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The Analysis of the Relationship between Corporate Social Responsibility and Financial Performance of Company

1. Introduction

It is estimated that 9 billion people will live on Earth by 2050. This growing trend of population, economic development and climate change will have an impact on everyone. We are witnessing many changes in the current economy and many changes are announced. Various means point to the negatives of today, which is characterized by the word „more“. We dare to say that this change is the subject of the concept of socially responsible business, which points out that economic interests may not be contrary to social and environmental interests, but may create a synergistic effect. Companies of today's world should therefore strive for the reputation of a modern enterprise that is also interested in current problems. For this reason, it makes sense to join the efforts to develop a business approach, which for the purposes of this paper we will refer to uniformly as Corporate Social Responsibility, which is represented by the abbreviation CSR.

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The concept of CSR is one of the most significant trends in the corporate sector, which is still in a very dynamic and intensive development, both in terms of its theoretical and practical application.

The strongest scientific interest in the CSR idea was recorded in the 5th-6th decade of the last century. The development of the concept is related to Howard R. Bowen who cited the first “approved” definition of CSR in his publication *Social Responsibilities of the Businessman* as: “...the social obligation to perform the activities and decisions necessary for society as a unit” (Bowen, 1953). Currently, there is no unique international definition for the term “Corporate Social Responsibility” and won’t be soon. The reason is that CSR is based on voluntariness which is beyond law-abidingness. That creates the space for a wide discussion and various understanding and interpretations of this term (Dahlsrud, 2008). There is a full list of explanations and approaches to specifying the CSR concept, which is, however, quite often vague (Robbins, Coulter, 2004; Koontz, Weihrich, 1993). The author Dahlsrud (2008) identified and analyzed 37 different definitions of CSR in a study published in 2006, however, despite this, his study didn’t express all of the existing specifications of CSR. Therefore, it is important to provide the operational definition of CSR because CSR is a subjective construct and its interpretation varies within the individuals and organizations.

The fundamental idea of CSR is the Triple Bottom Line (TBL) concept introduced in Brundtland in 1987. Elkington named it officially in his work *Cannibals with Forks* in 1994 where he describes the need to deal with various groups of concerned parties in detail through the triple bottom line: economic, social, and environmental (Elkington, 1998; Elkington, 2018). This concept is also called 3P, three pillars, or triple income statement. Society accepting the CSR concept strives to accumulate not only the profit within its entrepreneur activities but an even much more complex approach due to the respect of all 3Ps: Profit, People, Planet (Kunz, 2020). According to Zváriková (2003) it points out the need for companies to focus on the individual pillars as well as their interconnection, emphasising the principle of voluntariness beyond the obligations defined by law.

Currently, the term CSR is well-known. It became popular in the form we know it now after “The Pyramid of Corporate Social Responsibility” or even “Carroll’s Pyramid of CSR” from Archie Carroll defined it in 1991. The simplicity and capacity to describe the idea of CSR in four spheres made the pyramid one of the most acknowledged corporate CSR theories (Carroll, 1999). Carroll’s four-part definition of CSR was originally defined as the social responsibility

of the corporation which includes economic, legal, ethical, and discretionary (philanthropic) expectations of society from the organizations at the moment (Carroll, 1979). Economic responsibility was set as the foundation of the pyramid because it is a fundamental requirement to survive in the business world. Similarly, to the building basis keeping the entire structure, stable profitability helps support the expectations of society, shareholders, and other concerned parties (Carroll, 2016).

Economic performance and sustainability became urgent topics in a present hyper-competitive global business environment. The corporations which are not successful in their economic or financial sphere will end their business activities and any further responsibilities they might be accounted for become disputable. According to Belu and Manesco (2013), and Baron (2007), economic responsibility is an essential requirement we need to fulfill in the competitive business world. It relates to the good and ethical behavior of the corporation when performing its business operations (Németh, 2014; Schwartz, Carroll, 2003).

Of course, business management also plays a key role in the introduction of ethical business (Skaloš, 2020), so it is necessary for managers to be pro-ethical. Overall, we can support the idea of Aramonte and Avalos (2021) that investors perceive CSR as corporate behavior and activities that go beyond economic and legal obligations.

The results of the latest KPMG Survey of Sustainability Reporting (2022) show that the world's leading companies are becoming more active in reporting on sustainability activities and the so-called ESG aspects covering environmental, social and governance issues. 79% of corporations prepare sustainability reports. The KPMG Global Survey of Sustainability Reporting has been conducted every two years since 1993. While the reporting of sustainability activities over the last two decades has been voluntary, with the coming regulation, this area faces radical change. The latest findings of the 2022 report reveal gaps and present business strategy considerations that can help companies meet regulatory expectations and generate value.

According to the latest KPMG Survey of Sustainability Reporting 2022 (KPMG International, September 2022; Base: 5,800 N100 companies), out of the V4 countries, the best ranking was achieved by Poland with 82% of companies (in 2020 it was 77% of companies), followed by Slovakia with 81% of companies (in 2022 it was 76% of companies), which also shows other than financial indicators. We were surprised by Hungary, which fell from the first place gained in 2020 (83%) to the third place in 2022 with 79% of companies. The Czech Republic again ended up on the tail of the V4 countries with 74% (in 2020 it was 66%).

CSR is known in Slovakia mostly in big corporations, the subsidiaries of international corporations adopting and implementing the CSR policies from their parent companies and following them in all their business activities in compliance with the principles of responsible entrepreneurship. That is one of the reasons why it is suitable to research the CSR activities extent mostly in big international corporations having their CSR concepts elaborated and even implemented within the corporate strategies (Mullerat, 2010). The subsidiary Deutsche Telekom AG IT Solutions Slovakia belongs to the category of big international corporations. This made us research this corporation. The research we present is focused on the financial view of parent company Deutsche Telekom AG where we followed the impact of the selected indicators of CSR on the rentability of overall actives (ROA) to the net profit testing the essential presumptions set to the classical model of linear regression. One of the main purposes of our research was to find out the impact of CSR on the financial outcome of parent company Deutsche Telekom AG and find the relationship between CSR and economic contribution.

2. Methodology and the used methods

The relationship between CSR and the financial performance of the corporation is one of the main subjects of the studies and empirical researches on the topic of sorporate social responsibility. The number of evidence accumulated on the relationship character is ambiguous. Some of the studies research positive relationships, while the others negative ones, or even any. There were many studies to research the direct impact of CSR on the financial outcomes of the corporations, however, the findings vary too much. According to Mentor (2016), it can resource from the incorrect analyses of the regression of the corporate financial performance or incorrectly set independent variables. Cochran and Wood (1984) commented that there is no real consensus within the research community in terms of the selection of which parameter should be used as the indicator of financial performance. According to Moon and coll (2013), the method used by researchers to evaluate financial situations most frequently is based on profitability, such as return on assets (ROA). The return on assets is the indicator used to estimate the economic performance and profitability of the company (Belu, Manescu, 2013). ROA is a well-known and accepted indicator, we decided to use it in the research of the relationship between CSR and financial performance. Consequently, we followed the impact of the selected CSR indicators on the net profit. Based on the CSR reports on

Deutsche Telekom AG, these two financial indicators belong to the economic pillar of CSR.

Regarding the study literature on CSR and CSR pillars, we included twelve indicators we consider as statistically significant among the explanatory (independent) variables entering the model. They are the indicators of social and environmental CSR pillars. We analyzed the impact of 12-independent (explanatory) CSR indicators on the selected dependent (explanatory) variables presenting financial indicators of ROA and net profit using the classical model of linear regression.

We followed all variables at the same period from 2001-2019 and used the program software R. Deutsche Telekom AG dealt with CSR even before 2000, however, the data were available from 2001 to 2019. Data from 2020 were not published at the time of paper elaboration.

We worked with collected data from free available annual reports, CSR reports, and HR reports, official web page of Deutsche Telekom AG. Based on them, we set the hypotheses and created econometric models through which we followed the impact of the selected CSR indicators on profitability indicators (ROA) and net annual profit. We used the historical method which enabled us to comprehend the historical development and CSR coherences of particular society from the point of view of the global market better.

Regarding the above-mentioned, we set the following hypotheses:

Hypothesis H1:

H_0 : CSR indicators have a positive impact on ROA (return on assets) in Deutsche Telekom AG.

H_1 : CSR indicators do not have a positive impact on ROA (return on assets) in Deutsche Telekom AG.

Hypothesis H2:

H_0 : CSR indicators have a positive impact on net profit in Deutsche Telekom AG.

H_2 : CSR indicators do not have a positive impact on net profit in Deutsche Telekom AG.

We researched the hypotheses of testing the classical model of linear regression at the pre-set level of significance $\alpha=0,05$ (two various situations might happen: 1) If the p-value is lower than the significance level $\rightarrow H_0$ is rejected; 2) If the p-value is higher than the significance level $\rightarrow H_0$ is not rejected).

We tested the confirmation, or negation of Hypothesis H1 and Hypothesis H2 using economic models describing the impact of the explanatory variables (CSR indicators) on particular explained variable - ROA in the case of H1 and

net profit in case of H2, within the global corporation of Deutsche Telekom AG.

Firstly, we researched if our model fulfills the basic presumptions set to the classic model of linear regression within model verification. We also tested the statistical significance of regressive coefficients of the statistical model, correct specification of the model, and the issues related to the normality, heteroscedasticity, autocorrelation, and multicollinearity of the model (Želinský, Gazda, Výrost, 2010). Consequently, we predicted the prognosis into the future period.

3. Empirical Analysis

Currently, there is a large number of companies of different sizes that successfully practice CSR strategies. However, multinational companies are generally known to be subject to pressure from parent companies and are trying to actively engage in a more local environment. From these, we selected Deutsche Telekom AG, the world's leading telecommunications company, which provides services to more than 180 million customers in 50 countries of the world (www.deutschetelekomitsolutions.sk).

3.1. The case study of Deutsche Telekom AG global group

Deutsche Telekom AG is a German corporation headquartered in Berlin, established in 1995 through the privatization of the former state monopoly Deutsche Bundespost. It is one of the leading global integrated telecommunication companies with approximately 235,8 million mobile customers, 27,3 million landlines, and 21,3 million broadband lines. The business subject of service providing in the field of information-communication technologies (www.telekom.com).

The reason for our focus on the global group Deutsche Telekom AG is the fact that it is the biggest telecommunication service provider in Europe according to income. Following the charts of Fortune Global 500, it is ranked among the 500 largest companies in the world. In 2021, it ranked 53rd place. It has improved its ranking in 33 positions in comparison to 2020 (86th position). They provide the access to many various opportunities this world has to offer. They help improve daily life and satisfy the needs, present, and future, of all concerned groups (Annual report of Deutsche Telekom AG, 2020).

Currently, Deutsche Telekom AG group operates in more than 50 countries worldwide and runs several subsidiaries globally – in Europe, Africa, Asia, North, and Latin America. The UN membership countries adopted 17 goals of consistent sustainable development in 2015. Deutsche Telekom AG group wants to contribute to reaching these goals within their entire value network. The CSR concept of Deutsche Telekom AG consists of 3 areas of activities:

1. Interconnected life and work – enabling sustainable lifestyle in a digital world.
2. Interconnection of unconnected – access to informative and knowledgeable society.
3. Low-carbon emission society.

Climate crisis and global protests against the policy in the field of climate dominated in 2019. Deutsche Telekom AG responded to it immediately and set a new ambitious climate goal beside other goals at the beginning of 2019. The group strives to change the Deutsche Telekom AG network to “the green one” and lower CO₂ emission by 90% until 2030 (in comparison to 2017) and lower the emissions generated in the production and the product’s usage by 25% per customer (SDG 13).

Over the past 40 years, many studies have observed the relationship between CSR and financial results. When monitoring the performance of a company, market and accounting indicators are the most frequently monitored. Accounting indicators include profitability indicators such as return on assets (ROA), return on capital (ROE), earnings per share (EPS), turnover of assets, etc.. However, these indicators only capture the past activity of the company (Margolis, Elfenbein, Walsh, 2007). Market indicators include market return, Tobin’s Q, share price, market value, and more. These indicators evaluate the company’s ability to generate future cash flows (McGuire, Sundgren, Schneeweis, 1988). Interest in the relationship between CSR and company performance is tracked in many quantitative studies mainly due to:

- gaining an explanatory insight into how the economy works,
- improving the predictive power in predicting the future profitability of companies.

We consider the above-mentioned reasons to be the goal of our research by a selected company Deutsche Telekom AG. To achieve the goal, we set out two hypotheses, which we presented in the second part. Table 1 shows the financial results of Deutsche Telekom AG for the last ten years 2011-2021.

Table 1. Shows the financial results of Deutsche Telekom AG for the last ten years 2011-2021

Year	Income (in € billion)	Net income (in € billion)	Total assets (in € billion)	The average number of employees (in thousands of persons)
2011	58,7	0,5	122,5	236 000
2012	58,2	(5,4)	109,9	229 686
2013	60,1	0,9	118,1	230 000
2014	62,7	2,9	129,4	228 248
2015	69,2	3,3	143,9	266 232
2016	73,1	2,7	148,5	220 582
2017	74,9	3,5	141,3	216 454
2018	75,4	2,2	145,4	216 369
2019	80,5	3,9	170,7	212 846
2020	101,0	4,2	264,9	223 539
2021	108,8	4,2	281,6	220 840

Source: own processing based on (Annual reports of Deutsche Telekom AG in 2011-2021)

In the following sections, we present the created models on the basis of which we determined the influence of 12 independent (explanatory) variables on the selected explanatory variables, which are ROA and revenues. We used the data for the same time period for all variables, in the period 2001-2021. At the time of processing the paper, the data of 2022 have not yet been published.

3.2. The analysis of the selected CSR indicators

The task of descriptive statistics is mostly the description of data, the so-called exploration analysis of data. Fisher and Marshall (2008) state that it is the summary of statistical techniques of graphic and numeric character which are used for setting, presenting, and analyzing data acquired through the research. The selected characteristics of CSR indicators using descriptive statistics represent table 2: ROA – Return on assets (in %); NP – net profit in billions EUR;

EC - Energy consumption (in mil. MWh); WC - Water consumption (in mil. m³); W - Waste (in thousand t); CI - Community investment (in mil. €); VP - Volunteer projects; TW - Total workforce (in thousands); TWW - Women in total workforce (in %); EWD - Employees with disabilities (in %); FR - Fluctuation rate (in %); OA - Occupational accidents (in % per 1000 employees); HR - Health rate (in thousand FTE); ATD - Average training days per employee (annually per employee).

Table 2. Descriptive statistics of the selected CSR indicators

	Average	Error	Median	SD	Min.	Max.
ROA	0,119	1,285	1,5	5,603	-21,39	4,37
NP	0,266	1,501	1,7	6,544	-24,60	4,70
EC	6,184	0,441	6,0	1,921	3,30	9,30
WC	3,071	0,131	3,3	0,570	1,96	3,80
W	77,088	2,297	76,0	10,010	58,68	97,75
CI	52,263	2,142	49,0	9,338	45,00	87,00
HR	94,011	0,078	94,0	0,340	93,20	94,70
FR	4,371	0,095	4,2	0,416	4,01	5,32
ATD	3,458	0,129	3,4	0,562	2,30	4,50
OA	8,874	0,354	8,2	1,544	6,80	11,90
TW	235,926	3,456	235,1	15,064	210,50	259,90
TWW	33,832	0,366	33,8	1,595	31,00	35,70
VP	401,368	96,573	285,0	420,953	168,00	2097,00
EWD	6,647	0,154	6,4	0,671	5,70	7,60

Source: own study

Six variables in Table 2 (ROA, HR, FR, OA, TWW, EWD) are set in percentage and eight in absolute values. While we deal with financial variables, the maximum value of ROA is 4,37% and the minimum value is -21,39%. Therefore, the average value of ROA is very low, at 0,119%. It is caused by a significant deviation of the ROA value in 2002. The maximum value of net profit is 4,70 and the minimum value is -24,60 billion €. Corresponding median values are 0,119 and 0,266. The

average number of employees in 2001-2019 presents almost 260 000 employees, out of which 33% on average are women. The average value of the fluctuation rate presents 4,37% during the same period.

3.2.1. The result of the analysis of CSR indicator impact on return on assets (ROA)

The analysis was performed based on the econometric linear model with more variables which reflects dependency between dependent variable ROA and independent variables. The econometric linear model has the following form:

$$ROA = \beta_0 + \beta_1*EC + \beta_2*WC + \beta_3*W + \beta_4*CI + \beta_5*VP + \beta_6*TW + \beta_7*TWW + \beta_8*EWD + \beta_9*FR + \beta_{10}*OA + \beta_{11}*HR + \beta_{12}*ATD + \mu t + \epsilon t$$

Where:

- ROA - Return on assets (in %)
- EC - Energy consumption (in mil. MWh)
- WC - Water consumption (in mil. m3)
- W - Waste (in thousand t)
- CI - Community investment (in mil. €)
- VP - Volunteer projects
- TW - Total workforce (in thousands)
- TWW - Women in total workforce (in %)
- EWD - Employees with disabilities (in %)
- FR - Fluctuation rate (in %)
- OA - Occupational accidents (in % per 1000 employees)
- HR - Health rate (in thousand FTE)
- ATD - Average training days per employee (annually per employee)
- μt - Residual variable
- ϵt - Accidental (residual) componen

Based on the output from the model, we can state that model as a unit is statistically significant (p-value <0,05), however, we have 6 statistically insignificant variables in the model (WC, W, TWW, EWD, OA, HR) which do not significantly influence the dependent variable ROA. We decided to omit statistically insignificant variables from the model. After the modification, we got the transformed model with 6 independent variables with which we further worked. Consequently, we tested the presumptions put on the classical linear regression. The testing results of the modified model are present in table 3.

Table 3. The results of linear regression presumptions – ROA

	p-value					
Ramsey's test on the specification error (RESET test)	0,221			Model is specified correctly		
Jarque-Bera's normality test	0,481			Residuals come from normal division		
Breusch-Pagan's test	0,579			The issue of heteroscedasticity is not present in the model		
Durbin-Watson's autocorrelation test	0,418			The issue of autocorrelation of the first order is not present in the model		
Breusch-Godfried's autocorrelation test	0,819			There is no autocorrelation of the higher order in the model		
VIF (Variance Inflation Factor)	EC	CI	FR	ATD	TW	VP
	6,412	2,075	2,055	2,646	5,223	1,971

Source: own study

The determination coefficient, Multiple R-squared has the value of 0,753, which means that we can explain approximately 75,3% of the overall variability of depending variable ROA with our model.

To proof the presumption of the normality division of residuals, we used Jarque-Bera's test of normality. It is an essential presumption of the linear model. This presumption is being confirmed at the significance level of $\alpha=0,05$. Another important presumption is the presumption of homoscedasticity, i.e. that the vector of accidental damages is supposed to have a constant diffusion. If this presumption is not fulfilled and diffusion is not constant, we talk about the issue of heteroscedasticity. In our case, heteroscedasticity has not been confirmed at the significance level, and thus, we do not reject H_0 . We used Durbin-Watson's test to research the presumption of autocorrelation of the first order. The presence of autocorrelation of the 1st order has not been confirmed at the significance level $\alpha=0,05$. We checked it using Breusch-Godfrey's test of autocorrelation and compared the p-value with the significance level of α . Again, the issue of autocorrelation was not confirmed. We used the so-called

variance inflation factor (VIF) to detect the issue of multicollinearity. The strong correlation between the explanatory variables is a negative consequence of multicollinearity. However, based on the acquired values lower than 10, we can state that there is no presence of multicollinearity.

Table 4 presents the overview of statistically significant regressors of the transformed model, the estimate of the regression function parameters, standard deviation, t values of testing statistics, and p-values.

Table 4. The general output of regressive analysis – ROA

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	3,4209	65,5439	0,052	0,0251
EC	-0,2903	1,9519	-0,370	0,0118
CI	1,2017	0,0228	0,282	0,0483
FR	-0,1905	5,1055	-0,476	0,0142
ATD	0,0161	4,2858	0,093	0,0092
TW	0,2096	0,2245	0,290	0,0277
VP	0,0025	0,0049	0,523	0,0061

Source: own study

We modified the equation as follows:

$$ROA = 3,4209 - 0,2903*EC + 1,2017*CI - 0,1905*FR + 0,0161*ATD + 0,2096*TW - 0,0025*VP$$

From the above-mentioned equation, we can read that if the energy consumption increases by 1 unit, the ROA value will decrease by 0,2903 units. Lowering ROA in 0,1905 units causes the increase in employees' fluctuation in 1 unit. On the other hand, increasing ROA in 1,2017 units causes the growth in community investments in 1 unit, and also increasing the number of volunteer projects in 1 unit causes the growth of ROA in 0,0025 units. Similarly, the growth of the employees' number and the number of training days initiates the growth of ROA in 0,2096 and 0,0161 units.

3.2.2. The analysis of the CSR indicators impact on net profit

As a consequence of that, we couldn't get the definite positive dependency between CSR and return on assets confirmed fully, we thought about the impact of the same explanatory variables on net profit. It is the result of the economy of a particular accounting period after taxation and is determined to be divided among the owners. We worked with the acquired data from annual reports of Deutsche Telekom AG from 2001-2019. Original economic linear model following the impact of CSR indicators on net profit has the following form:

$$NP = \beta_0 + \beta_1*EC + \beta_2*WC + \beta_3*W + \beta_4*CI + \beta_5*VP + \beta_6*TW + \beta_7*TWW + \beta_8*EWD + \beta_9*FR + \beta_{10}*OA + \beta_{11}*HR + \beta_{12}*ATD + \mu t + \varepsilon t$$

Where:

NP - Net profit in billion €

We tested the model to fulfill the essential presumptions of linear regression and be suitable for predictions creation. We can explain approximately 74,5% of the total value of variable NP using this model. We were deciding on the model suitability using the F-test of statistical significance of the model and were interested in the p-value of the model which was lower than $\alpha=0,05$ – our pre-set significance level. Thus, the model as a unit is statistically significant, however, not all regression coefficients are statistically significant. Statistical significance was not confirmed in parameters WC, W, TWW, EWD, OA, HR, and ATD, therefore, we kept on working with the modified model, without statistics of insignificant variables. We tested the presumptions of the linear model, mostly the division normality of residuals, homoscedasticity, autocorrelation, multilinearity, and finally, its specification. There are the model test results present in table 5.

Table 5. The results of linear regression presumptions - Net profit

	p-value	
Ramsey's test on the specification error (RESET test)	0,056	Model is specified correctly
Jarque-Bera's normality test	0,221	Residuals come from normal division

Breusch-Pagan's test	0,501					The issue of heteroscedasticity is not present in the model
Durbin-Watson's autocorrelation test	0,452					The issue of autocorrelation of the first order is not present in the model
Breusch-Godfried's autocorrelation test	0,836					There is no autocorrelation of the higher order in the model
VIF (Variance Inflation Factor)	EC	CI	FR	TW	VP	
	5,933	2,027	2,048	5,036	1,833	

Source: own study

Similar to the first model testing, we didn't encounter any issues. This model meets all the presumptions set by the classical econometric model. The normality requirement was met $p\text{-value}=0,221 > \alpha=0,05 \rightarrow H_0$ we do not reject and thus, residuals come from normal division. There is no issue with heteroscedasticity (H_0 we do not reject), autocorrelation is not present between accidental components, nor multicollinearity between explanatory variables due to the significantly lower than 10 VIF values. Values higher than 10 are considered to be the expression of multicollinearity. The model is specified correctly based on the reset test $p\text{-value}$ 0,056 is higher than $\alpha=0,05$, H_0 won't reject. Model meets all the presumptions set on the classical model of linear regression and is specified correctly, we further worked with this model. The general output of regressive analysis can be seen in table 6.

Table 6. The general output of regressive analysis – Net profit

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	6,1887	68,9279	0,090	0,0093
EC	-0,0899	2,0712	-0,488	0,0364
CI	0,0698	0,2490	0,280	0,0484
FR	-0,6047	5,6222	-0,463	0,0065
TW	0,0083	0,2433	0,330	0,0074
VP	0,0023	0,0052	0,449	0,0066

Source: own study

The equation after modifications looks as follows:

$$NP = 6,1887 - 0,0899*EC + 0,0698*CI - 0,6047*FR + 0,0083*TW - 0,0023*VP$$

Based on the equation, we can say that if the energy consumption increases by 1 unit, the net profit value decreases by 0,0899 units. Lowering net profit in 0,6047 units causes the growth of the employees' fluctuation in 1 unit. On the contrary, increasing net profit in 0,0698 units causes the growth in community investments in 1 unit. Also, the increase in the number of volunteer projects in 1 unit causes an increase of net profit in 0,0023 units. The increase in the number of employees will very much likely cause the increase of net profit in 0,0083 units.

4. Discussion and conclusions

Although the number of studies dealing with the relationship between CSR and financial results has increased significantly, not all studies achieve the same results. According to McWilliams and Siegel (2000), empirical studies on the relationship between CSR and financial performance of a company can be divided into two groups. The first group of studies assesses the short-term financial impact of the company's involvement in socially responsible activities. The results of these studies confirm a positive relationship, some negative, and some found no relationship. A negative relationship resulted for example from the work of authors Wright and Ferris (1997). Posnikoff (1997) found a positive relationship, while Teoh, Welch, and Wazzan (1999) argue that there is no relationship between CSR and financial performance. The second group of studies monitors the long-term impact. However, even the results of these studies do not agree. Aupperle, Carroll, and Hatfield (1985) found no relationship between the variables studied, Waddock and Graves (1997) found a positive correlation, while McGuire, Schneeweis, and Branch (1990) reported a negative relationship (Ghelli, 2013).

Orlitzky, Schmidt and Rynes (2003) in the analysis of 52 empirical studies are among the authors who found a positive relationship between CSR and the financial performance of the company. Margolis, Elfenbein and Walsh (2003, 2007) examined 127 empirical studies between 1972 and 2002 and the results also show that there is a positive relationship between CSR and the financial performance of the company. It has also been confirmed that irresponsible behavior of companies leads to negative financial performance of companies

(Essen, 2011). Despite the above, many are still skeptical about the profitability of a responsible company.

In the case of Deutsche Telekom AG, we assumed a positive relationship between the company's profitability and CSR. By creating econometric models, we tried to confirm or refute our hypotheses. In the proposed models, we used a large number of indicators, while the quality of some of them is questionable due to the determination of their values.

We also assessed the suitability of both models on the basis of the so-called information criteria. There are several information criteria, the two most commonly used are the Akaike Information Criterion (AIC) and the Bayesian/Schwarz Information Criterion (BIC). From the point of view of the number of regressors (explanatory variables), the first model is more appropriate, and thus monitoring the impact of CSR indicators on ROA. We concluded that almost all statistically independent (explanatory) variables have a positive impact on selected dependent (explained) variables, which represent financial indicators ROA and net profit, and cause that if their value increases, the value of the company's profitability also increases. The proven negative impact on financial indicators in our case concerned only two variables, namely employee fluctuation and energy consumption. If their value increases, the ROA will have a decreasing tendency. Ultimately, we can confirm the established hypotheses, i.e. that CSR positively affects the financial results of the global group Deutsche Telekom AG.

Of course, in this context, we cannot ignore the impact of different external factors in different countries, such as monetary and fiscal policy, macroeconomic situation, etc. The differences in the annual reports reflect different environmental legislation and regulation, as well as the political situation and societal pressure in individual countries. Chen and Bouvain (2008) also conclude their research on comparing CSR reports by justifying differences based on different institutional frameworks.

Based on the analysis, we concluded that Deutsche Telekom AG corporation possesses the high-quality elaborated and implemented CSR concept. They are deeply involved within all three CSR pillars. Accordingly, we can state that they conduct responsibly towards internal and external stakeholders, the environment, and the community. It is proved by their activities within philanthropy, volunteering, and donation. They provide a variety of benefits and educational opportunities to their employees. They also take part in charity and philanthropic events, cooperation with schools, the education support of students and teachers as well as a wide public in digital competencies that make

their goal for 2022: Help the region in innovations and digitalization, create additional value for the employees.

Abstract

Corporate Social Responsibility (CSR) has been forming very dynamically and intensively for several decades. The rapid development, as well as the relatively large scope of this concept, which is cross-sectionally related to a number of different social disciplines, so far causes a very significant terminological inconsistency. The paper focuses on the relationship between CSR and the financial performance of companies, or on the positive consequences of applying the concept of CSR in business on the example of a selected company Deutsche Telekom AG, which applies CSR in its business and which achieves positive results not only from this point of view, but also from the point of view of company profitability. When analyzing the company from the point of view of the global market, it quantitatively monitors the impact of the measured indicators on the profitability of total assets (ROA) and on net profit, by testing the basic assumptions made on the classical linear regression model. The main goal of the paper was to find out the impact of CSR on the financial results of the parent company Deutsche Telekom AG for the period 2001-2021 and to find the relationship between CSR and economic benefits.

Keywords: *Corporate Social Responsibility, economic pillar, indicator, company, profit.*

JEL

Classification: L21, M14.

References

- Aramonte, S., Avalos, F. (2021). *The rising influence of retail investors*. https://www.bis.org/publ/qtrpdf/r_qt2103v.htm (15.03.2021 - access date).
- Aupperle, K.E., Carroll A. B., Hatfield J. D. (1985). An Empirical Examination of the Relationship Between Corporate Social Responsibility and Profitability. *Academy of Management Journal*, Vol. 28, Iss. 2, pp. 446-463.

- Belu, C., Manescu, C. (2013). Strategic Corporate Social Responsibility and Economic Performance. *Applied Economics*, Vol. 45, Iss. 19, pp. 2751–2764.
- Bowen, H. R. (1953). *Social Responsibilities of the Businessman*. <https://books.google.sk/books?id=4y0vAAAAMAAJ> (25.04.2021 – access date).
- Carroll, A.B. (1979). A Three-Dimensional Conceptual Model of Corporate Performance. *The Academy of Managerial Review*, Vol. 4, Iss. 4, pp. 497-505.
- Carroll, A.B. (1999). Corporate Social Responsibility: Evolution of a Definitional Construct. *Business and Society* Vol. 38, Iss. 3, pp. 268-295.
- Carroll, A.B. (2016). Carroll's pyramid of CSR: taking another look. *International Journal of Corporate Social Responsibility*, Vol. 1, Iss. 1, pp.1-8. DOI: 10.1186/s40991-016-0004-6.
- Cochran, P., Wood, R. (1984). Corporate Social Responsibility and Financial Performance. *Academy of Management Journal*, Vol.27, Iss. 1, pp. 42-56. DOI: 10.5465/255956.
- Dahlsrud, A. (2008). How Corporate Social Responsibility is Defined: An Analysis of 37 definitions. *Corporate social responsibility and environmental management*, Vol. 15, pp. 1-13. DOI: 10.1002/csr.132.
- Deutsche Telekom. Online Annual Report (2001–2022). <https://www.telekom.com/en/investor-relations/publications/financial-results>.
- Elkington, J. (1998). Partnerships from Cannibals with Forks: The Triple Bottom Line of 21st Century Business. *Environmental quality management*, Vol. 8, Iss. 1, pp. 37-51.
- Elkington, J. (2018). 25 Years Ago I Coined the Phrase “Triple Bottom Line”. Here's Why It's Time to Rethink It. *Harvard Business Review*. <https://hbr.org/2018/06/25-years-ago-i-coined-the-phrase-triple-bottom-line-heres-why-im-giving-up-on-it> (27.04.2021 – access date).
- Ghelli, C. (2013). Corporate Social Responsibility and Financial Performance: An Empirical Evidence. Copenhagen Business School. https://research-api.cbs.dk/ws/portalfiles/portal/58449703/caterina_ghelli.pdf (20.03.2021 – access date).
- Chen, S., Bouvain, P. (2008). *A Comparison of Corporate Social Responsibility Reporting in the United States, Germany and Australia*. In: Strange, R., Jackson, G. (ed.) *Corporate Governance and International Business*. (266-279). London: Palgrave Macmillan. DOI: 10.1057/9780230285743_15.
- Koontz, H., Weihrich, H. (1993). *Management*. Praha: Victoria Publishing.
- KPMG Slovensko spol. s r.o. (2020). *The time has come. The KPMG Survey of Sustainability Reporting 2020*. Executive summary, KPMG Impact. home.kpmg/sustainabilityreporting.
- Kunz, J. (2020). Corporate Social Responsibility and Employees Motivation—Broadening the Perspective. *Schmalenbach Bus Rev*, Vol. 72, pp. 159-191. DOI: 10.1007/s41464-020-00089-9.
- Margolis, J.D., Elfenbein, H.A., Walsh, J.P. (2007). *Does it Pay to be good? A meta-analysis and redirection of research on the relationship between*

- corporate social and financial performance. <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=226f6e84e027527325aac7a41a7ced2ba260134> (20.04.2021 - access date).
- McGuire, J.B., Sundgren, A., Schneeweis, T. (1988). Corporate Social Responsibility and Firm Financial Performance. *Academy of Management Journal*, Vol. 31, Iss. 4, pp. 854-872.
- McWilliams, A., Siegel, D. (2000). Corporate social responsibility and financial performance: Correlation or misspecification? *Strategic Management Journal*, Vol. 21, pp. 603-609.
- Mentor, M. (2016). *The Effects of Corporate Social Responsibility on Financial Performance*. Honors Undergraduate Theses. 47. <https://stars.library.ucf.edu/honorsthesis/47> (07.02.2021 - access date).
- Moon, S.G., Bae, S., Jeong, M.G. (2013). Corporate sustainability and economic performance: An empirical analysis of a voluntary environmental program in the USA. *Business Strategy and the Environment*, Vol. 23, Iss. 8, pp. 534-546. DOI: 10.1002/bse.1800.
- Mullerat, R. (2010). *International corporate social responsibility: The role of corporations in the economic order of the 21st century*. Kluwer Law International.
- Németh, H. (2014). Zvýšenie úspešnosti podnikov v kontexte vnútropodnikovej komunikácie. *Kvalita*, Vol. 22, Iss. 2, pp. 44-48.
- Orlitzky, M., Schmidt, F. L., Rynes, S.L. (2003). Corporate Social and Financial Performance: A Meta-Analysis. *Organization Studies*, Vol. 24, Iss. 3, pp. 403-442. DOI: 10.1177/0170840603024003910
- Posnikoff, J.F. (1997). Disinvestment from South Africa: They did well by doing good. *Contemporary Economic Policy*, Vol. 15, Iss. 1, pp. 76-86.
- Robbins, S. P., Coulter, M. (2004). *Manažment*. Praha: Grada Publishing.
- Schwartz, M. Carroll, A. B. (2003). Corporate social responsibility: a three-domain approach. *Business Ethics Quarterly*, Vol. 13, Iss. 4, pp. 503-530.
- Skaloš, I. (2020). Kto má zabojsovať o etické podnikanie? *Goodwill*, Vol. 12, p. 10.
- Teoh, S.H., Welch, I., Wazzan, C.P. (1999). The effect of socially activist investment policies on the financial markets: Evidence from the South African boycott. *Journal of Business*, Vol. 72, Iss. 1, pp. 35-89.
- Wright, P., Ferris, S. (1997). Agency conflict and corporate strategy: The effect of divestment on corporate value. *Strategic management Journal*, Vol. 18, pp. 77-83.
- www.telekom.com
- Zvaríková, K. (2023). *Spoločensky zodpovedné podnikanie*. Žilina: EDIS-vydavateľstvo UNIZA
- Želinský, T., Gazda, V., Výrost, T. (2010). *Ekonometria*. Košice: Ekonomická fakulta Technickej Univerzity v Košiciach.