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Research Article

Does Inclusion in the Sustainability Index Contribute to the Financial Performance of the Companies: Evidence from Developing Countries*

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ABSTRACT

This study investigates whether the performance of the companies is affected when they are included in the Sustainability Index. The study deals with companies operating in Brazil and Turkiye, in this respect, the panel data analysis technique is applied. ROA (Return On Assets) is used for the dependent variable, while independent variables are debt/equity ratio, company size, operational ratio and the Sustainability Index. The results of the study reveal that taking part in the Sustainability Index has a statistically significant positive effect on profitability for both Brazil and Turkiye. When the other results are analyzed, it is seen that there is a negative relationship between the debt / equity ratio and ROA for the case of Turkiye.

Jel Codes: Q01, L25, C33

Keywords: Sustainability Index, Financial Performance, Panel Data Analysis

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1. Introduction

In recent years, the perspective of company stakeholders towards the concept of sustainability has started to change. Stakeholders have begun to carefully monitor the company activities on sustainability. The big scandals such as Wolkswagen and Enron, in the past years showed that it is not enough for companies to continue their profit-oriented activities. While profit-oriented companies continued their activities, they did not care about environmental sensitivity, ignored the ethical rules, and did not establish enough relations with their social environment. However, due to the awareness of the stakeholders, these companies experienced customer losses, which also affected the profit of the companies. Therefore, the companies that want to continue their lives have had to invest on sustainability issues. It has become crucial for companies to work without endangering economic, social, and natural resources (Demirkol, 2020).

The concept of sustainability first emerged due to the concerns about the sustainability of forests. A German mine worker published a series of rules on how to improve the productivity of forests and make them 'sustainable' (Brander, 2007). After these rules, the book 'Silent Spring', published in 1962, formed a major impact domain. In this book, the effects of pesticides on the environment were discussed and the biggest step was taken for the formation of environmental movements in the world. The effect of the book was bigger than it was expected. Governments have taken steps to examine the effects of pesticides, and the research has shown that the effects of these pesticides are damaging the entire ecology. Thus, countries need to take more conscious steps on environmental issues. The United Nations, which is one of the largest communities of countries, has slowly begun to grasp the importance of environmental issues, and it held the 'Biosphere Conference' in 1968. In this conference, it was discussed that the environment is being harmed by people, and proper actions should be taken to avoid this. The published conclusion report is the first report published on environmental issues all around the world. This conference was the first of many important steps of the United Nations about sustainability.

With the struggling efforts of international organizations, there has been an increase in the awareness of stakeholders about the sustainability. For this reason, meeting the sustainability needs within the framework of economic, social, and economic issues has become one of the main objectives of companies (Baltacı, 2020).

The institution that plays the most active role in the development of the concept of sustainability is the United Nations (UN). The United Nations has consistently acted in cooperation with countries to ensure sustainable development. The UN touched on all three aspects of sustainability, and arranged activities related to all of them. In addition, the United Nations has formed the basis for Sustainability Indexes, so that these indexes are spread all over the world and become an essential element of responsible investment.

The establishment of sustainability indexes revealed the concept of sustainability performance. The Sustainability index is a tool for evaluating and measuring the efforts of companies on sustainability. To be included in the Sustainability Index, companies must prove their sustainability performance. Each index has its own specific criteria, and if the company is included in the sustainability index, it demonstrates to the public that the company meets these criteria, and they announce their sustainability efforts in sustainability reports. The sustainability reports are examined by the research companies or by the stock exchanges. The companies with the best sustainability performance are identified and included in the sustainability indexes.

Although each index is free to determine its own criteria, in general, ESG (Environmental, Social and Governance Criteria) factors are used to determine these criteria. In addition, most countries individually publish guidelines on ESG reporting, guiding companies on sustainability reporting.

When the history of the indexes was examined, it was seen that the first sustainable index was the Domini 400 Social Index which started to operate in 1990. After the United Nations launched the sustainable stock exchange initiative, the number of sustainability indexes has spread over the world.

Sustainability indexes were firstly established in developed countries, and developing countries started to keep up with these developments rapidly. When the developing countries were analyzed, it was seen that the first sustainability index, which was established in 2004, was the Social Responsibility Index on the Johannesburg Stock Exchange (JSE SRI) Index. Later to further develop itself, the index was done in collaboration with the FTSE Russell. Following South Africa, Latin American countries established their sustainability indexes. In 2005, the Corporate Sustainability Index started its operations in Latin America, so that the Sustainability Index continued to spread in developing countries.

Some countries come together and establish sustainability indexes collectively. The main reason for collaborations were the encouragements of the United Nations for joint work. When the index collaborations are examined, it is generally seen that they exist in developed countries. In the future, it is possible that developing countries will come together and establish common indexes or establish other sustainability indexes that will cover the countries of the world.

The concept of sustainability has become a crucial topic all over the world. Stakeholder awareness has created the concept of responsible investment, and therefore, sustainability indexes have started to be established. The sustainability indexes become an important benchmark for companies. The companies listed on the sustainability indexes are more prestigious and prevail over other companies that do not care about sustainability. The companies that want to be listed in this index must fulfill the criteria determined individually by each country's index.

Stakeholders have a positive impression of the companies listed on the sustainability index when they see that their responsibilities have been successfully fulfilled. Thus, stakeholders will be more demanding of their products & services, and will be more willing to invest in these companies. Companies whose sustainability performance is proved by sustainability indexes may have a bigger market share and this may affect the performance of the companies.

The relationship between a sustainability index and financial performance has recently started to be investigated. The published literature has meaningful contributions, but a lot of work needs to be done. The corporate sustainability index is a promising research area for companies and researchers. The main aim of this study is to examine the effect of inclusion in a sustainability index on the financial performance of the companies. A major shortcoming for research is insufficient literature due to the very recent history of studies on sustainability indexes. Furthermore, by comparing two developing countries, the aim is to enrich a limited number of studies, focusing on developing countries.

The rest of the article is organized as follows. Part two reviews the literature on the sustainability and the link between sustainability and financial performance. The third part introduces the data and the methodology part, and gives information about the results of the analysis. The fourth part is devoted to the discussion. The last part is the conclusion part that provides an overall assessment while giving further research ideas.

2. Literature Review

How does the 'sustainable' behavior of companies have an impact on companies? This question is still being discussed around the world. The relationship between sustainability performance and the financial performance of companies is not yet fully explained. The studies that show a relationship between sustainability performance and the financial performance of companies and their effects on each other, need to be investigated deeply.

For a long time, corporations used financial performance indicators to determine their success. However, environmental, and social needs arising from the company's stakeholders made the sustainability concept crucial and inevitable. At this point, companies are being forced to address their environmental and social responsibility performances in addition to traditional financial performances. The number of companies that disclose their environmental and social performances voluntarily is increasing. The main reason for this trend is the increase in environmental and social risk costs that negatively affect the financial baseline. The predominant theories that try to explain the reasons for the motives of the disclosure are as follows: Agency theory, Resource Dependency Theory, Stakeholder's theory and Legitimacy Theory.

Some companies have a great competitive advantage. The resource dependency theory tries to find the answer to how these companies have a great competitive advantage. Considering the limitation of resources, each company wants to acquire more resources and gain a competitive advantage. The resource dependency theory suggests that it is essential for a company to develop an improved relationship with its external environment to reduce the uncertainty in its external environment. An improved relationship with its external environment is positively associated with the success of the company. The resource dependency theory suggests that if the companies can retain resources that are valuable, rare, impersonal, and unique, the companies can gain a competitive advantage and performance (Barney, 1991). The concept of the resource dependency theory is in accordance with corporate sustainability. Firstly, both the resource dependency theory and corporate sustainability care about firm performance. Secondly, corporate sustainability helps the resource dependency theory by developing an improved relationship with the external environment. Lastly, the companies invest in social, financial, and human resources. By that way, corporate sustainability can be viewed as a unique and valuable resource within the resource dependency theory (Sharma and Vredenburg, 1998).

The second theory that must be examined is the stakeholder theory. This theory advocates that companies can determine their interests and wishes by increasing communication with stakeholders, and thus, can come to the forefront in financial terms. Thus, companies which can improve their relations with their stakeholders, can affect their financial success positively (Chevalier, 2001). The key point of this theory is caring for their stakeholders. Companies that listen well to their stakeholders will create a feedback system for themselves, and be able to review their strategies to become more successful (Freeman and Mcvea, 2001). But in some cases, conflicts of interest are observed among stakeholders. Companies, on the other hand, are the parties that gather all their stakeholders under one roof and encourage them to act socially responsibly (Maignan and Ferrel, 2004). This theory explains that the relationship between corporate sustainability and financial performance depends on companies ' communication with their stakeholders. Companies wishing to continue their sustainability activities must communicate with their stakeholders. Thus, trust on companies will increase, the resulting trustworthy environment will reduce the costs of companies and consequently the financial performance will be affected positively (Barney and Hansen, 1994).

The institutional theory is related to corporate sustainability by saying that the companies follow each other in behavioral terms. The companies will prefer to imitate each other to legitimize their actions to get the approval of society (Dillard, Rigsby and Goodman, 2004). The companies that do not respect social norms will not be able to get the approval of society, and may have difficulty in accessing resources, so their lives may be in danger. The company behavior is affected by each other. When there is a successful example, the best thing to do is to act like this successful company. Small companies in the same field of activity follow the large ones. The companies that continue their activities in the same sector indicate that they behave in a similar manner because of the pressure they feel. In this respect, the corporate sustainability and institutional theories are similar in many ways. Firstly, the commitment to sustainability affects the company's legitimacy. Secondly, the stakeholders with different ideas will reach a consensus on common norms of sustainability (Hoffman, 1999).

A legitimacy theory explains why companies' voluntary disclose their sustainability performance. The companies act responsibly regarding environmental and social issues to gain a competitive advantage. If they act contrary to the expectations of the stakeholders, the companies will be confronted with constraints (pressure, fine, reduction of demand) , and their performance will be adversely affected (Deegan, 2002). For this reason, companies are obliged to be in harmony with the social area of society if they wish to continue their activities. This theory's link to corporate sustainability is based on sustainability reports. To be accepted by society, and gain their legitimacy, the companies are generally eager to publish sustainability reports. Since legitimate companies will be perceived positively by society, this situation gives them a competitive advantage (Mousa, 2004). For example, according to the findings of Maltais and Nykvits (2020) in Sweden, the strong pressures on investors and firms on sustainability cause the firms to issue more green bonds (Löfer, 2021)

The theories examined the relationship between sustainability and financial performance in terms of their perspective. But as previously mentioned, the studies on the relationship between corporate sustainability and financial performance, have different results. Academic studies show that there are three relationships: positive, negative, and neutral between financial performance and corporate sustainability. So, how corporate sustainability really has an impact on the performance of companies still retains its place as an important debate today. The studies are summarized below to provide a better understanding of the differences.

Table 1: Summary of Studies on The Relationship Between Sustainability and Financial Performance

Study& Country	Variables	Method	Results
Soytaş et al. (2017)-Turkiye	**Dependent Variables:** ROA **Independent Variables:** Whether or not to take part in CSI and BIST 15 **Control Variables:** Company Size and Company Partnership Structure	Linear Regression Analysis	As a result of the study, they concluded that sustainability has a positive impact on financial performance.
Önder (2018)-Turkiye	**Dependent Variables:** ROA **Independent Variables:** Environmental Rating, Governance Performance Rating, Sustainability ratings	Multiple Linear Regression Analysis	The study concluded that overall sustainability scores positively influence profitability.
Aggarwal (2013) - India	**Dependent Variables:** ROA, ROE, ROCE, PBT and GTA **Independent Variables:** İmpact of overall sustainability rating of company **Control Variables:** Company size	Multiple Regression Analysis, correlation, t-test and F-test	No significant relationship

Önce and Düzer (2018)- Turkiye	**Dependent Variables:** ROA, ROE, P/E ratio, Market/ Book Value ratio **Independent Variables:** Economic, Environmental and Social Scores **Control Variables:** Sector	Panel Data Analysis	The study concluded that the level of knowledge about sustainability had a positive impact on financial performance.
Altınay et al. (2017)- Turkiye	**Dependent Variables:** ROA, ROE, P/E Ratio, Market/ Book Value Ratio **Independent Variables:** Whether it is included in the BIST Sustainability Index	Regression Analysis	At the end of the study, it was concluded that inclusion in the sustainability index had no significant relations with the value of share.
Kasbun et al. (2016)- Malaysia	**Dependent Variables:** ROA And ROE **Independent Variables:** Economic, Environmental and Social Sustainability Reporting **Control Variables:** Company Size	Regression Analysis	The study found a positive relationship between financial performance and sustainability reporting.
Santis et al. (2016)- Brazil	**Dependent Variables:** ROA, ROE, ROI and Liquidity Ratios **Independent Variables:** whether it is included in the sustainability index	Cluster Analysis	As a results of the study, it was found that no significant difference in financial performance between the companies quoted in the Sustainability Index and the non-quoted companies.
Aydın (2017) – Turkiye	**Dependent Variables:** Operating Profitability Ratio, Net Profit/Equity Ratio, Net Profit/ Total Assets, Financing Rate, Current Ratio **Independent Variables:** Whether it is included in the BIST Sustainability Index	Paried Student T-test	As a result of the study, it was found that the inclusion of the index did not have a statistically significant effect on the performance of the companies.
Fettahoglu (2013)- Turkiye	**Dependent Variables:** ROA **Independent Variables:** Overall Sustainability Rating, Community, Employees and Environmental Performance Rating, Governance Performance Rating **Control Variables:** Company Size and Leverage Ratio	Multiple Linear Regression Analysis	As a result of the analysis, it was concluded that the sustainability of the companies had a statistically significant but low impact on the profitability.
Yu and Zhao (2015) – USA	**Dependent Variables:** Tobins' Q **Independent Variables:** Whether or not to take part in DJSI **Control Variables:** Total Assets Whether it is included in the US Stock Exchange, Total Liabilities/Total Assets, Capital Expenditures/Total Assets	Ordinary Least Squares Regression	As a result of the study, a positive relationship was found between sustainability performance and company value.
Bäckström and Karlsson (2015) - Sweden	**Dependent Variables:** ROA **Independent Variables:** Corporate Sustainability Performance **Control Variables:** Company Size, Debt Ratio And Number Of Board Members	Multivariate Regression Method	As a result of the study, it is concluded that corporate sustainability has a positive effect on financial performance.
Charlo et al. (2015) - Spain	**Dependent Variables** ROE, Earnings Per Share, Price / Book Value Ratio **Independent Variables:** Whether it is included in the Sustainability Index **Control Variables:** Company Size, Leverage Ratio,	Discriminant analysis	As a result of the study, it was concluded that the companies in the sustainability index are more profitable

Önder (2017) - Turkiye	**Dependent Variables:** Profit Before Tax **Independent Variables:** Whether it is included in the BIST Sustainability Index **Control Variables:** Sector, Leverage Ratio, Revenue, Total Assets	Multiple Linear Regression Analysis	As a result of the study, it is concluded that there is no impact of corporate sustainability on company profit.
Collison et al. (2007) - UK	**Dependent Variables:** Daily Return Of Index, Price Level Of The Index **Independent Variables:** Whether it is included in the Sustainability Index **Control Variable** Exchange Rate	Descriptive Analysis	As a result of the study, it was observed that the stock market performance of the companies that are included in the sustainability index are more profitable.
Thai and Kabir (2017) - Netherlands	**Dependent Variables:** ROE, ROA **Independent Variable:** Data From Corporate Sustainability Reports **Control Variables:** Company Size, Leverage, Company Age, Sector, Selected Year and Previous Year	Ordinary Least Squares Regression	It was found that Corporate Social Responsibility activities have a positive effect on the financial performance of the companies.
Lo and Sheu (2007) - Taiwan	**Dependent Variables:** Tobins' Q Ratio **Independent Variables:** Whether it is included in the Sustainability index. **Control Variables:** Company Size, Access To The Financial Market, Leverage, ROA, Growth in Sales, Growth in Investments, Industry Branch, Credit Quality, Sector İmpact	Panel Data Analysis	The results of the study revealed that there is a statistically significant positive relationship between company value and corporate sustainability.
Ching-Hui (Joan) SuaChun-DaChen (2020)-North America	**Dependent Variables:** Abnormal Return on stock **Independent Variables:** the return on stock i on day t, Rmt is the benchmark index return on day, Whether it is included in the Sustainability Index	EGARCH Z-test	It was found that hospitality firms' financial performance is more sensitive to inclusion of sustainability index as compared with non-hospitality firms,
Schmutz (2020)-EU and US	**Dependent Variables:** Abnormal return, : the return on stock i after new information **Independent Variables:** Whether it is included in the Sustainability Index	Event Study and) Regression Methodology	The findings of this study did not reveal that environmental rules and regulations have a sustainability impact by neither EU nor US firms.

3. Emprical Analysis

3.1. Data, Variables and Methodology

This study examines the relationship between corporate sustainability and financial performance for two developing economies, namely for Turkiye and Brazil. Turkiye and Brazil are selected because they are similar in terms of economic trends and socio-cultural aspects.

Data cover companies traded at the stock exchanges of countries between 2014 and 2017. 374 firms are included in the Turkish sample and 298 firms are included in the Brazilian sample. Data are obtained from the Thomson Reuters Eikon database. Return on assets (ROA) is used as a dependent variable. Being included in the sustainability index (1 in case of taking, 0 in case of not taking), debt / equity ratio, total assets (company size criterion) and operational ratio (Operational Expenses / Total Revenue) variables are included in the model as independent variables and control variables.

Panel data, which consists of a combination of cross-section and time series data, allows for a robust analysis in economics and finance. Through these data, both time-dependent changes and differences between units can be examined (Baltagi, 1995).

In addition, other variables can be added to the models with panel data frequently used for econometric analysis techniques. The effects that are associated with these variables can be studied (Hausman and Taylor, 1981).

In our study, we also tried to see the effects of variables on a dependent variable by using panel data. The variables used in the study are summarized below.

Table 1: Variables

Variables	Code	Statement
Dependent Variable	K1	Return on Assets (ROA)
Independent Variables	K2	Debt / Equity
	K3	Total Assets (Logarithm)
	K4	Operational Ratio (Operational Expenses/Total Revenue)
	K5	Inclusion of Sustainability Index

The econometric model of the study is formed as follows.

$$K1_{it} = \beta_0 + \beta_1 K2_{it} + \beta_2 K3_{it} + \beta_3 \Delta K4_{it} + \beta_4 K5_{it} + \varepsilon_{it}$$

3.2. Findings

The findings for both Turkiye and Brazil are given in this part.

3.2.1. Findings for Turkiye

The cross correlations between the independent variables are tested to check if there is a multicollinearity problem.

The results of the cross- correlation analysis are presented in Table 2. As it can be seen, there is no statistically important relationship between the independent variables. Thus, the results show that there is no multicollinearity problem; the use of all independent variables in the model is appropriate.

Table 2: Cross- Correlation Between the independent variables for the Case of Turkiye

	Debt/Equity (K2)	Total Assets (K3)	Operational Ratio (K4)	Sustainability Index (K5)
Debt/Equity (K2)	1.0000			
Total Assets (K3)	0.0042	1.0000		
Operational Ratio (K4)	-0.0467	-0.0033	1.0000	
Sustainability Index (K5)	0.0066	0.3374	0.0676	1.0000

F-test is applied to check whether the data set allows panel data analysis. F-test is performed for the suitability of the data to the panel data. The fact that the F-test result is statistically significant (F (335,779) = 3.61 and p-value = 0.0000) indicates that panel data analysis should be used.

Before panel estimations, Wald, Wooldridge and Pesaran's tests are applied to check if there is variance, cross-sectional and autocorrelation problem or not. The Wald test is used to test the variance and the p-value is obtained as 0.0000. This shows us that there is a heteroskedasticity problem. The results of the Wooldridge test (p=0.0145) show us the presence of autocorrelation. The results of Pesaran's test (p=0,000) shows us the presence of the cross-sectional dependency.

Once the panel data has been decided, then it is decided by a Hausmann test which panel data method should be used. In the presence of autocorrelation and heteroskedasticity, the Hausman test cannot be reliable. In this case, the robust version of Hausman should be used. As a result of the robust Hausman test, p-value is found to be 0.4707. The robust Hausmann is higher than 0.05, which shows the validity of the random effects model for Turkiye.

The random effects model estimation results are recreated with Driscoll-Kraay standard errors resistant to variance, cross-sectional and autocorrelation problems. The results are given in Table 3.

Table 3: Random Effects Model Results of Turkiye

	ROA (K1) - Dependent Variable			
Analysis Result				
Variable	**Coefficient**	**Drisc/Kraay Std. Error**	**t value**	**Probability**
Debt/Equity (K2)	-3.92e*06	8.61e-07	-4.55	**0.020****
Total Assets (K3)	0.0101817	0.0059672	1.71	0.186
Operational Ratio (K4)	-0.0000733	0.0000585	-1.25	0.299
Sustainability Index (K5)	0.0076711	0.0012494	6.14	**0.009***
Cons	-0.0164664	0.0519883	-0.32	0.772

*Statistically significant at %99 at confidence level ** statistically significant at %95 at confidence level

A statistically significant relationship is found between return on assets and sustainability index. And also, a negative significant relationship is found between return on assets and debt/equity ratio. When the effect of the inclusion in the sustainability index on the profitability is examined, a positive relationship is found between the inclusion in the sustainability index and the return on assets.

In this case, it is concluded that there is a positive relationship between the sustainability index and company performance.

3.2.2. Findings for Brazil

The relationship between profitability and to be included in the sustainability index for Brazil is analyzed after Turkiye was examined. Before the analysis, the correlation table (Table.4) is presented below.

Table 4: Cross- Correlation Between the independent variables for Brazil

	Debt/Equity (K2)	**Total Assets (K3)**	**Operational Ratio (K4)**	**Sustainability Index (K5)**
Debt/Equity (K2)	1.0000			
Total Assets (K3)	-0.0071	1.0000		
Operational Ratio (K4)	0.0047	-0.0234	1.0000	
Sustainability Index (K5)	0.0025	0.0880	0.0765	1.0000

In table 4, it is seen that there are no statistically important relationships between the independent variables. Thus, the results show that there is no multicollinearity problem, the use of all independent variables in the model is appropriate.

F-test is applied to check whether the data set allows panel data analysis. The result of F-test (F (4, 516) = 147 and p-value = 0.0000) indicates that panel data analysis should be used.

The Wald test is used to test the variance and the p-value is obtained as 0.0000. This shows us that there is a heteroskedasticity problem. The p-value of the Wooldridge test is found as 0.000, and, the p value of Pesaran's test is found as 0.000. So, similar to Turkiye, the data has autocorrelation and cross-sectional dependency problems.

In the presence of autocorrelation and heteroskedasticity, the Hausman test cannot be reliable to determine which panel data method will be used. In this case, the robust version of Hausman should be used. As a result of the robust Hausman test, p-value is found to be 0.644. This result shows the validity of the random effects model for Brazil.

The random effects model estimation results are recreated with Driscoll-Kraay standard errors resistant to variance, cross-sectional and autocorrelation problems. The results are given in Table 5.

Table 5: Random Effects Model Results of Brazil

		ROA (K1) - Dependent Variable		
Analysis Result				
Variable	**Coefficient**	**Drisc/Kraay Std. Error**	**t value**	**Probability**
Debt/Equity (K2)	-1.04e-06	1.50e-06	-0.70	0.537
Total Assets (K3)	0.0027103	0.0024478	1.11	0.349
Operational Ratio (K4)	-8.19e-08	6.75e-08	-1.21	0.312
Sustainability Index (K5)	0.01355354	0.0038849	3.48	**0.040***
Cons	0.0291277	0.0265592	1.1	0.353

*Statistically significant at %95 at confidence level

There is a statistically significant positive relationship taking place between the Sustainability Index and profitability which is like the Turkish results.

In this case, it is concluded that inclusion in the Sustainability Index positively affects companies' performance both in Turkiye and Brazil.

4. Discussion and Implications

Two developing countries are selected in the study, and the analysis is conducted for each country. The findings of the analysis showed that similar results are obtained for both countries.

Statistically significant results are obtained for both Turkiye and Brazil. This indicates that there is a positive relationship between profitability and being included in the sustainability index. It is not a surprising that the results are similar for both countries because these two countries are similar in terms of economic trends and socio-cultural aspects. Considering that the Brazilian Corporate Sustainability Index started to operate in 2005, this study shows that the awareness of stakeholders has increased regarding the context of sustainability. In addition, the results of the study show that the index performs its function successfully.

From the perspective of Turkiye, the BIST Sustainability Index is a very new index that started operations in 2014. Therefore, it is surprising that the positive relationship exists between sustainability index and financial performance. Although the concept of sustainability and the index are very new for stakeholders in Turkiye, the Sustainability Index functions successfully. As the awareness and recognition of the index increases in the future, companies will make more efforts to be included in this index.

The Brazil and Turkiye study results are consistent with other studies that have positive relations in sustainability. Studies such as Soytaş et al. (2017), Önder (2018), Önce and Düzer (2018), Yu and Zhao (2015), Bäckström and Karlsson (2015), Charlo et al. (2015), Collison et al. (2007), Thai and Kabir (2017) tell us about the existence of a positive relationship.

However, studies on the relationship between social performance and sustainability performance will continue to be important due to differences in the literature.

5. Conclusion

Sustainability indexes, the biggest indicator of sustainability performance, continue to spread all over the world. The relationship between sustainable performance and financial performance is still a matter of debate. Because the social performance imposes an extra cost burden on the companies, the effects of social performance have become a subject that the world is looking at. The studies carried out in this field are increasing day by day and continuing.

In this study, the companies operating in Turkiye and Brazil (which are two characteristically similar developing countries) stock exchanges between 2014-2017 are examined, and it is investigated whether the inclusion in the sustainability index affects the company's profitability.

In the study, return on assets (ROA) is selected as the dependent variable and the status of being included in the sustainability index, debt / equity ratio, logarithm of total assets (company size) and operational ratio are selected as independent variables.

As a result of the study, it is found that the inclusion in the Sustainability Index in Turkiye and Brazil has a positive effect on company performance. The study results yield similar results for the two countries. As the Brazilian Sustainability Index has been in operation for a long time, the results of the study in Brazil are not surprising. What is surprising is the results found in Turkiye. Because the BIST Sustainability Index of Turkiye does not have a long history, however, the results of the study indicate that there is a positive relationship. This result shows that confidence and consciousness in the index created for Turkiye have been successfully created in a few years. Turkiye successfully manages its activities on sustainability and quickly gains momentum with the Sustainability Index.

In Turkiye, the increase in debt/equity ratio decreases profitability. This explains that if the company borrows more, then this will have a negative effect on the profitability of Turkish firms.

The importance of the concept of sustainability increases every day. Especially due to the recent climate changes, awareness of the value of resources is spreading rapidly to all segments. With the initiative on sustainability indexes, the awareness of responsible investment has increased in the same way, and has led to this issue becoming a research area. However, the fact that the studies are carried out in developed countries raises questions about what the attitude of developing countries is. This study, tries to clarify this subject a little more and aims to shed a light on the differences of opinion in the literature.

Future research might explore the effects of the declarations about the sustainability index on the financial performance of the firms and understand the effects of the sustainability index factor in more detail. A study on other developing countries is another promising field for future studies.

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