

# Examining the Sustainability Reporting Practices of Agricultural and Forestry Companies Operating in Hungary

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To demonstrate that companies are operating in a sustainable way, in line with the European Green Deal and the Taxonomy Regulation, some companies have already produced sustainability reports. Agricultural companies should also be prepared for this reporting obligation, which can cause considerable difficulties for farmers, so it is assumed that this is not yet common practice. In this research, the sustainability reporting practices of agricultural and forestry companies in Hungary were assessed and analysed. The research sought to find out what the current reporting practices of these companies are and how prepared they are for future regulation. In this paper, the information provided by companies on their websites and after personal contact was analysed using content analysis. The qualitative information gathered was quantified using a scoring method. For evaluating the data, descriptive statistics and pairwise correlation coefficients were applied. It is concluded that although forestry companies publish some level of information and pay more attention to the disclosure of this type of information than agricultural companies, there is a slight gap in both sectors. Moreover, almost a fifth of agricultural companies do not have any information on their websites. This is likely to change in the future, as the sustainability reporting legislation will broaden the range of companies that are required to report, so improvements in this field are expected.

## 1. Introduction

With the European Green Goals to make Europe a carbon neutral economy by 2050, new demands have been made on the content of companies' non-financial reporting. These have been reflected in the Corporate Sustainability Reporting Directive (CSRD) (Directive 2022/2464/EU, 2022), which came into force at the beginning of 2023, and which covers a wider range of corporate actors and requires more detailed reporting. The new regulation replaces the Non-Financial Reporting Directive (NFRD) (Directive 2014/95/EU, 2014), which was in force since 2014. The CSRD raises the importance of sustainability reporting to the same level as financial reporting. The content of the reports is also affected by the European Union (EU) Taxonomy Regulation (Regulation 2020/852/EU, 2020), which came into force in 2020 and names environmentally sustainable activities: companies are required to report on how and to what extent their activities are linked to environmentally sustainable economic activities. According to Lámfalusi et al. (2023) one of the criteria for sustainable economic activity is that it does not significantly harm any of the environmental objectives (Do No Significant Harm, DNSH principle), because in its absence economic activity cannot be considered environmentally sustainable (Dobránszky-Bartus and Valdemar, 2020). A crucial element of the link between EU taxonomy and sustainability reporting is that, under the Taxonomy Regulation, companies that are required to disclose non-financial information must include information in their reports on how and to what extent their activities are linked to environmentally sustainable economic activities. For the implementation of the CSRD, public-interest entities, companies and public-interest entities which are parent companies of large groups, in each case having an average number of employees more than five hundred will have to apply the new Directive from 2024 and the first reporting is due in 2025. For other large companies, the CSRD will apply from 2025, with the first mandatory reporting in 2026. For listed small and medium-sized enterprises (SMEs) and other companies, the application should start from 2026, with reports due from 2027. (However, SMEs are exempted from the mandatory application of the Directive until 2028, if justified.)

In addition, the Hungarian regulatory environment requires companies – regardless of size and number of employees – to produce an energy specialist report, which can also include information on the sustainability of companies. The obligation is based on energy consumption and applies to companies whose annual energy consumption exceeds 400,000 kWh of electricity and 100,000 m<sup>3</sup> of natural gas or 3,400 GJ of heat. The annual report must be published on the companies' websites by 31 May each year. In addition to the obligations set out in the law, some companies may voluntarily introduce different standards and/or management systems to increase their efficiency or reduce their environmental impact. The introduction of various standards and certifications is often driven by the requirements of an internationally recognised customer. In this context, and without being exhaustive, the following indicators are worth highlighting:

- ISO 50001 certification, which aims to increase energy efficiency and reduce emissions;
- ISO 14001 certification, which requires companies to operate more efficiently and think more environmentally. An internationally recognised and accepted standard;
- ISCC biofuel sustainability certification is the EU's biofuel certification scheme, which guarantees that biofuels marketed are sustainable and have been produced in compliance with the requirements of the Renewable Energy Directive (Bureau Veritas, 2023).

In the case of forestry companies, the following certificates deserve special mention:

- FSC certification, which guarantees compliance with good forest management practices. The scheme requires the application of the principles of sustainable development and continuous improvement in forest management and the provision of traceability to commercial and processing companies using wood from certified forests;
- PEFC certification guarantees sustainable forest management. The certification certifies that sustainable harvesting and production of wood and paper products is ensured in a traceable manner throughout the supply chain (Bureau Veritas, 2023).

Currently, there is no uniform and general guidance on corporate sustainability reporting, so the format – the prevalence, quality, and content – varies considerably between regions and countries (Turzo et al., 2022). According to Bögöly and Wickert (2023), Hungarian companies almost invariably produce their reports in some form of their own design, and only very rarely do companies report according to a legally recommended standard. There is also a strong need for a uniform format, as 70 % of the companies in their sample said that this would make it difficult to compare reports and thus reduce the efficiency of reporting. Companies can rely on a variety of tools when fulfilling their reporting obligations. Siew's (2015) detailed review study divides corporate reporting tools into three groups: frameworks, standards, and ratings and indices. Ratings and indices are used for third-party assessment of a company's environmental, social and governance (ESG) performance. ESG is the set of criteria that is most widely used in the literature to measure sustainable performance. In the EU regulatory environment, sustainability and ESG frameworks are largely interchangeable concepts.

In accordance with Lippai-Makra and Kovács (2021), the biggest challenge in Hungary is the production and evaluation of data of sufficient quality, which makes it difficult to compare the non-financial performance of companies. To overcome this, they suggest the use of a widely used standard or the prescription of a uniform format. According to Boros et al. (2022), some of the company reports they examined only addressed ESG issues at the level of principles and a smaller proportion reported on specific measures and results achieved. Therefore, they propose to compare companies based on ESG indicators. The United Nations Sustainable Development Goals (SDGs) are closely linked to the subject area and are also reflected in sustainability reporting. As stated by Wilburn and Wilburn (2020), the majority of large multinational companies have set specific targets and indicators related to the SDGs. Delgado-Ceballos et al. (2023) also focused on the SDGs in their combined analysis of corporate-level sustainability and ESG factors. Although, the authors suggest that simplification and standardisation of ESGs would be recommended. Research by Gunawan et al. (2022) suggests that the level of regulatory compliance may vary between companies in different sectors, so it may be worth analysing sustainability reporting at the sectoral level separately. Agriculture represents an economic sector that guarantees a certain degree of sustainability and safe management of natural and forestry systems (Colantoni et al., 2017). According to Kozma and Bosnyák-Simon (2021), companies in the food, tobacco and agriculture sectors in Hungary can be classified into three characteristic groups based on the sustainability-related documentation they publish: 1) companies that produce sustainability reports; 2) companies that publish an annual energy specialist report; and 3) companies that publish environmental information on their websites or in brochures.

Sustainability is a major area of interest within the field of companies' reporting practices. The issue has grown in importance in light of recent studies. However, few previous studies investigated agricultural and forestry companies' sustainability reporting practices. The aim of the study is to examine the sustainability reporting practices and the public disclosure of sustainability reports of agricultural and forestry companies operating in Hungary under the Non-Financial Reporting Directive. The question was whether the companies were

adequately prepared to comply with the reporting obligation and what quality of reports are currently publicly disclosed on their websites. Whether there is a correlation between the quality of publicly published reporting and other characteristics of companies (geographical location, main activity, foreign ownership, net turnover, number of employees, equity, balance sheet total).

## 2. Materials and methods

The study examined forestry and agricultural companies filing corporate tax returns in Hungary that meet at least two of the following requirements of the NFRD: balance sheet total of more than EUR 20 million, annual net turnover of more than EUR 40 million, or the average number of employees in the fiscal year of more than two hundred and fifty. To select the companies in this category and to analyse the financial data for the research, a database of financial management data provided by the National Tax and Customs Administration to the Institute of Agricultural Economics for the year 2021 was used. Based on the available data, this category includes nine forestry companies and seventeen agricultural companies representing each of the NUTS 2 statistical regions of Hungary.

The companies' sustainability disclosures were determined by scanning their websites and by personally contacting company representatives. Descriptive statistics and pairwise correlation coefficients were used to examine the sustainability reporting practices of the companies surveyed. For the latter, the relationship between certain characteristics of the companies (geographical location, main activity, ownership, net turnover, number of employees, equity, balance sheet total) and the quality of their sustainability reporting was examined according to Eq. (1):

$$r_{yx_j} = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 \sum_{i=1}^n (y_i - \bar{y})^2}} \quad (1)$$

where,

$y_i$ : quality (level) of the sustainability report of the  $i$  company

$x_i$ : characteristic of the  $i$  company

The independent variables in the analysis are company characteristics, most of which can be described by quantitative criteria. The activity and the geographical location of the companies are qualitative (nominal) characteristics and are therefore coded with dummy variables. Activities were coded as follows:

1. only core activities falling under the TEÁOR (Hungarian activity classification) classification;
2. additional activities to the core activity, up to a maximum of four;
3. five or more additional activities in addition to the core activity.

The geographical location of the companies was classified according to the location of their headquarters in one of the NUTS-2 regions of Hungary, in the order usually used by the Hungarian Central Statistical Office: 1. Budapest; 2. Pest; 3. Central Transdanubia; 4. Western Transdanubia; 5. Southern Transdanubia; 6. Northern Hungary; 7. Northern Great Plain; 8. Southern Great Plain.

The dependent variable assigned to each independent variable is the quality of companies' sustainability reporting. These are ordinal data, so, as above, they have been coded according to the content of the website, as follows:

1. no information on sustainability efforts is published;
2. documents and certifications that companies are required to produce are published;
3. sustainability-related information is displayed indirectly or as other content;
4. in addition to the mandatory documents, the website also provides other information and documents on sustainability.

Due to differences in the magnitude and unit of measurement of some variables, the data have been standardised.

## 3. Results and discussion

According to the data of the National Tax and Customs Administration in Hungary for 2021, nine forestry and seventeen agricultural companies meet the parameters set in the methodology. All forestry companies and nine agricultural companies operate as private limited companies, while the other eight operate as limited liability companies.

### 3.1 The main characteristics and financial parameters of the companies surveyed

In terms of ownership, the forestry companies are 100 % state-owned, two of the agricultural companies are fully foreign-owned, the rest are Hungarian-owned.

While forestry companies have an average of 410 employees, agricultural companies employ an average of 301 people. The average annual net turnover of agricultural companies is about 3.5 times higher than that of forestry companies, and there is also a significant difference in the average balance sheet total (2.3 times) and the average value of equity (1.8 times). The average value of share capital is similar for the two groups of surveyed companies.

In addition to the average data, the aggregated values are also shown in Table 1.

Table 1: Financial characteristics of the surveyed companies (2021)

Companies examined	Average statistical headcount (persons)	Average annual net turnover (thousand HUF)	Average balance sheet total (thousand HUF)	Average value of equity (thousand HUF)	Average value of share capital (thousand HUF)
Forestry companies	410	6,396,626	10,405,129	7,507,036	2,061,908
Agricultural companies	301	22,662,744	24,233,955	13,835,061	2,679,480
Companies examined	Total statistical headcount (persons)	Total annual net turnover (HUF thousand)	Total balance sheet total (HUF thousand)	Total equity (HUF thousand)	Total subscribed capital (HUF thousand)
Forestry companies	4,096	63,966,264	104,051,288	75,070,363	20,619,078
Agricultural companies	5,121	385,266,648	411,977,234	235,196,045	45,551,167

Source: Database containing financial management data provided by the National Tax and Customs Administration to the Institute of Agricultural Economics

The annual net turnover of the sampled companies in 2021 is shown in Figure 1a and Figure 1b. The forestry companies in the sample represent 29 % of the net turnover of all Hungarian forestry corporate enterprises, and the agricultural companies represent 14 % of the net turnover of all agricultural corporate enterprises.

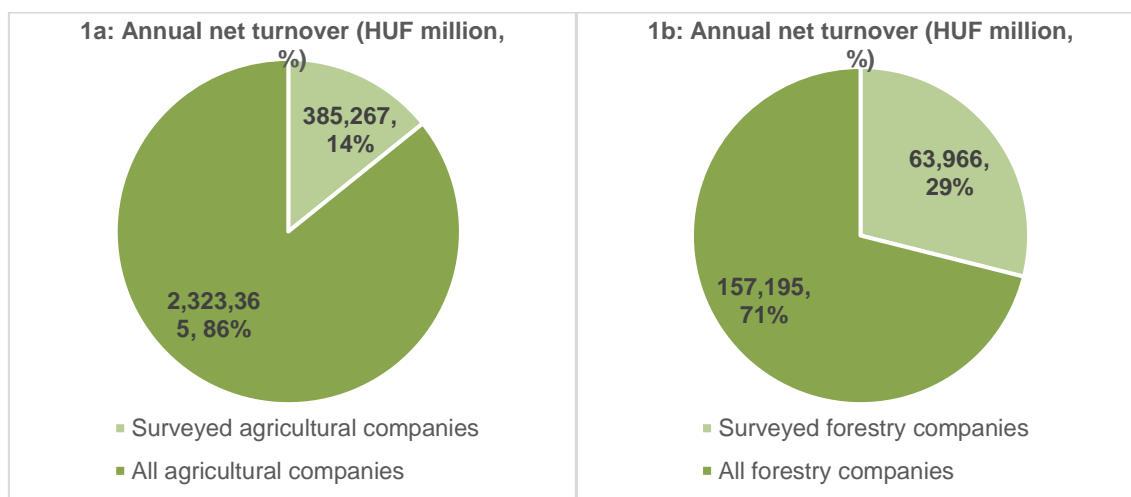


Figure 1: Evolution of annual net turnover of the surveyed agricultural (a) and forestry (b) companies (2021)

Source: Data from the Institute of Agricultural Economics Financial Report 2021

### 3.2 Sustainability information of the companies surveyed

The rating forms and frequency of sustainability information for the sampled companies are presented in Table 2. Out of twenty-six companies, only three agricultural companies were found to have no sustainability-related content. Forestry companies, by the very nature of their activities, are more attentive to the disclosure of this type of information. For these companies, in addition to the mandatory documents (energy specialist report), ISO 50001, ISO 14001 and FSC certification are typically available on their websites. In many cases, they disclose their membership in various sustainability, environmental, nature conservation and animal welfare

programmes. In the case of agricultural companies, sustainability efforts are most typically expressed indirectly or in other content (11 cases). Only one company has a detailed sustainability report. In addition to the mandatory reports, ISO standards, good manufacturing and hygiene practices, and quality policy objectives are used to present information on sustainability efforts. The better performance of forestry companies is partly due to the size of their operations and the fact that they have certificates that contribute directly or indirectly to the dissemination of sustainability information.

*Table 2: Sustainability information of the companies surveyed*

Categories	Forestry companies (pcs)	Agricultural companies (pcs)
No information on sustainability efforts is published	0	3
Documents and certifications that companies are required to produce are published	3	0
Sustainability-related information is displayed directly or as other content	1	11
In addition to the mandatory documents, the website also provides other information and documents	5	3
Total	9	17

The relationship of publicly available information on companies' sustainability efforts on websites with other company characteristics is shown in Table 3.

*Table 3: Correlation between type of sustainability information and other company characteristics*

Featured on	Pairwise correlation ( $p < 0.05$ ) (with type of sustainability information)
Net turnover	0.04
Balance sheet total	0.13
Average statistical headcount	0.15
Equity capital	0.18
Share of foreign ownership	0.17
Region (headquarters)	0.05
Diversity of activities	0.48
Last year of publication of sustainability information	0.77
Number of sites	0.58

At the 95 % probability level, the sustainability information publicly disclosed by companies on their websites is not related to the accounting, ownership, headcount, and location characteristics of the companies. The quality of the sustainability information is moderately correlated with the diversity of activities carried out by companies and the number of sites, while the time of publication shows a moderately strong positive correlation. This suggests that these three factors (diversity of activities, time of publication, and number of sites) have some influence on the quality of sustainability information published. That is, in many cases, more diverse companies are more likely to publish more and/or better-quality sustainability information. Likewise, those whose information is relatively more recent are more likely to provide more detail and/or better quality. There is also a positive correlation between the quality of information and the number of sites, but this is not necessarily a direct causal relationship, as forestry companies tend to have many more sites than agricultural companies, so the quality of the information provided is more related to the main activity (forestry, agriculture).

#### 4. Conclusions

Hungarian forestry and agricultural companies subject to the CSRD, which will be mandatory from 2024, have been more restrained in their sustainability reporting and disclosure practices so far, and should be better prepared for mandatory reporting in the future. For forestry companies, the picture is more positive, as they pay more attention to the disclosure of this type of information. However, all companies publish some level of information, and in addition to the mandatory documents, other certifications and other sustainability information are typically available on their websites. It can be concluded that preparing agricultural companies for reporting will take more work, as almost a fifth of them do not have any information on their websites and two-thirds of them report on sustainability efforts indirectly or in other content. There is not a significant correlation between the characteristics of companies and the sustainability information they disclose, so it is less predictable which types of companies are more or less advantaged or disadvantaged in this respect. The sustainability information

published by companies on their websites is slightly correlated with the diversity of the activities conducted by companies and the timing of publication. In other words, up-to-date companies with a wide range of activities are better off in this respect, but they also need to be prepared for the CSRD rules. For the future, sustainability reporting legislation will expand the range of companies required to report, so improvements are expected in this area. It is therefore appropriate to continue this research in the coming years, which could aim to assess how the new regulatory regime is changing the reporting behaviour of reporting entities.

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