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## Determinants and consequences of CSR disclosure: normative and empirical evidence

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*"Corporate social responsibility is a hard-edged business decision. Not because it is nice to do or because people are forcing us to do it […], but because it is good for our business. […] More and more people are looking at companies and ask themselves if this is an organisation whose values they share. This is a hard-edged business issue.*

Niall FitzGerald, Former CEO, Unilever

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## List of abbreviations

| | |
|---|---|
| a.a.O. | Am angegebenen Ort |
| Abs. | Absatz |
| Art. | Artikel |
| Bst. | Buchstabe |
| BV | Bundesverfassung |
| bzw. | Beziehungsweise |
| CC | Corporate Citizenship |
| ChemRVV | Chemikalien-Risikoreduktions-Verordnung |
| CO2 | Kohlenstoffdioxid |
| Coef. | Coefficient |
| COVID-19 | Corona virus disease-19 |
| CRED | Centre for Research on the Epidemiology of Disasters, |
| CSR | Corporate social responsibility |
| CSR-RUG | CSR-Richtlinie-Umsetzungsgesetz |
| DAX | Deutscher Aktienindex |
| DB | Der Betrieb |
| d.h. | Das heißt |
| DRS | Deutsche Rechnungslegungs Standards |

| | |
|---|---|
| EDI | Eidgenössisches Departement des Innern |
| e.g. | Exempli gratia |
| EG | Europäische Gemeinschaft |
| EH-RL | Emissionshandelsrichtlinie |
| EMS | Environmental Management Systems |
| EPA | Environmental Protection Agency |
| ESG | Environmental, social, and governance |
| et al. | Et alia/ et alii/ et aliae |
| etc. | Et cetera |
| EU | Europäische Union |
| EU ETS | EU Emissions Trading System |
| e.V. | Eingetragener Verein |
| ff. | Folgende [Seiten] |
| GRI | Global Reporting Initiative |
| H | Hypothesis |
| HCFC | Hydrochlorofluorocarbons |
| HGB | Handelsgesetzbuch |
| IAS | International Accounting Standards |
| IASB | International Accounting Standards Board |

| | |
|---|---|
| i.d.R. | In der Regel |
| IDW | Institut der Wirtschaftsprüfer in Deutschland e.V. |
| i.e. | Id est |
| IFRS | International Financial Reporting Standards |
| IIRC | International Integrated Reporting Council |
| INR | Indian rupees |
| IPO | Initial public offering |
| ISO | International Organization for Standardization |
| i.S.v. | Im Sinne von |
| i.V.m. | In Verbindung mit |
| JEL classification | Journal of Economic Literature classification |
| KoR | Zeitschrift für internationale und kapitalmarktorientierte Rechnungslegung |
| LIV | Verordnung des EDI betreffend die Information über Lebensmittel |
| Ln | Natural logarithm |
| LwG | Landwirtschaftsgesetz |
| M&A | Mergers & Acquisitions |
| MDAX | Mid-Cap-DAX |
| MNC | Multi-national corporations |

| | |
|---|---|
| NCCS | National Centre for Climate Services |
| NGO | Non Governmental Organization |
| No. | Number |
| NPGEO | Nationale Plattform für geographische Daten |
| Nr. | Nummer |
| OECD | Organisation for Economic Co-operation and Development |
| ORRChem | Chemical Risk Reduction Ordinance |
| PiR | Praxis der internationalen Rechnungslegung |
| PSM | Propensity score matching |
| S. | Seite |
| SARS-CoV-2 | severe acute respiratory syndrome coronavirus 2 |
| SDAX | Small-Cap-DAX |
| SEC | Securities and Exchange Commission |
| SIC | Standard Industrial Classification |
| Sog. | Sogennante |
| SR | Systematische Rechtssammlung |
| SSE | Shanghai Stock Exchange |
| SSRN | Social Science Research Network |
| SZSE | Shenzhen Stock Exchange |

| | |
|---|---|
| TAC | Transparency Action Cycle |
| u.a. | Unter anderem |
| UK | United Kingdom of Great Britain and Northern Ireland |
| UNFCCC | United Nations Framework Convention on Climate Change |
| U.S. | United States of America |
| Vgl. | Vergleiche |
| VOC | Volatile organic compounds |
| VOCV | Verordnung über die Lenkungsabgabe auf flüchtigen organischen Verbindungen |
| WPg | Die Wirtschaftsprüfung |
| ZIVIZ | Stifterverbands Zivilgesellschaft in Zahlen |
| z.B. | Zum Beispiel |

# 1. Introduction

## 1.1. Motivation and scope

Our current society faces major environmental, social, and humanitarian challenges such as climate change, human rights issues, and even a global pandemic. Those challenges affect economies, the environment, and individuals. The effects of those challenges on society, the environment, and the economy are not anymore long distant in the future but already noticeable, both nationally and internationally[1].

Aside from the pandemic, firms are held responsible for polluting the *environment*, worsening the *climate*, and facilitating *human rights* issues. Some of this decade's biggest corporate environmental scandals include the BP Deepwater Horizon oil spill in April 2010. It is estimated to be the largest marine oil spill in history, where between 2.5 and 4.2 million barrels of oil leaked into the ocean for 87 days before the leek was closed, forming an oil slick thousands of square miles wide with total costs over $ 65 billion as of 2019 (Beyer, Trannum, Bakke, Hodson, and Collier 2016). One of the biggest *human rights* catastrophes happened during the Foxconn suicides in 2010, were 14 confirmed suicides were committed at the plant of Foxconn, the largest Chinese consumer electronics firm, revealing poor labor conditions at the factory (Chan and Pun 2010). One main accusation by the public is most firms' focus on economic aspects rather than social or environmental aspects.

One increasingly recognized concept to incorporate social or environmental aspects and to address the above challenges is the concept of corporate social responsibility (CSR)[2]. With

[1] For a full overview on economic losses, poverty & disasters caused by climate related events see Wallemacq 2018. For an up-to-date overview on economic implications and statistics relating to the current corona pandemic in Germany see Statistisches Bundesamt (DeStatis) 2020

[2] There are many related terms commonly used in the literature such as “sustainability” or “environmental, social, and governance” (ESG) activities. The definitions of all these terms are close. Following Christensen, Hail, and Leuz 2019 and Huang and Watson 2015, CSR is the predominant term in the literature, which is why I use it.

the rise of multi-national corporations (MNCs) and increased globalization in the 1960s, public policy pressure led to a substantial CSR increase (American Accounting Association 1976). A range of internal and external stakeholders now widely encourage firms to behave responsibly in various respects, such as the (mis)use of resources, treatment of employees, community engagement, and profits distribution (Asif, Searcy, Zutshi, and Am Fisscher 2013).

The idea of businesses doing good for society has been in existence for several centuries across the globe. However, scientific writing on CSR evolved in the 1950s (Carroll 1999). CSR is attracting increasing attention in both the academic and practitioner literature. For example, based on a review of 40 years of strategic management research, Cummings and Daellenbach (2009) identified CSR as one of the five key areas of growing interest.

Although CSR has become a global trend and has attracted considerable attention from regulators, corporate executives, investors, and various other stakeholders in the past decades, there is no agreed-upon normative definition of CSR. There is a wide variety of studies exploring different definitions of CSR. One of the best known is Carroll's (1999) literature review on CSR definitions in academic literature, dating the first formal definition to Bowen and Johnson (1953): "*the obligations of business to pursue those policies, to make those decisions or to follow those lines of action which are desirable in terms of the objectives and values of our society.*" More recently, Dahlsrud (2008) reviewed 37 definitions of CSR[3] , and Sarkar and Searcy (2016) analyzed 110 definitions of CSR[4] to

[3] Dahlsrud (2008) reviewed several definitions of CSR in order to identify the areas in which CSR reached, finding five dimensions: Environmental, Social, Economic, Stakeholder, Voluntariness.

[4] Sarkar & Searcy 2016 reveal six of the recurring dimensions underpinning the concept. These dimensions are economic, social, ethical, stakeholders, sustainability and discretionary.

explore how the concept of CSR is defined and how it has evolved[5]. In summary, CSR is considered a "dynamic" concept that changed over time, through different cultures and societies, according to current debates in societies and respective media (Bassen, Jastram, and Meyer 2005) and through modifications in legal requirements (Logsdon and Yuthas 1997). CSR, therefore, has been described as being a "chameleon concept," revealing the "zeitgeist" of society (Gond and Moon 2011).

Nevertheless, a uniform understanding of CSR is needed to provide a basis for sound (empirical) analyses and build a solid theoretical framework. Whitehouse (2003) even argues that the absence of a coincident definition has led to conflicting academic research results. The scope of CSR changes with its definition. One of the most used definitions of CSR the European Commission (2001) defines CSR as "*[a] concept whereby firms integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a <u>voluntary</u> basis.*" In today's' world, this definition seems outdated. By including the phrase "voluntary basis," the Commission of the European Communities does not include mandatory practices in CSR activities. In 2013 the Indian government was the first nation worldwide to mandate CSR spending for firms that meet three certain criteria, i.e., a minimum level of equity, sales, and profit before tax, to spend on and report about their CSR activities (Manchiraju and Rojgopal 2017). Affected firms are required to spend at least 2 % of their average net profit over three years on CSR activities and outline their CSR policy and activities in the annual report as part of the Board's Report. Since then, researchers broadened their focus on CSR's to include and, in some cases, even focus on mandatory CSR actives.

[5] For more research on reviews of available definitions see e.g., Moir 2001, Joyner and Payne 2002, and Carter and Jennings 2004.

Acknowledging the tension between CSR being a "chameleon concept" by nature but needing a common understanding for research, I use the second very commonly used definition of CSR by the World Business Council for Sustainable Development (1999)[6]: CSR is "*the commitment of business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve their quality of life.*" With this wider definition of CSR, significant empirical analyses are possible without leaving out the very important aspect of mandatory CSR activities. Hence, this definition is better suited to incorporate all aspects of CSR: It is broad enough to capture the different regulatory approaches and not rely on voluntary action.

In accounting research and in line with other disciplines, the focus on CSR increased over the last decades. According to the literature review by Liu, Radhakrishnan, and Tsang (2018), between 1995 and 2015, 120 CSR/environmental studies were published in 13 renowned peer-reviewed accounting journals[7], including the Journal of Accounting and Economics, publishing their first article on CSR in 2014. The Journal of Accounting and Public Policy, Accounting Organizations, and Society and European Accounting Review are the top three publication outlets, with roughly 55 % of all publications. The number of CSR studies is increasing over time. Many of the studies use the empirical archival method (Liu et al. 2018). Most accounting research studies focus on whether CSR activity-related information is associated with investor decisions using experimental or archival empirical methods (Elliott, Jackson, Peecher, and White 2014; Holm and Rikhardsson 2008; Van der

[6] See World Business Council for Sustainable Development 1999.

[7] Journals with CSR studies: Accounting, Organizations and Society, Auditing: A Journal of Practice & Theory, Contemporary Accounting Research, The European Accounting Review, Journal of Accounting, Auditing and Finance, Journal of Accounting and Economics, Journal of Accounting and Public Policy, Journal of Accounting Research, Journal of Business Finance & Accounting, Journal of Management Accounting Research, Review of Accounting Studies, The Accounting Review, The International Journal of Accounting.

Laan Smith, Joyce, Adhikari, Tondkar, and Andrews 2010; Moser and Martin 2012). Other studies explore the effect on firm value[8].

In accounting research, the terms CSR and CSR disclosure are often interchangeably used. Besides the need for a common understanding, i.e., CSR's definition, there is a need to differentiate between CSR and CSR disclosure. CSR (also CSR activities) refers to the actions that firms pursue to act more socially and environmentally responsible, whereas scientists define CSR disclosure as "*the information that a firm discloses about its environmental impact and its relationship with its stakeholders by means of relevant communication channels*" (Gamerschlag, Möller, and Verbeeten 2011; Campbell 2004; Gray, Javad, Power, and Sinclair 2001).

Firms can disclose CSR related information in numerous communication channels. Former studies have often focused on annual reports (e.g., Cormier and Gordon 2001, Abbott and Monsen 1979, Tilling and Tilt 2010), specific CSR reports, often called sustainability reports (e.g., Tate, Ellram, and Kirchoff 2010, Venturelli and Rossella Leopizzi 2015, Boiral 2013), ad hoc reports (Theis 2020), quarterly reports (Tettenborn and Höltken 2020; Hachmeister and Sigel 2020b), websites (e.g., Jain, Keneley, and Thomson 2015, Jose and Lee 2007, Wanderley, Lucian, Farache, and de Sousa Filho, José Milton 2008), press releases (e.g., Holder-Webb, Cohen, Nath, and Wood 2009, Patten 2008, Aerts and Cormier 2009), social media accounts (e.g., She and Michelon (2019), Manetti and Bellucci 2016). This thesis also covers multiple outlets for social information. I first analyze annual reports, which are the most common communication channels, when the law requires firms to disclose CSR

[8] For a meta-analysis on studies researching the relationship between corporate social and financial performance see Margolis, Elfenbein, and Walsh 2009.

information (*mandatory CSR reporting*). Second, I analyze press releases, which are common to report on firms' CSR activities on a voluntary basis (*voluntary CSR reporting*).

Most previous research analyzing those commination channels (*voluntary* or *mandatory*) highlights CSR disclosure's positive or negative effects. There is a lack to highlight and provide an overview of the CSR activities itself in academic literature. The essay "Tue Gutes und sprich darüber – Kapitalmarktkommunikation von CSR Aktivitäten während der Corona-Krise" within this dissertation addresses this research gap. It provides insights on *voluntary* CSR disclosure within press releases on CSR activities pursued by firms during the global corona-virus pandemic. This paper also examines and finds positive stock market returns following the disclosure.

Regarding *voluntary CSR disclosure*, two drivers in environmentally and socially responsible behavior exist: On the one hand, CSR has become a part of good corporate governance of most firms and a deep-rooted part of their culture. Multiple scientific publications show that social considerations and CSR play a key role in corporate strategy (e.g., Baron 1995; Freeman 1984; McWilliams, Siegel, and Wright 2006; Wood 1991). Firms, therefore, participate in CSR for philanthropic reasons ("*philanthropic case*"). On the other hand, researchers increasingly debate sustainability and social responsibility to be drivers of innovation and competitive advantage (Altenburger 2013; Hansen, Grosse-Dunker, and Reichwald 2009; Schaltegger and Wagner 2011). Hence, firms participate in CSR due to economic benefits for themselves ("*business cas*e").

Firms do not decide on whether and which social actions they undertake purely based on philanthropy, but these decisions are often part of a corporate strategy with ultimate economic interests. McWilliams and Siegel (2001) state that firms manage CSR activities in the same way as any other corporate activities: based on cost-benefit considerations and maximizing corporate performance. Research shows that especially large firms have realized the benefits of social and environmental initiatives for long-term profitability (Epstein and Roy 2003) and act accordingly. It is important to notice that those reasons do not have to exclude each other. They can co-exist in today's CSR culture. Proponents of CSR affirm that it is possible to align corporate strategies with societal goals to generate benefits for the firm (Burke and Logsdon 1996; Drucker 1984; Epstein and Roy 2003; Griffin and Mahon 1997; Waddock and Graves 1997).

In line, empirical findings support both the *philanthropic* and *business* case. Researchers provide empirical evidence on the effects of CSR and CSR disclosure:

First, CSR and CSR disclosure seem to have a positive effect on ethical management. Ethical management includes corporate culture and managerial integrity, firms' accountability, responsibility, foresight, and management honesty, credibility, and trustworthiness (e.g., research by Porter and Kramer 2002; Bénabou and Tirole 2010; Wang and Tuttle 2014; Rodgers, Söderbom, and Guiral 2015).

Second, researchers heavily examined the effect of CSR and CSR disclosure on firms' financial performance with mixed findings. There is such a large body of literature on the impact of CSR and CSR disclosure on firms' performance that I will only highlight three meta-analyses. Orlitzky et al. (2003) perform a meta-analysis of 52 empirical studies. They find that corporate social performance is positively correlated with financial performance, and this relationship is bidirectional, simultaneous, and moderated by reputation. Margolis et al. (2009) perform a meta-analysis of 251 studies and find a significantly positive but economically small correlation between CSR performance and financial performance. Brooks and Oikonomou (2018) support those findings and find a positive, statistically significant association between CSR and financial performance at the firm level with low economic significance. They find that only a minority of empirical work finds a negative relationship between CSR and financial performance. However, these meta-studies also acknowledge that the reviewed empirical studies are simply incomparable with each other due to a series of observations concerning the diversity and variability of the characteristics used (Griffin and Mahon 1997). According to Brooks and Oikonomou (2018), these characteristics that hinder high-level conclusions are:

a. different definitions and formulations of both CSR and financial performance,
b. hypotheses built on theoretical frameworks that at times oppose one another,
c. datasets with different features concerning the CSR dimension of interest, the nature and scale of the financial performance measure used, the investigated asset class, the industry, country and timeframe in focus,
d. the application of diverse econometric methodologies.

Third, CSR and CSR disclosure seem to positively affect the firm's reputation and positive brand image (Pérez and López 2017; Öberseder, Schlegelmilch, and Murphy 2013; Axjonow, Ernstberger, and Pott 2018; Brickley, Smith Jr, and Zimmerman 2002; Jones 2005; Smith and Higgins 2000).

Forth, empirical studies show a positive impact of CSR disclosure on CSR performance (Clarkson, Li, Richardson, and Vasvari 2008).

Although the research found many positive effects and, therefore, reasons for firms to perform CSR activities and disclose related information voluntarily, regulators currently increase their effort to mandate CSR disclosure. Liu et al. (2018), based on the framework by Beyer, Cohen, Lys, and Walther (2010), point out that complete disclosure of CSR information within a voluntary setting is unlikely due to the following aspects[9]:

[9] For a full overview on empirical literature analyzing the benefits and drawbacks of mandatory CSR disclosure see also Christensen et al. 2019.

a. the presence of disclosure costs;

b. firms' lack of private information;

c. investors' differing interpretations of the disclosure of information;

d. managers potential lack of appropriate incentives to disclose;

e. the non-verifiability of disclosures; and

f. the absence of a commitment mechanism whereby managers can commit to disclosure whenever they have private information.

Due to those restrictions, regulators enact laws on mandatory CSR or, more commonly, mandatory CSR disclosure. Unlike voluntary CSR disclosure, mandatory CSR disclosure is CSR disclosure initiated and affected by legal requirements and/or recommendations of national authorities.[10] Those laws that promote CSR result from social changes, which have led corporations to take actions relating to the environment that is costly (e.g., Roussey 1992). These actions have accelerated the need for a measurement and reporting system dealing with environmental issues.

Across the world, CSR is regulated in different varieties. A comprehensive and up-to-date overview of non-financial or sustainability reporting provisions, including policy, regulation, guidance, frameworks, and standards worldwide, is provided by Van der Lugt, C. T., van de Wijs, P. P., and Petrovics (2020). In their recent overview of reporting instruments worldwide, they found 307 current and 23 forthcoming regulations by governments (243), financial market regulators (65), stock exchanges (17), or industry bodies/ business associations (5). According to previous empirical studies, CSR disclosure

[10] Regulation is used as an umbrella for mandatory (or voluntary applicable) laws, standards, codes, and guidelines. Regulators are national governments or their authorities (e.g., stock exchanges).

regulation has positive effects on the capital market (Harjoto, Jo, and Kim 2015) and positive real effects like a reduction in greenhouse gas emissions (Tomar 2019; Jouvenot and Krueger 2019; Grewal, Riedl, and Serafeim 2019; Gramlich and Huang 2017; Waddock and Graves 1997; Downar, Ernstberger, Reichelstein, Schwenen, and Zaklan 2020), a reduction in wastewater (Chen, Hung, and Wang 2018), or an increase in CSR performance (Clarkson et al. 2008; Clarkson 1995; Fiechter, Hitz, and Lehmann 2020). On the contrary, disclosure mandates are also associated with costs leading to lower operating margins (Downar et al., 2020).

Despite this growing body of empirical literature on mandatory CSR and its (positive) effects, previous research lacks to explain the mechanics behind those real effects of CSR. I address this research gap in the essay "Unternehmerische Berichterstattung zur Bekämpfung des Klimawandels – Wie kann Publizitätsregulierung klimafreundliches Handeln von Unternehmen forcieren?" within this dissertation. Using the "Transparency Action Cycle," which originates from Fung, Graham, and Weil (2007), this paper highlights how disclosure regulation can yield socially and environmentally friendly behavior by firms.

Also, little is known about how CSR disclosure mandates influence CSR disclosure itself. In essence, we do not know whether disclosure mandates increase disclosure levels beyond a voluntary state. The essay "The Impact of Disclosure Regulation and Peer Behavior on Firms' CSR-Disclosure - Evidence from India" examines this influence of disclosure regulation on disclosure levels also provides evidence on corresponding and peer behavior after the disclosure mandate.

## 1.2. Essays on CSR disclosure: motivation, methods, and main findings

This dissertation is a cumulative work consisting of three essays that approach CSR and CSR disclosure from three different perspectives; *first*, the effect of mandatory CSR disclosure on actual disclosure levels and resulting peer effects; s*econd*, voluntary disclosure on CSR activities in press releases and corresponding market reactions during a pandemic, and *third*, the mechanics behind real effects of CSR disclosure regulation. This section provides a summary of each of the individual papers. Moreover, co-authors are named, and publication details are given.

In detail, the first essay, “The Impact of Disclosure Regulation and Peer Behavior on Firms’ CSR-Disclosure - Evidence from India,” examines the influence of disclosure regulation and peer behavior on a CSR disclosure mandate’s first-time application. Recently multiple countries, including India, have enacted laws to mandate CSR disclosure. According to previous research, those regulations' effects manifest themselves in both positive and negative ways. For a detailed analysis of research on the real effects of CSR disclosure, see chapter 1.3.3.

Even though there is research on outcomes driven by CSR disclosure mandates, little is known about two additional effects: First, how CSR disclosure regulation influences CSR disclosure itself and the drivers of those effects; second, whether peer effects in CSR disclosure exist following the respective mandate. The second aspect is especially interesting, as a recent article in Management Science was published stating that, despite the vast literature on peer effects in various corporate activities, it is not only an important but largely unexplored aspect of CSR (Cao, Liang, and Zhan 2019).

The first essay uses the Indian Companies Act 2013 (following: the Act) to gain insights on the consequences of CSR disclosure mandates on CSR disclosure as well as on and peer effects in CSR disclosure. The Act mandates firms that meet certain criteria, i.e., a minimum level of equity, sales, and profit before tax, to spend on and report about their CSR activities (Manchiraju and Rojgopal 2017). Affected firms must outline their CSR policy and activities and details on CSR spending during the fiscal year.

To isolate the impact of disclosure regulation and peer group disclosure, I use a difference-in-differences regression approach exploiting the implementation of the Act. A difference-in-differences method is a quasi-experimental approach that compares the changes in outcomes over time between a population enrolled in a program (treatment group) and a population without such enrollment (comparison group). I use a propensity score-matched (PSM) sample of firms that are affected by the Act (treatment group) and firms not affected by the Act (control group) over the period 2013 to 2017. PSM is a statistical matching technique. It attempts to estimate the effect of a treatment, policy, or other intervention by accounting for the covariates that predict receiving the treatment. PSM, therefore, reduces the bias due to confounding variables that could be found in an estimate of the treatment effect obtained from simply comparing outcomes between treatment on control group observations (Rosenbaum and Rubin 1983).

To effectively measure changes in disclosure, I use automated textual analysis with different CSR disclosure measures. The automatic textual analysis enables analysis of a large set of documents (Richards, Zellweger, and Gond 2017), disentangle different CSR topics (Pencle and Mălăescu 2016), and ensure replicability (Duriau, Reger, and Pfarrer 2016). Following Pencle and Mălăescu (2016), I measure CSR disclosure as the number of words in a firms' annual report related to four categories: employee, environmental, human rights, and social activities[11]. As a measure of a firm's behavior relative to its peers' behavior, I use abnormal non-financial disclosure.

[11] For my main tests, I use the overall CSR disclosure. For additional tests, I examine the different CSR subtopics and find inferentially unchanged results.

*Finding 1*: I provide evidence that the CSR disclosure mandate does not lead to an increase in CSR disclosure. The number of CSR related words remain statistically unchanged following the implementation of the Act.

*Finding 2*: Regarding the influence of peer disclosure behavior, I find a significant moderating effect. Supporting the notion that peer-group disclosure influences a firm's own disclosure decision, I find that firms with a low level of ex-ante CSR disclosure (relative to their peers) even significantly decrease their CSR disclosure following the Act. These results indicate that a mandatory disclosure might undermine prior voluntary disclosure, leading to an overall reduction of CSR disclosure.

This essay contributes to prior literature on mandatory CSR disclosure in two ways. First, I provide insights into the effects of CSR disclosure regulation, i.e., the interplay between voluntary and mandatory CSR disclosure. In contrast to prior literature on mandatory *financial* disclosure, which comes to the conclusion that mandating disclosure is helpful to improve comparability and monitor managerial decision making (Ioannou and Serafeim 2017) (Cascino and Gassen 2015), I show that mandatory *non-financial* disclosure may lead to lower disclosure levels compared to prior voluntary disclosure and, thus, even reduced comparability across firms.

Second, I contribute to the literature on peer disclosure effects. As no prior studies focus on CSR disclosure's peer effects, this thesis provides new insights on how peer behavior influences firms' non-financial disclosing decisions negatively. This finding is particularly relevant as peer effects "play an important role in the economic justification of disclosure and reporting mandates" (Leuz and Wysocki 2016).

The second essay on CSR disclosure "Tue Gutes und sprich darüber – Kapitalmarktkommunikation von CSR Aktivitäten während der Corona Pandemie" (Do good and talk about it - capital market communication of CSR activities during the Corona pandemic) researches social activities by German DAX, MDAX, and SDAX firms during the Corona pandemic in 2020.

Especially in times of crisis, a society depends on the cohesion and commitment of all. This applies not only to the population but also to firms. CSR and the obligation of firms to contribute to sustainable economic development by working with their employees, the local community, and society in general to improve their quality of life has become an integral part of corporate activity and is particularly relevant in times of crisis. While the economic consequences caused by COVID-19 have determined the capital market communication of German firms since the beginning of 2020, CSR activities that have continuously been carried out have been less well covered in media reporting or scientific research.

So far, there is no (empirical) analysis of CSR activities in times of crisis in scientific publications. The spread of the Coronavirus and the associated economic consequences mainly fall in the calendar year 2020, which is why the annual and consolidated financial statements as of December 31st, 2019, were only affected to a very limited extent. According to the German Commercial Code (*Handelsgesetzbuch* (HGB)), the outbreak of the pandemic is a value-determining event which, in accordance with the reporting date principle (Section 252 (1) No. 3 HGB), did not have to be taken into account in the financial statements as of December 31st, 2019. This also applies in accordance with International Accounting Standards (IAS, see IAS 10.3(b) in conjunction with IAS 10.10) for financial statements according to International Financial Reporting Standards (IFRS). The same time-limiting factor applies to mandatory CSR disclosure. The CSR Directive Implementation Act (CSR-Richtlinien-Umsetzungsgesetz, CSR-RUG) defines that large firms[12] shall

[12] Listed companies (§ 289b (1) HGB), limited liability partnerships (haftungsbeschränkte Personenhandelsgesellschaften) and cooperatives are obliged to present non-financial matters in the annual report, provided that they (1) are classified as large within the meaning of § 267 (3) sentence 1 HGB and (2)

disclose information on non-financial aspects[13] with their annual report. Consequently, extensive reporting with information on quantitative effects as well as information on firms' actions can so far only be expected during the course of the year and thus on a voluntary basis (e.g., press releases).

Previous research provides insights on capital market communications regarding the coronavirus (not related CSR activities). On the one hand, Hachmeister and Sigel (2020a) and Tiedemann and Ratzinger-Sakel (2020) examine annual reports under the corona aspect: Hachmeister and Sigel (2020a) analyze annual reports of DAX firms and show that 15 of 21 (71.4 %) firms mention the coronavirus in their annual reports as of December 31st, 2019. Tiedemann and Ratzinger-Sakel (2020) analyze DAX, MDAX, and SDAX firms and show that 81.20 % of all firms examined do address the coronavirus in their annual report. The reporting is, therefore, not limited to large firms. On the contrary, it is even shown that MDAX and SDAX firms report on the coronavirus more often than DAX firms. Additionally, SDAX firms report the most extensive on coronavirus. A temporal trend in reporting is also shown: Corresponding to the worsening of the corona pandemic, the reporting in later published annual reports is more extensive. However, few other studies focus on corona-related reporting during the course of the year in quarterly reports/quarterly notifications as well as ad hoc announcements: Tettenborn and Höltken (2020) address the disclosure requirements currently applicable to financial reporting during the year, with special attention to the coronavirus, and also analyze the practical implementation in the

are capital market oriented within the meaning of § 264d HGB and (3) employ more than 500 employees on average over the year. The same applies to banks (Section 340a HGB) and insurance companies (Section 341a HGB).

[13] Firms shall at least report on environmental, employee and social concerns, respect for human rights and the fight against corruption and bribery (§ 289c HGB).

context of published quarterly reports, for the first quarter of 2020, of German DAX, MDAX, and SDAX firms.

With regard to the corona pandemic, the authors demonstrate that the virus is discussed in the context of CSR activities in almost a third of the firms studied. Still, there is no differentiated analysis of the individual CSR activities. Hachmeister and Sigel (2020b) also analyze quarterly reports of DAX firms with regard to coronavirus. It is shown that the coronavirus is reported on, especially in the context of changes in demand and changes in forecasts. According to their paper, some firms also report on their social commitment during the pandemic. Again, there is no detailed analysis of CSR activities. In contrast to the studies mentioned above, Theis (2020) analyze ad hoc reports relating to the corona pandemic and the corresponding capital market reactions. Theis (2020) finds significant positive stock market returns. Once more, there is no mentioning of analyzing disclosed CSR activities.

Due to the importance and relevance of this topic and the lack of research on it, this article analyzes the reporting on CSR activities in press releases of German DAX, MDAX, and SDAX firms empirically. Further, this essay covers the capital market reactions associated with the disclosed CSR activities.

*Finding 1*: It shows that more than 42.07 % of the firms have taken (one or more) explicit measures to mitigate the pandemic and reported accordingly in press releases. Especially DAX firms are increasingly active for the benefit of society. The measures range from monetary donations and donations in kind to own initiatives with national or international relevance. In terms of time, the frequency of activities coincides with the development of case numbers in Germany, i.e., the majority of activities fall into the lockdown phase in March and April 2020 and decrease again after the lockdown in summer 2020.

*Finding 2:* In addition, it is shown that this commitment is evaluated positively by the capital market, but primarily for firms that were philanthropically active in the crisis early on. No significant capital market reactions can be observed for later activities.

This essay contributes to prior literature on CSR during a pandemic in at least two ways. First, it provides unique insights into the CSR activities of firms during the pandemic, which has not been shown previously. Second, this essay supports previous empirical research on capital market reactions following the disclosure of CSR on coronavirus related matters.

The third essay on CSR disclosure, "Unternehmerische Berichterstattung Zur Bekämpfung des Klimawandels" (Corporate Reporting to combat Climate Change), is published in a Swiss accounting journal and highlights the mechanics on how more stringent regulations on environmental reporting, within the scope of capital market communication, support the fight against climate change. These mechanics are unraveled using the Transparency Action Cycle[14] and refer to Swiss regulations as an example for illustration.

To fight climate change, many countries, including Switzerland, signed the Paris Agreement in 2016 within the United Nations Framework Convention on Climate Change (UNFCCC). Under the Paris Agreement on Climate Change, Switzerland has committed to halving its greenhouse gas emissions by 2030 compared with 1990 levels with the core aim to keep a global temperature rise this century below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. In a second step, the Federal Council decided to set an even more ambitious target regarding greenhouse gas emissions and to reduce its net carbon emissions to zero by 2050.

To reduce greenhouse gas emissions of firms, regulators traditionally use the following four tools: *First*, environmental regulations, i.e., legal requirements or prohibitions with

[14] See Fung, Graham, and Weil 2007; Hombach and Sellhorn 2019.

environmental effects, e.g., Ordinance on the Reduction of Risks relating to the Use of Certain Particularly Dangerous Substances, Preparations and Articles [Chemical Risk Reduction Ordinance, ORRChem], *second*, subsidies, i.e., financial incentives to promote environmental activities, e.g., direct payments to agricultural producers which promote biodiversity,[Landwirtschaftsgesetz, Art. 104 Abs. 1 Bst. b BV [8]; Art. 73 LwG], *third*, emissions trading schemes, i.e., allocation and trading of emission certificates to limit emissions and create financial incentives to reduce emissions [Richtlinie 2003/87/ EG des Europäischen Parlaments und des Rates vom 13. Oktober 2003 über ein System für den Handel mit Treibhausgasemissionszertifikaten in der Gemeinschaft und zur Änderung der Richtlinie 96/61/EG des Rates, Emissionshandelsrichtlinie, EH-RL 2003/87/EG], and *forth*, taxes, i.e., additional penalties for undesirable emissions/substances, e.g., Incentive fee on volatile organic compounds (VOC) [Verordnung über die Lenkungsabgabe auf flüchtigen organischen Verbindungen vom 12. November 1997 (VOCV, SR 814.018)]. Besides these four tools, regulators can mandate corporate environmental reporting to counteract climate change.

Previous empirical research indicates the effectiveness of environmental disclosure regulation for desired, climate-friendly behavior. Downar et al. (2020) analyze the effect of the United Kingdom (UK) regulation on the disclosure of direct and indirect greenhouse gas emissions. Following the regulation, greenhouse gas emissions are to be reported as part of the annual report for listed firms. Based on data from the EU ETS, they demonstrate that direct greenhouse gas emissions decrease statistically significant by 18 % within three years following the introduction of regulation. These results are supported by Jouvenot and Krueger (2019) and Tomar (2019). Jouvenot and Krueger (2019) also analyze mandatory disclosure of greenhouse gas emissions for firms in the United Kingdom (UK) and also show a statistically significant decrease in emissions. In contrast, Tomar (2019) investigates the consequences of the U.S. Environmental Protection Agency's Greenhouse Gas Reporting Program. According to this program, certain U.S.-American firms are required to report on greenhouse gas emissions. Tomar (2019) documents a statistically significant decrease in greenhouse gas emissions as a result of mandatory disclosure. Chen et al. (2018) analyzed a more general reporting obligation on CSR activities for certain listed firms in China and the consequences for industrial wastewater volumes and sulfur oxide emissions. Chen et al. (2018) find a decrease in the amount of wastewater and emissions of the firms concerned. One last important study to mention is by Fiechter et al. (2020). They research the anticipatory effect of mandatory environmental disclosure relating to the announcement of the introduction of the EU Directive 2014/95/EU on reporting on CSR activities. They find that the announcement of the regulation itself already had a behavioral impact on public interest firms.

Although previous literature highlights a positive correlation between environmental disclosure or CSR disclosure mandates and firms' behavior regarding environmental-related behavior, there is a lack of explanation on *why* this effect can be observed. The third essay within this dissertation provides a framework to understand the mechanics behind this causality. Theoretical underlining is the so-called *Transparency Action Cycle* (TAC), which is developed by Fung et al. (2007) and is further specified by Hombach and Sellhorn (2019)[15]. The TAC establishes a link between disclosure regulation and the behavior of firms affected by disclosure regulation. It consists of six consecutive steps and is based on the assumption that firms' disclosure influences the behavior of recipients (e.g., investors, customers, employees, or NGOs). The starting point for the TAC is the introduction of an additional mandatory reporting requirement or disclosure regulation, e.g., the requirement

[15] While Fung et al. defined the TAC to explain generic causalities in behavior, Hombach and Sellhorn apply it to a more specific business context. In the second essay, I apply this broad concept to environmental and CSR disclosure.

to disclose information on greenhouse gas emissions (step 1). It is essential for the effectiveness of the TAC that a publicity obligation is precisely formulated and enforced so that firms disclose additional and comparable information (step 2). Respective stakeholders of the disclosing firm notice and process new information (step 3) and act accordingly (step 4). Actions include purchasing or not purchasing firms goods by customers, investing or divesting by investors, etc. Previous studies show that the social preferences of stakeholders matter not only to customers but also to investors when making decisions.[16] This is due to the fact that ecological behavior is often attributed to a positive benefit even if there is no direct financial added value is connected with it. Accordingly, negative capital market effects are observed when business decisions are financially positive but proven to be harmful to the environment.[17] However, an improved level of information does not automatically imply a change in the behavior of the recipients. This presupposes that the information provided is relevant to decision-making.[18] A behavioral change on the firm's side results from the response to the (anticipated) change in stakeholders' behavior (step 5). As a consequence, business decisions are changed to avoid possible or further negative consequences (step 6).

This essay contributes to prior literature on environmental reporting in at least two ways. First, this research supports empirical research results with further explanation of observed outcomes. It provides a theoretical basis for science to build on. Second, this essay supports regulators in their decision making process on environmental disclosures with a broader understanding and reasoning.

[16] See Martin and Moser 2016.

[17] See Grewal, Riedl, and Serafeim 2019; Hombach and Sellhorn 2018.

[18] See Böhmer, Voß, and Glachtsiou 2019.

## 1.3. Structure of the dissertation

This section provides an overview of the structure of the dissertation at hand. Chapter 2 presents the essay "The Impact of Disclosure Regulation and Peer Behavior on Firms' CSR-Disclosure - Evidence from India," including an introduction, the institutional background, a literature review, hypothesis development, data and research design, main results, additional analyses as well as a conclusion. Chapter 3 deals with the essay "Tue Gutes und sprich darüber – Kapitalmarktkommunikation von CSR Aktivitäten während der Corona Pandemie" (Do good and talk about it - capital market communication of CSR activities during the Corona pandemic) and includes an introduction, the current regulatory disclosure obligations, literature review, data and methodology, main results, and a conclusion. Chapter 4 covers the third essay on CSR disclosure, "Unternehmerische Berichterstattung Zur Bekämpfung des Klimawandels" (Corporate Reporting to combat Climate Change), including an introduction, traditional measures to steer environmentally desired corporate behavior, mandatory corporate reporting as a steering tool, as well as a discussion and conclusion. Chapter 5 concludes this dissertation and provides an outlook for future research avenues.

## 2. The impact of disclosure regulation and peer behavior on firms' CSR-disclosure - Evidence from India

**Abstract:** This study investigates how peer behavior affects firms' reactions to a corporate social responsibility (CSR) disclosure mandate. While prior literature shows that increased peer disclosure reduces financial disclosure after a mandate, we examine this effect for a CSR disclosure mandate. I exploit the setting of India's 2013 Companies Act, which enacted a CSR disclosure mandate that also requires mandatory CSR spending of a certain amount. Using a difference-in-differences design for a propensity matched sample of firms, I find that the mandate itself does not increase the disclosure of affected firms. I argue that this is due to a lack of enforcement. Instead, supporting the notion of information spillover, I find indications of a decrease in disclosure for firms with ex-ante low CRS disclosure compared to peers. Overall, my results support the notion that disclosure regulation without proper enforcement may reduce overall disclosure due to potential negative peer effects.

**JEL classifications:** M14, M41, M48, G38

**Keywords:** Non-financial accounting, CSR disclosure, externalities, mandatory disclosure, textual analysis, India

**Publication details:** Working Paper. Earlier versions of this paper were presented at the World Finance Conference, 2020 and at the Accounting Research Seminar Raithenhaslach, 2020

**Data availability:** Data are available from commercial databases and public sources identified in the paper.

## 2.1. Introduction

This paper examines the influence of disclosure regulation and peer behavior on a CSR disclosure mandate's first-time application. Over the last decade, several countries or regions such as China, Denmark, the UK, or Sweden, as well as the European Union, have enacted laws to mandate different forms of CSR disclosure. CSR disclosure mandates are shown to have positive effects on the capital market (Harjoto and Jo 2015) and positive real effects like a reduction in greenhouse gas emissions (Tomar 2019; Downar et al. 2020), a reduction in wastewater (Chen et al. 2018), or an increase in CSR performance (Fiechter et al. 2020). However, disclosure mandates are also associated with costs leading to lower operating margins (Downar et al. 2020). However, little is known about how CSR disclosure mandates influence CSR disclosure and what the drivers of these effects are.

To provide insights on the determinants of changes in CSR disclosure, I use an Indian setting. In 2013, the Indian government enacted the Indian Companies Act 2013 (following: the Act). The Act mandates firms that meet certain criteria, i.e., a minimum level of equity, sales, and profit before tax, to spend on and report about their CSR activities (Manchiraju and Rojgopal 2017). Affected firms must outline their CSR policy and activities as well as details on CSR spending during the fiscal year.

In December 2019, an article in Management Science was published stating that, despite the vast literature on peer effects in various corporate activities, it is an important yet largely unexplored aspect of CSR (Cao et al. 2019). Due to the absence of any research on CSR disclosure's peer effects, I base my research assumptions on two related streams of literature: peer behavior in *financial disclosure* and peer behavior in *CSR activities*. Between and even within those streams of research results on peers' influence on other firms' behavior is bifold. Some find a *positive* correlation (Ross 1977; Merton 1987; Lin, Mao, and Wang 2018; Dye and Sridhar 1995; Cao et al. 2019), while others provide insights supporting a *negative* correlation (Breuer, Hombach, and Müller 2020; Foster 1981). In this study, I examine the role of peer effects in CSR disclosure.

To isolate the impact of disclosure regulation and peer group disclosure, I use a difference-in-differences approach exploiting the implementation of the Act. I use a matched sample of Indian firms consisting of firms affected by the Act (treatment group) and firms not affected by the Act (control group). To gauge changes in disclosure, I use an automated textual analysis. I measure the number of CSR related words using a special-purpose dictionary developed by Pencle and Mălăescu (2016). As a measure of a firm's behavior relative to its' peers behavior, I use abnormal non-financial disclosure. I base the definition of "peers" on two alternative measures: first, I use firms operating in the same industry as "industry peers." Second, as an alternative measure, I use firms with their headquarter located in the same city as "location peers."

I find that the CSR disclosure mandate does not lead to an increase in CSR disclosure. Using different CSR disclosure measures, I only find insignificant changes in CSR disclosure for treatment group firms following the Act. An important reason for this finding is the low level of enforcement of the CSR disclosure mandate. This result is in line with prior findings on financial disclosure (e.g., Christensen, Hail, and Leuz 2013) that state that new regulation's benefits do not materialize without proper enforcement. Regarding the influence of peer disclosure behavior, I find a significant moderating effect. In detail, I find that firms with a low level of pre-treatment CSR (relative to their peers) disclosure even significantly decrease their CSR disclosure following the Act. This change is economically significant, amounting to a 32.43 % decrease in CSR disclosure (relative to unaffected firms). This result supports the notion of a negative correlation between a firm's disclosure and peer disclosure for non-financials, in line with (Foster 1981), who previously highlights this relationship for financial disclosure. In particular, my results indicate that a disclosure mandate might even curtail prior voluntary disclosure leading to an overall reduction in CSR disclosure level. Overall, I show that under certain circumstances, a mandate maybe even worse than a voluntary setting.

In additional tests, I test the robustness of my findings. I use two alternative measures of “industry peer” effects that focus on variation within industries and variation across industries.

To test variation within industries, I measure if a firm uses more CSR words during the ex-ante period than the industry average/median. To test variation across industries, I measure if an industry discloses more CSR words per year than the median across all industries. Using these alternative specifications, I find supporting evidence that the level of peer disclosure moderates the change in CSR disclosure following the Act negatively. In other words, firms with a low level of pre-treatment CSR disclosure (relative to their peers) significantly decrease their CSR disclosure following the Act. I also examine whether the results vary by CSR topics. I use separate variables to examine changes in environmental, employee, social, and human rights disclosure. My results indicate that CSR disclosure changes are not clustered for certain topics but are homogenous across all four CSR sub-topics.

Further, I test alternative sample compositions to rule out a potential influence of the sample composition and the matched sample approach. I use all available observations prior to matching to account for a matching’s limited generalizability alongside the matched sample approach. Further, I test alternative matching approaches, i.e., firm-year matching. Finally, I replicate my main test using financial sector firms only, which are excluded from the main sample due to a confounding regulation. Overall, all tests lead to virtually unchanged results, i.e., no direct effect of the Act and a negative moderating effect because of peer disclosure behavior.

This study contributes to prior literature in at least two ways. First, I provide insights into the interplay between voluntary (not required by law) and mandatory disclosure in the context of non-financial disclosure. While prior literature points out that mandatory financial disclosure is helpful to improve comparability and monitor managerial decision making (Ioannou and Serafeim 2017; Cascino and Gassen 2015), I show that a non-financial disclosure mandate may lead to lower disclosure levels compared to prior voluntary disclosure and, thus, even reduced comparability across firms.

Second, I contribute to the literature on peer disclosure effects. While prior studies focus on the influence of peer disclosure on a firm's financial disclosure[19] (Breuer et al. 2020; Admati and Pfleiderer 2000; Dye 1990), I provide insights that peer behavior influences firms' non-financial disclosing decisions. This finding is particularly relevant as peer effects "play an important role in the economic justification of disclosure and reporting mandates" (Leuz and Wysocki 2016).

The remainder of the paper is organized as follows. Section 2 presents the regulatory background. Section 3 reviews prior literature and develops hypotheses. Section 4 explains the data and research design. Section 5 presents descriptive and multivariate results. Section 6 concludes.

## 2.2. Institutional background

To examine the influence of a CSR disclosure mandate on actual CSR disclosure, I use an Indian setting. I exploit the passage of section 135 (Corporate Social Responsibility Rules) and Schedule VII of the 2013 Indian Companies Act. This CSR mandate was enacted on August 29, 2013, and went into force on April 1, 2014. Section 135 specifies that only firms

[19] For a detailed analysis of existing literature on peer effects in financial disclosure and research gaps see Leuz and Wysocki 2016.

that meet one of the following criteria must apply the Act: (1) net worth[20] at least Rupees (INR) 5,000 million ($83 million), sales at least INR 10,000 million ($167 million), or (3) net profit before tax of INR 50 million ($0.83 million). The Act mandates that affected firms are required to spend at least 2 % of their average net profit over three years on CSR activities and report about their CSR activities in the annual report as part of the Board's Report. It was and still is the first regulation that mandates not only CSR disclosure but also CSR spending (Kansal, Joshi, and Batra 2014; Manchiraju and Rojgopal 2017).

Regarding CSR spending, the Act recommends activities like eradicating extreme hunger and poverty, promoting education, promoting gender equality, reducing child mortality combating malaria, ensuring environmental sustainability, or contributing to governmental funds. Regarding CSR disclosure, the Act prescribes a disclosure scheme comprising the following elements: (1) An outline of a firm's CSR policy and activities, (2) the composition of the CSR Committee, (3) average net profit of the firm for the last three fiscal years. (4) Prescribed CSR expenditure, and (5) details of CSR spending during the fiscal year.

The ratification of the Act in 2013 preceded a multi-year legislative process that started in 2009 (Manchiraju and Rojgopal 2017). The initial version of the Act did not reference CSR disclosure or CSR spending. Since 2011, a draft initially discussed a potential disclosure mandate.[21] Because the original draft was withdrawn at the end of 2011, firms could not anticipate an actual bill until 2012. Thus, I assume that a potential anticipation effect, i.e., an

[20] Net worth refers to shareholders' equity. Section 2 clause 57 of the Act defines net worth as the aggregate value of the paid-up share capital and all reserves created out of the profits and securities premium account, after deducting the aggregate value of the accumulated losses, deferred expenditure and miscellaneous expenditure not written off, as per the audited balance sheet, but does not include reserves created out of revaluation of assets, write-back of depreciation and amalgamation.

[21] A mandate for CSR spending was already included one year earlier.

adjustment of firms' CSR disclosure before the mandate, should not primarily drive my results.

Even though the Act requirements are strict and should lead to a substantial increase in CSR disclosure and spending, there is no substantial thread in case of non-compliance because of a comply-or-explain loophole i.e., a firm is not subject to liability if a firm explains such a failure in the annual report. Failure to explain is punishable by a fine between \$833 and \$41.667 (Manchiraju and Rojgopal 2017) and further penalties for involved directors.[22] However, the Indian government has initiated prosecution against only 199 firms (1.6 % of all affected firms) for non-compliance with section 135 of the Act (Press Information Bureau 2018). During the period 2016-2017, more than 5,000 firms did not fulfill the requirements, but the Indian government has sanctioned prosecution proceedings against less than 300 firms (The Economic Times 2018).

Additionally, Indian legal enforcement is rather weak. During my sample period 2013 to 2017, India does not rank among the top 50 countries worldwide measured by regulatory quality, the rule of law, and government effectiveness (Kaufmann and Kraay 2020). Subramaniam, Kansal, and Babu (2015) note that India faces challenges because of bureaucratic hurdles, insufficient human and knowledge resources, and limited stakeholder analysis, supporting this notion. Further, Armah et al. (2011) indicate that in a developing economy like India, legal and institutional frameworks tend to be weak, and regulation implementation is less strictly enforced.

Since the change of Section 135 (Corporate Social Responsibility Policy Rules) and Schedule VII of the Indian Companies Act 2013, firms that meet certain size criteria are

[22] Every officer shall be punishable with imprisonment for up to three years and/or fines. Section 450 and 451 of the Act specify additional fines for each day of non-compliance.

required to disclose an overview of firms' CSR policy, including an overview of projects or programs proposed to be undertaken. The regulation is suited to examine the influence of a CSR disclosure mandate on CSR disclosure. The Act mandates disclosure in the annual report, i.e., firms may provide additional information in a CSR report or any other source but must provide required disclosure in the annual report.

## 2.3. Prior literature and hypothesis development

### *2.3.1. The Indian Companies Act 2013*

Manchiraju und Rojgopal (2017) investigate market reactions during the legislative process of the Act. They find negative market reactions indicating shareholder value destruction. Kapoor and Dhamija (2017) find that firms spend INR 59,422 million, albeit INR 79,918 million was mandated based on firms' net profit. Actual spending compliance was even lower because some firms spend more than required.[23] Overall, 56.4 % of firms spend less on CSR than required. Actual CSR spending is often misused or redirected to a firm without actual support of a project (Dinesh Narayanan 2015). Taken together, the Indian experience regarding mandatory CSR spending is rather negative and, to some extent, even curbs voluntary CSR activities. While there are a few studies providing evidence on CSR spending implications of the Act, no study examines the actual change in CSR disclosure, which is mandated by the Act, too. Also, empirical evidence raises the question if CSR mandates are per se positive or might have negative effects on voluntary CSR.[24]

[23] In detail, 24 firms (6 %) did not spend anything on CSR, 96 firms (25.7 %) spend more than zero but less than 50 % of the mandated amount, 91 firms (24.3 %) spend more than 50 % but less than 100 % of the mandated amount, and 163 firms (43.6 %) spend more than the required amount.

[24] Just recently, the European Union enacted a directive to implement mandatory CSR for firms listed in EU members state. See Fiechter, Hitz, and Lehmann 2020.

### 2.3.2. *The overall impact of the Act on CSR disclosure*

One goal of the Act is to increase CSR disclosure. However, I argue that the Act may not change non-financial disclosure for the following reasons. First, a lack of enforcement and limited sanctions in non-compliance fosters managerial incentives to avoid disclosure because the expected directs are low. Also, the comply-or-explain exemption enables firms to avoid disclosure without risk of any sanction. Thus, if the management perceives disclosure as costly[25] or even harmful[26] to the firm, which is likely given the low compliance regarding CSR spending (Dharmapala and Khanna 2018), I expect to find no significant change in CSR disclosure following the Act. By contrast, if a firm expects disclosure to be beneficial, I expect to observe either an increase in disclosure following the Act, even absent any enforcement or no change in disclosure as this firm might have also provided voluntary CSR disclosure previous to the mandate. Following this, I state the following non-directional hypothesis:

**Hypothesis 1:** The passage of the Indian Companies Act 2013 is not associated with a change in non-financial disclosure.

### 2.3.3. *The influence of peer behavior on CSR disclosure after the Act*

A firm's disclosure (or the absence of disclosure) provides valuable information about the firm and provides information relevant for peer firms too and vice versa (e.g., Foster 1980; Durnev and Mangen 2009; Shroff, Verdi, and Yost 2017). If these findings transfer to non-financial reporting, a firm will take peer firms' CSR disclosure into account when making disclosure decisions, no matter if it follows the Act or not.

[25] E.g., via measuring and tracking statistics on environmental related figures; costs may include higher personnel costs and costs to technically measure carbon emissions or other figures of interest via the purchase of equipment.

[26] E.g., via disclosing worse figures than competitors.

Despite the vast literature on peer effects in various corporate activities, it is an important yet largely unexplored aspect for CSR disclosure (Cao et al. 2019). Little is known about whether CSR policies are at least partially attributable to the spillover effect it has on other firms and their underlying mechanisms if such CSR peer effects exist (Cao et al. 2019).

Due to the absence of any research on peer effects in non-financial (or even CSR) disclosure, I base my following assumptions on two related literature streams. First, I analyze and conclude from the literature regarding *peer behavior in financial disclosure*. Second, I review and consider the literature as mentioned above regarding *peer behavior in CSR activities*. The first stream of literature is missing the element of CSR; the second is focusing on actual CSR policies and activities rather than on its disclosure.

Related *financial disclosure* literature focuses on the interplay between disclosure of regulated firms and unregulated firms. Thereby, two lines of arguments exist; (1) crowding-out (indicating a *negative* correlation) and (2) competition for attention (indicating a *positive* correlation).

For the first argument (crowding-out), prior studies provide evidence that selective disclosure, i.e., disclosure that does not affect all firms, pushes disclosure of regulated firms beyond its voluntary level and fosters incentives of unregulated firms below its voluntary level. This crowding-out effect exists because the additional disclosure of regulated firms reduces the incremental benefit of unregulated firms' voluntary disclosure (Breuer et al. 2020). This *negative* correlation between a firm's disclosure and its peers' disclosure implies that peer disclosure may substitute for a firm's disclosure allowing for cross-firm learning (see also, e.g., Foster 1981). If a firm has limited incentives to provide disclosure due to low non-financial performance, cross-firm learning may foster additional disclosure avoidance incentives. Following the notion by Breuer et al. (2020), in equilibrium, this may even lead to a reduction of a firm's disclosure following a disclosure mandate. Following the Act, non-regulated firms could, therefore, reduce their CSR disclosure after the passing of Act. For the second argument (competition for attention), prior *financial disclosure* studies show that unregulated firms increase voluntary disclosure following a disclosure mandate because mandatory disclosure attracts attention toward the regulated firms (Ross 1977; Merton 1987; Lin et al. 2018).[27] Assuming this *positive* correlation between a firm's disclosure and its peers' disclosure, Dye and Sridhar (1995) show that disclosure by some firms provokes other firms to make a related disclosure, too.

The literature on *peer behavior in CSR activities* leads to a similar conclusion. Cao et al. (2019) find strong evidence for mimicking behavior amongst peers, i.e., adopting similar CSR practices among peer firms. Thus, following the Act, it is possible to expect a non-regulated firm to increase its voluntary CSR disclosure if peer firms increase CSR disclosure.

Due to the divergent results from related literature, I test the following non-directional hypothesis.

**Hypothesis 2**: Firms' ex-ante disclosure quantity has a moderating effect on a firm's disclosure following the Indian Companies Act 2013.

## 2.4. Data and research design

### *2.4.1. Measurement of CSR disclosure*

To measure the change in CSR disclosure following the Act, I use an automated textual analysis (Chan, Watson, and Woodliff 2014; Gamerschlag et al. 2011; Hooks and van Staden 2011; Deegan and Gordon 1996; Neu, Warsame, and Pedwell 1998; Hackston and Milne 1996). The automatic textual analysis enables analysis of a large set of documents (Richards

[27] In their study Dye and Sridhar (1995) focus on voluntary disclosure, however the underlying notions holds for mandatory disclosure too.

et al. 2017), disentangle different CSR topics (Pencle and Mălăescu 2016), and ensure replicability (Duriau et al. 2016).

Following Pencle and Mălăescu (2016), I define CSR disclosure as the number of words in a firms' annual report related to four categories: employee, environmental, human rights, and social activities.[28] Following (McKenny, Short, Ketchen Jr, Payne, and Moss 2018; Liu 2016; Myšková and Hájek 2018), I use the frequency with which firms use different words related to the four topics. To identify the different CSR topics, I use the dictionary compiled by Pencle and Mălăescu (2016). The dictionary comprises 1,528 words. 319 words relate to employee activities, 451 words relate to environmental activities, 297 words relate to human rights, and 361 words relate to social activities.[29]

For my empirical tests, I use two disclosure measures: (1) the natural logarithm of the number of words related to the four CSR activities [CSRD (LOG)] and (2) the percentage of CSR related words scaled by the total number of words in an annual report net of CSR related words [CSRD (%)]. For the first measure, I use a log transformation to account for the skewed word number distribution. In detail, the number of words is positively correlated with firm size. Thus, the absolute number of words might primarily pick-up size differences between firms[30]. The second measure allows me to examine the change in disclosure, controlling for firm growth. Because changes in prevailing economic circumstances, e.g., M&A activities, the opening of new factories or power plants, have an influence on firms' financial and non-financial disclosure, an increase in CSR words might be unrelated to the disclosure mandate. Using a ratio, I only observe an increase in CSR words' ratio to total

[28] For my main tests, I use the overall CSR disclosure. For additional tests, I examine the different CSR subtopics and find inferentially unchanged results.

[29] The dictionary was initially developed to analyze CSR content in prospectus of U.S. IPOs. The world list is based on prior CSR literature.

[30] In my final sample, the lowest number of words is 0, and the highest number of words is 12,134.

words net of CSR words if the change in CSR related words exceeds the change in total words net of CSR words.

*2.4.2. Sample*

The starting sample consists of all annual reports of listed Indian firms available on the Bombay Stock exchange website. Over the period 2012-2017, there are 7,014 available annual reports (1,910 unique firms).[31] Because the Act requires CSR information disclosure for all fiscal years as of 2015, I use a sample period of three years surrounding the entry into force year.

To derive the final sample, I exclude firms without financial data in Worldscope Datastream. This exclusion leads to a sample of 3, firm-year observations (1,027 unique firms). Next, I exclude firms without annual reports which are useable for textual analysis, i.e., incomplete or corrupted files and not machine-readable files. This leads to a sample of 3,026 firm-year observations (912 unique firms). Next, I exclude financial sector firms (SIC 6000-6999) because of a confounding regulation. Since 2008, the Reserve Bank of India has advised financial sector firms to focus on CSR activities. Even though the Reserve Bank of India does not mandate disclosure of CSR activities, the advice might outweigh any incremental effect of the Act.[32] This leads to a sample of 2,613 firm-years (780 unique firms). Next, I exclude observations without available data for estimating model (1), i.e., missing data for control variables. I end up with a sample of 2,198 observations from 706 unique firms with available data. Finally, I exclude firms without at least one observation before and after the Act. I require multiple observations per firm because the difference-in-differences design

[31] Because annual reports of unlisted firms are not available, I focus on listed firms only. Even though the Act applies to unlisted firms too. However, because unlisted firms are usually smaller than listed firms, this data limitation primarily affect the composition of the control group.

[32] In additional tests, I use all available firms, including financial sector firms, and I conduct using financial sector firms only. Overall, I find virtually unchanged results.

uses a firm as its control. Thus, observations without counterpart in the pre or post period may lead to biased coefficient estimates. This omission leads to a sample of 1,598 firm-year observations (309 unique firms).[33]

Because the Act primarily mandates larger firms to disclose CSR activities, treatment assignment is not random. To limit the influence of sample heterogeneity, I use a matched sample approach. In detail, I use a one-to-one propensity score matching without replacement. I match each firm affected by the Act (i.e., treatment group firms) to a firm not affected by the Act (i.e., control group firms). For each industry, using Fama and French 12-industry definition (Fama and French 2015), I match firms based on firm size, liquidity, leverage, and profitability using average values before the Act to avoid potential influence of the Act on my matching criteria (Downar, Ernstberger, and Link 2018). All variables are defined in Appendix Table 12. Besides, I follow (Cram, Karan, and Stuart 2009) and include all matching variables as additional control variables to control for imperfect matching. After matching, I end up with a final sample of 907 firm-year observations (87 treatment group and 87 control group firms). Table 1 presents the sample selection.

[33] I find virtually unchanged results, if I additionally exclude financially distressed firms, i.e., firms with negative common equity or negative sales.

**Table 1: Sample selection**

| | Exclusions | firm-year observations | Unique firms |
|---|---|---|---|
| **Starting sample**: All annual reports published on the Bombay Stock Exchange homepage for the period 2012-2017 | | 7,014 | 1910 |
| Exclusion of … | | | |
| firms not included in Worldscope/Datastream | 3,648 | 3,366 | 1,027 |
| firms without machine readable annual reports | 340 | 3,026 | 912 |
| financial sector firms | 413 | 2,613 | 780 |
| firms with missing variables for model (1) | 412 | 2,201 | 707 |
| firms without unique industry identifier | 3 | 2,198 | 706 |
| unbalanced firms | 600 | 1,598 | 309 |
| **Unmatched (full) sample** | | **1,598** | **309** |
| Exclusion of unmatched firms | 691 | 907 | 174 |
| **Final matched sample:** | | **907** | **174** |

This table describes the sample selection for estimating models (1) and (2) on the influence of a disclosure mandate and peer group disclosure on firms' CSR disclosure.

### *2.4.3. Main regression design*

To examine the influence of the Act on firms CSR disclosure in a weak accounting enforcement environment (H1), I estimate the following generalized difference-in-differences regression model:

$$CSR\_DISCLOSURE = \beta_0 + \beta 1 * (TREAT * POST) + \textit{Firm-level control variables} + \textit{fixed effects for firm and year} + \varepsilon \quad (1)$$

where all variables are defined in Appendix Table 12. *CSR_Disclosure* refers to either: (1) *CSRD (LOG)* or *CSRD (%)*. To measure the influence of a CSR disclosure mandate on treatment group firms' CSR disclosure, I use binary variables that indicate firms affected by disclosure mandate (*TREAT*) and the period following the implementation of the disclosure mandate (*POST*). I use firms affected by the Act as the treatment group and firms not affected by the Act as the control group. Because treatment assignment depends on three thresholds (net worth, turnover, and net profit), it may change over time. I assign firms to treatment and control groups based on 2015 values, i.e., the Act's entry-into-force year.[34] I set *POST* to one for all firm-years as of the entry-into-force date and zero otherwise.[35] The interaction term *TREAT * POST* is a difference-in-differences estimator indicating the incremental effect of the disclosure mandate on CSR disclosure.[36]

To control other firms' disclosure drivers, I include the following control variables based on prior literature. I include the natural logarithm of total assets (*TOT_ASSETS*) to control for firm size and, thus, firms' general disclosure behavior. On average larger firms are more visible and tend to disclose more information than smaller firms (Badertscher, Shroff, and White 2013; Dhaliwal, Radhakrishnan, Tsang, and Yang 2012; Atiase 1985; Axjonow et al. 2018). I control for profitability using return on assets (*ROA*). Prior literature (Badertscher et al. 2013; Axjonow et al. 2018) indicates that more profitable firms tend to invest more in CSR activities than less profitable firms. Also, managers of less profitable firms tend to withhold negative information (e.g., Bao, Kim, Mian, and Su 2019). Next, I include a variable indicating liquidity, defined as cash to assets ratio (*CTA*), because higher cash reserves indicate fewer financing constraints and wider options to invest and, thus, to disclose new information (Badertscher et al. 2013). Finally, I include firms' financial leverage (*LEVERAGE*), defined as debt to assets ratio, as an inverse proxy for financial constraints and, thus, the likelihood of new information because of a lack of new projects (Badertscher et al. 2013). To mitigate the influence of heterogeneity in CSR disclosure

[34] In case of missing values for 2015, I use 2016 or 2017 values. Using treatment assignment for each year, leads to similar results.

[35] To control for adoption effects, I replicate all tests excluding the year 2015. This leads to virtually unchanged results.

[36] Because I am using a generalized difference-in-differences design, I do not include *TREAT* and *POST* as additional base level variables. The effect of *TREAT* is captured by firm fixed effects and the effect of *POST* is captured by year fixed effects.

across firms and over time, I include firm and year fixed effects. Firm fixed effects capture any unobservable heterogeneity across firms, which is constant over time. Year fixed effects account for general trends in disclosure over time independent of any regulation (Gow, Ormazabal, and Taylor 2010). Finally, I cluster standard errors at the industry level and winsorize all continuous variables at the 1st and 99th percentile to mitigate the influence of outliers.

### *2.4.4. The moderating effect of peer disclosure*

To examine the moderating effect of peer disclosure on a firm's own CSR disclosure following the Act (H2), I estimate the following generalized difference-in-differences regression model (2):

$$CSR\_DISCLOSURE = \beta_0 + \beta_1 \cdot (TREAT * POST) + \beta_2 \cdot (TREAT * \{ABNORMAL\_SILENT, LOUD\_NEIGHBORS\}) + \beta_3 \cdot (POST * \{ABNORMAL\_SILENT, LOUD\_NEIGHBORS\}) + \beta_7 \cdot (TREAT * POST * \{ABNORMAL\_SILENT, LOUD\_NEIGHBORS\}) + \text{Firm level control variables} + \text{fixed effects for firms and year} + \varepsilon \,, \tag{2}$$

where all variables are defined in Appendix Table 12.

I use the same approach as for Hypothesis 1 but include additional interaction terms to examine the influence of peer disclosure. *ABNORMAL_SILENT* is a binary variable indicating abnormal low CSR disclosure before treatment relative to peer firms. For each industry, using the Fama and French 12 industry definition, I regress the number of CSR words on the total number of words in an annual report net of CSR words and use the residuals of the regression as a measure of abnormal CSR disclosure. For measurement, I use values before treatment to avoid the potential influence of the Act on variables. Conceptually, the measure indicates if a firm discloses more or less CSR information than similar-sized firms in the same industry. I include the total number of words net of CSR words to control for differences in firm size because larger firms tend to disclose more information. By doing this, I also control for general disclosure practices because longer annual reports usually comprise more CSR related information. The binary variable *ABNORMAL_SILENT* takes a value of one for negative residuals, i.e., abnormal low disclosure, and zero otherwise. To capture not only the influence of industry peers, but I also test H2 with the independent variable *LOUD_NEIGHBORS. LOUD_NEIGHBORS* is a binary variable indicating abnormal low CSR disclosure before treatment relative to peer firms based on proximity. Similar to the industry-based approach, I regress the number of CSR words on the total number of words in an annual report net of CSR words for each headquarter location, i.e., city and use the residuals of the regression as a measure of abnormal CSR disclosure.

To test H2, the main variable of interest is the interaction term *TREAT * POST * {ABNORMAL_SILENT, LOUD_NEIGHBORS}*. It indicates the incremental change in firms' CSR disclosure following the Act for firms with an ex-ante low CSR disclosure level relative to peer group firms. Further, I interact each of my difference-in-differences variables, i.e., *POST, TREAT*, and *(TREAT * POST)*, with the binary variable *{ABNORMAL_SILENT, LOUD_NEIGHBORS}* to account for systematic differences between firms and over time.[37]

## 2.5. Results

### *2.5.1. Descriptive statistics*

Table 2 reports descriptive statistics for all variables used for estimating model (1) and (2). I present separate summary statistics for treatment and control group firms, because, by

[37] I find virtually unchanged results if I use a split-sample approach, i.e., if I estimate separate regressions for firms that disclosure more (less) CSR disclosure compared to their peers prior to the Act.

definition, the Act applies only to larger and more profitable firms. I provide details for the full unmatched sample and a propensity score-matched sample. To limit the influence of systematic differences across firms, I use a matched approach and additional firm-level control variables. Supporting the notion, I find that treatment group firms are, on average larger [*TOT_ASSETS*] and more profitable [*ROA*]. Both differences are significant at the 1 % level. Differences in liquidity [*CTA*] and financial leverage [*LEVERAGE*] are not statistically different from zero at conventional levels. For the variables indicating CSR disclosure [*CSRD (LOG), CSRD (%)*], I find that treatment group firms disclose significant (p-value < 0.01) more words on CSR related topics than control group firms. On average, a treatment group firm discloses 3,604 CSR related words (ln of 8.190; 10.167 %), and a control group firm discloses 1,317 CSR related words (ln of 7.184; 9.385 %). Abnormal silent firms are equally distributed across both groups indicating that treatment as well as treatment group firms voluntarily provide divergent levels of CSR information before the Act.

Regarding the matched sample approach, the number of observations differs for both groups because I only require at least one observation before and after matching, and I do not require an equal number of observations for each firm. Thus, of the matched firm pairs, the number of observations may vary between two (minimum number of observations) and six (maximum number of observations) observations.

## Table 2: Descriptive statistics

| Variables | Treatment group | | | Control group | | | Difference in means |
|---|---|---|---|---|---|---|---|
| | N | Mean | Standard Deviation | N | Mean | Standard Deviation | p-Value |
| | | | | **Full sample** | | | |
| CSRD (LOG) | 1,180 | 7.915 | 1.210 | 418 | 7.190 | 1.409 | [0.000] |
| CSRD (%) | 1,180 | 9.969 | 2.023 | 418 | 9.399 | 2.127 | [0.000] |
| ABNORMAL_SILENT | 1,180 | 0.542 | 0.498 | 418 | 0.569 | 0.496 | [0.528] |
| TOT_ASSETS (log) | 1,180 | 15.721 | 1.820 | 418 | 13.177 | 1.388 | [0.000] |
| CTA | 1,180 | 0.035 | 0.051 | 418 | 0.041 | 0.085 | [0.105] |
| LEVERAGE | 1,180 | 0.283 | 0.267 | 418 | 0.362 | 0.675 | [0.557] |
| ROA (%) | 1,180 | 4.633 | 12.969 | 418 | -6.204 | 34.942 | [0.000] |
| | | | | **Matched sample** | | | |
| CSRD (LOG) | 497 | 8.190 | 0.930 | 410 | 7.184 | 1.420 | [0.000] |
| CSRD (%) | 497 | 10.167 | 1.737 | 410 | 9.385 | 2.141 | [0.000] |
| ABNORMAL_SILENT | 497 | 0.565 | 0.496 | 410 | 0.532 | 0.500 | [0.496] |
| TOT_ASSETS (log) | 497 | 16.658 | 1.873 | 410 | 13.216 | 1.362 | [0.000] |
| CTA | 497 | 0.036 | 0.046 | 410 | 0.041 | 0.085 | [0.161] |
| LEVERAGE | 497 | 0.277 | 0.280 | 410 | 0.366 | 0.681 | [0.565] |
| ROA (%) | 497 | 6.073 | 16.278 | 410 | -5.054 | 30.653 | [0.000] |

This table presents descriptive statistics for all variables used for estimating model (1) and (2). P-Values are based on a two-tailed t-test. Variable definitions are presented in Appendix Table 12. All continuous variables are winsorized at the 1 and 99 % percentiles.

### *2.5.2. Correlations*

Table 3 presents correlations for all variables used for estimating models (1) and (2). Overall, I find correlations in the predicted direction. In detail, I find that larger firms disclose more CSR information than smaller firms. A positive correlation between the two disclosure measures (*CSRD (LOG), CSRD (%)*) indicates that both measures are similar but, to some extent, pick-up divergent aspects. I do not observe any extreme correlations.

## Table 3: Correlations

| | | Full sample | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| CSRD (LOG) | (1) | 1.000 | **0.518** | 0.054 | **0.617** | **0.135** | 0.011 | **0.159** |
| CSRD (%) | (2) | **0.733** | 1.000 | **-0.311** | **0.111** | 0.062 | **-0.179** | **0.219** |
| ABNORMAL_SILENT | (3) | -0.051 | -0.268 | 1.000 | **0.155** | -0.003 | **0.121** | -0.083 |
| TOT_ASSETS (ln) | (4) | **0.380** | 0.118 | 0.147 | 1.000 | -0.055 | **0.181** | 0.084 |
| CTA | (5) | -0.032 | -0.008 | -0.003 | **-0.113** | 1.000 | **-0.260** | **0.270** |
| LEVERAGE | (6) | 0.016 | -0.046 | 0.040 | -0.003 | **-0.120** | 1.000 | -0.467 |
| ROA | (7) | 0.021 | 0.030 | -0.027 | **0.115** | 0.066 | **-0.404** | 1.000 |
| | | **Matched sample** | | | | | | |
| | | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| CSRD (LOG) | (1) | 1.000 | **0.505** | **0.124** | **0.713** | **0.161** | 0.0185 | **0.196** |
| CSRD (%) | (2) | **0.690** | 1.000 | **-0.305** | **0.177** | 0.0275 | **-0.187** | **0.223** |
| ABNORMAL_SILENT | (3) | -0.013 | **-0.286** | 1.000 | **0.201** | 0.0564 | **0.127** | **-0.117** |
| TOT_ASSETS (ln) | (4) | **0.466** | **0.172** | **0.203** | 1.000 | 0.0023 | **0.145** | **0.179** |
| CTA | (5) | -0.058 | -0.056 | 0.0554 | -0.0879 | 1.000 | **-0.281** | **0.251** |
| LEVERAGE | (6) | 0.013 | -0.039 | 0.0341 | -0.0592 | -0.092 | 1.000 | **-0.441** |
| ROA | (7) | 0.025 | 0.0289 | -0.0263 | **0.125** | 0.0386 | **-0.450** | 1.000 |

This table presents Pearson (below) and Spearman (above the diagonal) correlations for all variables used for estimating model (1) and (2). Bold figures indicate statistically significant correlations that are at least at the 10 % level.

### 2.5.3. *Industry composition*

Table 4 presents the industry composition of the matched sample. Sample firms are primarily from the Consumer Nondurables (20.7 %), Manufacturing (28.0 %), and Other (20.2 %) industries. On average, the number of CSR words (non-log) ranges between 1,506 words (Chemicals and Television Transmission) and 3,193 words (Consumer Durables). On average, 9.81 % of words in annual reports relate to CSR topics. Please note that percentages are relatively high because the underlying dictionary comprises some generic terms which may occur in non-financial as well as financial reports.

## Table 4: Industry composition

| Industries | Observations | All: Mean of CSRD (LOG) | All: Mean of CSRD (%) | ABNORMAL_SILENT = 0: Mean of CSRD (LOG) | ABNORMAL_SILENT = 0: Mean of CSRD (%) | ABNORMAL_SILENT = 1: Mean of CSRD (LOG) | ABNORMAL_SILENT = 1: Mean of CSRD (%) |
|---|---|---|---|---|---|---|---|
| | | | | Full sample | | | |
| Consumer Nondurables | 260 | 7.660 | 9.710 | 7.661 | 10.225 | 7.659 | 9.234 |
| Consumer Durables | 97 | 7.944 | 9.634 | 8.112 | 10.250 | 7.826 | 9.201 |
| Manufacturing | 460 | 7.730 | 9.867 | 7.766 | 10.503 | 7.706 | 9.443 |
| Oil, Gas, and Coal Extraction and Products | 20 | 8.118 | 11.400 | 8.591 | 12.687 | 7.646 | 10.113 |
| Chemicals and Allied Products | 142 | 7.441 | 9.548 | 7.660 | 10.504 | 7.182 | 8.415 |
| Business Equipment | 123 | 7.688 | 9.978 | 7.852 | 10.740 | 7.556 | 9.361 |
| Telephone and Television Transmission | 20 | 8.459 | 9.820 | 8.312 | 10.402 | 8.579 | 9.344 |
| Utilities | 16 | 8.519 | 10.621 | 8.550 | 10.630 | 8.509 | 10.618 |
| Wholesale, Retail, and Some Services | 92 | 7.548 | 9.824 | 7.873 | 10.627 | 7.193 | 8.947 |
| Healthcare, Medical Equipment, and Drugs | 114 | 7.849 | 10.142 | 7.808 | 10.462 | 7.870 | 9.977 |
| Finance | - | - | - | - | - | - | - |
| Other | 254 | 7.747 | 9.674 | 7.788 | 10.146 | 7.705 | 9.178 |
| **Full sample total** | **1598** | **7.725** | **9.820** | **7.798** | **10.430** | **7.665** | **9.318** |
| | | | | Matched sample | | | |
| Consumer Nondurables | 188 | 7.613 | 9.706 | 7.633 | 10.311 | 7.598 | 9.216 |
| Consumer Durables | 10 | 8.069 | 9.701 | - | - | 8.069 | 9.701 |
| Manufacturing | 254 | 7.800 | 9.790 | 7.707 | 10.389 | 7.870 | 9.340 |
| Oil, Gas, and Coal Extraction and Products | - | - | - | - | - | - | - |
| Chemicals and Allied Products | 24 | 7.320 | 9.787 | 7.126 | 10.138 | 7.483 | 9.490 |
| Business Equipment | 115 | 7.699 | 9.970 | 7.852 | 10.740 | 7.560 | 9.264 |
| Telephone and Television Transmission | - | - | - | - | - | - | - |
| Utilities | - | - | - | - | - | - | - |
| Wholesale, Retail, and Some Services | 82 | 7.493 | 9.725 | 7.766 | 10.431 | 7.127 | 8.776 |
| Healthcare, Medical Equipment, and Drugs | 51 | 7.895 | 9.937 | 7.782 | 10.069 | 7.937 | 9.887 |
| Finance | - | - | - | - | - | - | - |
| Other | 183 | 7.892 | 9.874 | 7.934 | 10.518 | 7.853 | 9.278 |
| **PSM sample total** | **907** | **7.735** | **9.814** | **7.754** | **10.435** | **7.720** | **9.305** |

This table presents the industry composition and disclosure scores for each industry and differences in disclosure for firms with (without) loud peers. Industries are defined based on Fama and French (12) industry definition. Definitions of all variables are presented in Appendix Table 12.

### 2.5.4. *Location*

Table 5 presents the locations of firms in the final matched sample. Firms' headquarters are primarily located in Mumbai (27.34 %), other (21.06), and New Dehli (12.57 %). On average, 50.48 % of all firms in the sample have peers ("neighbors") that are more vocal about their CSR activities than the firm itself. In Noida (77.78 %) and Bangalore (75.86 %), the highest amount of firms face *LOUD_NEIGHBORS,* i.e., peer firms that are more vocal about their CSR activities, whereas in smaller cities ("other") (74.35 %) and New Dehli (69.30 %) firms do not face *LOUD_NEIGHBORS,* i.e., are more vocal about their CSR activities than their peers.

## Table 5: Location of firms' headquarters and peer constellation across cities

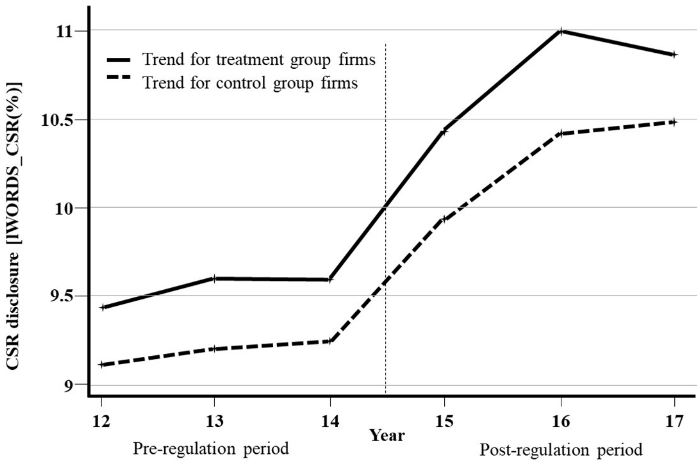
| Location | Observations (#) | Observations (%) | Observations (#) | Observations (%) | Observations (#) | Observations (%) |
|---|---|---|---|---|---|---|
| | | | **Matched sample** | | | |
| Ahmedabad | 50 | 6.00 | 30 | 5.76 | 20 | 5.18 |
| Bangalore | 58 | 6.39 | 14 | 2.69 | 44 | 11.40 |
| Chennai | 62 | 6.84 | 33 | 6.33 | 29 | 7.51 |
| Gurgaon | 33 | 3.64 | 15 | 2.88 | 18 | 4.66 |
| Hyderabad | 47 | 5.18 | 26 | 4.99 | 21 | 5.44 |
| Kolkata | 57 | 6.28 | 21 | 4.03 | 36 | 9.33 |
| Mumbai | 248 | 27.34 | 146 | 28.02 | 102 | 26.42 |
| New Delhi | 114 | 12.57 | 79 | 15.16 | 35 | 9.07 |
| Noida | 27 | 2.98 | 6 | 1.15 | 21 | 5.44 |
| Pune | 20 | 2.21 | 9 | 1.73 | 11 | 2.85 |
| Other | 191 | 21.06 | 142 | 27.26 | 49 | 12.69 |
| **PSM sample total** | **907** | **100** | **521** | **100** | **386** | **100** |

This table presents the number of observations for each city (headquarters) and the number of observations for firms with (without) loud peers within these cities. Definitions of all variables are presented in Appendix Table 12.

### 2.5.5. *Univariate difference-in-differences analysis*

Table 6 shows the results for estimating the univariate difference-in-difference regressions for firms that are not more silent than their peers pre-regulation (ABNORMAL_SILENT = 0) and firms that are more silent than their peers pre-regulation (ABNORMAL_SILENT = 1). Before the Act, the difference in CSR disclosure, measured by the natural logarithm of CSR related words between treatment and control group firms, is statistically significant (mean treatment group: 9.697, mean control group: 8.665, p-Value < 0.01).[38] This result indicates that both groups voluntarily disclose CSR information before the Act. After the Act, the number of CSR words increases for both firms (mean treatment group: 10.617, mean control group: 10.038, p-Value < 0.01). The difference-in-differences is negative (-0.453) and marginally significant (p-Value: 0.066). This result indicates that the overall effect of the Act is even negative because the increase in CSR disclosure by control group firms exceeds the increase in disclosure by treatment group firms. Figure 1 illustrates this trend.

**Figure 1: CSR disclosure (%) for treatment and control group firms over time[39]**




[38] I find virtually unchanged results using the number of CSR words scaled by the number of all words net of CSR words in an annual report.

[39] This figure shows the mean of CSR disclosure in % for the pre-regulation period (2012-2014) and the post-regulation period (2015-2017) for treatment and control group firms.

To provide initial insights on the influence of a firms' peer disclosure behavior (H2), I conduct separate univariate difference-in-differences analyses for firms with less (SILENT=1) and more (SILENT=0) CSR disclosure before the Act. I find that the overall negative effect is primarily attributable to the former group (SILENT=1, diff-in-diff: -0.997, p-Value = 0.037), whereas for the latter group the effect is negligible (SILENT=0, diff-in-diff: -0.094, p-Value > 0.1).

Results support the notion that the benefits of a disclosure mandate are limited without proper enforcement. Instead, peer disclosure behavior substantially influences a firm's disclosure.

## Table 6: Univariate difference-in-differences analysis

| **Dependent variable CSRD (%)** | | | | |
|---|---|---|---|---|
| | | **Full PSM sample (N= 907)** | | |
| | | Pre (1) | Post (2) | Difference (2) - (1) |
| Before | | | | |
| Control group | (i) | 8.665 | 10.038 | 1.373 |
| Treatment group | (ii) | 9.697 | 10.617 | 0.92 |
| Difference | (ii) - (i) | 1.032*** | 0.579*** | **-0.453*** |
| | | **Split sample (ABNORMAL_SILENT=0; N= 408)** | | |
| | | Pre (1) | Post (2) | Difference (2) - (1) |
| Before | | | | |
| Control group | (i) | 9.762 | 10.335 | 0.573 |
| Treatment group | (ii) | 10.382 | 11.106 | 0.724 |
| Difference | (ii) - (i) | 0.620*** | 0.770*** | **0.151** |
| | | **Split sample (ABNORMAL_SILENT=1; N= 499)** | | |
| | | Pre (1) | Post (2) | Difference (2) - (1) |
| Before | | | | |
| Control group | (i) | 7.745 | 9.764 | 2.019 |
| Treatment group | (ii) | 9.193 | 10.225 | 1.032 |
| Difference | (ii) - (i) | 1.449*** | 0.461* | **-0.988***** |

This table presents the univariate difference-in-difference regressions for the full (matched) sample, for firms that are not more silent than their peers pre-regulation (ABNORMAL_SILENT = 0), and firms that are more silent than their peers pre-regulation ABNORMAL_SILENT = 1). Bold figures indicate the difference-in-difference coefficient. Definitions of all variables are presented in Appendix Table 12. Continuous variables are winsorized at the 1 and 99 % percentiles. ***, **, and * indicate significance at 0.01, 0.05, and 0.1 levels, respectively, using a two-tailed test. Standard errors are clustered by industry. Industries are defined using the Fama and French (12) industry definition.

### 2.5.6. *Multivariate results*

2.5.6.1. Changes in CSR disclosure after the act

Table 7 presents the results for estimating the effect of a CSR disclosure mandate on CSR disclosure in a low legal enforcement environment. For the full sample [matched sample], columns (1) [(3)] present results using the natural logarithm of CSR words as dependent variable (*CSRD (LOG)*), Columns (2) [(4)] present results using the ratio of CSR words to all words in an annual report net of CSR words as dependent variable (*CSRD (%)*). I present results with firm-level control variables ('full model')[40] to provide insights on the incremental influence of these variables on my results.

I find a significant reduction using *CSRD (LOG)* (coef. -0.398, p-Value < 0.1) and a marginally significant reduction using *CSRD (%)* (coef. -0.464, one-tailed p-Value < 0.1). Concerning our control variables, I find mostly insignificant coefficient estimates, except for a negative and significant coefficient on liquidity in column (4).[41] The explanatory power of models (adjusted $R^2$) ranges from 32.9 to 47.4 % and is primarily attributable to the inclusion of firm and year fixed effects. In terms of economic significance, results are meaningful because a decrease of -0.398 (column (3)) corresponds to a disclosure reduction of 32.83 % for treatment group firms following the Act.

Overall result support hypothesis H1 that the Act does not lead to an increase in disclosure quantity. The results even indicate a reduction in CSR disclosure following the Act for treatment group firms compared to control group firms. This result is somewhat surprising,

[40] Results of the 'reduced model' without control variables indicate even stronger negative results. For the matched sample, in the reduced model, I find a negative and significant coefficient estimate on the interaction term *TREAT * POST* using *CSRD (LOG)* (coef. -0.392, p-Value < 0.05) and using *CSRD (%)* (coef. -0.475, p-Value < 0.1) as dependent variable. These results indicate that a disclosure does not lead to improvements in CSR disclosure. Instead, I even observe a reduction of prior voluntary disclosure.

[41] I find virtually unchanged results, if I additionally control for firm performance using return on equity, alternative measures of financial leverage, R&D intensity, analyst following, dividend payment, cash flow to assets, and a binary variable indicating losses.

giving that a lack of enforcement usually should lead to no significant change in disclosure at all. Thus, as a next step, I examine if changes in the disclosure are moderated by peer firm disclosure.

**Table 7: The effect of a CSR disclosure mandate on CSR disclosure in a low legal enforcement environment**

| | Full sample | | Matched sample | |
|---|---|---|---|---|
| **Dependent variable** | ***CSRD (LOG)*** | ***CSRD (%)*** | ***CSRD (LOG)*** | ***CSRD (%)*** |
| | (1) | (2) | (3) | (4) |
| | Coef/t-stat | Coef/t-stat | Coef/t-stat | Coef/t-stat |
| *Diff-in-diff variable* | | | | |
| ***TREAT * POST*** | **-0.308**** | **-0.304** | **-0.398*** | **-0.464** |
| | **(-2.431)** | **(-1.406)** | **(-2.362)** | **(-1.796)** |
| *Control variables* | | | | |
| *TOT_ASSETS* | 0.105 | -0.181 | 0.072 | -0.42 |
| | (1.694) | (-0.698) | -0.935 | (-1.234) |
| *CTA* | 1.368 | 0.592 | -0.167 | -1.623* |
| | (0.991) | (0.350) | (-0.213) | (-2.134) |
| *LEVERAGE* | -0.000 | -0.183 | -0.014 | -0.229 |
| | (-0.003) | (-1.135) | (-0.238) | (-1.378) |
| *ROA* | 0.000 | 0.000 | 0.001 | 0.003 |
| | (1.251) | (0.134) | -0.869 | -1.025 |
| *Intercept* | 4.288*** | 10.342*** | 4.651*** | 13.346** |
| | (5.342) | (3.203) | -4.944 | -3.218 |
| Fixed effects | Firm and year | Firm and year | Firm and year | Firm and year |
| Observations | 1,598 | 1,598 | 907 | 907 |
| Adj. $R^2$ | 0.365 | 0.304 | 0.472 | 0.332 |

This table presents the results of regression analyses examining the effect of a CSR disclosure mandate on firms' CSR disclosure in a low legal enforcement environment. The dependent variable in columns (1) and (3) is the natural logarithm of CSR words in firms' annual reports. The dependent variable in columns (2) and (4) is the ratio of CSR words to all words in an annual report. CSR words are defined using the dictionary of Pencle and Mălăescu (2016). Variable definitions are presented in Appendix Table 12. Continuous variables are winsorized at the 1 and 99 % percentiles. ***, **, and * indicate significance at 0.01, 0.05, and 0.1 levels, respectively, using a two-tailed test. Standard errors are clustered by industry. Industries are defined using the Fama and French (12) industry definition.

### 2.5.6.2. Peer disclosure behavior as a driver of Firms' CSR Disclosure

Table 8 reports the results for the moderating effect of firms' CSR disclosure behavior based on the expected behavior of peers following a CSR disclosure mandate. For the full sample [matched sample], columns (1) [(3)] present results using the natural logarithm of CSR words as dependent variable (*CSRD (LOG)*), Columns (2) [(4)] present results using the ratio of CSR words to all words in an annual report net of CSR words as dependent variable (*CSRD (%)*).I find a negative and significant coefficient estimate on the interaction term *TREAT * POST * ABNORMAL_SILENT* using *CSRD (LOG)* (coef. -0.797 p-Value < 0.05) and using *CSRD (%)* (coef. -1.111, p-Value < 0.05) as dependent variable.[42] Supporting the second hypothesis (H2), this result indicates that treatment group firms that disclosed less information than industry peers before the Act decreased CSR disclosure following the Act. This result supports the notion that more detailed disclosure by peer group firms reduces the need for more detailed disclosure by a firm.

Including the variable *ABNORMAL_SILENT* leads to an insignificant coefficient on the interaction *TREAT * POST* using *CSRD (LOG)* (coef. 0.032, p-Value > 0.1) and using *CSRD (%)* (coef. 0.130, p-Value > 0.1) as dependent variable. This result indicates that the negative effect observed in model 1 is primarily attributable to a subset of treatment group firms that reduced disclosure because of information transfer between firms. Instead, the Act has no significant direct effect on treatment groups' CSR disclosure, which supports H1. Also, I conduct partial F-tests to measure the overall change in CSR disclosure for silent treatment group firms following the Act. In detail, I test if the sum of *TREAT * POST* and *TREAT * POST * ABNORMAL_SILENT* is statically different from zero. I find significant negative coefficient estimates (all p-Values < 0.05) in all four columns. This result indicates that the Act even leads to an overall reduction in CSR disclosure.

Concerning the control variables, I find mostly insignificant coefficient estimates, except for a negative and significant coefficient on liquidity [*CTA*] in column (4). The explanatory

[42] In the reduced model, I again find stronger and negative significant results with a coefficient estimate on the interaction term *TREAT * POST * ABNORMAL_SILENT* using *CSRD (LOG)* (coef. -0.800 p-Value < 0.05) and using *CSRD (%)* (coef. -1.075, p-Value < 0.01) as dependent variable.

power of models (adjusted $R^2$) ranges from 32.4 to 48.5 % and is primarily attributable to the inclusion of firm and year fixed effects

**Table 8: The moderating effect of firms CSR disclosure behavior based on the expected behavior of peers following a CSR disclosure mandate**

| | Full sample | | Matched sample | |
|---|---|---|---|---|
| | *CSRD (LOG)* | *CSRD (%)* | *CSRD (LOG)* | *CSRD (%)* |
| | (1) | (2) | (3) | (4) |
| | Coef/t-stat | Coef/t-stat | Coef/t-stat | Coef/t-stat |
| *Diff-in-diff variables* | | | | |
| ***TREAT * POST*** | **-0.062** | **0.039** | **0.032** | **0.130** |
| | **(-0.504)** | **(0.163)** | **(0.280)** | **(0.394)** |
| *TREAT * ABNORMAL_SILENT* | 2.324*** | 3.398*** | 2.085*** | 4.353** |
| | (9.404) | (3.654) | (5.309) | (2.417) |
| *POST * ABNORMAL_SILENT* | 0.769** | 1.467*** | 0.824** | 1.336*** |
| | (3.032) | (4.240) | (3.011) | (4.728) |
| ***TREAT * POST * ABNORMAL_SILENT*** | **-0.415*** | **-0.562*** | **-0.797**** | **-1.111**** |
| | **(-1.974)** | **(-1.954)** | **(-3.371)** | **(-3.309)** |
| ***F-Test: (TREAT * POST) + (TREAT * POST * ABNORMAL_SILENT) = 0*** | **0.0411** | **0.1675** | **0.0281** | **0.0297** |
| *Control variables* | | | | |
| *TOT_ASSETS* | 0.125* | -0.132 | 0.062 | -0.434 |
| | (1.883) | (-0.544) | (0.867) | (-1.262) |
| *CTA* | 1.379 | 0.581 | -0.291 | -1.819* |
| | (1.030) | (0.374) | (-0.346) | (-2.014) |
| *LEVERAGE* | -0.018 | -0.221 | -0.034 | -0.269 |
| | (-0.319) | (-1.183) | (-0.571) | (-1.489) |
| *ROA* | -0.000 | -0.001 | 0.000 | 0.002 |
| | (-0.716) | (-0.807) | (0.270) | (0.700) |
| *Intercept* | 3.842*** | 9.364** | 4.558*** | 13.173** |
| | (4.239) | (3.118) | (5.121) | (3.175) |
| Fixed effects | Firm and year | Firm and year | Firm and year | Firm and year |
| Observations | 1,598 | 1,598 | 907 | 907 |
| Adj. $R^2$ | 0.375 | 0.324 | 0.485 | 0.346 |

This table presents the results of regression analyses examining the effect of a CSR disclosure mandate and peer firms' behavior on firms' CSR disclosure in a low legal enforcement environment. The dependent variable in columns (1) and (3) is the natural logarithm of CSR words in firms' annual reports. The dependent variable in columns (2) and (4) is the ratio of CSR words to all words in an annual report. CSR words are defined using the dictionary of Pencle and Mălăescu (2016). Variable definitions are presented in Appendix Table 12. Continuous variables are winsorized at the 1 and 99 % percentiles. ***, **, and * indicate significance at 0.01, 0.05, and 0.1 levels, respectively, using a two-tailed test. Standard errors are clustered by industry. Industries are defined using the Fama and French (12) industry definition.

### *2.5.7. Additional analyses*

2.5.7.1. Alternative measure of "peers"

My analysis so far indicates that peers' disclosure influences firms' disclosure. These results rely on the idea that peers are defined via industry. As an alternative measure for "peers," I examine if changes in the disclosure are moderated by peer firm disclosure based on their location. Again, following Hypothesis 2, I expect a significant coefficient estimate on the interaction term *TREAT * POST * LOUD_NEIGHBOURS,* indicating that firms' that are located close to another disclosure moderates the overall treatment effect.

For the matched sample, Table 9 columns (1) and (2) present results using the natural logarithm of CSR words as dependent variable (*CSRD (LOG)*), Columns (3) and (4) present results using the ratio of CSR words to all words in an annual report net of CSR words as dependent variable (*CSRD (%)*). Using location proximity as a peer measure in the reduced model, I find a negative and significant coefficient estimate on the interaction term *TREAT * POST * LOUD_NEIGHBOURS* using *CSRD (LOG)* (coef. -1.405 p-Value < 0.01) and using *CSRD (%)* (coef. -1.594, p-Value < 0.05) as the dependent variable. Again, supporting the second hypothesis (H2), this result indicates that treatment group firms that disclosed less information than location-based peers before the Act decreased CSR disclosure following the Act. This result indicates that more detailed CSR disclosure by firms that operate in the same area (city) reduces the need for more detailed disclosure by a firm. Concerning the control variables, I find only insignificant coefficient estimates. The explanatory power of models (adjusted $R^2$) ranges from 35.2 to 51.3 % and is primarily attributable to the inclusion of firm and year fixed effects.

**Table 9: The moderating effect of firms CSR disclosure behavior based on their neighbors' disclosure behavior following a CSR disclosure mandate**

| | *CSRD (LOG)* | | *CSRD (%)* | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| | Coef/t-stat | Coef/t-stat | Coef/t-stat | Coef/t-stat |
| *Diff-in-diff variables* | | | | |
| ***TREAT * POST*** | **-0.019** | **-0.020** | **-0.080** | **-0.049** |
| | **(-0.180)** | **(-0.187)** | **(-0.416)** | **(-0.221)** |
| *TREAT * LOUD_NEIGHBOURS* | 3.128*** | 3.100*** | 1.019** | 2.485* |
| | (15.821) | (10.456) | (2.846) | (2.080) |
| *POST * LOUD_NEIGHBOURS* | 1.515*** | 1.524*** | 1.827*** | 1.881*** |
| | (4.816) | (4.746) | (3.606) | (3.539) |
| ***TREAT * POST * LOUD_NEIGHBOURS*** | **-1.405*** ** | **-1.410*** ** | **-1.594** ** | **-1.645** ** |
| | **(-4.818)** | **(-4.863)** | **(-2.892)** | **(-2.764)** |
| *Control variables* | | | | |
| *TOT_ASSETS* | | 0.002 | | -0.506 |
| | | (0.042) | | (-1.444) |
| *CTA* | | 0.348 | | -0.960 |
| | | (0.403) | | (-1.156) |
| *LEVERAGE* | | 0.023 | | -0.187 |
| | | (0.368) | | (-0.947) |
| *ROA* | | 0.000 | | 0.002 |
| | | (0.377) | | (0.941) |
| *Intercept* | 4.908*** | 4.862*** | 7.240*** | 13.615** |
| | (22.013) | (7.530) | (19.497) | (3.223) |
| Fixed effects | Firm and year | Firm and year | Firm and year | Firm and year |
| Observations | 907 | 907 | 907 | 907 |
| Adj. $R^2$ | 0.513 | 0.510 | 0.352 | 0.356 |

This table presents the results of regression analyses examining the effect of a CSR disclosure mandate and peer firms' behavior on firms' CSR disclosure in a low legal enforcement environment using a propensity score-matched sample. The variable LOUD_NEIGHBORS defines if firms that are located in the same city as the observed firm are more vocal about their CSR undertakings than the observed firm. The dependent variable in columns (1-2) is the natural logarithm of CSR words in firms' annual reports. The dependent variable in columns (3-4) is the ratio of CSR words to all words in an annual report. CSR words are defined using the dictionary of Pencle and Mălăescu (2016). Variable definitions are presented in Appendix Table 12. Continuous variables are winsorized at the 1 and 99 % percentiles. ***, **, and * indicate significance at 0.01, 0.05, and 0.1 levels, respectively, using a two-tailed test. Standard errors are clustered by industry. Industries are defined using the Fama and French (12) industry definition.

2.5.7.2. Differences in CSR topics

CSR disclosure is a multi-faceted construct comprising disclosure on environmental, employee, social, and human activities. In a similar vein, the Act mentions a variety of CSR activities that should be pursued and, thus, disclosed afterward. To test if firms strategically circumvent CSR disclosure or just specific CSR topics, I exploit the dictionary by Pencle and Mălăescu (2016), which comprises separate word lists related to environmental, employee, social, and human activities. In detail, I replicate model 2 but use four different topic measures as dependent variables instead of an overall CSR disclosure measure. Table 10 presents the results. Columns (1) to (4) present results using a logarithmic measure as the dependent variable, and columns (5) to (8) present results using a percentage measure.[43] Across all specifications, I find insignificant coefficients estimate on the interaction term *TREAT* * *POST* and in seven out of eight specifications negative coefficient estimates. Overall, results indicate that the Act had no significant effect, independent of the CSR topic and that peer group disclosure has a similar effect on all four CSR topics.

[43] I only present results for the full model including all control variables. Using the reduced model without control variables, I find virtually unchanged results.

**Table 10: The influence of a CSR disclosure mandate on CSR content**

| | CSRD (LOG) | | | | CSRD (%) | | | |
|---|---|---|---|---|---|---|---|---|
| | *ENV* | *EMP* | *SOC* | *HUM* | *ENV* | *EMP* | *SOC* | *HUM* |
| | (1) Coef/t-stat | (2) Coef/t-stat | (3) Coef/t-stat | (4) Coef/t-stat | (5) Coef/t-stat | (6) Coef/t-stat | (7) Coef/t-stat | (8) Coef/t-stat |
| *Diff-in-diff variables* | | | | | | | | |
| ***TREAT * POST (a)*** | **0.039** | **0.057** | **0.032** | **0.011** | **0.042** | **0.074** | **0.036** | **-0.019** |
| | **(0.339)** | **(0.501)** | **(0.310)** | **(0.089)** | **(0.395)** | **(0.721)** | **(0.708)** | **(-0.216)** |
| *TREAT * ABNORMAL_SILENT* | 1.719*** | 1.890*** | 1.487*** | 1.636*** | 1.217* | 1.641** | 0.540 | 0.931** |
| | (4.595) | (5.243) | (3.663) | (4.520) | (2.278) | (2.463) | (1.620) | (2.658) |
| *POST * ABNORMAL_SILENT* | 0.752** | 0.722** | 0.693** | 0.687** | 0.447** | 0.335*** | 0.292*** | 0.262*** |
| | (3.261) | (3.169) | (3.135) | (3.251) | (3.354) | (4.174) | (3.672) | (3.864) |
| ***TREAT * POST * ABNORMAL_SILENT (b)*** | **-0.734*** ** | **-0.712*** ** | **-0.700*** ** | **-0.669*** ** | **-0.340*** | **-0.281** ** | **-0.270** ** | **-0.211** |
| | **(-4.018)** | **(-3.580)** | **(-3.618)** | **(-3.711)** | **(-2.188)** | **(-2.897)** | **(-3.090)** | **(-1.835)** |
| ***F-Test: (a) + (b) = 0*** | **0.0148** | **0.0275** | **0.0182** | **0.0143** | **0.0511** | **0.1757** | **0.0258** | **0.0159** |
| *Control variables* | | | | | | | | |
| *TOT_ASSETS* | 0.085 | 0.040 | 0.089 | 0.079 | -0.088 | -0.203 | -0.055 | -0.083 |
| | (1.222) | (0.604) | (1.142) | (1.135) | (-0.897) | (-1.594) | (-0.837) | (-1.197) |
| *CTA* | -0.154 | -0.319 | -0.225 | -0.183 | -0.336 | -0.758** | -0.385* | -0.356 |
| | (-0.204) | (-0.452) | (-0.343) | (-0.261) | (-0.910) | (-3.158) | (-2.283) | (-1.744) |
| *LEVERAGE* | -0.020 | -0.033 | -0.019 | -0.022 | -0.064 | -0.098* | -0.046 | -0.058 |
| | (-0.346) | (-0.652) | (-0.353) | (-0.401) | (-0.987) | (-2.282) | (-1.223) | (-1.383) |
| *ROA* | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 | 0.000 | 0.000 | 0.000 |
| | (0.326) | (0.180) | (0.090) | (0.234) | (0.901) | (0.420) | (0.591) | (0.796) |
| *Intercept* | 5.011*** | 5.453*** | 4.683*** | 4.678*** | 4.217** | 5.320** | 3.036** | 3.122** |
| | (5.153) | (5.886) | (4.331) | (4.835) | (3.169) | (3.037) | (3.376) | (3.322) |
| Fixed effects | Firm and year | Firm and year | Firm and year | Firm and year | Firm and year | Firm and year | Firm and year | Firm and year |
| Observations | 907 | 907 | 907 | 907 | 907 | 907 | 907 | 907 |
| Adj. $R^2$ | 0.514 | 0.491 | 0.544 | 0.516 | 0.359 | 0.334 | 0.469 | 0.393 |

This table presents the results of regression analyses examining the effect of a CSR disclosure mandate on firms' CSR disclosure in a low legal enforcement environment for each of the four topics (environment, employee, social, human rights). The dependent variable in columns (1) to (4) is the natural logarithm of CSR words relating to that respective topic in firms' annual reports. The dependent variable in columns (5) to (8) is the ratio of CSR words relate to one topic to all words in an annual report. CSR words are defined using the dictionary of Pencle and Mălăescu (2016). Variable definitions are presented in Appendix Table 12. Continuous variables are winsorized at the 1 and 99 % percentiles. ***, **, and * indicate significance at 0.01, 0.05, and 0.1 levels, respectively, using a two-tailed test. Standard errors are clustered by industry. Industries are defined using the Fama and French (12) industry definition.

2.5.7.3. Alternative measures of peer-group effects

To this point, results regarding information spillover depend on the definition and measurement of a firm's disclosure behavior relative to peer group firms. To test the robustness of my findings, I use two alternative proxies: (1) *LOUD_PEERS* and (2) *LOUD_INDUSTRY*. The first variable is a binary variable that takes a value of one if a firm in an industry, using the Fama and French 12 industry definition, uses more CSR words during the ex-ante period compared to the industry average/median, and zero otherwise, i.e., the measure accounts for within industry CSR disclosure variation. The second measure is a binary variable that takes a value of one, if firms in an industry disclose more CSR words per year compared to the median across all industries, and zero otherwise.

For both variables, I find a significant negative coefficient estimate on the interaction term *TREAT * POST * { LOUD_PEERS, LOUD_INDUSTRY}* indicating that heterogeneity in CSR disclosure across and within industry leads to an overall reduction in CSR disclosure following the Act (untabulated).

2.5.7.4. Alternative sample compositions

Using a matched sample approach raises problems due to lower generalizability (Cram et al. 2009). Thus, I conduct additional tests to alleviate this concern. First, I use all observations before matching, i.e., all available treatment and control group firms with at least one observation before and after the Act. The results can be found in Tables 7 and 8 in columns (1) to (4). Again, I find insignificant coefficient estimates on the interaction term *TREAT * POST* and significant negative coefficient estimates on the interaction term *TREAT * POST * ABNORMAL_SILENT*. I conclude that matching itself does not drive my results. Next, I use an alternative matching approach to limit the influence of the matching approach. In detail, I use a standard firm-year matching. This approach leads to unchanged results too.

Third, I estimate separate regressions using financial institutions only. For my main analyses, I exclude financial sector firms because of a confounding regulation published by the Reserve Bank of India. Using a sub-sample of 208 financial sector firm-year observations, I find a negative and significant coefficient on the interaction term *TREAT * POST * ABNORMAL_SILENT.* Table 11 reports the results.

**Table 11: The effectiveness of regulation [Hyp (1)] and the influence of peer behavior [Hyp (2)] on financial firms**

| | Hyp (1) | | Hyp (2) | |
|---|---|---|---|---|
| | *CSRD (LOG)* | *CSRD (%)* | *CSRD (LOG)* | *CSRD (%)* |
| | (1) | (2) | (3) | (4) |
| | Coef/t-stat | Coef/t-stat | Coef/t-stat | Coef/t-stat |
| *Diff-in-diff variables* | | | | |
| ***TREAT * POST*** | **0.007** | **-0.568** | **0.951**** | **0.560** |
| | **(0.011)** | **(-0.526)** | **(2.083)** | **(0.692)** |
| *TREAT * ABNORMAL_SILENT* | | | 1.953** | 3.031* |
| | | | (2.412) | (1.942) |
| *POST * ABNORMAL_SILENT* | | | -4.481*** | -3.808*** |
| | | | (-6.834) | (-3.244) |
| ***TREAT * POST * ABNORMAL_SILENT*** | | | **-2.169**** | **-3.338*** |
| | | | **(-2.116)** | **(-1.890)** |
| *Control variables* | | | | |
| *TOT_ASSETS* | -0.452 | -0.568 | -0.624 | 0.385 |
| | (-1.288) | (-0.628) | (-1.388) | (0.439) |
| *CTA* | 1.383 | 1.353 | 3.216* | 1.419 |
| | (1.166) | (0.478) | (1.814) | (0.487) |
| *LEVERAGE* | 0.065 | 0.116 | 0.171** | 0.166* |
| | (1.202) | (1.237) | (2.234) | (1.725) |
| *ROA* | 0.003 | 0.005 | 0.005* | 0.000 |
| | (1.496) | (0.836) | (1.811) | (0.098) |
| *Intercept* | 12.397*** | 15.858 | 16.808** | 4.228 |
| | (2.872) | (1.444) | (2.621) | (0.340) |
| Fixed effects | Firm and year | Firm and year | Firm and year | Firm and year |
| Observations | 279 | 279 | 208 | 208 |
| Adj. $R^2$ | 0.179 | 0.182 | 0.215 | 0.197 |

This table presents the results of regression analyses examining the effect of a CSR disclosure mandate and peer firms' behavior on firms' CSR disclosure in a low legal enforcement environment for financial firms only. The dependent variable in columns (1) and (3) is the natural logarithm of CSR words in firms' annual reports. The dependent variable in columns (2) and (4) is the ratio of CSR words to all words in an annual report. CSR words are defined using the dictionary of Pencle and Mălăescu (2016). Variable definitions are presented in Appendix Table 12. Continuous variables are winsorized at the 1 and 99 % percentiles. ***, **, and * indicate significance at 0.01, 0.05, and 0.1 levels, respectively, using a two-tailed test. Standard errors are clustered by industry. Industries are defined using the Fama and French (12) industry definition.

Fourth, I challenge the influence of the event date definition. First, I randomly assign firms to treatment and control groups to account for the non-random treatment assignment. Supporting the treatment assignment, I find no significant effect on both interaction terms. Finally, I split the post-period (first year and subsequent years) to test if results are persistent over time.

## 2.6. Conclusion

This study investigates the effect of CSR disclosure regulation in India and respective peer firms' disclosure behavior. Using a matched sample of Indian firms over the period 2013 to 2017, I provide evidence that the Act does not lead to an increase in disclosure quantity. The number of CSR related words remain statistically unchanged following the implementation of the Act. Instead, supporting the notion that peer-group disclosure influences a firm's own disclosure decision, I find a significant negative moderating effect of peer group disclosure. In detail, firms with a lower level of ex-ante CSR disclosure even decrease CSR disclosure after the mandate. In additional tests, I find that the observed effect applies to different CSR topics (employees, environment, social, human) and is robust using a battery of alternative specifications, i.e., an unmatched sample, different event-windows, and alternative measures of peer group effects.

This study contributes to prior literature in two ways. First, I provide insights into the effects of regulation of CSR disclosure, i.e., the interplay between voluntary and mandatory CSR disclosure. In contrast to prior literature that points out that mandatory *financial* disclosure is helpful to improve comparability and monitor managerial decision making (Ioannou and Serafeim 2017; Cascino and Gassen 2015; Axjonow et al. 2018), I show that mandatory *non-financial* disclosure may reduce CSR disclosure levels, thus, even reduce comparability across firms.

Second, I contribute to the literature on peer disclosure effects. While no prior studies focus on peer effects in CSR disclosure, I provide insights that peer behavior influences firms' non-financial disclosing decisions negatively. This is particularly relevant as peer effects "play an important role in the economic justification of disclosure and reporting mandates" (Leuz and Wysocki 2016).

Some caveats remain. My results only apply to one particular regulatory environment. Thus, I cannot evaluate if weak enforcement in general or the Indian setting determines the weak disclosure effect. Thus, further research is necessary to provide a deeper understanding of the cost-benefit relationship of CSR disclosure regulation.

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# Appendix

**Table 12: Variable definitions**

| Variable name | Definition |
|---|---|
| **Dependent variables** | |
| CSRD (LOG) | Natural logarithm of CSR related words; CSR words are defined using the dictionary of Pencle and Mălăescu (2016). |
| CSRD (%) | Percentage of CSR related words to the total number of words in an annual report; CSR words are defined using the dictionary of Pencle and Mălăescu (2016). |
| Employees | Employees refer to the computationally distilled word count of the 319 individual words included in Pencle and Mălăescu's (2016) "employee" word list. Words are counted for each annual report. |
| Environment | Environment refers to the computationally distilled word count of 451 individual words included in Pencle and Mălăescu's (2016) "environment" word list. Words are counted for each annual report. |
| Human | Human refers to the computationally distilled word count of 361 individual words included in Pencle and Mălăescu's (2016) "human rights" word list. Words are counted for each annual report. |
| Social | Social refers to the computationally distilled word count of 297 individual words included in Pencle and Mălăescu's (2016) "social and community" word list. Words are counted for each annual report. |
| **Independent variables** | |
| TREAT | Indicator variable, 1: a firm is required to disclose CSR related disclosure following the 2013 Indian Companies Act ; 0: otherwise. |
| POST | Indicator variable, 1: firm-years following the implementation of the 2013 Indian Firms Act, i.e., years 2015-2017; 0: otherwise. |
| ABNORMAL_SILENT | Indicator variable, 1: a firm discloses less CSR information than their industry peers with otherwise similar disclosing behavior related to non-CSR; 0: otherwise. Based on a regression to anticipate "normal" disclosing behavior within one industry; controlling for non-CSR disclosure behavior; CSR information is measured as the percentage of CSR related words in case the dependent variable is measure in percentage (CSRD (%)), or as the natural logarithm of CSR related |

| | |
|---|---|
| | words in case the dependent variable is measure as natural logarithm (CSRD (LOG)); values are based on pre mandate period; the binary variable SILENT takes a value of one for negative residuals, i.e., abnormal low disclosure, and zero otherwise. |
| LOUD_PEERS | Indicator variable, 1: a firm has highly talkative peers compared to its own disclosure; 0: otherwise. Highly talkative peers are defines as higher (>=) peer disclosure (number of words per annual report) than observed firms' disclosure; values are based on pre mandate period;. |
| LOUD_INDUSTRY | Indicator variable, 1: a firm operates in a highly talkative industry compared to other industries; 0: otherwise. A highly talkative industry is defined as disclosing (% of words per annual report) more (>=) than the median (50 percentile) peer disclosure across all industries excluding the observed firms' disclosure; the measure is based on the latest disclosure pre mandate available. |
| TOT_ASSETS | Natural logarithm of firms' total assets. |
| CTA | Operating cash flows scaled by total assets. |
| LEVERAGE | Total debt scaled by total assets. |
| ROA | Return on Assets; percentage of net income scaled by firms' total assets. |

**Table 13: Sample of wordlists for the CSR dimensions**

| **Employee (53/319 words)** | **Environment (64/451 words)** | **Human Rights (55/297 words)** | **Social and Community (64/361 words)** |
|---|---|---|---|
| Adopted Child | Acid Rain | Aboriginals | Accommodating |
| Alternative Lifestyle | Affluence Carrying Capacity | Abuse | Accountability |
| Certify | Agriculture | Alternative Lifestyle | Adopted |
| Certifying | Air Filtration | Bylaws | Affiliates |
| Civil | Alternative Energy | Civil Liberty | Affordable Housing |
| Discriminatory | Bio Diversities | Civil Rights | Allocating |
| Diverse | Caged Animal | Discriminatory | Anti |
| Diversification | Caged Animals | Diversities | Beneficially |
| Diversified | Carbon Dioxide | Diversity | Benefit the Masses |
| Diversify | Carbon Disclosure | Equal Opportunity | Biodiesel |
| Diversifying | Carbon Emission | Fairness | Charitable |
| Educate | Clean Energy | Female | Charitable Giving |
| Educating | CO2 | Fiduciary | Civic Duty |
| Education | Collective Well-being | Gay | Civic Engagement |
| Educational | Conflict Mineral | Gender Diversity | Civic Engagements |
| Elected | Conservation | Genders | Community Development |
| Employ | Depletes | Humanitarian | Community Group |
| Employed | Depleting | Imprisonment | Community Impact |
| Employee Diversity | Depletion | Labor Freedom | Community Minded |
| Employee Equity | Double Bottom Line | Labor Issue | Community Mission |
| Employee Involvement | Ecological | Labor Right | Community Outreach |
| Employee Relations | Eco-System | Lesbians | Community Policy |
| Employee Well-Being | Energy | Lifestyles | Community Project |
| Health | Energy Efficient | Medicaid | Conflict Mineral |

| | | | |
|---|---|---|---|
| Health Benefits | Environmental Disclosures | Medicare | Corporate Foundation |
| Health Care Benefits | Environmental Impact | Medicinal | Country |
| Healthcare | Environmental Management Systems (EMS) | Nationality | Cultural Preservation |
| Healthcaring | Environmental Performance | Nationalization | Food Pantry |
| Healthy | Environmental Policy | Nationalize | Foodbank |
| Incentives | Environmental Protection Agency | Native Peoples | Foundation |
| Individual | Environmental Resource | Natural Rights | Future Generation |
| Individually | EPA Standards | Oppressive Regime | Groups of Stakeholders |
| Infringe | Fossils | Payroll | Human Being |
| Infringement | Global Warming | Peer | Impact on Community |
| Insurance | Good Profit | Pension | Impact on Society |
| Lesbians | Green Engineering | Races | Job Creation |
| Life Benefits | GRI | Racial | Less Fortunate |
| Lifestyles | Groundwater | Religious | Local Community |
| Medicaid Claims | Harmony | Reservation | Local Development |
| Medicare | Hazardous | Respect For Human Rights | Native People |
| Medicinal | Hazardous Waste | Respect For Privacy | Not For Profit |
| Minorities | HCFC | Rights to Citizenship | People Group |
| Minority | Hybrid | Salaries | Philanthropic |
| Paid Time Off | IIRC | Same-Sex | Poor Individual |
| Paid Vacation Time | ISO | Scholarships | Poor People |
| Participatory | KLD | Sexually | Preserve Culture |
| Payroll | Land Conservation | Shared Norms | Privileges |
| Peer | Natural Resources | Unfair | Profit Sharing |
| Pension | Nature | Unionized | Redeemable |
| Performance | Nuclear | Unions | Social Activities |
| Prejudiced | Organic | Unlawful | Social Inclination |
| Prescribed | Ozone | Vote | Social Issue |
| Principles | Relationship | Voting | Socially Minded |

Renewable Energy
Renewal
Resource Conservation
Star
Sustainable
Sustainable Consumption
Symbiotic
Water Purification
Water Purifications
Wildlife
Wind Energies

Wheelchair Access
Wheelchairs

Societal Development
Sponsorship
Sweat Shops
Transparent
Unemployable
Unrestricted
Unsafe
Uprooting
Urban Planning
Well-Being
Zone

# 3. Tue Gutes und sprich darüber – Kapitalmarktkommunikation von CSR Aktivitäten während der Corona Pandemie

**English title:** Do good and talk about it - capital market communication of CSR activities during the Corona pandemic

**Abstract:** The economic consequences of the Corona crisis have dominated the reporting of German firms for months. In contrast, CSR activities that are still being carried out find less resonance in media reporting. This article analyzes the reporting on CSR activities of German DAX, MDAX and SDAX firms. It shows that, despite the economic burdens, 42 % of the firms examined have taken explicit measures to mitigate the social and societal consequences of the pandemic. The measures range from monetary donations and material donations to own initiatives with national or international relevance. In addition, it is shown that this commitment is perceived positively by investors on the capital market, although this is mainly true for firms that got involved in social activism early on in the crisis.

**Keywords: CSR disclosure, pandemic, social activities, COVID**

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**Publication details:** Under review at *Der Betrieb*

# Tue Gutes und sprich darüber – Unternehmensberichterstattung über CSR Aktivitäten während der Corona-Krise

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**Zusammenfassung**

Die durch die Corona-Krise bedingten wirtschaftlichen Folgen bestimmen seit Monaten die Berichterstattung deutscher Unternehmen. Daneben finden die weiterhin betriebenen CSR Aktivitäten in der medialen Berichterstattung nur weniger Anklang. Der vorliegende Beitrag analysiert die Berichterstattung über CSR Aktivitäten deutscher DAX, MDAX und SDAX Unternehmen. Es wird aufgezeigt, dass trotz wirtschaftlicher Belastungen, 42 Prozent der untersuchten Unternehmen explizite Maßnahmen zur Abmilderung der gesellschaftlichen und sozialen Folgen der Pandemie ergriffen haben. Die Maßnahmen reichen dabei von Geldspenden über Sachspenden bis hin zu eigenen Initiativen mit nationalem oder internationalen Bezug. Ergänzend wird aufgezeigt, dass dieses Engagement positiv von Investoren am Kapitalmarkt wahrgenommen wird. Allerdings primär für Unternehmen die sich frühzeitig in der Krise engagiert haben.

## 3.1. Einleitung

Corporate Social Responsibility (CSR), d.h. die Verantwortung von Unternehmen zu einer nachhaltigen wirtschaftlichen Entwicklung beizutragen, indem sie mit ihren Mitarbeitern, deren Familien, der lokalen Gemeinschaft und der Gesellschaft im Allgemeinen zusammenarbeiten, um deren Lebensqualität zu verbessern, ist inzwischen ein integraler Bestandteil unternehmerischer Aktivität.[44] Auch die Berichterstattung hierüber nimmt zunehmend eine größere Rolle ein und wird für Investoren ebenfalls zur Determinante der Investitionsentscheidung.[45]

Gerade in Krisenzeiten ist die Übernahme unternehmerischer Verantwortung von besonderer Relevanz, um den gesellschaftlichen Zusammenhalt zu sichern und zu stärken.[46] Bisherige Forschungsevidenz basiert primär auf Aktivitäten und die Berichterstattung hierüber in wirtschaftlichen Normalzuständen.[47] Regelmäßig umfassen solche Aktivitäten beispielweise Geld- und Sachspenden für soziale und Umweltprojekte, die Unternehmen selbst initiieren oder fördern.[48]

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[44] Im Rahmen dieses Beitrages wird auf die CSR Definition des World Business Council for Sustainable Development, Corporate social responsibility: Meeting changing expectations, 1999 genutzt.:

[45] Exemplarisch sei hier die hohe Zahl an freiwilligen CSR Berichten von börsennotierten Unternehmen sowie die verpflichtende Berichterstattung im Rahmen der nicht-finanziellen Erklärung gemäß § 289c HGB zu nennen. Zur Relevanz von CSR-Informationen für Investitionsentscheidungen, vgl. Gödker/Mertins, Behavioral Research in Accounting 2018 S. 37.

[46] Gemäß einer Studie der Bertelsmann-Stiftung ist der gefühlte gesellschaftliche Zusammenhalt seit Beginn der Corona-Pandemie gesunken, vgl. Follmer/Brand/Unzicker, Gesellschaftlicher Zusammenhalt in Deutschland 2020. Eine Herausforderung für uns alle. Ergebnisse einer repräsentativen Bevölkerungsstudie, 1. Aufl. 2020, S. 11-13. Zur Relevanz unternehmerischer Verantwortung, vgl. OECD (2020), COVID-19 and Responsible Business Conduct, 2020, abrufbar unter: https://read.oecd-ilibrary.org/view/?ref=129_129619-6upr496iui&title=COVID-19-and-Responsible-Business-Conduct (Abruf: 23. 11. 2020).

[47] Berthoin Antal/Oppen/Sobczak, Journal of Business Ethics 2009 S. 285; Loew/Ankele/Braun/Clausen, Bedeutung der internationalen CSR-Diskussion für Nachhaltigkeit und die sich daraus ergebenden Anforderungen an Unternehmen mit Fokus Berichterstattung, 2004; Hutter/Berthoin Antal/Farías/Marz/Merkel/Mützel/Oppen/Schulte-Römer/Straßheim, Research program of the Research Unit" Cultural Sources of Newness", 2010.

[48] Labigne/Gilroy/Kononykhina/Hollmann/Schilcher/Riess, CC-Survey 2018: Unternehmensengagement und Corporate Citizenship in Deutschland, 2018, abrufbar unter: http://dnb.d-nb.de (Abruf: 23. 11. 2020), S.3.

Die aktuelle Corona-Pandemie bietet hier aus mehreren Gründen Anknüpfungspunkte. Zum einen besteht bisher keine Evidenz über CSR Engagement in einer derartigen Krisenzeit. Gerade in der aktuellen Pandemie ist gesellschaftliches Engagement und die Berichterstattung hierüber keine Selbstverständlichkeit. Nahezu alle Wirtschaftszweige sind in gewissem Ausmaß von der Pandemie und den damit verbundenen Einschränkungen betroffen. Im verarbeitenden Gewerbe u.a. durch verringerten Auftragseingang, im Einzelhandel durch Schließung der Geschäfte, im Gastgewerbe durch Schließung der Gastronomie und Hotellerie und im Transportsektor durch gesunkene Reiseaktivitäten.[49] Als Folge dessen liegt der unternehmerische Fokus vermutlich stärker auf wirtschaftlichen Themen. Gleichzeitig forciert die Pandemie aber auch Anreize etwaige CSR Aktivitäten zur Abmilderung selbiger zu fokussieren. Daraus entsteht auch die Möglichkeit, die CSR Aktivitäten und Berichterstattung hierüber für Unternehmen unterschiedlicher Größe und Industriezugehörigkeit zu analysieren.

Der vorliegende Beitrag analysiert die Berichterstattung deutscher DAX, MDAX und SDAX Unternehmen über aktuelle CSR Aktivitäten während der Corona-Pandemie. Weiterhin wird analysiert, ob die Berichterstattung hierüber mit signifikanten Kapitalmarktreaktionen verbunden ist.

[49] Statistisches Bundesamt, Wirtschaftliche Auswirkungen - Statistiken mit Bezug zu COVID-19, 2020, abrufbar unter: https://www.destatis.de/DE/Themen/Querschnitt/Corona/Wirtschaft/kontextinformationen-wirtschaft.html#BIP (Abruf: 19. 11. 2020).

## 3.2. Unternehmenskommunikation in Zeiten der Corona-Pandemie

### *3.2.1. Status-quo*

Die Corona-Pandemie hält seit Monaten nicht nur unsere Gesellschaft in Atem, sondern beschäftigt auch Rechnungslegungsforschung und Praxis intensiv.[50] Die Berichterstattung über die Pandemie im Rahmen der Unternehmenskommunikation ist dabei noch begrenzt.[51] Dies liegt wesentlich darin begründet, dass die Ausbreitung des Coronavirus (SARS-CoV-2) und die damit einhergehenden wirtschaftlichen Folgen überwiegend in das Kalenderjahr 2020 fallen und die Jahres- bzw. Konzernabschlüsse zum 31.10.2019 hiervon nur begrenzt betroffen sind.[52] Aus Sicht der HGB Rechnungslegung, handelt es sich bei dem Ausbruch der Pandemie um ein wertbegründendes Ereignis, welches gemäß dem Stichtagsprinzip (§ 252 Abs. 1 Nr. 3 HGB) in Abschlüssen zum 31.12.2019 nicht zu berücksichtigen war. Dies gilt auch gemäß IAS 10 3(b) i.V.m. IAS 10.10 für Abschlüsse nach IFRS.[53] Die Auswirkungen für die letzten Jahres- bzw. Konzernabschlüsse sind daher überwiegend auf qualitative Angaben gemäß § 289 HGB bzw. § 315 HGB i.V.m. mit DRS 20 beschränkt.[54]

[50] Alberti, KoR 2020 S. 197; Brauchle/Tenzer, Der Konzern 2020 S. 177; IDW Teil 1, Fachlicher Hinweis, Auswirkungen der Ausbreitung des Coronavirus auf die Rechnungslegung zum Stichtag 31.12.2019 und deren Prüfung, 2020, abrufbar unter: https://www.idw.de/blob/122498/31bce74e5b1413b91f74c9de1ea64383/down-corona-idw-fachlhinw-relepruefung-teil1-data.pdf (Abruf: 19. 11. 2020); IDW Teil 2, Fachlicher Hinweis, Aus-wirkungen der Ausbreitung des Coronavirus auf die Rechnungslegung zum Stichtag 31.12.2019 und deren Prüfung, 2020, abrufbar unter: https://www.idw.de/blob/122878/ac5e8bd6bfd88081cfdd9398ceb04032/down-corona-idw-fachlhinw-relepruefung-teil2-data.pdf (Abruf: 19. 11. 2020); IDW Teil 3, Fachlicher Hinweis, Auswirkungen der Ausbreitung des Coronavirus auf die Rechnungslegung zum Stichtag 31.12.2019 und deren Prüfung, 2020, abrufbar unter: https://www.idw.de/blob/124230/a66ec0a99b6ddb7373f6e4b1e523c3ba/down-corona-idw-fachlhinw-relepruefung-teil3-update1-data.pdf (Abruf: 19. 11. 2020); Loitz, DB 2020 S. 401; Rinker, PiR 2020 S. 345; Zwirner/Zimny, DB 2020 S. 633; *OECD-Wirtschaftsausblick*, 2020 S. 12.

[51] Für erste empirische Studien verweisen wir besonders auf Tiedemann/Ratzinger-Sakel, WPg 2020 S. 791 Hachmeister/Sigel, DB 2020a S. 905 sowie Hachmeister/Sigel, DB 2020b S. 1969.

[52] Vgl. IDW Teil 1, a.a.O. (Fn. 50), S. 1-2 und Hachmeister/Sigel, a.a.O. (Fn. 51) S. 908.

[53] Vgl. IDW Teil 1, a.a.O. (Fn. 50), S. 2.

[54] Vgl. IDW Positionspapier: Auswirkungen der Ausbreitung des Coronavirus auf Rechnungslegung und Prüfung, Teil 1 (Fachlicher Hinweis des IDW), 2020 (Stand: 04.03.2020) S. 1–6, abrufbar unter: https://www.idw.de/blob/122498/31bce74e5b1413b91f74c9de1ea64383/down-corona-idw-fachlhinw-relepruefung-teil1-data.pdf (Abruf: 19. 11. 2020).

Eine umfangreiche Berichterstattung mit Angaben zu quantitativen Effekten sowie Informationen zu unternehmerischen Reaktionen ist daher erst durch die unterjährige Berichterstattung zu erwarten.[55] Dies betrifft damit auch die Berichterstattung über CSR Aktivitäten, welche regelmäßig auf die verpflichtende Berichterstattung im Rahmen der nicht-finanziellen Erklärung oder die freiwillige Berichterstattung in Form von CSR-Berichten oder Pressemeldungen begrenzt ist.

[55] Vgl. Hachmeister/Sigel, a.a.O. (Fn. 51) S. 908.

Seit der Einführung des CSR-Richtlinie-Umsetzungsgesetzes, welches am 09.03.2017 im Bundestag beschlossen wurde, um die entsprechende EU-Richtlinie 2014/95/EU umzusetzen, sind Kapitalgesellschaften (§ 289b Abs. 1 HGB), ihnen gleichgestellte haftungsbeschränkte Personenhandelsgesellschaften und Genossenschaften verpflichtet ihren Lagebericht um eine nichtfinanzielle Erklärung zu erweitern, sofern sie (1) als groß i.S.v. § 267 Abs. 3 Satz 1 HGB eingestuft werden, (2) kapitalmarktorientiert i.S.v. § 264d HGB und (3) im Jahresdurchschnitt mehr als 500 Mitarbeiterinnen und Mitarbeiter beschäftigen. Die Kriterien sind dabei kumulativ zu erfüllen. Gleiches gilt für Kreditinstitute (§ 340a HGB) und Versicherungen (§ 341a HGB), die die Kriterien (1) und (3) erfüllen. Gemäß dem CSR-Richtlinie-Umsetzungsgesetz sind Angaben zu nichtfinanziellen Aspekten in den Bereichen Umwelt-, Arbeitnehmer- und Sozialbelange, Achtung der Menschenrechte und Bekämpfung von Korruption und Bestechung (§ 289c HGB) offenzulegen. Für jedes Geschäftsjahr ist eine nichtfinanzielle (Konzern-)Erklärung bzw. ein nichtfinanzieller Bericht entweder im Lagebericht, oder in einem gesonderten nichtfinanziellen (Konzern-) Bericht zu veröffentlichen. Auf einen gesonderten nichtfinanziellen (Konzern-)Bericht muss im (Konzern-)Lagebericht Bezug genommen werden und dieser muss entweder zeitgleich mit dem (Konzern-)Lagebericht nach § 325 HGB im Bundesanzeiger offengelegt, oder auf der Internetseite veröffentlicht werden.[56] Da die Ausbreitung des Coronavirus zum Bilanzstichtag 31.12.2019 vor allem in Deutschland kaum fortgeschritten war, ist zu vermuten, dass sich in den nichtfinanziellen Erklärungen zum 31.12.2019 auch kaum Angaben finden lassen. Viel eher ist eine Berichterstattung in der unterjährigen Unternehmenskommunikation zu vermuten. Die bisherigen wissenschaftlichen Arbeiten hierzu werden nachfolgend überblicksartig zusammengefasst.

#### *3.2.2. Stand der Forschung zur Unternehmenskommunikation während der bzw. über die Corona-Pandemie*

Erste empirische Evidenz lieferte die Studie von Hachmeister/Sigel.[57] Im Rahmen einer Analyse der Geschäftsberichte der DAX Unternehmen zeigen die Autoren auf, dass 71,43 % der untersuchten Unternehmen in den Geschäftsberichten zum 31.12.2019 auf das Coronavirus eingehen. Die Berichterstattung erfolgt dabei insbesondere im Prognosebericht, dem Chancen- und Risikobericht, dem Brief an die Aktionäre und dem Konzernanhang.

In einer darauf aufbauenden Analyse der DAX, MDAX und SDAX Unternehmen zeigen Tiedemann/Ratzinger-Sakel, dass 81,20 % der Unternehmen das Coronavirus in ihrem Geschäftsbericht thematisieren.[58] Die Berichterstattung ist somit nicht nur auf große Unternehmen begrenzt. Zudem wird gezeigt, dass MDAX und SDAX Unternehmen häufiger über das Coronavirus berichten als DAX Unternehmen. Ebenfalls fällt auch die Berichterstattung zum Thema Coronavirus bei SDAX Unternehmen am umfangreichsten aus. Zudem wird ein zeitlicher Trend in der Berichterstattung aufgezeigt. Korrespondierend mit der Verschärfung der Pandemie, fällt auch die Berichterstattung in später veröffentlichten Geschäftsberichten umfangreicher aus.

Weitere Studien befassen sich mit der unterjährigen Berichterstattung in Form von Quartalsberichten bzw. Quartalsmitteilungen sowie Ad-hoc-Mitteilungen.

Tettenborn und Höltken[59] thematisieren die Anforderungen an die unterjährige Finanzberichterstattung unter Beachtung des Coronavirus und analysieren die praktische Umsetzung anhand veröffentlichter Berichte des erste Quartals deutscher Unternehmen. Es

[56] Für detaillierte Ausführungen und die praktische Umsetzung verweisen wir exemplarisch auf Baumüller/Sopp, DB 2019 S. 1801; Fink/Bäuscher, PiR 2020 S. 105; Arbeitskreis Integrated Reporting der Schmalenbach-Gesellschaft für Betriebswirtschaft e.V., DB 2018 S. 2253; Behncke/Wulf, KoR 2019 S. 21; Behncke/Wulf, KoR 2018 S. 570.

[57] Vgl. Hachmeister/Sigel, DB 2020 S. 908.

[58] Vgl. Tiedemann/Ratzinger-Sakel, WPg 2020 S. 791.

[59] Vgl. Tettenborn/Höltken, Corporate Finance 2020 S. 205.

wird aufgezeigt, dass einzelne Unternehmen bereits im Vorfeld von Quartalsberichten bzw. Quartalsmitteilungen, Ad-hoc Meldungen veröffentlicht haben. Diese Meldungen beziehen sich unter anderem auf die wirtschaftlichen Rahmenbedingungen, die Vermögens-, Finanz- und Ertragslage, sowie Prognose und Risikoeinschätzungen. Es wird ebenfalls gezeigt, dass knapp ein Drittel der untersuchten Unternehmen auch im Kontext mit CSR Aktivitäten über das Coronavirus berichten. Auch Hachmeister und Sigel[60] analysieren Quartalsberichte der DAX Unternehmen. Es wird aufgezeigt, dass besonders im Kontext von Nachfrageveränderungen und Prognoseänderungen über das Coronavirus berichtet wird. Hachmeister und Sigel zeigen ebenfalls, dass einzelne Unternehmen auch über gesellschaftliches Engagement während der Corona-Pandemie berichten.

Im Gegensatz zu den zuvor gennannten Studien liegt der Fokus von Theis[61] auf der Kapitalmarktrelevanz der Berichterstattung während der Corona-Pandemie. Insbesondere, inwieweit Ad-hoc-Meldungen mit Bezug zur Corona-Pandemie als wesentliche neue Informationen einzustufen sind. Es wird gezeigt, dass nach Veröffentlichung einer Ad-hoc-Meldung positive und signifikant von Null verschiedene Kapitalmarktreaktionen zu beobachten sind. Zudem wird gezeigt, dass Kapitalmarktteilnehmer teilweise sogar mit wesentlich schlechteren Informationen gerechnet haben und positiv überrascht wurden.

Oben genannte Studien verdeutlichen, dass sowohl über finanzielle- und nichtfinanzielle Themen im Rahmen der Corona-Pandemie berichtet wird. Der Fokus der Berichterstattung liegt aber, unabhängig von der Berichterstattungsform, auf finanziellen Themen. Die Berichterstattung über CSR Aktivitäten ist insgesamt begrenzt und erfolgt in aggregierter Form. Eine Erklärung hierfür könnte es sein, dass Unternehmen sich einer Vielzahl an

[60] Vgl. Hachmeister/Sigel, DB 2020 S. 1969.

[61] Vgl. Theis, Corporate Finance 2020 S. 214.

Kommunikationskanälen bedienen, um mit Kapitalgebern und anderen Stakeholdern in Verbindung zu treten (Homepage, Pressemitteilungen, Regelpublizität, etc.).[62] Eine Berichterstattung über einzelne CSR Aktivitäten während der Corona-Pandemie ist folglich eher im Rahmen der unregelmäßigen, unterjährigen Berichterstattung zu vermuten.

Zudem ist offen, welche Bedeutung Kapitalmarktteilnehmer den CSR Aktivitäten während der Corona-Pandemie beimessen.

Im Rahmen der nachfolgenden Analyse werden daher Pressemeldungen auf den Homepages deutscher DAX, MDAX und SDAX Unternehmen hinsichtlich der Berichterstattung von CSR Aktivitäten erhoben und ausgewertet. Auf diese Weise können neue Einblicke in die Unternehmenskommunikation in Zeiten der Corona-Pandemie im Allgemeinen und über die Berichterstattung zu CSR Themen im speziellen gewonnen werden. In einem zweiten Schritt wird analysiert, ob CSR Aktivitäten zur Abmilderung der Corona-Pandemie für Kapitalmarktteilnehmer eine wesentliche neue Information darstellen.

## 3.3. Empirische Analyse

Ausgangspunkt für die Berichterstattung über CSR Aktivitäten deutscher Unternehmen während der Corona-Pandemie bilden die 130 Unternehmen des DAX, MDAX und SDAX zum Stichtag 07.09.2020. Der Fokus auf diese Unternehmen ergibt sich aus Größe und der damit verbundenen öffentlichen Wahrnehmung der Berichterstattung.

Für die nachfolgende Auswertung wurden 13 Unternehmen (davon 1 DAX, 5 MDAX und 7 SDAX) Unternehmen ausgenommen, da diese ihren Sitz im Ausland haben. Für die verbleibenden 117 Unternehmen wurden alle CSR Aktivitäten mit Bezug zur Corona-Pandemie aus den Pressemeldungen im Zeitraum Januar bis September 2020 von der

[62]Theis, Corporate Finance 2020 S. 214.

jeweiligen Unternehmenshomepage erhoben.[63] Der Untersuchungszeitraum zielt darauf ab insbesondere die Unternehmensaktivitäten während der ersten Coronavirus-Welle aufzuzeigen.

Die Auswahl der Pressemeldungen erfolgte dabei auf Basis der jeweiligen Überschrift. Der Fokus auf Pressemeldungen ist damit zu begründen, dass so der genaue Zeitpunkt einer Aktivität identifiziert werden kann, sowie eine Einzelanalyse der Aktivitäten möglich ist.[64] Wie im Abschnitt 3.2.2 aufgezeigt wurde, sind andere Berichtsformen zur Analyse dieser Fragestellung weniger gut geeignet.

Zur inhaltlichen Auswertung wurden die Pressemeldungen wie folgt kategorisiert:

- Datum der Veröffentlichung
- Oberthema gemäß der Einteilung der gemeinsamen Studie des Stifterverbands Zivilgesellschaft in Zahlen ZIVIZ und der Bertelsmann Stiftung[65] in die Oberkategorien:
    - Geld, Sachen, Zeit und Sonstiges
    - Empfänger (national oder international)
    - Kooperationsprojekte (ja/nein)
    - Teil des operativen Geschäfts (ja/nein)

Details zu den einzelnen Kategorien sind den jeweiligen Analyseabschnitten zu entnehmen.

[63] Bei CSR Aktivitäten, welche in mehr als einer Pressemeldung genannt wurden, wurde jeweils nur die erste Meldung berücksichtigt.

[64] Man mag einwenden, dass sich hieraus ein Selektionseffekt ergibt, da nur Aktivitäten erfasst werden, die über Pressemeldungen veröffentlicht werden. Der Fokus ist damit zu begründen, dass so – aus Unternehmenssicht – wesentliche Aktivitäten erfasst werden.

[65] Labigne/Gilroy/Kononykhina/Hollmann/Schilcher/Riess, a.a.O. (Fn. 48), S.9.

Die Messung der Kapitalmarktreaktion nach Veröffentlichung einer Pressemeldung erfolgt anhand einer Ereignisstudie.[66] Aufbauend auf bisheriger empirischer Evidenz und der Annahme eines semi-effizienten Kapitalmarktes kann die Bekanntgabe einer Information, z.B. eine Pressemeldung zu einer neuen CSR Aktivität, eine Kursreaktion auslösen, wenn es sich hierbei um eine neue, öffentliche Information handelt.[67]

Zur Messung einer (abnormalen) Kursreaktion nach der Bekanntgabe einer CSR Aktivität wird die Kursreaktion am Tag der Bekanntgabe einer Information (sog. Ereignistag) bzw. in einem begrenzten Zeitfenster um den Ereignistag (sog. Ereignisfenster) mit der theoretischen Kursreaktion ohne dieses Ereignis verglichen (sog. normale Kursreaktion).[68] Die Verwendung eines Ereignistages und Ereignisfensters ist damit zu begründen, dass der genaue Zeitpunkt einer Informationsveröffentlichung nicht identifiziert werden kann. Wird eine Pressemeldung bspw. erst nach Börsenschluss veröffentlicht, kann eine Informationseinpreisung frühestens am nächsten Handelstag erfolgen. Darüber hinaus hat die bisherige empirische Forschung aufgezeigt, dass neue Informationen nicht in einer einmaligen Reaktion eingepreist werden, sondern die Einpreisung über einen gewissen Zeitraum erfolgt.[69] Im Rahmen der Studie wird ein Ereignisfenster von -1 bis +3 Handelstage um das Ereignisfenster genutzt.

Da die Ergebnisse der Ereignisstudie primär illustrierenden Charakter haben sollen, wird zur Messung der normalen Kursreaktion auf eine vereinfachte Variante der Ereignisstudie zurückgegriffen, das sogenannte Market-Adjusted Return Model. Danach entspricht die

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[66] Für detaillierte Ausführungen verweisen wir exemplarisch auf Theis, Corporate Finance 2020 S. 214. Theis analysiert die Reaktion des Kapitalmarktes auf die Veröffentlichung von Ad-hoc Meldungen der DAX Unternehmen im Zeitraum von Januar bis April 2020.

[67] Theis, Corporate Finance 2020 S. 216.

[68] Theis, Corporate Finance 2020 S. 217.

[69] Vgl. hierzu exemplarisch Chan, Journal of Financial Economics 2003 S. 223.

theoretische Kursreaktion einer Aktie ohne Bekanntgabe einer neuen Information der Kursreaktion eines adäquaten Referenzindexes, hier der *Prime All Shares*. Dieser Vorgehensweise liegt die Annahme zugrunde, dass die Kursreaktion der einzelnen Aktie der Kursreaktion des Leitindex entspricht.[70]

Die beobachtete abnormale Kursreaktion am Ereignistag bzw. die kumulierte abnormale Kursreaktion im Ereignisfenster wird abschließend anhand eines zweiseitigen t-Tests statistisch getestet.

## 3.4. Ergebnisse

### *3.4.1. Überblick*

Tabelle 14 gibt einen Überblick über die Häufigkeit der CSR Aktivitäten mit Bezug zur Corona-Pandemie insgesamt und differenziert nach Indexzugehörigkeit. Im Zeitraum von Januar bis einschließlich September 2020 wurden insgesamt 199 Pressemeldungen zu CSR Aktivitäten mit Bezug zur Corona-Pandemie von 61 verschiedenen Unternehmen veröffentlicht. Insgesamt haben also 42,07 % aller Unternehmen mindestens eine Aktivität zur Abmilderung der Corona-Pandemie durchgeführt.

Differenziert nach Unternehmensgröße, gemessen an der Indexzugehörigkeit, lässt sich ein Größentrend beobachten. 79,31 % aller analysierten DAX Unternehmen haben mindestens eine CSR Aktivität durchgeführt, hingegen nur 46,30 % aller MDAX und 20,97 % aller SDAX Unternehmen. Es kann somit gefolgert werden, dass größere Unternehmen öfter zur Abmilderung der Corona-Pandemie beigetragen haben.[71]

**Tabelle 14: Überblick der CSR Aktivität**

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[70] Vgl. Dyckman/Philbrick/Stephan, Journal of Accounting Research 1984 S. 4.

[71] Ein alternativer Erklärungsansatz wäre, dass kleinere Unternehmen ebenfalls vergleichbare CSR Aktivitäten betreiben, diese aber nicht veröffentlichen. Diese These kann auf Basis der öffentlich verfügbaren Informationen nicht bestätigt oder widerlegt werden. Im Rahmen des Beitrages wird die Annahme gesetzt, dass alle relevanten CSR Aktivitäten anhand von Pressemeldung kommuniziert wurden.

| | Unternehmen | Davon mit CSR Pressemeldung | Relativer Anteil |
|---|---|---|---|
| DAX | 29 | 23 | 79,31% |
| MDAX | 54 | 25 | 46,30% |
| SDAX | 62 | 13 | 20,97% |
| Insgesamt | 145 | 61 | 42,07% |

Tabelle 15 gibt einen Überblick über die Anzahl der CSR Aktivitäten pro Unternehmen insgesamt und differenziert nach Indexzugehörigkeit. Grundsätzlich wird jede Pressemeldung als eine Aktivität gezählt, auch wenn in Einzelfällen die Meldung auf einen Maßnahmenplan bzw. mehrere Aktivitäten abzielt.[72] Die Anzahl der CSR Aktivitäten wird im Rahmen der Analyse somit unterschätzt.

Die Anzahl der Pressemeldungen deutet auf Unterschiede im Umfang der CSR Aktivitäten hin. Von den 61 Unternehmen in der Stichprobe berichten 22 Unternehmen lediglich über eine Aktivität und 16 Unternehmen über zwei Aktivitäten. Im Gegensatz dazu berichten 3 Unternehmen über mehr als 10 Aktivitäten.

Differenziert nach Indexzugehörigkeit bestätigt sich die Feststellung der vorangegangenen Analyse, dass größere Unternehmen regelmäßige CSR Aktivitäten durchführen. Im Durchschnitt haben DAX Unternehmen 4,65 CSR Aktivitäten (Maximum: 15), MDAX Unternehmen 2,68 Aktivitäten (Maximum 12) und SDAX Unternehmen 1,92 (Maximum 7) durchgeführt.[73]

**Tabelle 15: Anzahl CSR Aktivitäten pro Unternehmen**

| Anzahl CSR Aktivitäten pro Unternehmen | Anzahl Unternehmen | DAX | MDAX | SDAX |
|---|---|---|---|---|
| 1 | 22 | 4 | 10 | 8 |
| 2 | 16 | 5 | 8 | 3 |

[72] Dies betrifft insgesamt 13 Pressemeldungen. Exemplarisch sei hier die Meldung von Infineon am 23.06.2020 zu nennen. In dieser Meldung wird die Mitwirkung in insgesamt 22 Initiativen erläutert.

[73] Inkludiert man in die Berechnung Unternehmen ohne CSR Aktivität im Analysezeitraum, so ergeben sich nachfolgende Werte: DAX: 3,69; MDAX: 1,24; SDAX: 0,40 CSR Aktivitäten.

| | | | | |
|---|---|---|---|---|
| 3 | 4 | 2 | 2 | 0 |
| 4 | 5 | 3 | 1 | 1 |
| 5-10 | 11 | 7 | 3 | 1 |
| >10 | 3 | 2 | 1 | 0 |

Tabelle 16 gibt einen Überblick über die Anzahl der CSR Aktivitäten je Industriesektor. Die Einteilung erfolgt auf Basis der Kategorisierung der Deutschen Börse.

Wenngleich die geringe Anzahl an Unternehmen je Sektor keine Rückschlüsse auf etwaige Unterschiede im Querschnitt erlaubt, so ist zumindest erkennbar, dass über alle Sektoren hinweg Unternehmen CSR Aktivitäten zur Abmilderung der Corona-Pandemie ergriffen haben.[74]

[74] Differenziert man die CSR Aktivitäten nach der Nähe zur operativen Tätigkeit eines Unternehmens, so stehen 42,71% der Aktivitäten in einem direktiven Zusammenhang mit der operativen Tätigkeit des Unternehmens.

**Tabelle 16: Anzahl CSR Aktivitäten je Sektor**

| Sektor | Durchschnitt CSR Aktivitäten | Anzahl Unternehmen |
|---|---|---|
| Automobile | 5,14 | 7 |
| Banks | 3,00 | 3 |
| Chemicals | 5,00 | 8 |
| Construction | 2,00 | 1 |
| Consumer | 3,17 | 6 |
| Financial Services | 3,00 | 3 |
| Industrial | 1,29 | 7 |
| Insurance | 1,33 | 3 |
| Media | 2,50 | 2 |
| Pharma & Healthcare | 2,00 | 4 |
| Real Estate | 5,00 | 1 |
| Retail | 2,20 | 5 |
| Software | 2,00 | 2 |
| Technology | 1,00 | 2 |
| Telecommunication | 8,00 | 2 |
| Transportation & Logistics | 4,67 | 3 |
| Utilities | 2,00 | 1 |
| Insgesamt | 3,25 | 60 |

### 3.4.2. Themen der CSR Aktivitäten

Tabelle 17 gibt einen Überblick über die Themen der CSR Aktivitäten differenziert nach Indexzugehörigkeit. Dem Gliederungsschema der Studie des Stifterverbands Zivilgesellschaft in Zahlen ZIVIZ und der Bertelsmann Stiftung folgend, werden die Aktivitäten in die Kategorien *Geld*, *Sachen*, *Zeit* und *Sonstiges* eingeteilt. Die Oberkategorie *Geld* umfasst Geldspenden, z.B. an einen Hilfsfonds. Die Oberkategorie *Sachen* umfasst Sachspenden, z.B. die Spende von Schutzmasken, und Nutzungsüberlassungen, wie die Bereitstellung von eigener Lagerkapazität für andere Unternehmen. Die Oberkategorie *Zeit* umfasst die Bereitstellung von kostenlosen Dienstleistungen, z.B. der kostenlose Transport von medizinischer Ausrüstung. Des Weiteren werden in dieser Kategorie Mitarbeiterfreistellungen, z.B. für den ehrenamtlichen Einsatz im medizinischen Bereich, und anlassbezogene Unterstützung, z.B. die Abstellung von Krisenteams, erfasst. Die Oberkategorie *Sonstiges* umfasst alle weiteren Aktivitäten, wie z.B. Aktivitäten von Stiftungen (z.B. die Airbus Stiftung beförderte gemeinsam mit dem Chilenischen Roten Kreuz über 600 Kilogramm medizinische Hilfsgüter, welche im Kampf gegen das Coronavirus in Chile benötigt werden), Projekte im eigenen Unternehmen (z.B. Continental produziert täglich 80.000 medizinische Masken in Hannover-Stöcken) und Aktivitäten zur Verbreitung von wichtigen Informationen (So nutzt beispielsweise Daimler seine globale Social Media Reichweite, um die Informationsverbreitung zur Corona-Pandemie zu unterstützen).

Von den 199 CSR Aktivitäten lassen sich 28 (21,6 %) der Oberkategorie Geld, 68 (34,2 %) der Oberkategorie Sachen, 43 (21,6 %) der Oberkategorie Zeit und 60 (30,2 %) der Oberkategorie Sonstiges zuordnen. Insgesamt wird also ein breites Spektrum an Aktivitäten verfolgt. Differenziert nach Indexzugehörigkeit ist zu beobachten, dass DAX und MDAX Unternehmen jeweils überwiegend Aktivitäten aus der Oberkategorie Sachen verfolgen (relativer Anteil DAX: 34,6 %; MDAX: 35,8 %) und SDAX Unternehmen überwiegend Aktivitäten aus der Oberkategorie Sonstiges. Insgesamt führen Unternehmen aus allen Indizes Aktivitäten aus allen Bereichen durch. Es besteht somit kein Zusammenhang zwischen der Unternehmensgröße und den durchgeführten Aktivitäten.

Differenziert nach Sektor ist zu erkennen, dass Aktivitäten aus der Oberkategorie Sachen besonders von Unternehmen aus dem Sektor Chemicals (26 von 68 Fälle) sowie Automobile (14 von 68 Fälle) durchgeführt werden. Unternehmen aus diesen beiden Sektoren dominieren auch in Bezug auf die anderen Oberkategorien. Lediglich in der Oberkategorie Zeit wird eine Mehrzahl der Aktivitäten von Unternehmen aus den Sektoren Telecommunication (9 von 39 Fälle) und Transportation & Logistics (8 von 39 Fälle) durchgeführt.

**Tabelle 17: Themen der CSR Aktivitäten**

| | Geld | Sachen | Zeit | Sonstiges |
|---|---|---|---|---|
| DAX | 16 | 37 | 21 | 33 |
| MDAX | 7 | 24 | 19 | 17 |
| SDAX | 5 | 7 | 3 | 10 |
| Insgesamt | 28 | 68 | 43 | 60 |

### *3.4.3. Zeitpunkt der CSR Aktivitäten*

Der erste bekannte Coronavirus-Fall weltweit wurde im Dezember 2019 in Wuhan, China diagnostiziert. Am 27.01.2020 wurde der erste Fall in Deutschland nachgewiesen. Ab Anfang März wurden in Deutschland verschiedene Maßnahmen ergriffen, um die Pandemie zu begrenzen, z.B. die europaweiten Grenzschließungen ab Mitte März und die Pflicht zum Tragen von Alltagsmasken ab Ende April.[75]

[75]Vgl. Bundesministerium für Gesundheit, Coronavirus SARS-CoV-2: Chronik der bisherigen Maßnahmen, 2020, abrufbar unter: https://www.bundesgesundheitsministerium.de/coronavirus/chronik-coronavirus.html (Abruf: 23. 11. 2020); Europäischer Rat, Zeitleiste – Maßnahmen des Rates gegen COVID-19, 2020, abrufbar unter: https://www.consilium.europa.eu/de/policies/coronavirus/timeline/# (Abruf: 23. 11. 2020).

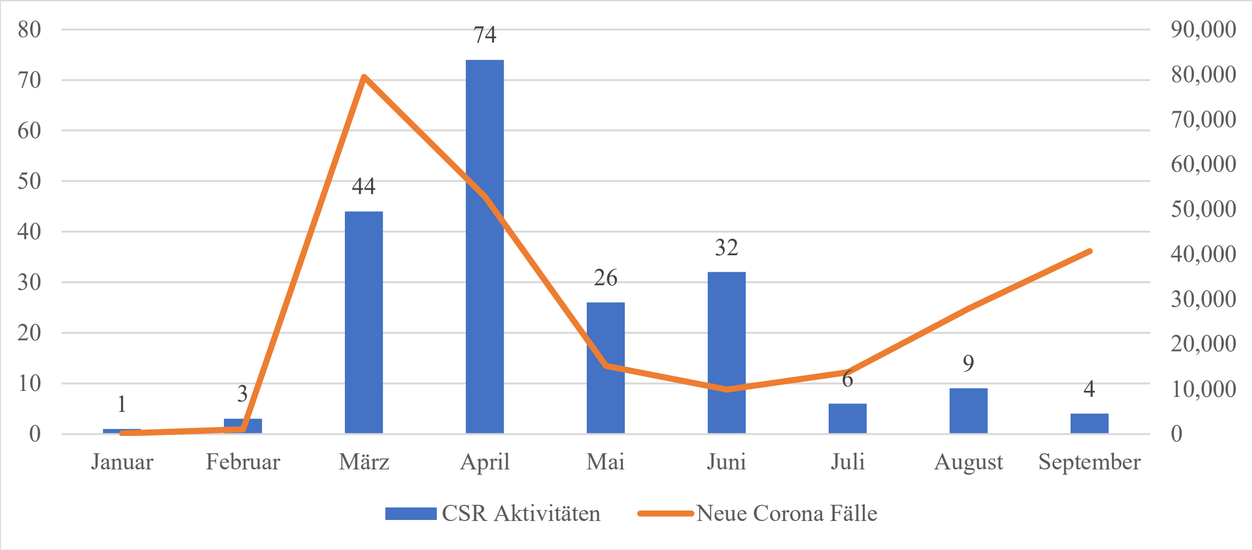
Betrachtet man die Häufigkeit der CSR Aktivitäten im Zeitablauf gemessen am Datum der Veröffentlichung der Pressemeldung, so zeigt sich ein Verlauf, der mit der Entwicklung der Fallzahlen vergleichbar ist.[76] Abbildung 2 zeigt die Ergebnisse.[77] Im Januar und Februar, der Frühphase der Pandemie, lassen sich nur vereinzelte CSR Aktivitäten beobachten. Während der ersten Hochphase in Deutschland nehmen auch die CSR Aktivitäten sprunghaft zu und erreichen mit 74 Fällen im April den Höchststand. Danach, ähnlich den Fallzahlen, nahmen die CSR Aktivitäten wieder ab und waren in den letzten drei Monaten der Untersuchung (Juli bis September) auf Monatsebene lediglich im einstelligen Bereich. Eine Auswertung auf Ebene der Kalenderwochen zeigt, dass die höchste Anzahl an CSR Aktivitäten auch in die Periode mit bis dahin höchsten Fallzahlen fällt.

Differenziert nach Indexzugehörigkeit ergibt sich ein vergleichbares Bild für alle drei Unternehmensgruppen. D.h. die meisten CSR Aktivitäten sind für DAX, MDAX und SDAX Unternehmen jeweils im März und April zu beobachten und nehmen danach wieder ab.

[76] Es sei angemerkt, dass regelmäßig erst nach Abschluss der CSR Aktivitäten darüber berichtet wird und die Aktivitäten oft längere Zeiträume umspannen. Der genaue Zeitpunkt einer CSR lässt sich nicht durchweg identifizieren. Die Sortierung auf Basis der Pressemeldung ist daher eine notwendige Approximation.

[77] Robert Koch Institut, NPGEO Corona, 2020, abrufbar unter: https://npgeo-corona-npgeo-de.hub.arcgis.com/datasets/dd4580c810204019a7b8eb3e0b329dd6_0?selectedAttribute=Refdatum (Abruf: 26. 11. 2020).

**Abbildung 2: CSR Aktivitäten pro Monat**




### *3.4.4. Adressaten der CSR Aktivitäten*

Tabelle 18 gibt einen Überblick über die Adressaten der CSR Aktivitäten. Die Zuordnung erfolgt auf Basis der Beschreibung in den Pressemeldungen. Durch die weltweite Verbreitung der Pandemie und die internationale Orientierung sowie Aktionärsstruktur zahlreicher deutscher Unternehmen ist zu vermuten, dass sich deutsche Unternehmen nicht nur national, sondern auch international engagieren.

Im Durchschnitt richten sich 77,39 % der CSR Aktivitäten an nationale Adressaten und 22,61 % der Aktivitäten auch an internationale Adressaten. Es fällt auf, dass DAX Unternehmen den höchsten Anteil an CSR Aktivitäten mit internationalem Bezug aufweisen (32,71 %). Es ist zudem anzumerken, dass die ersten CSR Aktivitäten, welche im Januar und Februar bekannt gegeben wurden, überwiegend international ausgerichtet sind (3 von 4 Aktivitäten mit internationalem Bezug). Diese Aktivitäten richten sich speziell an die Unterstützung der Bevölkerung in der chinesischen Provinz Wuhan.

**Tabelle 18: Adressaten der CSR Aktivitäten**

| | National | | International | |
|---|---|---|---|---|
| | **Absolut** | **Relativ** | **Absolut** | **Relativ** |
| DAX | 72 | 67,29% | 35 | 32,71% |
| MDAX | 63 | 94,03% | 4 | 5,97% |
| SDAX | 19 | 76,00% | 3 | 24,00% |
| Insgesamt | 154 | 77,39% | 45 | 22,61% |

### *3.4.5. Kooperation im Rahmen von CSR Aktivitäten*

Tabelle 19 gibt einen Überblick, ob CSR Aktivitäten allein oder zusammen mit weiteren Gruppen, z.B. anderen Unternehmen oder Verbänden, durchgeführt wurden. Die Einteilung erfolgt auf Basis der Erläuterung in der Pressemeldung.

Insgesamt beträgt der Anteil der Projekte in Kooperation lediglich 22,11 %. Differenziert nach Indexzugehörigkeit ist eine leichte Tendenz erkennbar, dass größere Unternehmen häufiger CSR Aktivitäten in Kooperation durchführen. Für DAX Unternehmen beträgt der Anteil der Kooperationsprojekte 25,36 %, für MDAX Unternehmen 22,39 % und für SDAX Unternehmen 16,00 %. Auf Grund der geringen relativen Anteile sollte diese Tendenz aber nicht überinterpretiert werden.

**Tabelle 19: Kooperation oder unabhängige Aktivitäten**

| | Kooperation | | Unabhängig | |
|---|---|---|---|---|
| | **Absolut** | **Relativ** | **Absolut** | **Relativ** |
| DAX | 25 | 25,36% | 82 | 76,64% |
| MDAX | 15 | 22,39% | 52 | 77,61% |
| SDAX | 4 | 16,00% | 21 | 84,00% |
| Insgesamt | 44 | 22,11% | 155 | 77,89% |

### *3.4.6. Kapitalmarktrelevanz der CSR Aktivitäten*

Die bisherigen Analysen haben aufgezeigt, dass Unternehmen aus dem DAX, MDAX und SDAX sich in vielfältiger Weise zur Abmilderung der Corona-Pandemie engagieren. Offen ist jedoch die Frage, ob dieses Engagement vom Kapitalmarkt wahrgenommen und positiv bzw. negativ bewertet wird. Die Ergebnisse der Ereignisstudie sollen hierzu Indikationen geben.

Tabelle 20 zeigt die durchschnittliche abnormale Kursreaktion am Ereignistag, d.h. die Differenz zwischen realisierter Kursreaktion abzüglich der Kursreaktion des Prime All Shares, sowie die kumulierte abnormale Kursreaktion im Zeitfenster von -1 bis +3 Tagen um den Ereignistag an. Zur Messung der Signifikanz ist der p-Wert des zweiseitigen t-Tests angegeben.

Für diese Analyse müssen 21 Pressemeldungen ausgeschlossen werden. 7 Pressemeldungen wurden ausgeschlossen, da die Bekanntgabe am Wochenende erfolgte und somit keine Daten über die Kursreaktion am Ereignistag vorliegen. Weitere 14 Meldungen wurden ausgeschlossen, da einzelne Unternehmen mehrere Pressemeldungen über CSR Aktivitäten an einem Tag veröffentlicht haben. In diesen Fällen kann die Kursreaktion am Ereignistag nicht mehr eindeutig einer Aktivität zugeordnet werden (sog. *confounding events*).[78]

Die Auswertung zeigt, dass die durchschnittliche abnormale Kursreaktion am Ereignistag statistisch nicht signifikant von Null verschieden ist, d.h. die Bekanntgabe von CSR Aktivitäten wird am Ereignistag weder positiv noch negativ bewertet. Betrachtet man hingegen die kumulierte abnormale Marktreaktion im Zeitfenster von -1 bis +3 Tagen um das Ereignisfenster, so ergibt sich eine abnormale Kursreaktion von 1,14 % welche statistisch signifikant auf dem 5 %-Signifikanzniveau von Null verschieden ist. Dies stützt die These, dass CSR Aktivitäten während der Corona-Pandemie eine neue und positiv überraschende Information für den Kapitalmarkt darstellen. Differenziert nach Indexzugehörigkeit ergeben sich positive, durchschnittliche, kumulierte und abnormale Kursreaktionen für DAX (0,26 %), MDAX (1,65 %) und SDAX (3,32 %) Unternehmen. Die

[78] Vgl. Röder, Kurswirkungen von Meldungen deutscher Aktiengesellschaften, 1999 S. 33ff.

Kursreaktion ist lediglich für MDAX und SDAX Unternehmen auf dem 10 %-Niveau signifikant von Null verschieden. Die Kursreaktion für DAX Unternehmen ist statistisch insignifikant.

**Tabelle 20: Abnormale Kursreaktion als Folge von CSR Aktivitäten während der Corona-Pandemie**

| | Beobachtungen | Ereignistag | p-Wert | Ereignisfenster {-1;3} | p-Wert |
|---|---|---|---|---|---|
| Insgesamt | 178 | 0,30% | 0,198 | 1,14% | **0,012** |
| DAX | 94 | -0.10% | 0,658 | 0,26% | 0,578 |
| MDAX | 60 | 0.38% | 0,375 | 1,65% | **0,059** |
| SDAX | 24 | 1.67% | 0,110 | 3,32% | **0,072** |

Abbildung 3 gibt einen Überblick über die durchschnittliche abnormale Kursreaktion im Ereignisfenster je Kalendermonat.[79]

Es ist zu vermuten, dass *First Mover* im Bereich CSR stärker von der positiven Überraschung des Kapitalmarktes profitieren, als *Late Mover*. Dies ist damit zu erklären, dass zu Beginn der Pandemie weniger stark mit CSR Engagement in diesem Bereich zu rechnen war. Hingegen in den späteren Phasen der Pandemie, als bereits zahlreiche Unternehmen aktiv waren, sind zusätzliche Aktivitäten für Kapitalmarktteilnehmer weniger überraschend.[80] Die Ergebnisse in Abbildung 3 bestätigen diese These für die Monate Februar, März und April. In diesen Monaten können durchschnittliche abnormale Kursreaktionen von mehr als 1,00 % beobachtet werden.[81] Für die Folgemonate nimmt die durchschnittliche abnormale Kursreaktion ab und liegt durchweg bei weniger als 1,00 %.

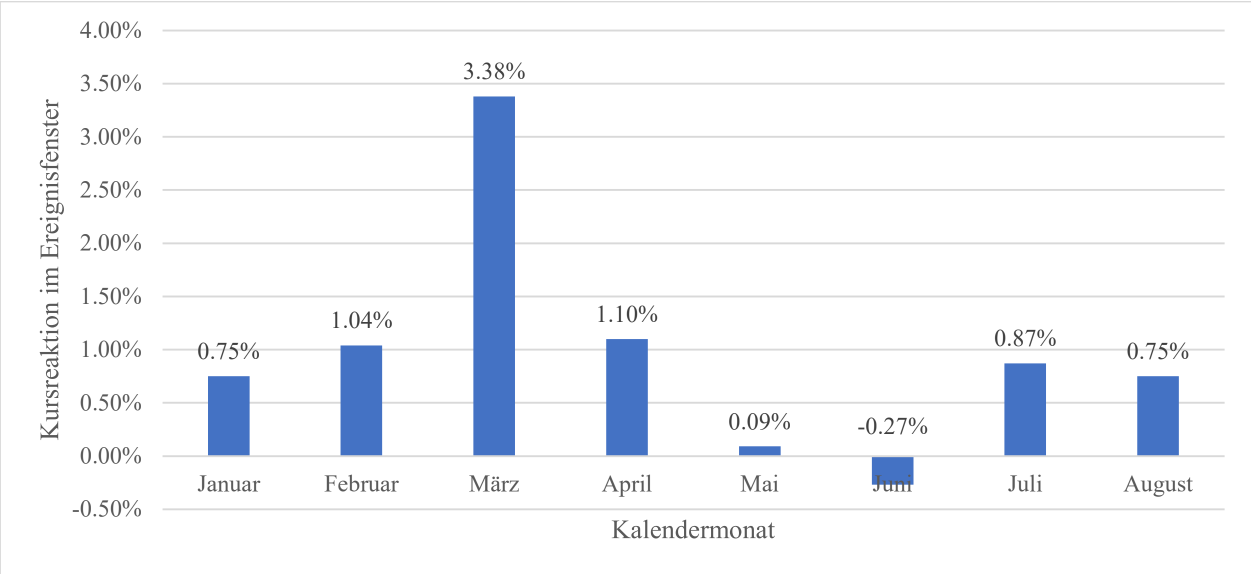
[79] Eine Analyse der Kursreaktion in Abhängigkeit der Art der CSR Aktivität erfolgt bewusst nicht. Nach Auffassung der Autoren ist grundsätzlich jedes CSR Engagement von Unternehmen positiv zu sehen, unabhängig davon, ob diese Aktivität zu einer positiven Kapitalmarktreaktion führt. Eine Analyse der Kursreaktion je Oberkategorie birgt daher das Risiko eines Fehlschlusses.

[80] Die Argumentation basiert auf den Ausführungen von Kopel, Strategic CSR, Spillovers, and First-Mover Advantage, 2009, abrufbar unter: https://ssrn.com/abstract=1408632 (Abruf: 23. 11. 2020).

[81] Die Ergebnisse für die Monate Januar und Februar sollten zurückhaltend interpretiert werden, da die Werte nur auf einer bzw. drei Pressemeldungen basieren.

Für den Monat März ist die Kursreaktion auf dem 10 % Signifikanz-Niveau und für den Monat April auf dem 5 % Signifikanz-Niveau von Null verschieden. In allen übrigen Monaten ist die Kursreaktion statistisch nicht von Null verschieden. Es kann somit festgehalten werden, dass frühzeitiges CSR Engagement besonders positiv vom Kapitalmarkt bewertet wird.

**Abbildung 3: Durchschnittliche abnormale Kursreaktion je Kalendermonat**




## 3.5. Zusammenfassung

Die durch das Coronavirus bedingten wirtschaftlichen Folgen bestimmen seit Monaten die Berichterstattung deutscher Unternehmen. Andere Themen, insbesondere die CSR Aktivitäten deutscher Unternehmen sind daneben etwas in den Hintergrund gerückt. Der vorliegende Beitrag analysiert daher die Berichterstattung von CSR Aktivitäten der DAX, MDAX und SDAX Unternehmen zur Abmilderung der Folgen der Corona-Pandemie.

Die Auswertung der 199 Pressemeldungen zeigt, dass knapp 42 % der untersuchten Unternehmen CSR Aktivitäten zur Abmilderung der Folgen der Corona-Pandemie durchgeführt haben. Besonders DAX Unternehmen sind dabei verstärkt aktiv geworden. Über die verschiedenen Industriesektoren hinweg lässt sich kein systematischer Unterschied erkennen. Thematisch liegt der Schwerpunkt der Aktivitäten auf Geld- und Sachspenden und richtet sich überwiegend an nationale Zielgruppen. In zeitlicher Hinsicht deckt sich die Häufigkeit der Aktivitäten mit der Entwicklung der Fallzahlen in Deutschland, d.h. die Mehrzahl der Aktivitäten fällt in die Phase des ersten Lockdowns ab März 2020 und nimmt nach dem ersten Lockdown wieder ab. Es kann somit dokumentiert werden, dass sich kapitalmarktorientierte Unternehmen auch während starker wirtschaftlicher Belastungen aktiv für die Gesellschaft engagieren. Im Rahmen einer Ereignisstudie kann darüber hinaus gezeigt werden, dass diese Aktivitäten positiv vom Kapitalmarkt bewertet werden und die Bekanntgabe dieser Aktivitäten mit statistisch signifikanten Kapitalmarktreaktionen verbunden ist. CSR Aktivitäten haben somit auch positive Effekte für Unternehmen in Form einer höheren Kapitalmarktbewertung.

Langfristig bleibt abzuwarten, inwieweit der erhöhte Fokus auf Coronavirus bezogene Aktivitäten zu einer Verschiebung des CSR Engagement insgesamt führt und inwieweit Unternehmen bei einer andauernden Pandemie auch langfristig Flagge zeigen, oder ob die abnehmende Tendenz der letzten Monate Bestand hat.

## 4. Unternehmerische Berichterstattung zur Bekämpfung des Klimawandels – Wie kann Publizitätsregulierung klimafreundliches Handeln von Unternehmen forcieren?

**Abstract:** Climate change is increasingly becoming an existential challenge for humanity. This article shows how stricter obligations for environmental reporting in the context of capital market communication can make a positive contribution to climate change. To fight climate change, many countries, including Switzerland, signed the Paris Agreement in 2016 within the United Nations Framework Convention on Climate Change (UNFCCC). Among other measures, regulators can mandate corporate environmental reporting to counteract climate change. Previous empirical research indicates the effectiveness of environmental disclosure regulation for desired, climate-friendly behavior. This essay provides a framework to understand the mechanics behind this causality. Theoretical underlining is the so-called *Transparency Action Cycle* (TAC) which is developed by Fung et al. (2007) and is further specified by Hombach and Sellhorn (2019). The TAC establishes a link between disclosure regulation and the behavior of firms affected by disclosure regulation. It consists of six consecutive steps and is based on the assumption that firms' disclosure influences the following behavior of recipients (e.g., investors, customers, employees, or NGOs).

**Keywords:** Non-financial disclosure regulation, Transparency Action Cycle, real effects

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Der Klimawandel wird zunehmend zur existenziellen Herausforderung für die Menschheit. Dieser Beitrag zeigt auf, wie strengere Pflichten zur umweltbezogenen Berichterstattung im Rahmen der Kapitalmarktkommunikation einen positiven Beitrag zum Klimawandel leisten können. Der Wirkungszusammenhang wird anhand des Transparency Action Cycle illustriert.

## 4.1. Einleitung

Aus wissenschaftlicher Sicht gilt der menschliche Einfluss auf den anhaltenden Klimawandel als erwiesen [1]. Die Auswirkungen auf die Gesellschaft, Umwelt und Wirtschaft sind bereits heute spürbar, und die Konsequenzen des Klimawandels dominieren zunehmend die Medien [2]. Auch in der Schweiz sind die Folgen des Klimawandels spürbar. Einer Studie des National Centre for Climate Services zufolge, ist die Lufttemperatur in den letzten 150 Jahren um etwa 2° C gestiegen. Dies liegt über dem globalen durchschnittlichen Temperaturanstieg von 0,9° C [3].

Die Schweiz hat sich im Rahmen des Pariser Klimaübereinkommens bereits ambitionierte Ziele gesteckt, und zusätzlich soll bis 2050 eine Netto-Null-Emission erreicht werden. Das bedeutet, dass nicht mehr Treibhausgase ausgestoßen werden sollen als natürliche und technische Speicher aufnehmen können [4].

Um die Emission von Unternehmen zu verringern, werden vonseiten des Regulierers bisher Umweltauflagen, Subventionen, Emissionshandelssysteme oder Lenkungsabgaben eingesetzt. Im Rahmen dieses Beitrags soll aufgezeigt werden, wie eine zusätzliche, verpflichtende Berichterstattung als Teil der Kapitalmarktkommunikation eine positive Wirkung auf ökologisches Handeln entfalten kann.

## 4.2. Typische Maßnahmen zur Beeinflussung Unternehmerischer Aktivitäten

In der Tabelle werden die üblicherweise ergriffenen regulatorischen Instrumente kurz vorgestellt und anhand ausgewählter Beispiele zur Förderung umweltfreundlicher Aktivitäten in der Schweiz illustriert [5].

**Tabelle 21: Regulatorische Instrumente zur Förderung umweltfreundlicher Aktivitäten**

| **Regulatorisches Instrument** | **Konzept** | **Ausgewählte Beispiele in der Schweiz** |
| --- | --- | --- |
| Umweltauflagen | Gesetzliche Gebote oder Verbote mit umweltbezogener Wirkung | • Verbote im Rahmen der Chemikalien-Risikoreduktions-Verordnung (ChemRRV)[82].<br>• $CO_2$ Zielwerte für Personenwagen (Art. 10 Abs. 1 $CO_2$-Gesetz[83]).<br>• Vorgaben zur Emissionssenkung für Alt- und Neubauten (Art. 9 Abs. 1 $CO_2$-Gesetz). |
| Subventionen | Schaffung finanzieller Anreize zur Förderung umweltbezogener Aktivitäten | • Direktzahlungen an Landwirtschaftsbetriebe, welche die Biodiversität fördern (Art. 104 Abs. 1 Bst. b BV[84]; Art. 73 LwG).<br>• Zuschüsse zur Förderung von Innovationen, die Treibhausgase oder den Ressourcenverbrauch reduzieren (Art. 35 Abs. 3 $CO_2$-Gesetz). |

[82] Verordnung zur Reduktion von Risiken beim Umgang mit bestimmten besonders gefährlichen Stoffen, Zubereitungen und Gegenständen vom 18. Mai 2005 (Chemikalien-Risikoreduktions-Verordnung, ChemRRV, SR 814.81).

[83] Bundesgesetz über die Reduktion der CO2-Emissionen vom 23. Dezember 2011 (CO2-Gesetz, SR 641.71).

[84] Bundesverfassung der Schweizerischen Eidgenossenschaft vom 18. April 1999 (Bundesverfassung, BV, SR 101).

| | | |
|---|---|---|
| Emissionshandel | Zuteilung und Handel von Emissionszertifikaten zur Begrenzung der Emissionen und zur Schaffung finanzieller Anreize zur Emissionsreduktion | • European Union Emissions Trading System (EU ETS)[85]. Seit Januar 2020 ist das EU ETS mit dem Schweizer Emissionshandel gekoppelt[86]. |
| Lenkungsabgaben | Zusatzabgaben für unerwünschte Emissionen/Stoffe | • VOC-Abgabe auf bestimmte flüchtige organische Substanzen (VOCV)[87].<br>• $CO_2$-Abgabe auf fossile Heizstoffe (Art. 93 und Art. 94 CO2-Verordnung[88]). |

## 4.3. Verpflichtende Berichterstattung als Instrument zur Beeinflussung Unternehmerischer Aktivitäten

### *4.3.1. Transparenzregulierung im Allgemeinen*

Die Pflicht, standardisierte Informationen zu veröffentlichen, ist allgegenwärtig und nicht nur auf die Kapitalmarktkommunikation begrenzt. Ein bekanntes Beispiel ist die Angabe von Inhaltsstoffen bei Lebensmitteln (LIV [13]). Zielsetzung dieser Pflichtpublizität ist nicht

[85] Richtlinie 2003/87/EG des Europäischen Parlaments und des Rates vom 13. Oktober 2003 über ein System für den Handel mit Treibhausgasemissionszertifikaten in der Gemeinschaft und zur Änderung der Richtlinie 96/61/EG des Rates (Emissionshandelsrichtlinie, EH-RL 2003/87/EG).

[86] Abkommen zwischen der Schweizerischen Eidgenossenschaft und der Europäischen Union zur Verknüpfung ihrer jeweiligen Systeme für den Handel mit Treibhausgasemissionen, abgeschlossen in Bern am 23. November 2017 (SR 0.814.011.268).

[87] Verordnung über die Lenkungsabgabe auf flüchtigen organischen Verbindungen vom 12. November 1997 (VOCV, SR 814.018).

[88] Verordnung über die Reduktion der CO2-Emissionen vom 30. November 2012 (CO2-Verordnung, SR 641.711).

nur die Bereitstellung von mitunter lebenswichtigen Informationen für Konsumenten, sondern auch das Schaffen von Anreizen für eine gesunde Ernährung,

da die Folgen von z.B. Fettleibigkeit langfristig hohe Kosten für Betroffene und die Gesellschaft verursachen [14]. Ohne eine entsprechende Kennzeichnung ist es Konsumenten oft nicht bewusst, welche gesundheitlichen Folgen mit bestimmten Lebensmitteln verbunden sein können. Es geht also nicht nur um die Bereitstellung von Informationen, sondern auch um eine Verhaltenssteuerung der Konsumenten. Zur Förderung einer klimafreundlichen Ernährung bieten inzwischen auch einige Anbieter, wie z.B. das Schweizer Unternehmen Eaternity, CO2-Kennzeichnungen für Lebensmittel an. Auf diese Weise soll das Bewusstsein für die eigene Klimabilanz geschärft werden [15].

Aus dieser Verhaltenssteuerung resultieren wirtschaftliche Effekte für Unternehmen bzw. im obigen Beispiel Lebensmittelproduzenten. Besser informierte Konsumenten verändern ihr Verhalten und kaufen beispielweise verstärkt gesündere oder umweltfreundlichere Lebensmittel. Dies kann zu einem Umsatzrückgang bei Produzenten von weniger gesunden Lebensmitteln führen und somit wirtschaftliche Anreize zur Anpassung des Produktportfolios schaffen [16].

#### *4.3.2. Transparency Action Cycle*

Der oben angeführte Wirkungszusammenhang lässt sich auch auf die Kapitalmarktkommunikation von Unternehmen und zum Wohle des Klimawandels übertragen. Theoretische Grundlage hierzu liefert der Transparency Action Cycle (TAC) [17]. Der TAC stellt einen Wirkungszusammenhang zwischen Publizitätsregulierung und dem Handeln der von Publizitätsregulierung betroffenen Unternehmen her (siehe Abbildung) [18].


**Abbildung 4: Transparency Action Cycle [19]**

Der von Fung et al. 2007 konzipierte und von Hombach und Sellhorn 2019 weiterentwickelte TAC basiert auf der Überlegung, dass das Veröffentlichen von Informationen durch Unternehmen das Verhalten der Rezipienten beeinflusst. Als Reaktion auf das (zu erwartende) geänderte Verhalten der Rezipienten reagieren Unternehmen durch Anpassung ihrer Handlungen.

Der TAC betrachtet zum einen gewinnmaximierende Unternehmen, die Informationen bereitstellen, und zum anderen Stakeholder, welche direkt oder indirekt mit Unternehmen interagieren, wie z.B. Investoren, Kunden, Arbeitnehmer oder NGOs. Letztgenannte interagieren üblicherweise nicht direkt mit Unternehmen, leisten aber einen Beitrag beim Aufbereiten und Verbreiten von Informationen. Ausgangspunkt für den TAC ist die Einführung einer zusätzlichen Berichterstattungspflicht in Form von neuen qualitativen und/oder quantitativen Angaben (siehe Abbildung, Schritt 1). Die Zielsetzung einer Publizitätsregulierung im Sinne des TAC unterscheidet sich dabei von typischen Überlegungen der Regulierung der Kapitalmarktkommunikation. Im Fokus steht nicht die

Effizienz des Kapitalmarkts oder der Investorenschutz, sondern eine gezielte Verhaltensbeeinflussung von Unternehmen. Bezogen auf den Klimawandel muss ein Regulierer also entscheiden, welche Informationen veröffentlicht werden sollen, damit Unternehmen ökologische Konsequenzen ihrer Handlungen stärker in die Entscheidungsfindung einbeziehen. In der Regel geht es also um Informationen, die in einem direkten Wirkungszusammenhang dazu stehen, z.B. Angaben zu Treibhausgasen.

Wesentlich für die Wirkungsweise des TAC ist, dass eine Publizitätspflicht präzise formuliert und durchgesetzt wird, sodass Unternehmen zusätzliche und vergleichbare Informationen bereitstellen (Schritt 2).

Durch das Bereitstellen standardisierter Informationen sinken die impliziten Kosten für Stakeholder beim Wahrnehmen und Verarbeiten neuer Informationen (Schritt 3) [20]. Werden Informationen uneinheitlich, an verschiedenen Stellen oder schlecht auffindbar publiziert, so werden Informationen nicht in die Entscheidungsfindung der Rezipienten einbezogen [21]. Eine flächendeckende umweltbezogene Berichterstattungspflicht ermöglicht es auch Informationsintermediären, wie z.B. NGOs, umweltbezogene Informationen einer breiten Öffentlichkeit zugänglich zu machen [22]. Somit wird der Informationsstand sowohl für professionelle Investoren als auch für sonstige Stakeholder, wie z.B. Kunden, verbessert [23].

Ein verbesserter Informationsstand impliziert jedoch nicht automatisch eine Verhaltensänderung der Rezipienten. Diese setzt voraus, dass die bereitgestellten Informationen entscheidungsrelevant sind (Schritt 4) [24]. Im Kontext von umweltbezogenen Angaben sind die sozialen Präferenzen von Stakeholdern zu beachten. Bisherige Studien zeigen, dass nicht nur Kunden, sondern auch Investoren bei ihren Entscheidungen auf Umweltbelange achten, sofern diese hinreichend transparent ist [25]. Dies liegt darin begründet, dass ökologischem Verhalten oft ein positiver Nutzen beigemessen wird, auch wenn kein direkter finanzieller Mehrwert damit verbunden ist. Dementsprechend lassen sich negative Kapitalmarkteffekte beobachten, wenn unternehmerische Entscheidungen finanziell positiv, aber nachweislich schädlich für die Umwelt sind [26].

Eine verhaltenssteuernde Wirkung aufseiten der Unternehmen ergibt sich als Reaktion auf die (antizipierte) Veränderung im Verhalten der Stakeholder (Schritt 5). Dies kann sich negativ auf die Unternehmensreputation [27], den Umsatz [28] oder die Kapitalmarktbewertung [29] auswirken, wie in der bisherigen Forschung aufgezeigt wurde.

Als Konsequenz des TAC ergeben sich geänderte unternehmerische Entscheidungen zur Vermeidung etwaiger bzw. weiterer negativer Folgen (Schritt 6). Diese geänderten Entscheidungen beeinflussen die Berichterstattung der Folgejahre.

#### *4.3.3. Empirische Evidenz*

Die empirische Evidenz für den TAC im Kontext der umweltbezogenen Berichterstattung ist zurzeit noch begrenzt. Dies liegt wesentlich darin begründet, dass die Ableitung kausaler Evidenz in empirischen Studien nur unter restriktiven Bedingungen möglich ist. Im optimalen Fall ist der Forschungsansatz vergleichbar mit einer zufallszugeteilten kontrollierten klinischen Studie. Das bedeutet, dass nur bestimmte – am besten zufällig ausgewählte Unternehmen – von einer Regulierung betroffen sind (Untersuchungsgruppen) und die übrigen Unternehmen nicht (Kontrollgruppe). Zudem ist ein zeitlich gestaffeltes Einführen der Regulierung hilfreich, um Zeittrends zu kontrollieren [30]. Diese Vorgehensweise bezeichnet man als sogenannten Difference-in-Differences-Ansatz [31].

Die Bedeutung der Transparenzregulierung im Bereich Umwelt bzw. Emissionen wurde bisher in einigen Studien untersucht. Einige Beispiele sind nachfolgend illustriert.

Downar et al. (2019) [32] analysieren den Effekt der Verpflichtung zur Veröffentlichung von direkten und indirekten Treibhausgasemissionen im Rahmen des Geschäftsberichts für börsennotierte Unternehmen im Vereinigten Königreich (UK) [33]. Basierend auf Daten aus dem EU ETS kann gezeigt werden, dass die Berichterstattungspflicht zu einem statistisch signifikanten Rückgang der direkten Treibhausgasemissionen um 18 % innerhalb von drei Jahren nach Einführen der Regulierung führt. Diese Ergebnisse werden von Jouvenot und Krüger (2019) [34] und Tomar (2019) [35] bestätigt. Jouvenot und Krüger befassen sich mit den Folgen der verpflichtenden Offenlegung von Treibhausgasemissionen für Unternehmen im Vereinigten Königreich (UK) und messen ebenfalls einen statistisch signifikanten Rückgang der Emissionen. Im Gegensatz dazu untersucht Tomar die Folgen des U.S. Environmental Protection Agency's Greenhouse Gas Reporting Program. Hiernach waren bestimmte U.S.-amerikanische Unternehmen zur Berichterstattung über Treibhausgasemissionen verpflichtet. Tomar dokumentiert einen statistisch signifikanten Rückgang der Treibhausgasemissionen als Folge der verpflichtenden Offenlegung.

Im Gegensatz zu den beiden zuvor genannten Studien, liegt der Fokus von Chen (2018) auf einer allgemeinen Berichterstattungspflicht zu CSR-Aktivitäten für bestimmte börsennotierte Unternehmen in China und den Folgen für industrielle Abwassermengen und Schwefeloxid-Emissionen [36]. Es wird aufgezeigt, dass es, als Folge der Berichterstattung, zu einem Rückgang der Abwassermenge und Emissionen der betroffenen Unternehmen kommt.

In Bezug auf die antizipative Wirkung umweltbezogener Berichterstattungspflichten dokumentieren Fiechter et al. (2020), dass bereits die Ankündigung der Anwendungspflicht der EU-Richtlinie 2014/95/EU [37] zur Berichterstattung über CSR-Aktivitäten bei Unternehmen von öffentlichem Interesse eine verhaltenssteuernde Wirkung hatte. Noch vor der eigentlichen Pflicht zur Berichterstattung kann für betroffene Unternehmen ein Anstieg der Ausgaben für CSR-Aktivitäten gezeigt werden. Die Ergebnisse implizieren, dass Unternehmen die Schritte 2 bis 4 des TAC antizipieren.

### 4.4. Diskussion

Die bisherige Forschungsevidenz legt nahe, dass gezielte Publizitätsregulierung zum Bekämpfen des Klimawandels eingesetzt werden kann. Es ist jedoch kritisch zu betrachten, ob eine Problemlösung an der falschen Stelle erfolgt. Die bestehende Situation resultiert nicht originär aus einer defizitären Rechnungslegung, sondern aus einem allgemeinen Marktversagen bei klimaschädlichen Verhalten.

Aus Sicht der Rechnungslegung und Wirtschaftsprüfung sind zudem weitere Aspekte zu beachten. Bei einer gezielten Verhaltenssteuerung orientiert sich die Berichterstattung i. d. R. am Gemeinwohl, d. h. die Gesellschaft insgesamt wird zum Adressaten der Berichterstattung. Im Gegensatz dazu ist die Zielsetzung von Rechnungslegungsstandards wie den IFRS, an den Informationsbedürfnissen von aktuellen und zukünftigen Investoren ausgerichtet. Wenngleich es Überschneidungen geben kann, so liegt im Regelfall ein Widerspruch in den Anforderungen an entscheidungsnützliche Informationen vor [38]. Entsprechend muss hinterfragt werden, inwieweit ein Vermischen von Berichterstattung zum Sicherstellen der Kapitalmarkteffizienz und Berichterstattung zur Verhaltenssteuerung angemessen ist [39]. Aktuelle Regulierungen der EU im Kontext der Nachhaltigkeitsberichterstattung deuten darauf hin, dass sie diesbezüglich nur wenige Bedenken hegt [40]. Weiterhin ist zu hinterfragen, unter welchen Umständen eine verhaltenssteuernde Wirkung zielführend ist. Der TAC impliziert, dass es Informationsdefizite für Stakeholder gibt. Inwieweit Standardsetter etwaige Defizite kurzfristig lösen können, ist ebenfalls offen. Beispielsweise gibt das IASB selbst zu verstehen, dass Standardsetting zur Nachhaltigkeitsberichterstattung andere Kompetenzen erfordert, als für übliche Rechnungslegungsstandards notwendig sind. Das Vorhandsein vielfältiger anderer Nachhaltigkeitsstandards und Rankings, wie z.B. GRI or ESG, schafft hier auch nur bedingt Klarheit [41]. Es besteht somit nicht nur ein Risiko eines Information Overload, sondern auch ein Risiko des Greenwashings bis hin zu einer Irreführung der Adressaten [42].

Zudem sind mit jeder Regulierung direkte und indirekte Kosten verbunden. Direkte Kosten, im Kontext umweltbezogener Angaben, betreffen die Kosten für das Beschaffen und Aufbereiten der Informationen, welche oft auch intern nicht vorliegen. Indirekte Kosten hingegen resultieren aus der Offenlegung wettbewerbsrelevanter Informationen [43]. Zudem ist bei einer Regulierung zu klären, welche Unternehmen zur Berichterstattung verpflichtet werden. Üblicherweise treffen direkte Kosten einer Regulierung kleinere Unternehmen stärker als grosse Unternehmen [44].

Der TAC unterstellt weiterhin, dass eine Offenlegung einheitlich und flächendeckend erfolgt. Dies setzt ein entsprechendes Enforcement voraus, bspw. in Form einer externen Prüfung. Es stellt sich die Frage, in welchem Umfang dies möglich ist, da es sich bei nicht-finanziellen Angaben oft um qualitative Angaben handelt, die oftmals einer subjektiven Einschätzung des Managements unterliegen. Auch im Falle quantitativer Angaben ergeben sich Grenzen der Prüfung, da regelmässig nur die genutzten Prozesse oder Massnahmen und nicht die ermittelten Werte geprüft werden können [45].

Insgesamt ist also das Abwägen von Kosten und Nutzen der Verhaltenssteuerung durch Transparenzregulierung schwierig, insb. da positive Realeffekte durch eine Begrenzung des Klimawandels schwer zu ermitteln sind.

### 4.5. Fazit

Im vorliegenden Beitrag wurde dargelegt, wie eine umweltbezogene Berichterstattungspflicht einen positiven Mehrwert zur Begrenzung des Klimawandels leisten kann. Dieser Wirkungszusammenhang kann anhand des Transparency Action Cycle beschrieben werden. Dann kann eine umweltbezogene Berichterstattung Reaktionen der Stakeholder induzieren und Anreize für Unternehmen schaffen, ihre Entscheidungen in Bezug auf die Umweltwirkung zu ändern. Dieser Wirkungszusammenhang wurde in der bisherigen Forschung bereits mehrfach dokumentiert. Wenngleich die positiven Effekte durch eine Reduzierung des Klimawandels nicht von der Hand zu weisen sind, so ist dennoch zu beachten, dass die Verhaltenssteuerung durch eine verpflichtende Berichterstattung nicht zu den Zielen der regulierten Kapitalmarktkommunikation zählt. Allerdings deuten europäische Bestrebungen bereits darauf hin, dass die positive Beeinflussung des Klimas höher zu gewichten ist.

## 4.6. Anmerkungen

1) Vgl. Anderegg, W. R. L., Prall, J. W., Harold, J., Schneider, S. H., Expert credibility in climate change. Proceedings of the National Academy of Sciences, 107/27, S. 12107–12109, S. 12108, 2010; Cook, J., Oreskes, N., Doran, P. T., Anderegg, W. R. L., Verheggen, B., Maibach, E. W., Carlton, J. S., Lewandowsky, S., Skuce, A. G., Green, S. A., Consensus on consensus: a synthesis of consensus estimates on human-caused global warming, in: Environmental Research Letters, 11/44, 2016, Artikel 048002, S. 1; National Centre for Climate Services (NCCS)2018; CH 2018 – Klimaszenarien für die Schweiz, S. 18, Zürich 2018.

2) Gemäss einer UNStudie von Wallemacq stieg die Anzahl der dokumentierten Naturkatastrophen in den letzten 20 Jahren von 165 auf 329 Katastrophen pro Jahr an. Vgl. Wallemacq, P., Economic losses, poverty & disasters: 1998–2017, Centre for Research on the Epidemiology of Disasters (CRED), 2018.

3) Vgl. NCCS, S. 18.

4) Vgl. Bundesrat 2019, Bundesrat will bis 2050 eine klimaneutrale Schweiz, https://www.admin.ch/gov/de/start/dokumentation/medienmitteilun gen/bundesrat.msg-id-76206.html, Zugriff am 2. April 2020.

5) Mitverursacher des Klimawandels sind sowohl Privathaushalte als auch Unternehmen. Massnahmen zur Begrenzung des Klimawandels richten sich daher regelmässig an beide Gruppen. Der Fokus des Aufsatzes liegt auf Unternehmen.

6) Verordnung zur Reduktion von Risiken beim Umgang mit bestimmten besonders gefährlichen Stoffen, Zubereitungen und Gegenständen vom 18. Mai 2005 (Chemikalien-Risikoreduktions- Verordnung, ChemRRV, SR 814.81).

7) Bundesgesetz über die Reduktion der CO2-Emissionen vom 23. Dezember 2011 (CO2-Gesetz, SR 641.71).

8) Bundesverfassung der Schweizerischen Eidgenossenschaft vom 18. April 1999 (Bundesverfassung, BV, SR 101).

9) Richtlinie 2003/87/ EG des Europäischen Parlaments und des Rates vom 13. Oktober 2003 über ein System für den Handel mit Treibhausgasemissionszertifikaten in der

Gemeinschaft und zur Änderung der Richtlinie 96/61/EG des Rates (Emissionshandelsrichtlinie, EH-RL 2003/87/EG).

10) Abkommen zwischen der Schweizerischen Eidgenossenschaft und der Europäischen Union zur Verknüpfung ihrer jeweiligen Systeme für den Handel mit Treibhausgasemissionen, abgeschlossen in Bern am 23. November 2017 (SR 0.814.011.268).

11) Verordnung über die Lenkungsabgabe auf flüchtigen organischen Verbindungen vom 12. November 1997 (VOCV, SR 814.018).

12) Verordnung über die Reduktion der CO2-Emissionen vom 30. November 2012 (CO2-Verordnung, SR 641.711).

13) Verordnung des EDI betreffend die Information über Lebensmittel vom 16. Dezember 2016 (LIV, SR 817.022.16). Andere Beispiele sind die Offenlegung von Mortalitäten bei Spitälern oder die in vielen Ländern verbreiteten Ampelkennzeichnungen bei Restaurants zur Kennzeichnung der Hygienestandards.

14) Vgl. Hombach, K., Sellhorn, T., Shaping corporate actions through targeted transparency regulation: a framework and review of extant evidence, in: Schmalenbach Business Review, 71/2, S. 137–168, S. 141, 2019.

15) Vgl. Liebrich, S., CO2-Kennzeichnung kann helfen, den Klimawandel zu stoppen, in: Süddeutsche Zeitung. https://www.sueddeutsche.de/wirtschaft/co2-kenn zeichnung-lebensmittel-1.4816060, Zugriff am 3. März 2020 und Klarmann, M., Ellens, J., We create facts for a climate-friendly diet. Eaternity. https://wemakeit.com/projects/co-score-of-all-foods, Zugriff am 3. März 2020.

16) Vgl. Hombach, K., Sellhorn, T., S. 141. 2019.

17) Vgl. Fung, A., Graham, M., Weil, D., Full disclosure: The perils and promise of transparency. Cambridge University Press, S. 51–54, 2007.

18) Das Modell nach Fung et al. stellt einen generalisierten Wirkungszusammenhang Hombach und Sellhorn konkretisieren das Modell für den Unternehmenskontext.

19) Vgl. Hombach, K., Sellhorn, T., S. 137–168, 2019.

20) Vgl. Böhmer, T., Voss, O., Glachtsiou, P., Unternehmenskommunikation und Informationsbedürfnisse von Kapitalmarktteilnehmern – Eine empirische Analyse von Analystenkonferenzen der DAX30-Unternehmen, in: Zeitschrift für internationale und kapitalmarktorientierte Rechnungslegung, 19/09, S. 394–399, S. 394, 2019.

21) In ihrer Studie zur Treibhausgasberichterstattung in Grossbritannien zeigen Sullivan und Gouldson auf, dass Defizite in der Vergleichbarkeit insb. aus unterschiedlichen Ansätzen zur Messung und unterschiedlichen berichteten Werten (direkte versus indirekte Emissionen) resultieren. Vgl. Sullivan, R., Gouldson, A., Does voluntary carbon reporting meet investors' needs? in: Journal of Cleaner Production, 36/1, S. 60–67, 2012. Christensen et al. zeigen in ihrer Studie zu der Berichterstattung über Minenunfälle auf, dass neue Informationen nicht wahrgenommen werden, wenn die Offenlegung über einen unbekannten Kommunikationskanal erfolgt. Vgl. Christensen, H. B., Floyd, E., Liu, L. Y., Maffett, M., The real effects of mandated information on social responsibility in financial reports: Evidence from mine-safety records, in: Journal of Accounting and Economics, 64/2–3, S. 284–304, 2017.

22) Vgl. Islam, M. A., van Staden, C. J., Social movement NGOs and the comprehensiveness of conflict mineral disclosures: evidence from global firms, in: Accounting, Organizations and Society, 65, S. 1–19, S. 18, 2018.

23) Ebenso verbessert sich der Informationsstand für Unternehmen, da umweltbezogene Angaben intern oft nicht vorliegen; Vgl. Steinmeier, M., Stich, M., Does sustainability assurance improve managerial investment decisions? in: European Accounting Review, 28/1, S. 177–209, S. 177, 2019.

24) Vgl. Böhmer, T., Voss, O., Glachtsiou, P., 394–399, S. 394, 2019.

25) Vgl. Martin, P. R., Moser, D. V., Managers' green investment disclosures and investors' reaction, in: Journal of Accounting and Economics, 61/1, 239–254, S. 239, 2016.

26) Vgl. Grewal, J., Riedl, E. J., Serafeim, G., Market reaction to mandatory nonfinancial disclosure, in: Management Science, 65/7, 3061–3084, S. 3061. 2019; Hombach, Sellhorn, 2018, S. 1.

27) Vgl. Axjonow, A., Ernstberger, J., Pott, C., The impact of corporate social responsibility disclosure on corporate reputation: a non-professional stakeholder perspective, in: Journal of Business Ethics, 151/2, S. 429–450, S. 429, 2018.

28) Vgl. Hombach, Sellhorn, S. 158, 2019.

29) Vgl. Grewal et al. 2019.

30) Für letzteren Aspekt sei exemplarisch der UK Companies Act 2006 (Strategic Report and Directors' Reports) Regulations 2013 No. 1970 § 15 zur Berichterstattung über Treibhausgasemissionen zu nennen. Die erstmalige Anwendungspflicht war abhängig vom Datum des Geschäftsjahresendes. Zudem ist die Anwendungspflicht auf bestimmte börsennotierte Unternehmen nach Section 385 (2) im Vereinigten Königreich (UK) begrenzt. Eine Randomisierung ist im Bereich der Regulierung unüblich. In der aktuellen Forschung ergibt sich die Bildung der Teilgruppen häufig anhand der Erfüllung bzw. Nichterfüllung von z.B. gesetzlich definierten Grössenkriterien.

31) Es ist anzumerken, dass dieser Ansatz nur Hinweise für kausale Evidenz liefert. Gesicherte kausale Evidenz ist nur im Rahmen von experimentellen Studien möglich. Dies geht aber zulasten der externen Validität der Ergebnisse.

32) Downar, B., Ernstberger, J., Rettenbacher, H., Schwenen, S., Zaklan, A., Fighting climate change with disclosure? The real effects of mandatory greenhouse gas emission disclosure, 2019.

33) Section 385 (2) Companies Act 2006.

34) Jouvenot, V., Krueger, P., Reduction in corporate greenhouse gas emissions under prescriptive disclosure requirements, auf den Seiten der SSRN, https://ssrn.com/abstract=3434490, Zugriff am 2. April 2020.

35) Vgl. Tomar, S., CSR disclosure and benchmarking- learning: emissions responses to mandatory greenhouse gas disclosure 2019, auf den Seiten der SSRN, https://papers.ssrn.com/sol3/papers. cfm?abstract_id=3448904.

36) Grundlage hierfür sind mehrere aufeinanderfolgende Regulierungen: insb. Shanghai Stock Exchange (SSE), Notice on listed firms' 2008 annual report; Shenzhen Stock Exchange (SZSE), Notice on listed firms' preparation for 2008 annual reports, vgl. Chen, Y.- C., Hung, M., Wang, Y., The effect of mandatory CSR disclosure on firm profitability and social externalities: Evidence from China, in: Journal of Accounting and Economics, 65/1, S. 169–190, S. 170, 2018.

37) Richtlinie 2014/95/EU des Europäischen Parlaments und des Rates vom 22. Oktober 2014 zur Änderung der Richtlinie 2013/34/EU im Hinblick auf die Angabe nichtfinanzieller und die Diversität betreffender Informationen durch bestimmte grosse Unternehmen und Gruppen.

38) Hoogervorst, H., Speech: IASB Chair on what sustainability reporting can and cannot achieve, auf den Seiten der IFRS-Homepage, https://www. ifrs.org/news-and-events/2019/04/speech-iasb-chairon- sustainability-reporting/, Zugriff am 14. Mai 2020, 2019.

39) Korrespondierend ergibt sich auch die Frage der Legitimation solcher Ansätze, da diese Regulierungen oftmals direkte Kosten für betroffene Unternehmen nach sich ziehen. Kritiker sind bereits in einigen Fällen erfolgreich gegen entsprechende Regulierungen gerichtlich vorgegangen; vgl. Dhooge, L. J., The first amendment and disclosure regulations: compelled speech or corporate opportunism, in: American Business Law Journal, 3/51, S. 599–659, 2014; Karmel, R. S., Disclosure reform – The SEC is riding off in two directions at once, in: The Business Lawyer, 71/3, S. 781–834, 2016.

40) Die EU-Kommission betrachtet CSR als eine Pflicht der Unternehmen für deren Einfluss auf die Gesellschaft (vgl. European Commission, Communication from the Commission to the European Parliament, the Council, the European economic and Social Committee and the Committee of the Regions: A renewed EU strategy 2011–14 for Corporate Social Responsibility, COM [2011] 681 final [Press release], Brussels, S. 6, 25. Oktober 2011) und hat mit der Richtlinie 2014/95/EU grosse Unternehmen verpflichtet, CSR-Informationen zu veröffentlichen.

41) Hoogervorst, H., 2019.

42) Exemplarisch kann dies anhand des deutschen Automobilkonzerns Volkswagen illustriert werden. Volkswagen war Spitzenreiter im Dow Jones Sustainability Index (Bereich Automotive) und gleichzeitig in einen Skandal auf Grund der Manipulation von Abgaswerten verwickelt.

43) Vgl. Cannon, J. N., Ling, Z., Wang, Q., Watanabe, O. V., 10-K Disclosure of corporate social responsibility and firms’ competitive advantages, in: European Accounting Review, 28/6, S. 1–29, S. 2; Grewal 2019, S. 3061.

44) Vgl. Richtlinie 2013/50/EU des Europäischen Parlaments und des Rates vom 22. Oktober 2013 zur Änderung der Richtlinie 2004/109/EG des Europäischen Parlaments und des Rates zur Harmonisierung der Transparenzanforderungen in Bezug auf Informationen über Emittenten, deren Wertpapiere zum Handel auf einem geregelten Markt zugelassen sind, der Richtlinie 2003/71/EG des Europäischen Parlaments und des Rates betreffend den Prospekt, der beim öffentlichen Angebot von Wertpapieren oder bei deren Zulassung zum Handel zu veröffentlichen ist, sowie der Richtlinie 2007/14/EG der Kommission mit Durchführungsbestimmungen zu bestimmten Vorschriften der Richtlinie 2004/109/EG, S. 1.

45) Vgl. Marten, K., Weigt, S.G.K., Die Prüfung nichtfinanzieller Informationen – Herausforderungen für den Abschlussprüfer vor dem Hintergrund der Stärkung nichtfinanzieller Berichtspflichten, in: Zeitschrift für internationale und kapitalmarktorientierte Rechnungslegung, 2018/10, S. 454–459, S. 454; Schmitt, J., Warum die Prüfung des CSR-Berichts so herausfordernd ist, in: Finance Magazin. https://www.fi nance-magazin.de/finanzabteilung/bilanzierung/ warum-die-pruefung-des-csr-berichts-so-heraus fordernd-ist-2021231/, Zugriff am 2. April 2020.

# 5. Conclusion

The overall goal of this dissertation is to approach CSR disclosure, both mandatory and voluntary, from three different perspectives and to broaden our understanding of the effects that stem from disclosing CSR information on various outcomes, i.e., effects; *first*, I examine the effect of mandatory CSR disclosure on actual disclosure levels and resulting peer effects, *second*, I analyze voluntary disclosures on CSR activities in press releases and corresponding market effects during a pandemic. *Third*, I provide a deeper understanding of the mechanisms behind the real effects of CSR disclosure regulation. In all three essays, I base my hypothesis on a thorough examination of established theories and use hand-collected data, data gathered from databases, and proprietary data to conduct a large number of empirical tests to approach our research questions. In the following section, I summarize the empirical findings and point out each distinct essay's implications. The dissertation concludes with an outlook for promising avenues, which could be followed by future research.

## 5.1. Summary of results, contributions, and implications

The first essay, "The Impact of Disclosure Regulation and Peer Behavior on Firms' CSR-Disclosure - Evidence from India," studies the influence of governmental disclosure regulation and respective peer behavior. With this essay, I enrich current research on outcomes driven by CSR disclosure mandates, as there is little evidence on how CSR disclosure regulation influences CSR disclosure itself and whether peer effects in CSR disclosure exist following the respective mandate. The first essay uses the Indian Companies Act 2013 to gain insights on the relationship between CSR disclosure mandates and CSR disclosure and peer effects in CSR disclosure. The Act mandates firms above a minimum level of equity, sales, or profit, to spend on and report about their CSR activities (Manchiraju and Rojgopal 2017). Using a difference-in-differences regression approach exploiting the implementation of the Act combined with a propensity score-matched sample of firms from 2013 to 2017, I measure if changes in disclosure levels are due to the mandate.

I provide statistical evidence that the Act does not increase CSR disclosure, but I highlight the existing and statistically significant influence of peer disclosure behavior. I find a significant moderating peer effect, i.e., I find that firms with peers being more talkative on CSR than themselves significantly decrease their CSR disclosure following the Act. The results of this study indicate that a mandatory disclosure can undermine prior voluntary disclosure, leading to an overall CSR disclosure reduction.

This essay contributes to prior literature on mandatory CSR disclosure in two ways. First, I provide insights into CSR disclosure regulation's effects, i.e., the interplay between voluntary and mandatory CSR disclosure. In contrast to prior literature on mandatory *financial* disclosure, which concludes that mandating disclosure is helpful to improve comparability and monitor managerial decision making (Ioannou and Serafeim 2017; Cascino and Gassen 2015; Axjonow et al. 2018), I show that mandatory *non-financial* disclosure can potentially lead to lower disclosure levels compared to prior voluntary disclosure and, thus, even reduced comparability across firms.

Second, I contribute to the literature on peer disclosure effects. As no prior studies focus on CSR disclosure's peer effects, this thesis provides new insights into how peer behavior negatively influences firms' non-financial disclosure decisions. This finding is particularly relevant as peer effects "play an important role in the economic justification of disclosure and reporting mandates" (Leuz and Wysocki 2016).

The second essay, "Tue Gutes und sprich darüber – Kapitalmarktkommunikation von CSR Aktivitäten während der Corona Pandemie" (Do good and talk about it - capital market communication of CSR activities during the Corona pandemic), researches social activities by German DAX, MDAX, and SDAX firms during the Corona pandemic in 2020 that were disclosed in press releases. Although previous research provides insights on capital market communications regarding the coronavirus, there is no (empirical) analysis of CSR activities in times of crisis in scientific publications. Due to the importance and relevance of this topic and the lack of research, this article analyzes CSR activities published in press releases of German DAX, MDAX, and SDAX firms empirically. Further, I analyze the capital market reactions associated with the disclosed CSR activities within this essay.

The empirical evidence shows that more than 42.07 % of the firms have taken (one or more) explicit CSR related activities to help others during the pandemic and reported accordingly in press releases. Especially DAX firms are conducting such activities and therefor are increasingly active for the benefit of society. The measures range from monetary donations and donations in kind to own initiatives with national or international relevance. The frequency of activities shows a parallel evolution with the development of case numbers in Germany, i.e., most activities were conducted during the first lockdown phase in March and April 2020 and decrease again after the lockdown in summer 2020. The essay also shows that this commitment is evaluated positively by the capital market, but primarily for firms that were philanthropically active in the crisis early on. No significant capital market reactions can be observed for later activities.

This essay contributes to prior literature on CSR during a pandemic in at least two ways. First, it provides unique insights into firms' CSR activities during the pandemic, which was not shown previously by academic research. Second, this essay supports previous empirical research on capital market reactions following CSR disclosure matters. In this setting, I highlight the capital market reactions, i.e., abnormal returns after the publication of the CSR disclosure.

The third essay on CSR disclosure, "Unternehmerische Berichterstattung zur Bekämpfung des Klimawandels" (Corporate Reporting to combat Climate Change), highlights the mechanics of how more stringent regulations on environmental reporting, within the scope of capital market communication, support the fight against climate change. These mechanics are unraveled using the Transparency Action Cycle[89] and refer to Swiss regulations as an example for illustration.

To reduce greenhouse gas emissions of firms, regulators can choose to mandate the disclosure of non-financial information. Previous empirical research highlights the effectiveness of environmental disclosure regulation for desired, climate-friendly behavior. Although previous literature indicates a positive correlation between environmental/CSR disclosure mandates and firms' behavior regarding environmental-related behavior, there is a lack of explanation on *why* this effect can be observed. The third essay within this dissertation provides a framework to understand the mechanics behind this causality. Theoretical underlining is the so-called TAC, which is developed by Fung et al. (2007) and is further specified by Hombach and Sellhorn (2019)[90]. The TAC establishes a link between disclosure regulation and the behavior of firms affected by disclosure regulation. It is based on the assumption that firms' disclosure influences the following behavior of recipients (e.g., investors, customers, employees, or NGOs) and consists of six consecutive steps.

This essay contributes to prior literature on environmental reporting in at least two ways. First, this research supports previous empirical research results with further normative explanation of observed positive outcomes. This essay therefore provides a theoretical basis for researchers to build on. Second, this essay can inform and support regulators in their

[89] See Fung et al. 2007; Hombach and Sellhorn 2019.

[90] While Fung et al. defined the TAC to explain generic causalities in behavior, Hombach and Sellhorn apply it to a more specific business context. In the second essay, I apply this broad concept to environmental/CSR disclosure.

decision making process on environmental disclosures with a broader understanding and reasoning.

## 5.2. Outlook

The dissertation at hand approaches CSR disclosure from three different perspectives, i.e., mandatory CSR disclosure effects on disclosure levels and resulting peer effects, voluntary CSR disclosures, corresponding market effects during a pandemic, and the mechanics behind real effects of CSR disclosure regulation. The three essays raise various issues for promising avenues of future research.

The first essay, "The Impact of Disclosure Regulation and Peer Behavior on Firms' CSR-Disclosure - Evidence from India," follows frequent calls for more research on disclosure regulation, its real effects (Leuz and Wysocki 2016) and on peer effects in various corporate activities (Cao et al. 2019). However, my results only apply to one particular regulatory environment. Thus, I cannot evaluate whether the Act itself or the specific Indian setting with potentially weak enforcement determines the weak disclosure effect. Thus, further research is necessary to provide a deeper understanding of CSR disclosure regulation's effects. It would be interesting to extend the setting to additional countries with mandatory CSR disclosure, e.g., Germany, France, Denmark, South Africa, and China. One still needs to consider that in India, CSR disclosure is mandatory, as it is now in multiple other countries, but the actual spending is mandated, too.

The essay "Tue Gutes und sprich darüber – Kapitalmarktkommunikation von CSR Aktivitäten während der Corona Pandemie" (Do good and talk about it - capital market communication of CSR activities during the Corona pandemic) analyzes the reporting on CSR activities of German DAX, MDAX, and SDAX firms. It shows that 42 % of the firms examined have taken explicit measures to mitigate the pandemic's social and societal consequences. The measures range from monetary donations and material donations to own initiatives with national or international relevance. It is also shown that this commitment is perceived positively by investors on the capital market for firms that got involved in CSR activities related to COVID-19 early on in the pandemic. Due to the uniqueness and novelty of the pandemic, the essay only covers a limited time frame. During this time, no annual reports were released. In the German setting, researching annual reports regarding CSR are particularly interesting as the recently passed CSR Directive Implementation Act (CSR-RUG, passed by the Bundestag on 9 March 2017 based on Directive 2014/95/EU ) mandates the disclosure of non-financial information for companies oriented toward the capital market, financial institutions and insurance companies with more than 500 employees. In this setting, where all DAX, MDAX, and SDAX companies fulfill the requirements, it would be particularly interesting to examine the CSR disclosure relating to COVID-19, which will be published along with or within the companies' annual reports to gain a broader and more accurate perspective on companies social activities during the pandemic.

The third essay on CSR disclosure, "Unternehmerische Berichterstattung Zur Bekämpfung des Klimawandels" (Corporate Reporting to combat Climate Change), shows how stricter obligations for environmental reporting in the context of capital market communication can make a positive contribution to climate change. Among other measures, regulators can mandate corporate environmental reporting to counteract climate change. Previous empirical research indicates the effectiveness of environmental disclosure regulation for desired, climate-friendly behavior. This essay provides a framework to understand the mechanics behind this causality. Theoretical underlining is the so-called *Transparency Action Cycle* (TAC), which is developed by Fung et al. (2007) and is further specified by Hombach and Sellhorn (2019). The TAC establishes a link between disclosure regulation and the behavior of firms affected by disclosure regulation. It consists of six consecutive steps and is based on the assumption that firms' disclosure influences recipients' following behavior (e.g., investors, customers, employees, or NGOs). To extend our initial work, further studies could conduct empirical research to test potential facilitators or moderating factors along with the TAC within non-financial regulation. To do so, existing or new non-financial regulations that could be developed in collaboration between researchers and government or stock exchanges, could be used for analysis.

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# Appendix

## Appendix A: Contribution to Working Papers and Articles

### Essay 2 (Chapter 3): Tue Gutes und sprich darüber – Kapitalmarktkommunikation von CSR Aktivitäten während der Corona Pandemie

I had the paper idea. The setting, as well as the identification strategy, was developed by me.

I discussed the paper idea with the co-author to assess whether the proposed paper could make a contribution to the literature.

I collected the data.

Data analysis and analysis design was developed in an iterative and cooperative process.

The paper was written in an iterative cooperative process.

Natascha Ariane Maria Bell, M.Sc. (lead author)

Dr. Benedikt Downar (co-author)

**Essay 3 (Chapter 4): Unternehmerische Berichterstattung zur Bekämpfung des Klimawandels – Wie kann Publizitätsregulierung klimafreundliches Handeln von Unternehmen forcieren?**

The paper idea was developed in an iterative and cooperative process.

I wrote the paper draft and made the revisions suggested by the co-authors, reviewer and editor.

The final wording was an iterative and cooperative process.

Natascha Ariane Maria Bell, M.Sc. (lead author)

Prof. Dr. Jürgen Ernstberger (co-author)

Dr. Benedikt Downar (co-author)