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SUSTAINABILITY DISCLOSURE AND CORPORATE PERFORMANCE: A EUROPEAN EVIDENCE FROM AGRICULTURE INDUSTRY

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Abstract

This paper investigates the relationship between sustainability disclosure, measured by environmental, social, and governance (ESG) combined and individual scores on corporate performance of the agricultural companies from Europe. The main reason of this study is that on 15 November 2022 the worldwide population is more than 8 bn and is expected to increase at 9.6 bn in 2050, which will increase the pressure on agricultural industry to produce food and goods to serve the people needs. In this context and due to the new European regulation, companies must adopt strategies regarding the concerns for environment, social, and governance activities, developing an integrated report to show to investors how they are involved in social issues and environmental concerns. This study uses a multiple linear regression, data being collected from Thomson Reuters database for the period 2017-2021. The results indicate that companies with higher ESG scores have higher performance. This study may help investors and other stakeholders to have an overview as to which sector to orient their investment strategies.

Key words**:** *sustainability disclosure, corporate performance, environmental, social, and governance, agriculture*

INTRODUCTION

In the last two decades, the sustainability disclosure has been widely debated into literature by researchers. Sustainability disclosure is as well-known as corporate social responsibility (CSR) by researchers. Today, the topic of sustainability plays an important role due to the facts of the new regulation starting with the EU directive 2014/95/UE and the UE Commission strategy to be environmentally friendly, reducing the impact on the environment fighting against climate changes that will impact all aspects of humans (health, food, etc.).

The scholars have established that sustainability disclosure can be discussed with different company metrics and can be analyzed for companies in a specific industry. In the study conducted by [13] was analysed the impact of ESG factors for the companies from energy and healthcare industry on firm value. The results obtained revels that the sustainability disclosure doesn't have an impact on firm value for companies from healthcare industry while for companies from energy industry the impact on firm value is negatively associated.

The relationship between ESG factors on companies' corporate performance was analysed by several scholars. For example, [26] for power generation companies has analysed this impact. The results reveal that a good ESG disclosure can improve corporate performance. [25] identified that sustainability disclosure has a negative impact on the return of investment. Furthermore, the results identified in the literature were mixed. [4] show that social and governance scores are positively associated with financial performance, the environmental score is negatively associated for companies listed on the Amman Stock Exchange.

The impact of sustainability disclosure on financial performance has different results for each industry. In the IT sector, [15] identified that higher ESG ratings could increase company value. For the healthcare industry, [16] shows that a lower rate of environmental score increases financial performance, while the social score negatively affects ROA. Analysing the impact of ESG scores on financial performance in the energy sector, [2] identify that there is no significant relationship between ESG and ROE. [8] show that for the tourism sector the impact is

opposite. A significant relationship is identified for operational performance, while for financial performance measured by ROE, the impact is insignificant.

When the relationship between sustainability reporting and corporate performance was analysed for companies in Europe, the identified results were mixed. [1] show a positive correlation between ESG performance and financial performance. Therefore, companies that report high ESG have high financial performance, while the size of the company moderates the relationship between ESG and financial performance. Similar results are provided by [17] for Norwegian listed companies. The authors find a strong and significant relationship between ESG score and financial performance, but with mixed outcomes. ESG initiatives have a negative impact on ROA, while there is a positive correlation between Tobin's Q and ESG. Furthermore, the authors observe that firm size and ESG score are correlated, larger companies invest more in ESG initiatives and have higher financial performance. [21] in another approach analysed for financial companies from Northern Europe the impact on financial performance of the sustainability disclosure. The authors identified that only ROA is significant associated with ESG factors while the other variables analysed was identified a negative relationship. For 350 listed European [7] examines the same relationship in a boarder context for the 2014-2019 period showing a non-linear variation of sustainability disclosure on financial performance, the company size and ESG scores being the variables which affect this relationship. Their findings are consistent with those of [17] in terms of company size and ESG.

Studies that analyse the impact of sustainability disclosure on corporate companies acting in the agriculture industry are relatively small ([23] [3], [9], [20] or [12]). In their study [13] they analysed how ESG scores impact financial performance in the European food industry. Data were collected from the CSRHub database, for the period 2017-2020, and analysed using ordinary least squares regression. The results show that companies who achieve higher ESG rates have better financial performance. For the agriculture and food industry, [3] identified a non-significant impact on corporate performance measured through operational (ROA), financial (ROE), and market (TQ) performance. The combined factors of ESG have no significant impact on the corporate performance of agriculture companies, but when taken individually a positive and significant impact was identified between the governance score and the performance of the market. Analysis in more details the sustainability reporting, [20] identified mixed results for both operational and financial performance of the agriculture companies. Furthermore, for the European agri-food listed companies [12] identify that environmental and social disclosure has a positive impact on profitability and market value, while governance disclosure has a negative impact on market value of agri-food companies.

The main hypothesis of this study analyses the impact of sustainability disclosure on corporate performance of agricultural companies, being expressed as follow:

H1: Sustainability disclosure, represented by ESG combined factors and each one individually taken, have an impact of corporate performance, represented by ROA, ROE, and Tobin Q ratio, of the European companies acting in agriculture sector.

This hypothesis can be developed in several secondary hypotheses, expressed as follows:

H1.1: The environmental score (ENV) has an impact of corporate performance of the European companies acting in agriculture sector.

H1.2: The social score (SOC) has an impact of corporate performance of the European companies acting in agriculture sector.

H1.3: The governance score (GOV) has an impact of corporate performance of the European companies acting in agriculture sector.

The summary of this paper advances as follows: The materials and methods are presented in the second section, while the results and discussions are presented in the

third section, and in the last section of the paper the conclusions are presented.

MATERIALS AND METHODS

In this study, the impact of sustainability disclosure represented by combined and individual factors of ESG (environmental, social, and governance scores) on the performance of agricultural companies is analysed.

Table 1. Sample distributions by region

Europe Region	Central Europe	East Europe	North Europe	South Europe	West Europe	Total
A. Agricultural economic sector name						
Basic Materials	12	13	13	10	21	69
Consumer Cyclicals	10	4	16	11	112	153
Consumer Non-Cyclicals	91	7	107	61	330	596
Energy	29		21	11	19	80
Industrials			18	7	32	57
Utilities				8	20	28
Total	**142**	**24**	**175**	**108**	**534**	**983**
B. Agricultural industry name						
Agricultural Chemicals	10	13	5		14	42
Brewers			13		26	39
Consumer Goods Conglomerates	13		6		27	46
Department Stores	8	4	8	2	22	44
Distillers & Wineries	1		4		40	45
Environmental Services & Equipment			18	7	32	57
Fishing & Farming	8		12	8	34	62
Food Processing	44	2	48	23	109	226
Food Retail & Distribution	20	5	15	20	63	123
Forest & Wood Products	2		8	10	7	27
Non-Alcoholic Beverages	5			5	17	27
Renewable Energy Equipment & Services	22		16	11	14	63
Renewable Fuels	7		5		5	17
Restaurants & Bars			2	5	83	90
Textiles & Leather Goods	2		6	4	7	19
Tobacco			9	5	14	28
Water & Related Utilities				8	20	28
Total	**142**	**24**	**175**	**108**	**534**	**983**

Source: Own calculation based on data extracted from Thomson Reuters Database.

The data were extracted from Thomson Reuters Refinitiv Eikon DataStream, for the last 5 years (2017-2021) from the companies acting in 6 sectors (utilities, industrials, basic materials, energy, consumer cyclicals and consumer non-cyclicals) and 17 industries, represented by: Agricultural Chemicals, Brewers, Consumer Goods Conglomerates, Department Stores, Distillers & Wineries, Environmental Services & Equipment, Fishing & Farming, Food Processing, Food Retail & Distribution, Forest & Wood Products, Non-Alcoholic Beverages, Renewable Energy Equipment & Services, Renewable Fuels, Restaurants & Bars, Textiles & Leather Goods, Tobacco and Water & Related Utilities and 27 European countries, structured in five European regions, as are presented in Table 1. All the data are based on Refinitiv Eikon Datastream (the numerical values for ESG factors and the information for companies from the agriculture industry). Refinitiv Eikon Datastream is a well-known database due to its credibility and multiple data available for companies, being used by several authors, such as [20], [9], [12] or [5].

Table 2. Variables included in the study

Variable	Abvr.	Explanation
A. Dependent variables (Source: Computed with data from Thomson Reuters)		
Return of Assets	ROA	Calculated by dividing the net income on total assets, showing the profitability of total assets.
Return on Equity	ROE	It is calculated by dividing the net income on total equity, showing the profitability of the invested equity from the accounting perspective.
Tobin Q ratio	TQ	Is calculated by dividing the market value of the company by total assets, showing the market performance.
B. Independent variables (Source: Thomson Reuters)		
ESG Combined	ESG	The Refinitiv ESG Score is an overall company score based on self-reported information on the environmental, social, and corporate governance pillars.
Environmental	ENV	The environmental pillar measures a company's impact on living and nonliving natural systems, including the air, land, and water, as well as complete ecosystems.
Social	SOC	The social pillar measures a company's capacity to generate trust and loyalty with its workforce, customers, and society, through its use of best management practices.
Governance	GOV	The corporate governance pillar measures the systems and processes of a company that ensure that its board members and executives act in the best interests of its long-term shareholders.
C. Control variables (Source: Computed with data from Thomson Reuters)		
Firm size	FZ	The natural logarithm of total assets
Firm size	FZE	The natural logarithm of the total number of employees
Leverage	LV	Calculated by dividing the total liabilities by the total equity.

Source: Own representation based on prior literature.

To have a holistic approach for the performance of companies from agriculture sector, the performance is measured at three levels: operational (ROE), financial (ROA), and market performance (TQ). Furthermore,

the sustainability disclosure is represented by ESG combined and individually scores. Furthermore, the econometric model contains three control variables, represented by two indicators for firm size and leverage. Table 2 presents dependent, independent, and control variables included in the econometric model.

As presented in Table 2, the dependent variables are represented by ROA, ROE, and TQ, are in accordance with the previous reviewed literature ([9]; [12] [5]; [6], [20] or [10]). Furthermore, the independent variable is represented by ESG scores and each individually taken (environmental, social and governance scores), based on the studies conducted by [23], [14], or [11] and calculated by Refinitiv Eikon DataStream. Moreover, studies such as [6], [9], [3] or [23] used as control variables firm size and leverage.

The model developed to express the impact of sustainability disclosure on the performance of agricultural companies is expressed as follows:

$$Perf_{it} = \beta_0 + \beta_1 SD_{it} + \beta_2 FZ_{it} + \beta_3 FZE_{it} + \beta_4 LV_{it} + \varepsilon_{itg}$$

where:

$Perf_{it}$= represents the company performance, which will subsequently take the value of the ROA, ROE, and TQ ratio.

SD_{it}= represents the sustainability disclosure, which will subsequently take the value of the ESG combined score, ENV score, SOC score, and GOV score.

$\beta_{0=}$ is the constant.

β_{1-4}= the slope of the controls and the independent variables.

ε_{itg} = is the error.

RESULTS AND DISCUSSIONS

This section presents descriptive statistics, matrix corelation, and regression results to establish the impact of sustainability disclosure on agriculture companies' performance.

Fig. 1 shows the region differences for the combined and individual ESG scores. Southern Europe is leading the list, with the highest level of combined ESG scores. Southern Europe is followed by Western and Central Europe, having an average disclosure of ESG combined scores of 53-54%. In terms of GOV disclosure, Western Europe is leading, having the highest rates from the sample while on the opposite side is Northern Europe with the lowest rates for GOV. Furthermore, in terms of the SOC aspect, Southern Europe is leading and at the opposite side is Eastern Europe, with the lowest scores for the social aspect (40%).

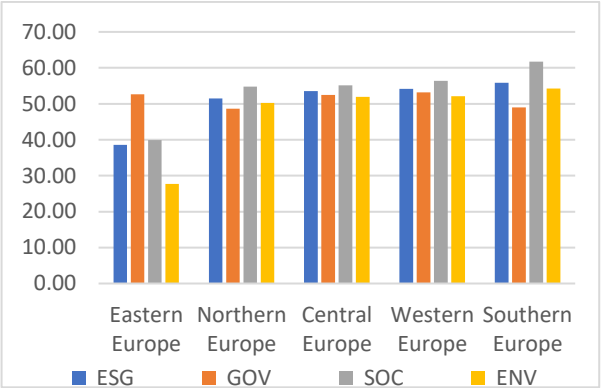

Fig. 1. Average of combined and individual ESG scores and performance distributed by region

Source: Source: Own calculation.

The descriptive statistics of the dependent variables (agriculture companies' performance), independent variables (ESG combined and individually scores), and control variables are presented in Table 3. In terms of financial performance, the mean ROA is 3.06%, with a min of -70.67% and a maximum of 50.71%.

Table 3. Descriptive Statistics of Variables

Variables	N	Minimum	Maximum	Mean	Std. Dev.
ROA	959	-70.67%	50.71%	3.06%	9.49%
ROE	935	-185.50%	194.48%	7.93%	27.61%
TQ	935	0.00	4.96	0.91	0.94
ESG	983	4.19	94.21	53.38	19.83
ENV	983	0.00	98.18	51.38	24.94
SOC	983	2.29	97.24	56.09	23.11
GOV	983	4.43	96.29	51.80	21.95
FZ	961	14.46	26.23	21.79	1.73
FZE	885	2.56	13.30	8.96	1.88
LV	961	0.00	1.10	0.32	0.19

Source: Own calculation based on data analysed with SPSS software.

Moreover, the operational performance has a mean of 7.93 with a standard deviation of

27.61 while the market value, represented by Tobin Q ratio, has a mean of 0.91% with a maximum of 496 and a minimum of 0.00. The mean value of the ESG score is 53.38, which is close to the ENV score of 51.38 and the GOV score of 51.80. The minimum SOC and GOV scores are 2.29 and 4.43 while the maximum values are 97.24, and 96.29. FZ has a mean of 21,79, while FZE has a mean of 8.96, with a standard deviation of 1.73 and 1.88, it is slightly distributed, while Leverage has a mean of 0.32 and a standard deviation of 0.19. Furthermore, Table 4 presents descriptive statistics that support the assumption that data are normally distributed and that a regression model based on these variables is valid [18].

Table 4. Skewness and Kurtosis distribution

Variables	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
ROA	-2.580	0.079	19.579	0.158
ROE	-1.506	0.080	16.304	0.160
TQ	1.630	0.080	2.732	0.160
ESG	-0.275	0.078	-0.623	0.156
ENV	-0.168	0.078	-0.897	0.156
SOC	-0.338	0.078	-0.753	0.156
GOV	-0.041	0.078	-0.981	0.156
FZ	-0.138	0.079	0.418	0.158
FZE	-0.214	0.082	0.357	0.164
LV	0.626	0.079	0.763	0.158

Source: Own calculation based on data analysed with SPSS software.

Table 5 presents the Pearson (below the diagonal) and Spearman (above the diagonal) correlation matrix for all variables included in the study.

Table 5. Pearson/Spearman correlation matrix

V	(1)	(2)	(3)	($)	(5)	(6)	(7)	(8)	(9)	(10)
(1)	1	.82**	.39**	.09**	.11**	.09**	0.04	-0.01	-0.03	-.22**
(2)	.55**	1	.25**	.13**	.12**	.15**	.07*	.09**	.09**	-0.05
(3)	.17**	.09**	1	.08*	.08**	0.06	0.06	-.16**	-.17**	-.21**
(4)	.14**	.10**	0.03	1	.87**	.91**	.67**	.60**	.57**	.11**
(5)	.12**	.09**	0.03	.88**	1	.75**	.39**	.50**	.44**	0.05
(6)	.11**	.09**	0.01	.92**	.76**	1	.44**	.58**	.55**	.17**
(7)	.12**	.08*	0.02	.68**	.4**	.45**	1	.39**	.41**	0.06
(8)	.12**	.10**	-.19**	.62**	.52**	.58**	.42**	1	.81**	.15**
(9)	.08*	.08*	-.19**	.59**	.46**	.57**	.42**	.83**	1	.16**
(10)	-.12**	-.11**	-.17**	.10**	0.02	.15**	.06*	.11**	.15**	1

Notes: **. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed). (1) ROA, (2) ROE, (3) TQ, (4) ESG, (5) ENV, (6) SOC, (7) GOV, (8) FZ, (9) FZE, (10) LV

Source: Own calculation based on data analysed with SPSS software.

Pearson's correlation (below the diagonal) shows that ESG, ENV, SOC, and GOV scores are all positively connected with ROA at the 0.01 level. The score is negatively associated with financial performance (ROA) at level 0.01, while it is favorably correlated with operational performance (ROE) at level 0.01 with the ESG, ENV, and SOC scores and at level 0.05 with the GOV scores. Furthermore, at the 0.05 level, a positive association is seen between market performance as reflected by the Tobin Q ratio and independent factors. With certain exceptions, the Spearmen correlation matrix supports the above-mentioned corelation. GOV, for example, is positively connected to ROA at the 0.05 level and to ROE at the 0.01 level. Furthermore, a strong correlation was identified between ESG scores and ENV scores with the Tobin Q ratio at the level of 0.05 and 0.01. It is important to note that all independent variables are positively related to the dependent variables.

To have a holistic approach and whit the purpose to identify potential outliers, this study used the Cook's Distance measure. The presence of outliers in the data sample can affect the regression results. In this study, the steps used by [23] were followed. Observations with the Cook distance being higher 4/N were eliminated. For example, the first four regression analysis conducted for ROA, was identified between 55 and 59 outliers which was eliminated. For the next regression analysis for ROE, between 43 and 45 outliers were identified and eliminated, and for TQ were identified between 54 and 55 outliers. This step was applied to ensure that the identified outliers do not influence the regression results. Furthermore, the variance inflation factor (VIF) was used to check the multicollinearity potential issues. The results obtain for each regression shows that the VIFs values for the independent variables are below 10 and the tolerance range is above 0,1 which means that the multicollinearity does not exist, according with [19] and [24].

Table 6 presents the results of the multiple linear regression analysis on the impact of sustainability disclosure on the financial performance of agriculture companies. The regression analysis shows that the econometric model may explain between 8,8% and 10,7% the variation of ROA when we control by FZ, FZE, and LV. Furthermore, the model used is valid, Anova sig. being

<0,05. The regression model results for ROA identified a positive relationship between sustainability disclosure and financial performance of agricultural companies.

Table 6. The Impact of Sustainability Disclosure on ROA

Variables	Coef.	Coef.	Coef.	Coef.
(Constant)	5.524	4.686	4.847	3.210
ESG	*0.03**			
ENV		*0.150*		
SOC			*0.320***	
GOV				0.009
FZ	0.030	0.48	0.540	0.134
FZE	-0.056	-0.006	-0.148	0.022
LV	*-10.052***	*-9.780***	*-10.195***	*-9.664***
F	23.794	24.664	25.761	20.895
Durbin-Watson	2.201	2.061	2.11	1.731
Adjusted R Square	0.099	0.103	0.107	0.088
Anova Sig.	<.001[b]	<.001[b]	<.001[b]	<.001[b]

Notes: **. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Source: Own calculation based on data analysed with SPSS software.

The results provided by the regression models also identified that the relationship is significant only for ESG factors al 0.05 and for SOC scores at the level 0.01. In addition, combined ESG scores and SOC scores have a significant impact on ROA, increasing the financial performance of agricultural companies. The identified results are similar to those of [23] showing that the ESG aspect, combined and individually, has a positive impact on the financial performance of agricultural companies. The identified results are partially in contradiction with those of [3] who identified a negative but not significant relationship between the combined factors of ESG and ROA for companies in the agricultural & food industries sector. Although similar results were identified by [9] for environmental and governance scores, the author found a nonsignificant and positive relationship between companies from all over the world that act in the agricultural sector.

Table 7 presents the results of the multiple linear regression analysis of the impact of sustainability disclosure on the operational performance of agriculture companies (ROE). The regression analysis shows that the econometric model may explain between 5.5% and 7.0% the variation of ROE when we control by FZ, FZE and LV. Furthermore, the model used is valid, Anova sig. being <0.05. The regression models result for ROE identified a positive relationship between sustainability disclosure and operational performance of agricultural companies.

The results provided by the regression models also identified that the relationship is significant for the combined ESG score, the ENV and the SOC scores, at the level 0.01.

Table 7. The Impact of Sustainability Disclosure on ROE

Variables	Coef.	Coef.	Coef.	Coef.
(Constant)	2,128	0,916	1,438	-5,079
ESG	*0,117***			
ENV		*0,065***		
SOC			*0,111***	
GOV				0,034
FZ	-0,071	0,001	0,016	0,388
FZE	*0,768*	1,058	0,652	1,000**
LV	*-15,052***	*-14,676***	*-15,427***	*-15,878***
F	14,743	12,898	15,315	12,538
Durbin-Watson	1,661	2,018	1,920	1,831
Adjusted R Square	0,063	0,055	0,07	0,058
Anova Sig.	<,001[b]	<,001[b]	<,001[b]	<,001[b]

Notes: **. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Source: Own calculation based on data analysed with SPSS program.

In addition, the companies which are oriented to the social aspect of the employees and community and are involved in solving environmental issues, their operational performance increases. These results are contrary to those of [20] who identified that ESG aspects have a significant positive and negative impact on financial performance. Furthermore, the results identified in Table 7 are partially in agreement with those of [23] and completely in contradiction with those of [3] who identified a negative relationship with ROE. Furthermore, in analysing the impact of corporate social responsibility on the agribusiness industry in Bangladesh, [22] identified that CSR has a significant impact on ROE, these results supporting the results obtained for ROE.

Table 8 presents the results of the multiple linear regression analysis of the impact of sustainability disclosure on the market performance of agriculture companies (TQ).

The regression analysis shows that the econometric model may explain between 12.4% and 14.4% the variation of TQ when

we control by FZ, FZE and LV. Furthermore, the model used is valid, Anova sig. being <0.05. The regression models result for the TQ ratio identified a positive relationship between sustainability disclosure and market performance of agricultural companies, both combined and individually related scores related to independent variables.

Table 8. The Impact of Sustainability Disclosure on TQ

Variables	Coef.	Coef.	Coef.	Coef.
(Constant)	*2.702***	*2.540***	*2.739***	*1.982***
ESG	*0.009***			
ENV		*0.005***		
SOC			*0.007***	
GOV				*0.004***
FZ	-0.061*	*-0.048*	-0.061*	-0.012
FZE	*-0.076***	*-0.066***	*-0.066***	*-0.079***
LV	*-1.148***	*-1.093***	*-1.180***	*-1.174***
F	34.682	30.410	31.742	29.61
Durbin-Watson	1.999	1.685	1.696	1.774
Adjusted R Square	0.144	0.128	0.133	0.124
Anova Sig.	<.001[b]	<.001[b]	<.001[b]	<.001[b]

Notes: **. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Source: Own calculation based on data analysed with SPSS program.

Moreover, a strong relationship at level 0.01 was identified between the dependent variable and independent variables. In addition, the companies that are oriented to have more corporate social responsibility achievements the higher their market performance. The results identified are contrary to those of [23] but similarly to those of [3].

CONCLUSIONS

The growing number of ESG issues has a specific impact on agriculture business. On the one hand, policymakers, and regulators such as the European Commission are imposing more restrictions and reporting obligations to increase the transparency referring to the social and environmental aspects. Moreover, investors and other stakeholders are interested to be informed about those companies that are eco-friendly and are involved in the community. This new regulation and this new attention given by stakeholders can affect the company's performance.

This aim of this study is to investigate the impact of sustainability disclosure on corporate performance of the companies acting in agriculture sector from Europe region. ROA, ROE and Tobin Q ratio are the dependent variables of the study representing the financial, operational and market performance. ESG combined scores and each one individually analysed, named as sustainability disclosure, represent the independent variables while the control variables are represented by the firm size and leverage of the companies. Data were collected from the Refinitiv Eikon database for European agriculture companies, for the period 2017-2021, divided into five European regions.

The results revel that the companies from agriculture sector who have a higher level of sustainability disclosure achieve a better performance (operational, financial and market performance). The identified results are similar to those of [23] who identified that both combined and individual ESG factors have a positive impact on both financial and operational performance of agriculture companies.

The findings identified have an important implication for companies, shareholders, regulators, and government because suggest the level of compliance of agricultural companies with the regulation regarding corporate social responsibility and European regulation. Furthermore, this study contributes to the literature by offering new insights referring to the link between sustainability disclosure and corporate performance of agricultural companies, viewed for the European regions. Moreover, this study may help investors and other stakeholders to have an overview as to which sector to orient their investment strategies.

This study has some limitations. First, the data are collected only for Europe, which offer only a European vision, not a worldwide Future studies may extend the database and the period. Second, the number of companies that disclose information about ESG data in Refinitiv Eikon is relatively small, especially for companies from emerging countries. Future studies may collect data from several other databases such as Bloomberg to combine and have more data available. Third, this study uses only multiple linear models.

Future studies may use OLS regression or fixed and random effects. Future studies may analyse the impact of sustainability disclosure on corporate performance for each European regions to provide new insights between European emerging countries and European developed.

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