



AUDIT FACTOR AND ITS IMPACTS ON DISCLOSURE LEVEL OF ENVIRONMENTAL PARAMETERS OF SELECTED COMPANIES IN THE STATE OF GUJARAT

Dr. Chhaya Prajapati

Assistant Professor, Sardar Patel College of Commerce, Sardar Patel University, Vallabh Vidyanagar-388 120,
Gujarat, India,

Dr. Kamini Shah

Professor, Research Guide & Corresponding Author, Department of Business Studies, Sardar Patel University,
Vallabh Vidyanagar-388 120, Gujarat, India,

ABSTRACT:

Every corner of the world faces problems of environmental issues and climate change. Corporate sectors play a vital role in deploying the environment and natural resources in different ways. In this regard, numerous laws have been implemented by the government in favor of environmental protection and climate change and it became mandatory for the corporate sectors to disclose environment-related information in annual reports. As the Big 4 audit firms seek to make significant in-roads into the market for climate change and sustainability services. Deloitte, PricewaterhouseCoopers (PwC), Ernst & Young, and Klynveld Peat Marwick Goerdeler (KPMG) are the world's four largest audit firms. For this study sample has been selected from NSE and BSE listed companies in Gujarat. For their environmental disclosures, a content analysis of the corporate annual reports of 40 companies over a six-year period from 2016 to 2021 was chosen. This study is based on secondary data which has been analyzed using the *t-test* technique. The result of the study shows audit quality influences company disclosure of environmental parameters. It indicates that the Big 4 independent audit firms positively impact the disclosure of environmental parameters.

Keywords: Audit Quality, Big 4 audit firms, Environmental Disclosures, Environmental Performance

INTRODUCTION

Environmental sustainability accounting is gradually becoming a core practice of businesses, resulting in a genuine partnership between the public, private, and non-profit sectors for long-term environmental development. The investors also require the disclosure of environmental information in annual reports. Therefore, corporate sectors publish environmental information in annual reports in the form of ESG, BRSR, conservation of energy, and audit committees to protect the interests of investors. Environment Analyst examines their strategies and asks each firm where it sees the greatest opportunities (Environmentanalyst/Global, 2010). The Big 4, dominates auditing and other professional services and has clients representing many publicly traded companies. As part of their commitment to aligning all relevant services and products with net zero by 2050 or sooner, the Big Four audit firms have joined the Net Zero Financial Service Providers Alliance. A key component of each company's operations is the integration of the alignment with the Paris Agreement (ClientEarth, 2021). In this context, the research was carried out to analyze the impact of Audit Quality on the Disclosure of Environmental Performance of selected Corporate Sectors in Gujarat. Auditor independence gives investors confidence in audited financial statements. Furthermore, auditor independence is the foundation of the public accounting profession.

LITERATURE REVIEW

(Zahid, Khan, Anwar, & Maqsood, 2022) their study investigates the role of audit quality as a moderator in the relationship between environmental, social, and governance (ESG) factors and corporate financial performance (CFP) in Western European countries. From 2010 to 2019, the research sample included 620 firms headquartered in Western Europe, including Austria, Belgium, France, Germany, Luxembourg, Monaco, the Netherlands, and Switzerland. The findings indicate that ESG has a significantly negative impact on a firm's financial performance as measured by return on assets (ROA), lending support to the trade-off hypothesis that investing in ESG activities raises the cost of doing business.

(Dsouza & Jain, 2021) their research aims to determine the impact of internal audit quality as an essential tool for effective financial management and stability that meets the firm's financial goals. The required data for the study was collected via a questionnaire, as well as data was analysed using correlation analysis and simple regression on audit, finance, and banking professionals. The study reveals that internal audit quality has a significant impact on financials; high audit quality directly impacts a company's level of financial stability.

(Boiral, Saizarbitoria, & Brotherton, 2019) their article examines assurance providers' perspectives on the quality and limitations of sustainability reports, as well as their recommendations for improving them using the Global Reporting Initiative (GRI) as a framework. The lack of integration of these principles observed in this study could be explained in part by assurance providers' training, experience, and educational background, who may believe that the GRI - whatever version is considered - is not in line with the norms of their practice or is simply irrelevant to the type of audit companies expect them to deliver.

(Boiral, Saizarbitoria, & Brotherton, 2019) their article examines assurance providers' perspectives on the quality and limitations of sustainability reports, as well as their recommendations for improving them using the Global Reporting Initiative (GRI) as a framework. The lack of integration of these principles observed in this study could be explained in part by assurance providers' training, experience, and educational background, who

may believe that the GRI - whatever version is considered - is not in line with the norms of their practice or is simply irrelevant to the type of audit companies expect them to deliver.

(Alhelou, Taweel, Al Shobaki, & Abu-Naser, 2018) conducted their study on environmental sustainability accounting, as well as determining the external auditor's responsibility for the audit of environmental sustainability accounting activities and clarifying its role in environmental community conservation for Palestinian enterprises. Data was acquired using a questionnaire distributed in a comprehensive survey to 150 accountants and auditors. The researchers discovered a positive relationship between the "audit on environmental sustainability accounting activities and the enterprise value."

(Nguyen, 2020) has evaluated the factors affecting the degree of environmental accounting information disclosure. Data had been collected from 87 companies listed on the Vietnamese stock market from 2009 to 2019. The study focuses on the factors such as firm size, profitability, leverage, firm age, and independent auditors. The result of the study shows that the firm size, profitability, leverage and firm age have positive impact on the level of environmental accounting information disclosure. However, the choice of audit firms also impacts positively on environmental accounting information disclosure.

(Das, 2016) throws light on the fundamental and theoretical aspects of the concept of "Environmental Accounting". This study examine the drawbacks of the conventional accounting system and importance of environmental accounting. It emphasizes on the theoretical development of environmental accounting. It is suggested that every companies should fully recognize and control all environmental costs, including the aforesaid costs.

RESEARCH GAP

Environmental sustainability accounting is gradually becoming a core part of the sustainability accounting practice of businesses, resulting in a genuine partnership between the public, private, and non-profit sectors for long-term environmental development. Several research papers examined here specifically deal with the impact of internal and external audits and organisational processes in favour of environmental sustainability. The extent to which the external auditor comprehends the audit method of environmental accounting and sustainability activities also has been studied. But very few studies were conducted at the state level considering that, the research gap has been the bridge by conducting a study on its impact of audit quality on disclosure of environmental performance of selected corporate sectors in Gujarat.

RESEARCH METHODOLOGY

PROBLEM STATEMENT

Companies are preparing and publishing reports on sustainable development that address environmental issues. The information revealed in the financial statements could be a problem due to improper disclosure.

Big 4 audit firms provide higher audit quality than non-Big 4 audit firms. Financial statements audited by Big 4 firms are considered to be more reliable and precise than those audited by non-Big 4 firms. To improve the credibility of these reports and provide adequate transparency and accountability, environmental auditing through an external auditor who can judge the environmental information disclosed in environmental audit

reports is required. The study will identify and assess the relationship and impact of the audit role on environmental sustainability accounting activities performed by the contributing enterprises on the enterprise's value, market position, and competitiveness. As a result, the following question has been used to present the research problem.

The Impact of Audit Quality on Disclosure of Environmental Performance of Selected Corporate Sectors in Gujarat

OBJECTIVES OF THE STUDY

1. To analyze the impact between Audit Quality, and the disclosure of environmental parameters of the companies in the state of Gujarat.

HYPOTHESIS

1. There is no impact between the Audit Quality and the disclosure of environmental parameters of the companies in the state of Gujarat.

RESEARCH DESIGN

The current study is descriptive in nature.

SAMPLING TECHNIQUE AND SAMPLE SIZE

Data has been analyzed using the *t-test* technique. For sample selection, a non-probability convenient sampling technique was employed. A total of forty (40) companies were chosen from eight (8) sectors, with each sector consisting of five (5) companies listed below.

Sr. No.	Name of the Companies/ Sector Types
Textile	
1	Surat Textile Mills Ltd.
2	Welspun India Ltd.
3	Arvind Ltd.
4	Ashima Ltd.
5	Sintex Industries Ltd.
Chemicals & Fertilizers	
6	Gujarat Narmada Valley Fertilizers & Chemicals Ltd.
7	Gujarat State Fertilizers & Chemicals Ltd.
8	Atul Ltd.
9	Gujarat Heavy Chemicals Ltd.
10	Gujarat Alkalies & Chemicals Ltd.
Pharmaceuticals	
11	Alembic Pharmaceuticals Ltd.
12	Link Pharma Chem Ltd.
13	Samrat Pharmachem Ltd.
14	Sun Pharmaceutical Industries Ltd.
15	Torrent Pharmaceuticals Ltd.
Power & Energy	
16	Adani Power Ltd.
17	Gujarat Industries Power Company Ltd.
18	S E Power Ltd.
19	Torrent Power Ltd.
20	Inox Wind Energy Ltd.

Oil & Gas	
21	Adani Total Gas Ltd.
22	Hindustan Oil Exploration Co. Ltd.
23	Gujarat Gas Ltd.
24	Gas Authority of India Ltd.
25	Gujarat State Petronet Ltd.
Iron & Steel	
26	S.A.L Steel Ltd.
27	Ratnamani Metals & Tubes Ltd.
28	Welcast Steels Ltd.
29	Panchmahal Steel Ltd.
30	Welspun Corp Ltd.
Plastic & Rubber	
31	Jolly Plastic Inds. Ltd.
32	Astral Poly Technik Ltd.
33	Shaily Engineering Plastics Ltd.
34	Tirth Plastic Ltd.
35	INEOS Styrolution India Ltd.
Engineering	
36	A I A Engineering Ltd.
37	Laxmipati Engineering Works Ltd.
38	Sadbhav Engineering Ltd.
39	Elecon Engineering Co. Ltd.
40	Integra Engineering India Ltd.

OPERATIONAL DEFINITION AND MEASUREMENT OF VARIABLES

▪ Dependent Variable: Environmental disclosure

Environmental disclosure is an official declaration that details a company's efforts to be environmentally friendly, typically including its goals for strategic environmental remediation. It is regularly reported and made public in the company's annual report how the firm's operations have impacted the environment. (Olurankinse & Mamidu, 2021)

▪ Independent Variable: Audit Quality

Auditors approve annual reports. The "Big Four" accounting firms enjoy widespread trust and confidence in society. Larger corporations frequently hire one of the Big Four accounting firms to gain global acceptance and recognition. The Big 4 audit firms were chosen for this study: Deloitte, PricewaterhouseCoopers, Ernst & Young, and KPMG. (Welbeck, Yaw Owusu, Bekoe, & Kusi, 2017)

DISCLOSURE SCORE OF ENVIRONMENTAL PARAMETERS BY THE COMPANIES DURING THE YEARS 2015-16 TO 2020-21

Sr. No.	Name of Companies	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
1	Surat Textile Mills Ltd.	03	03	03	03	03	03
2	Welspun India Ltd.	07	09	15	15	12	13
3	Arvind Ltd.	05	11	09	12	13	08
4	Ashima Ltd.	03	03	03	03	03	03
5	Sintex Industries Ltd.	04	08	02	04	08	01
6	GNFC Ltd.	05	04	11	09	11	10
7	GSFC Ltd.	06	13	13	13	13	13
8	Atul Ltd.	03	07	08	09	13	14
9	Gujarat Heavy	05	11	12	13	09	09

	Chemicals Ltd						
10	Gujarat Alkalies & Chemicals Ltd.	11	16	15	15	12	13
11	Alembic Pharmaceuticals Ltd.	02	07	09	06	08	10
12	Link Pharma Chem Ltd.	01	01	01	01	01	02
13	Samrat Pharmachem Ltd.	02	02	02	02	02	02
14	Sun Pharmaceutical Industries Ltd.	05	07	07	08	09	10
15	Torrent Pharmaceuticals Ltd.	10	16	16	15	14	16
16	Adani Power Ltd.	12	12	16	13	15	18
17	GIPC Ltd.	05	06	06	06	10	13
18	S E Power Ltd.	02	02	02	02	02	02
19	Torrent Power Ltd.	05	10	12	11	12	14
20	Inox Wind Energy Ltd.	04	07	02	02	06	01
21	Adani Total Gas Ltd.	02	02	03	11	12	12
22	Hindustan Oil Exploration Co. Ltd.	03	04	04	04	11	11
23	Gujarat Gas Limited	04	06	08	08	10	12
24	Gas Authority of India Ltd. (GAIL)	16	17	17	17	18	18
25	Gujarat State Petronet Ltd.	06	06	14	14	14	14
26	S A L Steel Ltd.	01	01	01	01	01	01
27	Ratnamani Metals & Tubes Ltd.	08	13	12	12	12	12
28	Welcast Steels Ltd.	03	03	03	03	03	03
29	Panchmahal Steel Ltd.	02	02	02	02	02	02
30	Welspun Corp Ltd.	06	16	16	14	14	16
31	Jolly Plastic Inds. Ltd.	01	01	01	01	01	01
32	Astral Poly Technik Ltd.	07	11	11	11	12	12
33	Shaily Engineering Plastics Ltd.	02	02	02	02	02	02
34	Tirth Plastic Ltd.	00	00	00	00	00	00
35	INEOS Styrolution India Ltd.	04	04	04	06	12	15
36	A I A Engineering Ltd.	06	10	08	10	10	15
37	Laxmipati Engineering Works Ltd.	00	00	00	00	00	00
38	Sadbhav Engineering Ltd.	07	09	09	08	08	08
39	Elecon Engineering Co. Ltd.	04	05	05	06	10	08
40	Integra Engineering India Ltd.	00	00	00	00	00	00

AUDIT QUALITY AND THE DISCLOSURE LEVEL OF ENVIRONMENTAL PARAMETERS OF THE COMPANIES IN THE STATE OF GUJARAT.

AUDIT QUALITY							
Sr. No	Name of Companies	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
1	Surat Textile Mills Ltd.	0	0	0	0	0	0
2	Welspun India Limited	0	0	0	0	0	0
3	Arvind Ltd.	0	0	1	1	1	1
4	Ashima Ltd.	0	0	0	0	0	0
5	Sintex Industries Ltd.	0	0	0	0	0	0
6	GNFC Ltd.	1	0	0	0	0	0
7	GSFC Ltd.	1	1	0	0	0	0
8	Atul Limited	0	0	1	1	1	1
9	Gujarat Heavy Chemicals Ltd	0	0	0	0	0	0
10	Gujarat Alkalies & Chemicals Ltd.	1	1	1	1	0	0
11	Alembic Pharmaceuticals Ltd.	0	0	0	0	0	0
12	Link Pharma Chem Ltd.	0	0	0	0	0	0
13	Samrat Pharmachem Ltd.	0	0	0	0	0	0
14	Sun Pharmaceutical Industries Ltd.	1	1	0	0	0	0
15	Torrent Pharmaceuticals Ltd.	1	1	0	0	0	0
16	Adani Power Ltd.	1	1	0	0	0	0
17	Gujarat Industries Power Company Ltd.	0	0	0	0	0	0
18	S E Power Ltd.	1	1	0	0	0	0
19	Torrent Power Ltd.	1	1	1	1	1	1

20	Inox Wind Energy Ltd.	0	0	0	0	0	0
21	Adani Total Gas Ltd.	0	0	0	0	0	0
22	Hindustan Oil Exploration Co. Ltd.	1	1	1	1	1	1
23	Gujarat Gas Limited	0	0	0	0	0	0
24	Gas Authority of India Limited.	0	0	0	0	0	0
25	Gujarat State Petronet Ltd.	0	0	0	0	0	0
26	S A L Steel Ltd.	0	0	0	0	0	0
27	Ratnamani Metals & Tubes Limited	0	0	0	0	0	0
28	Welcast Steels Ltd.	0	0	0	0	0	0
29	Panchmahal Steel Ltd.	0	0	0	0	0	0
30	Welspun Corp Ltd.	1	1	1	1	1	1
31	Jolly Plastic Inds. Ltd.	0	0	0	0	0	0
32	Astral Poly Technik Ltd.	1	1	0	0	0	0
33	Shaily Engineering Plastics Ltd.	1	1	1	0	0	0
34	Tirth Plastic Ltd.	0	0	0	0	0	0
35	INEOS Styrolution India Ltd.	0	1	1	1	1	1
36	A I A Engineering Ltd.	0	0	0	0	0	0
37	Laxmipati Engineering Works Ltd.	0	0	0	0	0	0
38	Sadbhav Engineering Ltd.	0	0	0	0	0	0
39	Elecon Engineering Co. Ltd.	0	0	0	0	0	0
40	Integra Engineering India Ltd.	0	0	0	0	0	0

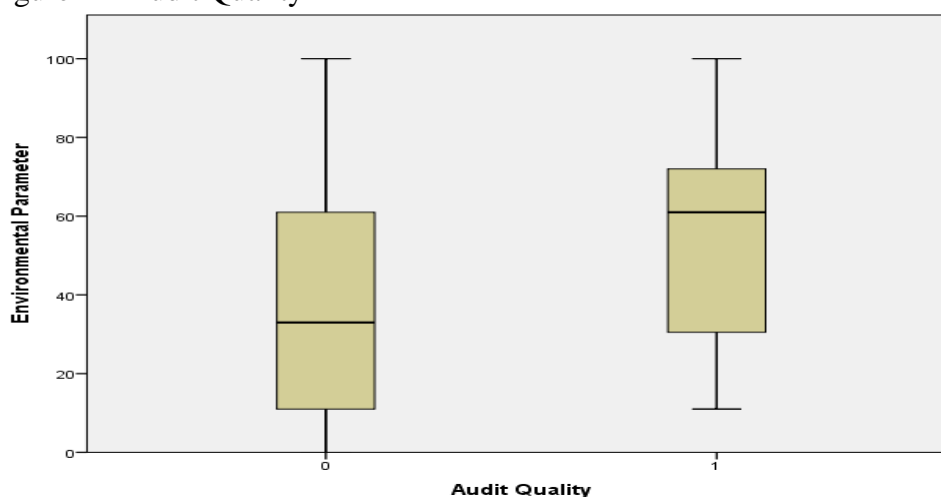
The table shows the audit quality of companies to measure the relationship between audit quality and disclosure of environmental parameters. For independent audit firms scores were assigned 1 and 0 for local audit firms. The Big 4 audit firms chosen for this study are namely, Deloitte, PricewaterhouseCoopers, Ernst & Young, and KPMG. Out of forty (40) only three (3) companies have hired big 4 audit firms throughout six years i.e., Torrent Power Ltd., Hindustan Oil Exploration Co. Ltd., and Welspun Corp Ltd. However, four (4) companies have been hired for four years and twenty-five (25) companies have scored zero because during, six years, they did not hire Big 4 audit firms to audit annual reports in any year.

TESTING OF HYPOTHESIS

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	T	df	Sig. (2-tailed)
Environment Parameter	Equal variances assumed	1.877	.172	-4.182	238	.000
	Equal variances not assumed			-4.471	87.137	.000

a) Figure*** Audit Quality



The t-test for equality of means is shown in the table above, and we can see that there is a significant difference in the means of environmental disclosures between companies with different audit qualities at a 5% level of significance. We see that companies with an Audit Quality of 1 have a significantly higher mean number of disclosures than companies with an Audit Quality of 0. There is a positive and significant relationship between Audit Quality and environmental parameter disclosure. So the null hypothesis is rejected.

It means that any year they use the Big Four rather than other auditors, there is the possibility of increasing environmental disclosure. As a result, whether a company discloses environmental information is more dependent on whether it works for a Big 4 auditing firm or another auditing firm. This also implies that engaging the renowned Big 4 firms (Deloitte, Price Waterhouse Coopers (PWC), Ernst & Young, and KPMG) is likely to force managers to disclose environmental information in their annual reports.

MAJOR FINDINGS

The finding of the study reveals that audit quality has a 5% effect on the disclosure level of environmental parameters in companies. It indicates that the Big 4's independent audit has a positive impact on environmental disclosures.

RECOMMENDATIONS

It is recommended that the Non-Big 4 audit firms motivate management to provide environmental information because it will boost investor confidence and improve perceptions of the sample companies. The Companies Act should include provisions for independent auditors to review the environmental report.

CONCLUSION

Corporations are under increasing pressure to provide more transparent disclosure regarding their governance practices that support environmental and social sustainability. According to (Choi & Leeb, 2014) research on the Big4 audited companies, these auditing firms deliver high-quality audits at reasonable prices to give investors accurate financial statements. Non-big 4 audit firms should insist the management disclose environmental information because it will increase the investors' faith. The result of the study shows that audit quality has a favourable impact on how much information companies disclose about their environmental policies. It demonstrates the beneficial effect of the Big 4's independent audit on the disclosure of environmental disclosures.

LIMITATIONS OF THE STUDY

Due to the study's limited time frame, the service sector was ignored. However, only one state was considered in the study. As a result, the availability of data and prior research literature was found to be extremely limited.

SCOPE FOR FURTHER STUDY

This study was limited to six years, but more years could be studied to get more precise results. The sample companies can be included at the India level. A comparative study between private and public companies is possible in the future; however, a comparative study.

REFERENCES

Alhelou, E. M., Taweel, I. M., Al Shobaki, M. J., & Abu-Naser, S. S. (2018). Audit on Environmental Sustainability of Accounting Activities and its Impact on Maximizing the Value of the Enterprise as a Framework Proposed by the Auditors. *Research Journal of Finance and Accounting*, 9(22), 51-76. Retrieved 2023, from <http://dstore.alazhar.edu.ps/xmlui/handle/123456789/138>

Boiral, O., Saizarbitoria, I. H., & Brotherton, M. C. (2019, March). Assessing and Improving the Quality of Sustainability Reports: The Auditors' Perspective. *Journal of Business Ethics*, 155(3), 703-721. doi:10.1007/s10551-017-3516-4

Choi, J. H., & Leeb, W. J. (2014). Association between Big 4 auditor choice and cost of equity capital for multiple-segment firms. *Accounting and Finance*, 135–163. Retrieved from https://www.researchgate.net/publication/260531664_Association_between_Big_4_auditor_choice_and_cost_of_equity_capital_for_multiple-segment_firms

ClientEarth. (2021, 9 December). *Big Four auditors risk legal challenge on climate*. Retrieved November 2023, from clientearth.org: <https://www.clientearth.org/latest/press-office/press/big-four-auditors-risk-legal-challenge-on-climate-failings-clientearth/>

Das, P. (2016). Environmental Accounting: A Conceptual Study of Indian Context . *World Academy of Science, Engineering and Technology International Journal of Mechanical and Industrial Engineering*, 10(8), 2917-2923. Retrieved 2021, from file:///C:/Users/DC/Downloads/10005264.pdf

Dsouza, S., & Jain, A. K. (2021, june). IMPACT OF INTERNAL AUDIT QUALITY ON FINANCIAL STABILITY. *Journal of Commerce & Accounting Research*, 10(4), 19-30. Retrieved 2023, from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3955993

Environmentanalyst/Global. (2010, December). Retrieved August 2023, from Big 4 accountancy firms: sustainability advisory strategies and opportunities: <https://environment-analyst.com/global/27804/big-4-accountancy-firms-sustainability-advisory-strategies-and-opportunities>

Karagiorgos, T., Drogalas, G., & Giovanis, N. (2011, March). Evaluation of the effectiveness of internal audit in Greek hotel business. *International Journal of Economic Sciences and Applied Research*, 4(1), 19-34. Retrieved 2023, from <https://www.econstor.eu/bitstream/10419/66594/1/659522241.pdf>

Nguyen, T. D. (2020). Factors Influencing Environmental Accounting Information Disclosure of Listed Enterprises on Vietnamese Stock Markets. *Journal of Asian Finance, Economics and Business Vol 7 No 11 (2020)*, 7(11), 877–883. Retrieved April 2022, from <https://www.koreascience.or.kr/article/JAKO202032462597169.pdf>

Olurankinse, F., & Mamidu, A. I. (2021, November). Corporate Characteristics and Environmental Disclosure Quality In Listed Oil And Gas Companies In Nigeria. *IOSR Journal of Business and Management*, 23(11), 16-28. doi:10.11648/J.IJAFRM.20190402.12

Welbeck, E. E., Yaw Owusu, G. M., Bekoe, R. A., & Kusi, J. A. (2017, December). Determinants of environmental disclosures of listed firms in Ghana. *International Journal of Corporate Social Responsibility*. doi:DOI 10.1186/s40991-017-0023-y

Zahid, R. A., Khan, M. K., Anwar, W., & Maqsood, U. S. (2022, September). The role of audit quality in the ESG-corporate financial performance nexus: Empirical evidence from Western European companies. *Borsa _Istanbul Review*, 22(S2), S200–S212. Retrieved 2023, from <https://www.sciencedirect.com/science/article/pii/S2214845022000643>