

## The Impact of Environmental Pollution on Audit Quality<sup>1</sup>

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Received: 2022/04/07

Accepted: 2022/09/13

Review Paper

### INTRODUCTION

One of the most important functions of auditing is its supervisory role in the organization to balance the benefits between different stakeholder groups and prevent shareholder losses. Hence, the quality of auditing reduces conflicts and increases the quality of financial information by establishing regulatory mechanisms and gives shareholders and investors hope for the company's future and real profits. On the other hand, high quality information can have favorable consequences for companies in dealing with stakeholders and users of information. In fact, the more transparent the information provided by companies, the more successful companies will be in fulfilling their responsibilities to stakeholders and users. This procedure helps to reduce information asymmetry in the company. In addition, auditors limit managers' opportunistic behaviors and reduce earnings management due to their supervisory role (Gil et al., 2018).

In the present study, the audit fee has been used as a criterion to assess the quality of the audit. When companies do not follow the environmental model to prevent air pollution and environmental degradation, the relevant organizations put a lot of pressure on the company by committing crimes, mediating the issue, and may even use the influence of politicians to comply

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1. DOI: 10.22051/JAASCI.2022.38561.1645

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with this vital issue. Such a situation affects the time spent on the audit process and ultimately the audit fee (Chen et al., 2021). In the following, the theoretical foundations and background of the research are presented along with the hypotheses. In the following, the research methodology and how to measure the research variables are introduced, and finally, the test of hypotheses, conclusions, and research suggestions are presented.

### Research Hypotheses

Main Hypothesis: There is a significant relationship between environmental pollution and audit quality.

1-1 1: There is a significant relationship between environmental pollution and auditor independence (optional accruals).

1-2-hypothesis: There is a significant relationship between environmental pollution and audit fees.

### MATERIALS AND METHODS

The statistical population of this study includes all companies listed on the Tehran Stock Exchange for the period 1393-2017. 110 companies are selected to investigate the hypotheses.

#### Research models and variables

In order to test the first and second hypotheses, Equation 1 is used:

$$\begin{aligned} AUD (DACC \text{ or } LNFA)_{i,t} \\ = \alpha_0 + \alpha_1 AP_{i,t} + \alpha_2 ROA_{i,t} + \alpha_3 SIZE_{i,t} \\ + \alpha_4 MBV_{i,t} + \alpha_5 LEV_{i,t} + \varepsilon_{i,t} \end{aligned}$$

#### Dependent variable: Audit quality

To measure audit quality, two indicators of audit fees and discretionary accruals are used (Knuts et al., 2019; Chen et al., 2021).

**Audit Services Fee:** Audit fees, according to Deng et al.'s (2013) research, include any funds paid to the auditor or auditing firm for the provision of audit services in accordance with the agreement or contract.

**Discretionary accruals:** In this study, according to the research of Chen et al. (2011), Kotari et al. (2005) index is used to measure voluntary accruals. This is a measure of performance-adjusted optional accruals presented by Kotari et al. (2005).

$$TAccr_{i,t} = \alpha_0 + \alpha_1 (1 / Assets_{i,t-1}) + \alpha_3 \Delta Rev_{i,t} + \alpha_3 PPE_{i,t} + \alpha_4 ROA_{i,t} + \varepsilon_{i,t}$$

**Independent variable: environmental pollution**

If the company has a special program to control air pollution, it will be assigned the number 1 as a virtual variable, otherwise it will be given the number zero. Companies that get the number 0 do not have a specific plan and program to reduce air and environmental pollution (Chen et al., 2021). Air pollution information can be extracted through board reports.

**RESULTS AND DISCUSSION**

The results of testing the first hypothesis in table 1 show that there is a positive relationship (0.093) and significance (0.001) between environmental pollution and voluntary accruals. Therefore, the first hypothesis of the research is accepted. The adjusted coefficient of determination shows that about 27.7% of the changes in the dependent variable of the company's optional accruals can be explained by the independent variable of environmental pollution and other variables.

*Table 1. The relationship between environmental pollution and discretionary accrual*

Variables	Dependent Variable: Discretionary Accruals			
	Beta	t	Sig	VIF
c	-0.295	-4.298	0.000	-
AP	0.093	3.309	0.001	1.613
ROA	-0.094	-2.669	0.007	1.116
SIZE	0.014	-2.436	0.015	1.437
MBV	-0.014	-3.048	0.002	1.258
LEV	0.057	4.122	0.000	1.324

The results of the second hypothesis test in table 2 show that there is a positive (1.039) and significant (0.000) relationship between environmental pollution and audit fees. Therefore, the second research hypothesis is accepted. The adjusted coefficient of determination shows that about 1.23% of the changes in the dependent variable of the company's audit fee can be explained by the independent variable of environmental pollution and other variables.

**Table 2. The relationship between environmental pollution and Audit Fee**

Variables	Dependent Variable: Audit Fee			
	Beta	t	Sig	VIF
c	7.346	15.957	0.000	-
AP	1.093	4.965	0.000	1.613
ROA	0.742	3.145	0.001	1.116
SIZE	0.082	2.176	0.030	1.437
MBV	-0.067	-2.213	0.027	1.258
LEV	0.295	3.199	0.001	1.324

## CONCLUSION

Psychological studies show that air pollution has a significant psychological effect on the expression of different states and conditions created in people (Chen et al., 2021). People's moods include low moods, inattentions, and daily emotional states that affect how people process socially. That is, it manifests itself especially in the way we think, remember, and judge the world around us. Therefore, the purpose of this study was to investigate the impact of environmental pollution on audit quality in companies listed on the Tehran Stock Exchange. Therefore, 110 companies were selected for the period 1393-1398. In this study, two hypotheses were proposed. The results showed that air pollution has a positive effect on the number of optional accruals. In fact, companies that do not have specific guidelines for controlling air pollutants suffer from information contradictions and information asymmetries due to the lack of social responsibility of managers. In such an environment, the managers of these companies abuse the optional accruals to advance their goals and affect the quality of accounting information. The results also show that environmental pollution affects audit fee.

**Keywords:** Environmental Pollution, Audit Fee, Information Asymmetry.

**JEL Classification:** Q56, M42.

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