing

To be able to further apply the Jones model to the examined sample of V4 companies to verify the existence of earnings management, it was necessary to apply the Mann-Whitney test. Based on the results of this test, a hypothesis was accepted pointing out either the manipulation of profit or non-manipulation of profit in companies operating in the territory of individual V4 countries. The results of the test captured for the examined period 2016-2019 show a higher value of the level of significance compared to the p-value in all years and V4 countries. These results, therefore, indicate the adoption of a hypothesis that companies conducting business in Slovakia, the Czech Republic, Poland, and Hungary manage their profits, ie in these countries, there is a manipulation of profits.

Table 5. The percentage level of DA in the period of 2016-2019

Year	DA	Slovakia	Czechia	Poland	Hungary
2016	Positive	41.74%	83.54%	86.78%	65.63%
	Negative	58.26%	16.46%	13.22%	34.38%
2017	Positive	42.64%	86.59%	81.82%	75.00%
	Negative	57.36%	13.41%	18.18%	25.00%
2018	Positive	21.02%	71.34%	68.60%	71.88%
	Negative	78.98%	28.66%	31.40%	28.13%
2019	Positive	36.64%	72.56%	70.25%	58.33%
	Negative	63.36%	27.44%	29.75%	41.67%

Source: own processing

Compared to other V4 countries, it can be seen that in the period 2016-2019, non-discretionary accrual in Slovak companies achieved a higher share than discretionary accrual, which means that more than half of Slovak companies manipulate their profits by reducing them. In the Czech, Polish and Hungarian countries, the percentage of discretionary accrual is higher, which indicates that companies doing business in these countries manipulate their profits by increasing them.

Table 6. The average level of DA in the period of 2016-2019

Year	Average of DA	Slovakia	Czechia	Poland	Hungary
2016	Positive	-0.01862	0.13350	0.17460	0.07070
	Negative	-0.01887	0.132772	0.17288	-0.17207
2017	Positive	-0.00060	0.19232	0.06284	0.10758

	Negative	-0.00144	0.18875	0.06281	-0.09283
2018	Positive	0.06035	0.02773	0.02435	0.06926
	Negative	0.06035	0.02565	0.02008	-0.09839
2019	Positive	0.00911	0.06494	0.02550	0.07199
	Negative	0.00908	0.06021	0.02195	-0.11491

Source: own processing

Based on the average values of discretionary and non-discretionary components of the accrual, it can be seen that the majority of Slovak companies manage their profits by decreasing, Czech companies manipulate profits by increasing them, Polish companies use their profits by increasing them and most Hungarian companies also manage their profits by increasing them in the analyzed period 2016-2019.

Table 7. Scope of DA in the period of 2016-2019

Year	Scope of DA	Slovakia	Czechia	Poland	Hungary
2016	Positive	-0.00777	6.25765	4.97014	9.28175
	Negative	-0.01100	1.23998	0.76486	-1.99771
2017	Positive	-0.00026	4.50204	13.01939	6.97149
	Negative	-0.00083	0.71070	2.89483	-2.69297
2018	Positive	0.01269	25.72545	28.17073	10.37765
	Negative	0.04766	11.17238	15.63906	-2.85866
2019	Positive	0.00334	11.17403	27.55284	8.10303
	Negative	0.00575	4.55760	13.55564	-3.62599

Source: own processing

Based on the last criterion for the application of the Jones model to verify the existence of earnings management in companies in the V4 countries, the extent of discretionary and non-discretionary parts of accruals was determined. If we take into account the average value of discretionary and non-discretionary accruals for the entire period under study, then companies in Slovakia manage their profits by decreasing, and companies operating in other V4 countries such as the Czech Republic, Poland, and Hungary manage their profits by increasing them.

5. Discussion

The main aim of this paper was to find out whether there is earnings management in the companies of the V4 countries operating in the tourism sector and, if so, in which direction it occurs. The Jones model, which is considered to be the best model for detecting earnings management in the literature, was applied to determine this fact. To apply the Jones model to a sample of Slovak, Czech, Polish and Hungarian companies, it was necessary to perform the following steps.

The first step was to estimate the discretionary accrual and its descriptive characteristics. In the second step, it was necessary to assess and verify the occurrence of earnings management in companies in the V4 countries in the tourism sector. In this step, it was, therefore, necessary to create a fictitious file for each sample of enterprises in the tourism sector for each of the V4 countries. Through a fictitious set, it was possible to assess the differentiation of discretionary accrual values and to point out whether companies in the tourism sector of the V4 countries tend to manage their profits. This was established through hypotheses and the use of the Mann-Whitney test. Under hypothesis H₀, non-manipulation of profit was assumed and under hypothesis H₁, manipulation with profit was assumed. The results of this test showed that a sample of companies operating in the tourism sector in individual V4 countries tends to manage their profits. To determine the direction, but also the extent of the occurrence of earnings management in companies in the tourism sector of the V4 countries, the percentages of discretionary and non-discretionary components of accruals and their average values were used. Based on the statistical analysis and application of the Jones model to companies operating in the V4 countries to identify and verify earnings management, it was found that companies in all four countries in the tourism sector use earnings management to manipulate their profits. Companies operating in Slovakia practice the manipulation of profit by reducing it, which means that they try to reduce the tax base. Companies operating in the Czech Republic, Poland, and Hungary use profit manipulation by increasing it, which means that they try to manage profit by increasing the tax base.

Authors management in the V4 countries was also researched by the authors Callao et al. (2017). These authors detected earnings management in the V4 countries through ten models of profit accounting in order to select the most appropriate model to capture the presence of profit manipulation. They tried to capture the presence of earnings management through the discretionary parts of the accrual. They used three criteria to assess the individual profit models, namely the adjusted coefficient of determination, the standard deviation and the statistical significance of the variables entering the selected models. Within the results of their research, the authors found that the high value of the adjusted coefficient of determination is achieved by the Yoon and Miller model, the Shiwakumar model and the Kasznik model. A low value of the adjusted coefficient of determination was recorded for the Jones model, the Kang and Shivaranakrishnan models, the Teoh, Welch and Wong models, the Dechow, Richardson and Tuna models and the Kothari model. Low standard deviation values were recorded for the Jones model and the Modified Jones model. The statistical significance of the variables was demonstrated for the variables entering the Jones model and the Shiwakumar model in all V4 countries except Slovakia, where the statistical insignificance of the variables was confirmed. The achieved results of the authors prove the fact that the most suitable models in the detection of earnings management include the Jones model, Shiwakumar model, Kasznik model, Yoon and Miller model. Another of the authors, Valaskova and Durana (2020) found that downward profit manipulation is used by companies that achieve relatively high profits. The reason for the use of downward profit manipulation may be to reduce the tax base for tax expenditures, as such companies are regulated by specific legislation in the national economy and aim to limit regulation in order to impose strict measures detrimental to their business. In their study, they also found that upward profit manipulation is used by companies for several reasons, in order to strengthen the company's strategy in order to avoid reporting low profit values, to put in a better financial situation and to obtain better creditworthiness, management fees or competition. Kliestik et al. (2020) examined which country from V4 is the largest manipulators. Their research shows that Poland is one of the largest manipulators in

comparison with Slovakia, the Czech Republic and Hungary, which show an almost similar degree and scope of earnings management.

The incompleteness and unavailability of data on financial items, which reduced the sample of enterprises operating in the tourism sector in individual V4 countries, can be considered as limitations that occurred in the given research.

The subject of future research is to focus on possible motives leading to profit manipulation and their impact on companies in the tourism sector in individual V4 countries.

6. Conclusion

Looking back at history, it is possible to identify certain circumstances that may have stimulated the emergence of earnings management, such as the emergence of individual countries in the world or the need for economic operators to create a good position in the market in an increasingly competitive business environment. As part of the development of the world economy, the professional literature writes about earnings management in a positive as well as a negative sense. Some of the authors believe that earnings management provides a way to save entities from bankruptcy. Other authors consider earnings management to be illegal and in violation of accounting principles. Earnings management is an activity that modifies the accounting information in an entity's financial statements to reflect more favourable results. Accounting information is important for several stakeholders, such as owners and managers, but also other entities, such as the state, investors, competitors, banks, or other financial institutions with which the company has mutual relations. Through the use of earnings management techniques, entities can modify their performance by either reducing it and diverting a lower amount of money to the government or increasing it to attract more investor attention. The paper addressed the issue of the occurrence of earnings management in companies operating in the tourism sector in the V4 countries, which include Slovakia, the Czech Republic, Poland, and Hungary. We chose these countries because of the existence of several similarities between them, which can include socio-economic, cultural-historical or economic similarities. The similarity of individual countries of the Visegrad Group can also be characterized based on their historical development, the interconnectedness of economies, the long-term cooperation of individual countries within the framework of international trade, and also on the basis of similar solutions of economic and regional differences. Given the complexity of earnings management, the subject of this paper was to determine the existence of earnings management in companies operating in the tourism sector of the V4, as in these countries, the issue of earnings management in the tourism sector has not been developed. Research can thus contribute to the expansion of scientific research in this area. Based on the results of the statistical analysis, it can be said that the objective of this paper was met, as the Jones model found the occurrence of earnings management in individual companies in the tourism sector within all V4 countries in the period 2016-2019. Discretionary accrual analysis reveals different positive and negative discretionary accrual values in the V4 countries. Enterprises in Slovakia achieve lower values of positive discretionary accrual compared to negative discretionary accrual.

On the contrary, in the Czech Republic, Poland, and Hungary, companies achieve higher values of positive discretionary accrual. The contribution results pointed to profit management in the sample of companies in the V4 countries. As the only V4 country, Slovakia manages its profits by reducing them in the business environment. Other V4 countries, such as the Czech Republic, Poland, and Hungary, manage their profits by increasing them. Future research could focus on earnings management and covid-19. If we look at the current economic situation concerning the covid-19 pandemic, we can say that its effects on world economies are negative. A partial or complete reduction in the operation of companies results in a significant reduction in revenues, profits, and cash flow or the generation of fixed costs. Not to mention the credit risk, as a result of which there may be a

significant reduction in the time of receivables turnover, or receivables will not be paid in full. All these negatives can lead to a reduction in the market capitalization of companies. As a result, we anticipate that the impact of the covid-19 pandemic on the practice of earnings management will be enormous, but this impact can only be measured based on data from the financial statements of companies for the period 2020-2022.

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Brief description of Authors:

prof. Ing. Tomas Kliestik, PhD.

ORCID ID: <https://orcid.org/0000-0002-3815-5409>

Affiliation: The University of Zilina, Department of Economics, Faculty of Operation and Economics of Transport and Communications, Univerzitna 8215/1, 01026 Zilina, Slovak Republic, <https://fpedas.uniza.sk/sk/>.

Email: tomas.kliestik@fpedas.uniza.sk

Author's position: Associate Professor

Research interests: risk management, financial analysis, corporate governance, financial management, corporate finance, financial risk management, time series econometrics, finance, investment, prediction and construction of bankruptcy models, and earnings management.

Ing. Lenka Hrosova

ORCID ID: <https://orcid.org/0000-0002-9743-4934>

Affiliation: The University of Zilina, Department of Economics, Faculty of Operation and Economics of Transport and Communications, Univerzitna 8215/1, 01026 Zilina, Slovak Republic, <https://fpedas.uniza.sk/sk/>.

Email: lenka.strakova@fpedas.uniza.sk

Author's position: Ph.D. student

Research interests: creative accounting, earnings management, quantitative and qualitative fundamentals of opportunistic earnings modeling, financial fraud, and financial statement.

doc. Ing. Katarina Valaskova, PhD.

ORCID ID: 0000-0003-4223-7519

Affiliation: The University of Zilina, Department of Economics, Faculty of Operation and Economics of Transport and Communications, Univerzitna 8215/1, 01026 Zilina, Slovak Republic, <https://fpedas.uniza.sk/sk/>.

Email: katarina.valaskova@fpedas.uniza.sk

Author's position: Associate Professor

Research interests: financial economics and risk management, prediction of the financial health of companies, earnings management, quantification, and diversification of risks.

doc. RNDr. Lucia Svabova, PhD.

ORCID ID: <https://orcid.org/0000-0002-4722-4103>

Affiliation: The University of Zilina, Department of Economics, Faculty of Operation and Economics of Transport and Communications, Univerzitna 8215/1, 01026 Zilina, Slovak Republic, <https://fpedas.uniza.sk/sk/>.

Email: lucia.svabova@fpedas.uniza.sk

Author's position: Associate Professor

Research interests: statistics, econometrics, multivariate statistical methods, counterfactual impact evaluation, financial derivatives.