Corporate Social Responsibility Information in Annual Reports in the EU – A Czech Case Study

Radka MacGregor Pelikánová

Abstract: The commitment of the EU to Corporate Social Responsibility (CSR) is projected in the EU law about annual reporting by businesses. Since EU member states further develop this framework by their own domestic laws, annual reporting with CSR information is not unified and just partially mandatory in the EU. Do all European businesses report CSR information and what public declaration to society do they provide with it? The main dual purpose of this paper is identifying the parameters of this annual reporting duty and studying the CSR information provided by the ten largest Czech companies in their annual statements for 2013-2017. Based on legislative research and the teleological interpretation, the current EU legislative framework with Czech particularities is presented and, via a case study exploring 50 annual reports, the data about the type, extent and depth of the CSR is dynamically and comparatively assessed. It appears that, at a minimum, large Czech businesses satisfy their legal duty and e-report on CSR in a similar extent, but in dramatically different quality. Employee matters and adherence to international standards are used as a public declaration to society more than the data on environmental protection, while social matters and R&D are played down.

Keywords: corporate social responsibility; environment; employment; R&D; annual reports; financial and non-financial statements; competition.

1. Introduction

Despite the sui generis status of the EU and the alleged chronic EU blurring of the distinction between truth and reality [1] and between law and politics [2] in a business and competition context [3], the EU is committed to the Corporate Social Responsibility (CSR). Indeed, this commitment is included in both its ten year strategy Europe 2020 as well as in the EU law, which sets a legislative framework for e-reporting of both financial and non financial statements. Since EU member states, freely or less freely [4], reflect and further develop this framework by their domestic laws, the resulting systems aim to, but do not command, free, centralized, electronic, periodic and detailed financial and non financial reporting. Although undoubtedly the importance of business ethics and CSR keeps growing [5] (p.254), the CSR reporting is only partially mandatory across the EU and the types, quality and quantity of data to be provided about CSR is not regulated in a unified manner. Therefore, a rather complex legislative setting emerges with a real application with relevance for the majority of, if not all, businesses in the EU. However, its understanding is pivotal in order to address the status quo of the CSR reporting in the EU, and in particular in the Czech Republic. This leads to the need for having two main and highly important purposes for this paper – to determine this framework and to assess its real life application.

Firstly, since there are just a few holistic legal studies exploring the exact parameters of the current legislative framework regarding the CSR reporting in the EU and EU member states, such as the Czech Republic, via annual reports, it is vital to do so. Despite the EU’s commitment to a single internal market, to transparency and accessibility of the business documents, such as annual reports, and to CSR and the general perception of their importance, academia, businesses and the public at large remain in the dark regarding the exact extent of the legal duty in the EU and the Czech Republic.
In other words, do Czech businesses have to regularly e-file their annual statements with CSR information with their business registers and, if yes, what does this CSR information have to include and entail? One academic stream proposes that the competition reflected by the CSR e-reports might be perceived as information in the public sphere, i.e. the public good, which reflects the positive social orientation of people [6,7] and develops the much needed critical awareness among the public regarding positive and negative impacts of the business conduct [8-10]. Arguably, it leads neither to a rivalry nor to excludability [11] and supports the competitiveness [12,13]. Indeed, e-reporting about CSR can assist in the prevention of economic crises [14,15] and be a positive factor for the proper competition [16,17], especially in the field of intellectual property and R&D [2,18,19].

Naturally, this perception is fully in compliance with the vision of the internal pro-integration EU tandem – the European Commission and the Court of Justice of the EU [19-21]. However, other studies are less conclusive about the reconciliation of the EU values with CSR [22], the determination of competitors to go altruistically for the CSR [23], the reports about it and the general endorsement by the community promoting social norms [24]. Some authors even propose that empirical analysis shows such a complexity of the CSR reporting, and its conversion, that both it might be spontaneous as well as regulated and its realization is at the edge of feasibility [25], if not even beyond [26]. Hence, there is an ambiguity about the (lack) of both the legal duty and social duty with respect to CSR and its e-reporting as such, and perhaps even about its legitimacy [27]. This leads to controversies and misunderstandings about whether the CSR information has, should, does not need to, or even should not be included in annual reports filed electronically and freely available.

Secondly, even more complex controversies emerge after the determination of the existence of this duty, namely what is to be included and ultimately what is included in the reality. Boldly, once the existence of this duty is clarified, an even more important issue emerges, namely, what CSR information is, in real life, provided in the annual statements and what public declaration to society is achieved by it? There are just a few, general national and strongly fragmented studies, and these with inconclusive propositions about the reality of the CSR reporting [20,29-31]. Generally, they propose that the understanding of the extent, format and form of CSR varies considerably [27,29], that the impact of the CSR on performance varies [33] and even tensions and conflicts between various types and categories of CSR information exist [26]. Some of them even suggest that the satisfaction of the legal duty of the CSR reporting is rather fictive because the majority of, e.g. Czech, companies do not provide quantitatively and qualitatively appropriate CSR information in re any of the CSR types, i.e. neither about the environmental protection nor employment matters, etc. [28]. Nevertheless, new studies establish that the perception of the CSR, which is obviously intimately linked to the involved business ethics, has significantly developed and the commitment to CSR and its reporting has been reinforced and even partially standardized via ISO norms, in particular in the newer EU member states [9,10,34].

Due to this lack of many prior case studies [20,28-32], and because those that exist bring, based on linear regression, very interesting suggestions about the CSR and its dimensions, such as employees and environmental matters [31], the realization of a Czech pioneering national case study about the categories aka types, quantity and quality of CSR information provided in annual statements centrally filed, and accessible online, is highly desirable. Since it is proposed that both the company size and financial performance affects the CSR and CSR reporting much more than the belonging into a particular field of industry [31], the selected sample includes the 10 largest Czech companies by revenue and their annual reports, available online via central e-portal, for the period 2013-2017. This is dynamically and comparatively explored and scrutinized with respect to the types of CSR information - research and development (R&D) leading to innovations [13,35], environmental protection, employment matters, and others. The high compliance rate of 90% regarding the CSR information in the e-published annual reports and the often problematic quality and reduced quantity of the CSR information provided might suggest that the CSR information is perceived as a legal duty to be formatically observed.

Based on legislative research and the teleological interpretation of the current EU legislative framework with Czech particularities, and the Czech case study, the original Meta-Analysis implies
that Czech businesses, at least large companies, satisfy their legal duty and e-report on CSR to a similar extent, but in a dramatically different quality. The preference for both the form over the content and for certain types of CSR information is accompanied by other indices about how companies use CSR information in their e-published annual reports as a public declaration. Employee matters and adherence to international standards are used as a public declaration to society more than data on environmental protection, while social matters and R&D are downplayed. Indeed, there is even an occasional lack of perception of the R&D as an element or factor of CSR. These are critical points deserving further study.

2. Conceptual and legislative framework

The understanding and appreciation of the publication of CSR information in annual reports in the EU, and in particular in the Czech Republic, logically has two prerequisites. First off, the conceptual framework, including contextual priorities and under-lying concerns, needs to be recognized. Second, how this conceptual framework is vested and projected in the applicable legislative framework, i.e. both by the EU law and Czech laws, has to be assessed. Boldly, it is mandatory to recognize whether businesses have to file and make centrally and electronically accessible their annual reports and whether these annual reports have to include CSR information.

2.1. Conceptual Framework

The interaction of the law and business, and, more specifically, the interaction of the legal, moral and social obligations with regard to business conduct, is full of contradictions [36]. Since the 1970s, these contradictions have led to a realization that there is a conflict between the commitment to the promotion of the globalized economic growth and the issue of the increasing world population needs, along with the degrading ecological situation [37]. The pendulum of balance has importantly moved and led to the burning question posed, among others, to and by the United Nations (UN), namely how to achieve global prosperity without environmental deterioration in the world [32], in both developed and developing countries. This led to the origins of the CSR embedded in the proclamation ‘Our Common Future – A global Agenda for Change’, prepared by the Brundtland Commission which was published in 1987 as the UN Annex to document A/42/427 and which was followed by the UN Agenda 21 and UN Resolution A/RES/60/1 from 2005 (Resolution 2005) further developing the idea of sustainability at the international level [27]. The initial focus on sustainability has been progressively paralleled by corporate responsibility concerns. Namely, the sustainability concept as a systematic and visionary tool governed predominantly by soft law has co-existed with the corporate responsibility concept as rather a normative and moral tool regulated by the hard law, until they merged into CSR [38]. In the digital setting of the initial decades of the 21st century, this is underscored by Art.36 of the Resolution 2005, which demands equity and transparency of financial and business systems, and by Art.49 of the Resolution 2005, which envisages three mutually reinforced pillars for sustainable development – economic development, environmental protection and social development. Moving down to the ultimate addressees, the CSR became for businesses the synonym for the transition from the “profit only” emphasis [10] to “profit, people, planet”, leading to the focus on the combination of economic prosperity linked to innovations, environmental quality and social improvements [12,22]. Boldly, the CSR makes businesses responsible, perhaps even liable, not only to their shareholders, but as well to other categories of their stakeholders [39].

The combined effect and impact of the economic crises, the failed Lisbon Strategy 2000-2010 and other negative events have significantly contributed to the shifting of the focus to the development of regulations on financial, corporate management, corporate governance and liabilities matters, even in the EU [3,14]. Naturally, this trend includes as well the discussion, proposition and even legal regulation of minimal standards of the CSR and reporting about it [25] with respect to the mentioned three pillars of the Resolution 2005 – economics linked to R&D, environmental linked to environment protection and social linked to employment and other matters. The CSR and related business ethics dimension are progressively perceived as general directions to create a future world which will fairly
and sustainably balance economic, environmental and social factors [40] in the context of the highly competitive knowledge economy [13].

2.2. Legislative Framework

The current EU, EU law and EU strategy, aka Europe 2020, focuses on the single internal market where smart, sustainable and inclusive growth takes place [41] and where the technological potential [13,42,43] and fair competition [44] should develop and could lead to the EU world trade leadership [45], as repeatedly proposed by the European Commission [46] and skeptically observed by others [47]. This is implied by the EU primary law, especially the Treaty on EU (TEU) and the Treaty on the Functioning of EU (TFEU), as well as by the EU secondary law, represented predominantly by regulations and directives. The legislative framework directly covering the annual e-reporting about CSR rests on three pillars – two directives on statements and reports to be prepared and filed by businesses and one regulation about the manner of e-publication. This EU law penetrates into national laws of the EU member states [4], and these states add to it their own certain particularities.

The first pillar is the Directive 2013/34/EU on annual financial statements (Directive 2013) which specifically sets a CSR reporting duty for large businesses. Pursuant to its Art.19a(1), public interest entities with over 500 employees shall include in the management report a non-financial statement containing information on environmental, social and employee matters, respect for human rights, anti-corruption and bribery matters, etc. This duty set by the EU law may be exempted based on Art.19a(4) which allows EU member states to exempt undertakings which e.g. provide this information on their websites. However, if public interest entities with over 500 employees are not exempted by the national law, then, based on Art.30(1), they have to publish annually the balance sheet, annual financial statements and the management report, i.e. basically they have to file their annual reports including the CSR information. However, no further regulation on the EU level is provided and, pursuant to comparative studies, the CSR concept is not fully obligatory in EU member states [48] and the reporting practice with respect to its content is quite diversified across the EU as well as across industries [25].

Namely, each EU member state adds to the general lines of the EU legal framework some national particularities features which sometimes leads to more fragmentation and ambiguity and seldom leads to more harmonization and clarity. Regarding the Czech national law provisions with respect to CSR and its reporting, the fundamental statute is Act No. 563/1991 Coll., on accounting (Act 1991), which, among other items, regulates by its Art.18 et foll. the compulsory content of financial and other statements. In addition, Act 1991 requires, via Art.21, that larger businesses and companies have their statements, including annual reports, verified by a public auditor. Although Act 1991 regulates by Art.21 the compulsory content of the annual report and demands both financial statements as well as CSR information, namely about R& D, environment protection and employment relationships, it does not further clarify the extent and depth of such CSR information, i.e. does not explain the expected quantitative and qualitative dimension of the CSR information. Hence the Czech law complies with the EU law without further clarifying it, and there is no doubt that Czech public interest entities with over 500 employees must include “some” CSR information in their annual reports, i.e. to provide “some” data on non financial key performance indicators, including information relating to the environment and employee matters[49].

The second pillar is Directive 2017/1132/EU relating to certain aspects of company law (Directive 2017), which repeals, among others, Directive 2009/101/EC September 2009 on the coordination of safeguards which, for the protection of the interests of members and third parties and which, by its Art.13 et foll., provides a general framework for the disclosure and publication of documents in commercial registers. Instead of terms such as undertaking or public interest entities used by Directive 2013, Directive 2017 provides a list of its addresses by its Annex II. For the Czech Republic, Annex II of Directive 2017 determines as the addresses of the publication duty of Art.13 et foll. of Directive 2017 the limited liability company (s.r.o.) aka private limited company and the shareholder company (a.s.) aka public limited company. Documents to be disclosed by these documents are listed by Art.17 and they include accounting documents for each financial year to be published pursuant to
Directive 2013. Regarding the form, Art.16 specifies that each EU member state has to keep a central company register and all documents required by Art.14 are to be kept on the file. The Czech national law is fully compatible with it and Act 1991 regulates by Art.21a the compulsory publication of corporate documents and various statements for all entities registered in public registries. Another Czech statute, Act No. 304/2013 Coll., on public registries (Act 2013), provides, by Art.1 and Art. 2, that the public registries are maintained electronically by courts. Namely, each and every Czech company or corporation needs to be registered in and have filed corporate documents and various statements, including annual reports, with the Commercial register which, pursuant to Art.42, is maintained by the Commercial court and which is freely electronically accessible. Hence, unlike in other EU member states, the free e-publication of annual reports is an actuality in the Czech Republic and documents filed with the Commercial register and placed in the so called Collection of documents are posted in a pdf format on the platform of the domain justice.cz [50].

Pillar number three is the Regulation (EU) 2015/884 establishing technical specifications and procedures required for the system of interconnection of registers, which created the electronic system of interconnection of registers called the Business Registers Interconnection System (BRIS). Within the BRIS, data critical for financial accounting, tax and even managerial accounting [51,52] is migrated from national Business Registers to the European Central Platform and available at the e-Justice Portal placed on a sub-domain of the EU top level domain “TLD.eu” [53]. Hence the search at the e-Justice Portal, www.e-justice.europa.eu, allows for a central search based on a name or a registration number within all migrated data or a search within a national Business Register, and it can both establish and/or eliminate a competitive advantage in our information digital era. However, annual reports do not belong to the compulsory content data and so can, but do not need to, be accessible for free or the access fees are not exceeding the administrative costs. In this respect, the Czech national law goes beyond it and makes annual reports, including CSR information, freely electronically available. However, the data is not perfectly migrated via BRIS and so a search for Czech annual reports has to rather be done while directly using the Czech national platform place on the domain justice.cz.

3. Materials and Methods

Both of the two main raisons d’être of this paper focus on (i) the parameters of the annual reporting legal duty with respect to CSR and (ii) the realization of this by Czech companies. This entails many tools and processes going from a critical and partially descriptive analysis of the legislative acts and secondary academic sources from various jurisdictions to a field search and case study. The cross-disciplinary and multi-jurisdictional nature of the exploration requires holistic processing with the employment of Meta-Analysis [54]. The interplay of economic, legal and technical aspects shapes the focus, targeting both qualitative and quantitative data and entailing deductive and inductive aspects of legal thinking [55]. Thus, the quantitative research and data is complemented by qualitative research, along with critical closing and commenting, and refreshed by Socratic questioning [56].

Regarding the first line of the dual purpose, this implies that both legislative and academic literature research focusing on the sources from the EU, Czech and other EU member states’ jurisdictions needs to be done and the mined data properly teleologically interpreted, while fully recognizing the importance of the purposive and mischief approach [1,27] The current EU legislative framework regarding annual reporting, in particular e-reporting including CSR information, is revealed along with Czech particularities. Hence the first line relies predominantly on the legislative research and teleological interpretation of EU legislative primary and secondary sources, represented by the three pillars legal construction, consisting of two Directives and one Regulation, and is further clarified by recent secondary academic sources ranked and classified in the WoS and Scopus databases.

Regarding the second line of this paper’s two goals, a pioneering Czech case study was performed while using a representative sample of the ten largest Czech companies and their annual statements for 2013-2017. The criterion for the term ‘largest’ was the total of annual revenues in the last observed years, i.e. 2016 and 2017. Interestingly, all of these top companies have annual revenues
exceeding CZK 50 billion, but their assets ranged from CZK 10 billion to CZK 600 billion and their net income from “red numbers” to a very black number of CZK 20 billion. The list below indicates their name, identification number and field of industry
1.  Škoda Auto a.s., ID 00177041 – automobiles
2.  ČEZ, a.s., ID 45274649 – electricity
3.  Agrofert, a.s. – conglomerate, agriculture
4.  RWE Supply & Trading CZ a.s., ID 26460815 – oil & gas
5.  Foxconn Technology CZ, s.r.o., ID 27516032 – consumer electronics
6.  UNIPETROL, a.s., ID 61672190 – chemicals
7.  Hyundai Motor Manufacturing Czech s.r.o., ID 27773035 – automobiles
8.  ČEPRO, a.s., ID 60193531 – oil & gas.
9.  Continental Automotive Czech Republic s.r.o., ID 62024922 – automobiles

All of these companies have a legal form of either a shareholder company or a limited liability company, employ more than 500 employees, and file their annual reports with the Czech Commercial Register, which makes them freely available in the electronic format pdf via the national portal available at justice.cz and the EU system BRIS. Hence, the sample was selected regardless of the field of industry and all the included companies meet the conventional requirements for e-reporting. Since the research via BRIS and the national Czech Commercial Register yields annual reports regarding all these companies for the entire period of 2013-2017, the critical and comparative exploration of 50 annual reports and their the data about the type, extent and depth of the CSR information could be performed. The data on CSR was classified by their type and these types were done based on Directive 2013, i.e. R&D, environmental protection, environmental matters and others. The quantitative aspect was addressed by calculating the total number of pages, i.e. how many pages long was the entire annual report, on how many pages was the CSR information contained and on how many pages each type of the CSR information (R&D, environmental protection, environmental matters and others) was included. The qualitative aspect was addressed by the holistically manual approach, i.e. each and every one of these 50 annual reports was carefully read through by the author, a legal expert on corporate matters including reporting, and was ranked as either general information (+), or more developed and concrete information (++), or really well developed information with very good examples (++) In addition, the legal analyses performed while studying these reports allows for extracting critical statements with a direct or indirect (implied) declaratory nature.

4. Results

Today’s global, complex, highly competitive and heavily digitalized society brings forth many challenges for European integration [36,42,57]. The EU and its EU member states attempt to address them by various instruments designed to promote competitiveness, transparency and communication with different levels of effectiveness and efficiency [58-62]. The prior proposition that the implementation of the concept of CSR is not obligatory [48] and that it will be freely embraced by subjects progressively recognizing its benefits has been modified by clear indices and even demands of the EU law and often even national laws making the CSR concept and basic (not detailed) reporting about its realization compulsory for certain subjects.

In this context, the e-reporting on CSR is the hallmark of a current relationship and interaction of a wide spectrum of stakeholders in the internal single market [32], which is only partially covered by mandatory, expressed and explicit legal norms [27,38]. Ultimately, the above described legislative framework includes ambiguities, terminological imprecisions and even vacuums. Nevertheless, one can argue that it implies a general rule that shareholder companies and limited liability companies with more than 500 employees have to include CSR information in their annual reports and file them with their national Commercial Registers. The Czech law extends this legal duty by demanding that the electronic filing leads to the free availability of annual reports and ultimately becomes a part of the data available via BRIS. The selected 10 largest Czech companies satisfy the given criteria and are
subject to this legal duty, i.e. their annual statements with the CSR information are to be available via BRIS. However, the quantity and quality of the provided CSR information is not determined, since neither the EU law nor Czech law regulates clearly and expressly regarding this manner. Certain studies from the EU propose a growing interest in the CSR and suggest that this leads to some pressure for companies to recognize, apply and report regarding the CSR [20,31] and contribute to the enhancement of awareness [8], while other studies are less conclusive [25] and even suggest the reluctance [28]. This is further magnified by the ongoing issue of the balancing between the neoclassical equalization of levels of development between jurisdictions of the EU and the process of EU member state’s internal divergences [11]. So it remains unclear and pretty open both on the legislative and academic levels what, exactly, quantitatively and qualitatively should be included in the annual reports of the qualified companies about the CSR.

In such a context, it is extremely interesting to make a pioneering case study involving annual reports of the 10 Czech largest companies for 2013-2017 and research about whether they provide CSR information and, if yes, what kind (R&D, environmental protection, employment matters, others) and in what quantity and quality and whether the very wording or its general spirit provides hints and indices able to be considered as declarations. On how many pages of the annual reports is the CSR and its various types discussed, in what depth and concreteness and can some quotes or expressions be proposed as declarations to the public about the given company, i.e. one of the 10 largest Czech companies? The set of tables below addresses these questions and provides a truly original insight.

Table 1. Annual Reports of Škoda Auto a.s., ID 001 77 041.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>7/192</td>
<td>2/+</td>
<td>2/++</td>
<td>2/++</td>
<td>1/+</td>
</tr>
<tr>
<td>2014</td>
<td>8/126</td>
<td>2/+</td>
<td>2/++</td>
<td>2/++</td>
<td>2/+</td>
</tr>
<tr>
<td>2015</td>
<td>6/128</td>
<td>1/+</td>
<td>1/++</td>
<td>2/++</td>
<td>2/+</td>
</tr>
<tr>
<td>2016</td>
<td>6/112</td>
<td>2/+</td>
<td>1/+</td>
<td>2/++</td>
<td>1/+</td>
</tr>
<tr>
<td>2017</td>
<td>9/148</td>
<td>1/+</td>
<td>2/+</td>
<td>3/++</td>
<td>3/+</td>
</tr>
</tbody>
</table>

Quotes - Declaration

“… won an award at the “TOP Responsible Company” competition … surveys of public opinion once again rated ŠKODA AUTO one of the most popular companies in the Czech Republic. … it also finished first in the CZECH TOP 100 and Czech 100 Best rankings and is therefore…” Škoda Auto is objectively the best employer.

Source: Prepared by the author based on BRIS.

Škoda Auto includes a Management Report with the CSR information in its annual report and has a special CSR section, which is rather short (3-7% of the total number of pages) and only partially goes into depth. The most discussed are employment matters. Interestingly, these annual reports rely heavily on external and extrinsic evidence and refer to achievements having a CSR impact, such as winning awards. The reading and orientation in these annual reports is easy and intuitive.

Table 2. Annual Reports of ČEZ, a.s., ID 452 74649.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>13/300</td>
<td>4/+++</td>
<td>3/++</td>
<td>3/++</td>
<td>3/++</td>
</tr>
<tr>
<td>2015</td>
<td>15/329</td>
<td>4/+++</td>
<td>5/+++</td>
<td>4/+++</td>
<td>2/+</td>
</tr>
<tr>
<td>2016</td>
<td>13/332</td>
<td>3/+++</td>
<td>5/+++</td>
<td>3/+++</td>
<td>2/+</td>
</tr>
<tr>
<td>2017</td>
<td>14/356</td>
<td>5/+++</td>
<td>4/+++</td>
<td>3/+++</td>
<td>2/+</td>
</tr>
</tbody>
</table>
“… Emission limits observed … EU Emission tickets commercialized … Reduction of working hours per week to 37.5 hours … Education programs … International and national R&D projects …” – ČEZ is very active in all aspects of the CSR

ČEZ includes several sections on CSR information in various sections in its annual report. The combined CSR information is rather short (3-4%), but goes into sufficient depth. The most discussed are R&D matters. Interestingly, these annual reports rely heavily on discussions of diverse complex strategies and thus reading them and comprehending the meaning in them is not layman friendly.

Table 3. Annual Reports of Agrofert, a.s., ID 261 85 610.

<table>
<thead>
<tr>
<th>Year</th>
<th>CSR / all pages/pages</th>
<th>R&amp;D pages/quality</th>
<th>Environm. pages/quality</th>
<th>Employm. pages/quality</th>
<th>Others pages/quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>1/109</td>
<td>&gt;1/+</td>
<td>&gt;1/+</td>
<td>&gt;1/+</td>
<td>0</td>
</tr>
<tr>
<td>2014</td>
<td>1/110</td>
<td>&gt;1/+</td>
<td>&gt;1/+</td>
<td>&gt;1/+</td>
<td>0</td>
</tr>
<tr>
<td>2015</td>
<td>3/117</td>
<td>1/+</td>
<td>1/+</td>
<td>1/+</td>
<td>0</td>
</tr>
<tr>
<td>2016</td>
<td>3/92</td>
<td>1/+</td>
<td>1/++</td>
<td>1/++</td>
<td>0</td>
</tr>
<tr>
<td>2017</td>
<td>3/114</td>
<td>1/+</td>
<td>1/++</td>
<td>1/++</td>
<td>0</td>
</tr>
</tbody>
</table>

“…does not focus on R&D because it does not fit its specialization … has a lot of certificates about environment protection… strictly complies with the labor law” – Agrofert does not convey a message about its committed to CSR

Agrofert includes just a few notes about CSR and they take in total very little space (1-3%) and do not go into any depth. No CSR matters are really discussed and the spirit of the annual reports rather undermines the CSR’s importance. The observation of the labor law is presented as the CSR favour and obviously such a statement is misleading if not directly wrong.

Table 4. Annual Reports of RWE Supply & Trading CZ a.s., ID 26460815

<table>
<thead>
<tr>
<th>Year</th>
<th>CSR</th>
<th>R&amp;D</th>
<th>Environm.</th>
<th>Employm.</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>1/41</td>
<td>&gt;1/+</td>
<td>&gt;1/+</td>
<td>&gt;1/+</td>
<td>0</td>
</tr>
<tr>
<td>2014</td>
<td>2/60</td>
<td>&gt;1/+</td>
<td>&gt;1/+</td>
<td>1/+</td>
<td>0</td>
</tr>
<tr>
<td>2015</td>
<td>4/55</td>
<td>&gt;1/+</td>
<td>&gt;1/+</td>
<td>3/++</td>
<td>0</td>
</tr>
<tr>
<td>2016</td>
<td>4/57</td>
<td>&gt;1/+</td>
<td>&gt;1/+</td>
<td>3/++</td>
<td>0</td>
</tr>
<tr>
<td>2017</td>
<td>3/62</td>
<td>&gt;1/+</td>
<td>&gt;1/+</td>
<td>2/++</td>
<td>0</td>
</tr>
</tbody>
</table>

“… Diversity Talks …. No R&D …. Involvement with Dow Jones Sustainability Index and Carbon Disclosure Project ….”

RWE includes just a few paragraphs about CSR and they take in total a small space (3-7%), but still sufficiently detailed information is provided. The rather short CSR information is caused by the manner of the structure of the holding company, i.e. more CSR information is provided in annual reports of it’s daughter companies. The top CSR matters discussed in the annual reports of RWE deal with employment.

Table 5. Annual Reports of Foxconn Technology CZ s.r.o., ID 27516032

<table>
<thead>
<tr>
<th>Year</th>
<th>CSR</th>
<th>R&amp;D</th>
<th>Environm.</th>
<th>Employm.</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>2/40</td>
<td>&gt;1/+</td>
<td>&gt;1/+</td>
<td>1/+</td>
<td>&gt;1/+</td>
</tr>
<tr>
<td>2014</td>
<td>2/41</td>
<td>&gt;1/+</td>
<td>&gt;1/+</td>
<td>1/+</td>
<td>&gt;1/+</td>
</tr>
<tr>
<td>2015</td>
<td>2/41</td>
<td>&gt;1/+</td>
<td>&gt;1/+</td>
<td>1/+</td>
<td>&gt;1/+</td>
</tr>
<tr>
<td>2016</td>
<td>2/43</td>
<td>&gt;1/+</td>
<td>&gt;1/+</td>
<td>1/+</td>
<td>&gt;1/+</td>
</tr>
<tr>
<td>2017</td>
<td>Not available</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Foxconn includes just a few paragraphs about CSR and they take in total little space (3-5%), the only type of the CSR discussed in some detail covers employment matters. The adherence to standardized norms and projects is underlined.

Table 6. Annual Reports of UNIPETROL, a.s., ID 61672190

<table>
<thead>
<tr>
<th>Year</th>
<th>CSR</th>
<th>R&amp;D</th>
<th>Environm.</th>
<th>Employm.</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>6/223</td>
<td>&gt;1/+</td>
<td>2/+</td>
<td>2/+</td>
<td>1/+</td>
</tr>
<tr>
<td>2014</td>
<td>6/247</td>
<td>&gt;1/+</td>
<td>2/+</td>
<td>2/+</td>
<td>1/+</td>
</tr>
<tr>
<td>2015</td>
<td>6/214</td>
<td>&gt;1/+</td>
<td>2/+</td>
<td>2/+</td>
<td>1/+</td>
</tr>
<tr>
<td>2016</td>
<td>7/207</td>
<td>2/+</td>
<td>2/+</td>
<td>2/+</td>
<td>1/+</td>
</tr>
<tr>
<td>2017</td>
<td>7/198</td>
<td>2/+</td>
<td>2/+</td>
<td>2/+</td>
<td>1/+</td>
</tr>
</tbody>
</table>

Unipetrol has a special short chapter on CSR in its annual reports (1%) which focuses on education, volunteering, donations and environment protection. Environment and employment matters are developed in following parts of the annual reports, but not directly in the CSR chapter. The Code of Ethics is emphasized.

Table 7. Annual Reports of Hyundai Motor Manufacturing Czech s.r.o., ID 27773035

<table>
<thead>
<tr>
<th>Year</th>
<th>CSR</th>
<th>R&amp;D</th>
<th>Environm.</th>
<th>Employm.</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>3/48</td>
<td>&gt;1/+</td>
<td>1/+</td>
<td>1/+</td>
<td>1/+</td>
</tr>
<tr>
<td>2014</td>
<td>3/58</td>
<td>&gt;1/+</td>
<td>1/+</td>
<td>1/+</td>
<td>1/+</td>
</tr>
<tr>
<td>2015</td>
<td>3/62</td>
<td>&gt;1/+</td>
<td>1/+</td>
<td>1/+</td>
<td>1/+</td>
</tr>
<tr>
<td>2016</td>
<td>3/64</td>
<td>&gt;1/+</td>
<td>1/+</td>
<td>1/+</td>
<td>1/+</td>
</tr>
<tr>
<td>2017</td>
<td>1/31</td>
<td>&gt;1/+</td>
<td>1/+</td>
<td>1/+</td>
<td>1/+</td>
</tr>
</tbody>
</table>

Hyundai has rather short annual reports which have a set of chapters focusing on CSR (3-9%). Interestingly, along with typical types of CSR information, an impressive set of “other CSR” matters is included, such as various social and cultural projects. Various international standards and national prices are underlined.

Table 8. Annual Reports of ČEPRO, a.s., ID 60193531

<table>
<thead>
<tr>
<th>Year</th>
<th>CSR</th>
<th>R&amp;D</th>
<th>Environm.</th>
<th>Employm.</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>7/221</td>
<td>1/+</td>
<td>2/+</td>
<td>2/+</td>
<td>1/+</td>
</tr>
<tr>
<td>2014</td>
<td>8/170</td>
<td>3/+</td>
<td>2/+</td>
<td>2/+</td>
<td>1/+</td>
</tr>
<tr>
<td>2015</td>
<td>9/180</td>
<td>3/+</td>
<td>2/+</td>
<td>3/+</td>
<td>1/+</td>
</tr>
<tr>
<td>2016</td>
<td>12/144</td>
<td>3/+</td>
<td>3/+</td>
<td>5/+</td>
<td>1/+</td>
</tr>
<tr>
<td>2017</td>
<td>12/116</td>
<td>3/+</td>
<td>3/+</td>
<td>5/+</td>
<td>1/+</td>
</tr>
</tbody>
</table>

Quotes – Declaration “… control audit ISO 9001 and 14001 … Code of Ethics … Platform for company development as a free platform for the discussion with employees …”
Čepro has a set of short chapters regarding various types of CSR information (4-5%) which, despite their brevity, provides concrete data. Čepro underlines its adherence to international standards, its Code of Ethics and its drive to open communications, i.e. a bottom-up approach involving employees and getting them engaged in company decisions and allowing them to share in the company profits (extra bonuses for employees). Unlike other companies, Čepro seems to link R&D to the CSR.

Table 9. Annual Reports of Continental Automotive Czech Republic s.r.o., ID 62024922

<table>
<thead>
<tr>
<th>Year</th>
<th>CSR</th>
<th>R&amp;D</th>
<th>Environ.</th>
<th>Employm.</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>2/44</td>
<td>&gt;1/++</td>
<td>&gt;1/++</td>
<td>&gt;1/++</td>
<td>0</td>
</tr>
<tr>
<td>2014</td>
<td>2/48</td>
<td>&gt;1/++</td>
<td>&gt;1/++</td>
<td>&gt;1/++</td>
<td>0</td>
</tr>
<tr>
<td>2015</td>
<td>3/48</td>
<td>&gt;1/++</td>
<td>&gt;1/++</td>
<td>&gt;1/++</td>
<td>0</td>
</tr>
<tr>
<td>2016</td>
<td>3/53</td>
<td>&gt;1/++</td>
<td>&gt;1/++</td>
<td>&gt;1/++</td>
<td>0</td>
</tr>
<tr>
<td>2017</td>
<td>3/55</td>
<td>&gt;1/++</td>
<td>&gt;1/++</td>
<td>&gt;1/++</td>
<td>0</td>
</tr>
</tbody>
</table>

Quotes – Declaration
“... CZK 1 441 million on R&D not to be amortized and CZK 3 269 million on R&D to be amortized ... co-operation with colleges ... co-operation with R&D center in Ostrava ... ISO 14001 for environment ... extensive employee health protection ...”

Continental has a set of very short chapters entailing various types of CSR information (4-6%) which, despite being brief, provides concrete data and excellent examples. Continental underlines its adherence to international standards and its commitment to co-operate with academia regarding both R&D and hiring new employees. Unlike other companies, Continental seems to link R&D to CSR and even provides data about its large spending on R&D and the appearance and operation of R&D centers.

Table 10. Annual Reports of Finitrading a.s., ID 61974692

<table>
<thead>
<tr>
<th>Year</th>
<th>CSR</th>
<th>R&amp;D</th>
<th>Environ.</th>
<th>Employm.</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>0/34</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2014</td>
<td>0/34</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2015</td>
<td>0/34</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2016</td>
<td>0/34</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2017</td>
<td>0/34</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Quotes – Declaration
“......”

Finitrading is the only exception among the ten, i.e. this company has filed with the Commercial Register its annual reports with audited financial statements without any CSR information. Finitrading has over 10 000 employees and is well known in the Czech Republic. Its domain is finitrading.cz and, interestingly, even on it, there is no CSR information provided. As a matter of fact, there is a link channeling all searchers for information and documents from the Website of Finitrading on the domain finitrading.cz to the Website of the Commercial Registers, i.e. justice.cz. Hence, Finitrading does not provide CSR information at all, which is, considering its size, field of activity (steel and iron) and the large number of employees, surprising, and this fact deserves further exploration and explanations. Nevertheless, this is beyond the scope of this paper.

5. Analysis and Discussion

The holistic Meta-Analysis with respect to the two main purposes of this paper brings together a reflection upon the conceptual and legislative framework and upon their real life operation. The study of the conceptual framework indicates that CSR is a reality of the modern European integration
and that CSR reporting belongs to current policies. It is well established that the competitiveness
resides not only in basic economic performance and outputs, but also in social, environmental,
cultural and other elements [13].

The legal framework shows that the EU law has crossed the goal-line with respect to CSR
reporting as such, but not yet about its very content and arguably even not yet fully about the exact
addresses of this duty [20,28-32]. Generally, it is proposed that the understanding of the extent,
format and form of CSR varies considerably [29], on both EU and national levels [63], and that
conflicts are not only between various stakeholders but even between various CSR concerns [26]. An
apparent call for more law regulations [22] from above is paralleled by a proposition that the bottom-
up approach reflecting the current drive of businesses for transparency and for better disclosure is
more suitable [64].

A similar hesitation and exchange of opinions can be observed regarding the publication of such
reports, namely the use of BRIS, as reflected by very different approaches of the EU member states
[27]. Indeed, national particularities have the potential to clarify and strengthen the content and form
of the CSR reporting duty and its e-availability, but in the case of the Czech Republic, similarly to the
majority of other EU member states, this potential is only partially realized. Namely, with but little
exaggeration it can be argued that the Czech drive for the form and accessibility [27] outdistances
concerns over the content [28], i.e. the legal duty in the Czech context demands basic CSR
information to be present in the freely e-available annual reports of certain subjects.

Indeed, the conceptual and legislative framework with respect to the Czech context implies only
one strict, hard and rather general conclusion with respect to the largest Czech companies – they have
the legal duty to prepare annual reports and include in them CSR information. Period. This opens a
large window of opportunity for companies in their decision processes on and about the
included and ultimately published CSR information.

However, the recipients of this information, i.e. the auditorium for reading these annual reports
with CSR information, is very heterogeneous and does not want to have “some” information. In order
to avoid futility, a reasonable quantity and quality of data about R&D, environmental protection and
employment matters is to be provided in a searcher-friendly manner, because this information is
expected by a large and heterogeneous pool of subjects [65]. Some of these “searchers” are current or
potential business partners and if the company wants to be perceived as a reliable fit for them, it had
better convey such a message and endorsement of matching concepts [66], e.g. by including well
developed CSR information in their freely electronically available annual reports. Others of these
“searchers” are consumers and the general public, i.e. the large section of the public with a certain
CSR sensitivity and, at the same time, having neither the time, nor the desire nor the capacity for
intensive information gathering of CSR material [67]. Naturally, even employees can become
“searchers” and the CSR information can have a positive impact on their filing vis-à-vis to their
employer and on their readiness to perform their job duties [68,69]. In sum, irregardless of whether
outsiders or insiders, there is an increasing demand for better and more accessible information on
CSR [12,68,69] and the public draws its own conclusions.

For example, one previously published micro-study of CSR importance with respect to large
Czech companies revealed that two-thirds of consumers paid attention to the provided CSR
information and even became influenced by it [70]. However, other studies indicate that the majority
of companies do not file, or try to avoid filing, annual reports with CSR information with the
Commercial Register [28] and so miss out on the opportunity to provide a public declaration to
society about their CSR commitment. Since it is well established that business ethics is regarded as
a significant factor with an impact on both profitability and corporate image in the EU, and in
particular in a Central European context [8-10], the empirical observation might suggest that this is
generally underestimated by Czech companies.

Moving to the sample used for the Czech case study consisting of the ten largest Czech
companies by revenue, the EU law analysis reveals that they are subject to the legal duty to provide
both financial and non financial statements, i.e. they have to include CSR information in their reports.
The analysis of the Czech law added to this manner of content command a very important and not
so common in other EU member states, legal duty about the form, or even more specifically about the form presentation. Namely, Czech companies of all sizes have to prepare annual reports and they have to file them with the Commercial Register to be e-published and so made freely available to the public at large without any restrictions. By the operation of the EU law, this data is further, at least partially, migrated to the EU central system BRIS on the e-Justice Portal.

This performed case study of annual reports brings forth a pioneering and very useful insight regarding types, quantity, quality and even the declaration dimension of the realization of the discussed legal duty. The table below extracts and presents an overview of information collected from all these companies and all their annual reports.

**Table 11. Overview – CSR information in annual reports of the ten largest Czech companies in 2013-2017**

<table>
<thead>
<tr>
<th>CSR</th>
<th>Extent – quantity</th>
<th>Depth – quality</th>
<th>Declaration potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D</td>
<td>0-10% of annual report</td>
<td>Generally + or ++</td>
<td>differences in the use</td>
</tr>
<tr>
<td>Environment</td>
<td>1-4 pages</td>
<td>++</td>
<td>Underemployed</td>
</tr>
<tr>
<td>Employ.</td>
<td>1-5 pages</td>
<td>+++</td>
<td>Employed</td>
</tr>
<tr>
<td>Others</td>
<td>0-3 pages</td>
<td>+</td>
<td>Employed</td>
</tr>
</tbody>
</table>

Comments: 9 out of 10 companies included CSR information in their annual reports, the CSR information took a similar share of the annual report and no dramatic changes occurred between 2013 and 2017. Generally, companies include CSR information in a similar extent, but in a different manner and depth. Certain companies have CSR chapters in their annual reports while others spread the CSR information into different segments of annual reports, often even without treating it as CSR information. References to international standards, official prices and awards were mentioned, occasionally misleading information was presented.

The above Table suggests a wide spectrum with respect to the type, quantity and quality of the CSR information provided by the largest Czech companies. This spectrum is provided freely and online to the public at large, from partners and competitors over to state authorities even to consumers. Indeed, the ten largest Czech companies are subject to this legal duty, are aware about it and, except for one (Finitrading), satisfy it. They prepare their annual reports, or have an outside firm prepare them, have them verified and audited, and e-file them with the Commercial Register. These annual reports are truly digitally available without any restrictions and they include CSR information. However, neither the EU law nor Czech law provides mandatory and detailed instructions about the type, extent and depth of this information. Namely, the legal duty is set up in a rather general and vague manner. This leaves a rather large discretionary space in its perception and satisfaction and it is up to these companies how strongly they will adhere to the CSR concept and how extensively they will report about it via annual reports. Boldly, it is up to these companies in regard to how much and in what depth they will provide CSR information about their R&D, environmental, employment and other matters in their annual reports or somewhere else, e.g. by making statements on their internet pages. The manner in which they proceed, regardless whether via annual reports or otherwise, reflects their perception of the CSR, as well as their readiness to use it as a public declaration.

Since the performed case study considered the period of five years and investigated all annual reports filed by these companies, it is sufficiently indicative, at least regarding the most official and formal communication pathway for the CSR declaration. The yielded results confirmed that these companies do satisfy their legal duty, i.e. they meet the mandatory threshold and include in their annual reports the CSR information and file these reports with the Czech Commercial Register. The companies act in a predictable and stable manner and so no dramatic differences develop between annual reports for the same company during the 2013-2017 time frame. However, the analysis of the CSR information provided in these annual reports revealed that certain companies provide CSR in a
much more reader or consumer friendly manner and are well organized, while other companies spread the CSR information through their annual reports, often without any logic. Although the share of the CSR information in the annual reports is fairly similar among the observed companies (1-10%), important differences in the quality of the information exist. Often much better data is provided regarding employment matters and possibly as well environmental protection than regarding social matters and R&D, which is occasionally even not considered as related to CSR. The top focus on the employment matters is a product of several factors, such as the impact of economic downturns on structural unemployment [71], a generally large social focus on job safety and the current economic situation in the Czech Republic.

Interestingly, on one hand, the drive to provide robust statements about CSR with respect to employment matters sometimes will lead companies into presenting misleading information and present as the CSR as a ‘bonus’, even though it is something which is required by mandatory labor law provisions (e.g., the statement about the observance of the labor law). On the other hand, some companies are determined to provide truly objective and correct CSR information and strongly refer to objective achievements, prizes and awards received and officially followed standards. The teleological and purposive approach to annual reports reveals that, for some companies, typically from the oil-gas-chemical industry, the CSR information in the annual report is a great vehicle for a public declaration to society, while for other companies is it a mere duty.

6. Conclusions

This paper and the underlying study on its two main purposes contributes to knowledge and discussions going to the very roots of current interaction and behavior on the market and even beyond. Every human community, including the global business community, needs the preservation of a set of orders under the auspices of certain values and this while working towards the common good [72]. Over the last few decades, the CSR has grown to become one of the key concepts intimately linked to business ethics and even beyond, in short, the general direction for the future [40]. In the EU, CSR is recognized and supported both by law provisions generated by the EU and EU member states and by the actions of all stakeholders, especially companies. Nevertheless, this is merely a general framework presentation and there are many questions and issues linked to the determination of the exact dimension of the mandatory features of the legal duty to provide CSR information, and in particular in annual reports and the e-publication of these annual reports.

The ten largest Czech companies are subjects of the legal duty to prepare and e-file with the Commercial Register their annual reports with CSR information, but this legal duty is set up in a rather general and vague manner. This leaves open a rather large discretionaey space in its perception and satisfaction. Boldly, it is up to these companies about how much and in what depth they will provide CSR information about their R&D, environmental, employment and other matters in their annual reports. The manner how they proceed reflects their perception of the CSR and their readiness to use it as a public declaration. The performed case study considers a period of five years and investigated all annual reports filed by these companies. The results confirmed that these companies generally do satisfy their legal duty, i.e. 90% of them meet the mandatory threshold and include in their annual reports CSR information and file these reports with the Czech Commercial Register. However, the analysis of the CSR information provided in these annual reports revealed that the manner of CSR reporting is not settled. Perhaps the only three common features are that generally (i) the CSR information usually appears only on from 0-10 pages, (ii) represents 1-10% of the total number of pages of the annual report and (iii) touches most heavily on employment matters. Otherwise, significant differences exist. Regarding the form, some annual reports are well organized with respect to CSR, while others are not, some of them have a special CSR chapter while others spread the CSR information across the entire annual report. Regarding the types, the importance and developments vary and sometimes R&D is totally skipped. Regarding quality and concreteness, there is very little in common, where some companies can, on one or two pages, provide detailed and convincing CSR information while other companies have their pages of the annual report filed with
general and unconvincing CSR information. For sure, each annual report has the potential to convey a declaration to society, but this potential is not always developed. In addition, these declarations have in common only the adherence to international standardization. Otherwise, each company seems to exercise quite a bit of discretion about how they used the annual report and CSR information for information and marketing purposes.

There are some limitations attached to this research and it would be very instructive and useful to address them in the near future. Firstly, the case study entailed annual reports of the ten largest Czech companies filed for 2013-2017 and naturally expanding this sample would be extremely useful and would boost its significance. This expansion should entail the national aspect (not only Czech companies), the quantitative aspect (more than 10 companies) and the company’s size aspect (adding smaller companies). Secondly, it would be interesting to go into more depth in the annual reports and deeply discuss the manner of their approach and inclusion of the CSR information (or the lack of such an inclusion). Thirdly, it would be enlightening to study more about these companies and about other channels, including their various presentations dealing with CSR. Fourthly, it would be inspiring to focus even more on the interplay of the CSR and ethics with the business results of these companies.

Well, the CSR is a much-needed concept in the second decade of the 21st century, throughout the entire global setting and if the EU, the EU member states and even Europeans are serious about the proclaimed smart, sustainable and inclusive growth, they have to not only work both hard and in compliance with the CSR and related business ethics demands, but, as well, inform and be informed about it. In the digital post-modern society, increasingly, knowledge is power and information is the top commodity. The enhancement of awareness and open information about the CSR are needed and can contribute to a competitive advantage. The inclusion of genuine and appropriate CSR information in freely available digital annual reports is not a bureaucratic duty set by the law, instead it is a great opportunity offered by our digital era for all stakeholders.

**Funding:** This research and resulting contribution were funded by Czech Science Foundation, grant number GA ČR No. 17-11867S „Comparison of the interaction between the law against unfair competition and intellectual property law, and its consequences in the central European context.”

**Conflicts of Interest:** “The author declares no conflict of interest.”

**References**


53. MacGregor Pelikánová, R. And the best top level domain for European enterprises is ... International And Comparative Law Review 2012, 12, 2, 41-57.
The trade show conversation in developing implementation of the Europe 2020 Strategy goals be efficient? The challenge for