Volume **10** / 2022 ISSN 2344-102X
Issue 1 / **February** 2022 ISSN-L 2344-102X

ANALYSIS OF THE ECONOMIC PERFORMANCE AND SUSTAINABILITY OF BUSINESSES OPERATING IN ELECTRICITY PRODUCTION AND DISTRIBUTION INDUSTRY

Veronica GROSU
Stefan cel Mare University of Suceava, 720229, Romania
veronica.grosu@usm.ro
Ioana ANDRIOAIA
Stefan cel Mare University of Suceava, 720229, Romania
ioana.andrioaia99@gmail.com
Iulian DASCALU
Stefan cel Mare University of Suceava, 720229, Romania
iuliannd@gmail.com

Abstract
Recently, the concept of energy independence has attracted the attention of researchers during the last few years. The majority of EU member countries are dependent on imported energy, which is not a favorable aspect in the current context of the energy crisis and the Russian-Ukrainian conflict. In addition, it is also necessary to find solutions for sustainable development and to address the environmental impact of fossil fuel. Thus, to contribute to the efforts to move towards a sustainable economy the aim of the research is focused on the analysis of financial performance and economic sustainability indicators of businesses operating in the field of electricity producers as well as electricity distributors. To achieve the proposed aim, the following objectives are pursued in this paper: O1 – Analyze the operational electricity market in Romania and its participants; O2 - Review the scientific literature on the economic performance and sustainability of electricity producers and distributors; O3 – Develop econometric models that can describe the influence of financial ratios on the financial performance and economic sustainability of energy businesses. The results helped in the development of an econometric model that reveals which economic indicators have a significant influence on the performance and sustainability of businesses based on the production and distribution of electricity.

Keywords: *economic performance; electricity; energy crisis; sustainability*

JEL Classification: M20

I. INTRODUCTION

Global economic development in recent years has been made possible by consciously ignoring the effects it has had on environmental components, thus producing profound and abrupt changes in their structures. With most of the population becoming aware of the dangers we have exposed ourselves through this profit-only doctrine, and in order to provide answers, the scientific literature has focused on exploring the sustainability of economic entities, specifically the link between their financial performance and sustainability. Sustainability is seen in the literature as a response to the negative effects that business has on environment and is defined as a key to long-term business planning that facilitates increased financial performance, while also bringing long-term improvements to stakeholders with minimal negative effects on environmental components.

Energy independence and the type of energy have attracted the attention of researchers in this field over the last few years. Most EU member countries are dependent on imported energy, which is not a favorable aspect in the current context of the energy crisis and the Russian-Ukrainian conflict. In many countries, the energy sector is at the forefront of the debate. In addition to the energy independence already mentioned, there is also a need to find solutions for sustainable development and to address the environmental impact of fossil fuels. Thus, to contribute to the efforts to move towards a sustainable economy, the aim of the research is focused on the analysis of financial performance and economic sustainability indicators of businesses operating in the field of electricity generation as well as electricity distributors. To achieve the proposed goal, we pursued the following objectives: O1 - To study the functioning of the electricity market in Romania and its participants; O2 - To review the scientific literature on economic performance and sustainability of electricity producers and distributors; O3 - To develop

DOI: 10.4316/EJAFB.2022.10113

Volume **10** / 2022 ISSN 2344-102X
Issue 1 / **February** 2022 ISSN-L 2344-102X

econometric models that can divulge the influence of financial ratios on financial performance and economic sustainability of businesses that operate in the energy sector.

Our results contributed to the development of an econometric model that discloses the economic indicators which have a significant influence on the performance and sustainability of businesses which operate in the electricity sector.

II. LITERATURE REVIEW

Energy plays a fundamental role in shaping human society, it being the main driver of economic and social development. The Romanian energy system is strongly influenced by the phenomenon of globalization, whose effects has led to the demonopolisation of the electricity market. Thus, the competitive environment is relatively new in this sector of the economy and any innovation or change brings challenges that businesses in this sector have had to familiarize themselves with and manage (Mihăilă, 2017).

Over the last two decades, the outcry from environmental activists coupled with the growing awareness of environmental (global warming) and social (human rights) issues have prompted businesses to get involved and implement environmentally and socially responsible practices. The energy sector has experienced significant growth (Perramon, et al., 2014) and has become one of the main sources of greenhouse gas (GHG) emissions, which are blamed for causing global warming (Mezher, Tabbara & Al-Hosany, 2010). Thus, concerns from stakeholders about corporate sustainability have increased substantially in recent years.

Global demand for energy is growing steadily and the negative impact of the energy sector will soon become one of the most pressing concerns in the coming years (Boiral, Henri & Talbot, 2012). Efficient, clean and affordable energy services have a significant role to play in the sustainable growth of national economies (Sathaye et al., 2009). In the future, energy companies are expected to contribute to environmental sustainability by increasing efficiency, investing in renewable energy, improving air quality, reducing carbon emissions, combating climate change and protecting biodiversity.

In the literature, the issues of sustainable business performance and corporate social responsibility are addressed from several perspectives. Thus, a company's sustainable performance is manifested in its approach to environmental, social and governance concerns(ESG). The abbreviation "ESG" is commonly used in scientific literature (Fatemi, Glaum & Kaiser, 2018).

The environmental component refers to the company's perspective on how to manage resources. In this sense, energy efficiency, water treatment, circular economy, preservation of the natural environment and maintenance of biodiversity, as well as climate change and greenhouse gas emissions are included in this component. The social component covers a wide range of a company's activities for employees and customers as well as addressing human rights issues, with the aim of building and maintaining social relations. The final component, governance, refers to the company's corporate governance mechanisms that support and improve the implementation of policies that address social and environmental concerns.

ESG considerations are also deeply rooted in stakeholder theory (Freeman, 2010) which is concerned with satisfying the interests of heterogeneous groups of parties which have different interests in a company. According to stakeholder theory, enterprises are considered as entities that function in society and are therefore expected to operate in a sustainable way on their way to achieving their goal, namely the satisfaction of their shareholders (owners). However, stakeholder theory nevertheless stimulates an ongoing debate on the trade-off effects between the sustainable performance (SP) of an enterprise and financial performance (FP) (Weber, 2014). Existing literature provides rich but very ambiguous evidence in this respect.

According to Endrikat (2014) and Friede (2015) following meta-analyses since the 1970s, a considerable number of papers have been published in the literature offering inconclusive or contradictory findings with different methodological approaches. However, following our review of the literature we found evidence demonstrating that the impact of sustainable performance has a direct influence on financial performance (SP→FP). Furthermore, we found papers that also observed an inverse relationship, the impact of financial performance influences sustainable performance (FP→SP). This impact of sustainable performance on financial performance (SP→FP) is typically studied through the lens of neoclassical theories (where we find a negative link), the natural resource-based view (existence of a positive link) or stakeholder theory (again, a positive link). The negative link identified between sustainability and financial performance is due to the fact that sustainability implies usually extra costs. According to this view, sustainability would require new investments or changes in business management approaches that amplify costs. Consistent with neoclassical theory, some industries (in the energy sector) face high compliance costs because they operate under legal requirements that aim at sustainable behavior (Tzouvanas et al., 2020).

DOI: 10.4316/EJAFB.2022.10113

Volume **10** / 2022 ISSN 2344-102X
Issue 1 / **February** 2022 ISSN-L 2344-102X

On the other hand, according to the other two theories, sustainability has a positive effect and improves financial performance. Given the resource perspective (developed by Hart, 1995), sustainability favors the development of new resources and scarce capabilities that are difficult to imitate/recreate by competitors. These, in turn, enhance a firm's competitive advantage and contribute to better financial performance (Hart & Dowell, 2011). For example, investment in green technologies will stimulate innovation, implementation of social policies can increase employee skills and engagement, and better corporate governance is a positive signal for investors that will increase their confidence in the company. In terms of stakeholder theory, sustainable performance attracts stakeholders by meeting their expectations. A firm that meets the expectations of key stakeholders gains a competitive advantage by enhancing its reputation and strengthening long-term relationships with these stakeholders (Surroca, Tribó, & Waddock, 2010). However, the context of reputation is vague, as it may be the only motivation to be involved in sustainability actions. This threat is highlighted by the showcase hypothesis and raises skepticism about the effectiveness of sustainability practices (Connors, Anderson-MacDonald & Thomson, 2017). There is also a growing body of literature that considers a non-linear impact of sustainable performance on financial performance. For example, Nollet (2016) provides evidence on U shaped relationships. Although investments in sustainable performance bring diminishing returns initially, over time they will bring benefits that offset the initial costs. Firm-specific characteristics remain influential on the turning point in this U-shaped relationship (Broadstock et al., 2019). In explaining the effects of sustainability on financial performance (SP→FP), the existing literature also brings into question the slack resources hypothesis. Slack resources are defined as those resources that an entity holds in excess of those essential to its business. These resources may accept various adaptive strategies when faced with internal or external pressures for change (Bourgeois, 1981). In this sense, slack resources support the implementation of sustainability strategies and related management practices, improving sustainability (Kock, Santalo, & Diestre, 2012). The moderate role of slack resources is explained by the observation that higher financial performance is associated with higher levels of slack resources (Daniel et al., 2004). In this sense, a better sustainability strategy and related practices could be considered as an important factor in increasing financial performance.

The energy sector is included among the environmentally sensitive industries (ESI). Thus, in the energy sector, we expect to see a positive link between financial performance and sustainability, in line with the fundamentals of natural resource-based theory and stakeholder theory. At the same time, the importance of renewable resources in the current context of the energy crisis, generated largely by the war in Ukraine, has become extremely important, exposing to the world how important energy independence is for the European Union.

III. RESEARCH METHODOLOGY

In order to achieve the purpose of this paper, i.e. the analysis of the performance and sustainability of economic entities in the electricity sector, we collected information available from the topfirme database (topfirme.ro). The methodology followed in collecting, filtering and processing the database with this information can be seen in the table below (Table 1).

Table 1. Methodology for the collection, production and processing of the database

Database: Data collection was done through the topfirme website;	
Type of research: Quantitative;	
Database structure: – 50 electricity generating firms (CAEN code 3511); – 21 electricity distribution companies (CAEN code 3513);	
Inclusion criteria: – Electricity producing and distributing firms; – turnover;	
Exclusion criteria: • all firms with other activities	
Results	
Total enterprises analyzed	71
Date of data processing	02.08.2022
Data processing	SPSS 26 application
Data access link: https://www.topfirme.com/	

Source: Own processing

DOI: 10.4316/EJAFB.2022.10113

Volume **10** / 2022 ISSN 2344-102X
Issue 1 / **February** 2022 ISSN-L 2344-102X

After the database was created, we entered our data into IBM SPSS 26 statistical software and analyzed the existing correlations using the economic information obtained from the processing of the topfirm data. Thus, we created 4 economic models as shown in the table below (Table 2).

Table 2. List of econometric models carried out

Model	Analysis
1	Manufacturers - Performance
2	Distributors - Performance
3	Producers - Economic Sustainability
4	Distributors - Economic Sustainability

Source: Own processing

As can be seen from the table above, the purpose of the modelling was to observe and compare the influence of factors on the performance and sustainability of electricity producers and distributors respectively. Therefore, in the following sub-chapters we have analyzed the performance and sustainability of these entities.

IV. DISCUSSION AND RESULTS

In the first part of this sub-chapter we will analyze the performance, i.e. the independent variables that have a significant influence on the performance of the businesses selected for analysis after which we will analyze the overall sustainability of the same companies. The details of the econometric models relevant to the two categories of economic entities can be seen in the table below (Table 3).

Table 3. Econometric model - producers, distributors

Model	R	R square	Adjusted Square	Std. Error of the Estimate	Durbin-Watson
1 - Producers	,982a	,963	,963	152023354,421	,962
2 - Distributors	,994a	,987	,987	41731777,498	1,873
a. Predictors: (Constant), Average number of employees, House accounts, Receivables, Total equity, Liabilities , Expenses, Total fixed assets					
b. Dependent Variable: Turnover					

Source: Processing in IBM SPSS 25

As can be seen, the correlation of the two models is very strong, almost perfect, with a correlation coefficient of over 0.95%. Their coefficient of determination is also high, indicating that the dependent variable (turnover) is influenced by the following independent variables: average number of employees, liquidity, receivables, equity, debts, expenses and fixed assets.

From an econometric point of view, the models can be accepted because the F-test value is high and Sig is less than 0.05, thus the models have a confidence level of over 95% (see Table 4).

Table 4. Anova - performance models

Model	Sum of Squares	Df	Mean of Squares	F	Sig.
1	2044607075503774860000,000	7	292095822148249800000,000	1263,877	,000[b]
2	1645053869234149600,000	7	235007695604878490,000	1349,424	,000[b]

Source: Processing in IBM SPSS 25

For a better analysis of the order of influence of the independent variables, we have made Table 5 where we can observe the coefficients of the models.

Table 5. Values of coefficients for models - performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1 Producers	(Constant)	-24180452,229	9842435,774		-2,457	,015
	Expenditure	,510	,043	,508	11,891	,000
	Total capital	,243	,033	,823	7,406	,000

DOI: 10.4316/EJAFB.2022.10113

Volume **10** / 2022 ISSN 2344-102X
Issue 1 / **February** 2022 ISSN-L 2344-102X

	Fixed assets total	-,101	,037	-,328	-2,735	,007
	Receivables	-,021	,048	-,008	-,436	,663
	House accounts	,228	,099	,041	2,290	,023
	Liabilities	,182	,046	,123	3,983	,000
	Average number of employees	-786,668	11989,707	-,002	-,066	,948
2 Distributors	(Constant)	2281410,368	4381254,937		,521	,604
	Expenditure	,811	,027	,866	30,152	,000
	Total capital	,076	,053	,260	1,438	,153
	Fixed assets total	,028	,038	,119	,731	,466
	Receivables	,077	,139	,026	,555	,580
	House accounts	-,097	,047	-,138	-2,068	,041
	Liabilities	-,256	,061	-,280	-4,217	,000
	Average number of employees	34917,100	7458,944	,098	4,681	,000

Source: Processing in IBM SPSS 25

According to the table that can be seen above, we constructed the equations of the two multiple linear regression models. This resulted in the following equations:

- The equation for the model of electricity producing businesses

*Turnover = -24180452,229 + 0,510 * Expenses + 0,243 * Total capital - 0,101 * Total fixed assets - 0,021 * Receivables + 0,228 * Cash + 0,182 * Debts - 786,668 * Average number of employees + ε*

- Equation for the model of electricity distribution businesses

*Turnover = 2281410,368 + 0,811 * Expenditure + 0,076 * Total capital + 0,028 * Total fixed assets + 0,077 * Receivables- 0,097 * Cash and cash equivalents - 0,256 * Debts+34917,100 * Average number of employees + ε*

The interpretation of the two econometric multiple linear regression models provides us with information on how Expenses, Total Capital, Total Fixed Assets, Receivables, House Accounts, Debts, Average Number of Employees influence Turnover, i.e. the performance of these entities. Therefore, in Table 6 it can be seen the order of influence of the independent variables used in the models and how they influence the dependent variable (turnover).

Table 6. Type of influence of variables - performance models

Influence of variables (in descending order)	**Producers**		**Distributors**	
	1. Expenditure	Positive	1. Expenditure	Positive
	2. Total capital	Positive	2. Average number of employees	Positive
	3. Debts	Positive	3. Debts	Negative
	4. Fixed assets total	Negative	4. House accounts	Negative
	5. House accounts	Positive	5. Total equity	Positive
	6. Receivables	Negative	6. Fixed assets total	Positive
	7. Average number of employees	Negative	7. Receivables	Positive

Source: Own processing

As can be seen from the table above, for both models the strongest influence on turnover is exerted by the business expenditure variable and the type of influence is positive, i.e. when business expenditure increases turnover increases with it. This influence can be explained by the fact that when companies in this sector incur

DOI: 10.4316/EJAFB.2022.10113

Volume **10** / 2022 ISSN 2344-102X
Issue 1 / **February** 2022 ISSN-L 2344-102X

expenditure as a result of carrying out operating activity, turnover will also increase, i.e. the activity is carried out in an efficient way.

The second most influential variable for electricity producers is total (own) capital, and for distributors the average number of employees. Both influences are positive. The significant influence on generators of equity capital can be explained by the fact that it represents their expansion and available resources, which are extremely important for power generators. In contrast, we observe that for distributors the next most influential variable after expenditure is the average number of employees. This means that the human resource is very important for distributors in increasing their turnover, which is normal when we consider that they are in charge of energy distribution all over Romania. Also, this difference in the order of influence of variables between electricity producers and distributors on performance shows that although they have a similar scope of activity, turnover is influenced in a very different way. These results are particularly important for the top management of companies in the field under analysis, as they reveal the type of influence that various economic indicators have on economic performance.

The next dependent variable with a significant influence on performance is the variable representing the debt of enterprises. However, the influence of this variable is positive for generators and negative for electricity distributors. Thus, debt positively affects generators because when companies in this sector borrow to increase their capital supply, they use it efficiently, unlike electricity distributors for whom debt negatively influences turnover, which indicates that the latter do not use loans efficiently.

The 4th variable in order of influence on turnover is fixed assets for generators and cash on accounts for distributors. The reason why fixed assets have a significant influence on generators is that they use fixed assets in the actual production of energy which translates into a higher turnover as a result of selling energy. On the other hand, for distributors cash seems to be more important than fixed assets.

The least influence is the number of employees for producers (which negatively affects turnover, indicating that producers do not need human resources at the moment, which negatively affects performance) and receivables for distributors (which of course have a positive influence on performance, as receivables are actually future receipts).

We consider these results particularly important for senior management of electricity companies (generators and distributors) as it can support them in making strategic decisions. In the next sub-chapter we will analyse the economic sustainability of companies.

Business sustainability analysis

As in the case of the models obtained for the performance of the enterprises that had turnover as the dependent variable, this time we have carried out two econometric models (for manufacturers and distributors) that focused on their economic sustainability. Thus, for the analysis of economic sustainability, we used general solvency as the dependent variable in these models. Information on the models can be seen in the table 7.

Table 7. Econometric model - manufacturers, distributors

Model	R	R square	Adjusted Square	Std. Error of the Estimate	Durbin-Watson
3 - Producers	,827a	,729	,521	16,838468824475930	,619
4 - Distributors	,851a	,723	,710	21,799977215211100	1,335
a. Predictors: (Constant), Average number of employees, ROE, Overall liquidity, ROA, Receivables, Debts					
b. Dependent Variable: Overall Solvency					

Source: Processing in IBM SPSS 25

As we can see in the tables, there is a strong correlation between the variables of the models, with both coefficients (correlation and determination) having values above 70%, which means that the dependent variable (overall solvency) used in these models is influenced by the following independent variables: ROE, ROA, overall liquidity, receivables, debts, average number of employees. The models can also be accepted econometrically, given the values of the F-test and the SIG coefficient in the table 8.

Table 8. Anova - economic sustainability models

Model	Sum of Squares	Df	Mean of Squares	F	Sig.
3	107412,649	6	17902,108	63,139	,000[b]
4	151647,164	6	25274,527	53,183	,000[b]

Source: Processing in IBM SPSS 25

DOI: 10.4316/EJAFB.2022.10113

Volume **10** / 2022 ISSN 2344-102X
Issue 1 / **February** 2022 ISSN-L 2344-102X

Thus, the Sig coefficient is less than 0.05 which gives both models a confidence level of over 95% and the F-test value is high. Taking these aspects into account, we can accept the models econometrically. Next we will study the order of influence of the variables for overall solvency as well as the type of influence exerted by them. The situation of the coefficients of the models can be seen in Table 9.

Table 9. Coefficient values for the models - sustainability

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
3 Producers	(Constant)	7,022	1,127		6,228	,000
	ROE	,014	,076	,007	,188	,851
	ROA	-1,200	3,883	-,012	-,309	,757
	Overall Liquidity	1,650	,092	,696	18,014	,000
	Receivables	1,113E-8	,000	,141	2,745	,006
	Liabilities	-1,134E-8	,000	-,248	-3,484	,001
	Average number of employees	,001	,001	,123	2,161	,031
4 Distributors	(Constant)	-4,506	2,554		-1,764	,080
	ROE	-,295	1,855	-,008	-,159	,874
	ROA	-1,084	4,194	-,012	-,258	,797
	Overall Liquidity	4,879	,274	,853	17,794	,000
	Receivables	-1,428E-8	,000	-,043	-,483	,630
	Liabilities	5,165E-9	,000	,050	,430	,668
	Average number of employees	,001	,004	,019	,218	,828

Source: Processing in IBM SPSS 25

According to the table that can be seen above, we can construct the equations of the two multiple linear regression models. This resulted in the following equations:

- The equation for the model of electricity producing firms

*Overall solvency = 7.022+ 0.014 * ROE- 1.200 * ROA + 1.650 * General Liquidity+1.113E-8 * Receivables-1.134E-8*Liabilities+0.001 * Average number of employees+ ε*

- Equation for the model of electricity distribution companies

*Overall solvency=-4.506- 0.295 * ROE- 1.084 * ROA + 4,879 * Overall Liquidity-1,428E-8 * Receivables+5,165E-9*Liabilities+0,001*Average number of employees+ ε*

The interpretation of these two multiple linear regression models from an econometric point of view provides us with information on how ROE, ROA, overall liquidity, receivables, debt and average number of employees influence the economic sustainability of the companies under analysis. The order of influence as well as the type of influence exerted on economic sustainability (overall solvency) can be seen in Table 10.

Table 10. Type of influence of variables

Influence of variables (in descending order)	Producers		Distributors	
	1.General liquidity	Positive	1.General liquidity	Positive
	2. Debts	Negative	2. Receivables	Negative
	3. Receivables	Positive	3. Debts	Positive
	4. Average number of employees	Positive	4. ROA	Negative
	5. ROA	Negative	5. Average number of employees	Positive
	6. ROE	Positive	6. ROE	Negative

Source: Own processing

Thus, the first independent variable with the greatest influence on economic sustainability is overall liquidity, both for producers and distributors. The formula used for overall liquidity was current assets/current liabilities. Of course, high liquidity will help companies to cope with unforeseen events and pay debts when they fall due, thus contributing substantially to long-term economic sustainability.

DOI: 10.4316/EJAFB.2022.10113

Volume **10** / 2022 ISSN 2344-102X
Issue 1 / **February** 2022 ISSN-L 2344-102X

The 2nd variable in order of influence on economic sustainability is the variable debts to producers (with a negative influence) and debts to distributors (negative influence). Debts negatively affect the economic sustainability of producers because a high number of debts can lead to their inability to pay (insolvency). As for distributors, they are negatively affected by debts, which means that they have difficulties in converting debts into cash (possibly due to bad paying customers). Therefore, senior management should consider these indicators which have a negative influence on the economic sustainability of companies in this sector.

The next variable that has a notable influence on the sustainability of the entities analyzed are receivables from electricity producers and payables to distributors. Both variables have a positive influence on sustainability. In terms of the influence of receivables on sustainability it is easy to understand why the increase in receivables ensures economic sustainability as they are amounts to be collected. In contrast to distributors, generators' receivables are more certain, i.e. they have a much higher certainty that they will be paid, given the nature of electricity which is essential in almost any activity carried out. As for debts, they have a positive influence on distributors because they indicate that they are investing in infrastructure, which leads to long-term sustainability.

Surprisingly the ROA and ROE performance indicators exert little influence on economic sustainability. As we can see in the model above, ROA and ROE are last in the order of influence for producers, with ROA even having a negative influence on sustainability, which should raise some questions about the profitability and resource usage of Romanian businesses. The situation is also similar for electricity distributors, with both ROE and ROA having a small influence on sustainability and affecting economic sustainability indicators negatively. Therefore, senior management should understand why an increase in performance does not necessarily translate into better sustainability, but actually affects it negatively. We note that economic indicators exert a somewhat different influence on energy producers than on distributors, and we believe that the econometric models developed in this paper can be of use to senior management in making important decisions regarding both performance and sustainability of electricity companies.

V. CONCLUSION

Every activity and event that takes place in a business has an associated cost or value and is known as a transaction. Much of this cost is associated in modern society with electricity. This is the key to the "advancement of civilization" and the evolution of human societies that depend on the transformation of energy for the benefit of mankind. Few have questioned this assumption, and the quality of civilizations' standard of living is proportional to the amount of energy society uses. The overall objective of the energy sector is to provide the conditions to meet the medium and long-term need for energy at affordable prices, appropriate to a modern market economy and living standards in terms of quality and environmental protection. As electricity is an important strategic resource, it is regulated on the electricity market at state level. Following a review of the literature we found that the electricity market in Romania has two components, the regulated and the unregulated. The participants in these markets are as follows: electricity producers, the transmission and system operator of the market, distribution operators and finally electricity suppliers.

In the last practical part of this research, we analyzed in detail the correlations and links of economic indicators with the economic performance and sustainability of businesses. Thus, we have observed the influence that certain indicators have on the performance and sustainability of the companies analyzed. Therefore, the results of the work have materialized in the realization of econometric models that highlight the economic indicators which have a significant influence on the performance and sustainability of the analyzed businesses. The correlations found that general liquidity, debt, receivables, average number of employees, rate of return on assets and equity have a significant influence. Therefore, we achieved our purpose of this paper, which is to analyze the performance and sustainability of businesses and the factors that influence them.

REFERENCES

1. Boiral, O., Henri, J. F., & Talbot, D. (2012). Modeling the impacts of corporate commitment on climate change. *Business Strategy and the Environment*, 21(8), 495-516.
2. Bourgeois III, L. J. (1981). On the measurement of organizational slack. *Academy of Management review*, 6(1), 29-39.
3. Broadstock, D. C., Managi, S., Matousek, R., & Tzeremes, N. G. (2019). Does doing "good" always translate into doing "well"? An eco-efficiency perspective. *Business Strategy and the Environment*, 28(6), 1199-1217.
4. Connors, S., Anderson-MacDonald, S., & Thomson, M. (2017). Overcoming the 'window dressing'effect: Mitigating the negative effects of inherent skepticism towards corporate social responsibility. *Journal of business ethics*, 145(3), 599-621.
5. Daniel, F., Lohrke, F. T., Fornaciari, C. J., & Turner Jr, R. A. (2004). Slack resources and firm performance: a meta-analysis. *Journal of Business Research*, 57(6), 565-574.
6. Endrikat, J., Guenther, E., & Hoppe, H. (2014). Making sense of conflicting empirical findings: A meta-analytic review of the relationship between corporate environmental and financial performance. *European Management Journal*, 32(5), 735-751.

DOI: 10.4316/EJAFB.2022.10113

Volume **10** / 2022 ISSN 2344-102X
Issue 1 / **February** 2022 ISSN-L 2344-102X

7. Fatemi, A., Glaum, M., și Kaiser, S. (2018). ESG performance and firm value: The moderating role of disclosure. *Global Finance Journal*, 38, 45-64.
8. Freeman, R.E. (2010). *Strategic Management: A Stakeholder Approach*; Pitman: Boston, MA, USA.
9. Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: aggregated evidence from more than 2000 empirical studies. *Journal of sustainable finance & investment*, 5(4), 210-233.
10. Hart, S. L. (1995). A natural-resource-based view of the firm. *Academy of management review*, 20(4), 986-1014.
11. Hart, S. L., & Dowell, G. (2011). Invited editorial: A natural-resource-based view of the firm: Fifteen years after. *Journal of management*, 37(5), 1464-1479.
12. Kock, C. J., Santalo, J., & Diestre, L. (2012). Corporate governance and the environment: what type of governance creates greener companies?. *Journal of Management Studies*, 49(3), 492-514.
13. Mezher, T., Tabbara, S., și Al-Hosany, N. (2010). An overview of CSR in the renewable energy sector: Examples from the Masdar Initiative in Abu Dhabi. *Management of Environmental Quality: An International Journal*.
14. Mihăilă, M.N. (2017). *Impact of costs on the decision-making process in the electricity supply sector*, University of Craiova.
15. Nollet, J., Filis, G., & Mitrokostas, E. (2016). Corporate social responsibility and financial performance: A non-linear and disaggregated approach. *Economic Modelling*, 52, 400-407.
16. Perramon, J., Alonso-Almeida, M. D. M., Llach, J., și Bagur-Femenías, L. (2014). Green practices in restaurants: Impact on firm performance. *Operations Management Research*, 7(1), 2-12.
17. Sathaye, J., Lecocq, F., Masanet, E., Najam, A., Schaeffer, R., Swart, R., & Winkler, H. (2009). Opportunities to change development pathways toward lower greenhouse gas emissions through energy efficiency. *Energy Efficiency*, 2(4), 317-337.
18. Surroca, J., Tribó, J. A., & Waddock, S. (2010). Corporate responsibility and financial performance: The role of intangible resources. *Strategic management journal*, 31(5), 463-490.
19. Tzouvanas, P., Kizys, R., Chatziantoniou, I., & Sagitova, R. (2020). Environmental disclosure and idiosyncratic risk in the European manufacturing sector. *Energy Economics*, 87, 104715.
20. Weber, O. (2014). The financial sector's impact on sustainable development. *Journal of Sustainable Finance & Investment*, 4(1), 1-8.

DOI: 10.4316/EJAFB.2022.10113