

A Scientific Quarterly Refereed Journal Issued by Lebanese French University – Erbil, Kurdistan, Iraq Vol. (7), No (4), Winter 2022

ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

The Impact of Environmental Accounting on Financial Performance:

Evidence from Oil Companies in IRAQ

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ARTICLE INFO

Article History:

Received: 21/7/2022 Accepted: 8/9/2022 Published: Winter 2022

Keywords:

Environmental Accounting, Environmental Costs, Financial Performance, Oil Companies and Environmental pollution.

Doi: 10.25212/lfu.qzj.7.4.45

ABSTRACT

Environmental Accounting is an emerging concept in Iraq. Therefore, this study examines the theoretical framework for the concept and aimed to investigate the impact of environmental cost accounting on the financial performance of oil companies in Iraq. The research used only secondary data over a ten-year period (2010-2020). The time-series data were collected from the financial statements of selected oil companies that are operating in Iraq under licences granted by the Ministry of Oil in Baghdad. The statistical tool used for data analysis is the EViews version 10. and analyzed using regression analysis. The statistical analysis results indicate that the three environmental cost variables have an impact on the financial performance of oil companies which was measured by ROA. The study recommended that the environmental performance of the firms should be considered one of the important axes in evaluating their performance. Thus, work to issue laws, regulations and instructions that require firms to abide by international standards related to the protection of the environment and society from pollution.

1. Introduction

The concept of environmental accounting has many meanings and uses. Environmental accounting can sustain national income, financial performance, or



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ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

internal managerial accounting in companies. This study focuses on the application of environmental accounting as a tool for internal business decisions and its effect on financial performance. Environmental costs are one of the many different types of costs firms incur as they provide products and services to stakeholders. Environmental performance is one of the many important measures of firm performance. Environmental accounting has developed into a significant area of accounting in recent years due to the severity of environmental contamination and the growing concern among stakeholders. However, there is not a widespread focus on the manner and recognition of environmental accounting. Legal authorities, organizations that create standards, and other regulators are unable to agree on the conceptual underpinnings of environmental accounting and its disclosure. As a result, such disclosure is not required but rather optional and does not have a set style or structure. As time goes on, more rules are emerging in tailored formats, which might help us arrive at a standard structure for accounting for environmental-related expenditures and reporting them in financial statements. However, the social responsibility and commitment of the organizations that act as powerful agents for environmental pollution govern such disclosure. The promotion of sustainable economic growth and the rise in environmental consciousness throughout the world are focusing businesses' attention on environmental sensitivity. The pursuit of sustainability has led to the establishment of several international organizations that have established diverse conventions to govern how people interact with the environment. These criteria are encouraging businesses to recognize the potential of their strategic social positions to shape behavior and change the status of the physical, social, and economic environments. Therefore, many businesses, particularly oil firms in underdeveloped nations like Iraq, act in a way that indicates they can accomplish their goals even if they disregard their social and environmental responsibilities. Oil Environmental degradation issues include the loss of the aesthetic values of natural beaches due to unsightly oil slicks; damage to marine wildlife; modification of the ecosystem through species elimination and the delay in biota (fauna and flora) succession; and decrease in fishery resources. Pollution from spills, oil well blow-outs, oil ballast discharges, and improper disposal of drilling mud from petroleum prospecting and other production waste. As environmental conservation



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efforts continue to grow, a growing number of businesses and other organizations are establishing their environmental strategies and creating commercial ventures that regard the environment. These ecologically responsible company operations include efforts in environmental accounting. Environmental expenses are disclosed in environmental reports and are utilized externally as well as internally by businesses and other organizations. The physical and intangible costs of land and ecosystem degradation and destruction, as well as air and water pollution, have been or will have to be paid by society (Ghali, B. A. A., & Habeeb, L. M., 2018). According to Ezeagba et al. (2017), environmental costs are the effects that people, organizations, or society suffer as a consequence of things that have an influence on the environment. They are any direct or intangible costs that have an impact on the company's finances in the short or long term. These costs cover handling, treating, and disposing of waste and emissions, remediation and compensation costs for environmental harm, and any control-related regulatory compliance costs, such as equipment depreciation, operating materials, water use, and energy, internal staffing, outside services, fees, taxes, and permits, fines, insurance, and remediation and compensation. According to the US Environmental Protection Agency, environmental expenditures also include the cost of following environmental rules. The expense of environmental restoration, pollution control technology, and non-compliance penalties were specifically mentioned. Furthermore, according to Abubakar (2010), given what is known about environmental degradation, environmental costs could be said to include the price of halting degradation, the price of returning the environment to its pre-degradation state, the price of forcing people to halt degradation or to restore the environment to its pre-degradation state, or a combination of the above. The non-torching of reserves with recurring costs is necessary for profit calculation. The cost of environmental changes and the resulting human unhappiness are often either not taken into account at all or are guantified incorrectly. Most often, the result of this is the reporting of incorrect and often excessive earnings. By factoring in the environmental impact of production in the calculation of the overall cost of production, environmental cost accounting goes beyond the principles of traditional cost determination. It is "an integrated method that explores the interactions among accounting, the environment, managerial information, decision making, and

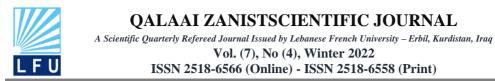


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responsibility" (Environmental Protection Agency, 1995). Environmental cost accounting advocates argue that effective environmental consideration will lead to enhanced company performance, improved environmental performance, and considerable benefits to human health. It is possible for individuals using this information to understand the company's position on environmental conservation and how it particularly addresses environmental concerns by providing environmental accounting information as one of the primary components in an environmental report. Therefore, in order for environmental costs accounting to be a sustainable company practice, it should result in advantages. A company shouldn't continue with a strategy that results in negative cash flow (Jorgenson et. al., 2010). Therefore, for environmental costs accounting to be viable, there must be financial advantages. In order to determine the impact of environmental spending on the performance of oil companies in Iraq, this paper will provide a basis for corporate investment decision-making and contribute to the global literature on environmental costs accounting in annual reports from the perspective of African countries. It is vital for Iragi firms to follow the current trend in accounting for environmental expenses at the corporate level. Though there would not be a favorable economic return, could these businesses continue with environmental costs accounting in such a difficult business environment? It is crucial to think about if using environmental accounting methods would help the business succeed. Consequently, if environmental accounting techniques enhance business success. There is a gap between prior studies on environmental accounting disclosure and the impact of such disclosures on firm performance in Iraq because they were exploratory and descriptive in nature and primarily focused on discussing the environmental phenomenon from a gualitative perspective (not empirical). Therefore, the issue this research attempts to solve is to objectively determine if the environmental expenses incurred by Iragi oil corporations have any effect on those businesses' performance. The performance of listed Iragi oil corporations is examined in the research in relation to environmental expenses. With this goal in mind, it is hypothesized that environmental expenses have little to no impact on how well Irag's listed oil corporations operate.

This research focuses on Iraqi oil and gas firms that are known to have significantly harmed the environment. To be clear, the issue is that the Iraqi business environment



still relies on traditional accounting techniques rather than recognizing and designing environmental accounting for environmental information and issues of raw materials, energy consumption, and use of natural resources that have steadily depleted the environment. This increases the study's applicability.

1.1 Statement of the Problem

The problem of mishandling of natural resources and environmental degradation has become one of the biggest problems facing developing countries. Therefore, the Iraqi oil industry was examined in this study because it has many environmental problems and the majority of the companies in this sector are multinationals and have long embraced environmental accounting methods. According to the World Bank, Iraq is rated 165th out of 185 nations in terms of "ease of doing business." Additionally, the nation's public sector does badly in providing its services by oil revenue, as seen by its ranking of 169th out of 176 nations in Transparency International's 2012 Corruption Perception Index (Al-Tameemi & Alshawi, 2014). Also, Irag scored 23 points out of 100 on the 2021 Corruption Perceptions Index reported by Transparency International¹. However, lack of determination and measurement of environmental costs, including conventional costs, potentially hidden costs, contingent costs, image and relationship costs, as well as social costs using an environmental accounting system, as well as the prevalence of low environmental awareness, are factors in Iraq that led to decreasing financial performance (Yaacoub & Dhairab, 2017). According to research, environmental disclosures in a sufficient amount and compliance with corporate environmental rules may have a positive and considerable impact on financial performance (Nwaiwu & Oluka, 2018; Okoye, Ebubechukkwu & Agweda, 2016).

1.2 Research Objectives

The main goal of the study is to determine how environmental expenses affect the financial performance of oil companies in Iraq. The following are the research's objectives:

1. Analyzing the financial impact of environmental costs on Iraqi oil companies.

¹) <u>https://tradingeconomics.com/iraq/corruption-index</u>.



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2. Determining how possible discloser environmental costs affect the financial performance of Iraqi oil companies.

2. Theoretical Framework & Literature Review

This section describes earlier pertinent research by other researchers who have worked in the same area. It includes viewpoints, characteristics, study findings, and related conclusions from earlier research conducted by others.

2.1 Environmental Cost

Environmental accounting aids companies in keeping disclosure of all environmental costs spent by the company. Environmental accounting also enables businesses to advertise their environmental friendliness to the public. Cost of the environment The US Environmental Protection Agency (EPA) defined "green accounting" or "environmental accounting" as the identification and assessment of the costs of environmental materials and activities in order to aid management in making choices on environmental issues in 1995. Such accounting is done to find and then address the negative environmental effects of a company's operations and systems (Ezejiofor, Racheal & Eucharia, 2016). According to the EPA (1995), environmental pollution fines are charges that have direct financial consequences on a company's overall performance (internal costs) as well as on individuals, society, and the environmental costs as well as its dimensions, however, served as the foundation for the primary term employed in this research.

2.2 Financial performance

The financial evaluation of a company's activities and policies is known as financial performance. It often assesses a company's overall financial health over a certain time period and may be used to compare comparable businesses in the same sector, industry, or group of industries (Kinyua, Gakure, Gekara & Orwa, 2015; Al-Waeli, Hanoon, Ageeb & Idan, 2020). The firm's return on investment (ROI), return on assets (ROA), and return on sales (ROS), which are all arbitrary measures of how well the company can use its key assets to generate money, may all be used to determine



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financial performance (Zulkiflimokhtar, 2006; Harash, Al-Tamimi & Al-Timimi, 2014). A short literature review on environmental costs and CFP is included in the section that follows. The financial performance of Iraqi banks is impacted by internal audits done in compliance with the Institute of Internal Auditors' rules, According to Fatah, N. & et al. (2021). According to a prior research by the International Monetary Fund (IMF) (2000), changes in crude oil prices have an impact on monetary policies that influence financial markets, corporate profitability, economic activity, and inflation. The asset price on the stock market reflects both recent and upcoming information about a company's economic health (Birnland, 2008, p. 6). Additionally, Birnland claims in his research (2008, p. 6) that the present discounted value of a company's future net profits is used to compute asset valuations. As a result, the cash flows account for both the immediate and long-term effects of crude oil price fluctuations. However, it seems that there are other factors than merely crude oil price fluctuations that have an impact on economic activity. Regarding Europe, Mohanty et al. (2010) examined the correlation between the price of crude oil and the stock returns of oil producers in Central and Eastern Europe (CEE), and they discovered that there was no meaningful connection between the two variables between 1998 and 2010. After two years, Lameira et al. (2012, p. 5) present data that "between 2005 and 2009 have allowed to infer that the oil and gas sector has the highest profitability among energy companies located in the Eurozone." Their research supports Ramos & Veiga's conclusions (2013). "It is not fair to assume large variances in performance of energy firms owing to their location," they add (Lameira et al., 2012, p. 5). The price of crude oil is not a variable in Lameira et almathematical .'s model, however. In fact, their research contrasted the sectors of the energy business (Electricity sector, Oil & Gas sector and holding companies).

2.3 Related studies

Studies conducted in the past, both inside and outside of Iraq, including Ghali, B. A. A., & Habeeb, L. M. (2018) and Tsoutsoura (2004). found varying degrees of evidence supporting a relationship between environmental spending and firm performance. Numerous writers, accounting organizations, and academics have studied the challenges surrounding environmental expenditures and come to the conclusion that



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environmental expenditure accounting and disclosures are crucial for both internal and external users (depending on various purposes) (Larojan et al, 2014). The usefulness of environmental or social disclosures to investors (Okafor, 2018; and O'Donovan, 2002) and the results produced are mixed are some of the objectives that served as the foundation for their investigation, the inadequate and variable quality of environmental disclosures (United Nations 1992; Al-Waeli et al., 2020; and Grav, 2000); According to certain research (Schaltegger, S., & Wagner, M., 2005), there is a link between stock price movement and environmental information, but not in others; Studies on the dependability of social and environmental disclosures in annual reports (Pandey & Kumar, 2016; Erhinyoja, E. F., & Marcella, E. C., 2019) have not found them to be accurate indicators of corporate success. Numerous studies have been conducted in various nations to analyze company environmental performance from various angles. Owolabi (2006) looked examined how much environmental expenses were included into oil and gas accounting in Iraq. His analysis found a high degree of stakeholder knowledge of environmental concerns and a favorable attitude toward environmental cost and responsibility. In relation to the risks brought on by oil and gas operations in Iraq, Osemene (2007) looked at a few accounting, financial, and environmental difficulties. The research showed that there are still significant obstacles with regard to financial and environmental accounting. She pointed up issues with underreporting charges and the inability to allocate expenses to each of the environmental elements. Environmental disclosure is discussed from the theoretical viewpoints of decision-usefulness studies, economics-based theories like Positive Accounting Theory, and political economy theories. The political economy theories, such as stakeholder and legitimacy theories, go beyond shareholders' wealth maximization, making them more helpful than economics-based theories.

The relationship between corporate environmental performance and economic performance has been studied by a number of scholars (Okoye, et. al., 2016; Setiawan, & Honesty, 2021). These research' findings are not conclusive. Their results suggest that while the connection is anticipated to be beneficial in the long run, it is predicted to be negative in the short term. Results as a whole clearly imply that environmental disclosure is multidimensional and motivated by complementing pressures (Cormier et al, 2005). The impact of environmental investments on investment choices was



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researched by Clause and Rikhardsson. The findings imply that publication of environmental information affects judgments about investment allocation. According to this result, businesses that are indifferent to their environmental costs may eventually see drops in their stock price if investors rationally predict the firm's future worth based on its current level of environmental expenses. Investors, on the other hand, believe that the crisis is limiting economic activity and earnings. (Abdullah, H., & Fatah, N., 2020). Enahoro (2009) came to the conclusion that environmental costs are not billed separately from other costs, that there is no cost accounting system for tracking externality costs, that environmental costs have no bearing on company performance in that country.

Environmental concerns are perceived differently than they are really performed. For instance, there may be discrepancies between managers' and accountants' perceptions of environmental issues and management and actual firm performance, according to Setiawan & Honesty (2021) and Owolabi (2006). This is primarily due to how much managers and accountants perceive the costs and liabilities associated with environmental preservation. In addition to the gaps, no prior study has examined the connection between environmental accounting disclosure and business financial performance in the Iraqi oil industry; this research is a modest effort to address that void. According to O'Donovan (2002), legitimacy theory is perhaps a more likely explanation for the rise in environmental disclosures from the early 1980s. Al-Mawali, 2021; Walden and Schwartz, 2003; Hooghienstra, 2000; and Wilmshurst and Frost, 2000 are some more academics that concur with the dominance of legitimacy theory as a more thorough explanation to corporate social and environmental reporting. Stakeholder theory (Guthrie and Parker, 1990; Roberts, 1992; and Roberts and Mahoney, 2004), institutional theory (Cormier et al, 2005; Nwaiwu, N. J., & Oluka, N. O., 2018), and resource dependence theory are additional theories that offer a strong theoretical foundation to support the value of social and environmental accounting research. The value systems of organizations and those of society are in conflict with one another. Legitimacy is present at the organizational level when the value systems of the organization and society are in agreement. In contrast to legitimacy theory, institutional theory describes how social expectations are satisfied and attained via

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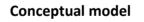
the institutionalization of norms and regulations. There should be some kind of code of conduct to establish, uphold, and sustain social standards and therefore foster a productive organization-society relationship.

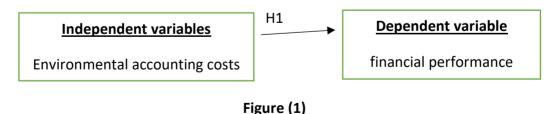
The theory of resource dependency is concerned with how organizations use the environment to get resources. Because organizations rely on both themselves and the environment, this perspective is crucial. Stakeholder theory focuses on how organizations resolve the many and often contradictory demands of various stakeholders. Due of the varied impacts that many stakeholders have on organizations, this is increasingly important. Cost benefit analysis (CBA) is a method for comparing all costs and advantages associated with various courses of action. Many believe that the cost-benefit analysis paradigm may be used to better accurately assess all environmental resources and environmental choices. For example, it will be necessary to offer estimates of the costs and benefits associated with carrying out the steps necessary to preserve the endangered species.

Hypotheses of study and Conceptual model

The hypothesis created as a result of the literature study is as follows:

H1: Environmental accounting costs have a significant impact on the financial performance of oil companies in Iraq.





3. Methodology

The research used only secondary data over a ten-year period (2010-2020). The timeseries data were collected from the financial statements of selected oil companies



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that are operating in Iraq under licences granted by the Ministry of Oil in Baghdad². The cost of environmental remediation and pollution control, the cost of environmental law compliance and penalties, donations and charitable contributions, epresented environmental costs. Furthermore, firm performance is measured by return on asset. The statistical tool used for data analysis is the EViews version 10, and analyzed using regression analysis.

3.1 Model Specification and Variables Measurement

The model employs one dependent variable, represented by Return on Assets (ROA), and three independent variables: Cost of Environmental Remediation and Pollution Control (ERPC), Cost of Environmental Laws Compliance and Penalty (ELCP), and Donations and Charitable Contributions (DCC) [ROA=f(ERPC+ELCP+DCC)]. The model uses a linear regression equation to assess the study's hypothesis.

 $ROA = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + e$

Where:

ROA = Return on Asset

 $\beta 0 = Intercept$

 β 1-3 = Coefficient of the independent variables

X1 = ERPC (Measured by Total Cost of Environmental Remediation and Pollution Control)

X2=ELCP (Measured by Total Cost of Complying with Environmental Laws and non-Compliance Penalty)

X3 = DCC (Measured by Total Donations and Charitable Contributions)

e = Residual or error term

3.2 population and sample

The population of the study includes oil companies operating in Iraq, and because it contains huge data, therefore the researchers selected five companies as a sample, which are: (CNOOC), ExxonMobil, Gazprom, Rosneft and (TPAO).

² Available on: <u>https://www.iraq-businessnews.com/list-of-international-oil-companies-in-iraq/</u>



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4. Results and Discussion

Two parts are used to show the findings. The first section presents some basic data from the study's sample of quoted oil firms. In Section 2, the regression findings are shown.

4.1 Basic Sample Statistics

The sample descriptive statistic is first presented in table 1, while the regression results are presented in table 3.

Variable	Mean	Std.Dev	Minimum	Maximum	Probability
ERPC	4.81	8633.16	12.27000	141.4700	0.000000
ELCP	3.11	73267.2	382.7000	1041.200	0.013273
DCC	4.44	1164.20	275720.5	1180148.6	0.040022

Table 1 Sample Descriptive Statistics (2010-2020 data)

Source: Researcher's Result Using EViews 10.

Environmental Remediation and Pollution Control, Environmental Laws Compliance and Penalty, and Donations and Charitable Contributions had respective mean values of 4.81, 3.11, and 4.44 over the research period, as shown in Table 1. Environmental Remediation and Pollution Control has the highest standard deviation of 8633.16, indicating its low contribution to the Quoted oil companies' performance model, as confirmed by the significant value of t-statistics in the coefficient table, whereas Donations and Charitable Contributions has the lowest standard deviation, indicating its greater significance to the study's model. This is supported by the fact that Environmental Remediation and Pollution Control has the greatest mean while DCC has the lowest mean. Finally, as shown in the table 1, no variable is normally distributed.

4.2 Environmental Costs and Return on Asset of Oil Companies in Iraq

The conclusions of OLS regarding the impact of environmental costs on the performance of Iraqi-listed oil firms are addressed. Environmental Remediation and Pollution Control, Environmental Laws Compliance and Penalty, and Donations and Charitable Contributions used as surrogates for environmental expenses in the



research. As a performance proxy, the research also used Return on Asset, calculated as net profit as a percentage of net assets value.

The regression results are presented in table 2 below.

Environmental costs Variables	Firm Performance (ROA)	
Intercept	5.65	
	(0.000)	
ERPC	0.004	
	(2.90)	
ELCP	0.028	
	(1.67)	
DCC	0.001	
	(4.89)	
R	0.88	
R ²	0.82	
Adj. R ²	0.76	
F. Sig.	0.002	
Durbin Watson	2.60	

Table 2: Environmental Costs and Performance of Quoted Oil Companies in Iraq

Source: Regression Result Using EViews 10.

The estimated relationship for the model is:

ROA =-5.65 + 2.90 (ERPC) + 1.67 (ELCP) + 4.89(DCC)

The model suggests that the three environmental cost variables have a considerable impact on the performance of oil companies as measured by ROA. Thus, ERPC and DCC are important at the 1% level of significance for performance, and ELCP is significant at the 5% level. The implication of these results is that the more money Iraqi oil companies spent on handling, treatment, and disposal of waste and emissions, remediation and compensation related to environmental damage; and any control related regulatory compliance costs; such as equipment depreciation, operating materials, water and energy, internal personnel, external services, fees, taxes, permits, fines, insurance, and remediation and compensation; the better their performance. A Durbin-Watson statistic of 2.60 implies that there is no serial correlation.



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The findings give sufficient evidence to support the premise that environmental costs have a substantial impact on the performance of Iraqi-listed oil corporations. In the model's summary of regression results, the combined influence of environmental spending proxies on the performance of Iraqi Oil Companies is indicated. The overall correlation between the dependent and independent variables of the research is 88%, indicating a high positive correlation that is statistically significant at the 5% level. While the R2 value of 0.82 indicates that environmental expenses account for 82 percent of the performance of listed Iraqi oil firms, the remaining 18 percent is accounted for by other variables.

Conclusion

In accordance with the results of this research, it can be inferred that spending on environmental initiatives increases the performance of Iraqi oil firms that are publicly traded. The management of oil firms should enhance their involvement in environmental concerns within their host communities in order to have a greater impact on them, hence enhancing the performance of their particular enterprises and the performance of their employees.

Recommendation

The study recommended that companies should adopt a unified method for reporting and disclosing environmental issues in order to control them. However, the study concluded with some suggestions, that the environmental performance of the firms should be considered one of the important axes in evaluating its performance, given that the quality of environmental performance fundamentally affects the rest of the other aspects of its balanced performance, and work to issue laws, regulations and instructions that require economic institutions to abide by international standards related to the protection of the environment and society from pollution. This is in addition to increasing public awareness of environmental issues among all interested parties, through the keenness of the concerned government bodies and ministries and NGOs to inform the community about the environment and the environmental effects related to institutions.



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References

- Abdullah, H., & Fatah, N. (2020). The effect of the COVID-19 pandemic on capital stock gains: evidence of large stock exchanges. In Third scientific international conference of Al-Mustansiriyah University, Baghdad.
- Al-Mawali, H. (2021). Environmental cost accounting and financial performance: The mediating role of environmental performance. *Accounting*, 7(3), 535-544.
- Al-Waeli, A. J., Ismail, Z., & Khalid, A. A. (2020). The Impact of Environmental Costs on the Financial Performance of Industrial Companies in Iraq. *International Journal of Management (IJM)*, 11(10), 1955-1969.
- Cormier D., Magnan M. & Van Velthoven B. (2005), Environmental Disclosure Quality in Large German Companies: Economic Incentives, Public Pressures or Institutional Conditions? European Accounting Review, Vol. 14, No.1, 3-39
- Enahoro J. A (2009). Design and Bases of Environmental Accounting in Oil & Gas and manufacturing Sectors in Iraq, unpublished PhD. Dissertation, Covenant University Ota, Iraq.
- Erhinyoja, E. F., & Marcella, E. C. (2019). Corporate social sustainability reporting and financial performance of oil and gas industry in Nigeria. *International Journal of Accounting, Finance and Risk Management*, 4(2), 44.
- Ezeagba, C. E., John-Akamelu, R. C., & Umeoduagu, C. (2017). Environmental accounting disclosures and financial performance: A study of selected food and beverage companies in Nigeria (2006-2015). *International Journal of Academic Research in Business and Social Sciences*, 7(9), 162-174.
- Fatah, N. A., Hamad, H. A., & Qader, K. S. (2021). The Role of Internal Audit on Financial Performance Under IIA Standards: A Survey Study of Selected Iraqi Banks. QALAAI ZANIST SCIENTIFIC JOURNAL, 6(2), 1028-1048.
- Ghali, B. A. A., & Habeeb, L. M. (2018). The relationship between information technology and strategic knowledge management and their impact on the financial performance of Iraqi companies. *Academy of Strategic Management Journal*, *17*(5), 1-19.
- Gray R. (2000), Current Developments and Trends in Social and Environmental Auditing, Reporting and Attestation: A Review and Comment, International Journal of Auditing, Vol. 4, 247-268



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Vol. (7), No (4), Winter 2022 ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

- Hooghienstra R. (2000), Corporate Communication Impression Management New Perspectives Why Companies Engage in Corporate Social Reporting, Journal of Business Ethics, Vol. 27 55-68
- Howes, R. (2013). Environmental Cost Accounting: Coming of Age? Tracking organizational performance towards environmental sustainability. In *The Triple Bottom Line* (pp. 121-134). Routledge.
- Jorgenson, A. K., Rice, J., & Clark, B. (2010). Cities, slums, and energy consumption in less developed countries, 1990 to 2005. *Organization & Environment*, 23(2), 189-204.
- Larojan, C., Thevaruban, J. S., Larojan, C., & Thevaruban, J. S. (2014, February). Impact of environmental management accounting practices on financial performance of listed manufacturing companies in Sri Lanka. In *Proceedings of the 3rd International Conference on Management and Economics* (Vol. 26, p. 27).
- M. Tsoutsoura (2004) "Corporate social responsibility financial performance." Center for Responsibility Business. Working paper series, paper 7. Retrieved: 22 August 2007 from: http://repositories.cdlib.org/crb/wps/7.
- Nwaiwu, N. J., & Oluka, N. O. (2018). Environmental cost disclosure and financial performance of oil and gas in Nigeria. *International Journal of Advanced Academic Research*, *4*(2), 1-23.
- O'Donovan G. (2002), Environmental Disclosures in the Annual Report: Extending the Applicability and the Predictive Power of Legitimacy Theory, Accounting, Auditing & Accountability Journal, Vol. 15, No. 3 344-371
- Okafor, T. G. (2018). Environmental costs accounting and reporting on firm financial performance: A survey of quoted Nigerian oil companies. *International Journal of Finance and Accounting*, 7(1), 1-6.
- Okoye, E. I., Ebubechukkwu, J., & Agweda, F. (2016). Effect of Non-Disclosure of Environment Cost on the Performance of Selected Firm Listed on Nigeria.
- Osemene, O.F. (2007) 'An assessment of environmental and financial accounting issues in the operations of oil and gas industries in Iraq', An unpublished seminar paper, Department of Accounting and Finance, University of Ilorin, Ilorin.
- Owolabi, A.A. (2006) 'Incorporating environmental cost into Iraq oil and gas accounting', An unpublished Doctoral thesis, Department of Management and Accounting, Obafemi Awolowo University, Ile-Ife.



A Scientific Quarterly Refereed Journal Issued by Lebanese French University – Erbil, Kurdistan, Iraq Vol. (7), No (4), Winter 2022

ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

- Pandey, S. N., & Kumar, A. (2016). Exploring the association between environmental cost and corporate financial performance: A study of selected NIFTY companies. *NMIMS Management Review*, 31, 12-21.
- Ramos, S. B., & Veiga, H. (2013). Oil price asymmetric effects: Answering the puzzle in international stock markets. Energy Economics, 38, 136-145.
- Roberts R. W. (1992), Determinants of Corporate Social Responsibility Disclosure: An Application of Stakeholder Theory, Accounting, Organizations and Society, Vol. 17, No. 6 595-612
- Roberts R. W. and Mahoney L. (2004), Stakeholders Conceptions of the Corporation: Their Meaning and Influence in Accounting Research, Business Ethics Quarterly, Vol. 14, No. 3 399-431
- Schaltegger, S., & Wagner, M. (2005). Current trends in environmental cost accounting—And its interaction with ecoefficiency performance measurement and indicators. In *Implementing environmental management accounting: status and challenges* (pp. 45-62). Springer, Dordrecht.
- Setiawan, M. A., & Honesty, F. F. (2021, June). Environmental performance, environmental costs and financial performance. In Sixth Padang International Conference On Economics Education, Economics, Business and Management, Accounting and Entrepreneurship (PICEEBA 2020) (pp. 85-88). Atlantis Press.
- United Nations (1992) Environmental Accounting, Current Issues, Abstracts and Bibliography. New York: United Nations
- Walden W.D. and Schwartz B.N.(2003), Environmental Disclosures and Public Policy Pressure, Journal of Accounting and Public Policy, Vol. 16, No. 2 125-154
- Wilmshurst T.D. & Frost G.R. (2000), Corporate Environmental Reporting: A Test of Legitimacy Theory, Accounting, Auditing & Accountability Journal, Vol. 13, No. 1 10-26'

کاریگەریی ژمێریاریی ژینگەیی لەسەر ئەدای دارایی وەرگرتنی داتای کۆمپانیاکانی نەوت له عێراق

پوخته:

ژمێرياريى ژينگەيى لە عێراقدا چەمكێكى نوێيە. بۆيە ئەم توێژينەوەيە ھەوڵدەدات لە لايەنە تيۆرىيەكەى ئەم چەمكە بكۆڵێتەوە و ئامانجى توێژەرەكان ئەوەيە؛ كاريگەريى ژمێرياريى ژينگەيى



A Scientific Quarterly Refereed Journal Issued by Lebanese French University – Erbil, Kurdistan, Iraq Vol. (7), No (4), Winter 2022 ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

لهسەر ئەداى دارايى كۆمپانياكانى نەوت لە عێراقدا بخەنەپوو. لەم توێژينەوەدا داتاى لاوەكى بۆ ماوەى 10 ساڵى كۆمپانياكانى نەوت وەرگيراون (2010-2020). بەشێوەيەك داتاكان بە ميتۆدى زنجيرە زەمەنييەكان لە پاپۆرتى دارايى ئەو كۆمپانيايانە وەرگيراون كە لەلايەن وەزارەتى نەوتى عێراقەوە مۆڵەتيان پێدراوە. دواتر؛ داتاكان بە بەرنامەى (EViews) شيكاريى كراون و گريمانەى توێژينەوەكەش تێستى چەماوەى بۆ كراوە. ئەنجامەكان دەريدەخەن، كە ھەر سى گۆپاوەكەى ژمێرياريى ژينگەيى، كاريگەرييان لەسەر ئەداى دارايى كۆمپانياكانى نەوت ھەبووە. لە كۆتاييدا توێژينەوەكە چەند پاسپاردەيەك پێشكەش دەكات؛ كە پێويستە ئەداى ژينگەيى كۆمپانياكان وەك كۆلەكەيەكى سەرەكيى ھەڵسەنگاندنى بارى دارايى لەبەرچاوبگيرێت، و دەبێت كار لەسەر دەرچواندنى ياسا و پێسا و پێنمايى بكرێت، تاكو كۆمپانياكان پابەندىن بە ستانداردە نێودەوڵەتىيەكانى پەيوەست بە پاراستنى ژينگە و كۆمەڵگە لە پيسبوون.

وشەسەرەكىيەكان: ژمێرياريى ژينگەيى، تێچووى ژينگەيى، ئەداى دارايى، كۆمپانياكانى نەوت، پيسبوونى ژينگە.

تاثير المحاسبة البيئية على الأداء المالى: أدلة من شركات النفط في العراق

الملخص:

المحاسبة البيئية مفهوم ناشئ في العراق. لذلك تبحث هذه الدراسة في الإطار النظري للمفهوم وتهدف إلى تحقق في أثر محاسبة التكاليف البيئية على الأداء المالي لشركات النفط في العراق. استخدم البحث بيانات ثانوية خلال فترة عشر سنوات (2020-2010). بحيث تم جمع بيانات السلاسل الزمنية من التقارير المالية لشركات النفط المختارة تعمل في العراق مرخصة من قبل وزارة النفط في بغداد. تم تحليل البيانات بواسطة برنامج (EViews) تم اختبار الفرضية باستخدام تحليل الانحدار. تشير نتائج التحليل الإحصائي إلى أن متغيرات التكلفة البيئية الثلاثة لها تأثير على الأداء المالي لشركات النفط والذي تم قياسه حسب العائد على الأصول (ROA). وأوصت الدراسة بضرورة اعتبار الأداء المالي لشركات النفط والذي تم قياسه حسب العائد على الأصول (ROA). وأوصت الدراسة واللوائح والتعليمات التي تلزم الشركات بالالتزام بالمعايير الدولية المتعلقة بحماية البيئة والمجتمع من التلوث.

الكلمات المفتاحية: المحاسبة البيئية ، التكاليف البيئية ، الأداء المالي ، شركات النفط ، التلوث البيئي.