



ANALYSIS OF THE IMPACT OF INVESTMENT TO SOCIAL ACTIVITIES ON THE COMPANY 'S FINANCIAL PERFORMANCE

Dovilė MEIŽIKAITĖ¹, Indrė LAPINSKAITĖ²

¹*Department of Financial Engineering, Faculty of Business Management, Vilniaus Gediminas Technical University, Saulėtekio al. 11, LT-10233, Vilnius, Lithuania*

²*Department of Financial Engineering, Faculty of Business Management, Vilniaus Gediminas Technical University, Saulėtekio al. 11, LT-10233, Vilnius, Lithuania*

Received 24 January 2019; accepted 4 February 2019

Abstract. This study operationalizes corporate sustainable development, explains what socially responsible investment is. The main issue of work is to analyse "Vodafone's" different branches investment (Spain, Portugal, Italy, Greece) to sustainable development and how does it affect corporation financial performance. To achieve this goal for analyses correlation methodology is used. Data collected from annual sustainable responsibility and financial reports using two measurements – the amount of investment to social projects (EUR), and EBITDA margin. Research range is 2011-2017. Calculations are made using excel. It is found that investments to social projects differently affects a company's financial performance, Italy and Portugal relationship between investment and EBIDTA make a positive impact.

Keywords: corporate sustainable development, socially responsible investment, correlation, investor, green business, social project.

Introduction

Socially responsible investment is becoming increasingly important in the corporate world. Also, socially responsible investments become something that pension advisors, charity trustees, and indeed corporate executives need to know about. All investors in sustainable development seek for good financial results, and they think that investments to corporate sustainability should be used to make progress on all aspects of sustainability. They should actively search for investments that can bring important social or environmental benefits. Investors think that there is a strong relationship between corporate sustainability and corporate financial performance, and they use data related to sustainability as a base for investment decision as never before. Unruh et al. (2016) to the reason why they value sustainability performance, responded that most investors see the company's good sustainability performance as one of the key factors by making investment decisions. Topicality and problem of this article are that in today's fast-moving world investment to social activities becomes very popular among big, average and small companies. More and more investors claim that they will not invest money in a company that has poor sustainability index. Some investors use socially responsible investment strategies, which are designed to manage the risk or performance duties. It also reviews environmental, social and management criteria to assess the quality of management and expected resilience of corporate portfolios to future issues. Some are seeking financial outperformance over the long term. The main goal of this scientific paper is to analyse if international company investments to social activities affect the financial performance of a company, in the article a big telecommunication company's "Vodafone" investments to social activities (projects) in different companies branches and how the investments of each unit are reflected in the financial result of each unit expressed in the EBITDA margin will be analysed. A hypothesis – international corporation different branches investment to sustainability equally positively affect the company's financial position. In order to get goal tasks are formulated. First, in this scientific article literature review must be done, the theoretical aspects of socially responsible investment of the company will be presented. The second task – collect and process data from company sustainability and financial reports, and third – using correlation methodology check the raised hypothesis and make conclusions.

¹ Corresponding author. E-mail: dovile.meizikaite@stud.vgtu.lt

² Corresponding author. E-mail: indre.lapinskaite@vgtu.lt

A literature review of companies investing in sustainable development

Probably everybody of us is already investors. As Mirchandani and Tare (2014) say – "Investment is the employment of funds with the aim of achieving additional income or growth in value". Investment has a main quality – it involves 'waiting' for a reward. Furthermore, as authors say – investment involves the commitment of resource which has been saved or put away from current consumption in the hope that some benefits will accrue in future. Investment is peoples, who have savings, activity. Investments are made from savings, or in other words, people invest their savings. But as Greeshma and Sanesh (2011) pointed out that all savers are not necessary investors. Investment is an activity which is different from savings. Investment can be described as an asset. For example, when someone has money, and then give them to another person, he may consider the loan as an investment. All people always expect to get back money along with interest at a future date. Other people may have purchase gold for the purpose of price appreciation and may consider it as an investment. Samet and Jarboui (2017) say that – "In the business aspect, companies may buy new equipment to improve working, it also could be an investment". As we can see definition of "Investment" may mean many things to many separate persons, but we can distinguish several participants of investment process – people, money (asset, savings), risk and future benefit.

Perhaps, most of us have already encountered or heard a combination of words – sustainable development. This is quite a young term. Sustainable development is the balance of ecological, economic and social interests. The idea of sustainable development has been around for over a century and a half, it is noticeable that its impact on people's lives is too weak. As Diesendorf (2000) sustainable society is seen as a society that achieved a balance of all three aspects in the process. The fashion of the ecologisation of individual elements of life is formed in individual countries and international politics. A situation requires significant solutions, both at the political level and in each of our lives. Introducing the concept of sustainable development was when the Worlds Commission on Environment and Development published "Our Common Future "report in 1987. In the Brundtland report, sustainable development is defined as development that meets the needs of the present without compromising the ability to meet their own needs. Bansal in his article (2005) distinguishes three principles of sustainable development: environmental integrity, social equity, and economic prosperity. He argues that there must be a principle of environmental integrity that ensure that human activities do not violate any natural resource, as a regenerative capacity of the natural resource is limited. The social aspect is interpreted in such a way that all members of society must have the same opportunities and access to resources. It should be also mentioned that he claims that people's needs are not limited by food, shelter and pretty clothes, it also includes good health care, education, and political freedom. The last aspect to be discussed is economic, which states that society should live a sensible life that is linked to the productivity of organizations and individuals. This includes the creation and distribution of goods and services that increase the standard of living all around the world. Every person differently understands the meanings of sustainable development. Dvorakova and Zborkova (2014) in their scientific paper conducted a study. They made a survey for people who had to choose one or four definitions of sustainable development which was most comprehensible for them. Results showed that most people understand sustainable development like the balance between the three mains aspects – economic, social and environmental. (Dvorakova & Zborkova, 2014). So, as we can see the concept of sustainable development dynamic, and it means that sustainability can be understood differently according to different perspectives, therefore, the concept of sustainable development has no tangible definition.

Sustainable development and socially responsible investment at the corporation level

For the company to express sustainable development it must apply previously mentioned Bansal's (2005) three principles to organizations products, policies, and practices. He tells that "Corporate environmental management is an effort by firms to reduce the size of their ecological footprint". A balance of profit, people and the planet are necessary to ensure that business generates the social capital needed to weather disturbance (Marchese et al., 2018). Every firm has an environmental impact, merely it is building lighting or waste and emission generated by production processes. Many companies have increased their level of environmental management by expanding the markets for green products and stocks and tightening pollution standards. It has been suggested that such companies should increasingly look at environmental management as an opportunity to reduce the cost of legislation, increase revenue and improve competitive advantage. Insights into the factors affecting facilities decisions to undertake environmental initiatives can reveal their potential and limitations and inform cost-effective policy development (Ervin, Wu, Khanna, Jones, & Wirkkala, 2012). Thus, it is believed that corporate environmental management will be linked to the good environmental performance of the company. The next principle is social. Recently, corporate social responsibility has become an integral part of corporate practice. Many companies in their annual reports have provided information on social responsibility activities and emphasize the importance of these activities. (Servaes & Tamayo, 2013). A high corporate social responsibility standard is often associated with high corporate social outcomes (Rahdari & Anvary Rostamy, 2015). Interest in socially responsible investment has been growing rapidly. And the elementary question is – what encourages investors to consider socially responsible resources. According to Dooren and Galema (2018) socially responsible securities could attract investors, and their returns are expected to be

risk-adjusted, but literature study shows that results may be different. Some studies show that investing in socially responsible activities brings greater returns to the company, or it is negligible from a normal return on investment. Understanding and analysing the priorities of all investors is a very important responsibility of the company's management and board. Based on their understanding of investor interest, an organizations leadership will often focus on corporate strategy and behavior in one direction rather than another (Ioannou & Serafeim, 2014). Socially responsible investment is a strategic investment that increases company's value by balancing the interests of investing and non-investing stakeholders (Sheikh, 2017). There are different types of investment strategies, which describes generic possibilities to deal with the challenge of sustainability (Baumgartner, 2009). When company's leaders believe that their investors rather prefer short-term profits, they organize sales, manage costs, and conduct research activities to maximize profits. Sustainability-oriented investment funds are also becoming to seek out and develop their own stories corporate ESG performance in lieu of companies connecting their sustainability with their financial performance (Unruh et al., 2016). The literature provides support for the assertion that socially responsible investors derive additional utility from investing responsibly.

Relationship determination between investment and profit margin using correlation methodology

The main goal of this article is to find out if investments to sustainability affect "Vodafone" financial performance in different departments all around the world. The company managers nowadays are concerned about the efficiency of asset utilization to improve the performance of the business (Siminica, Circiumaru, & Simion, 2012). The best way to do this – make a correlation between the two datasets. This methodology will be used because it is simple both to calculate and to interpret. The correlation methods are used to prove that relationship between the two factors exists or does not exist. Therefore, it is used to identify areas where further research could take place and show further results. To achieve this goal, 4 countries were selected for research. It is – Spain, Greece, Italy, and Portugal. Data which is required for my research is collected from two companies reports. First – corporate sustainable responsibility reports. All companies which perform sustainable development have an opportunity to annually upload reports to the international website – globalreporting.org (GRI). GRI is an independent international institution whose main task is to spread the message about corporate sustainability reports worldwide. All company's voluntary submits reports on the economic, environmental and social aspects of their products and services. The organization has started sustainability reporting since 1997. The official website of the GRI organization says that the organization aims are to help businesses and government bodies around the world understand the impact of company activities on climate change, human rights, governance, and social welfare. And it really helps to create benefits of all three aspects: economic, social and ecological. From this annual sustainability report amount of investment to social projects was used, most often in the report, this amount was named as – *Investment to social activities*. The second report – annual financial performance report of Vodafone, EBITDA margin was used, which was given in reports. EBITDA – the Earnings Before Interest, Taxes, Depreciation and Amortization margin. The EBITDA margin is EBITDA divided by total revenue. It measures the extent to which the cash operating expenses use up revenue (Boesso, et.al, 2014). Correlation in statistics, dependence or association is any statistical relationship, whether causal or not between random variables or bivariate data. In the broadest sense correlation is any statistical association, though in common usage it most often refers to how close two variables are to have a linear relationship with each other (Rodgers and Nicewander, 2012). Need to mention that correlation is used in certain areas of the financial world, although in this case, several scientists point out that this is not related to each other (Damghani et. al., 2012). The limits of the correlation coefficient values are between minus one and plus one. When the value of the coefficient is plus or minus one, this indicates a perfect positive or negative correlation. A correlation of zero means there is no relationship between the two variables (Cruz-Torres et. al., 2018). According to D.J. Rumsey (2016) the value of the correlation coefficient is closest to and means:

- *exactly -1*. A perfect downhill (negative) linear relationship;
- *-0,70*. A strong downhill (negative) linear relationship;
- *-0,50*. A Moderate downhill (negative) linear relationship;
- *-0,30*. A weak downhill (negative) linear relationship;
- *0*. No linear relationship'
- *+0,30*. A weak uphill (positive) linear relationship;
- *+0,50*. A moderate uphill (positive) relationship;
- *+0,70*. A strong uphill (positive) linear relationship;
- *Exactly +1*. A perfect uphill (positive) linear relationship.

The idea of the research was to find out what is a correlation between two data rates – investment amount to sustainability and EBITDA margin. In table 1, we can see what data was used.

Table 1. "Vodafone" data of separate departments (composed by the authors, 2018)

Year	Country	Amount of investment to social activities (EUR)	EBITDA margin %
2011	<i>Spain</i>	4900000	34,20%
2012		5400000	30,40%
2013		5100000	25%
2014		4932000	24,10%
2015		4600000	22,40%
2016		5200000	21,60%
2017		5100000	25,20%
2011	<i>Italy</i>	7600000	47,20%
2012		7000000	46,20%
2013		7800000	44,40%
2014		8400000	40,10%
2015		6000000	35,60%
2016		4500000	33,50%
2017		5100000	33,50%
2011	<i>Portugal</i>	2695032	39,00%
2012		2475784	37,40%
2013		1569657	36%
2014		1816104	34,80%
2015		1831425	32,60%
2016		1730860	31,70%
2017		1745700	32,60%
2011	<i>Greece</i>	259595	22,70%
2012		268776	23,40%
2013		291532	24%
2014		545990	23,50%
2015		392950	22,10%
2016		348261	21,70%
2017		585500	20,80%

All calculations were made using Excel. Calculated correlation coefficients are presented in table 2, and charts are given.

Table 2. Correlation coefficients (composed by the authors, 2018)

<i>Country</i>	<i>Correlation coefficient</i>
Spain	0,2
Italy	0,79
Portugal	0,77
Greece	-0,47

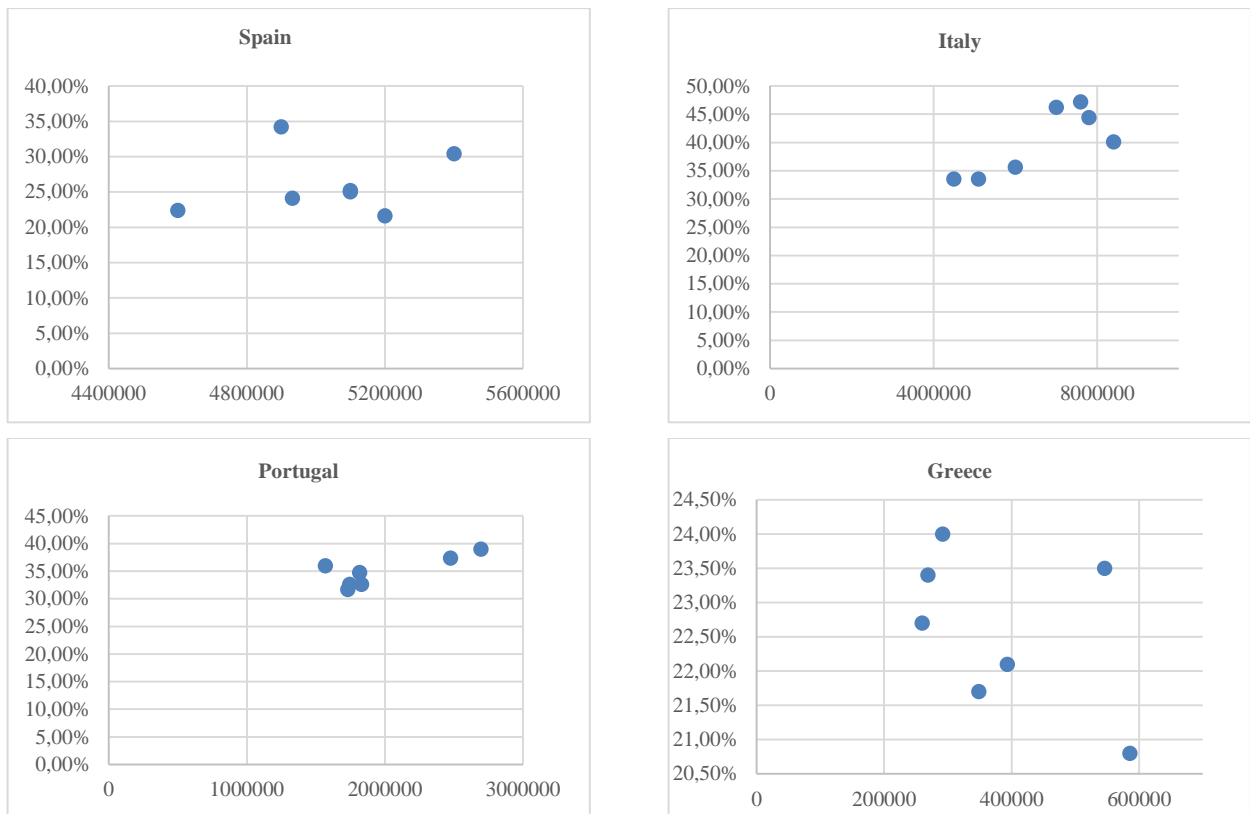


Figure 1. Correlation represented by diagrams (composed by the authors, 2018)

According to the results presented, we see that the hypothesis: "Vodafone" different branches investment to sustainability equally positively affect the company's financial position did not confirm. Values between 0.7 and 1.0 indicate a strong positive linear relationship through a firm linear rule. In my case, Italy (correlation coefficient is 0.79) and Portugal (correlation coefficient is 0.77) departments relationship between investment to sustainability and EBITDA margin are positive and strongly affects reach other. It means, that, when a company invests more money to social projects, this has an impact of EBITDA margin change. Values between 0 and 0.3 indicate a weak positive linear relationship through a linear rule. As results shows, Spain with correlation coefficient 0.2 has a weak relationship, it means that investments to social projects do not have a significant impact for EBITDA margin. And, values between -0.3 and -0.7 indicate a moderate negative linear relationship, in my case Greece has -0,47 correlation coefficient, so it would be better if Greece wouldn't 't invest much money into social projects.

Conclusions

As a literature analysis showed sustainable development is very important for companies. When a company makes history of its sustainability, it means much more than rewards or positions on the sustainability index list. Investors want to be confident that the company's sustainability efforts are focused on material issues that affect the company's ability to thrive and survive. Investment to company sustainability is creating value. But, not all the time. As the results show not all investment to sustainable development gives positive feedback for companies' profitability. In "Vodafone" case using correlation methodology hypothesis was denied. All the results where different. Italy and Portugal departments relationship between investment to sustainability and EBITDA margin are positive, but not equally positive. That means that in these countries, "Vodafone" should continue to invest more money in social projects, as this brings profit to the company. But department which is located in Greece should reconsider the size of its invested funds in social projects, as according to research, investments have a negative impact on EBITDA indicator. This department should focus on another investment direction. But this is only one example, and I believe that in any way investment to sustainability brings the company many benefits – not necessarily financially.

Limitations

Not all departments separately upload sustainable development reports and not every year. Majority of reports are written in their native language.

References

- Bansal, P. (2005). Evolving sustainably: A longitudinal study of corporate sustainable development. *Strategic Management Journal*, 26(3), 197–218. doi: 10.1002/smj.441
- Baumgartner, R. J. (2009). Organizational culture and leadership: Preconditions for the development of sustainable corporation. *Sustainable Development*, 17(2), 102–113. doi: 10.1002/sd.405
- Cruz-torres, R., Schmidt, A., Miller, G. A., Weinstein, L. B., Barnea, N., Weiss, R., Piasetzky, E., & Hen, O. (2018). Short range correlations and the isospin dependence of nuclear correlation functions. *Physics Letters, B* 785, 304–308. doi: 10.1016/j.physletb.2018.07.069
- Damghani, B. M., Suisse, C., Welch, D., & Knights, S. (2012). The Misleading Value of Measured Correlation. *Wilmott*, 62, 64–73. doi: 10.1002/wilm.10167
- Diesendorf, M. (2000). *Sustainability: The corporate challenge of the 21st century*. Allen & Unwin, Volume 2 (19-37)
- Dvorakova, L., & Zborkova, J. 2014. Integration of sustainable development at enterprise level. *Procedia Engineering*, 69, 686–695. doi: 10.1016/j.proeng.2014.03.043.
- Ervin, D., Wu, J., Khanna, M., Jones, C., & Wirkkala, T. (2013). Motivations and barriers to corporate environmental management. *Business Strategy and the Environment*, 22(6), 390–409. doi: 10.1002/bse.1752
- Ioannou, I., & Serafeim, G. (2014). The impact of corporate social responsibility on investment recommendations: Analysts' perceptions and shifting institutional logics. *Strategic Management Journal*, doi.org/10.1002/smj.2268
- Marchese, D., Reynolds, E., Bates, M. E., Morgan, H., Clark, S. S., & Linkov, I. (2018). Resilience and sustainability: Similarities and differences in environmental management applications. *Science of the Total Environment*, 613–614, 1275–1283. doi: 10.1016/j.scitotenv.2017.09.086
- Mirchandani, A., & Tare, U. (2014). Growing inclination of woman towards investments. *Vistas*, 3(1): 83–88.
- Rahdari, A. H., & Anvary Rostamy, A. A. (2015). Designing a general set of sustainability indicators at the corporate level. *Journal of Cleaner Production*, 108, 757–771. doi: 10.1016/j.jclepro.2015.05.108
- Samet, M., & Jarboui, A. (2017). How does corporate social responsibility contribute to investment efficiency?. *Journal of Multinational Financial Management*, 40, 33–46. doi: 10.1016/j.mulfin.2017.05.007
- Sheikh, S. (2017). Is corporate social responsibility a value-increasing investment? Evidence from antitakeover provisions. *Global Finance Journal*. doi: 10.1016/j.gfj.2017.08.002.
- Siminica, M., Circiumaru, D., & Simion, D. (2012). The correlation between the return on assets and the measures of financial balance for Romanian companies. *International Journal of Mathematical Models and Methods in Applied Sciences*, 6(2), 249–256. doi: 10.1021/ia201972f
- Van Dooren, B., & Galema, R. (2018). Socially responsible investors and the disposition effect. *Journal of Behavioral and Experimental Finance*, 17, 42–52. doi: 10.1016/j.jbef.2017.12.006
- Unruh, G. D., Kiron, N., Kruschwitz, M., Reeves, H., Rubel, & zum Felde, A.M. (2016). *Investing For a Sustainable Future*. MIT Sloan Management. Retrieved from <https://sloanreview.mit.edu/projects/investing-for-a-sustainable-future/>
- Greeshma, V., & Sanesh, C. (2011). Investment Management, School of Distance Education, University of Calicut, http://www.universityofcalicut.info/SDE/BBA_finance_investment_mgmnt.pdf
- Servaes, H. & Tamayo, A. 2013. The Impact of Corporate Social Responsibility on Firm Value: The Role of Customer Awareness. *Management Science*, 59(5): 1045–1061.