

ANALYSIS OF THE IMPACT OF SOCIAL PERFORMANCE ON FINANCIAL PERFORMANCE**Raluca ANDREEV**Ștefan cel Mare University of Suceava, 720229, Romania
raluca.andreev@gmail.com**Mihaela TULVINSCHI**Ștefan cel Mare University of Suceava, 720229, Romania
mihaela.tulvinschi@usm.ro**Anamaria-Geanina MACOVEI**Ștefan cel Mare University of Suceava, 720229, Romania
anamaria.macovei@usm.ro**Abstract**

Increasing competition and increasing stakeholder interest in the impact of business activities on the environment raises the issue of the need for businesses to invest or focus on corporate social responsibility (CSR) activities. There are opposing views in the field of studies on the positive or negative influence of CSR activities on financial performance. This paper aims to establish whether the various components of social performance have a significant influence on the financial performance of the Top 6 pharmaceutical companies listed on the Bucharest Stock Exchange (BVB), over a period of analysis between 2011-2020. For this, a multiple linear regression model was used, and the results obtained showed that CSR activities positively and significantly influence financial performance, provided that the size criteria are met, which provides financial assurance for the successful completion of CSR actions. Based on the results obtained, pharmaceutical companies should continue to support CSR activities and provide the general public with better information on the actions taken so that they can be analyzed and measured in order to conduct more accurate research.

Keywords: corporate social responsibility; stakeholder theory; turnover; sustainability; econometric model.

JEL Classification: M41; C15.

I. INTRODUCTION

At the present moment, the economy has become a jungle in which the fight for survival is going on, because of this, companies must constantly adapt to new trends in order to manage to remain as efficient as possible so as to position themselves at the forefront of the competition. This can be achieved by directing businesses towards a sustainable development, based on satisfying an ever-widening group of users, and in this case we can no longer talk about an exclusively financial performance, but we will emphasize, in this sense, the concept of social performance.

The essence and use of the term social performance has left its mark in many discussions and analyzes since the environment experienced increasingly drastic changes, which led to the awareness that the company's activity is influenced by a series of social factors (employees, shareholders, public, social policy), ignoring which would generate losses for economic entities.

In the present work we propose to carry out a study to determine the elements of social performance that exert a notable influence on the financial performance of enterprises. Noting that in the Romanian economic space, the concept of social performance is in the early stages of understanding and application, we decided to carry out this work with the aim of highlighting the importance of the term corporate social responsibility for a sustainable and sustainable development of economic entities. Top 6 pharmaceutical companies from Romania, which are listed on the Bucharest Stock Exchange, were chosen as a sample, these being: Antibiotice SA, Biofarm SA; Farmaceutica Remedia SA; MedLife SA, Ropharma SA, Zentiva SA. The modeling was carried out over a period of 10 years, between 2011-2020.

Pharmaceutical companies were selected as a benchmark, because with the outbreak of the COVID-19 pandemic, this sector was given special importance, but also due to the impact of the respective companies on the health and development of the population. Thus, our goal is to establish whether the social responsibility activities of the respective companies play an important role in achieving superior performance.

In what follows, a literature review will be carried out, after which we will focus our attention on the case study, in which we will analyze the elements of social and environmental performance, which have a major influence on the financial performance of companies.

II. LITERATURE REVIEW

Financial performance is a basic term in describing the activity of a company, because the goal of every enterprise is to be as efficient as possible, on this depends its development and its maintenance in a competitive market. Performance represents "a quantified result, obtained in a competition, and at the level of a company, performance expresses the degree of achievement of the objectives pursued" (Refis & Issaoun, 2021). This assuming that only the best company will get to access the title of winner, if it manages to differentiate itself, be innovative and mark the future in the concepts of durability and sustainability.

Financial performance is described by several criteria, such as efficiency and effectiveness. Effectiveness represents "the ratio between the result obtained by a system and the established objectives" (Admam, Baar and Sahi, 2021), presupposing the choice of suitable measurement indicators, so as to make the best predictions regarding the company's activity in the future and in what direction to direct their efforts. Efficiency, on the other hand, represents "maximizing the quantity obtained from a quantity of resources or minimizing the quantity of resources consumed for a certain production" (Refis & Issaoun, 2021). So this term corresponds to the best management of resources and capabilities, in relation to the results achieved.

The specialized literature does not provide a wide range of indicators for determining performance, but turnover is one of the most representative indicators of financial performance, helping managers to make the best decisions regarding the company's strategy and providing information about the market position of the company, the place held by it in the activity sector. According to OMFP no. 1802/2014, net turnover is defined as "the amounts obtained from the sale of products and the provision of services after deducting commercial discounts and value added tax and other taxes directly related to turnover" (OMFP_1802_2014.pdf, no date). The calculation formula resulting from the following definition:

$$\text{Turnover} = \text{Revenues from the sale of products} + \text{Revenues from the provision of services} - \text{Commercial discounts} - \text{VAT} - \text{Other taxes} \quad (1)$$

Some researchers argue that "targeting any short-term financial indicator will affect the long-term survival of the company" (Lo & Liao, 2021), because of this, management must be oriented towards long-term development. A long-term strategy consists in implementing the concept of social performance with all its elements (development of human capital, proper management of waste, funding of education, organization of social projects), which will exert a positive influence on financial performance and in at the same time it will satisfy all categories of stakeholders, who play a significant role in the conduct of business.

The theory of interested parties is supported by the influence exerted by stakeholders on business, for this reason companies must not underestimate the power held by interested parties (customers, employees, investors, public, credit institutions), because their interest, currently, is materialized, especially, on initiatives to protect the environment, and environmental issues are a decisive factor in establishing business strategies, as a result of the current ecological situation.

In specialized studies, social performance is represented by corporate social responsibility (CSR), which is defined by (Boukattaya & Omri, 2021) and (Idowu et al., 2013), as a "voluntary activity", which illustrates the company's involvement in social and environmental activities, in all the operations they carry out with stakeholders and the business environment. From the mentioned we can note that CSR represents a new dimension of business strategies, which means that companies have changed their orientation, from satisfying a single group of users (shareholders) to satisfying the interests of all stakeholders. Romanian companies are familiar with the EU CSR reporting guidelines (Socoliuc et al., 2018).

It has been shown that companies' indifference to environmental responsibility leads to financial losses (Van der Laan, Van Ees and Van Witteloostuijn, 2008), for this reason it is important for companies to invest in corporate social responsibility actions, to prevent such unpleasant situations. Other authors argue that the expenditures made by firms in order to increase social performance can bring the company a competitive advantage over other entities in the same field, because consumers have a vested interest in companies doing good to the society in which they operate (Leong & Yang, 2020). Also the positive relationship between CSR and innovation (Fischer & Sawczyn, 2013), explains why companies invest sums of money to make their business as sustainable and environmentally friendly as possible. The negative influence of CSR on the company's performance is also exemplified in specialized studies. Boukattaya and Omri do not exclude this fact, but argue that the negative relationship between CSR and CSP can manifest itself over a short period of time, but in the long term, a positive relationship still persists (Boukattaya & Omri, 2021). Financial and non-financial reporting are important to determine the performance of companies (Grosu & Tanasă, 2018).

Taking into account what was reported in the previous paragraph, we will formulate two hypotheses from which the case study will start:

- Hypothesis H0: CSR elements do not influence financial performance significantly.
- Hypothesis H1: CSR elements influence financial performance significantly.

III. RESEARCH METHODOLOGY

Analyzing the influence exerted by social performance on financial performance, using econometric modeling with the help of the IBM SPSS Statistics program, version 26, we aim, first of all, to establish those components of interest of social performance, which companies should implement in their business strategies, so as to obtain superior financial performance, since, in essence, this is the goal pursued by every economic entity, the efficient and balanced use of all components, resources and knowledge, which would allow it to attract investors and satisfy the demands of shareholders in matter of profitability and superior remuneration through dividends.

A first step would be the integration of corporate social responsibility in practice, because CSR plays an important role, especially in times of uncertainty, because companies can engage in CSR activities to create a favorable image, for this purpose attracting investors and minimizing risks (Huang, 2021), so social responsibility can help companies overcome certain financial or social crises by attracting the attention of interested people, by masking certain problems with the help of social practices.

The data were collected manually, from the website of the Bucharest Stock Exchange (BVB), from the annual reports of the administrators, made available to the public on the websites of each individual company, and from their financial statements. Our sample covers a period of 10 years, between 2011-2020, thus having the opportunity to determine the impact of social performance on financial performance, taking into account various economic fluctuations and legislative changes that occurred during the 10 years, such as the implementation, in 2017, of the provisions of Directive 2014/95/EU, which require listed companies to issue non-financial reports to report environmental and social responsibility actions.

In the given study, both the social responsibility actions that must be taken by companies to increase their financial performance and to create the best possible image in front of stakeholders, as well as various elements characteristic of economic enterprises, were taken as independent variables. , as presented in table 1, and the dependent variable, which represents financial performance, was chosen turnover.

Table 1: Presentation of independent variables

Independent variables	Description
Number of employees with higher education	It includes the number of people from the total employed staff who have completed higher education
Shares held by legal entities	It includes the percentage of shares held by legal entities out of the entity's total shares
Elaboration of a code of ethics	It was determined by scores from 1 to 5, 1 signifying the non-existence of a code, and 5 the existence of a very well-structured ethical code
Enterprise size (F.size)	It was calculated as the natural logarithm of the entity's total assets
Organization of social projects	It was determined on the basis of scores from 1 to 5, 1 meaning the non-organization of social projects, and 5 the implementation of extensive social projects

Source: Own processing

IV. RESEARCH RESULTS

After performing the econometric modeling, the best result was obtained within the multiple linear regression model, which is represented by the following equation for turnover (Macovei, 2021):

$$\text{CifAf} = \alpha + \beta_1 * \text{NrPersStudSup} + \beta_2 * \text{ActPersJur} + \beta_3 * \text{Cod.Etic} + \beta_4 * \text{F.size} + \beta_5 * \text{Org.Pr.Soc} + \varepsilon \quad (2)$$

where: CifAf – dependent variable of the model; NrPersStudSup; ActPersJur; Cod.Etic; F.size; Org.Pr.Soc – according to table 1 are the independent variables; α , β_1 , β_2 , β_3 , β_4 and β_5 - represent the parameters of the regression model; ε - the random error variable, which quantifies the influence of factors with random action.

In table 2, we have reflected the correlation between each independent variable of the model and the turnover, respectively the correlations between the independent variables.

Table 2: Pearson correlation coefficients

	CIF.Af	NrPersStudSup	ACT.PERS.JUR	COD.ETIC	F.size	ORG.PR.SOC
Pearson Correlation	CIF.Af	,574	,820	-,432	,785	,830
	NrPersStudSup	1,000	,706	,256	,911	,670
	ACT.PERS.JUR	,820	1,000	-,478	,862	,732
	COD.ETIC	-,432	,256	1,000	-,069	-,092
	F.size	,785	,911	-,069	1,000	,715
	ORG.PR.SOC	,830	,670	-,092	,715	1,000

Source: Authors Computation with the aid of IBM SPSS Statistics, version 26

According to the data, a strong positive correlation can be observed between the turnover and the independent variables: the organization of social projects, the weight held by legal entities and the size of the enterprise (F.size). The significant correlation, of 0.830, between the turnover and the organization of social projects can be explained by the fact that investing in social actions will generate an increase in consumer confidence in the activity carried out by the company, which will materialize in customer loyalty, respectively an increase in sales, of turnover and performance. Also, the share of shares held by legal entities exerts a significant influence on turnover, because legal entity shareholders will be more likely to increase sales through various social actions, which will lead to an increase in their reputation, thus there is an average correlation between ACT.PERS.JUR and ORG.PR.SOC, of 0.732. There is an average correlation of 0.574 between the number of people with higher education and turnover. This can be explained by the fact that the pharmaceutical field is quite automated, on the production lines there is no need for highly qualified people to manage the machines, however there is a need for qualified people in the field of research and development, which plays an important role in the pharmaceutical industry. Taking into account the current pandemic situation, caused by COVID-19, there was quite a fierce battle between the competitors in the respective sector, in terms of creating the most useful drugs in the fight against the SARS-CoV-2 virus, in this case being need a well specialized staff. Regarding the code of ethics, which is an important component of social responsibility, we observe a weak, inverse and negative correlation between it and turnover. This fact can be explained by the fact that the companies did not put much emphasis on the drafting of ethics codes. During the data collection stage, it was noted that the codes were either not published or were presented in a superficial manner, without containing complete and relevant information.

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,984 ^a	,968	,960	25156077,059	1,761

a. Predictors: (Constant), ORG.PR.SOC, COD.ETIC, F.size, NrPersStudSup, ACT.PERS.JUR

b. Dependent Variable: CIF.Af

Source: Authors Computation with the aid of IBM SPSS Statistics, version 26

From table 3 it can be noted that on the total model, there is a significant link and a very high correlation between the turnover and the independent variables studied $R = 0.984$, being greater than 0.750, we also find that the variation of the independent variables explains in proportion 96.8% of turnover variation, according to the determination ratio $R^2 = 0.968$. In this case we validate the model with a Sig value. for the Fisher test less than the significance threshold of 0.05.

Table 2: Coefficients

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients		
				Beta		
1	(Constant)	-2198038478	431588411,35		-5,093	<,001
	NrPersStudSup	368871,510	162949,933	,536	2,264	,034
	ACT.PERS.JUR	-6701370,972	1099064,996	-1,492	-6,097	<,001
	COD.ETIC	-137810118,5	20625839,973	-1,145	-6,681	<,001
	F.size	149062569,93	23137098,416	,945	6,443	<,001
	ORG.PR.SOC	89486359,083	7771744,442	,781	11,514	<,001

a. Dependent Variable: CIF.Af

Source: Authors Computation with the aid of IBM SPSS Statistics, version 26

According to table 4, the equation of the model, which explains the relationship between the turnover and the independent variables is as follows:

$$\text{Cifra de afaceri} = 368871,51\text{NrPersStudSup} - 6701370,972\text{ActPersJur} - 137810118,5\text{CodEtic} + 149062569,93\text{F.size} + 89486359,083\text{OrgPrSoc} - 2198038478 \quad (3)$$

Considering that the value of Sig. related to the Student's test, reflects values lower than the significance threshold of 0.05, in this case we reject the hypothesis H0 and accept the hypothesis H1, that is, the elements of corporate social performance significantly influence the financial performance of pharmaceutical companies. So the independent variables equally influence the turnover except for the number of employees with higher education, because in the pharmaceutical industry it is essential to have a highly qualified staff, taking into account the research they have to carry out, so high qualification is no longer a element as essential as it was 20-30 years ago to increase your sales, achieve superior performance or outperform your competition. At the moment, there is a much greater emphasis on protecting and preserving the environment, namely the impact of business on the environment, which represents a much more attractive direction for investors and which offers a better competitive advantage.

Considering the estimated equation we can conclude the following:

- An increase of one unit in the number of employees with higher education will generate, on average, an increase in turnover by 368871.51 units. A well-trained staff will generate higher quality products, meeting customers' quality needs and increasing sales. In order to withstand the competition, pharmaceutical companies make considerable investments in research and development projects, the success of which is due to qualified employees. Under these conditions, we notice both a direct influence of employees with higher education on the turnover, by increasing work efficiency and perfecting products, and an indirect influence by means of carrying out scientific research in order to obtain new medicines, intended to treat the population.
- An increase of one unit in the share of shares owned by legal entities will lead, on average, to a decrease of 6701370.972 units in turnover. Taking into account the current pandemic context, not all pharmaceutical companies have been able to maintain their sales at the higher levels required by corporate shareholders, producing new drugs to meet the demand for products that come to treat the SARS-CoV-2 virus.
- An increase by one unit of the code of ethics variable will generate a decrease, on average, by 137810118.5 units of turnover. Most of the entities do not have well developed codes of ethics, and for a period of 5 years, several companies did not even publish the code of ethics.
- One unit increase in the size of the enterprise will lead, on average, to an increase in turnover by 149062569.93 units. Large businesses will be more likely than small businesses to engage in social responsibility activities. On the one hand, they will have significant resources to be able to invest in society, in the modification of manufacturing lines, to reduce pollution, and on the other hand, large companies have the power to influence the behavior of consumers and small businesses in the matter to protect the environment.
- The increase by one unit of the variable organization of social projects will generate the increase, on average, by 89486359.083 units of the turnover. In this case we support the previous statements such as that CSR influences the financial performance of the company. The engagement of entities in social actions, such as the organization of various social projects, will generate the satisfaction of the general public, the satisfaction of current consumers and the attraction of new customers and investors, which will inevitably influence the turnover in the sense of its increase.

Figure 1 shows the histogram of the multiple regression model. A fluctuating distribution can be seen, with a standard deviation of 0.899. This result is due to the pandemic situation, which put the pharmaceutical sector to

the test, because on the one hand, higher profits were recorded, and on the other hand, additional expenses were incurred on the staff side, because some were sent to technical unemployment, and others, as a result of illness, were on medical leave, which disrupted the activity of businesses. Also, some pharmaceutical companies adapted their activity much faster to the economic and social circumstances, taking into account the increase in demand for medicines that treat flu, colds, respiratory diseases, disinfectant, thus managing to obtain a competitive advantage at the expense of the competition. In these circumstances, the production structure also changed, as a greater increase in production and sales was recorded for the drugs used in the treatment of COVID-19 than for the other products offered by the company, which do not concern this niche

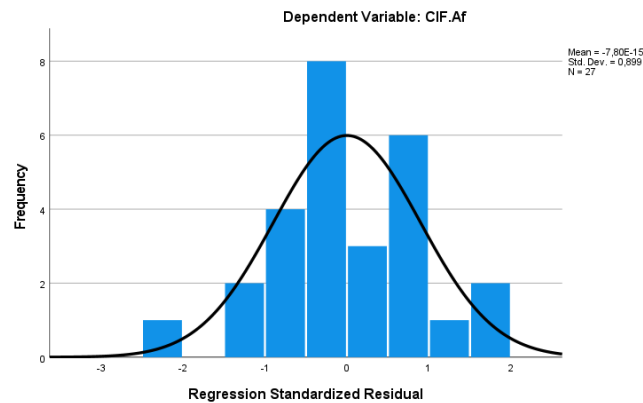


Figure 1: Model histogram

Source: Authors Computation with the aid of IBM SPSS Statistics, version 26

V. CONCLUSIONS

As a result of the respective research, it was demonstrated, once again, the major influence that social performance exerts on financial performance. Thus we point out the need for companies to invest in social responsibility actions, especially if they want to follow a growth trend, by attracting new investors and customer loyalty. Summarizing the results obtained from the econometric modeling, we find that in addition to the desire to invest in CSR, financial resources are also needed, because in the case of insufficient resources, we can witness a negative influence of social performance on financial performance. In our study, the pharmaceutical companies are important structures, which record profits in proportion and in their case the size led to an increase in the turnover. Also, the COVID-19 pandemic had a decisive role in the results obtained, because the pharmaceutical field was overburdened, the demand for medicines and medical services being constantly increasing and, on the other hand, increasing the competition in terms of finding a remedy against the SARS-CoV-2 virus.

Our study had some limitations, because the field of CSR is relatively new, in the Romanian space, and data on social and environmental protection actions are difficult to quantify, analyze and measure, there may be some discrepancies between the real situation within the company and the situation which we deduced by analyzing annual reports, non-financial reports and financial statements. Thus, pharmaceutical companies should implement much more useful techniques in terms of measuring social and environmental actions, with the aim of facilitating understanding by the general public and for using the information in future studies, so that the results obtained are much more accurate and reflect the up-to-date situation of economic entities.

REFERENCES

1. Admam, C., Baar, A., Sahi, H. (2021). Le tableau de bord et la performance financière d'une entreprise. Thesis. Université Abderrahmane Mira/ Aboudaou. Available at: <http://172.17.1.105:8080/xmlui/handle/123456789/17036> (Accessed: 22 November 2021).
2. Boukattaya, S., Omri, A. (2021). Corporate Social Practices and Firm Financial Performance: Empirical Evidence from France', *International Journal of Financial Studies*, 9(4), p. 54. doi:10.3390/ijfs9040054.
3. Fischer, T.M., Sawczyn, A.A. (2013). The relationship between corporate social performance and corporate financial performance and the role of innovation: evidence from German listed firms', *Journal of Management Control*, 24(1), pp. 27–52. doi:10.1007/s00187-013-0171-5.
4. Grosu, V., Tanasă, S. M. (2018). Performanța prin prisma raportării integrate. O abordarea a cadrului elaborat de Consiliul Internațional pentru Raportare Integrată. <http://irek.ase.md:80/xmlui/handle/1234567890/95>.
5. Huang, J. (2021). Corporate social responsibility and financial performance: The moderating role of the turnover of local officials', *Finance Research Letters*, p. 102497. doi:10.1016/j.frl.2021.102497.

6. Idowu, S.O. et al. (eds) (2013) *Encyclopedia of Corporate Social Responsibility*. Berlin, Heidelberg: Springer Berlin Heidelberg. doi:10.1007/978-3-642-28036-8.
7. Leong, C.K., Yang, Y.C. (2020). Market competition and firms' social performance', *Economic Modelling*, 91, pp. 601–612. doi:10.1016/j.econmod.2019.12.002.
8. Lo, F.-Y., Liao, P.-C. (2021). Rethinking financial performance and corporate sustainability: Perspectives on resources and strategies', *Technological Forecasting and Social Change*, 162, p. 120346. doi:10.1016/j.techfore.2020.120346.
9. Macovei, A. G. (2021). Note de curs-Econometrie. Universitatea 'Ștefan cel Mare' Suceava.
10. OMFP_1802_2014.pdf* (no date). Available at: https://static.anaf.ro/static/10/Anaf/legislatie/OMFP_1802_2014.pdf (Accessed: 15 December 2021).
11. Refis, T., Issaoun, F. (2021). La mesure de la performance financière d'une compagnie d'assurance ; cas : Direction Régionale de la SAA d'Alger. Thesis. Université Mouloud Mammeri. Available at: <https://www.ummo.dz/dspace/handle/ummo/14757> (Accessed: 23 November 2021).
12. Socoliuc, M., Grosu, V., Hlaciuc E., Stanciu S. (2018). Analysis of Social Responsibility and Reporting Methods of Romanian Companies in the Countries of the European Union, Special Issue "Information Society and Sustainable Development—Selected Papers from the 5th International Conference ISSD 2018", *Sustainability*, ISSN 2071-1050, Vol. 12(2), Issue 2, 4462, <https://doi.org/10.3390/su10124662>
13. Van der Laan, G., Van Ees, H. and Van Witteloostuijn, A. (2008). Corporate Social and Financial Performance: An Extended Stakeholder Theory, and Empirical Test with Accounting Measures', *Journal of Business Ethics*, 79(3), pp. 299–310. doi:10.1007/s10551-007-9398-0.

*This study was presented at International Scientific Students Conference, ISSC 2022 „Challenges of Accounting in The Vision of Young Researchers”, march 11-12, 2022, Chișinău, Republic of Moldova.