www.iiste.org

Current Trends in the Reporting of Environmental Information in the Annual Report of Major Industrial and Mineral Companies in Jordan

Ghada Awad Altarawneh

Department of Accounting, Mutah University, Mutah, Karak, 61711, Jordan E-mail of the corresponding author: ghadatrn@yahoo.com

Abstract

This paper investigates the corporate environmental reporting practices of industrial and mineral companies in Jordan. The focus of this paper is on the state and nature of environmental disclosure presented in the annual report of the selected companies between 2010-2103. The paper finds a lack of environmental reporting, either in the form of a separate report or in the type of information embedded within the financial statement. Because environmental disclosure in business organizations is one of the most important issues that should be given prominence for the benefit of society, Jordan needs strong legislative and legal systems to enforce business entities to meet the requirements of international environmental agreements and standards and enhance the way they disclose environmental information by referring to a reliable set of standards and rules. In addition, there is a need to investigate the reasons behind the limitations and inadequacies of environmental reporting in the mineral and industrial sector.

Keywords: environmental accounting, environmental reporting; industrial and Mining Sector; Annual Report

1. Introduction

Effective environmental disclosure by businesses is critical and vital for the sustainable future and secure environment for all stakeholders and constituents of society. Looking at the current state of our mother earth must compel us to take serious steps, particularly by business organizations worldwide, to save what remains in nature and rescue what can be restored. Uneven and uncontrolled use of natural resources, flooding, deforestation, tsunamis, warming and many other climate changes are messages for us to wake up from our apathy and realize our true responsibility towards our generous mother earth.

Internationally, policy makers, professionals and communities have already addressed different environmental issues at different levels, setting standards and rules related to environmental affairs, including the improvement of environmental disclosure in the financial reporting systems of corporations.

In this context, a corporation's responsibility for the environment is already part of companies' social accountabilities. Social welfare and environmental responsibility should be one of the main objectives of businesses and this need not contradict creating and generating wealth. Lehman (1995) points out that environmental reporting "establishes and articulates an accountability relationship between corporations and others" (p. 408). This relationship encompasses both people and the environment. Hence, disclosing environmental information is vital to demonstrate corporation's social accountability.

Given that fact, stakeholders are, with time, giving more and more attention to detail in environmental issues. Interestingly, financial investors, who represent an important part of corporate stakeholders, show favoritism to those corporations with 'good' social and environmental performance (Chan & Welford, 2005). Therefore, some countries have legal requirements for corporate social and environmental disclosure (CSER) reports, along with audits of such reports, for example in France. Other companies issue annual reports that cover some social and environmental issues. However, such reports still differ widely in format, style, content and methodology, and international agreements are required to set standards and identify reliable means of producing CSERs in general, and environment disclosure in particular.

In this context, Jordan is an interesting case to investigate. Jordan has adopted open economic strategies, privatization and encourages foreign investment, which maximizes the size of industrial and mineral activities. Moreover, there has been a growing awareness regarding the environment in Jordanian society. For that reason, we believe that it would be useful and necessary to assess and explore industries' attitude towards the environment by investigating the environmental disclosure practice of major industrial and mineral companies in Jordan. Our endeavor here is to contribute to other efforts to ensure that all parties, particularly business organizations, are taking their environmental responsibilities seriously. In addition, this investigation will add to the literature by providing facts about environmental reporting practice within a developing economic, social, and political context. It is worth mentioning that this study will not consider any health, clean-up cost, or social activities in the analysis.

2. Literature review

2.1. Companies' social responsibility and environmental information

Over a period of more than thirty years, most business organizations have started recognizing that corporate social responsibility should be given greater importance (Gray et al. 1987). Social responsibility encompasses many factors regarding the effects of business activities on employees, customers, society and the environment. One important aspect of a business's social responsibility is environmental disclosure. The purpose of environmental disclosure is to ensure that companies comply with the environmental requirements of legal norms and international standards. Gray et al. (1996) provide an inclusive explanation of corporate social and environmental disclosure, which signifies that environmental disclosure practice symbolizes a corporate exercise in distributing environmental information to a wide group of interested parties. It is "the process of communicating the social and environmental effects of an organization's economic action to particular interest groupings within society and to society at large" (Gray et al. 1987).

This is non-negotiable: corporations are part of societies, thus they should have a strong foundation of relationships, and should increase their transparency by providing relevant information that enables people to take reasonable actions (Gray et al. 1987). Applying this to environmental matters, companies have to inform society on how economic entities deal with the environment while also making profits, as well as preserving and ensuring environment sustainability.

2.2 Research studies on Corporate Environmental Reporting Practices

Numerous studies have been conducted to investigate corporate environmental reporting practices, as a response to pressure imposed on business entities by different parties such as stakeholders and the international community.

Many researchers have tackled corporate environmental disclosure through investigating the relationship between different influential factors, such as return on assets, profitability, sector, size of company (Cowen *et al.* 1987) & (Shuchi, 2009). Other studies have concentrated on some issues, i.e. the influence of corporate governance, employees, social pressure, accountability, company nationality and stakeholders, (Li *et al.*, 2008), (Cormier & Magnan, 1999), (Bewley & Li, 2000), (Buysse & Verbeke, 2003) and (Gray *et al.* 1996).

However, what concern us in this current article are those studies that have investigated the nature, type and extent of environmental disclosure within business entities.

Baker, Cohanier and Pederzoli (2012): This study investigated the corporate social and environmental reporting (CSER) practices of companies in the large retail distribution sector, and the reasons behind the slow development of CSER practices in this industry. The analysis of annual reports of the selected companies, which represent the largest retail distribution companies in the world, revealed that the CSER report is relatively reticent. The reason for this, according to the paper, is that CSER reports are still not compulsory in many countries.

Gray *et al.* (1995): In their studies, they stated that the quality of environmental disclosure was poor and concluded that the information needed by stakeholders was not covered sufficiently. Other research revealed results consistent with previous studies. Deegan and Gordon (1996) comment that the level of reporting of voluntary environmental information in Australia is, in the main, low, but at the same time the amount of environmental information increased overtime, particularly in those companies that were particularly environmental disclosures in annual reports of construction and industrial Malaysian companies for the year 2000. Their study concluded that the extent of environmental disclosure was very low, and that the environmental information in annual reports appeared in different places throughout the reports and was not concentrated in a specific section.

Yusoff, Othman and Yatim (2013): These writers investigated environmental practices and explained the likely connection between impacting factors for environmental reporting and real environmental reporting practices of 100 Malaysian and Australian companies. This comparative study mainly tried to investigate the state of environmental reporting in other reports. The paper finds that environmental reporting in 'other' reports (Malaysia and Australia) are mostly descriptive and in qualitative in type, which does not add greater corporate accountability amongst corporations in satisfying stakeholders' requests and demands for environmental information. Additionally, the influential factors on environmental reporting are of a similar quality to those made in annual reports, in both countries.

Porwal and Sharma (1991): These writers looked at the position of social reporting in India, by examining a sample of 147 companies. They developed a weighted disclosure index, including 47 items of social disclosure. The study found that 46% of the Indian companies reported some sort of social disclosure in their annual report. They noted that 40% of social disclosure was presented in the directors' report and 42% in the Notes to financial statements. Moreover, they found that 45% of the companies made a quantitative disclosure while others made qualitative reporting.

Lodhia and Jacobs (2013): The objective of this paper was to explore environmental reporting in the Australian Commonwealth public sector through focusing on two departments with the main responsibility for social and environmental matters. The annual and sustainability reports of these two Australian commonwealth departments were analyzed from 2003-2008. Using interviews and a documentary data analysis method enabled the researchers to provide an in-depth study of the selected departments. The findings suggest that the practice of environmental reporting in a research context went further than legitimacy considerations, with the internal perspective being vital in elucidating current practices. Thus, Bourdieu's theory provides a helpful approach to understanding environmental reporting in the Australian commonwealth public sector.

Cormier, Magnan and Velthoven (2005): These writers examined the determining factors of corporate environmental disclosure of 385 German business entities for the years (1992-1998). By means of a multi-theory that includes economic incentives, public pressures and institutional theory, the study found that risk, ownership, fixed assets, age, and firm size determined the extent of environmental disclosure of the selected sample.

Other studies, such as those of Gray, et al., (2001) and Abreu, et al., (2012), are in agreement that there is a positive relationship between environmental disclosure and the size of the company, and that the amount of environmental disclosure increases significantly in large corporations. In contrast, other studies, such as Akhtaruddin (2005), found no positive relationship between environmental disclosure and the size of the company.

Another study, in 2013, by Makori, examined the relationship between environmental auditing and the profitability of selected firms listed on the Bombay Exchange in India. The major findings of the study explained that there is a considerably negative relationship between Environmental Accounting and Return on Capital Employed and Earnings per Share, and a significant positive relationship between Environmental Accounting and Net Profit Margin and Dividend per Share. Based upon the findings of this study, it was recommended that the government should give tax credits to companies that fulfill their environmental responsibilities and that environmental reporting should be made obligatory in India so as to enhance the performance of companies.

3. Research method

3.1 Sample of the study

A non-probability sampling method was used by selecting the major mineral and industrial companies listed on the Amman Stock Exchange. The reason behind the selection of these particular companies is based on the fact that the activities of the industrial and mining sector have a direct and clear impact on the environment as compared to other sectors. The sample covers the annual reports of the most important and central 18 companies in the Jordanian economy for the years 2010-2011-2012-2013. The companies are:

- 1- Arab Potash Company which includes:
 - Jordan Magnizia Co
 - Arab Fertilizer and Chemical Industries Ltd
 - Dead Sea Industries Company (JODICO)
 - Numeira Mixed Salts & Mud Company Ltd
- 2- Jordan Phosphate Mines Company:
 - Indo-Jordan Chemicals Co. Ltd
 - Vision Transportation Co.
 - Nippon Jordan Fertilizer Company
 - Jordan Abyad Fertilizer & Chemicals Company (JAFCCO)
 - Jordan Industrial Ports Company
 - Manajim Mining Development Company
 - T Petro Jordan Abadi Company
 - Arkan for Contracting & Construction Company
- 3-Jordan Petroleum Refinery Company
 - Jordan Liquefied Gas Manufacturing and Filling Co
 - Jordan Mineral Oils Manufacturing Co
- 4-Jordan Cement Factories
 - CTS- Sudan
 - Arab Concrete Supply
- 5- Jordan Vegetable Oil Industries Co
- 6- Jordan Marble Co

3.2 Analysis of the annual reports of the selected companies

The exploratory analysis of the annual reports of the 18 companies focuses on two issues. Firstly, the researcher looked at where environmental matters were mentioned from the beginning to the end of the annual reports, and

secondly, the type of environmental disclosure, taking into consideration the degree of financial and nonfinancial reporting, giving more attention to the quantified auditable environmental information presented, rather than simply a narrative description of good intent.

3.2.1 Independent section on the environment within the annual report

Reprehensibly, all 18 companies studied did not specify or identify any separate section where quantified auditable environmental matters could be disclosed and failed to mention information in their annual reports that took into account that the companies have a large and direct negative impact on the surrounding environment. 3.2.2 Statement of corporate objectives

All the companies, except Jordan Ceramic Industries Co. and Jordan Vegetable Oil Industries Co., integrated a statement of corporate objectives relating to environmental and social matters. Overall, the statement was too short and limited to an assertion of general philosophy on green matters, future strategies and social responsibility, rather than quantified and precise information. For example, Arab Potash Company's stated corporate objective is:

In the area of social responsibility, investment in the development of local communities and protecting the environment, APC donated more than 10 million Dinars, which were spent according to priorities defined in consultation with the local authorities and civil society organizations. Sectors that received support included water and sanitation, protection of the environment, building public facilities, health services, labor and professional associations, welfare organizations, welfare package campaigns, sports clubs and federations, municipalities, houses of worship, press and media organizations, writers, pockets of poverty campaigns, grants to students, and schools and universities.

3.2.3 Financial reporting

Analysis of the annual reports of the selected companies covered the fiscal years from 2010 to 2013. This analysis revealed little observable differences among big companies (Potash, Cement and Phosphate and its subsidiaries) in the level of complexity or amount and type of environmental disclosure.

There was mostly no sign of environmental assets or liabilities or expenses or contingent liabilities. For instance, in all companies' balance sheets and income statements (except Cement Company, where there is an account, which represents the total amount of provision for rehabilitation of quarries and environment protection; for instance, in 2010 the amount was 198,200JD.). There is no precise auditable information about facilities/assets to improve pollutant management, supply chain carbon emissions fees, liabilities caused by breaching environmental laws and regulations, environment compensation for certain employees and stakeholders, efficient energy use, obligations because of lawsuits and compensations, revenue from using recycled materials, tax reductions due to the use of recycled materials and eco-friendly products, disposal issues, donations for environmental protection, etc. The exception is some very little information revealed by Potash Company which declared a 1,241,700 JD donation for water and environment protection, without any details.

In a general sense, the companies do not appear to disclose a great deal about the extent and impact of their corporate environmental activities and responsibilities. The result of this research is well matched with many previous studies, which state the lack of true responsibility and accountability in corporate social responsibility (Gray, 1995; 1996) and (Cooper and Owen, 2007).

3.2.4 Environmental statistical information

There was no sign of non-financial statistical environmental information. Therefore, the researcher mostly could not find statistical information, which covered issues such as the quantity of equipment and machines equipped with recycling facilities, quantities of refuse recycled and amount of unleaded petrol used.

3.2.5 Environmental audit report

Among all the companies investigated, not one of them has produced an environmental audit report, either by the company itself or by an independent specialist. In addition, the company audit reports mentioned nothing about whether or not the companies meet the terms of environmental standards and rules, either Jordanian rules or international standards.

3.2.6 Particular description (narrative)

There was a similarity between companies that issued descriptive statements or comments on some of their environmental aspects and activities. The information provided is mostly given in the form of simple descriptions, such as concerning ISO14001 certificates. In some companies there was more narrative description than in others, particularly those that have a strong environmental impact, yet still inadequate, and limited to explanation. This typically consisted of a general statement, and linked to issues regarding social responsibility. For instance, Potash Company states:

The Arab Potash Company at all levels holds commitment to environment as one of the Company's top priorities, which is part of APC's commitment to sustainable development. The Company's activities in the area of the Dead Sea and Aqaba focus on minimizing damage to the environment. Accordingly The Company is proud that it complies with international environmental standards and that it received the international certificate of compliance ISO 14001 in this area.

The most commonly mentioned topics reported were mainly health and safety at work and working conditions.

3.3 Trend of environmental reporting in general

As mentioned above, this article has focused on the disclosure of environmental information in the 2010 - 2013 annual reports. Although, the vast majority of the companies studied consider the environment a momentous issue for their businesses. Disclosure of environmental aspects in the annual report is relatively rare, inadequate and consists of a general philosophy, with no consistent format of disclosure. Disclosure, in all cases, did not exceed half a page.

Apparently, the disclosure of environmental information varies over the years investigated and depends on the willingness of the companies to show a positive and activist environmental image, that presents a picture of good business citizenship.

Comparison of annual reports over 4 years revealed a general increase (except the oil and ceramic companies) in the awareness of environmental disclosure. However, even if a few companies revealed some environmental information, it would still be inadequate, incomplete, rarely audited and generally embedded within the information regarding company social responsibility. Inexcusably, there is a general absence and ignorance of information about the negative impact of a company's activities and operations on the environment. From this researcher's point of view, this lack of corporate environmental information, including environmental current and future liabilities, will surely affect the reliability of financial reporting in general and generate skepticism about environmental disclosure.

I think the main reason behind this poor quality of environmental reporting, although there are different frameworks (United Nations Environment Program, The Global Reporting Initiative (GRI)) that can be adopted to standardize environmental reporting and environmental auditable activities) is because of the un obligatory nature of environmental audit. There is no law forcing companies to follow such a procedure, and therefore a company can choose when, what and how to disclose social and environmental information.

4. Conclusion

- The lack of environmental reporting, either in the form of a separate report or by the type of information embedded within the financial statement, should possibly be seen as a natural result of the voluntary nature of environmental reporting in general. "The existence of this disparity has been tentatively attributed to a lack of detailed accounting standards relating to environmental issues, and to reluctance on the part of corporate management to fully apply existing standards that would facilitate more complete disclosure" (United Nations, 1992).
- There is a total absence of information, either in financial or non-financial terms, concerning the negative impact of business operations on the environment.
- Environmental information is rarely audited.
- Large companies provide more social and environmental information in their annual reports as compared to small companies. This might be a result of the nature of their activities which impact on the environment, and also because this sort of company has a larger number of stakeholders who require more social and environmental information.
- Looking at the financial statements and reporting systems of the selected companies enables us to say that those companies are well equipped to maximize wealth, yet they are still far from meeting their environmental responsibilities.

5. Recommendations

The little detail on environmental financial and auditable information, which has been verified by this study demands serious steps to enhance and develop environmental reporting, therefore:

- Much thought needs to be given to the development of environmental reporting and standards, so as to provide useful and reliable information. Thus, there is a strong need for some sort of environmental accounting and reporting.
- All organizations that do not comply with the requirements of environmental accounting and reporting standards should face penalties, such as an Adverse Opinion Report, or a fine of a specific amount of money.
- All people in positions of authority, including accountants and auditors, should understand the nature of the operation of the business and its impact on the environment. Thus, they could determine which information they should look for and be aware of, such as the contingent liability associated with those operations that affect the surrounding environment, or the implementation of the assets needed to protect environment.
- Environmental performance, using financial and non-financial terms, should appear regularly on the

www.iiste.org IISTE

financial reporting system of companies.

- There is a need to establish a formal format for environmental reporting to obligate companies to • disclose and make available for the auditing process.
- There must be environmental auditing associated with the auditing of financial statements. This auditing should cover issues such as assets, business operations, ensuring that people engaged in the business have suitable procedures in place for obtaining and considering information concerning environmental incidents, liabilities and risks, and respond in an appropriate way to that information.
- Jordan needs strong legislative, political and legal systems to force business entities to meet the requirements of international environmental agreements and standards and to enhance the way in which they disclose environmental information by referring to a reliable set of standards and rules.
- There is a need to investigate the reasons behind the limitations and inadequacies of environmental reporting in the mineral and industrial sector.

References

Abreu, M., Castro, F., Assis S.F., da Silva, J. (2012). "A comparative understanding of corporate social responsibility of textile firms in Brazil and China", Journal of Cleaner Production, 20(1), 119-126.

Ahmad, N., & Sulaiman, M. (2004), "Environmental Disclosures in Malaysian Annual Reports: Legitimacy Theory Perspective", International Journal of Commerce and Management, 14(1), 44-58.

Akhtaruddin, M. (2005), "Corporate Mandatory Disclosure Practices in Bangladesh", The International Journal of Accounting, 40(4), 399-422.

Baker, R., Cohanier, B., & Pederzoli, D. (2012), "Corporate Social and Environmental Reporting in the Large Retail Distribution Sector", 2nd Annual International Conference on Accounting and Finance.

Bewley, K., & Li, Y. (2000), "Disclosure of Environmental Information by Canadian Manufacturing Companies: A Voluntary Disclosure Perspective", Advances in Environmental Accounting and Management, 1, 201-226.

Buysse, K., & Verbeke, A. (2003). "Proactive environmental strategies: a stakeholder management perspective", Strategic management journal, 24(5), 453-470.

Chan, J.C. Welford, R. (2005), "Assessing Corporate Environmental Risk in China: An Evaluation of Reporting Activities of Hong Kong Listed Enterprises", Corporate Social Responsibility and Environmental Management. 12, 88-104.

Cormier, D., & Magnan, M. (1999), "Corporate Environmental Disclosure Strategies: Determinants, Costs and Benefits", Journal of Accounting, Auditing & Finance, 14(4), 429-451.

Cormier, D. & Gordon, I.M. (2001), "An examination of social reporting strategies", Accounting, Auditing, & Accountability Journal, 14(5), 587-617.

Cormier, D., Magnan, M. & Velthoven B.V. (2005) "Environmental disclosure quality in large German companies: economic incentives, public pressures or institutional conditions", European accounting review, 14(1), 3-39.

Cooper, S. M., & Owen, D. L. (2007), "Corporate social reporting and stakeholder accountability: The missing link", Accounting, Organizations and Society, 32(7), 649-667.

Cowen, S. S., Ferreri, L. B., Parker, L. D. (1987), "The Impact of Corporate Characteristics on Social

Responsibility Disclosure: A Typology and Frequency-based Analysis", Accounting, Organizations and Society. 12(2), 111-122.

Deegan, C. & Gordon, B. (1996), "A study of the environmental disclosure practices of Australian corporations", Accounting and Business Research, 26(3), 187-199.

Gray, R. (1990a), "The Greening of Accountancy: The Profession after Pearce", certified research report No. 17, Chartered Association of Certified Accountants, London.

Gray, R. (1990b), "Corporate Social Reporting by UK Companies: A Cross-Sectional and Longitudinal Study", the Annual Conference of British Accounting Association, University of Dundee.

Gray, R., Javad, M., Power, D. M., & Sinclair, C. D. (2001). "Social and environmental disclosure and corporate characteristics", Journal of Business Finance & Accounting, 28(3 - 4), 327-356.

Gray, R., Kouhy, R & Lavers, S. (1995), "Corporate Social and Environmental Reporting: A Review of the Literature and Longitudinal Study of UK Disclosure", Accounting, Auditing and Accountability Journal, 8, 47-77.

Gray, R., Owen, D. & Adams, C., (1996), "Accounting and Accountability: Changes and Challenges in Corporate Social and Environmental Reporting", Prentice-Hall, London. Gray, R., Owen, D. & Maunders, K. (1987), "Corporate Social Reporting: Accounting and accountability",

Hemel Hempstead: Prentice Hall.

Harte, G. And Owen, D. (1991), "Environmental Disclosure in the Annual Reports of British Companies: A Research Note", Accounting Auditing & Accountability Journal, 4(3), 51-61

Hopwood, A., (2009), "Accounting and the Environment", Accounting, Organizations and Society, 34(3), 433-

439.

Lehman, G. (1995), "A Legitimate Concern for Environmental Accounting", *Critical Perspectives on Accounting*. 6(5), 393-412.

Li, J., Pike, R. & Haniffa, R. (2008), "Intellectual capital disclosure and corporate governance structure in UK firms." *Accounting and Business Research*, 38(2), 137-159.

Lodhia, S. & Jacobs, K. (2013), "The practice turn in environmental reporting: A study into current practices in two Australian commonwealth departments", *Accounting, Auditing & Accountability Journal*, 26(4), 595-615

Makori, D. (2013), "Environmental Accounting and Firm Profitability: An Empirical Analysis of Selected Firms Listed in Bombay Stock Exchange, India", *International Journal of Humanities and Social Science*, 3(18).

Porwal, L. and Sharma, N. (1991), "Social Responsibility Disclosure by Indian Companies", The Chartered Accountant (India), No. 8, 630-635.

Shuchi, P. (2009), "Relationship between environmental disclosures and corporate characteristics : A Study of large manufacturing companies in India", *Social Responsibility Journal*, 5(2), 227-244.

United Nations, (1992), "Transnational Corporations and Management Division", *Environmental Accounting: Current Issues, Abstracts and Bibliography.* New York: United Nations.

Yusoff, H. & Yatim, N. (2013), "Environmental Reporting Practices in Malaysia and Australia", *The Journal of Applied Business Research*, 29(6), 1717-172.

Ghada Awad Altarawneh received her Ph.D. in Accounting from the University of Buckingham at Buckingham, UK in 2011, and B.S. and M.S. degrees in Accounting from Mutah University/Jordan and Al al-Bayt University/Jordan in 2002 and 2005, respectively. She has been a faculty member of Accounting department at Mutah University since 2011. Her main interests include social and environmental accounting, Accounting information systems, and using artificial intelligence in accounting systems. She is also considered a feminist activist in Mutah University and southern Jordan.

The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage: <u>http://www.iiste.org</u>

CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

Prospective authors of journals can find the submission instruction on the following page: <u>http://www.iiste.org/journals/</u> All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

MORE RESOURCES

Book publication information: http://www.iiste.org/book/

Academic conference: http://www.iiste.org/conference/upcoming-conferences-call-for-paper/

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digtial Library, NewJour, Google Scholar

