IJBFMR 5 (2017) 26-32 ISSN 2053-1842

International Journal of Business and Finance Management Research
www.bluepenjournals.org/ijbfmr

Relationship between corporate sustainability and financial performance: An application on BIST sustainability indexed companies

Eda Oruç ERDOĞAN

Akdeniz University, Business Administration Department, Turkey. E-mail: edaoruc@akdeniz.edu.tr.

Article History
Received 29 March, 2017
Received in revised form 07 April, 2017
Accepted 12 April, 2017

Keywords:
Sustainability,
Financial performance,
BIST sustainability index.

Article Type:
Full Length Research Article

ABSTRACT

Sustainability reporting and analyses draw attention as a popular and vivid research area in business management and economics. In recent years, the numbers of reports published by companies in this area have been increasing rapidly. According to a survey of the world's largest 250 companies, approximately 80% of companies are preparing to have social, environmental and ethical reports. Although the corporate sustainability approach is imposing some additional costs on the companies in short run, it will provide significant advantages to the companies in the long run, which will make positive contributions to the companies operating within the frame of corporate sustainability in terms of financial performance such as profitability, efficiency and shareholder investments.

INTRODUCTION

In the last century, the world population has exceeded 7 billion. Studies show that the world population will be 9 billion by 2050. There is a direct relationship between the growth of world population and the decline of natural resources. In this context, efficient management of scarce resources and transfer to future generations is possible only through the adoption of a sustainable management approach. Corporate sustainability, corporate social responsibility, sustainability reporting, and other concepts have created a framework deemed to be important by all (BIST, 2014: 4).

Not considering the risks related to the social, environmental and corporate governance of the companies and exclusively focusing on operations based on the financial data will make them to be negatively affected by today's competition environment, which will provide negative consequences for all circles with their holistic implications. On the other hand, the worldwide financial crises and uncertainties have led many circles to defend the need to shift to long-term value creation and sustainability instead of short-term profit maximization (Busch et al., 2010: 7). Increasing environmental global awareness and studies on sustainable economic development have led the companies to make focus on this field. As a result of regulations in the area of awareness of stakeholders and sustainability, the concept of corporate sustainability has emerged as a concept drawing utmost interest. In the 1980s, business leaders and other circles generally viewed the concept of sustainability as a tool to steadily increase enterprise earnings. Today, the concept of corporate sustainability is addressed within an holistic approach that includes the social, environmental and economic impacts on companies (Adams et al., 2010: 2).

In the interviews made with 766 business CEOs worldwide in 2010 within the United Nations Global Compact, the most important elements that make the companies to adopt sustainability policies are brand values - trust and reputation, reduction in costs, increase in profitability, employee motivations and consumer demands, as well as expectation of stakeholders from the companies to be a responsible corporate citizen, and their additional knowledge and transparency demands regarding the ways in which companies create added value (IMKB, 2011: 3).

Corporate sustainability - Sustainability reporting

In the UN report entitled *"Our Common Future"*, which is also known to be the Bruntdland Report, sustainability is defined as meeting "*the needs of the present without compromising the ability of future generations to meet their own needs"* (WCED 1987). With this report and the work of the World Summit held in 1992, significant attention has been paid to environmental, social and economic elements in the context of regulatory work carried out by governments of different countries. In this context, sustainable development has emerged as an important concept throughout the world, and it has accelerated the emergence of concepts such as corporate sustainability and sustainability reporting (Uwalomwa, 2011: 2).

Corporate sustainability is not only an integrated expression of environmental, social and economic issues, but also as an approach which aims to manage the environmental, social and economic risks which modern companies face and increase the long-term stakeholder value through converting these risks into opportunities (Esty and Winston, 2008). In this context, where financial reports are not sufficient alone, the need for non-financial information and performance results has contributed to the creation of an environmental, social and economic reporting format within sustainability reporting (Aggarwal, 2013: 61).

According to United Nations' World Commission on Environment and Development Report (1987), corporate sustainability is also referred to as a business and investment strategy aimed at using the best commercial practices to meet and balance the needs of current and future stakeholders (WCED, 1987). In this context, the corporate sustainability performance measures the extent to which an enterprise's activities adopt environmental, social and economical factors and, consequently, the effect it imposes on the community and the environment (Artiach et al., 2010: 31).

In the context of corporate sustainability, the companies are noted to be obliged to provide accountability in matters such as positive and/or negative effects on society and environment that are part of their activities. The necessity of publishing corporate sustainability reports with detailed information on management structure, stakeholder engagement approach and triple reporting performances which are required be formed by the companies to disclose the so called affects properly, has accelerated the emergence of the concept of sustainability reporting (Aggarwal, 2013: 61). Today, within the framework of sustainability reporting, many companies share their information with the public. According to the studies conducted, approximately 70% of the publicly traded companies report on corporate responsibility, and approximately 95% of the multinational companies on the Global Fortune 250 list report activities such as employee rights, environment and stakeholder relations together with the financial reports (BIST, 2014: 6).

BIST sustainability index

The history of sustainability index dates back to the 1990s. The first sustainability index that financial markets and investors regard as a global sustainability indicator is Dow Jones and FTSE index formed in 1999 and 2001, respectively. Sustainability index started to be calculated in 2004 and 2005 in South Africa and Brazil; and as of 2008 countries classified as developing countries such as China, Indonesia, India, Hong Kong, Korea, Mexico and Egypt started to work on sustainability index as well (BIST, 2014: 36).

Borsa Istanbul, which does not remain indifferent to these developments, has made a cooperation agreement with the Etik Yatırım Araştırma Hizmetleri Limited Şirketi (EIRIS) in 2013 regarding the establishment of the BIST sustainability index with a view to adopt an integrated approach in the environmental, social and corporate management issues. According to the agreement, EIRIS has evaluated the companies by the criteria considered as global sustainability criteria and incorporated the companies appropriate to these criteria into the sustainability index created by BIST.

BIST sustainability index started to be calculated and published starting from 2014. The companies that were first included in the index and valued by EIRIS covered the companies that were traded on BIST 30 while the numbers of the companies to be evaluated have increased in line with the views and proposals of stakeholders. The BIST sustainability index aims to provide companies with significant competitive advantage by enhancing their risk management skills within the context of corporate transparency, accountability and sustainability, and to increase their public and investor awareness and reputation, in this context (BIST, 2014: 43).

The relationship between corporate sustainability and financial performance

Performance can be expressed as a multi-dimensional concept that defines the success of an enterprise. In other words, performance measures the achievement level of an enterprise's goals (Civelek et al., 2015: 21).

The relationship between corporate sustainability and the financial performance of companies has attracted the attention of many researchers in recent years and a number of studies have been conducted on the subject. Much of the work has been done in developed countries (US, UK, Germany, etc.); more research has been done compared to developing countries (Aggarwal, 2013: 62). When the literature is examined, the results vary from positive to negative relationships (Andersen and Olsen, 2011: 19). Aupperle et al. (1985) concluded that there is no relational and identifiable relationship between corporate social responsibility and financial performance (Cortez and Cudia, 2011: 323).

On the other hand, there are studies that find no relationship between sustainability disclosures and financial performance (Godfrey and Hatch, 2007: 87). However, there are also studies showing the relationship with enterprise performance when sustainability reporting of organizational, social, environmental and economic performances are transformed into measurable forms (Orlitzky et al., 2003). When the shareholder value is evaluated, it is also shown in the literature that there are significant relationship between sustainability practices and enterprise performance. The studies on the subject interpreted this that advantages such as environmental management and technologies, cost saving, revenue increase, supplier relationships, reduction of obligations, competition advantage, efficiency etc. make positive contribution on the enterprise performance. The study conducted by Orlitzky et al. (2003) concludes that corporate social performance and enterprise performance mutually strengthens to each other. Pava and Krausz's (1996) study found weak evidence of a positive relationship between corporate sustainability performance and financial performance. Mofrad (2012) concluded that there is a positive significant relationship between corporate sustainability and financial performance.

Jain et al. (2016) investigated the relationship between social responsibility and financial performance in small and medium-sized companies (SMEs). According to the results obtained, they found a weak positive relationship between social responsibility and financial performance in SMEs. They have attributed this to the different approaches of enterprise partners to the social responsibility.

In a study made by Klassen and McLaughlin (1996), they conclude that strong environmental reporting performance in the US is related to significant positive returns, while weaker environmental reporting is related to significant negative market returns (Reddy and Gordon, 2010: 22). Ameer and Othman (2012) concluded in their study that the there is a positive relationship between sustainability disclosures and financial performances of the top 100 best sustainable companies (Hussain, 2015: 9).

As a result of forty-five operators' analysis of sustainability reports, Montabon et al. (2007: 998) identified a positive and significant relationship between the employer's environmental management practices and financial performance. Saleh et al. (2011: 165) tried to determine the relationship between financial performance and social responsibility on two hundred enterprises quoted on the stock exchange in Malaysia. As a result of their analysis conducted, they found a significant relationship between social responsibility performance and financial performance. Han et al. (2016) examined the relationship between financial performance and corporate responsibility and social responsibility of Korean business enterprises. While there is a positive relationship found between financial performance and corporate responsibility, there is no significant relationship between financial performance and social responsibility.

In Turkey, Arsoy et al. (2012) investigated the relationship between corporate social responsibility and financial performance on 28 entities subject to corporate governance index. They have found that corporate social responsibility leads to better performance.

When the literature is examined, various opinions about the relationship between sustainability concept and business financial performance are expressed in Table 1.

DATA AND METHOD

In order to examine the relationship between corporate sustainability and the financial performance of the companies, the financial performance of the companies in the sustainability index of the Borsa İstanbul was compared for the periods before and after they are included in the index. The study's data set is based on the companies in the BIST sustainability index of 2014 and the new companies in the BIST sustainability index of 2015. The companies included in the analysis are indicated in Table 2.

The financial performance indicator used to assess whether there is a difference between the financial performance of the business after (AFTINDX) and before its inclusion in the sustainability index (BEFINDX) is its asset return. Operating profitability is calculated as net profit/total assets.

In the study, it was first examined whether the data shows normal distribution by applying the Kolmogorov-Smirnov test to the average values of the pre and post index indices of the companies located in the BIST sustainability index in years of 2014 and 2015. Then paried sample statistic dependent sample t test was applied.

The Kolmogorov-Smirnov (k-s) test is used to examine whether the sample gives a certain distribution (normal). With this test it is possible to examine whether the data collected from a sample exhibits a normal distribution (Altunışık et al., 2010). The normality test results of our variables are shown in Table 3.

H_0: Normally distributed.

Table 1. Summary literature assessment on the relationship between sustainability and financial performance.

Studies	The relationship	The Result
Aupperle et al. (1985)	Corporate social responsibility and business performance	No relationship
Klassen and McLaughlin (1996)	Environmental performance and financial performance	Positive relationship
Pava and Krausz (1996)	Financial performance and corporate sustainability performance	Positive relationship
Orlitzky et al. (2003)	Corporate social performance and business performance	Positive relationship
Khurana et al. (2006)	Sustainability scores and financial performance	Positive relationship
Cortez and Cudia (2011)	Environmental costs and investment income	Positive relationship
Uwalomwa (2011)	Environmental explanations and business performance	Positive relationship
Ameer and Othman (2012)	Sustainability statements and financial performance	Positive relationship
Arsoy et al. (2012)	Corporate social responsibility and financial performance	Positive relationship
Mofrad (2012)	Corporate social performance and financial performance	Positive relationship
Nilipour and Nilipour (2012)	Corporate sustainability performance and financial performance	No relationship
Başar (2014)	Social responsibility and financial performance	Negative relationship
Kusuma and Koesrindartoto (2014)	Sustainability practices and financial performance	No relationship
Jain et al. (2016)	Social responsibility and financial performance	Positive relationship
Kasbun, Heng Teh and San Ong (2016)	Sustainable reporting and financial performance	Positive relationship

Table 2. The companies in the analysis.

Companies ıncluded in BIST sustainability ındex in 2014	New companies ıncluded in BIST Sustainability Index in 2015
Arçelik	Anadolu Efes
Aselsan	Brisa Bridgestone
Koç Holding	Coca Cola
Migros	Doğuş Oto
Petkim	Ereğli Demir Çelik
Sabancı	Ford Otomotiv
Tav	Otokar
Tofaş	Saf Gayrimenkul
Turkcell	Ülker
Tüpraş	Vestel
Türk Telekom	Aksa
	Thy

Table 3. Test of normality.

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
BEFINDX	0.160	23	0.129	0.960	23	0.455
AFTINDX	0.187	23	0.200	0.923	23	0.545

a. Lilliefors significance correction.

H_1: Not normally distributed.

According to Kolmogorov-Smirnov and Shapiro-Wilk test results, the variable values show normal distribution. Because the significance levels in the test results of the variables are (Sig.) $p = 0.129$; (Sig.) $p = 0.200$ (Kolmogorov-Smirnov) and $p = 0.455$; $p = 0.545$ (Shapiro- Wilk) and this value is greater than 0.05. Therefore the H_0 hypothesis is accepted.

It was tried to understand if taking place in the BIST sustainability index has made positive contribution to the

Table 4. Correlation result.

		Paired samples correlations		
		N	Correlation	Sig.
Pair 1	BEFINDX and AFTINDX	23	0.519	0.011

Table 5. Paired samples test result.

		Paired differences					T	df	Sig. (2-tailed)
		Mean	Std. Dev.	Std. error mean	95% Confidence ınterval of the difference				
					Lower	Upper			
Pair 1	BEFINDX - AFTINDX	-5.83003E6	9.24964E7	1.92868E7	-4.58285E7	3,41684E7	-0.302	22	0.765

financial performance. The paired-samples t-test has been applied to assess the financial performance of the companies under different conditions. The results of the analysis are as indicated in Tables 4 and 5.

The results show that there is no significant difference in the financial performances of the companies included in the Borsa İstanbul sustainability index before and after inclusion to the index. In other words, there is no significant difference between financial performance averages before and after being included in the BIST sustainability index. It can be said that being included into the BIST sustainability index will not make and positive or negative effect on the financial performance of the companies. The relationship between the financial performance before being included in the BIST sustainability index and the financial performance after being included in the index is approximately 0.51.

When the results are evaluated, it is seen that there is no difference between the financial performances of the companies in the BIST sustainability index between the periods. This may be due to the fact that sustainability practices are new and are not yet implemented in the long term by the companies. As a consequence of the lack of long-term sustainability practices to reflect to the financial performance of companies, there was no difference between the periods before and after the companies' inclusion in the index.

DISCUSSION

Performance and valuation approaches of companies based on financial data are not seen as a sufficient performance and evaluation criterion by today's stakeholders. Stakeholders in need of information also ask for non-financial information about companies and in this context they expect an environmentally and socially sensitive management in addition to the financial data, and also its disclosure to public. The concepts of sustainability, corporate sustainability and corporate social responsibility are described as a reflection of this expectation and a process that has recently been emphasized by companies and stakeholders. On the other hand, the financial crises that affect the whole world and the uncertainties that arise within this scope are steadily increasing the necessity of creating and maintaining long term values.

In case the business enterprises adopt an approach that prioritizes value creation to the society through sustainability practices, they may have the opportunity to increase their performances by decreasing their operating costs. Therefore, there will be a positive reflection on the financial performance of companies adopting and implementing sustainability practices in the long-run. Besides, periodical publication of sustainability reports eliminates the risk of systematic information sharing of the companies and thus asymmetric information problem in terms of financial actors. When evaluated in terms of Turkey, according to the results obtained, it is seen that there is no difference in financial performance values before and after being included in the sustainability index. This is because that sustainability practices are newly gaining significance in terms of business enterprises. Similarly, Aupperle et al. (1985), Nilipou and Nilipou (2012) and Kusuma and Koesrindartoto (2014) could not find any relationship between financial performance and sustainability practices due to the newness of sustainability practices in companies. However, when sustainability practices are started to be implemented in the long run, it is obvious that there will be a positive reflections on business performance and performance increases will be observed.

With this study the aim of maximizing market value which is the basic aim of the business enterprises is realized and also the significance of taking into consideration all stakeholders' expectations of the enterprise and its sensitivity to the environment.

The restriction of the study is that the enterprises included in BIST sustainability index are included in the index very recently and sustainability practices came to the agenda of the enterprises newly. Implementation of the sustainability practices in the following periods by more enterprises and that the enterprises included in the index have been included for a long period of time are a motivating element for conducting new researches.

Conclusion

Corporate sustainability is not only an integrated expression of environmental, social and economic issues, but it also aims to manage the environmental, social and economical risks which companies face and increase the long-term stakeholder value through converting these risks into opportunities. When evaluated in this respect, many companies share their information with the public within the scope of sustainability reporting and aim to obtain positive advantages such as profitability, productivity and shareholder investments in return.

Today, sustainability index have been established in many countries within the scope of sustainability reporting, and the number of companies reporting sustainability in the world has been increasing every passing day. Turkey, which does not remain indifferent to these developments, started to calculate and publish it with the XUSRD code as price and return in 2014 within the frame of Borsa İstanbul.

It was tried to assess in our study whether there is any difference between the financial performance of companies newly included in the BIST sustainability index between before and after their inclusion into the index for the years 2014 and 2015. There is no difference in terms of financial performance between the periods according to the results obtained. The newness of the index and the lack of attention of the companies to the concept of sustainability in the recent times may prevent the sustainability practices to reflect to the financial performances of the companies. It may be expected that the financial performance of the companies that attach importance to sustainability practices may be positively affected in the long run.

REFERENCES

Adams M., Thornton B. & Sepehri M. (2010). The impact of the pursuit of sustainability on the financial performance of the firm. J. Sustain. Green Bus. Pp. 1-14.

Aggarwal P. (2013). Impact of sustainability performance of company on its financial performance: A study of listed İndian companies. Global J. Manage. Bus. Res. Financ. 13 (11):60-70.

Altunışık R., Coşkun R., Bayraktaroğlu S. & Yıdırım E. (2010). Sosyal Bilimlerde Araştırma Yöntemleri SPSS Uygulamalı, Sakarya Yayıncılık.

Ameer R. & Othman R. (2012). Sustainability practices and corporate financial performance: A study based on the top global corporations. J. Bus. Ethics. 108(1):61-79.

Andersen M. & Olsen L. (2011). Corporate social and financial performance: A cononical correlation analysis. Acad. Account. Financ. Stud. J. 15(2):17-37.

Arsoy A. P., Arabacı Ö. and Çiftçioğlu A. (2012). Corporate social responsibility and financial performance relationship: The case of Turkey. Muhasebe ve Finansman Dergisi, 53:159-176.

Artiach T., Lee D., Nelson D. & Walker J. (2010). The determinants of corporate sustainability performance. Account. Financ. 50(1):31-5150.

Aupperle K., Carroll A. & Hartfield J. (1985). An empirical examination of the relationship between corporate social responsibility and profitability. Acad. Manage. J. 28(2):446-63.

Başar A. B. (2014). Kurumsal Sosyal Sorumluluk Raporlaması ve Finansal Performans Arasındaki İlişki: Borsa İstanbul'da İşlem Gören Kimya-Petrol-Plastik Sektörü Şirketleri Üzerine Bir Araştırma. Yönetim ve Ekonomi. 21(2): 60-72.

Borsa Istanbul (2014). BIST sustainability guide, Istanbul.

Borsa İstanbul (2014). Şirketler İçin Sürdürülebilirlik Rehberi. http://www.borsaistanbul.com/data/ kilavuzlar/surdurulebilirlik-rehberi.pdf.

Busch T., Stinchfield B. T. & Wood M. S. (2010). A Triptych ınquiry: Rethinking sustainability, ınnovation, and financial performance. Tinbergen Institute, TI 11-026, Netherlands.

Civelek M. E., Çemberci M., Kibritçi A. O. & Uca N. (2015). Key factors of sustainable firm performance: A strategic approach. Zea Books, Lincoln, Nebraska.

Cortez M. A. A. & Cudia C. P. (2011). Sustainability and firm performance: A case study of Japanese electronics companies. Ritsumeikan International Affairs. 10p.

Esty D. & Winston A. S. (2008). Green to Gold: How Smart Companies use Environmental Strategy to Innovate, Create Value and Build Competitive Advantage. John Wiley, New York, NY. 2008.

Godfrey P. C. & Hatch N. W. (2007). Researching corporate social responsibility: An agenda fort the 21st Century. J. Bus. Ethics. 70(1):87-98.

Han J. J., Kim J. H. & Yu J. (2016). Empirical study on relationship between corporate social responsibility and financial performance in Korea. Asian J. Sustain. Soc. Responsibility. (2):1-16.

Hussain N. (2015). Impact of sustainability performance on financial performance: An empirical study of global fortune (N100) firms. Working Paper, June, Universite CA' Foscori Venezia.

IMKB. (2011). Sürdürülebilirlikle İlgili Özet Bilgiler. İstanbul Menkul Kıymetler Borsası İMKB İstatistik Müdürlüğü, İstanbul.

Jain P., Vyas V. & Chalasani S. D. P. (2016)., Corporate social responsibility and financial performance in SMEs: A structural equation modelling approach. Global Bus. Rev. 17(3):630-653.

Kasbun N. F., Heng Teh B. & San Ong T. (2016). Sustainability reporting and financial performance of Malaysian public listed companies, ınstitutions and economies, Vol.8, No.4, 78-93.

Khurana I. K., Pereira R. & Martin X. (2006). Firm growth and disclosure: An empirical analysis. J. Financ. Quant. Anal. 41(2):357-380.

Klassen R. D. & MclLaughlin C. (1996). The ımpact of environmental management on firm performance. Manage. Sci. 42(8):1199-1214.

Kusuma A. P. A. & Koesrindartoto D. P. (2014). Sustainability procatices and financial performance: An empirical evidence from Indonesia. International Conference on Trens in Economic. Humanities and Management. Aug 13-14, Thailand. Pp. 11-15.

Mofrad M. A. (2012). The relationships between GDP, export and ınvestment: Case study Iran. Bus. Intelligence J. 5(2):401-405.

Montabon F., Sroufe R. & Narasimhan R. (2007). An examination of corporate reporting, environmental management practices and firm performance. J. Oper. Manage. 25(5):998-1014.

Nilipour A. & Nilipour A. (2012). Survey of the association between financial performance and corporate sustainability performance.

Interdiscipl. J. Contemp. Res. Bus. 2(9):1084-1092.
Orlitzky M., Schmidt F. L. & Rynes S. L. (2003). Corporate social and financial performance: A meta – analysis. Organization studies. 24(3):403-441.
Pava M. L. & Krausz J. (1996). The association between corporate social-responsibility and financial performance: The paradox of social cost. J. Bus. Ethics. 15(3):321-357.
Reddy K. & Gordon L. W. (2010). The effect of sustainability reporing on financial performance: An empirical study using listed comanies. J. Entrepr. Sustain. 4(2):19-42.
Saleh M., Zulkifli N. & Muhamad R. (2011). Looking for evidence of the relationship between corporate social responsibility and corporate Financial performance in an emerging market. Asia-Pacific J. Bus. Admin. 3(:2):165-190.
Uwalomwa U. (2011). Corporate social environmental sustainability reporting and firms' performance: A study of selected firms in Nigeria. BVIMSR's Journal of Management Research. 3(1).
WCED. (1987). Report of the World Commission on Environment and Development: Our Common Future. World Commission on Environment and Development (WCED). Oxford Paperbacks. http://www.un-documents.net/our-common-future.pdf