The Impact Of Environmental Costs Dimensions On Financial Performance: Role Of Environmental Disclosure As A Mediator Of Iraqi Industrial Companies

Abbas Jumaah Al-Waeli1, Zuriadah Ismail2, Azam Abdelhakeem Khalid3, Raad Naser Hanoon4

1Department of Accounting, Mazaya University College, Iraq
2Department of Accounting, Faculty of Management and Economics, University Pendidikan Sultan Idris
3Department of Accounting, Faculty of Management and Economics, University Pendidikan Sultan Idris
4Department of Accounting, Mazaya University College, Iraq

Abstract

This study aims to Impact Environmental Costs Dimensions on Financial Performance: Role of Environmental Disclosure as a Mediator of Iraqi Industrial Companies. The data was collected from annual reports of 25 selected companies Iraqi stock exchange and oil sector from 2014 to 2018. The results show that environmental costs (contingent costs and external social costs) positively influence financial performance. While Contingent costs, social costs, hidden costs, and Image & relationship costs show a positive influence on environmental disclosure. Whilst, finding revealed that environmental disclosure was positively significant in affecting financial performance. It was found that environmental disclosure was fully mediated the relationship between environmental costs (hidden costs and Image & relationship costs) and financial performance. Environmental disclosure partially mediated the relationship between environmental costs (Contingent costs, and social costs) and financial performance. There is no Mediation for environmental disclosure of the impact between Conventional costs and financial performance. It was also found that environmental disclosure mediated the impact between environmental costs (Conventional costs, Image & relationship costs, and External social costs), and financial performance. This indicates advantages for companies that produce less moderate environmental disclosure and enables them to gain investors’ confidence. This study's implications provide insights into the implementation of the measurement of environmental costs and environmental disclosure in Iraq.

Keywords: Environmental Costs, Financial Performance, Environmental Disclosure, and Iraqi Industrial Companies
1. Introduction

The notion of environmental responsibility came to the fore during the 1980s when the world began to notice the depletion of natural resources at an increasing rate due to the fast-paced industrialisation growth right after World War II (Gray, Bebbington, & Gray, 2014). It has become crucial for businesses to incorporate environmental efforts into their business strategy, with growing knowledge of environmental concerns and the magnitude of costs involved. Organizations are becoming highly aware of the protection and optimal usage of natural resources to maximize comparative advantage (Hart, 1995). In this aspect, a growing body of literature on environmental responsibility indicates that businesses can achieve sustainable comparative benefits by reducing the negative effect of their activities on the natural environment (Clarkson, Overell, & Chapple 2011).

In addition, environmental costs may be high, ranging from five to twenty per cent of the overall cost of doing the business activity, according to (Ditz, Ranganathan, & Banks, 1995). Because these costs are likely to rise as pressures for environmental protection measures increase. That calculates and disclosure about environmental costs directly reporting to external shareholders and other stakeholders can improve a business's competitive position. Thus, improving the financial performance of companies (Gale & Stokoe, 2001). As well as being one of the several words used to define the social and environmental contributions and consequences of business activity, environmental disclosure contributes to enhancing the financial results of industrial and social companies (Jenkins & Yakovleva, 2006; Tirumalsety & Gurtoo, 2021). For decades, the natural environment and the impact of human activity on the climate have become humanity's ever-present issue. The international community has been much more engaged with the push toward global industrialization and has thus attempted to explore solutions through international policy and legislation on how to exploit the natural world to fulfill the needs of the present generation without jeopardizing those of future generations (Buss, 2007). So, the aim of study the level of environmental disclosure, environmental costs, and financial performance of Iraqi industrial companies and, How the impact of environmental disclosure is a mediator on the relationship between environmental costs and financial performance?
1.2 Problem Of The Study

The current research represents the existing gap in the previous accounting literature where previous studies have addressed the companies' environmental costs and financial performance. Therefore, the problem remains unsolved yet. Thus, this study aims to study the environmental disclosure variable as mediation to solve the problem caused by weak financial performance in Iraqi companies.

In its overall 'ease of doing business' category, the World Bank rated Iraq 165 out of 185 nations. In their 2012 Corruption Perception Index, Transparency International rated Iraq 169 out of 176 (Beba, 2013; Al-Tameemi & Alshawi, 2014). This represents the low output of the businesses in the public sector responsible for delivering different facilities in Iraq (Al-Tameemi & Alshawi, 2014). Additionally, it is predicted that the research problem lies due to the weakness of financial performance of Iraqi companies in lack of determination and measurement of environmental costs such as contingent costs, potentially hidden costs, conventional costs, Image & relationship costs, and social costs in the form clear. According to an applicable accounting system and weakness and shortcoming in environment awareness (Yaacoub & Dhairab, 2017). Adequate transparency on environmental costs and compliance with corporate environmental laws have a substantial positive impact on financial performance metrics, the outcomes analyzed by (Nwaiwu & Oluka, 2018; Okoye, Ebubechukwu, & Agweda, 2016).

Thus, the main purpose of environmental disclosure as a mediator is to address the poor financial performance of the sample used in this study which represents ISX and the Oil Sector companies. Kiende Gatimbu & Masinde Wabwire, (2016) Findings reveal that environmental disclosure has a significant positive effect on mean financial performance, Proposes that businesses invest in the disclosure of the environment because it contributes to improved financial performance (Abubakar, Moses, & Inuwa, 2017; Tze San, Wei Ni, Boon Heng, & Sin Huei, 2015).

1.3 Hypotheses Of The Study

The followings are the hypotheses developed based on the review of literature:

H1. There are major impacts of conventional environmental costs on the financial performance of Iraqi industrial companies.

H2. There are major impacts of environmental potentially hidden costs on the financial performance of Iraqi industrial companies.

H3. There are major impacts of environmental contingent costs on the financial performance of Iraqi industrial companies.
There are major impacts concerning the image and relationship costs on the financial performance of Iraqi industrial companies.

There are major impacts concerning social costs on the financial performance of Iraqi industrial companies.

There is a major impact of environmental costs (potential hidden costs, conventional costs, Image & relationship costs, contingent costs, and social costs) on environmental disclosure.

The effects of environmental disclosure on the financial results of Iraqi industrial companies are significant.

There are several major effects of environmental costs (potential hidden costs, conventional costs, Image & relationship costs, contingent costs, and social costs) on financial performance through environmental disclosure.

2. Literature Review

2.1 Industrial Companies In Iraqi Stock Exchange

The started ISX with development entails the number of companies in Iraqi Stock Exchange number 125 represents nine different sectors (www.isx-iq, 2019). So, The researchers will excluding financial companies because it has different rules and doesn’t have a statement of environmental costs in addition, other sectors which do not have the statement of environmental costs. Thus, the remaining companies represent 25 are industrial companies considered the sample of study as well as, some of the companies in the oil sector in the following section that has the annual report for the selected years in this study. As well, Iraq has a suitable location for the development of political and economic trends, particularly for the global oil market both historically and at the present phase. Iraq has proven to be the significant oil reserves and ranked as the second-largest oil reserves in the world behind Saudi Arabia with 260 billion barrels, 120 billion barrels, and its oil export policy has been a crucial component in the international oil supply and pricing setting for over 30 years (Jafar Abbas Abdullah, 2018). Iraq was the founding member of the cartel of the Organization of Oil Exporting Countries (OPEC) and since the 1960s, Iraq was among the giant oil-producing countries that nationalize its oil fields (Jafar Abbas Abdullah, 2018).

2.2 Environmental costs

Environmental costs are generated based on serious talk concerning the accounting of environmental costs and environmental management (Schaltegger, Bennett, & Burritt, 2006).
Environmental expenses have historically been understood as being the ‘end-of-pipe’ expenditures like the post-action charges after production or costs related to the waste-water treatment. Environmental management politics only focuses on the ‘end-of-pipe costs and technologies that can create short-run revenues. However, such a focal point will be high-priced in the long run as the use of assets in the organization will be neglected.

In addition, the EPA Act (Act 490) serves in the nation as general environmental rules. Section 2(h) of Act 490 needs the EPA to prescribe air, water, land, and other types of environmental pollution regulations and rules, including the discharge of waste and the management of toxic substances (Saremi, Ghadami, & Moeinnezhad, 2014). A vital approach to making some substantial change in the struggle against environmental degradation is to recommend acceptable standards and recommendations following globally accepted guiding principles (Ahinful, 2017). So, the researchers will discuss the dimensions of environmental costs in the next section according to the environmental protection agency that represents Conventional costs, potentially hidden costs, Image & relationship costs, Contingent costs and social costs. These costs can impact the company’s financial performance, especially having a significant impact on industrial companies.

2.3 Dimensions of Environmental Costs

The classification of the environmental costs varies across the organization due to different purposes and business nature contexts. A useful cost categorization that was provided by the US Environmental Protection Agency (EPA) in 1995 is reviewed for this study. They asserted that the costs of the environment are defined according to how an organization intended to apply the information. Five distinctive dimensions were established based on this chart, as shown in Figure 1 (Tsai, Lin, & Chou, 2010; Duman, Yılmaz İçerli, Yücenürşen, & Apak, 2013; Ezeagba et al., 2017).

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Figure 1: Dimensions of Environmental costs according to EPA, (1995).
2.3.1 Conventional Costs

Conventional costs refer to the costs of the raw materials and the energy related to the environment. It is generally known as the environmental costs as it involves the accounting and the investment budget. It is suggested that these are the costs that need to be reduced and be highlighted in the process of decision-making (Ezeagba et al., 2017; USEPA, 1995).

2.3.2 Potentially Hidden Costs

Potentially secret expenses are environmental costs that may potentially be hidden from management and categorized into three types; first, the immediate environmental costs incurred due to process, system, or facility service. This may involve seating costs, the design of environmentally preferable processes and products, supplier qualifications, assessment of alternative products and processes (Bickel, Schmid, & Friedrich, 2005; USEPA, 1995). Secondly, regulatory and voluntary environmental costs are sustained in the operation of a process, system, or facility; since many businesses have historically viewed these costs as overhead, managers and experts accountable for day-to-day activities and management decisions do not obtain enough consideration. As a consequence of being pooled into overhead budgets, the extent of these expenses can often be more challenging to evaluate (Landrigan, 2012; USEPA, 1995). Third, while management accounting activities can hide upfront and existing operational expenses, back-end environmental costs may not at all be integrated into management accounting systems. These environmental costs of ongoing practices are prospective, which indicates that they may occur in the future at more or less well-defined points (Bickel et al., 2005; Landrigan, 2012; USEPA, 1995).

2.3.3 Contingent Costs

In probabilistic terms, the costs that may or may not be incurred at some point in the future can best be defined here as "contingent costs"; their expected value, their range, or the chance of increasing some number. Examples include costs related to the correction and compensation of potential unintended releases of pollutants into the environment (e.g. oil spills), fines and penalties for future regulatory violations, and future costs resulting from unexpected outcomes of permitted or foreign release. These expenses may also be referred to as "contingent liabilities" or "contingent costs of liability." As these expenses do not need to be considered for other reasons,
the internal management accounting systems and forward-looking decisions do not provide them with adequate attention (Stanciu, Joldoș, & Stanciu, 2011; USEPA, 1995).

### 2.3.4 Image And Relationship Costs

Image and relationship expenses are "less tangible" or "intangible" environmental costs since they are incurred to impact management, clients, staff, societies, and regulators' subjective (though measurable) perceptions. These expenses have also been referred to as "corporate image" and costs of "relationship." The costs of annual environmental reports and community relations events, costs incurred voluntarily for environmental activities (e.g. tree planting) and costs incurred for award/recognition programs for P2 can be included in this group. The expenses themselves are not "intangible" but instead are the direct advantages resulting from relationship/corporate Image expenditures (Amaechi & Nwankwoke, 2017; USEPA, 1995).

### 2.3.5 Social Costs

Societal costs are characterized as costs borne by society as a whole instead of those causing the expenses and receiving the benefits, and these costs are traditionally not reflected in the account of a company. This research does not bring external costs into consideration but will focus instead on private costs. Most companies avoid these expenses for profit calculation, except for a few companies globally (Chang, 2007; Emmanuel, Elvis, & Abiola, 2019; USEPA, 1995).

### 2.4 Financial Performance

In monetary terms, financial performance is an indicator of the policies and activities of a company. It is a general indicator of the overall financial health of a business over a given period and can be used to compare similar companies in the same industry or to compare aggregated industries or sectors (Kinyua, Gakure, Gekara, & Orwa, 2015). According to(Gentzoglannis, 2019), financial performance benefits can be managed in the future as corporate performance details, in particular the profitability needed to determine potential changes in economic capital. In this connection, quality data is essential, information useful for forecasting the company's performance ability to produce cash and resources available. In addition, knowledge is often useful in formulating the consideration of the company's effectiveness in the utilization of resources (Natarajan V, Reddy, & Bekele, 2015).

### 2.5 Environmental Disclosure
Corporate environmental disclosure (CED) has been the subject of several research and much discussion since the 1980s about the divulgence of information by businesses. Multiple research has investigated the essence and trends of CED including several explanatory factors that influence CED practices (Eugénio, Costa Lourenço, & Morais, 2010; Gao, Heravi, & Xiao, 2005; Tilt, 2001). A broad range of studies asserts that environmental disclosure is a significant phenomenon used by businesses to accomplish a variety of purposes (Gray & Sinclair, 2001). Lodhia, (2001) argued that environmental disclosures are not a traditional or habitual concept where it depends from country to country and sector to sector. In addition, it is interpreted by different theoretical structures.

Campbell & Mínguez-Vera, (2008) defined environmental disclosure of financial statements as 'disclosures concerning the consequences of the organizational procedures onto the natural environment. Environmental disclosure is related to financial statements that concern the actions of determining, revealing, and being responsible to stakeholders (Sutantoputra, Lindorff, & Prior Johnson, 2012). It offers positive and negative information that is not mentioned in the financial reports. However, the disclosure must be happening to satisfy and influence the consumer, investor, and shareholder's demand in their decision-making (Adams, 2004; Al-Waeli, Ismail, & Khalid, 2020).

2.6 Theoretical Framework

2.6.1 Legitimacy Theory

The theory of legitimacy is known widely to be utilized to justify environmental disclosure. Cho and Patten (2007) asserted that legitimacy theory indicates that environmental disclosure is required due to society's pressure and the politics faced by a company concerning environmental performance. Companies are attempting to provide more environmental and financial information to external parties to respond to such pressure. Campbell, Craven, and Shrives (2003) investigated the predicted legitimacy through the required voluntary disclosure for social and environmental issues and financial performance. Legitimacy theory speculates that organizations are constantly searching to confirm that they are utilized within certain societies' limits and standards (Laan, 2009).

This theory supports the connection between environmental disclosure and financial performance because it requires the company to disclose environmental information to external and internal parties. To reduce the state's penalties and fines and attract international parties through disclosure of financial, environmental, and economic information, giving the company the legitimacy and permission to survive and continue in business. That leads to improving the company's financial performance by attracting stakeholders to deal with the company and invest in it. The next section 2.6.2 deals with the Accountability theory comprehensively, which will
address the relationship between environmental costs and financial performance, which continue to be an up-to-date and complex matter in the extractive sector’s daily activities.

2.6.2 Accountability Theory

Accountability is a multi-faceted concept (Sfestani, & Peykani, 2016) (Lundelius; & Schroeder1996; Toomey; Anderson & Guthrie, 1996; Ogden, 1995; Rosair & Taylor, 2000) It is an elusive concept, which means that different things go to different people. Boven, (2005) stated that the definition is rather general and lacks of precise definition. Broadly, accountability denotes one party's state being held to account for another party(Do, Davey, &Coy, 2014). It is consistent with (Brien, Stapenhurst, & Johnston, 2008), who argued that accountability exists in a relationship between an individual and the direction that requires the individual to saddle with the task or function. The concept of accountability is also seen as being a state about ‘commanding and requesting for reasons’ for the conduct. This occurs at various social or environmental constructs such as within families and within and between companies (J. Roberts & Scapens, 1985). The theory of accountability supports the relationship between environmental costs and environmental disclosure. This theory complements other theories in this study. The theory shows that it requires the company to disclose the costs of environmental pollution that affect the community and other external parties, especially investors and the government. Consequently, the environmental costs disclosure improves the company’s financial performance by attracting external parties to a safe and secure environment.

3. Research Methodology

3.1 Research Design

The researchers in this study have adopted the quantitative approach. This study investigates the impact of environmental costs on financial performance and the role of environmental disclosure as a mediator in the relationship between Environmental costs and financial performance in Iraqi industrial companies. To achieve the research objectives, a quantitative research approach using secondary data for analysis is employed. The data is processed into information by analyzing the statistical relationship between the variables. The outcome would be conclusive to provide a solution to the identified problem. Additionally, inferential analyses measure the relationship
between the independent and dependent variables and the effect of environmental disclosure as a mediator variable.

3.2 Population and Sample of the Study

This research's target populations are ISX and the oil sector in Iraq for the period of 2014 to 2018. The choice of ISX and oil sector was informed by previous studies that have identified these two sectors significantly impacting the environment in Iraq (Ammar Mohammed Hussein, 2018; Hammoud & Hammadi, 2016) Iraq Stock Exchange consists of 125 and the oil sector consists of 15. The total number of companies selected for this study is 25 industrial companies as described in table 1. The researchers use a purposive sampling method is a non-probability sampling method, which is also known as a judgmental, subjective, or selective method. It also obtains annual reports from these companies on the website or by hand after obtaining permission.

<table>
<thead>
<tr>
<th>Table 1: Total selected companies as a sample and Exclude companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>statements</td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
<tr>
<td>Total companies in the Iraqi stock exchange</td>
</tr>
<tr>
<td>Exclude None Industrial Companies</td>
</tr>
<tr>
<td>Total companies in the oil sector</td>
</tr>
<tr>
<td>Companies that don’t have adequate data for the study period from 2015 to 2018.</td>
</tr>
<tr>
<td>Total selected companies as sample</td>
</tr>
</tbody>
</table>

4. Results
4.1 Explanation About Data Characteristics

As Table 2 shows, up to 25 Iraqi companies were involved in the study. Each company represents 4% of the sample since 5 observations (one observation for Conventional costs, Potential Hidden Costs, Contingent costs, Image and Relationship Costs, External Social Costs, Environmental Disclosure, and Financial Performance) was taken from each company covered the period 2014 to 2018. These companies were IBPM, IBSD, IELI, IHLI, IICM, IIDP, IIEW, IITC, IKLV, IMCI, IMIB, IMOS, IRMC, IKHC, IHFI, INCP, IMAP, ITLI, IDC, NGC, SRC, COC, BOC, OEC, and MOC.
Table 2: Sample description-Years

<table>
<thead>
<tr>
<th>Years</th>
<th>n</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>25</td>
<td>20.0%</td>
</tr>
<tr>
<td>2015</td>
<td>25</td>
<td>20.0%</td>
</tr>
<tr>
<td>2016</td>
<td>25</td>
<td>20.0%</td>
</tr>
<tr>
<td>2017</td>
<td>25</td>
<td>20.0%</td>
</tr>
<tr>
<td>2018</td>
<td>25</td>
<td>20.0%</td>
</tr>
<tr>
<td>Total</td>
<td>125</td>
<td>100%</td>
</tr>
</tbody>
</table>

It is clear from Table 2 that, the observations taken were distributed equally across the years. Each year represents 20% (n=25) of the total percentage, this can be shown from figure 2.

Figure 2: Sample description-Years
4.2 Comparing the overall means for the scales under the study

As Table 3 shows, External social costs scored the highest overall mean (23.6%) with a Standard deviation of 7.6%, followed by Conventional costs (Mean=21.0%, SD=7.2%), while Contingent costs scored the lowest mean (15.8%) with Standard deviation of (5.2%). For the mediated indicator, the overall mean was (20.2%) with a Standard deviation of (6.1%), while for the outcome variable (i.e. Dependent variable) the overall mean was (17%) with a Standard deviation of (7.3%), as in figure 3.

Table 3: Overall descriptive statistics for the Indicators under the study

<table>
<thead>
<tr>
<th>Indicators</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional costs</td>
<td>125</td>
<td>5.0%</td>
<td>35.0%</td>
<td>21.0%</td>
<td>0.072</td>
</tr>
<tr>
<td>Potential hidden costs</td>
<td>125</td>
<td>7.0%</td>
<td>35.0%</td>
<td>20.9%</td>
<td>0.068</td>
</tr>
<tr>
<td>Contingent costs</td>
<td>125</td>
<td>6.0%</td>
<td>35.0%</td>
<td>15.8%</td>
<td>0.052</td>
</tr>
<tr>
<td>Image and relationship costs</td>
<td>125</td>
<td>2.0%</td>
<td>40.0%</td>
<td>18.5%</td>
<td>0.071</td>
</tr>
<tr>
<td>External social costs</td>
<td>125</td>
<td>7.0%</td>
<td>44.0%</td>
<td>23.8%</td>
<td>0.076</td>
</tr>
<tr>
<td>Environmental Disclosure</td>
<td>125</td>
<td>2.0%</td>
<td>50.0%</td>
<td>20.2%</td>
<td>0.061</td>
</tr>
<tr>
<td>Financial Performance</td>
<td>125</td>
<td>2.0%</td>
<td>45.0%</td>
<td>17.0%</td>
<td>0.073</td>
</tr>
</tbody>
</table>

Notes: CC = Conventional costs, PHC= Potential Hidden Costs, Con. C= Contingent costs, IRC= Image and Relationship Costs, ESC= External Social Costs, ED= Environmental Disclosure, FP= Financial Performance, Std. Dev= standard deviation, Min=Minimum, Max=Maximum

Figure 3. Comparing the overall means for the scales under the study
4.3 Regression and Collinearity Analysis:

Table 4 indicated that the 6 predictors (i.e. the independent variables along with the mediator) explained about 20.1% of the variance in Financial Performance, while the value of adjusted $R^2$ indicated that the significant predictors of all predictors' sets explained about 16.8% of the variance in Financial Performance. However, the multiple linear correlation coefficient was 0.45, which indicates the was a positive and moderate correlation between the predictors and Financial Performance. Multiple linear regressions with collinearity analysis ran. The results are presented below.

Table 4: Model Summary

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. The error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.45</td>
<td>0.201</td>
<td>0.168</td>
<td>0.067</td>
</tr>
</tbody>
</table>

Predictors: (Constant), Mediator_Environmental Disclosure, Potential hidden costs, External social costs, Contingent costs, Image and relationship costs

Table 5 indicates that the regression model predicts the dependent variable significantly well, as shown in the "Regression" row. This indicates the statistical significance of the regression model.
that was run. Here, $p = 0.000$, which is less than 0.01, and indicates that, overall, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data).

Table 5: Results OF Analysis of Variance (ANOVA)

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>0.134</td>
<td>5</td>
<td>0.027</td>
<td>6.002</td>
<td>0.000</td>
</tr>
<tr>
<td>Residual</td>
<td>0.533</td>
<td>119</td>
<td>0.004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>0.667</td>
<td>124</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dependent Variable: Financial Performance
Predictors: (Constant), Environmental Disclosure, Potential hidden costs, External social costs, Contingent costs, Image and relationship costs

Table 6: Coefficients of the regression Model

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>(Constant)</td>
<td>0.108</td>
<td>0.081</td>
<td>1.34</td>
<td>0.183</td>
<td></td>
</tr>
<tr>
<td>Potential hidden costs</td>
<td>-0.257</td>
<td>0.107</td>
<td>-0.238</td>
<td>-2.40</td>
<td>0.018</td>
</tr>
<tr>
<td>Contingent costs</td>
<td>0.161</td>
<td>0.166</td>
<td>0.114</td>
<td>0.973</td>
<td>0.333</td>
</tr>
<tr>
<td>Image and relationship costs</td>
<td>-0.074</td>
<td>0.126</td>
<td>-0.072</td>
<td>-0.60</td>
<td>0.555</td>
</tr>
<tr>
<td>External social costs</td>
<td>0.184</td>
<td>0.105</td>
<td>0.191</td>
<td>1.76</td>
<td>0.081</td>
</tr>
<tr>
<td>Environmental Disclosure</td>
<td>0.296</td>
<td>0.118</td>
<td>0.246</td>
<td>2.51</td>
<td>0.013</td>
</tr>
</tbody>
</table>

Excluded Variables: Conventional costs (Tolerance=0.000)

The Coefficients table provides us with the necessary information to predict Financial Performance from the predictors, as well as determine whether the predictors contribute statistically significantly to the model (by looking at the "Sig." column). Furthermore, we can use the values in the "B" column under the "Unstandardized Coefficients" column, as shown above. Standardized Beta Coefficients showed that Potential hidden costs have a negative effect.
on Financial Performance ($\beta = -0.238, \text{sig.} < 0.05$), while Environmental Disclosure has a positive effect on Financial Performance ($\beta = 0.246, \text{sig.} < 0.05$). However, at 10% level of significance, External social costs have a positive effect on Financial Performance ($\beta = 0.191, \text{sig.} < 0.10$).

Nevertheless, the hypothesized relationship between the dependent variable and Contingent costs and Image and relationship costs was not found to be statistically significant (sig.>0.05), as shown in table 6. On the other hand, Tolerance is associated with each independent variable and ranges from 0 to 1. Allison (1999) notes that there isn’t a strict cutoff for tolerance, but suggests a tolerance of below 0.40 is cause for concern. Weisburd & Britt state that anything under 0.20 suggests serious multicollinearity in a model (Allison, P. (1999). Multiple Regression: A Primer. Pine Forge Press). Since all values of Tolerance test are greater than 0.4, so no cause for concern. The Excluded variable from the model was Conventional costs since Tolerance was 0.000. Concerning the Test Results for Multicollinearity (FIV) and based on the Coefficients Output - collinearity Statistics, we can observe that all values of VIF were less than 10, meaning that the VIF value obtained is between 1 to 10, it can be concluded that there are no multicollinearity symptoms.

4.4 Path of least squares analysis

Path of least squares analysis was conducted to test the hypotheses of the research. The researcher used SEM using AMOS 23.0 to examine all the paths of the model through the resultant path coefficients.

Figure 4. presents a graphical representation of the resultant model using AMOS 23.0. The figure illustrates the independent variables (Conventional costs, Potential hidden costs, Contingent costs, Image and relationship costs, External social costs, Environmental Disclosure). The Figure also presents the mediating factor, which is Environmental Disclosure along with the dependent variable (i.e. Financial Performance). The numbers of the paths represent the Beta value of each path, which indicates the amount of independent variable influence on the mediated variable and one dependent variable.
Table 7: Summary of Standardized Direct Effects using path analysis of AMOS

<table>
<thead>
<tr>
<th>Variables</th>
<th>External Costs</th>
<th>Image Costs</th>
<th>Contingent Costs</th>
<th>Potential Hidden Costs</th>
<th>Conventional Costs</th>
<th>Environmental Disclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Disclosure</td>
<td>-0.28*</td>
<td>-0.43**</td>
<td>0.16*</td>
<td>-0.41*</td>
<td>-0.14</td>
<td>0.00</td>
</tr>
<tr>
<td>(0.013)</td>
<td>(0.005)</td>
<td>(0.015)</td>
<td>(0.013)</td>
<td>(0.309)</td>
<td></td>
<td>(...)</td>
</tr>
<tr>
<td>Financial Performance</td>
<td>0.46**</td>
<td>0.20</td>
<td>0.25**</td>
<td>0.07</td>
<td>0.30</td>
<td>0.27**</td>
</tr>
<tr>
<td>(0.002)</td>
<td>(0.162)</td>
<td>(0.003)</td>
<td>(0.497)</td>
<td>(0.054)</td>
<td></td>
<td>(0.009)</td>
</tr>
</tbody>
</table>

A number between brackets represents Two Tailed Significance.

**. The effect is significant at the 0.01 level.

*. The effect is significant at the 0.05 level.

Table 7 shows that External costs and Contingent costs have a positive effect on Financial Performance ($\beta = 0.39, \text{sig.}<0.01$), ($\beta = 0.29, \text{sig.}<0.01$), respectively. However, no statistical effect was found for Image costs, Potential hidden costs, and Conventional costs on Financial Performance ($\text{sig.}>0.05$). Expectedly and highly, Environmental Disclosure
statistically has a positive effect on Financial Performance \( (\beta = 0.27, \text{sig.} < 0.01) \) As in Table 8.

Table 8: Summary of Standardized Indirect Effects using path analysis of AMOS

<table>
<thead>
<tr>
<th>Variables</th>
<th>External Costs</th>
<th>Image Costs</th>
<th>Contingent Costs</th>
<th>Potential Hidden Costs</th>
<th>Conventional Costs</th>
<th>Environmental Disclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Disclosure</td>
<td>-0.28*</td>
<td>-0.43**</td>
<td>0.16*</td>
<td>-0.41*</td>
<td>-0.14</td>
<td>0.00</td>
</tr>
<tr>
<td>(0.013)</td>
<td>(0.005)</td>
<td>(0.015)</td>
<td>(0.013)</td>
<td>(0.309)</td>
<td>(...)</td>
<td></td>
</tr>
<tr>
<td>Financial Performance</td>
<td>0.46**</td>
<td>0.20</td>
<td>0.25**</td>
<td>0.07</td>
<td>0.30</td>
<td>0.27**</td>
</tr>
<tr>
<td>(0.002)</td>
<td>(0.162)</td>
<td>(0.003)</td>
<td>(0.497)</td>
<td>(0.054)</td>
<td>(0.009)</td>
<td></td>
</tr>
</tbody>
</table>

A number between brackets represents Two Tailed Significance.

**. The effect is significant at the 0.01 level.

*. The effect is significant at the 0.05 level.

Table 9: Summary of Standardized Total Effects using path analysis of AMOS

<table>
<thead>
<tr>
<th>Variables</th>
<th>External Costs</th>
<th>Image Costs</th>
<th>Contingent Costs</th>
<th>Potential Hidden Costs</th>
<th>Conventional Costs</th>
<th>Environmental Disclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Disclosure</td>
<td>-0.28*</td>
<td>-0.43**</td>
<td>0.16*</td>
<td>-0.41*</td>
<td>-0.14</td>
<td>0.00</td>
</tr>
<tr>
<td>(0.013)</td>
<td>(0.005)</td>
<td>(0.015)</td>
<td>(0.013)</td>
<td>(0.309)</td>
<td>(...)</td>
<td></td>
</tr>
<tr>
<td>Financial Performance</td>
<td>0.39**</td>
<td>0.08</td>
<td>0.29**</td>
<td>-0.04</td>
<td>0.26</td>
<td>0.27**</td>
</tr>
<tr>
<td>(0.004)</td>
<td>(0.494)</td>
<td>(0.005)</td>
<td>(0.906)</td>
<td>(0.101)</td>
<td>(0.009)</td>
<td></td>
</tr>
</tbody>
</table>

A number between brackets represents Two Tailed Significance.

**. The effect is significant at the 0.01 level.

*. The effect is significant at the 0.05 level.

Table 9 shows concerning relationships between the indicators and the mediated variable (Environmental Disclosure), results obtained from the analysis indicated that External social costs were negatively related to Environmental Disclosure \( (\beta = -0.28, \text{sig.} < 0.05) \), Image and relationship nor Potential hidden costs was negatively related to Environmental Disclosure \( (\beta = -0.43, \text{sig.} < 0.01) \), Contingent costs was positively related to Environmental Disclosure \( (\beta = 0.16, \text{sig.} < 0.05) \), and Potential hidden costs were negatively related to Environmental Disclosure \( (\beta = -0.41, \text{sig.} < 0.05) \). However, Conventional costs have no statistical effect on Environmental Disclosure \( (\beta = -0.14, \text{sig.} > 0.05) \). On the other hand, analysis of standardized indirect effects for the indicators on Financial Performance indicated that:
Potential hidden costs have a negative indirect effect on Financial Performance through Environmental Disclosure (β = 0.10, sig. < 0.01).

Contingent costs have a positive indirect effect on Financial Performance through Environmental Disclosure (β = 0.04, sig. < 0.01).

Image & Relationship costs have a negative indirect effect on Financial Performance through Environmental Disclosure (β = −0.12, sig. < 0.01).

External social costs have a positive indirect effect on Financial Performance through Environmental Disclosure (β = 0.04, sig. < 0.05).

However, Conventional costs have no significant indirect effects on the Financial Performance through Environmental Disclosure (sig. > 0.05).

5. Discussions

The descriptive results of this study showed that the level of environmental disclosure in Iraq is rising. It also denoted that the level of environmental disclosure occasionally decreases but increases in the following year. Therefore, this study found that the level of environmental disclosure in Iraq from 2014 to 2018 is upward and has increased from time to time.

The second objective findings are inconsistent with the results of previous studies mostly Asuquo, (2012) conducted out research on “Environmental Friendly Policies and Their Financial Effects on Company Performance of Selected Oil & Gas Companies in the Niger Delta Region of Nigeria”. The finding of the second research objective is consistent with the results of previous studies. According to Onyinyich, et al. (2017), both donation and environmental potentially hidden costs have a negative relationship (r = −0.068 and r = 0.072) respectively with return on assets (ROA) whereas, training, recruitment and canteen expenses (TRC) and the return on assets (ROA) have a positive relationship (r = 0.068) on Nigerian brewery Plc.

According to which the invisible costs are costs that do not show up explicitly in a company's information system, such as the budget, financial accounting, or management accounting, or a journal or other summary document (Savall & Zardet, 2008). The results of the second research objective are inconsistent with the findings of previous studies especially Contra wise, the negative connection concerning the environmental contingent costs and financial performance were also been discovered to support prior research works. Jaggi, Freedman, and Martin (2011) discovered a negative connection between pollution performance indicators and financial performance indexes. They concluded that the market does not compensate for the company’s environmental commitment. The findings of H5 are consistent with the results of previous studies, especially Agbiogwu, Ihendinihu, & Okafor, (2016) Finding from the analysis suggests that the environmental and social costs of the sampled companies greatly impact the net profit margin, earnings per share, and return on the capital employed by the manufacturing companies. The analysts suggested that government should ensure complete adherence of environmental laws by manufacturing companies in Nigeria.
The findings of (H9.a-H8.e) are consistent with previous literature findings, especially, Diantimala (2018) conducted a study on the impact of financial performance on sustainability disclosure and the impact of sustainability disclosure on company value. Disclosure is used as a mediating variable and investigation of the indirect effect of financial performance on company value is needed to attain the impact of mediating. The outcome showed that greater liquidity encourages management to present more disclosure. Hence, greater disclosure will significantly escalate the company’s value. In addition, information disclosure is seen as a means to improve the marketability of shares, promote company image, and decrease capital cost, thus improving financial performance (Cahaya & Porter, 2008). Fahru & Wan Amalina (2018) attempted to explore more on the company’s performance, particularly in the context of Islamic banks and disclosure as a mediating variable to strengthen this connection concerning the Company Governance Mechanisms and Company Performance of Islamic. This hypothesis (H8.e) consistent with the findings of previous studies, (Roberts, 1992) discovered a positive connection between protected social and environmental disclosure and financial performance (Smith, Yahya, & Marzuki Amiruddin, 2007). It can be concluded that companies that publish high current levels of disclosure of financial statements tend to portray relatively good financial performance in the past. This occurrence supports Ullmann’s 1985 argument (Fu-Ju Yang1, 2010) that a certain extent of profit is necessary before a company devotes its resources to meet stakeholder's demands.

6. Limitations of the Study

A couple of key limitations need to be considered. The researchers analyzed company annual reports depending on only five years from the Iraq Stock Exchange in 2014 to 2018. Due to the lack of available data at the time of data collection, it was not achievable to include the year 2018-2019 and all companies in the sample. The current study focuses on quantitative research methodology only. The data collection method may be varied into qualitative methods such as case studies, observation, and interviews.

7. Conclusion

Overall, the study concluded the findings indicated to the impact of Environmental costs dimensions: Conventional costs, hidden environmental costs, and the Image & Relationship costs on financial performance have an insignificant impact. While contingent costs and social costs have a positive impact on financial performance. Concerning the second direct relationship between the independent variable and the mediator variable, the findings of the current study
indicated that Environmental costs dimensions (hidden costs, Image & relationship costs, Contingent costs, and social costs) have a positive relationship with environmental disclosure. In addition, Environmental Conventional costs have an insignificant impact on environmental disclosure. This study can be considered a modest guideline for managers in the Oil sector and Iraqi stock exchange to improve its financial performance. The guide applies to the 15 Iraqi oil companies operating in Iraq as it shares the same context and more than 100 companies in the Iraqi stock exchange. As well, the result showed there is a significant positive impact of environmental disclosure on the financial performance of Iraqi industrial companies concerning the third direct relationship. The results of the mediating effect of environmental disclosure showed that only three of five hypotheses are supported (H$_{13}$, H$_{14}$, H$_{15}$, and H$_{16}$). The results showed that the interaction of, environmental hidden costs, Image & relationship costs, Contingent costs, and social costs on financial performance through mediating are significant. On the other hand, the mediating effect of environmental disclosure in other hypotheses is insignificant (H$_{12}$), which indicates that the impact of Conventional costs on financial performance through mediating is insignificant. This may be attributed to that Conventional costs are costs related to the company's management tries to cover and are not easily disclosed because they affect the company's reputation.

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