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The Impact of Corporate Social Responsibility on Corporate Financial Performance: Evidence from Russian and Dutch Companies

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Abstract

This paper studies the impact of Corporate Social Responsibility (CSR) reporting on the Corporate Financial Performance (CFP) of Russian and Dutch companies. Using the theoretical framework of stakeholder theory, we apply regression analysis to obtain quantitative evidence on CSR-CFP relations. The companies' CSR involvement is measured by their reputation index provided by CSRhub – transparent data platform developing consensus ratings of companies' ESG performance all around the world. The return on equity ratio is used as a measure of corporate financial performance. The sample consists of 45 Russian and 55 Dutch companies from the CSRhub list (2017 data.) We study all companies rated by CSRhub from two European countries – Russia as an emerging economy and the Netherlands as the developed country with a coordinated market economy. Our findings demonstrate a weak positive correlation between CSR and the companies' ROE. The CSR has a higher impact on the financial performance of Russian companies than on their Dutch counterparts. The proposed explanations relate to the different levels of business risk and trust in these countries, the dissimilar nature (mandatory and voluntary) of non-financial reporting, and the transparency of national businesses for investors. Different perceptions of business risk by investors as well as different levels of company transparency may explain the lower CSR effect on the performance of Dutch companies in comparison to the Russian case. These results may be used by corporate management for assessing financial returns from CSR strategies.

Keywords: corporate social responsibility, sustainability, return on equity, corporate financial performance, regression analysis, Russian companies, Dutch companies

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Introduction

The Corporate Social Responsibility (CSR) concept has become a leading business trend over the last few years [1–3]. The CSR approach refers to companies' voluntary initiatives to take responsibility for both positive and negative impacts on society and the environment from their core business activities, "a form of international private self-regulation focused on the reduction and mitigation of industrial harms and provision of public good" [4, p. 644]. The implementation of CSR strategies is a key task for any modern company that wants to maintain its competitive advantages and Corporate Financial Performance (CFP). However, there is no consensus on how CSR initiatives relate to the performance of companies and other actors. Since CSR policies cannot exist independently of the economic and political issues of their countries [5–7], one can expect to see differences between the nature of the CSR-CFR relations in different national contexts.

The aim of this paper is to investigate the impact of CSR strategies on Corporate Financial Performance, which is believed to be positive. We study this issue by considering companies from two European countries – Russia as an emerging economy and the Netherlands as a developed country with a coordinated market economy. The special focus of our research is to compare results for samples of companies from these two countries. Given the significant differences in institutional, cultural and economic stances between Russian and Dutch businesses, we also expect to identify cross-national distinctions within the scope of our research.

Our methodology is based on regression analysis of CSR and financial data for Russian and Dutch organizations. The study has the following targets:

- Developing a unified operationalization of the CSR concept for Russian and Dutch companies;
- Analysing CSR-CFP relations for Russian companies;
- Analysing CSR-CFP relations for Dutch companies;
- Comparing the strength of CSR-CFP relations between Russian and Dutch companies;
- Deriving conclusions regarding the existence of CSR-CFP relations and determining further areas of research.

This study will contribute to the existing literature by providing quantitative results of CSR-CFP relations for Russian and Dutch companies from various business sectors. We employ the stakeholder approach to explain the observed relations and take an institutional point of view when discussing possible cross-country differences.

To meet our main research targets, we divide this paper into five parts. The part 1 explains the business context of CSR practices with an emphasis on Russian and Dutch companies. Part 2 focuses on the scope of CSR research and sets out the main findings of Corporate Social Responsibility studies and the main approaches to CSR operationalization by reviewing previous papers. Part 3 proposes a research design for CSR-CFP relation modelling, while Part 4 develops the model itself. Finally, Part 5 discusses the results of our statistical analysis and its limitations. The Conclusion summarizes the main results of the study and its possible implications.

1. CSR definition and business context

CSR concept and business practices

The concept of Corporate Social Responsibility has numerous scopes and definitions. Traditionally, CSR has been perceived as a company's contribution to the life of the local community or society in general. A seminal research project on the CSR topic [8] states that Corporate Social Responsibility comprises the economic, legal, ethical, and philanthropic expectations that any community has about any type of business and, in addition, the expectation for an organization to be constantly profitable so that its owners and investors fulfil their economic goals.

The recent view on CSR as Shared Value refers to the management strategy of finding business opportunities in social problems. The ordinary CSR concept focuses on giving something back to society or minimizing the harmful effect of business on the local community. Shared Value offers businesses the opportunity to maximize their competitive advantages by solving social problems in new markets or for new customers [9].

Most experts agree to recognize a business as socially responsible if it complies with the following criteria. First of all, a company has to meet the economic, legal, ethical, and philanthropic expectations of society. Secondly, a firm must implement sustainable practices and initiatives that go beyond the legal necessities set down by official law. Furthermore, to be considered as an advanced CSR user, a business should build its core operations around a particular social problem that requires an urgent and/or permanent solution. With the help of these criteria, it is possible to identify the degree to which a business is socially responsible and to quantify this degree.

By the 2000s, it had become clear that voluntary initiatives were insufficient and corporate self-regulation was not effective in view of the different scandals regarding sweatshop issues in developing countries, financial fraud, and other unethical behaviour of multinational companies. The CSR concept began to receive particular attention from the international business community after a major scandal involving the Enron and Arthur Anderson corporations [10]. In order to prevent the repetition of such mistakes, international companies started to pay more attention to CSR policies that provide some degree of control over corporate behaviour. Moreover, some governments and non-profit organizations (NPOs) also responded to the problem of unethical corporate behaviour by issuing ethical guidelines and codes of conduct. For instance, the Sarbanes-Oxley Act for US corporations and the EU Non-Financial Disclosure Directive for EU

organizations made it mandatory for all publicly traded companies to disclose both financial and non-financial data about their business operations[1]. After these events, CSR practices became a strategic aspect for many Western companies and started to appear in the corporate culture of emerging market countries, too. As a result of CSR practices, companies with better disclosure became more attractive for stakeholders and enjoyed financial benefits in the long run. The reasons for such effects are multiple: the most common explanation makes use of the stakeholder perspective and states that CSR disclosure adds information to financial accounting data, leading to a better understanding of the company's activities, decreasing information asymmetry and reducing the incentives for the opportunistic behaviour of management. This is especially valuable when and where information supply is scarce – for example, in countries with slack corporate reporting legislation or poor transparency. In this paper, we shall explore whether this is the case for the two European countries under consideration.

National context of corporate social responsibility: the case of Russia

Corporate Social Responsibility practices started to emerge in the Russian business environment quite recently in comparison with the West. Russian legislation does not even require publicly traded companies to report on CSR activities. Even though most Russian companies have already adopted the GRI framework for preparing CSR reports, different metrics are used to measure non-financial performance, which makes it difficult to compare companies with each other. Nevertheless, assessing the efficiency of social investments has become a growing trend among Russian companies.

There are few good studies of the corporate social responsibility of Russian companies. Black and Rachinsky have explored the relation between corporate governance and the market value of companies. They conducted a time-series analysis of a number of available governance indices for Russian companies from 1999–2006. The authors found an economically and statistically strong correlation between company governance and market value [11]. However, this study did not completely cover the CSR concept, since corporate governance is only one of many CSR dimensions. In addition, market value is just an external measure of a company's performance. Orazalin and Mahmood studied the sustainability indicators of Russian oil and gas companies. They found that "companies with a share of foreign ownership disclose more transparent sustainability information than companies owned only by local investors"; however, more valuable information is found in reports addressed to local stakeholders (in Russian) than in reports to foreign ones (in English) [12, p. 70]. Shvarts et al. identified a trend of the enhanced disclosure of environmental issues by Russian oil and gas companies [13].

All these papers say little about the issue considered here. So, there are significant gaps in the study of CSR-CFP relations for Russian companies.

National context of corporate social responsibility: the case of the Netherlands

The Netherlands was one of the first European countries to develop strategic CSR. In 2000–2002, the Dutch government financed the "National Initiative for Sustainable Development" – a programme that included 19 Dutch companies which incorporated CSR into their core business strategies and subsequently conducted CSR marketing to present the information to the public [14]. In 2015, Euronext Amsterdam became a sustainable stock exchange, introducing a commitment letter that made it mandatory for all listed companies to report on non-financial practices and promote responsible investment[2]. A comparison of the Netherlands with other European countries suggests that, in implementing CSR, Dutch companies focus "on water and climate change, diversity and sustainable building" [5, p. 26]. As a result, Dutch companies have accumulated extensive experience in the preparation of CSR reports, which makes them a benchmark for comparison.

Both Dutch corporate management and stakeholders strive to measure the CSR performance of Dutch companies against their European counterparts. However, this is quite a complicated task due to the use of different KPIs to measure sustainable practices [15]. Nevertheless, early research already showed that enhanced CSR disclosure by European (including Dutch) companies "translates into more precise earnings forecasts by analysts" [16, p. 643] on financial markets and in the public sphere than in the case of US companies.

Existing literature on the CSR of Dutch companies speaks about the problem of comparability, which also exists for Russian companies. This causes the number of research papers where the authors statistically analyse the impact of CSR on company financial performance. For instance, [17] reveals a positive correlation between the environmental performance of European (including Dutch) companies and their ROA (return on assets). Another paper [18] examines the determinants of company participation in CSR practices for Dutch businesses. The author conclude that the magnitude of CSR practices depends on company size and level of ownership. However, no correlation between business financial resources and the size of CSR activities has been found.

Thus, our analysis of previous studies points to a shortage of quantitative research on the impact of CSR on the performance of Dutch companies, just as for their Russian counterparts. This paper aims to contribute to the existing literature by providing empirical evidence on CSR-CFP relations in the Netherlands as well as in Russia.

[1] Timeline of Business Ethics and Compliance. URL: https://www.ethics.org/resources/free-toolkit/ethics-timeline/

[2] Retrieved from the Sustainable Exchange Initiative: URL: https://sseinitiative.org/stock-exchange/euronext-amsterdam/

2. CSR research scope

Previous findings of CSR research

After exploring the questions of whether CSR is necessary at all and how it should be organized, recent discussions have focused on how CSR affects different aspects of company performance. Recent papers have touched on the impact of CSR on financial performance (an issue of particular interest for us), market structure [19] and brand [20], innovative activities [21; 22], company market value [23; 24], ratings [25], etc.

Most authors agree that CSR activity and disclosure benefit companies and society insofar as they strengthen company and market transparency, reduce information asymmetry and raise stakeholder awareness. Some recent studies have accented the links between CSR disclosure and financial performance by examining company risks. [26] showed that companies with high CSR scores are more likely to have lower idiosyncratic risk [27], showed that companies with low CSR scores are more likely to experience financial distress [28] found that bank debts cost more for companies with low CSR scores than for companies with higher scores [29; 30] demonstrated the same result for the cost of equity.

It has been shown that "CSR has a significant impact on [the] capital allocation process: market participants are more willing to allocate scarce capital resources to firms with better CSR performance. Moreover, by disaggregating the CSR performance into its components, we are able to show at a more fine-grained level that both the social and the environmental aspect of CSR activities reduce capital constraints" [31, p. 17].

CSR-CFP relations have been statistically examined in numerous papers [2; 32]. Previous academic publications have extensively studied CSR-CFP relations using the data of Western and Asian companies. While most studies have identified positive relations between these variables, several authors have managed to find negative, neutral, U-shaped, or more complicated relations.

A certain positive effect has been found for companies from different countries. Skare and Golja [33] examined the financial results and CSR of 45 US companies included in the DJSIndex and compared them with 45 companies that do not engage in CSR practices. The study revealed a strong positive correlation between responsible behaviour and financial performance. A study by Purnamasari et al. showed the positive effect of CSR on operating cash flow and reduced costs for Indonesian companies in the short and long term [34]. Lin et al. revealed the positive influence of CSR on financial performance with intellectual capital as the mediator and the industry type as the moderator [35]. Another paper found a positive correlation between CSR and ROA of Indonesian telecommunication companies [36]. Mervelskemper and Streit [23] studied how capital market investors evaluate ESG disclosure with regard to the form and the content of reports. Their results indicate that ESG (environmental, social, and corporate governance) performance is targeted more strongly and in the (desired) positive direction when firms publish ESG reports irrespective of their type (stand-alone or integrated), although integrated reporting is better insofar as it correlates more strongly with better company outcomes in comparison with distinct reports for ESG and corporate governance performance. Margolis et al. [32] found a positive yet small effect of CSR on CFP and explained it by the existence of external variables or situational contingencies that could substantially bias the results.

Du Toit and Lekoloane [37] did not find any correlation between CSR practices and the financial performance of companies listed on the Johannesburg Stock Exchange.

Peng and Yang [38] investigated how the impact of ownership concentration moderated the link between corporate social performance (CSP) and CFP for a sample of Taiwanese listed companies during the period from 1996 to 2006. The results of the empirical analysis provided strong support for the idea that the divergence between control rights and cash flow rights of controlling owners negatively moderates the link between social and short and long-term financial performance. Elouidani and Faical [39] constructed their own CSR index for publicly traded companies on the Casablanca Stock Exchange. The authors showed a strong negative impact of CSR on company financial indicators. A recent study [40] of the stock market reaction to the environmental performance of US, Canadian and Scandinavian companies revealed the negative reaction of the stock market towards environmental issues: firms with the highest (lowest) environmental performance scores are quoted at significantly lower (higher) price-to-sales multiples than other companies.

Non-linear relations between distinctive parts of CSR and CFP were reported by a number of researchers. Brammer and Millington [41] showed that companies with unusually poor CSP performance were the best in the short term, and unusually good social performers were the best over the long run. Wang et al. [42] found that corporate philanthropy and financial performance can be linked by an inverse U-shape curve. The same dependence was proposed by Barnett and Salomon [43], who showed that companies from the Kinder, Lydenberg, and Domini (KLD) rating database with low or high corporate social performance have higher CFP than companies with moderate CSP.

Even more complicated and interesting links have been found. Braga-Alves and Shastri [44] established that higher CSR scores lead to higher market value but not to higher profitability. Alareeni and Hamdan [45] showed that, on the whole, ESG disclosure positively affects the performance (ROA and ROE) of US S&P 500 companies. However, measuring ESG components separately showed that environmental and social disclosure was negatively associated with ROA and ROE but positively related to Tobin's Q. At the same time, corporate governance disclosure was positively related to ROA and Tobin's Q and negatively related to ROE. It is also important that proxies for the total ESG and its components (social, environmental and governance proxies) tend to be higher for firms with high assets and high financial leverage. Jaisinghani and

Sekhon [46] inquired into the profit persistence of Indian companies that disclose their CSR. The overall impact was found to be significantly positive, while individual dimensions of CSR disclosure demonstrate a mixed impact on company profitability. CSR dimensions relating to overall community development and product-related disclosures have a positive relationship, while environmental and customer-related dimensions have a negative relationship to financial performance.

Table 1 provides a summary of the results from existing literature on the CSR-CFP relationship.

Table 1. Types of CSR-CFR relations identified by previous studies

Authors	Type of Relations
Moneva, Ortas, 2010 [17] Skare, Golja, 2012 [33] Purnamasari et al., 2015 [34] Lin et al., 2015 [35] Firli, Akbar, 2016 [36] Mervelskemper, Streit, 2017 [23]	Overall positive
Du Toit, Lekoloane, 2011 [37]	Neutral
Peng, Yang, 2014 [38] Elouidani, Faical, 2015 [39] Garcia-Blandon et. al., 2020 [40]	Overall negative
Brammer, Millington, 2008 [41] Wang et al., 2008 [42] Barnett, Salomon, 2012 [43]	U-shape
Braga-Alves, Shastri, 2011 [44] Alareeni, Hamdan, 2020 [45] Jaisinghani, Sekhon, 2020 [46]	Ambiguous

Source: Adapted by the authors from the existing literature.

Our review of research papers devoted to the relationship between Corporate Social Responsibility and Corporate Financial Performance reveals different findings. The main reason for the different results of empirical studies is the different ways in which CFP and CSR are measured.

CFP is traditionally measured using financial ratios computed from the data of company financial statements. However, the operationalization of CSR practices is apparently more challenging for several reasons. First of all, there is a lack of generally accepted standards within the business community that would establish official or generally used CSR measures. Instead, several different guidelines have been set down by non-government and non-profit organizations. Corporate managers are not obliged to comply with all the rules contained in any one guideline. Management is free to choose a framework that will present CSR information in the clearest, fairest and most complete manner. Depending on their choice of guideline, companies use different metrics to make their CSR performance transparent. This makes it impossible to compare the performance of firms even in the same industry. Another factor that adversely affects research results is the inability of corporate management to adopt measurable sustainable objectives. CSR policies mainly consist of non-financial data that is difficult to quantify in real figures. As a result, an inadequate choice of CSR metrics may lead to an unfair description of business performance and result in seemingly biased research findings.

The operationalization of CSR and its components as measurable variables is the main issue discussed by experts conducting quantitative research in this field.

CSR operationalization

CSR measurement approaches may be divided into two main types: content analysis and CSR reputation indices. CSR indices are the most common method used by researchers to make quantitative measurements of company social responsibility. These indices are computed by independent expert agencies. One of the most famous indicators is the Dow Jones Sustainability Index (DJSI) established by Standard and Poor's in 1999. The index tracks the performance of large international companies according to economic, environmental, and social criteria[3]. DJSI is computed for different geographical regions, making it possible to investigate the CSR performance of companies from different countries. However, it includes only firms that fulfil certain sustainability criteria and are the best in environmental, social, and governance (ESG) disclosure. Other major indices that have been used by researchers include Vigeo CSR scores for European companies and the MSCI KLD 400 Social Index for US publicity traded companies [47]. However, these indices are designed only for a particular region. Authors facing this problem have used CSR scores developed by local rating agencies. For instance, Du Toit and Lekoloane [37] based their research on the Socially Responsible Investment Index computed for all the Southern African companies listed on the Johannesburg Stock Exchange. Experts from China have used CSR composite ratings provided by an independent firm that reviews the CSR performance of Chinese firms annually [48]. Nevertheless, such indices have several weaknesses. First of all, they are developed by private agencies, which do not always use scientific methods or completely disclose their calculation methodology. Secondly, agencies normally publish aggregate CSR scores, making it impossible to examine social, environmental, and economic dimensions separately [49].

[3] DJSI index family. URL: https://www.sustainability-indices.com/index-family-overview/

In view of these disadvantages, some researchers have constructed their own CSR scores. For instance, Wang [50] calculated social responsibility scores based on the economic, social, and environmental dimensions of CSR and using information from the financial statements of Taiwanese companies.

As none of the aforementioned indices include Russian companies, which are at the focus of our research, they cannot be used in this study. Even Wang's method is not applicable to Russian companies due to the lack of publicly available data for Russian organizations.

The second method of social responsibility measurement is based on content analysis. Content analysis codifies a written text into different categories. As existing research papers show, this approach enables scholars to obtain valid results for corporate environmental and social reporting practices [51]. Gamerschlag, Möller and Verbeeten [52] have managed to develop a Social Responsibility Index for German companies based on the content analysis of company reports. The authors identified 32 keywords for each dimension using Global Reporting Initiative guidelines and then counted the number of these words in company CSR reports. The main advantage of this methodology is that it covers all the CSR dimensions and is relatively easy to replicate for checking the validity of the results. This approach has also been used to measure the effect of CSR reporting practices on the financial performance of UK firms [53]. Nevertheless, this method may lead to a lack of research objectivity, since researchers determine the keywords themselves while analysing company reports [49]. This can result in the distortion of the studies' findings.

Both approaches, whether sustainable indices or content analysis, have advantages and drawbacks that must be mentioned in the research limitations. The operationalization of CSR in our paper is based on the index approach, which normally provides higher reliability since CSR scores are calculated by independent CSR experts.

We use the CSRhub reputation index as a metric for evaluating company social practices. CSRhub is an independent agency that develops CSR scores for companies around the world. The scores are based on "Stakeholder Theory", reflecting the firms' responsibility to multiple stakeholders[4]. CSRhub recognizes four main categories of company stakeholders: community, employees, environment, and governance. Each of the categories is divided into three subcategories, as shown in Table 2.

Table 2. Components of CSRhub scores

Community	*Philanthropy*	*Product*	*Human Rights & Supply Chain*
Business commitment and effectiveness within the local, national and global communities in which companies operate	Companies' donations, charitable activities and volunteerism of staff	The responsibility of business for the development, design and management of products and services and their impact on customers and society	Companies' commitment to respect human rights and operate without using child, forced or compulsory labour
Employees	*Compensation & Benefits*	*Diversity & Labour Rights*	*Training, Health & Safety*
Companies' disclosure of policies and programmes in diversity and labour relations	Includes employee rewards, equal compensation, and fair financial benefits	Policies for the non-discriminatory treatment of labour	Companies' ability to provide employees with a safe and healthy workplace
Environment	*Energy & Climate Change*	*Environmental Reporting*	*Resource Management*
Interaction between business and environment	Companies' efficiency in addressing the problem of climate change through appropriate strategies and policies	Companies' environmental reporting and adherence to specific disclosure standards	Measuring how efficiently a business uses its resources while manufacturing or delivering products/services
Governance	*Board*	*Leadership Ethics*	*Transparency & Reporting*
Executive compensation, attention to stakeholders, disclosure of policies and procedures	The effectiveness of the Board of Directors in corporate governance	How efficiently a company manages its relations with its main stakeholders	To what extent a business is transparent to its stakeholders, complies with sustainability goals and follows sustainable guidelines

Source: Adapted by the authors from https://content.csrhub.com/files/CSRHub_Data_Schema_2014_11.pdf

[4] CSRhub. The CSR Rating Methodology. URL: https://esg.csrhub.com/csrhub-ratings-methodology

CSRhub collects data in each category for every company. When all the information is processed, the categories are weighted, and the results are summed together to make the final CSR score. The validity of these scores has been confirmed by several papers that used them to study the relationship between the companies' CSR performance and their cost of debt and brand value [54; 55]. Hence, we can expect valid results from our regression analysis based on the use of CSRhub scores for operationalizing the CSR concept.

3. Research design for studying CSR-CFP relations

CSR and CFP metrics

To choose an adequate research methodology, it is important to understand which CSR and CFP metrics appear in the reports of modern companies. While the aforementioned studies do not examine CSR-CFP relations, their results may help us to select the dependent and explanatory variables for building an econometric model in our paper.

We use Return on Equity (ROE) as a proxy for corporate financial performance. ROE is a common measure of business financial profitability that is used by most investors and analysts to assess business efficiency and the performance of company top management. ROE, as well as ROA, often appear in CSR research [56; 57]. The alternative way to measure financial performance is to use market-based indicators such as Tobin's Q. Accounting-based ratios seem to be more appropriate for our research because they reflect the companies' current status-quo, whereas market-based indicators show expectations about future results and can be influenced by a lot of market and/or macroeconomic factors that are beyond a company's control. Moreover, accounting measures seem to show a stronger positive relationship between CSR-related factors and CFP than market-based measures [58]. That is why accounting-based indicators have been chosen as the variables for our study: ROE for the basic model and ROA for testing the model's robustness.

As a proxy for corporate social responsibility, we use the CSRhub score – a compound index assigned to companies by the CSRhub agency. The method of calculating the scores and their validity was discussed in the previous section. The CSRhub scores of different companies are chosen as the operationalization of our main explanatory variable. In order to isolate the CSR's impact on company financial performance, we use the profit margin, assets turnover, and financial leverage as control variables. The choice of additional explanatory variables is based on the DuPont analysis that assumes that ROE is a product of three ratios:

ROE = Profit Margin • Assets Turnover • • Financial Leverage,

where

Profit Margin = Net Income / Sales

Assets Turnover = Sales / Total Assets

Financial Leverage = Total Assets / Equity

The profit margin adjusts for possible variation in ROE across companies due to different profitability levels. The assets turnover explains the variation in ROE caused by differences in the firms' size and efficiency of production. Financial leverage measures the level of business indebtedness, whose increase can artificially boost a company's ROE. Thus, the inclusion of the chosen control variables allows us to avoid the problem of endogeneity in the model and, consequently, to obtain valid measurements of the impact of CSR on business financial performance.

Methodology

Our research uses regression analysis to determine the quantitative impact of CSR reporting practices on company financial performance. In view of the methodology of recent research papers and the fact that econometric models are the most common way to measure the correlation between two variables, a multiple regression analysis is performed in the form of a lin-lin econometric model.

We use the Stata statistical software package for data analysis and modelling.

Developing the research hypotheses

The literature on CSR-CFP relations presents many different conclusions. Nevertheless, most authors of recent studies agree that a statistically significant nexus exists between these factors and that their relationship is positive. Stakeholders suppose that CSR efforts are part of "doing good" and will transfer to "doing well". The comprehensive CSR intentions, practices and ways of disclosure of companies are evaluated positively by stakeholders (personnel, customers, investors) and result in high productivity, considerable sales and investments. All of these factors lead to high company performance.

Based on the results of previous research papers and the fact that CSR-CFP relations have not been examined extensively for Russian and Dutch companies so far, we make a two-tailed hypothesis:

H1: CSR reporting practices have a significant positive effect on the CFP of Russian and Dutch companies.

There is another stream of studies that compares how CSR relates to some activity aspects of companies in different countries. It was observed in [16] and [59] that environmental disclosure reduced the information risk and was viewed very differently by analysts and asset managers in Europe and in North America. Significant differences in SCR-related ratings were reported by authors [60] for companies in Europe and companies in other world regions.

It was observed for developed and developing countries that "corporations implement more socially responsible management practices in countries with stronger law enforcement relative to countries with weaker law enforcement" [61, p. 16, 27].

All the aforementioned studies explain the differences in the character of CSR-CFP relations in their subsamples by the cultural, institutional, and legal features which characterize the companies in a given country.

Table 3. Research variables

Dependent variable	ROE = Net Income / Equity
Main explanatory variable	Corporate Social Responsibility (CSR) – CSRhub score
Control variables	Profit Margin = Net Income / Sales
	Assets Turnover = Sales / Total assets
	Financial Leverage = Total assets / Equity
	Country = 1 if Dutch company, 0 if Russian company
	CSR#Country – cross variable that is 0 for Russian companies and non-zero for Dutch companies

Source: Created by the authors.

Black, de Carvalho and Gorga [62] demonstrated the strong influence of country characteristics on CSR performance, which they studied for companies from emerging economies. Considering the fact that the CSR concept has existed in the Netherlands for a longer period of time than in Russia, we can expect that Dutch consumers and investors are more aware of the importance of social responsibility and, consequently, are more likely to distinguish responsible and non-responsible practices. This leads to the following hypothesis:

H2: The CSR effect on CFP differs for Russian and Dutch companies.

In view of the nature of relations between our variables and the literature analysis performed above, we use a lin-lin econometric model to test our research hypotheses in the form:

$$ROE = ß_1 + ß_2\, Profit\ Margin + ß_3\, Assets\ Turnover + ß_4\, Financial\ Leverage + ß_5\, CSR + ß_6\, CSR\#Country + e_i.$$

To test our second research hypothesis and measure the potential differences in CSR impact between the two countries, the dummy variable "Country" and the cross variable "CSR#Country" are added to the model. Table 3 shows all the determining variables for our regression model.

Dataset

Given the fact that CSRhub provides scores for only 45 Russian and 55 Dutch companies, our study is limited to a sample of 100 organizations. They include companies that are either listed on national stock exchanges – Euronext (Amsterdam, the Netherlands) and MOEX (Moscow, Russia) – or are officially registered and have their corporate headquarters in Russia or the Netherlands. Our sample also contains data on firms operating in different industries such as oil & gas, energy, mining, consumer goods, transport, and financial services. Nevertheless, we do not make a cross-industry analysis due to the fairly small number of companies in any particular industry. The division of the sample into business sectors would not provide reliable statistical evidence.

The research variables were calculated using information from the financial reports of the sampled firms for the year 2017. All the data is presented in euro to enable a comparison between Russian and Dutch organizations.

Descriptive statistics for data

To develop a valid econometric model, we begin by conducting an analysis of our data set. Table 4 presents summary statistics for the research variables.

Table 4. Summary statistics

Dutch companies					
Variable	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
ROE	55	0.025	0.01	0.0008	0.073
Profit Margin	55	0.839	0.06	0.73	1.039
Financial Lev.	55	1.05	0.06	0.74	1.17
Assets Turnover	55	0.96	0.09	0.78	1.42
CSR	55	53.50	8.69	33	67
Russian companies					
Variable	Obs	**Mean**	**Std. Dev.**	**Min**	**Max**
ROE	45	0.027	0.099	0.0002	0.052
Profit Margin	45	0.9	0.092	0.66	1.27
Financial Lev.	45	1.04	0.032	1.00	1.11
Assets Turnover	45	0.96	0.068	0.66	1.036
CSR	45	49.69	7.39	33	60

Total sample					
Variable	Obs	Mean	Std. Dev.	**Min**	**Max**
ROE	100	0.026	0.011	0.0002	0.073
Profit Margin	100	0.904	0.075	0.66	1.27
Financial Lev.	100	1.04	0.048	1.00	1.17
Assets Turnover	100	0.96	0.079	0.66	1.42
CSR	100	51.79	8.32	33	67

Source: Output from the Stata computer programme.

Remarkably, there are quite a few differences in summary statistics for Russian and Dutch companies. For instance, the mean values of all the variables except CSR are almost equal in the two subsamples. For this reason, we infer limited variation in ROE by country and, consequently, expect the dummy variable "Country" to be insignificant. The difference in the mean values of CSR scores for the two subgroups is larger than for other variables. Therefore, we assume the existence of various CSR effects for Russian and Dutch companies and, as a result, expect the cross variable "CSR#Country" to be statistically significant.

To determine a correct specification for our model, we examine the type of relations between the dependent and explanatory variables. Scatter plots of the dependant variable ROE against the explanatory variables show us a positive correlation between ROE and CSR: companies with high CSR scores tend to have higher ROE. Thus, we can assume the existence of linear relations between ROE and CSR. Moreover, we expect to obtain a positive beta coefficient for the CSR variable in our model. Other control variables demonstrate a weak positive correlation with our dependent variable. Normally, company management develops strategies to increase the profit margin, assets turnover, and financial leverage in order to improve corporate ROE. Considering this argument and our graphical evidence, we can expect positive beta coefficients for all the control variables reflecting the existence of direct relations between the profit margin, assets turnover, financial leverage, and ROE. Finally, our scatter plots do not show any potential non-linear relations between the variables. Therefore, we use a lin-lin specification of the model. Table 5 presents the expected results of our estimates.

To avoid multicollinearity between our regressors, which can lead to biased results due to low t-statistics and insignificant coefficients, we make a correlation matrix and a variation inflation factor for our explanatory variables (Table 6).

Table 5. Expected results for econometric model

Theoretical interpretation	Econometric interpretation
Profit margin positively affects ROE	H0: $\beta_2 < 0$ H1: $\beta_2 \geq 0$
Assets turnover positively affects ROE	H0: $\beta_3 < 0$ H1: $\beta_3 \geq 0$
Financial leverage positively affects ROE	H0: $\beta_4 < 0$ H1: $\beta_4 \geq 0$
H1 research hypothesis: CSR reporting practices have an effect on CFP of Russian and Dutch companies	H0: $\beta_5 = 0$ H1: $\beta_5 \neq 0$
H2 research hypothesis: CSR effect on CFP differs for Russian and Dutch companies	H0: $\beta_6 = 0$ H1: $\beta_6 \neq 0$

Source: Created by the authors.

Table 6. Correlation matrix and VIF for explanatory variables

Correlation matrix						
	Profit margin	**Assets turnover**	**Finance leverage**	**CSR**	**CSR_Country**	**Country**
Profit margin	1.0000					
Assets turnover	–0.4867	1.0000				

Correlation matrix						
	Profit margin	Assets turnover	Finance leverage	CSR	CSR_Country	Country
Finance leverage	–0.0791	–0.5024	1.0000			
CSR	0.0531	0.3583	–0.0029	1.0000		
CSR_Country	–0.1320	0.0866	0.0660	0.4035	1.0000	
Country	–0.1643	0.0243	0.0846	0.2297	0.9724	1.0000
VIF (variation inflation factor)						
Variable	VIF	1/VIF				
CSR_Country	50.30	0.0199				
Country	44.63	0.0224				
CSR	3.54	0.2826				
Assets turnover	3.27	0.3062				
Profit margin	2.10	0.4758				
Finance leverage	1.97	0.5084				
Mean VIF	17.63					

Source: Output from the Stata computer programme.

Table 6 shows that VIF for the profit margin, assets turnover, financial leverage, and CSR is below 5, which points to the absence of a significant correlation between explanatory variables in the model. However, VIF for CSR#Country and Country has extreme values of 50.3 and 44.63, respectively. This is evidence of strong relations between these regressors, which is also suggested by their high correlation index of 0.97. Hence, the inclusion of both variables in the regression will cause severe multicollinearity that can degrade the quality of our model. To avoid this problem, we exclude the variable "Country" from the regression, keeping only the cross variable CSR#Country. The analysis of summary statistics demonstrates similar results in the two subsamples, implying that all the variables except CSR do not vary much by country on average. Therefore, we assume that the exclusion of the dummy variable "Country" will not significantly influence our results.

To ensure that our model does not suffer from heteroskedasticity that causes low standard errors and high t-statistics and, consequently, lowers the precision of estimates, we examine the distribution of the model error term. To be more specific, we test the residuals for its homogeneity. The White, Breusch-Pagan, and Shapiro-Wilk tests show that our error term is distributed closely to normality and that heteroskedasticity is not severe in the model and so should not substantially affect the validity of our results.

4. CSR-CFP relations models for Russian and Dutch companies

Estimation of CSR-CFP relations

To obtain quantitative evidence on the impact of CSR on company performance, we estimate our regression using the least squares method. We use the model:

$ROE = -0.459 + 0.143\ Profit\ Margin + 0.159\ Assets\ Turnover + 0.183\ Financial\ Leverage + 0.00024\ CSR - 0.00004\ CSR\#Country + e_i$.

The output of the model is presented in Table 7.

Table 7. Results of estimated CSR-CFP model for the whole sample

Source	SS	df	MS
Model	0.011351285	5	0.002270257
Residual	0.001254449	94	0.000013345
Total	0.012605734	99	0.000127331

Number of obs = 100

F (5, 94) = 170.12

Prob > F = 0.0000

R-squared = 0.9005

Adj R-squared = 0.8952

Root MSE = 0.00365

ROE	Coef.	Std. Err.	T	P>|t|	[95% Conf. Interval]	
Profit margin	0.14307	0.00706	20.25	0.000	0.12904	0.15709
Assets turnover	0.15914	0.00836	19.05	0.000	0.14255	0.17573
Finance leverage	0.18342	0.01065	17.22	0.000	0.16227	0.20457
CSR	0.00022	0.00006	3.63	0.000	0.00010	0.00034
CSR_Country	–0.00004	0.00002	–2.56	0.012	–0.00007	–8.8e-06
Cons.	–0.45857	0.02098	–21.86	0.000	–0.50022	–0.41692

Source: Output from the Stata computer programme.

The regression estimates support our initial conjectures.

Our control variables demonstrate a positive impact on company ROE. As the P-value for these regressors is quite small, we can reject the null hypothesis about the insignificance of control variables. This is an expected result.

The coefficient for the CSR and CSR#Country variables turns out to be significant at the 5% level. Since the CSR scores were calculated from information disclosed by companies, our H1 research hypothesis that *CSR reporting has an effect on the financial performance of Russian and Dutch companies* cannot be rejected. Thus, we conclude that CSR positively affects CFP for both Russian and Dutch companies. Moreover, as we will show in the next subsection, the H2 hypothesis that the impact of CSR on CFP differs between countries cannot be rejected, either.

Robustness of the CSR-CFP relations model

In order to derive a final conclusion on the relations between CSR practices and business performance, we test our model for robustness in two ways. At first, we compare the model based on the two country subsamples. Next, to assure that our main model is sustainable to changes in regressors and, consequently, measures the true CSR effect, we re-estimate the initial regression with new control variables.

To ensure that our regression does indeed reflect the dependence of ROE on CSR for both Russian and Dutch companies and to test the H2 hypothesis, we build two separate models for these countries. The output of these models is presented in Table 8.

Table 8. Estimation of separate models

Russian companies

Source	SS	df	MS
Model	0.003799208	4	0.000949802
Residual	0.000541607	40	0.00001354
Total	0.004340815	44	0.000098655

Number of obs = 45
F (5, 94) = 70.15
Prob > F = 0.0000
R-squared = 0.8752
Adj R-squared = 0.8628
Root MSE = 0.00368

ROE	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
Profit margin	0.13096	0.01237	10.59	0.000	0.10596	0.15596
Assets turnover	0.15925	0.01741	9.15	0.000	0.12406	0.19444
Finance leverage	0.15989	0.02083	7.67	0.000	0.11778	0.20199
CSR	0.00025	0.00011	2.42	0.020	0.00004	0.00047
Cons.	–0.42489	0.03957	–10.74	0.000	–0.50486	–0.34491

Dutch companies

Source	SS	df	MS
Model	0.007386274	4	0.001846569
Residual	0.000560627	50	0.000011213
Total	0.007946901	54	0.000147165

Number of obs = 55
F (5, 94) = 164.69
Prob > F = 0.0000
R-squared = 0.9295
Adj R-squared = 0.9238
Root MSE = 0.00335

ROE	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
Profit margin	0.16484	0.00944	17.45	0.000	0.14586	0.18382
Assets turnover	0.15686	0.00880	17.82	0.000	0.13918	0.17454
Finance leverage	0.18211	0.01158	15.72	0.000	0.15884	0.20538
CSR	0.00013	0.00006	2.01	0.050	–2.04e-08	0.00026
Cons.	–0.47171	0.02267	–20.81	0.000	–0.51724	–0.42618

Source: Output from the Stata computer programme.

The results of estimates for the two separate models are similar to our initial findings. All the coefficients remain significant, meaning that our main regression is robust to changes in the sample. Hence, we conclude that *the impact of CSR on corporate ROE exists for both Russian and Dutch companies*. However, new estimates demonstrate a variation in the CSR effect for both subgroups. Thus, the CSR coefficient increases slightly from 0.00021 to 0.00025 for Russian companies while falling from 0.00021 to 0.00013 for Dutch organizations. We see that sustainable reporting has a smaller impact on Dutch businesses than on Russian companies. Thus, our H2 hypothesis cannot be rejected, and so we conclude that *CSR affects CFP differently for Russian and Dutch companies*.

To check the robustness of our model in another way, we replace the profit margin and assets turnover with the return on assets (ROA). Furthermore, we replace financial leverage by the debt-to-equity ratio. We pursue the robustness check by using the new explanatory variables:

Return on Assets ROA = Net Income / Total Assets

Debt to equity ratio D/E = Total Liabilities / Total Equity

The new model looks as follows:

$ROE = -0.137 + 0.09\ ROA + 0.0646\ Debt\_Equity + 0.0004\ CSR - 0.00008\ CSR\#Country + e_i$.

The new model's output is presented in Table 9.

Table 9. Robustness testing of CFP-CSR relations

Source	SS	df	MS
Model	0.009480242	4	0.002370061
Residual	0.003125491	95	0.0000329
Total	0.012605734	99	0.000127331

Number of obs = 100
F (5, 94) = 72.04
Prob > F = 0.0000
R-squared = 0.7521
Adj R-squared = 0.7416
Root MSE = 0.00574

ROE	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
ROA	0.09032	0.00927	9.74	0.000	0.07191	0.10873
Debt_Equity	0.06457	0.00807	8.00	0.000	0.04854	0.08060
CSR	0.00042	0.00009	4.66	0.000	0.00024	0.00059
CSR_Country	–0.00008	0.00002	–3.38	0.001	–0.00013	–0.00003
Cons.	–0.13736	0.01104	–12.43	0.000	–0.15930	–0.11543

Source: Output from the Stata computer programme.

The regression with the new explanatory variables shows that a unit increase in a company's ROA improves its return on equity by 0.09 monetary units. This is slightly less in comparison with our initial estimates of profit margin and assets turnover effects. A new measurement of business indebtedness also explains the small variation in ROE in comparison with financial leverage in the first model. Nevertheless, the P-value for the two control variables demonstrates the significance of these regressors at any critical level.

Note that the coefficients of CSR and CSR#Country are slightly higher than our initial estimates. The growth of the coefficients of these two variables leads to almost similar CSR effects for Russian and Dutch companies, meaning that sustainable practices have the same impact on corporate performance regardless of the country of business operations. A possible reason for the change in the estimated CSR effect may be the poorer quality of our second regression, while the new control variables explain a smaller variation in ROE, as shown by the decrease in R^2. Therefore, part of the unexplained variation in the dependent variable is due to the coefficients of CSR and CSR#Country, which artificially increase the total CSR effect. Hence, the new regression explains only 75% of the variation in

ROE in comparison with 90% in our initial model. Nevertheless, the coefficients of CSR and CSR#Country are still significant in the second model, indicating that the level of sustainable practices does indeed have an impact on business performance. Thus, we can conclude that our initial model is a better approximation of CSR-CFP relations and, consequently, delivers more valid results about the impact of CSR on a company's ROE. Moreover, the re-estimation of the regression with new explanatory variables does not result in any substantial bias of the CSR and CSR#Country coefficients. Hence, we can state that our estimate of CSR-CFP relations is reasonably robust.

5. Discussion of CSR-CFP relations

The results of the regression analysis confirm both of our research hypotheses. As for Hypothesis 1, we found a significant and positive correlation between companies' CSR scores and their financial performance in the full sample and in both national subsamples for Russia and the Netherlands. This is consistent with a lot of previous studies ([5; 16; 33; 61] and other papers mentioned above). We see that companies' CSR scores explain some variation in ROE. Thus, we can assert that CSR disclosure facilitates stakeholder's trust, reduces the likelihood of opportunistic behaviour among managers [63] and serves as an indicator of the degree of "good management" in the long-term orientation.

At the same time, the strength of CSR-CFP relations is quite weak. This can be explained by the following reasons.

First of all, the CSR score we use in our model as a proxy for CSR is not Corporate Social Responsibility per se. It is only a proxy calculated by a reliable rating agency that took a lot of factors into account yet could have overlooked or omitted other factors. And, in any case, information disclosure about some activity is not tantamount to this activity but is only a picture drawn by company management to meet the expectations of users and stakeholders. This picture may skew the strength of some links in the models.

Secondly, the weak CSR impact on ROE can also be explained by the low recognition of corporate social practices as an essential component of business success. As an emerging concept, the level of corporate sustainability may still not be considered by company management and other stakeholders as an important business indicator. As a result, companies do not strive to develop sustainable strategies that could increase net income and, consequently, improve ROE.

Thirdly, this study is based on cross-sectional analysis. Within the period in question, the observed CSR-CFP relationship may be weak because of a lag between the two variables. We can predict other results using panel data.

As for Hypothesis 2, our study demonstrates lower returns from CSR reporting practices for Dutch companies in comparison with Russian organizations. This fact can be explained by the different levels of business risk and trust in these countries. Dutch companies, especially those listed on the national stock exchange, are required to disclose non-financial information about their core business operations. In contrast, Russian organizations report about their non-financials on a voluntary basis. This results in the higher transparency of Dutch businesses in comparison with Russian companies. Moreover, Dutch institutions that regulate the behaviour of corporations are stronger than their Russian counterparts due to their longer history. Hence, Dutch government and society impose stricter controls on local businesses in comparison with the Russian state. In view of the above, investors may perceive Dutch businesses as less risky than Russian companies. This decreases the importance of CSR reporting for Dutch companies, as local stakeholders are sure in advance of the high sustainability of national organizations and, consequently, pay less attention to CSR disclosure. In contrast, Russian businesses have been historically characterized as non-transparent or poorly transparent ([13; 64; 65]). Therefore, the CSR reports of Russian companies are highly valued by stakeholders, as they provide additional information about businesses that is necessary for making solid investments and other decisions. Hence, the different perceptions of business risks by investors as well as different levels of company transparency can explain the lower impact of CSR on the performance of Dutch companies in comparison with Russian organizations.

The limitations of the study stem from different sources. This paper studies the CSR performance of Russian and Dutch companies only. As a result, our research findings may be only relatively applicable to organizations from other countries. In addition, the sample may not be sufficiently large to make proper statistical inferences. Furthermore, our model does not include the effect of time that is required to show returns from CSR strategies. Therefore, panel data analysis should be performed for a more precise study of CSR-CFP relations.

Finally, our results may be affected by the sub-optimal operationalization of the main variables. There are no unified measurement standards for the CSR concept. The chosen operationalization of the CSR concept as the CSRhub index might affect our results as well. The usage of other scores and/or content analysis of company CSR reports for quantifying the sustainability concept may provide different evidence of CSR-CFP relations. In addition, ROE as an accounting-based measurement of corporate performance might not completely reflect the expectations of company shareholders which are frequently affected by the level of long-term business sustainability. For some samples, the usage of market-based measures of business performance such as EPS (earnings per share) or the market-to-book ratio may provide evidence of stronger CSR-CFP relations than our model does. This might be due to the fact that companies with low CSR scores may be perceived as not being sustainable and so face a higher risk of being penalized for unethical behaviour or violation of environmental legislation. Since few investors would choose to have a stake in such businesses, the demand for their shares would fall. Hence, the total market value of unsustainable companies may be adversely affected by negative shareholder expectations. This effect is not captured by our model.

Conclusions

The disclosure of CSR practices is not mandatory in most countries around the world. For this reason, relatively few companies (mostly big businesses) prepare annual CSR reports. This leads to a lack of transparency about core business operations. As a result, investors may unintentionally provide funds to companies that engage in harmful or illegal practices.

The main goal of the present paper is to provide quantitative evidence about the effect of CSR practices on business performance and to encourage more organizations to issue CSR reports so as to become more transparent for stakeholders and society. Using a sample of Russian and Dutch companies, we performed regression analysis to estimate CSR-CFP relations. Our results demonstrate the existence of a small positive impact of sustainable activities on corporate performance measured by ROE. This can be partly explained by our choice of independent variable – ROE. The return on equity (ROE) may not fully reflect the expectations of investors about future business performance, which can be adversely affected by negative news about unethical or unsustainable corporate actions. The small impact of sustainable activities may also be due to their lack of recognition as an important element for good business performance. As a result, neither company management nor shareholders focus on the company's level of CSR engagement when making decisions, considering sustainability to be a secondary factor of business success. That may explain why our analysis suggests the low capacity of CSR to explain variation in ROE.

Our study also reveals a higher CSR impact on the performance of Russian companies in comparison with Dutch organizations. This phenomenon may be due to different levels of business risk and company transparency in these countries. When deciding about investing in Russian businesses, which is less transparent and riskier than Dutch firms, investors are more likely to require additional information about a company's core operations. This leads to the higher value of CSR reports for Russian organizations, and the information disclosed in these reports affects business performance more substantially than it does for Dutch companies. We conducted two robust tests which showed that our results have a reasonable level of validity.

This study did not examine the effect of CSR reporting over time, which can be quite considerable given that CSR strategies may not provide an immediate return. Therefore, a panel data analysis should also be performed to capture the effect of time. Furthermore, we did not analyse CSR impact by industry due to the lack of data. However, the growth of CSR reporting may result in more information becoming available in the near future. This will make it possible to perform a cross-industry analysis to determine business sectors that are especially sensitive to CSR activities. Finally, a study based on a different way of operationalizing CSR should be performed to support the credibility of our findings. For instance, the development of a CSR index that could be calculated for most companies using the available data would significantly contribute to the existing academic sources and help to bridge the gaps in the statistical analysis of CSR-CFP relations.

These research findings may be useful for both external and internal users. In particular, they should be important for companies from countries with emerging economies where CSR disclosure serves as an indicator of good company management and is more informative than the same information in developed European countries. Investors on financial markets could use CSR disclosure to help to evaluate the assets they select. Company management and other stakeholders should understand the nature and character of the CSR-CFP link when assessing expected returns from investments in CSR practices. Our evidence of a positive correlation between CSR and CFP may encourage more companies to disclose information about their social practices and, consequently, make their operations more transparent. Finally, our study contributes to the existing literature by proposing an approach to CSR operationalization that can be used for further statistical and econometrical modelling in CSR research.

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