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Towards 2014/95/EU directive compliance: the case of Poland

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Abstract

Purpose – This study aims to investigate the differences in the extent of non-financial disclosure (NFD) across companies listed on the Warsaw Stock Exchange over the period surrounding the implementation of the Directive 2014/95/EU.

Design/methodology/approach – The sample comprising 134 selected companies. Content analysis and a disclosure index were used to measure the level of NFD. Non-financial reporting practices in the two years before (2015) and one year after (2017) the implementation of the Directive were compared.

Findings – The results highlight that there is already a high level of compliance with the European Union's regulation. The extent of the NFD across different thematic aspects in reporting media increased significantly between 2015 and 2017 in particular in human rights and anti-corruption. The Directive had the largest impact on those firms with previously low levels of NFD and led to more homogeneity of NFD across different industries.

Originality/value – The study contributes to the understanding of the impact of the Directive on the NFD practices by European Union companies. The research has important implications for policymakers because it revealed that mandatory regulations form a crucial instrument in improving the harmonization of NFD. The research suggests that, due to the Directive, stakeholders should be provided with more comprehensive information that they need in their decision-making process.

Keywords CSR disclosure, Sustainability disclosure, ESG disclosure, Directive 2014/95/EU, Non-financial disclosure

Paper type Research paper

1. Introduction

Growing and broadened interest in sustainability reporting has helped generate the diffusion of a wide range of sustainability activities by firms of all types (Michelon *et al.*, 2015).

As stated in the Directive 2014/95/EU (the Directive):

> "[. . .] disclosure of non-financial information is vital for managing change towards a sustainable global economy by combining long-term profitability with social justice and environmental

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protection. In this context, disclosure of non-financial information helps the measuring, monitoring and managing of undertakings' performance and their impact on society [. . .]".

According to the Directive, large companies (exceeding 500 employees) having headquarters in the Member States are required to provide a series of environmental, social and governance (ESG) statements. Companies were expected to comply with the new disclosure requirements of the locally transposed laws by 2018. Poland has become one of the then 28 European Union (EU) countries that have transposed the Directive into their national legislation. Since then, non-financial disclosure (NFD) is required among certain Polish enterprises by the Polish Accounting Act (PAA).

Assessments of the state of the art of non-financial reporting, before the implementation of the Directive, by Manes-Rossi *et al.* (2018), Hoffmann *et al.* (2018), Venturelli *et al.* (2017) and Matuszak and Różańska (2017), showed that despite what previously appeared in the European debate on the application of the Directive by large companies, there was an information gap regarding some of the aspects required by the Directive. However, the information gap varied from country to country. As noted by Matuszak and Różańska (2017), there was a low level of pre-implementation compliance with the new Directive requirements on NFD, especially in Poland. In this case, the potential contribution of the Directive to narrow the non-financial information gap seems to be significant.

Considering the potential consequences of the Directive on NFD, legitimacy, stakeholder and institutional theories provide clear predictions. These theories suggest that, in the absence of regulation, some companies consider it useful to engage in and provide NFD to meet the needs of their stakeholders and signal their legitimacy to society (Freeman and Evan, 1990; Deegan, 2002; Laplume *et al.*, 2008). Companies that have not previously provided NFD will be required to do so under the new regulations, which will expand the number of companies provided NFD. In addition, because companies report only on those NFD that they consider most relevant to their stakeholders (Amel-Zadeh, 2016), the requirement to disclose a comprehensive non-financial statement is likely to increase the average quantity of disclosure.

Prior studies confirmed these assumptions, showing that the introduction of mandatory reporting guidelines increased the number of companies that were reporting (Frost, 2007; Choi *et al.*, 2013; Dong and Xu, 2016; Fatima *et al.*, 2015; Kerret *et al.*, 2010; Criado-Jiménez *et al.*, 2008; Larrinaga *et al.*, 2010; Damak-Ayadi, 2011; Chauvey *et al.*, 2015; Pedersen *et al.*, 2013; Dumitru *et al.*, 2017) and the level of NFD provided (Frost, 2007; Criado-Jiménez *et al.*, 2008; Damak-Ayadi, 2011; Chauvey *et al.*, 2015; Haji, 2013; Kerret *et al.*, 2010).

We argue that mandatory regulation may have varying effects on firms depending on their prior level of NFD and may lead to greater standardization of NFD and thereby narrow the gap between "best practices" and the reporting of the average firm. Surprisingly little research (Dumitru *et al.*, 2017) has been carried out on these standardization effects. In particular, there is a lack of research that compares NFD provided by large companies located in the EU before and after implementation of the Directive to learn how the Directive transposition has influenced non-financial reporting in EU countries. Given these potential contributions of the Directive, as well as the gap in the literature, we investigated the extent to which NFD by Polish companies changed over the period surrounding the implementation of the Directive and assessed the early compliance with this new legislation. In this study, we refer to sustainability reporting and ask how the Directive has shaped non-financial information disclosed by Polish listed companies and assess its initial effectiveness as a regulatory instrument.

Focusing on Poland was justified for the following three reasons. Firstly, non-financial reporting by Polish companies before the Directive was completely voluntary, unlike in the other EU Member States such as Denmark, France or Spain. This setting allows for clearer implications of potential changes resulting from compliance with the Directive (the migration from voluntary to mandatory disclosure requirements). Secondly, Poland was a new member of the EU (accessed in 2004) and like other countries of Central and Eastern Europe (CEE), due to specific economic conditions, was characterized by a lower level of voluntary NFD compared to “old EU” countries, as well as significant variability in NFD across industries (Matuszak and Różańska, 2017; Dyduch and Krasodomska, 2017). According to estimates of the Polish Ministry of Finance (Dadacz, 2017), approximately 300 undertakings in Poland are subject to the new NFD, which is one of the largest settings in the CEE region. Therefore, it is reasonable to examine Poland in the context of changes in NFD and standardization effect to be able to draw economically significant conclusions for the CEE region. Thirdly, the transposition of the Directive in Poland clearly specifies penalties for non-compliance in PAA, unlike the other EU Member States such as Estonia, The Netherlands and Spain. Thus, the Polish legal environment ensures a strict level of law enforcement, which increases the likelihood of future compliance with the Directive, allowing sharper predictions of its potential consequences.

To explore the research question, we analysed the NFD in both management reports and, where issued, stand-alone reports using content analysis and binary disclosure index for a sample of 134 companies listed on the Warsaw Stock Exchange (WSE). We focused on the impact of the Directive on the change in NFD from 2015 in comparison to 2017. Non-parametric statistics were used to explore varying consequences of the Directive across different groups of companies.

Our analysis shows that the number of companies providing NFD in Poland increased significantly over the period surrounding the implementation of the new legislation. We also found that the Directive led to increased NFD and had the largest impact on those firms with previously low levels of NFD (non-experienced in NFD, not listed on the Respect Index, privately owned, environmentally insensitive and with no stand-alone report). The impact of the Directive was greater in those areas of the NFD that companies did not emphasize in earlier periods (e.g. human rights and anti-corruption).

However, our analysis also highlights that mandatory disclosure led to more homogeneous non-financial reporting within companies as it decreased the variance between them. Our quantitative research in the Polish setting confirmed the high effectiveness of the Directive in the initial period of implementation in relation to the number of reporting companies and the content reported. These results have implications for our understanding of mandatory regulations on NFD. In particular, we assume that our study contributes to the understanding of the impact of Directive 2014/95/EU on NFD practices by EU companies.

The paper is organized as follows. In Section 2, we provide the theoretical background for the research study, offer a literature review and present the research hypotheses. In Section 3, we report the research methodology. In Section 4, the results of the study are presented and discussed. Finally, Section 5 includes the main conclusions along with the limitations and suggestions for further research.

2. Literature review and hypothesis development

2.1 Background literature

According to Carrots and Sticks (2016), in recent years, there has been a surge in the number of reporting instruments around the world that either require or encourage organizations to report or disclose, sustainability-related information. The number of mandatory reporting instruments has almost doubled from 2013 to 2016. Among others, the EU has made progress towards meeting the information needs of investors and stakeholders regarding the long-term risk of environmental and social issues. To this end, the EU issued Directive 2014/95/EU (European Parliament and of the Council of the European Union, 2014) to require large public-interest entities with an average of 500 or more employees to disclose non-financial information and EU Guidelines 2017/C215/01 (European Commission, 2017) to assist organizations in providing this disclosure.

The Directive aims to ensure that organizations provide at least a "package" of non-financial information considered to be unavoidable and comprehensive. This information must be provided at the minimum for the environmental, social, employee conditions, respect for human rights, anti-corruption and bribery matters. For each of these matters, companies must disclose a description of their policies including the due diligence processes implemented, the outcomes of those policies, principle risks and their management. The Directive calls for the above elements to be presented in the form of a non-financial statement and published either within the management report or as a separate report, according to the principle of "comply or explain". This approach means that if the company does not pursue policies in relation to one or more of those matters, the financial statement shall provide a clear and reasoned explanation for not doing so. It means that a company must state that it has a policy in relation to a specific ESG matter or, if it does not apply a policy regarding a particular ESG matter, it must provide an explanation and justification of why that is the case. In terms of the other aspects of reporting, companies must simply "comply". Under a "comply or explain" approach, only a company that both fails to disclose information about policies in relation to one or more ESG matters and fails to provide an adequate explanation would be non-compliant. According to Harper Ho (2017) "comply or explain" approach operates in tandem with mandatory regulations rather than displacing them and represents an intermediate approach to regulation. Moreover, there are different views on whether "comply or explain" is in fact a mandatory or voluntary approach. On the one hand, it is mandatory, as all affected companies must either comply or explain based on the same regulation. At the same time, because conformity to the legislation is not required, the regulation represents a form of soft law or self-regulation.

The Directives is a legislative act that represents an important step towards standardizing reporting and formalizing transparency requirements, however, each Member States are allowed to decide how to transpose its regulation into national laws. In particular, the Directive allows the Member States to specify whether or not reports must be verified and if any penalties will be imposed upon organizations that fail to report adequately. Although, the regulation does not require any assurance of the content of the non-financial statement, the statutory auditor or audit firm is obliged to check whether the non-financial statement has been provided if a firm falls within the scope of the Directive. The EU Member States were required to transpose the new rules into national law by December 2016 and the first reports containing the prescribed NFD were prepared for the 2017 financial year and published in 2018.

The introduction of this mandate at the European level, as well as the global trend of mandatory sustainability reporting, increases the need for a better understanding of its consequences. We recognize that there are unanswered questions about the impact, context and drivers behind the Directive and the economy in which it is transposed. For example, how effective is this instrument in achieving its objectives related to the minimum content required? To what extent does the non-financial reporting change subsequent to the Directive implementation in a particular sector or economy?

The existing literature (Hess, 2008) argued that voluntary disclosure often indicates the extent to which mandatory regulations may enforce compliance. Researchers started to investigate the level of compliance of annual reports with the Directive and subsequent EU Guidelines 2017/C215/01 before their implantation. More specifically, the analysis performed by Manes-Rossi *et al.* (2018) revealed that there is already a high level of compliance by big European companies with the EU Guidelines 2017/C215/01, as the average value of the Compliance Index was 71%.

It should be noted that the study described examined a sample composed of the 50 biggest European companies from 10 different countries. Most of the sampled companies are based in countries where mandatory regulations for environmental and social disclosure have been required well before the Directive was issued (e.g. Denmark, France, Spain, Sweden and the UK) (Venturelli *et al.*, 2017). Therefore, it was reasonable to expect a high level of compliance with the EU Guidelines 2017/C215/01, especially in relation to social and environmental matters. These values are higher than those obtained in previous similar studies conducted by Hoffmann *et al.* (2018), Venturelli *et al.* (2017), Matuszak and Różańska (2017), Dyduch and Krasodomska (2017), Szadziewska *et al.* (2018) and Gușe *et al.* (2016), which focused on a single country.

More specifically, Hoffmann *et al.* (2018) conducted an analysis of non-financial information submitted by 522 German companies in the financial year 2015 or 2016. The analysis of sustainability reports showed that there was still room for improvement to meet the requirements of the CSR Directive Implementation Act.

In Italy, Venturelli *et al.* (2017) evaluated the information gap for Italian companies and, consequently, the adjustments required by the new Directive on non-financial information focused on a sample of 223 large companies considered entities of public interest and carried out the analysis of non-financial information disclosed in the mandatory and voluntary reports for the year 2015. The results showed a medium level of compliance (an average NFD score of about 49%).

In the Polish context, Matuszak and Różańska (2017) analysed a sample of 150 companies listed on the WSE, focusing on annual reports, CSR reports and companies' websites to investigate the quality and the extent of CSR disclosure provided, as well as the level of compliance with the new requirements of the PAA on NFD resulting from the transposition of the Directive a year before the implementation of the new regulations. Their study showed that there was a low level of compliance with the new PAA requirements on NFD. The low level of compliance with the Directive among Polish listed companies was also confirmed by the study conducted by Dyduch and Krasodomska (2017) on a sample of 60 annual reports for the year 2014. The state of the non-financial reporting by Polish listed companies has not changed even in 2016, which is the last reporting year before the regulations in this area came into force. Szadziewska *et al.* (2018) documented on a sample of 53 listed companies that the majority of them would not meet the requirements for NFD resultant from the changes introduced to the PAA made after transposition of the Directive.

Focusing on Romania, Gușe *et al.* (2016) analysed the annual reports and other disclosure outlets of 20 companies listed on the Bucharest Stock Exchange (BSE), which were made available to the public through the BSE website in 2015 to determine to what extent these companies were prepared to implement the Directive. Their results indicated medium levels of compliance, as most of the content elements were disclosed on average by about 50% of the sampled firms.

Looking at the review of the research, we can see that in the period immediately preceding the implementation of the Directive (2015 or 2016), the reports still had gaps regarding some of the aspects required by the Directive.

According to previous studies (Gușe *et al.*, 2016; Matuszak and Różańska, 2017; Manes-Rossi *et al.*, 2018), two of the least-reported thematic aspects include human rights and anti-corruption. Regardless of the thematic aspects, there are differences between enterprises in the level of NFD. Previous studies indicate several factors that differentiate the level of NFD, including the release of stand-alone CSR report (Hoffmann *et al.*, 2018), inclusion in the Respect Index portfolio (Dyduch and Krasodomska, 2017) and membership in the environmentally sensitive industry (Matuszak and Różańska, 2017; Dyduch and Krasodomska, 2017; Manes-Rossi *et al.*, 2018).

Previous studies have proved that many reports, especially from countries where there was no legal obligation to disclose non-financial information, still need further development to meet the requirements of implementing the Directive. Diagnosis of the state of the art of non-financial reporting before the implementation of the directive showed that, despite what previously appeared in the European debate on the application of the Directive by large companies, there was an information gap. It seems that the implementation of the Directive should help to fill it in the coming years. From this perspective, the potential contribution of the Directive to NFD in the EU appears greater than we had expected.

Nevertheless, there is a lack of research that compares the NFD provided by large companies located in the EU before and after the implementation of the Directive to learn how the Directive transposition has influenced non-financial reporting in EU countries. The relevant exemption in this matter is one study (Sierra-Garcia *et al.*, 2018), which was focused on Spanish IBEX-35 listed companies. However, the study is fragmentary as the authors limited it to comparing one element of the content, namely, key performance indicators (KPIs) and this does not give a full picture of the changes in NFD required by the Directive.

2.2 Theoretical framework

Considering the potential consequences of the Directive on NFD, the legitimacy, stakeholder and institutional theories provide clear predictions. In the neoclassical approach to corporations, the sole responsibility of the company is to maximize shareholder value (Friedman, 1962). In this light, CSR activities and reporting are not the company's responsibility. However, according to the legitimacy theory, as corporations become more and more influential, their responsibility goes beyond just maximizing shareholder value. According to Deegan (2002), the corporations and individual members of society are bound by a "social contract" because the company has the right to act in society, when it receives a "licence to operate", which depends on the public's acceptance of how the company runs its business. To maintain their legitimacy, companies must, therefore, signal that they are acting in the interest of society, for example, by engaging and reporting on CSR activities (Deegan, 2002).

Legitimacy theory links to stakeholder theory, according to which, a company's responsibilities go beyond the needs of shareholders and include the interests of other parties that have a stake in the company. Therefore, to be successful, companies must manage their stakeholder relationships, meeting the needs and expectations of various groups, including their employees, shareholders, suppliers, customers, competitors, regulators, the government, auditors, the local community, public opinion, et cetera. According to this theory, companies with strong stakeholders will use and report more on CSR activities (Freeman and Evan, 1990; Laplume *et al.*, 2008).

Legitimacy theory is also linked to institutional theory, according to which, organizations will change their structure or activities to conform with external expectations about acceptable (legitimate) forms or structures. However, in contrast to the theory of legitimacy, which perceives the ability of managers to change the perception of legitimacy (perhaps, through disclosure of information), according to institutional theory, managers are expected to follow "norms" that are largely imposed upon them (Deegan, 2002).

According to these theories, in the absence of regulation, some companies choose not to engage and report on CSR activities, for example, because they are not exposed to the same pressure from stakeholders as their peers. The introduction of mandatory CSR reporting requires these companies to report on CSR, which increases the number of companies that report on CSR (Gulenko, 2018).

A similar justification applies to the quantity of information disclosed. Institutional stakeholder theory suggests that some companies may benefit from being involved in CSR activities that are material to their stakeholders (Amel-Zadeh, 2016). As mandatory CSR reports cover a wide range of CSR activities that are not equally relevant to all companies, they are likely to increase the overall quantity of information disclosed (Gulenko, 2018) increasing, in particular, those disclosures that until now were not considered relevant.

According to the above theories, mandatory regulation may have also varying effects on firms depending on their prior level of NFD. Faced with NFD regulation, firms with low levels of NFD are likely to change their reporting behaviour, as increased transparency will bring them under greater scrutiny relative to competitor firms (Brunner and Ostermaier, 2019). On the other hand, firms with higher NFD levels will be less likely to modify their NFD reporting as a result of mandatory regulations. The greater institutionalization of CSR may erode the business case for the voluntary adoption of CSR (Jackson *et al.*, 2019), and thus the reporting on it. Firms may even have a tendency to limit their disclosure to the mandatory requirements (Dumitru *et al.*, 2017). Along similar lines, mandatory regulation may lead to greater standardization of NFD and thereby narrow the gap between the "best practices" and the reporting of the average firm.

Studies on the consequences of mandatory NFD have been undertaken from various perspectives. Most studies have compared the pre- with the post-implementation period (Frost, 2007; Haji, 2013; Kerret *et al.*, 2010) or have looked at trends in the post-implementation period and examined how disclosures have changed over time (Chauvey *et al.*, 2015; Damak-Ayadi, 2011). Few studies have identified the consequences by comparing countries that have introduced an NFD mandate to those that have not (Dumitru *et al.*, 2017; Hąbek and Wolniak, 2016).

Regardless of the adopted research perspective, prior studies indicated that the introduction of mandatory non-financial reporting increases the number of reporting companies, for example, in Australia (Frost, 2007; Choi *et al.*, 2013), in China (Dong and Xu, 2016), in Malaysia (Fatima *et al.*, 2015), in Israeli (Kerret *et al.*, 2010), in Spain (Criado-Jiménez *et al.*, 2008; Larrinaga *et al.*, 2010), in France (Damak-Ayadi, 2011; Chauvey *et al.*, 2015), in Denmark (Pedersen *et al.*, 2013) and in Romania (Dumitru *et al.*, 2017).

Another consequence of NFD regulation is the higher level of reporting quantity. Many researchers found that companies report quantitatively more under the reporting mandate, measured by the number of words (e.g. Frost, 2007), sentences (e.g. Criado-Jiménez *et al.*, 2008; Damak-Ayadi, 2011), pages (Chauvey *et al.*, 2015) or items disclosed (Haji, 2013; Kerret *et al.*, 2010). However, the initial compliance with the mandate was low in many cases (Criado-Jiménez *et al.*, 2008; Lenssen and Delbard, 2008), but attained a higher level in subsequent years suggesting a movement towards diffusion (Chauvey *et al.*, 2015) and became a routine process over time (Bose *et al.*, 2018).

For example, Criado-Jiménez *et al.* (2008) found that roughly 80% of the largest Spanish companies did not provide any environmental information required by the ICAC-2002 standard a year after its implementation. In addition, companies that report certain environmental information often neglect aspects of regulation that are not in their interest. Chauvey *et al.* (2015) proved that the lack of early compliance with mandate requirements suggested a lack of normativity at that time. They concluded that much of the problem regarding poor compliance with the mandate can be attributed to the lack of specificity of the law (any specific guidelines) and lack of clearly identified sanctions for non-compliance. The negligible influence of outside actors such as the profession and non-regulatory organizations appeared to foster a lower normativity.

Some researchers have extended their studies on the consequences of mandatory non-financial reporting by testing factors influencing the NFD before and after the regulatory changes (Choi *et al.*, 2013; Haji, 2013). However, few studies have attempted to examine the factors affecting the differences in NFD over the period surrounding the implementation of the new legislation (Frost, 2007; Criado-Jiménez *et al.*, 2008) to understand the varying effects of mandatory regulations on firms' NFD. For example, Criado-Jiménez *et al.* (2008) found that the increase of disclosure was comparatively higher for companies in non-environmentally sensitive industries, while Frost (2007) stated that the most significant increase of the total disclosure was in the case of companies that reported breaches of regulations and that did not issue a stand-alone environmental report. Surprisingly little research (Dumitru *et al.*, 2017) has been carried out on the standardization effects of NFD mandatory regulations.

According to Gulenko (2018), the extrapolation of findings from previous mandatory CSR literature to new settings is very difficult. Researchers should consider various differences between studies such as the reporting requirements and enforcement, different reporting practices prior to the mandate, as well as cultural differences.

Accordingly, the intent of our investigation was to empirically investigate the effectiveness of the Directive in the field of NFD in Poland. Specifically, we examined the extent to which NFD in Poland changed immediately following the implementation of the Directive and assessed the early compliance with the Directive requirements with respect to the extent of the information being provided. The present study also went one step further, by examining the standardization effect of the Directive.

2.3 Hypotheses development

The rationale for expecting Directive 2014/95/EU to significantly affect NFD is that companies would be keen to follow new "norms" that are imposed upon them (Deegan, 2002). According to stakeholder and legitimacy theories, companies may strive to increase the insufficient and non-compliant level of NFD to reduce regulatory pressure and at the same time to ensure legitimacy.

In the previous literature, it was clearly stated that overall reporting quantity increased subsequent to an NFD mandate. Matuszak and Różańska (2017) analysed the CSR reporting practices in 2015 among 150 Polish companies affected by the Directive and stated that in the majority of cases, NFD of companies was not compliant with the new requirements. Together with the findings from other studies (Frost, 2007; Damak-Ayadi, 2011; Kerret *et al.*, 2010), this indicates that the overall quantity of NFD among Polish companies will increase after the Directive implementation.

Unlike previous studies (Chauvey *et al.*, 2015; Criado-Jiménez *et al.*, 2008; Lenssen and Delbard, 2008), we assumed that the level of compliance will be high in the first year after the introduction of the obligation. This is due to the coercive pressure imposed by the government in the form of penalties for non-compliance in PAA, as well as normative isomorphism, which represents the pressures exercised by the professional and non-regulatory organizations providing a detailed guideline that helps companies providing NFD. Polish companies may rely on international guidelines (e.g. GRI G4), EU-based guidelines (e.g. Guidelines 2017/C215/01) or national frameworks (e.g. Non-Financial Information Standard[1]) that enable Polish companies to fulfill their reporting obligations regarding NFD.

Considering the theoretical and empirical evidence, we hypothesize:

H1a. Directive 2014/95/EU in its early implementation period will lead to a significant increase in the average level of NFD provided by companies.

Based on institutional stakeholder theory we can expect that some companies may benefit from being involved in CSR activities that are material to their stakeholders (Amel-Zadeh, 2016). As mandatory non-financial reports under Directive 2014/95/EU cover a wide range of sustainability matters that previously were not equally relevant to all companies, they are likely to increase mostly those disclosures that until now were not considered relevant. Within CSR issues, human rights and anti-corruption are two thematic aspects that have long been neglected by companies. Reporting on those aspects can be a challenge if companies do not have insight into their human rights and anti-corruption practices, impacts and policies. Moreover, quantifying these practices and impacts is often difficult because methodologies that allow reporting on human rights and anti-corruption in quantitative terms are not common. International initiatives that are dedicated to the issues of anti-corruption and human rights in business were introduced relatively late. For example, the United Nations Global Compact's 10th Principle on anti-corruption was only added in 2004, more than four years after the initial launch of the initiative. While the first corporate human rights responsibility initiative called the Guiding Principles for Business and Human Rights was introduced and endorsed by the United Nations only in 2011. Many businesses still struggle with embedding human rights and anti-corruption into their non-financial reporting.

When considering human rights, this could be associated with companies' failure to either invest in systematic data gathering or recognize the importance attached to such information (Parsa *et al.*, 2018). Regarding corporate reporting on anti-corruption, given the nature of the problem, companies may choose to avoid the topic as part of their sustainability disclosures rather than proactively and transparently addressing the issue. What's more previous literature shows that the more a company is exposed to corruption, the less likely it appears to openly report its anti-corruption engagement (Barkemeyer *et al.*, 2015). A range of previous studies on sustainability disclosure (Gușe *et al.*, 2016; Matuszak and Różańska, 2017; Manes-Rossi *et al.*, 2018) documented that two of the least-reported thematic aspects include human rights and anti-corruption. In the Polish setting, Matuszak and Różańska (2017) stated that in most cases the disclosure in those areas provided by public-interest entities listed on WSE in the 2015 financial year does not meet the Directive 2014/95/EU requirements. A large number of the entities still have a considerable amount of work to do to improve the level of reporting in the area of human rights.

Among other ESG matters, anti-corruption deserves careful attention, as it is not disclosed by most companies. Other studies confirmed these findings showing that GRI indicators from the subcategory of human rights and the subcategory of society with an anti-corruption aspect were presented the least frequently in integrated reports of seven leading capital groups in Poland for 2015 (Sikacz, 2017) and they were also not among the most commonly used measures in sustainability and integrated reports of 18 companies operating in Poland in 2013–2015 (Waniak-Michalak, 2017). Considering this empirical evidence and theoretical predictions we assume that after the implementation of the Directive, which imposes an obligation on companies to report on a wider range of sustainability issues the overall quantity of NFD will increase, especially in the human rights and anti-corruption areas. Hence, we hypothesize:

H1b. Directive 2014/95/EU in its early implementation period will lead to a larger increase in the level of NFD by companies in those thematic aspects of the NFD that were not emphasized in earlier periods i.e. human rights and anti-corruption.

Based on prior studies (Frost, 2007; Damak-Ayadi, 2011; Haji, 2013; Kerret *et al.*, 2010; Fortanier *et al.*, 2011) mandatory regulation increases the overall level of NFD among affected firms. However, the increase in a particular firm may vary depending on their prior level of NFD. Firms with low levels of NFD and driven by coercive pressure imposed by the government are likely to change their reporting practices as increased transparency will put them under greater scrutiny relative to competitor firms. Moreover, according to Hąbek and Wolniak (2013) firms that are obliged by mandatory regulations to disclose non-financial information can tend to meet minimum requirements. By doing so, firms can try to reduce their reporting costs by "ticking the box" instead of collecting and reporting on the most material issues. On the other hand, firms with higher NFD levels will be less likely to modify their NFD as a result of mandatory regulations. They may even tend to limit their disclosure to the mandatory requirements.

As indicated in Section 2.1, previous studies indicate several factors that differentiate the level of NFD, including the release of stand-alone CSR report (Hoffmann *et al.*, 2018), inclusion in the Respect Index portfolio (Dyduch and Krasodomska, 2017) and membership in the environmentally sensitive industry (Matuszak and Różańska, 2017; Dyduch and Krasodomska, 2017; Manes-Rossi *et al.*, 2018).

In the light of the above, we took these factors into consideration and assumed that the increase of NFD will be comparatively higher, for companies with previously low levels of NFD or companies that have never reported before. Previous studies on voluntary non-financial reporting showed that industry environmental sensitivity, inclusion in the Respect Index portfolio, stand-alone CSR report and state ownership significantly influenced the NFD of Polish companies (Dyduch and Krasodomska, 2017; Matuszak and Różańska, 2017; Matuszak *et al.*, 2019; Szadziewska *et al.*, 2018). Thus, we expect that the increase of NFD disclosure will be comparatively higher, for companies with previously no experience in NFD, operating in environmentally insensitive industries, not being listed on the Respect Index, not preparing stand-alone reports and privately owned. Taking into account the above considerations, we hypothesize:

H1c. Directive 2014/95/EU in its early implementation period will lead to a larger increase in the level of NFD by companies with previously low levels of NFD i.e. non-experienced, not listed on the Respect Index, privately owned, environmentally insensitive and with no stand-alone report.

Studies on various countries (Fifka and Drabble, 2012) provide evidence that increasing standardization also leads to a more homogeneous understanding of sustainability on a global scale. Thus, we assume that Directive 2014/95/EU would also lead to more homogeneity in NFD across Poland and diminish sectoral differences. This expectation is also due to the fact that before the implementation of the Directive, significant variability in NFD across industries in Poland was observed by Matuszak and Różańska (2017). Taking into consideration the overall justification of the above-developed hypotheses we, therefore, hypothesize that:

H2. Directive 2014/95/EU in its early implementation period will lead to narrowing of the gap between NFD of companies with previously different levels of NFD.

3. Research methodology

3.1 Research sample

Our initial sample included all firms listed on the WSE on 3 August 2017. The sample selection procedure consisted of four steps: To be included in our sample, companies have to meet the following criteria:

- They must be Polish companies (ISIN – PL)
- They have to fulfil criteria imposed by transposed Directive concerning employment, assets and income in 2015 and 2017 in single or consolidated reports. If the company did not fulfil the criteria for a single report, we checked the data from consolidated reports. If the criteria were fulfilled, the company was classified to be part of the research sample or eliminated otherwise.

The final study sample was composed of 134 Polish companies listed on the WSE in 2015 and 2017. Table 1 presents the descriptive statistics of our research sample. Table 1 shows that all companies in the study met the criteria for the disclosure of non-financial information in both years before (2015) and after (2017) implementation of the Directive 2014/95/EU.

3.2 Data collection and disclosure index

The collected data are grouped in two categories: data concerning employment, assets and income comprising the absolute values and the NFD extent data used to calculate the statistics. The data from the first group were obtained from the NSD on 1 July 2019. The data from the second group were hand-collected from two communication channels, namely, the management commentary as a part of annual reports and separate CSR reports. To examine NFD extent in the management commentary and the separate CSR report, the time scope was 2015 and 2017. Our base year for comparison was chosen intentionally. To verify developed hypotheses, we compared the period before and after implementation of the Directive. The year 2015, which is the second year before implementation of the Directive, was chosen also due to the fact that the anticipation effect is stronger one year before implementation than the two-year period. This effect was documented by Tauringana and Chithambo (2015). Thus, to obtain data not strongly biased by the anticipation effect, the year 2015 was chosen.

To quantify the non-financial reporting practices, a content analysis method was used in both management reports and, where issued, stand-alone reports. If more than one document was available for the same company in 2015, we used the most comprehensive version. In 2017, we focused on a firm's choice as to the reporting channel of NFD. To investigate the level of NFD, an assessment instrument was developed. Our instrument is based on the new PAA requirements with regard to the NFD, thus ensuring its reliability (Tauringana and Chithambo, 2015). Following the new requirements, we examined the existence of non-financial information separately in five thematic aspects, namely:

Table 1. Descriptive statistics of the research sample

Variable	Minimum	Maximum	Mean	Median	SD
Employment (2015)	504	38,877	3,800	1,420	6,299
Employment (2017)	500	43,310	4,003	1,484	7,009
Assets (2015)	97	266,940	12,498	897	34,707
Assets (2017)	97	317,405	15,415	1,007	45,520
Income (2015)	90	60,466	3,235	981	7,302
Income (2017)	99	70,012	3,474	976	8,075

Notes: Employment, number of full-time employees; Assets, the value of assets in million PLN, Income, the value of income from sales of products and goods in million PLN
Source: Own elaboration

(1) Environment (EN),
(2) Labour Practices (LP),
(3) Human Rights (HR),
(4) Community Involvement (CI) and
(5) Anti-Corruption (AC).

We developed NFD sub-indices for each thematic aspect based on the Directive's content items, namely:

- A description of the policies pursued by the undertaking in relation to the thematic aspect.
- A description of the outcome of those policies.
- A description of the principal risks related to the thematic aspects linked to the undertaking's operations.
- A description of how the undertaking manages those risks.

Each thematic aspect, in each company, was scored separately. If the content item was present in the communication channel, it scored 1 and 0 otherwise.

In terms of content item "A description of the policies pursued by the undertaking in relation to thematic aspect", the company could score 1 point for the existence of such description regardless of its length. In relation to content item "A description of the outcome of those policies" to score 1 point we examined the existence of each type of disclosure that relates to the outcome of the policy, namely:

- qualitative disclosures (e.g.: work-related fatalities, operations with significant actual and potential negative impacts on local communities and types of injury),
- quantitative but non-monetary disclosures (e.g.: volume, number, metric tons, rate and percentage),
- monetary disclosures (e.g.: PLN and EUR).

Regardless of the type of disclosure provided (qualitative disclosures, quantitative but non-monetary disclosures, monetary disclosures), we awarded one point. In the content item "A description of the principal risks related to the thematic aspects linked to the undertaking's operations" the company could score 1 point for the existence of description of non-financial risk regardless of its length, as well as regardless of the number or type of risk described. In terms of the content item "A description of how the undertaking manages those risks", we scored 1 point for the existence of such description regardless of its length and methods presented.

As PAA, as well as Directive, do not favour any content item over another, we treat each item of each thematic aspect as equally important and we used the same binary scoring for each item. This approach allowed us to evaluate the extent of thematic aspects disclosed by the companies in their management commentary or separate CSR report. For each thematic aspect the NFD extent sub-index was computed according to the following formula:

$$\text{NFD extent sub} - \text{index} = \frac{\text{Sum of scores obtained by company within thematic aspect}}{4\,(\text{total number of content items})}$$

Further NFD extent total index was computed according to the following formula:

$$\text{NFD extent total index} = \frac{\text{Sum of NFD extent sub} - \text{indices by company}}{5\,(\text{total number of NFD extent sub} - \text{indices})}$$

To decrease the subjectivity of this evaluation, we used cross-check analysis (scores given by one author were checked independently by the second author and conversely). Discrepancies across members of the research team were discussed and reconciled.

In addition, following prior studies (Bose *et al.*, 2018; Khan *et al.*, 2013), we used Cronbach's alpha coefficient to assess the internal consistency of the used binary disclosure index. Its value ranged between 0 and 1, with a value higher than 0,70, indicating a sufficient level of reliability. The alpha coefficient value for the binary disclosure index was 0,829 and the standardized alpha coefficient was 0,972, which indicated that the items included in the binary disclosure index captured the same underlying construct.

3.3 Method of analysis

In this research, the significance of the differences between years and/or groups was tested using several tests such as the Wilcoxon signed-rank test, Kruskal–Wallis test and Z-test. According to Field (2018), the Wilcoxon signed-rank test is a nonparametric test that can be used in situations in which there are two sets of scores to compare, but these scores come from the same participants. The other nonparametric test is the Kruskal–Wallis test, which can be used in situations where there are at least two sets of scores to compare, but these scores come from different participants. In terms of the Z-test, it can be used to test the significance of the differences between two proportions (groups).

4. Results and discussion

To verify H1a, the following analyses were undertaken, the results of which are presented in Tables 2, 3 and 4. Table 1 shows the descriptive statistics on the extent of the non-financial reporting of sample companies before and after the implementation of the Directive. The results showed that the mean of the NFD extent total index increased after the implementation of the Directive, from 0.26 to 0.77. This result suggests that the companies with no previous experience in sustainability reporting begin to practice such reporting to align with the regulatory requirements.

This can be observed in our sample where the number of companies with no disclosure dropped down to zero after implementation (Table 3). This indicates that the Directive forced 50 companies to practice non-financial reporting, but it has also decreased the differences between the companies, which is reflected by the lower standard deviation (from 0.35 to 0.24). Thus, following the implementation of the Directive requirements, there was an improvement in the NFD practices, in terms of the extent of information.

Our results confirmed the assumptions by Venturelli *et al.* (2017) and Matuszak and Różańska (2017) regarding the potential influence of the Directive on NFD in Italy and

Table 2. Descriptive statistics of NFD extent total index before and after implementation of the directive (2015 and 2017, respectively)

Period	*n*	Mean	Min	Max	SD
Before implementation (2015)	134	0.26	0.00	1.00	0.35
After implementation (2017)	134	0.77	0.00	1.00	0.24

Source: Own elaboration

Table 3.
Number of sample firms including disclosure of at least one thematic aspect of NFD before and after implementation of the directive (2015 versus 2017)

Period	NFD environmental index (EN)	NFD labour practices index (LP)	NFD human rights index (HR)	NFD community involvement index (CI)	NFD anti-corruption index (AC)	NFD extent total index
Before implementation (2015)	68	50	37	58	27	84
After implementation (2017)	132	133	123	126	124	134
Change in %	94[a]	166[a]	232[a]	117[a]	359[a]	60[a]

Notes: [a]Difference in proportion of disclosers statistically significant at $p < 0.05$, based on the Z-test
Source: Own elaboration

Poland. The result indicating the increase of non-financial reporting practices after the implementation of the Directive is consistent with the findings in other studies (Dong and Xu, 2016; Criado-Jiménez *et al.*, 2008; Fatima *et al.*, 2015; Lenssen *et al.*, 2010; Larrinaga *et al.*, 2010; Pedersen *et al.*, 2013; Frost, 2007).

Additionally, the analysis of communication channels was undertaken. Figure 1 depicts the number of companies using a particular medium as a communication channel. Before implementation of the Directive, 80% of the analysed companies (108 companies) used annual reports as the main communication channel to disseminate non-financial information, while the rest of the sample companies used a CSR report (26 companies). After implementation, the change can be observed around the chosen media. The number of companies that chose annual reports decreased by approximately 30% (33 companies) in favour of CSR reports. This interesting change can be explained in that companies wanted to separate their financial information from the NFD, as they knew that the credibility of the two groups is very different. The other explanation is that Polish-listed companies seem to attribute greater importance to CSR reports as disclosure media compared to the annual reports. However, these explanations should be taken prudently because to present clear evidence on the tendency in the matters requires longitudinal research.

As noted in Table 3, in each NFD extent sub-indices, the number of firms presenting NFD increased significantly across the 2 years of analysis. The extent of the change did not differ across the reporting media (Table 4). Sample firms with no stand-alone reports both years showed a significant increase of NFD extent total index (0.098–0.728 from 2015 to 2017), while the sample firms with stand-alone reports for both years did not exhibit statistically significant increases. This may largely be due to the already high NFD extent total index (them mean 0.633) in 2015. The findings with respect to the breadth of the disclosure further support the claim that the NFD extent in Poland is increasing due to mandatory regulations. According to the results presented in Tables 2, 3 and 4 H1a can be confirmed.

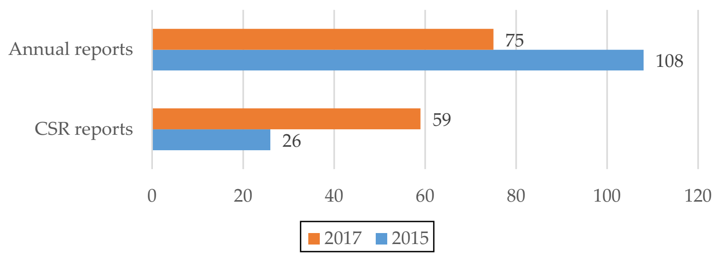

Figure 1.
Number of companies by disclosure media

Table 4.
Comparison of the mean NFD extent total index before and after implementation of the directive among firms with or with no stand-alone report both years

Groups	n	2015	2017	Z
Total sample	134	0.255	0.767	9.223***
Sample firms with no stand-alone report both years	60	0.098	0.728	6.600***
Sample firms with stand-alone report both years	12	0.633	0.850	1.183

Notes: $^{*}p < 0.10$; $^{**}p < 0.05$; $^{***}p < 0.01$
Source: Own elaboration

To verify H1b, the following analysis was undertaken, the results of which are presented in Table 5. Results indicate that in each case NFD extent sub-index has been improved after the implementation of the Directive. The greatest change was in Anti-Corruption (AC mean change = 333%), followed by the thematic aspect of Human Rights (HR mean change = 239%) and then by the thematic aspects of Labour Practices (LP mean change = 216%), Environment (EN mean change = 153%) and Community Involvement (CI mean change = 140%). In each thematic aspect, the mandatory regulations decreased the differentiation between companies in the extent of the presented information, which is reflected in the decrease of the standard deviation. To determine the significance of the differences in the NFD extent total index, as well as the NFD extent sub-indices before and after implementation of the Directive, a Wilcoxon signed-rank test was performed.

As presented in Table 5, the Wilcoxon signed-rank test showed statistically significant differences between the NFD extent total index before and after implementation of the Directive ($Z = 9.201$, p-value < 0.001). In terms of the NFD extent sub-indices, the Wilcoxon signed-rank test confirmed the statistical significance of the differences in each NFD extent category included in the analysis. Therefore, it can be noted that the implementation of the Directive positively influenced the NFD extent of the sample companies and that the effect of the mandatory requirements was connected more with the Anti-Corruption and Human Rights thematic aspects than with Community Involvement. This last effect can be understood in light of the fact that before the implementation of the Directive, companies used to report about their community involvement practices rather than anti-corruption issues, which were imposed directly by the Directive. Community involvement practices such as charity actions seemed to be more linked to social responsibility issues than other thematic aspects. According to the results presented in Table 5, *H1b* can be confirmed.

Additionally, to deepen the analysis presented in Table 5, we compare the mean NFD extent total index and the mean NFD sub-indices before and after implementation of the Directive across the following groups of companies by which the NFD extent total index increased, decreased or stayed unchanged after implementation of the Directive (Table 6). The results presented in Table 6 indicate that after implementation of the directive, the NFD extent total index of nine sample companies (6.7%) decreased. For these nine companies, the decrease was due to the absence of some information in the 2017 reports. In total, 13 sample companies (9.7%) did not change the extent of their NFD after the implementation of the Directive. It can be explained that these companies had a relatively high level of NFD extent total index, as well as NFD extent sub-indices before implementation, for instance, the NFD extent total index for 12 companies was 1 (maximum) and for one company was 0.8. The rest of the companies (112 companies, 83.6%) increased their NFD extent total index. Summarizing the above considerations, it can be noted that the mandatory non-financial regulations imposed by the Directive have become an important factor in initiating and improving non-financial reporting practices among Polish listed companies.

In Table 6, we used the Wilcoxon signed-rank test to confirm the statistically significant differences between the NFD extent total index and the NFD extent sub-indices after the implementation of the Directive in analysed three groups (companies by which the NFD extent total index increased, decreased or stayed unchanged after implementation of the Directive). The results indicated that for nine companies, the change of the NFD extent total index was statistically significant ($Z = 2.665$, p-value < 0.01), as well as the change of the following NFD extent sub-indices: HR ($Z = 2.240$, p-value < 0.05), CI ($Z = 2.240$, p-value < 0.05) and AC ($Z = 1.887$, p-value < 0.1).

However, in terms of two NFD extent sub-indices, namely, EN and LP, the change was not statistically significant and became almost at the same level after implementation. In

Table 5.
Comparison of the mean NFD extent total index and the mean NFD sub-indices before and after implementation of the directive (2015 versus 2017)

Period	n	EN		LP		HR		CI		AC		NFD extent total index	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Before implementation (2015)	134	0.336	0.395	0.269	0.390	0.200	0.362	0.304	0.398	0.168	0.360	0.255	0.349
After implementation (2017)	134	0.851	0.234	0.849	0.231	0.677	0.340	0.729	0.310	0.728	0.321	0.767	0.239
Change (%)		153	−41	216	−41	239	−6	140	−22	333	−11	199	−32
Z		8.751***		9.033***		8.170***		7.935***		8.584***		9.201***	

Notes: *$p < 0.10$; **$p < 0.05$; ***$p < 0.01$
Source: Own elaboration

Table 6. Comparison of the mean NFD extent total index and the mean NFD Sub-indices before and after implementation of the directive (2015 versus 2017)

Period	N	EN 2015	EN 2017	EN Z	LP 2015	LP 2017	LP Z	HR 2015	HR 2017	HR Z	CI 2015	CI 2017	CI Z	AC 2015	AC 2017	AC Z	NFD extent total index 2015	NFD extent total index 2017	NFD extent total index Z
Decrease of NFD extent after implementation	9	0.917	0.806	1.604	0.861	0.806	0.913	0.778	0.444	2.240**	0.944	0.667	2.366**	0.722	0.472	1.887*	0.844 (0.24)	0.639 (0.21)	2.665***
Increase of NFD extent after implementation	112	0.221	0.842	8.768***	0.138	0.839	8.912***	0.065	0.667	8.638***	0.174	0.712	8.387***	0.045	0.725	8.638***	0.129 (0.20)	0.757 (0.24)	9.144***
No change in NFD extent after implementation	13	0.923	0.962	–	0.981	0.962	0.447	0.962	0.923	–	0.981	0.923	–	0.846	0.923	1.342	0.938 (0.17)	0.938 (0.17)	–

Notes: $*p < 0.10$; $**p < 0.05$; $***p < 0.01$. Standard deviation in brackets
Source: Own elaboration

relation to companies that improved their non-financial reporting practices, the differences of the NFD extent total extent index, as well as of the NFD extent sub-indices before and after implementation were statistically significant (p-value < 0.01). In the last group, companies that did not change their reporting extent, the difference of non-financial reporting extent before and after implementation among the NFD extent sub-indices was not statistically significant or was not observed.

To verify H1c, the following analyses were undertaken, the results of which are presented in Table 7. To determine the effect of a sample firm's characteristics on the change of NFD extent total index, as well as NFD extent sub-indices, the sample was divided into five sub-groups in terms of the following criteria: having or not having experience in NFD before the implementation of the Directive (for the data from 2015 the company should score at least one point within content items in a given thematic aspect to be classified as experienced firm); preparing or not preparing a stand-alone report; being or not being listed on the Respect Index; being privately owned or State-owned; operating in environmentally sensitive industries or in other industries (by environmentally sensitive industries we assumed construction, energy, chemicals, oil and gas and basic materials). The Kruskal–Wallis test was used to determine the significance of the differences between the groups. The results presented in Table 7 indicate that in all sub-groups, the differences in the change of NFD extent sub-indices between groups were statistically significant. In sub-group 1

Groups	n	Δ EN	Δ LP	Δ HR	Δ CI	Δ AC	Δ NFD extent total index
Group 1. Sample firms with experience and with no experience before the implementation of the Directive							
With experience in NFD	84	0.357	0.449	0.420	0.295	0.503	0.405
With no experience in NFD	50	0.780	0.800	0.575	0.645	0.655	0.691
KW (H)		36.807***	21.897***	3.056*	20.817***	2.803*	19.218***
Group 2. Sample firms that prepared stand-alone report or did not prepare stand-alone report both years							
With stand-alone report	12	0.229	0.313	0.167	0.167	0.208	0.217
With no stand-alone report	60	0.646	0.721	0.579	0.521	0.683	0.630
KW (H)		6.962***	4.494***	5.909***	4.915***	6.647***	6.107***
Group 3. Sample firms that were listed on respect score in 2017							
Listed on respect index	27	0.148	0.176	0.083	0.130	0.231	0.154
Not listed on respect index	107	0.607	0.682	0.577	0.500	0.643	0.602
KW (H)		27.279***	30.526***	23.314***	15.479***	14.830***	26.233***
Group 4. Sample firms with or without state ownership both years							
State ownership	18	0.222	0.278	0.153	0.125	0.250	0.206
Privately owned	116	0.560	0.627	0.528	0.472	0.608	0.559
KW (H)		11.896***	9.818***	10.782***	11.025***	9.768***	14.653***
Group 5. Sample firms operating in environmentally sensitive industries or other industries both years							
Env. insensitive industry	29	0.241	0.379	0.267	0.267	0.336	0.298
Other industries	105	0.590	0.636	0.536	0.469	0.621	0.570
KW (H)		18.938***	8.287***	6.963***	5.066**	7.079***	10.870***

Notes: *$p < 0.10$; **$p < 0.05$; ***$p < 0.01$
Source: Own elaboration

Table 7. Comparison of the mean change of NFD extent total index and the mean change of NFD sub-indices before and after implementation of the directive

because of mandatory regulation, firms with no experience in non-financial reporting increased the extent of NFD significantly compared to the experienced group. Further, the NFD extent change between 2015 and 2017 among firms from sub-group 2 that did not prepare a stand-alone report increased much more than those firms that did prepare a stand-alone report. Stand-alone reporters received high scores; therefore, the difference was relatively low. In this case, they have also experienced reporters. In the third sub-group, the change in NFD extent total index between 2015 and 2017 in the Respect index listed firms were low compared to those not listed. Due to mandatory regulation, the latter group significantly increased their NFD extent. According to the results presented in Table 7, H1c can be confirmed.

Additionally, we split our research sample into two groups: sample companies that are members of environmentally sensitive industries (Energy, Chemicals, Oil and Gas, Construction, Basic materials) and others and compare the mean NFD extent total index before and after implementation of the Directive (2015 and 2017). The results presented in Table 8 indicate that the mean value of the NFD extent total index for environmentally sensitive industry (ESI) before and after implementation of the Directive (mean 2015 = 0.566; mean 2017 = 0.864, respectively) was higher than in other industries (mean 2015 = 0.170; mean 2017 = 0.740, respectively), however the difference between the mean values of the NFD extent total index decreased across the years. In both cases (2015 and 2017) the differences are statistically significant which is documented by Kruskal-Walis tests (24.963, p-value < 0,01; 5.783, p-value < 0,01, respectively). The implementation of the Directive had limited diversity around NFD, which was reflected in a similar level of standard deviation in both groups (0.192 and 0.244, respectively).

To determine the significance of the differences within each group across the years, the Wilcoxon signed-rank test was conducted. The results of the Wilcoxon test indicate a significant improvement in the NFD extent total index for both groups: environmentally sensitive industry (Z = 3.247, p-value < 0.001) and other industries (Z = 8.549, p-value < 0.001). These analyses confirmed that mandatory reporting had an effect on the reporting extent irrespectively of the fact that analysed companies engaged in NFD voluntarily before the implementation of the Directive. According to the results presented in Tables 2, 5 and 8, *H2* can be confirmed.

Summarizing the above results, it should be stressed that all companies that were obliged to prepare a non-financial statement (or a stand-alone non-financial report) fulfilled their responsibility. The level of non-financial statement compliance with the Directive after implementation was relatively high. Due to the implementation of the Directive, the differences in NFD extent between less and more experienced firms significantly decreased.

Table 8. Comparison of the mean NFD extent total index before and after implementation of the directive (2015 versus 2017) by selected groups

Sector	N	NFD extent total index 2015	SD 2015	NFD extent total index 2017	SD 2017	Z
Environmentally sensitive sectors (energy, chemicals, oil and gas, construction and basic materials)	29	0.566	0.413	0.864	0.192	3.247***
Other sectors	105	0.170	0.275	0.740	0.244	8.549***
KW (H)		24.731***		5.783		

Notes: *$p < 0.10$; **$p < 0.05$; ***$p < 0.01$
Source: Own elaboration

These results highlight the positive effect of the Directive's requirements on the extent of NFD.

5. Conclusions, limitations and future research agenda

In this analysis, we examined the extent to which NFD provided by Polish listed companies changed over the period surrounding the implementation of Directive 2014/95/EU. Using a set of complementary theories, namely, the legitimacy, stakeholder and institutional theories, we empirically tested the early effectiveness of the Directive in the field of non-financial information on our sample of Polish listed companies.

We found that the number of companies reporting on NFD in Poland increased significantly when comparing the 2015 to 2017 reporting years. The Directive forced all companies in the sample to practice sustainability reporting. We also documented that the extent of NFD across different areas of NFD in both management and stand-alone CSR reports by our sample firms significantly increased when comparing 2015 disclosure to the 2017 reporting year. Each of these increases appears to suggest that companies are committed to complying with the Directive, despite its "Comply or Explain" approach of enforcement.

Our contribution to and extension of, prior NFD research also contributes in our assessment to the differences in the extent of NFD across companies, as well as the standardization effect of the Directive. Our results show that the Directive had the largest impact on those firms with previously low levels of NFD: companies that are non-experienced, not listed on the Respect Index, without state ownership, non-environmentally sensitive and with no stand-alone report were found to increase their NFD comparatively more than those experienced, listed on the Respect Index, with state ownership, environmentally sensitive and with stand-alone reports.

We found that the impact of the Directive was greater in those areas of the NFD that companies did not emphasize in earlier periods. The greatest change was observed in human rights and anti-corruption areas. Finally, our analysis highlights that mandatory regulations reduced the differences in the extent of NFD among companies and led to more homogeneous NFD reporting within companies in terms of thematic aspects and its content items. This study shows that the effects of the Directive had taken place immediately in the first year of its application.

Overall, our results confirmed the relatively high effectiveness of the Directive in the initial period of implementation in relation to the number of reporting companies and the content reported. Mandatory non-financial regulations imposed by the Directive effectively motivated companies to improve their reporting as compared to a voluntary year.

Hence, this study supports the legitimacy theory of disclosures and its links to the stakeholder and institutional theories, according to which, public expectations on companies change through the issuance of mandatory regulations to disclose NFD related to sustainability and companies are expected to follow "norms". Therefore, they take it into consideration by disclosing more information to remain legitimate.

These results have implications for our understanding of the mandatory regulations on NFD. In particular, we assumed that our study contributes to the understanding of the impact of Directive 2014/95/EU on NFD practices by EU companies. Our research has important implications for policymakers because it revealed that mandatory regulations form a crucial instrument in improving the harmonization of legislation of NFD. Our research suggests that as a result of Directive 2014/95/EU, stakeholders should be provided with more complex and comparable information. This could encourage them to use NFD in their decision-making processes to a greater extent.

Of course, given its exploratory nature, our research has several limitations that should be noted. In terms of measurement instrument developed for this study, a simple binary coding scheme was used, whereby the presence or absence of an item was recorded, regardless of the length and the manner of its description. We compared only two separate years of reporting and our investigation was limited to 134 companies. We focused only on the Polish setting but the results of our study may be similar to other CEE countries in particular in those that have the congruous context described in the introduction section. However, the impact of the Directive on the non-financial reporting of companies from some other EU countries may be different. Researchers should consider the different reporting practices that were in place before the introduction of the mandate, the reporting requirements and enforcement thereof (e.g. penalties for non-compliance at the level of national laws) and adapted reporting frameworks, as well as the cultural differences. We would encourage extensions of our research along each of these limiting dimensions, including longitudinal research, a larger sample and different EU country settings. The future research agenda should also include other potential consequences that result from Directive 2014/95/EU such as enhancing transparency and accountability, changes in firm profitability or reductions in emission levels that could bring us closer to a sustainable world.

Note

1. The non-financial information standard (NIS) is a voluntary regulation whose development was coordinated by the Reporting Standards Foundation and the Association of Stock Exchange Issuers, which has been accepted and supported by a number of institutions and organizations. NIS enables Polish companies to fulfil their reporting obligations for non-financial information that was created pursuant to Directive 2014/95/EU.

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