



JOEEP

e-ISSN: 2651-5318
Journal Homepage: <http://dergipark.org.tr/joep>

Araştırma Makalesi • Research Article

A Study on the Governance Scores of Firms: Evidence from Borsa İstanbul

Firmaların Yönetişim Skorları Üzerine Bir Araştırma: Borsa İstanbul'dan Kanıtlar

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MAKALE BİLGİSİ

Makale Geçmişi:

Başvuru tarihi: 4 Kasım 2023

Düzeltilme tarihi: 17 Şubat 2023

Kabul tarihi: 4 Mart 2024

Anahtar Kelimeler:

Yönetişim Skorları

Yönetişim

ESG

Firma Performansı

ARTICLE INFO

Article history:

Received: Nov 4, 2023

Received in revised form: Feb 17, 2023

Accepted: March 4, 2024

Keywords:

Governance Scores

Governance

ESG

Firm Performance

ÖZ

ÇSY, bir şirkete yapılan yatırımın sürdürülebilirliğini ve etik etkisini ölçmek için kullanılan üç merkezi faktör olan Çevresel, Sosyal ve Yönetişim anlamına gelmektedir. ÇSY kriterleri, yatırımcılar ve finansal analistler tarafından yatırımların sürdürülebilirliğini ve etik etkisini değerlendirmek için kullanılmakta ve yatırım karar alma süreçlerinde giderek standart bir husus haline gelmektedir. Bu çalışmada yönetim boyutu çerçevesinde analizler yapılmıştır. Başka bir deyişle, çalışmada yönetim ÇSY puanlarının firma performansı üzerindeki etkisi belirlenmiştir. Çalışmada firma performansının bir göstergesi olarak Varlık Kârlılığı (ROA) kullanılmıştır. Çalışmada Borsa İstanbul'da (BIST) faaliyet gösteren ve ÇSY sürdürülebilirlik skorları sürekli açıklanan 12 firmanın 2013-2021 yıllarına ait verileri kullanılmıştır. Geliştirilen modellerin varyans, otokorelasyon ve yatay kesit bağımlılığı sorunlarına sahip olması ve bu sorunlara karşı dayanıklı olması nedeniyle panel düzeltmeli standart hatalar (PCSE) panel sağlam tahmincisi kullanılmaktadır. Analizler sonucunda yönetim ÇSY puanının firma performansı üzerinde pozitif ve anlamlı bir etkiye sahip olduğu tespit edilmiştir. Başka bir deyişle yönetişimin ÇSY puanının artması firma performansını artıran bir faktördür. Çalışmanın bulgularının, düzenleyicilere ve politika yapıcılara ÇSY 'nin açıklanmasına ilişkin politikalar oluşturmada yardımcı olması beklenmektedir.

ABSTRACT

ESG stands for Environmental, Social, and Governance, which are three central factors used to measure the sustainability and ethical impact of an investment in a company. ESG criteria are used by investors and financial analysts to evaluate the sustainability and ethical impact of investments, and they are increasingly becoming a standard consideration in investment decision-making processes. In this study, analyses were conducted within the framework of the governance dimension. In other words, the effect of governance ESG scores on firm performance will be determined in the study. Return on Assets (ROA) is used as an indicator of firm performance in the study. In the study, the data for the years 2013-2021 of 12 firms operating in Borsa İstanbul (BIST) whose ESG sustainability scores have been announced continuously are used. The panel-corrected standard errors (PCSE) panel robust estimator is used since the developed models have problems of variance, autocorrelation, and cross-sectional dependence and are resistant to these problems. As a result of the analyses, it is found that the governance ESG score has a positive and significant effect on firm performance. In other words, an increase in the governance ESG score is a factor that increases firm performance. The findings of the study are expected to help regulators and policymakers to formulate policies on ESG disclosure.

1. Introduction

The emergence of governance has been due to the changes that have occurred throughout the world, especially in developed countries, since the 1980s, affecting almost every field, especially economy and administration. This process of change has influenced the basic parameters that shape societies and the governments that govern them, and almost all of these variables, which are now considered traditional, have either lost their influence significantly due to the

pressure created by change.

World Bank data show that among the top ten risks facing the world, climate change, unexpected weather events, reduction in biodiversity, epidemics, hunger, and social injustice are among the top five risks. These changes have led policy makers, decision makers and regulators to take more sensitive and effective measures against climate change and social risks (La Torre et al., 2020; Broadstock et al., 2021; Shahbaz et al., 2023; Józwick et al., 2023; Ullah et

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al., 2023; Saadaoui et al., 2023; Józwick et al., 2023). The number of studies that go beyond the traditional shareholder approach, i.e. shareholder wealth maximization, and emphasize the organizations and stakeholder approach to sustainable investments has increased rapidly. These studies are critically related to the performance of organizations on three parameters: environmental footprints, social responsibility, and corporate governance. ESG (Environmental, Social, and Governance) has emerged as a frequently used acronym to capture the performance of organizations on these parameters in financial analysis (Maiti, 2021).

Environmental, Social and Governance (ESG) criteria are of increasing importance in the modern business world. This approach encourages businesses not only to focus on profit targets but also to consider environmental sustainability, social responsibility and ethical governance norms (Sultana et al., 2018). These criteria ensure that businesses are not only profit-orientated but also pay attention to the environment, society and ethical values. In addition, compliance with ESG criteria can increase the trust of not only investors but also customers and employees (Cek and Eyupoglu, 2020). Therefore, focusing on ESG criteria is important not only for sustainability but also for gaining a competitive advantage and sustaining long-term success (de Souza Barbosa et al., 2023). ESG criteria are considered as a reflection of ethical, social and environmental responsibility in the business world (Beretta et al., 2019).

As Environmental, Social and Governance (ESG) issues are becoming increasingly important in the business world, the literature in this field is rapidly expanding. Several studies have investigated in detail the relationship between Environmental, Social and Governance (ESG) disclosures and company performance, focusing on understanding the complexity and mechanisms of this relationship (Huang, 2021; Bruna et al., 2022). While such research helps us to better understand how Environmental, Social and Governance (ESG) factors affect the financial success of companies, other studies take a broader view of ESG dimensions of firm performance and examine their impact on social and environmental impacts as well as long-term sustainability (Atan et al., 2018). When the literature is evaluated in general, it is possible to say that ESG-related issues are concentrated in two different dimensions. When the literature on the subject is analyzed, it is seen that ESG research is extremely limited in developing countries. In addition, most of the studies have focused on the impact of total ESG scores on firm performance. In this context, this study analyses the impact of governance score on firm performance. For this reason, the annual data of 12 different companies traded on Borsa Istanbul (BIST) between 2013 and 2021 are analysed. Within the framework of the developed model and the methodology applied, the objectives of the research are determined as follows (i) To determine the governance environment ESG performance of the firms according to years (ii) To determine the average scores of the governance environment ESG dimensions, (iii)

To assess the impact of the governance environment score on company performance.

This study consists of five sections. After the introduction, the second section summarises literature on the subject. The third section introduces the data set, variables, and methodology. In the fourth section, PCSE robust estimator models are developed for the effect of ESG scores on firm performance. In the last section, a general evaluation of the research is made and suggestions for future studies are presented.

2. Literature Review

There are three important corporate governance theories in the background of the research on the relationship between ESG practices and firm performance. These theories are stakeholder theory, agency theory, and value maximization theory. Stakeholder theory is a governance approach that states that the expectations and interests of shareholders, employees, customers, and suppliers, who are in different relationships with the firm, should be met and their interests should be satisfied (Freeman, 1984). According to the stakeholder theory, firms constitute a subset of a society. For firms to achieve their corporate goals, they should prevent conflicts of interest that may arise with their stakeholders and have a conciliatory governance approach. Firms have to develop practices that will meet the expectations of their stakeholders to produce value (Ross, 1973; Jensen and Meckling, 1976). Meeting the expectations of stakeholders is only possible with a sustainable governance approach. According to Roberts (1992), sustainable governance approach is strengthened by the positive relationship between sustainability reporting and firm performance. Sustainable governance practices, which are also of great importance in terms of stakeholder theory, gain a systematic structure with ESG reporting (Clarkson et al., 2008). As a result, efforts such as sustainability studies and ESG reporting increase the trust of stakeholders and become a factor that improves firm performance by improving financial conditions (Velte, 2017). In addition, there is a published view in the existing literature that ESG/CSR practices have a significant impact on firm value (Gillan et al., 2021). In this context, studies conducted from the perspective of the theory of value enhancement show that ESG has direct and indirect positive effects on firm performance and increases shareholders' interests by providing a competitive advantage (Bernardi and Stark, 2018; Albuquerque et al., 2019). Therefore, the positive relationship between ESG and firm performance can be supported by stakeholder theory (Albaitar et al., 2020).

It is seen that studies examining the relationship between ESG disclosures and firm performance in the literature have yielded mixed results so far (Albaitar et al., 2020; Khan, 2022). There are studies claiming that ESG disclosures positively affect firm performance (Mohammad and Wasiuzzaman, 2021; Carnini Pulino et al., 2022), as well as studies suggesting that they have a negative effect (Ruan and

Liu, 2021) or no effect (Landi and Sciarelli, 2019). Moreover, it is a common view that the impact of ESG disclosures on firm performance varies depending on the characteristics of firms (Yoon et al., 2018). Cek and Eyupoglu (2020) found that social and governance fundamentals positively and significantly affect a firm's economic performance due to the value they create for shareholders in the long run. In addition, Paolone et al. (2022) found that the governance dimension effect on a firm's performance is much stronger than the other two dimensions.

Naseem et al. (2020) found that sustainability activities positively affect firm performance for Asia Pacific firms. Garcia et al. (2017) showed that ESG initiatives lead to significant improvements in firm performance measures for firms in both developed and emerging markets. Similar results are reported by Aureli et al. (2020), who argue that ESG information has an impact on firm performance as investors are interested in companies' sustainability reports. Moreover, Bhaskaran et al. (2020) claim that firms with high intensity ESG practices have a higher valuation in terms of firm performance for firms in 51 countries. The results of the study can also be related to the conclusion that effective utilisation of resources, employee welfare initiatives and adoption of best governance practices create more value for stakeholders. Alsayegh et al. (2020) showed that there is a significant positive impact on the economic performance of Asian firms. The research is associated with the conclusion that environmentally friendly and socially responsible firms with strong governance policies improve their economic, environmental and social sustainability performance by being less exposed to future risks.

Buallay et al. (2022) found that the operational performance of tourism firms increased following high levels of disclosure of sustainability actions for firms covering 37 countries. On the other hand, Shaikh (2022), with a sample of firms spanning 17 countries, found that sustainability-oriented actions hurt firms' performance. Moreover, only the governance factor was found to have a positive impact on firm performance. Consistent with these results, Pirtea et al. (2021) found that in the context of large global publicly traded agricultural companies, the overall ESG score does not affect firm performance. Diaye et al. (2022) argued that better ESG scores help a country's long-term economic growth but have no effect in the short term. Similar results were also found by Shahbaz et al. (2020).

According to Gillan et al. (2021), ESG activities enhance firm performance by increasing shareholder wealth or maximizing shareholder wealth. In contrast, ESG practices can also be considered as a tool that reflects governance problems and governance may tend to increase their benefits rather than stakeholders' welfare (Bénabou and Tirole, 2010). Firms with high performance may also provide high resources for ESG activities, in which case causality runs from high firm performance to ESG activities. In both directions, causality predicts a positive relationship between

ESG activities and stakeholder welfare. In any case, maximising stakeholder wealth increases company value in the long run, and this increase is considered a consequence of ethical and responsible corporate behaviour (Jensen, 2002).

Ting et al. (2020) examined the relationship between ESG and firm performance for developed and developing countries using regression analysis. The results of the research show that ESG disclosures have a positive effect on firm performance. Wasiuzzaman et al. (2022) analyzed the data of 668 energy sector firms operating in 52 countries for the period 2009-2016 with regression models and concluded that ESG disclosures affect firm performance. Alareeni and Hamdan (2020) analyzed the impact of ESG disclosures of S&P 500 firms on firm performance for the period 2009-2018 with the panel regression method. The results show that ESG disclosures have a positive effect on performance. Buallay et al. (2020) evaluated the impact of corporate social responsibility disclosures on firm performance in Mediterranean countries over the period 2008-2017 from a stakeholder theory perspective. The results show that disclosures hurt firm performance. Duque-Grisales and Aguilera-Caracuel (2021) found a statistically significant and negative relationship between ESG scores and firm performance in Brazil, Chile, Colombia, Mexico, and Peru. Bahadori et al. (2021) examined the relationship between ESG scores and firm performance for 24 emerging markets and concluded that high ESG scores positively affect firm performance.

In the Türkiye sample, research on the subject has recently started to increase. Şişman and Çankaya (2021) examined in the effect of ESG scores of firms in the airline sector on the financial performance of firms. As a result of study, it was determined that there is a statistically significant relationship between ESG overall score and return on assets (ROA). In a similar way, the authors Şeker and Şengül (2022); Çetenek et al. (2022); Güneysu (2023) also investigated in the Türkiye sample. Apart from these studies, Şeker and Şengül (2022) examined the average ESG scores of firms at the country level. According to the results obtained, it was determined that the countries in the European Union were at the top of the ESG scores, while the Far Eastern countries were at the bottom. Şişman and Çankaya (2021) examined the relationship between ESG scores and financial performance of all banks operating in the stock markets of G-8 countries. The results of the analysis show that according to both return on assets and return on equity models, the Environmental score has a negative and significant relationship, while the Social score has a positive and significant relationship. Governance score has a negative and significant relationship on both sides.

3. Methodology

The purpose of this study is to determine the impact of governance scores on firm performance. ESG scores consist of three different dimensions: environmental, social and

governance. In this study, the effect of ESG's governance dimension scores on firm performance is analyzed. Scores obtained from Thomson Reuters database are used for ESG performance. Thomson Reuters collects company news from websites, stock exchanges and other sources. Reuters also tries to overcome the bias problem by applying severity weighting, as large companies are expected to have more positive/negative media appeal than smaller companies. Return on Assets (ROA) is used as an indicator of firm performance. Similarly, Doğan and Topal (2015) and Doğan and Mecek (2015) used a similar performance measure in the literature. In the study, the data for the years 2013-2021 of 12 firms operating in Borsa Istanbul (BIST) whose ESG sustainability scores have been announced continuously are used. Firms in the financial sector are excluded from the analysis. Governance scores range between 0 and 100, with 100 indicating the best performance and 0 indicating the worst performance. The criteria for calculating the governance environment ESG score are shown in Table 1.

Table 1. Governance ESG Environmental Criteria

	Category	Thomson Reuters Number of Measurements
Governance	Governance	35
	Stakeholders	12
	Corporate Social Responsibility Strategy	9

Source: ESG Scores (Refinitiv, 2021).

According to Table 1, there are 56 criteria in the calculation of the governance environment ESG score, including 35 governance, 12 stakeholders, and nine corporate social responsibility strategies. In addition, two control variables, firm size and leverage ratio, are added to the model. Leverage ratio is calculated by dividing total debts by total assets, while firm size is calculated by taking the logarithm of total assets. In this framework, the model used in the research is presented below;

Model 1:

$$ROA_{it} = \beta_1 GOVERNANCE_{it} + \beta_2 SIZE_{it} + \beta_3 DEBT_{it} + \alpha + \epsilon_{it} \quad (1)$$

In the research, a balanced panel data analysis method is obtained with nine-year data from 12 firms. Panel-corrected standard errors (PCSE) panel robust estimator was used since the developed models have problems with changing variance, autocorrelation, and cross-sectional dependence and are resistant to these problems.

4. Findings

In this section, we present the empirical results on the effect of governance scores on firm performance of 12 firms in BIST.

Table 2. Descriptive Statistics

	N	Mean.	Std Dev.	Min.	Max.
GOVERNANCE_ESG	108	62.75	16.67	20	91
ROA	135	0.0597	0.0415	-0.069	0.145
SIZE	135	7.496	0.5216	6.431	9.009
DEBT	135	0.5865	0.1839	0.21	0.87

Table 2 presents the descriptive statistics of the variables used. According to the results, the average governance environment ESG score of BIST firms for the years 2013-2021 is determined as 62.75.

Table 3. Correlation Analysis

	ROA	GOVERNANCE	SIZE	DEBT
ROA	1			
GOVERNANCE	0.192	1		
SIZE	0.123	0.343	1	
DEBT	-0.273	-0.032	0.102	1

In Table 3, the relationship between firm performance, governance score, firm size and debt ratio is tested by correlation analysis. According to the findings, a positive relationship is observed between governance score and firm performance. In other words, each unit increase in the governance environment ESG score increases firm performance by 19.2 per cent. There is also a positive relationship between firm size and firm performance. However, there is a negative relationship between firm performance and debt ratio.

Table 4. The Effect of Governance Environment ESG Score on Firm Performance

	(ROA)
GOVERNANCE	0.137***
SIZE	0.101**
DEBT	-0.147***
Constant	0.303***
Wald ch ²	503.20
P Statistic	0.0000
R ²	0.121

***, ** and * indicate significance at 1%, 5% and 10% levels, respectively.

In Table 4, the effect of governance score on firm performance is analysed using PCSE panel robust estimation method. In the study, the PCSE robust estimator is preferred because it is robust to changing variance, autocorrelation, and cross-sectional dependence, and because it can be applied in the case of T<N or because of its increased predictive power and standard errors are corrected. Thus, with the PCSE estimator, problems of changing variance, inter-unit correlation, and autocorrelation are prevented.

According to the research results, governance score has a positive and statistically significant effect on firm performance (p<0.01). In other words, an increase in the governance environment ESG score is a factor that increases firm performance. The results of the control variables show

that firm size positively affects firm performance ($p < 0.05$). There is a negative relationship between leverage ratio and firm performance ($p < 0.01$).

5. Conclusion and Discussion

ESG investments, an important subcategory of sustainability investments, are adopted through various filters on a global scale. The growing interest in ESG investments encourages policymakers around the world to develop policies around ESG filters. Many countries are making progress towards mandatory ESG disclosures, especially for listed companies. In this context, significant efforts have been made to establish reporting guidelines for ESG disclosures and practices.

In this study, the effect of the governance dimension of the ESG score, which consists of three different dimensions, on firm performance is analysed. Return on assets ratio is used as a measure of firm performance. In the study, the data of 12 firms operating in BIST and continuously disclosing governance scores for the years 2013-2021 are used. PCSE panel robust estimation method is preferred in the analyses. According to the results obtained from the estimation models, governance and scores have a significant and positive effect on firm performance. In other words, an increase in firms' governance scores leads to an increase in their performance. This suggests that the adoption of sustainability activities can be associated with better financial success. In line with stakeholder theory and other theories discussed earlier, our results suggest that the adoption of environmentally and socially responsible practices with effective governance promotes the welfare of a firm's various stakeholders. These findings are in line with the studies of Cek and Eyupoglu (2020), Doğan (2021), Mohammad and Wasiuzzaman (2021), Gillan et al., (2021), Carnini Pulino et al., (2022) and Paolone et al., (2022).

The results of our research lead to a number of policy implications. First, the results suggest that firms can improve firm performance by disclosing ESG activities on governance in more detail. Second, our results suggest that disclosures on governance parameters are incomplete and should be emphasised more. Therefore, top management should focus more on performance. Thirdly, the governance is an important tool to communicate a firm's sustainable business practices to stakeholders. In addition, the separation of ownership and management may lead to an increase in ESG scores. This can be explained by the risk of managers misusing the assets of the company they control. In other words, within the framework of the agency theory, the development of various corporate governance mechanisms that will enable the managers who control the business to fulfil their responsibilities towards the shareholders who own the business will be beneficial for sustainability development.

The research also has some limitations. Although annual data are generally published for countries, if there are data published at a higher frequency, different country groups

can be focussed on these data. In addition, in future studies, investigating the relationship between firms' ESG scores and variables such as ownership structure, board structure, and earnings governance will contribute to expanding the existing literature.

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