



Investigating the impact of environmental, social and corporate governance on green innovation of companies listed on the Tehran Stock Exchange, considering the mediating role of financial constraints and environmental awareness of managers.

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Abstract

This study investigated the effect of environmental, social, and corporate governance on green innovation of companies listed on the Tehran Stock Exchange, considering the mediating role of financial constraints and environmental awareness of managers. The temporal and spatial scope of the study is from 2019 to 2023 and in companies listed on the Tehran Stock Exchange. The research hypotheses are explained in the form of three hypotheses, and all hypotheses have been tested at a 95% confidence level and with a type I error of 5%. Regression analysis of mixed data with Eviews9 software was used to test the hypotheses. The findings of the present study showed that there is a positive and significant effect between environmental, social, and corporate governance on green innovation of companies listed on the Tehran Stock Exchange ($P < 0.05$); also, financial constraints and environmental awareness of managers can have a mediating effect between the relationship between environmental, social, and corporate governance on green innovation of companies listed on the Tehran Stock Exchange ($P < 0.05$). Environmental, social and corporate governance is not only an ethical and social obligation for companies, but can also act as an effective factor in promoting green innovation and improving their economic performance on the Tehran Stock Exchange.

Keywords: Environmental, social and corporate governance, green innovation, financial constraints, environmental awareness of managers.

JEL Classification: G34, G41, M14, F64.

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INTRODUCTION

Environmental, social, and corporate governance frameworks encourage companies to adopt environmentally responsible strategies, improve social accountability, and strengthen governance structures, which can stimulate innovation by prioritizing resource efficiency and sustainable technologies. However, financial constraints, such as limited access to capital or high financing costs, may hinder companies' ability to invest in green technologies, while managers' environmental awareness can guide strategic decisions toward sustainability. This study examines how environmental, social, and corporate governance practices affect green innovation in companies listed on the Tehran Stock Exchange, with a specific focus on the mediating roles of financial constraints and managers' environmental awareness. By exploring these dynamics, this research seeks to provide insights into how to overcome financial and cognitive barriers to achieving sustainable innovation in a developing market context.

METHODOLOGY

The research method is actually a set of activities that help determine where, how, and with what tools the desired data is collected. In general, research methods in behavioral sciences can be divided according to the criteria of the research objective and the data collection method. In the classification of scientific research based on the purpose, research is divided into three categories: fundamental, applied, scientific, and since the present research is aimed at testing theoretical concepts objectively and realistically, it can be considered applied research in terms of purpose. Based on the nature and method, scientific research can be divided into five groups, which are: historical, descriptive, correlational, scientific, and empirical research. Considering that the present research seeks to analyze the relationships between variables using statistical tests and also considering the above-mentioned materials, it can be said that the present research is a descriptive and correlational research in terms of method.

RESULTS

The value of the F statistic, which is 111.12, shows that the regression fitted by the least squares panel regression method with fixed effects is significant on the research data. The adjusted coefficient of determination of the regression is 0.622, which, while measuring the suitability of the model, shows that 62 percent of the changes in green innovation are explained by the environmental, social and corporate governance variables and the control variables. According to the findings, the value of the Durbin Watson statistic corresponding to the research model was calculated to be (2.003), which can ensure the absence of autocorrelation in the aforementioned model. Considering the coefficient of the independent variables and the reported significance level, most of them are less than (0.05); Accordingly, the first hypothesis is accepted with 95 percent confidence and environmental, social and corporate governance has a significant effect on the green innovation of companies listed on the Tehran Stock Exchange ($P < 0.05$).

The F-statistic value, which is 19.128, shows that the regression fitted by the least squares panel regression method with fixed effects is significant on the research data. The adjusted coefficient of determination of the regression is 0.654, which, while measuring the suitability of the model, shows that 65 percent of the changes in the relationship between environmental, social and corporate governance on green innovation are mediated by the variable of financial and control constraints. According to the findings, the value of the Durbin Watson statistic corresponding to the research model was calculated as (2.093), which can ensure the absence of autocorrelation in the aforementioned model. Considering the coefficient of the independent variables and the reported significance level, most of them are less than (0.05); Accordingly, the second hypothesis is accepted with 95 percent confidence and financial constraints have a mediating effect on the relationship between environmental, social and corporate governance on green innovation of companies listed on the Tehran Stock Exchange ($P < 0.05$).

The F statistic, which is 16.221, shows that the regression fitted by the least squares panel regression method with fixed effects is significant on the research data. The adjusted coefficient of determination of the regression is 0.501, which, while measuring the suitability of the model, shows that 50 percent of the changes in the relationship between environmental, social and corporate governance on green innovation are mediated by the variable of environmental awareness of controlling managers. According to the findings, the value of the Durbin Watson statistic corresponding to the research model was calculated as (1.185), which can ensure the absence of autocorrelation in the aforementioned model. Considering the coefficient of the moderating and independent variables and the reported significance level of most of them is less than (0.05); the third hypothesis of the research is accepted with 95 percent confidence and that environmental awareness of managers has a mediating effect on the relationship between environmental, social and corporate governance on green innovation of companies listed on the Tehran Stock Exchange ($P < 0.05$).

CONCLUSION

Environmental, social and corporate governance refers to a set of criteria and principles that help companies act in line with their social and environmental responsibilities. In recent years, attention to this issue has increased globally and companies are looking for ways to improve their performance in this area. This special attention to environmental, social and corporate governance can have positive effects on green innovation of companies, especially in the Tehran Stock Exchange market. Companies that adhere to environmental, social and corporate governance principles usually have a greater competitive advantage. These companies can attract new markets by improving their public image and increasing customer trust. In the Tehran Stock Exchange, companies that operate in the field of green innovation can attract more investors due to their attention to environmental and social issues and, as a result, obtain more financial resources for development and innovation. Paying attention to environmental, social, and corporate governance can act as a driver for innovation. By focusing on environmental and social challenges, companies can develop new products and services that help reduce negative impacts on the environment. This type of innovation not only helps improve companies' environmental performance, but can also lead to increased profitability and economic growth. Investors are increasingly paying attention to environmental, social, and corporate governance criteria and are willing to invest in companies that adhere to their social and environmental responsibilities. This allows companies listed on the Tehran Stock Exchange to attract more support from investors by implementing green innovation strategies. In other words, adhering to environmental, social, and corporate governance principles can act as a key factor in attracting new capital and increasing stock value. Ultimately, environmental, social and corporate governance is not only an ethical and social obligation for companies, but can also act as an effective factor in promoting green innovation and improving their economic performance on the Tehran Stock Exchange. Given the increasing public awareness and social pressures, companies should pay more attention to these principles in order to achieve success in competitive markets.

Contribution of Authors

The authors jointly contribute to the preparation and publication of the article.

Ethical Approval

Informed written consent was obtained from individuals for the publication of their anonymous information in this study.

Sponsor

This study had no sponsor.

Conflict of Interest

The authors of this article declared no conflict of interest regarding the authorship or publication of this article.

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