



# **ENVIRONMENTAL, SOCIAL AND GOVERNANCE STANDARDS AS A PILLAR OF SUSTAINABLE FINANCIAL DEVELOPMENT-THE CASE OF THE GREEK FOOD INDUSTRY**

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## **Abstract**

Businesses have recently started exploring various approaches to incorporate Environmental, Social and Governance (ESG) activities into their decision-making processes. Our study makes use of ESG's environmental component to study the impact of environmental criteria on the annual turnover of the Greek food sector. According to the results, the food industries that have over 500 million annual turn over, invest in ESG and emphasize in environmental criteria. Investing in environmental policies and strategies increases financial sustainability. Companies become more profitable and efficient in this context.

## **Keywords**

ESG, Environmental pillar, Financial economics, Food industry

## **Introduction**

The topic of ESG has become increasingly popular in practice and academia in recent years. In June 2004, the United Nations Global Compact introduced the concept of ESG, telling companies to pay attention to business performance as well as environmental, social, and governance performance. Through collaborative initiatives involving entities like the United Nations, the International Financial Reporting Standards Foundation, and pertinent investment firms [18], the notion of ESG is gaining traction among the general populace and is branching out into fresh realms of ESG exploration and implementation. ESG represents a novel path for both macroeconomics and small-scale enterprises, with company-specific ESG studies steadily coming to the forefront.

The acronym ESG is made up of the abbreviation of the words Environmental, Social, and Governance. In other words, it includes a wide range of non-financial factors that can affect a company's long-term performance and overall social impact. ESG standards provide businesses with the appropriate information to make the appropriate decisions in evaluating business practices [12]. In more detail, ESG is characterized as factors of financial stability as well as elements of sustainability. In addition, they are integral tools - both in the medium term and in the long term - in matters related to investments, lending, and insurance of the organization.

According to an OECD survey [31], the factors that make companies adopt the ESG framework and embrace sustainability principles in their operations are significantly correlated with the awareness of their long-term profitability, the higher long-term profits, as well as the degree to which they implement sustainability principles and can showcase this through ESG adoption varies.

In Greece, big and powerful listed companies have made huge progress in adopting ESG energy efficiency, while small and not-so-powerful companies have made significant efforts to implement ESG. The latter businesses could benefit from the new model under certain conditions, ensuring their growth and sustainability, especially if they sell abroad or act as suppliers to large domestic companies [1]. Companies' activities to reduce their environmental footprint are a key part of their strategy since they are now considered critical elements and criteria for their activities.

Pillar "E" of ESG is considered a crucial factor in assessing the environmental impact of industries. The study thoroughly analyzes the impact of businesses on the natural environment, including issues related to climate

change, industrial waste, food waste, pollution levels, carbon footprint, energy sources, water management, and resource utilization. The sustainability of economic entities is directly linked to the resources available to them. Therefore, these factors can potentially jeopardize the sustainable growth of businesses. Understanding ESG standards, particularly the environmental criterion, is essential for investors when making strategic decisions, such as transitioning to renewable energy sources to reduce pollutants in the environment [5].

The purpose of this paper is to highlight the relationship between environmental practices according to the ESG model and the financial results of the food industry.

The article is divided into five sections, with this introduction being one of them. The second section delves into the background of the theoretical and practical challenges presented by current ESG principles. Moving on to the third section, the methodology is presented. The fourth section concludes the results and finally discussion and conclusion are presented.

### Literature Review

Even though ESG is not a brand-new idea, but it is of renewed importance [22]. ESG factors are becoming increasingly important to investors when selecting investments [10,14]. Additionally, it has been found that companies that adopt ESG practices generate greater profits than those that do not [2]. Today, more and more people are becoming interested in eco-friendly and sustainable products and services and greener production methods. A growing number of researchers are focusing on the importance of ethical business practices and how technological innovation inside corporations can lead to green solutions and help reduce industrialization's adverse consequences.

Şeker and Şengür [25], analyzed how environmental, social, and governance (ESG) performance in firms is linked to financial performance. Results showed a positive correlation between environmental pillar and financial indexes.

Partalidou et al. [19], investigate the link between the performance of food companies' CSR and their financial performance. Results showed that publishing a standalone sustainable report and implementing quality principles led to better financial results.

ESG reporting is being evaluated for its effectiveness in addressing the issue and verifying the profitability of European agri-food companies that disclose ESG information. Based on the data of a study, the results indicate that corporate profitability is impacted by ESG disclosure practices; specifically, evidence is presented for the existence of a positive relationship between profitability and disclosure practices of strictly environmental information [11].

In another study about the impact of environmental performance in the food industry results showed that sales are heavily influenced by environmental performance [29]. Moreover, financial performance has been shown to benefit from the disclosure of environmental practices by some researchers [17, 28].

Pillar E of the ESG has been recognized as a valuable basis for calculating the industry's impact on the environment. It carefully considers issues related to the actions of companies on the physical environment [13].

According to Balluchi et al. [4], the longevity of economic organizations directly depends on the resources available. Consequently, the study of ESG standards and in particular the first criterion, that of the environment, is the cornerstone of investors in making management decisions such as the use of renewable energy sources with the long-term objective of mitigating pollutants deposited in the community. The adoption of sustainable practices is a competitive advantage strategy as it excludes firms in the industry that have low annual turnover. Also, organizations that apply green standards can differentiate themselves from other companies, in the products and services they offer which are characterized as environmentally friendly giving further value to the product/service itself and the firm that produces/offers it [6,13].

In addition, ESG criteria offer a new measure of accountability that expresses voluntary commitment to non-financial objectives and ensures that social trust is shared. Companies adopt ESG to benefit from their strategic and financial advantages [3].

The scientific research of Rajic et al. [20] proved that the food industry is differentiated from other industries, especially in terms of economic structure, energy, and other areas. For example, it differs both in the production process and in the distribution of products. Therefore, the food industry has a significant impact on environmental pollution and greenhouse gas emissions [27].

Based on the study of Roukas & Kotzekidou [21], examining the correlation between ESG sustainability assessment reports and the financial performance of the food industry will provide strategic planners with information on mitigating environmental pollution and greenhouse gas emissions.

In terms of sustainability, the requirements for food businesses are particularly high. With the modern method to improve value creation, it is necessary to be clear whether the more sustainable enterprises achieve better financial performance. If this has been confirmed, it will motivate even more companies to become more involved in the issue [16].

Gündoğdu et al. [15] identified a set of criteria and options for companies and proposed a decision-making model to deal with challenges with uncertain information. On this basis, GHG emissions were identified as the

most important factor and eco-efficiency was selected as the ideal option for environmentally friendly competitive tactics.

Yoo & Managi [30] studied how different ESG scores can affect a company's financial performance by looking at data from two sources: Bloomberg ESG scores (which show how much a company shares about its ESG practices) and MSCI ESG scores (which show how well a company follows ESG principles). They found that ESG disclosure is very important for a company's profits. Environmental disclosure has a positive impact on financial indicators, but the impact of social and governance ratings is not as clear.

When a company's ESG ratings go down, it can make its stock returns go down too. This is a big problem that tells companies they need to work harder on sharing information about their environmental, social, and governance practices and making sure they are in control of them [26].

Moreover, in other studies, sustainability reporting has been found to negatively correlate with financial performance [7, 24]. In some studies, a negative relationship between environmental disclosure and firm performance has been found, or a non-significant relationship [8].

Companies use different strategies to make sure they are doing good things for the environment, society, and their business. They do this to make sure they are worth a lot of money and to keep from spending too much or taking too many risks in the future. Companies that don't have a lot of money are less likely to invest in social responsibility [9].

A variety of results have been found from studies that have investigated the relationship between environmental reporting and firm performance. Thus, this work contributes to literature from several viewpoints. Firstly, we provide empirical evidence to support Greek food companies to adopt ESG practices to achieve economic sustainability. This study confirms that a virtuous paradigm is possible, showing a positive association between environmentally friendly practices and economic sustainability.

Although ESG has been discussed in the literature, a systematic review of the environmental pillar does not exist. For the first time, we have included the impact of the environmental pillar on the financial results of the Greek food industry. Environmental factors have neither been evaluated nor have they been examined in terms of how they may impact economic sustainability. We address this gap through our research.

### Methodology

This research investigates the annual turnover of firms implementing ESG standards. A survey method was used for the research purpose of the paper. A questionnaire related to environmental criteria, with 29 variables was prepared. The sample included 20 food firms from all over Greece. The sampling method was the simple random method. First, descriptive statistical measures are reported with the corresponding graphs and tables using the statistical program SPSS v. 27. The variable was entered using the Likert scale on a five-point scale as follows: 1= Up to 10 million 2= 10 million-100 million 3=100 million - 500 million 4= 500 million and above. It is worth noting that the predominant value (mode) of the sample is 3, noting that most firms submitted an annual turnover ranging from 100 million - 500 million, indicating that the firms are of moderate economic activity.

Then, the One Way - ANOVA analysis followed. This non-parametric analysis investigates the variance with the F statistic. Because the sample size was small, we used the Shapiro-Wilk criterion. The value of the control statistic (F) used in the normality test differs depending on the environmental criterion and the annual turnover.

### Results

Annual turnover (million)	Frequency	Percent
< 10	4	20,0
11-100	5	25,0
101-500	7	35,0
>501	4	20,0
Total	20	100,0

**Table 1. Categorization of the annual turnover of food firms**

According to table 1, 20% of food firms have an annual turnover until 10 million. 20% of the firms have annual turnover from 11 to 100 million. 35% of the firms have annual turnover from 101 to 500 million. Finally, 20% of the food firms have annual turnover above 501 million.

		N	Mean	Std. Deviation
The company aims and invests in sustainable development	<10 million	4	4,50	0,577
	10 - 100 million	5	4,80	0,447
	101 -500 million	7	4,86	0,378
	>500 million	4	5,00	0,000
	Total	20	4,80	0,410
The company is sensitive to issues related to the environment (eg climate change, waste)	<10 million	4	4,75	0,500
	10 - 100 million	5	4,80	0,447
	101 -500 million	7	4,71	0,488
	>500 million	4	5,00	0,000
	Total	20	4,80	0,410
The company implements circular economy practices, waste minimization and food waste control	<10 million	4	4,25	0,500
	10 - 100 million	5	4,60	0,548
	101 -500 million	7	4,57	0,535
	>500 million	4	5,00	0,000
	Total	20	4,60	0,503
The company implements circular economy practices, waste minimization and food waste control	<10 million	4	4,00	0,816
	10 - 100 million	5	4,20	1,095
	101 -500 million	7	4,71	0,488
	>500 million	4	5,00	0,000
	Total	20	4,50	0,761
The company focuses on the protection of natural resources at all stages of the production process	<10 million	4	4,50	0,577
	10 - 100 million	5	4,40	0,894
	101 -500 million	7	4,57	0,535
	>500 million	4	4,75	0,500
	Total	20	4,55	0,605

**Table 2. Annual turnover in relationship to environmental measures**

According to table 2, firms with a large annual turnover (500 million and above) generally receive higher scores for environmental issues. In contrast, smaller companies (up to 10 million) tend to receive lower scores in all environmental criteria. The test of variance showed that there is a relationship between annual turnover and the application of environmental criteria. It appears that firms with an annual score of more than 500 million adopt sustainable practices.

		Statistic	df	Sig.
The company aims and invests in sustainable development	<10 million	0,729	4	,024
	10 - 100 million	0,552	5	0,000
	101 -500 million	0,453	7	0,000
	>500 million	.	4	.
The company is sensitive to issues related to the environment (eg climate change, waste)	<10 million	0,630	4	0,001
	10 - 100 million	0,552	5	0,000
	101 -500 million	0,600	7	0,000
	>500 million	.	4	.
The company implements circular economy practices, waste minimization and food waste control	<10 million	0,630	4	0,001
	10 - 100 million	0,684	5	0,006
	101 -500 million	0,664	7	0,001
	>500 million	.	4	.
The company implements circular economy practices, waste minimization and food waste control	<10 million	0,945	4	0,683
	10 - 100 million	0,684	5	0,006
	101 -500 million	0,600	7	0,000
	>500 million	.	4	.
The company focuses on the protection of natural resources at all stages of the production process	<10 million	0,729	4	0,024
	10 - 100 million	0,771	5	0,046
	101 -500 million	0,664	7	0,001
	>500 million	0,630	4	0,001

**Table 3. Results of one-way ANOVA for environmental criteria**

**Notes. Group differences are significant at  $p < 0.05$**

Due to the small sample size, it is deemed appropriate to utilize the Shapiro-Wilk test. The control statistic value utilized in the normality assessment differs based on the criterion and annual turnover (found in the significance column of the Tests of Normality table and the ANOVA table). This discrepancy arises due to the non-normal distribution of turnover. Upon examining the tables, it is evident that companies with higher annual turnovers (500 million or more) generally achieve higher scores. Conversely, smaller companies (up to 10 million) tend to receive lower scores across all environmental criteria. The inference drawn from the variance control is that there may be a correlation between annual turnover and the implementation of environmental criteria. It appears that companies with an annual score exceeding 500 million are more inclined to adopt sustainable practices.

## Discussions and Conclusions

Existing literature on ESG and financial performance has not yet found a clear relationship between ESG corporate behavior and financial key figures. In this paper, we focus on a specific sector, the food industry, to ensure a reasonable comparison of ESG ratings. Food companies face challenges in terms of sustainability, as regulators and consumers have differing demands.

According to the results, the food industries that have over 500 million annual turn over, invest in ESG and emphasize in environmental criteria. The food industry benefits from environmental strategies because intense market competition leads to hostile behaviors in the food industry toward consumers. As a result of environmental policies, customers are better protected. Investing in environmental policies and strategies increases financial sustainability. Companies become more profitable and efficient in this context. Environmentally friendly products, reducing emissions, and practicing climate change activities are closely related to financial sustainability. As a result, environmental policies affect the market value of companies [23].

As a result, we can summarize the policy implications of our study as follows: First, policymakers responsible for sustainable development need to understand the reciprocal relationship among environmental pillar, since improving it, that can have positive effects on financial results. Second, policymakers should focus on smaller firms and give them motivation to become environmentally sustainable. Third the reform priorities for corporate sustainability vary depending on the industry. Policy-makers must concentrate on food industries and refrain from applying generalized reform priorities to diverse industries. In this context, researchers should emphasize to ethical business practices and other ways to achieve green solutions and lessen industrialization's adverse effects.

There are several limitations to the current study, including the small number of firms. The results can therefore be tested in other countries or between other industries. As a second point, we only compare the impact of environmental criteria with the annual turnover. In future research environmental criteria could be correlated with all economic results.

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