

# Uncertain Supply Chain Management

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## Corporate environmental responsibility and corporate performance in Jordan

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### ABSTRACT

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This research sought to assess how Jordan's corporate environment affected corporate performance. The population is made up of (182) businesses. Using simple random sampling, 384 respondents from companies listed on the Amman Stock Exchange were given questionnaires as part of a quantitative approach. To confirm the correlations between the variables, the data were analyzed using AMOS; the study relied on the descriptive analytical method. The study's most notable findings demonstrated that corporate environmental performance had a favorable and considerable impact on corporate performance.

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## 1. Introduction

Being environmentally, socially, and economically sustainable is one of the most pressing concerns facing businesses today, particularly those in the public sector (Hopwood et al., 2010). To advance the idea of sustainable development, sustainability issues like global warming, the depletion of natural resources, the generation of hazardous waste, pollution, deforestation, population growth, unemployment, and poverty have attracted significant international and national attention. Measurement and disclosure of environmental and social performance are now more important than ever due to growing concerns about the social and environmental effects of organizational activities (Guthrie & Farneti, 2008; Beck et al., 2010; Hopwood et al., 2010). In addition to the financial metrics used in the financial accounts, sustainability performance includes things like natural resource conservation, emission levels, environmental initiatives, workplace health and safety, community relations, stakeholder involvement, and the organization's economic impact (Hoque & Adams, 2008; Al-Zaqeba et al., 2022a; Hamour et al., 2023).

According to Kocmanová and Doekalová (2011), the definition of sustainability of enterprises and sustainable performance is the integration of environmental, social, and economic performance. Incorporating the triple bottom line long-term economic prosperity, social equality, and environmental performance—into a company's operating procedures and management is what is meant by "sustainable development" (Bansal, 2005). The process of sustainable development includes the strategy of sustainability (Baumgartner and Ebner, 2010). Likewise, corporate sustainability is also characterized as a heuristic multi-criteria approach made up of economic, social, and environmental performance elements (Baumgartner and Ebner 2010; Al-Zaqeba et al., 2020b). Despite increased interest in both academia and practice, there is currently little understanding of which corporate sustainability factors should be taken into consideration when measuring corporate sustainability performance (CSPM) (Antolin-Lopez et al., 2016). Researchers, governments, customers, investors, and the civil society, among other stakeholders, now pay attention to a company's social and environmental performance in addition to its economic performance (Hörisch et al., 2014; Al-Zaqeba et al., 2022c).

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In accordance with the matter, the Jordanian government granted of the observation and would aid businesses in achieving sustainable development and have a favorable impact on socioeconomic progress and the preservation of natural and environmental resources (Albatayneh, 2014). Through the adoption of Law of Environmental Protection No. (12) Of 1995, the Jordanian government began laying out a strategy and issuing regulations in accordance with the goals and tactics of the Rio Summit. As a result, the environment protection council was created, the General Corporation for the Environment Protection (GCEP) was founded as a standalone organization, and most recently, the GCEP established the sustainable development office. One of the first nations worldwide and in the Middle East to take steps toward achieving the Millennium Development Goals (MDGs) was Jordan. Zuideau (2007) claims that significant progress was accomplished in the first 10 years, particularly in the areas of eradicating poverty, maternity and child health, infectious diseases, primary education for all, and environmental sustainability (Al-Zaqeba et al., 2022c). Therefore, no doubt that the application of the principles of sustainability helps companies in achieving excellence in all aspects, which helps them achieve the best value for their partners and shareholders, and for the society and the environment in which they operate. This application is based on the foundations of sustainable thinking and ethical values, which helps companies to design their products and services and determine the way they deal with related parties, serve their customers and interact with the community. Accordingly, Al-Zaqeba et al. (2022a, 2022b) indicate that companies wishing to implement the principles of sustainability must adopt effective measures to contribute positively to serving the local community and the growing environment facing our societies in the current era. Valuable to the relevant parties to face social and economic challenges in a manner compatible with the nature of work. To achieve this, companies communicate with the relevant authorities, determine the needs of these agencies and meet the expectations of the relevant authorities (Alrai Newspaper, 2020; Almatarneh et al., 2022). Therefore, the goal of the study was to provide a response to the following:

Does the Jordanian management believe that the corporate atmosphere affects corporate performance?

The following major study hypothesis was developed in order to respond to the research question.

Corporate environmental performance and corporate performance are significantly positively correlated.

The study will propose a set of recommendations for the development of sustainable development for companies in Jordan, illustrating the critical role of sustainable development that enables it to design successful strategies. The elements of sustainable development are environmental, economic and social development, developing managers' understanding of these variables and how they evolve, in a manner that achieves business continuity and prevents the decline of their companies.

## 2. Literature review

The company commits to minimizing the damaging effects of its operations on the environment and supporting any efforts made by others to protect the environment (Strike et al., 2006). Green performance is defined in this study as the use and protection of natural resources through the implementation of environmentally sound practices. It is a collection of assessments, internal policies, implementation actions, and plans that have an impact on the entire organization as well as the relationships with the natural environment (Coglianes and Nashe, 2001).

### 2.1 Corporate Environmental Performance and Corporate Performance

Most of the research has focused on how a company's environmental performance and behavior affect its financial results (Horváthová, 2010; Dixon-Fowler, 2013; Endrikat et al., 2014; Manrique & Martí-Ballester, 2017). Unfortunately, past studies have shown contradictory results about whether there is a positive, negative, or neutral relationship between CEP and CFP. It has been suggested by pertinent management and corporate governance theories that there should be a positive CEP-CFP connection. By addressing and balancing the claims of various stakeholders as part of corporate social responsibility (CSR) strategies that include environmental practices, businesses can more effectively adapt to external demands and concerns, which improves performance and financial results. This efficient adaptation is supported by the stakeholder theory and agency theory (Moneva et al., 2020). However, Jiang et al., (2020) examines the connections between knowledge production, market orientation, and environmental performance as well as the moderating impacts of the use of environmental management systems. Their research shows that knowledge generation totally mediates the impact of competitor orientation on environmental performance and somewhat mediates the impact of customer orientation and cross-functional cooperation. Additionally, information sharing and environmental performance are positively moderated by the application of environmental management systems. In addition, Manrique and Martí-Ballester (2017) found that the current ratio has a favorable and significant impact on the firm's financial performance as assessed by return on assets. Kagai (2016) examined the connection between CFP and CER. This investigation found a connection between CER and CFP. It was investigated if the two control factors, industry and business size, had a marginally beneficial impact on the association between CER and CFP. Industry does not have a positive moderate influence, whereas firm size does. Furthermore, El-Garaihy et al. (2014) investigation into how consumer happiness and brand reputation affect a company's ability to compete, followed by a measurement of the effect on the ability of socially responsible businesses to compete. The study's empirical findings demonstrated how actions related to business, law, ethics, and discretion might have an impact on CSR projects (Mbutia, 2016; Metcalf et al., 1995). The experiments further supported the existence of a strong positive association between CSR

efforts and competitive advantage. The study's findings support the notion that customer happiness and brand reputation can fully mediate the relationship between corporate social responsibility (CSR) and competitive advantage. Shatnawi et al. (2018) examined how environmental management practices (EMPs) and corporate performance were related in manufacturing firms in Sweden, China, and India. Their findings show that just a small number of EMPs have been used in three distinct countries in a different way. The majority of EMPs do not appear to be positively correlated with financial performance (Zobi et al., 2023). Additionally, according to Zahra (1993), each environmental cluster featured a unique mix of corporate innovation, venture capital, and rejuvenation initiatives.

Gonzalez-Benito and Gonzalez-Benito (2005) studied the link between environmental responsibility and commercial success. While the data shows that some environmental policies have drawbacks, it also partially supports the notion that environmental management can give businesses a competitive edge. It follows that no one response can be given to the question of whether environmentally conscious behavior enhances company success. Instead, this relationship must be broken down into smaller, more manageable correlations. Neutrally, Watson et al (2004) to ascertain how EMS tactics will affect financial performance, a framework for assessing EMS improvements was explored. The findings showed that EMS users do not have better financial performance for the provided data. On the other hand, EMS techniques have not yet been effectively utilized for their anticipated competitive advantage. It also suggests that financial performance is not negatively impacted by the perceived cost of deploying an EMS. On the other hand, Albertini (2013) analyzed critically the connection between CEM and CFP. The findings revealed a favorable correlation between CEM and CFP (Shubailata et al., 2024). The correlation between CEM and CFP is positively impacted by organizational performance as a measure of financial performance. Companies that have implemented an EMS to address environmental problems must have specific regulatory skills. Environmental management of this kind transforms a company, changes the way things are made, and incorporates it into regular business operations. Negatively, Schaltegger and Synnestvedt (2002) centered on comprehending the link between a firm's economic and environmental performance. The managerial skills that are attained via the selection of an environmental program and the cost-effective means of producing a certain product determine the relationship between environmental performance and economic performance. The choice of the economically required level of environmental performance reflects social responsibility and a comparison of economic and environmental goals after improving the corporate environmental management system in terms of market-oriented (increasing revenue) or improving environmental efficiency (reducing cost). The findings from earlier research support the hypothesis that spare resource availability and CSP are positively correlated by showing that CEP is positively associated with preceding financial performance. The findings offer broad confirmation of the hypothesis. They demonstrated how each environmental cluster contained a unique mix of business innovation, venturing, and renewal initiatives. The studies also examine the effects of such practices on financial performance and emphasize the benefits and drawbacks of environmental management strategies that are revealed in environmental reporting. The findings show that only a few EMPs have been used in three separate countries in diverse ways. It is obvious that the majority of EMPs do not positively correlate with financial performance. Then confirm that businesses are motivated to provide mandatory and optional external and internal reports more regularly as a result of greater awareness of the importance of environmental protection and attaining sustainable growth.

### 3. Methodology

The researcher recorded the occurrences, presented them, and described them through analytical descriptive tables to classify and analyze the data to describe the population of the study. The major information gathered by the questionnaire and examined by the AMOS program is presented in the tables. Which are related to the study's variables to arrive at accurate results and provide sensible recommendations?

#### 3.1 Demographics and sample

The study population of the present study was based on the total managers of industry, services and financial companies registered with the Amman Stock Exchange (ASE), which were 182 companies (ASE, 2019). The industry sector consisted of 85 companies meanwhile; the service sector consisted of 68 companies, and the financial sector consisted of 29. All sectors listed at ASE were chosen except banks due to the large size of the banks as well as due to the structure and regulations of banks which are different from other companies. The focus was upon industrial, services and financial sectors because of their reputation for being competitive, quickly changing, and being innovative. The population of this study is displayed in Table 1.

**Table 1**  
Population of the Study

Sector	Number of Firms	Percent
Industrial	85	46.7%
Service	68	37.3%
Financial	29	16%
Total	182	100%

According to Gonz'alez (1999), the sampling frame can be regarded as the process for the research units as derived from the participants in the study, in which it refers to the tangible portrayal of the research population. Louw & Zuber-Skeritt (2009) mentioned that the sample size must be sizable for the study, in which it has to be sufficiently big to predict the aspects of the population in hopes of a valid result. According to Louw & Zuber-Skeritt (2009), the choice of sample size is typically determined by: 1) the level of confidence that the researcher needs in the data, 2) the tolerance for error, 3) the types of analysis that the researcher is going to conduct, and 4) the size of the population from which the sample is being drawn. The selection of the simple random sampling method was employed as a sampling design. The reason simple random sampling was chosen is because this method enables the generalization of the findings to the population (Bryman and Bell 2015). Also, due to its ability to provide information about a given sample size. As suggested by Saunders et al. (2009), based on the total population of 3612 managers in firms registered with Amman Stock Exchange (ASE, 2019), the right number of participants for this study, as determined by Krejcie and Morgan's table (1970) it will be 350. However, to overcome the non-response rate in a mail survey that can be as high as 80% (Khan et al., 2016).

### 3.2 Collection of Data

This study investigated the relationship between corporate sustainability performance and corporate performance using a questionnaire addressed to the management of Jordanian industrial, service, and financial companies listed on the Amman Stock Exchange.

#### *Advantages of Survey Use*

According to Sekaran & Bougie (2010), the survey questionnaire is the most popular technique of data collection since it offers several benefits. Among them, it first allows the researcher to use visual aids to clarify points; second, it is most helpful in data collection when many people in various locations need to be reached; third, the researcher can obtain data easily; fourth, it can be sent to respondents in a variety of ways; and finally, the questionnaire responses are easily coded.

#### *Data Collection Procedures*

The questionnaire served as the main data gathering tool for this investigation. To management of companies listed on the Amman Stock Exchange, a questionnaire was given out. The most widely used tool for gathering data in social science investigations is a questionnaire (Lawrence et al., 2007; Sekaran and Bougie, 2003). On the questionnaire's cover page, the survey in this study contains comprehensive instructions that explain how to fill it out. There are various techniques to gather data, including Internet surveys, postal surveys, telephone surveys and self-administered surveys (face to face). Due to the timing and cultural factors of the survey's respondents, a face-to-face method was employed in this research study. For instance, it was challenging to collect participant emails, home phone numbers, and mailing addresses in Jordan because some persons might not have been interested in participating in the survey and/or because of technological issues. Face-to-face communication was therefore selected as the best method. The entire data collection period was about four months.

**Table 2**  
T-test for Non-Response Bias (Independent Sample)

Variables	Group	N	Mean	Mean difference	LTEV (sig)	Sig (2-tails)
Corporate Performance	Early Response	101	3.0161	-.00078	.160	.130
	Late Response	248	3.0391	-.00078		.121
	Late Response	248	3.0198	-.19310		.108
Corporate environmental Performance	Early Response	101	2.9291	-.06800	.114	.320
	Late Response	248	2.9889	-.06800		.319

#### *Independent One Sample T-test Analysis*

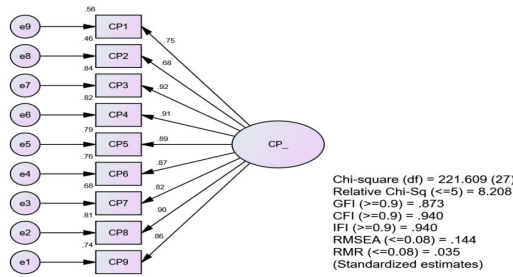
The t-test analysis is conducted to examine the differences between the answers of males and females regarding the dependent variable of this study (corporate performance). It can be seen from Table 3 that the Test of Levene's Equality of Variances represented by sig is not significant for all the variables indicating that the equal variance is assumed. The non-significant was determined based on the sig value, which is that all variables are greater than 0.05, indicating that variance is not equal. Additionally, the sign (2-tailed) suggested that there is no difference in the respondents' responses according to their gender. This is because the sig (2-tailed) is greater than 0.05. In other words, there is no distinction between the responses. of the respondents based on their gender. Male or females have similar answers.

**Table 3**  
Differences in the Responses Based on Gender

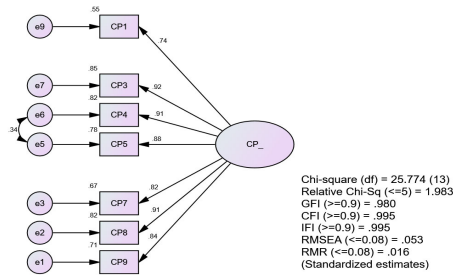
Variable	Gender	N	Mean	Sig	t	df	Sig. (2-tailed)	Mean Difference
Corporate Performance	Male	237	2.9991	.930	-.568	347	.570	-.06046
	Female	112	3.0595		-.568	217.714	.571	-.06046

*Confirmatory Factor Analysis of CP*

The CFA of corporate performance was conducted using AMOS. The fit indices and the factor loading were examined. Fig. 1 shows the unmodified CFA of corporate performance.



**Fig. 1.** Unmodified CFA of CP

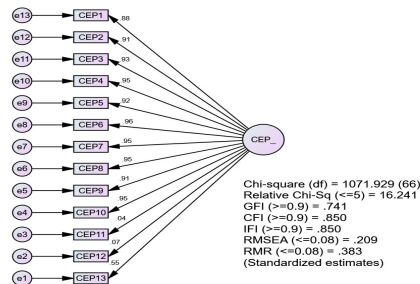


**Fig. 2.** Modified CFA of corporate performance

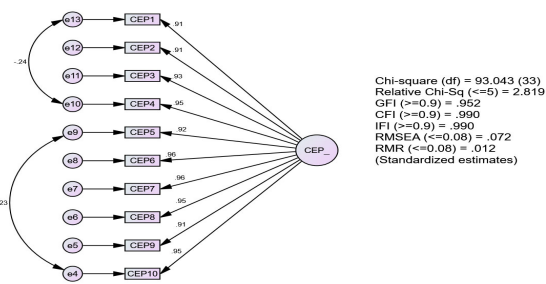
Fig. 1 shows that some of the indices such as Relative Chi-square, RMSEA as well as GFI are not acceptable, and there is a need to do modification to enhance the goodness of fit indices. Using the modification index, two items were deleted. Items CP2 and CP6 were removed due to high correlation. In addition, some items were correlated to enhance the fit index. After removing the items and covariate items CP4 and CP5, the modified CFA of corporate performance is presented in Fig. 2. Based on the figure, all the indices were achieved and factor loading are greater than .60 thus, it is confirmed that CP is measured using seven items.

*Confirmatory Factor Analysis of Corporate Environmental Performance*

The CFA of corporate environmental performance is presented in Figure 3. The figure shows the unmodified CFA of corporate environmental performance. It shows that some of the indices are not accepted, and some items have factor loading less than 0.6.



**Fig. 3.** Unmodified CFA of corporate environmental performance



**Fig. 4.** Modified CFA of corporate environmental performance

The above figure shows that there is a need to modify the measurement. Thus, items with low factor loading were removed individually. In addition, using the modification index in the output of the CFA indicates the need to covariate some items to enhance the fit index. Fig. 4 shows the modified CFA of corporate environmental performance. Fig. 4 shows that all the indices were achieved. In addition, all the factor loadings are above the accepted value of 0.60. Thus, there is no need for further modification. It is concluded that the ten items measure corporate environmental performance.

**4. Results**

To achieve the aim of the current study, namely, to research the impact of CEP on CP, Hypothesis states that “There is a significant positive relationship between CEP and corporate performance”. The study of the empirical data's final findings revealed a strong and favorable association between CEP and CP. In the context of Jordan, the increase in the corporate environmental performance will result in a positive increase in the Amman Stock Exchange-listed Jordanian companies' financial performance.

The findings support past studies. Researchers indicated that increases in awareness of environmental performance of corporations would increase the performance of a company. Jordanian companies. The Jordan Petroleum Refinery, the largest company in Aden, believes that good environmental performance enhances the integrity and sustainability of the company's financial performance and recognizes its responsibilities towards the environment and the local community. The corporate

policy follows compliance with nationally recognized laws, instructions and assets and continuously strives to improve their environmental performance through mentoring, securing resources, training of staff and appropriate and feasible initiatives. Their goal is to lessen the damaging effects on the environment of various activities and maximize the recycling of resources.

In agreement with the findings of this study, Lokuwaduge and Heenetigala (2017) noted that the firms that exhibit inter-dimensional consistency have a stronger overall impact of ESG performance on EP than the other firms. In addition, Zyadat (2016) stated that the aspect of sustainability's impact on financial performance was statistically significant. Environmental, Social, and Governance (ESG) practices were investigated for their effect on economic performance by Tarmuji et al. in 2016. According to this study, social and governance practices have a major impact on economic performance. Chen, Ong, and Hsu (2016) investigated the link between environmental management practices and financial performance and discovered that pollution control on-site had a considerable impact on the short- and long-term financial performances of multinational construction businesses. Karlsson and Bäckström (2015) analyzed the connection between business sustainability performance and financial performance in Sweden. The findings show a favorable correlation between company sustainability and financial performance. Albatayneh (2014) investigated the connection between Jordan's service and industrial sectors' efficiency strategies, sustainability outcomes, and corporate financial success. The study added to the body of literature on sustainability by demonstrating how efficiency strategy and sustainability performance might boost financial performance. Eccles et al. (2014) evaluated the impact of business sustainability on organizational performance and procedures. Companies with a high level of sustainability have been found to do much better over the long run than their competitors in terms of the stock market and financial performance.

The results differ from Chen, Tang, and Feldmann (2014), who discovered that only a small number of EMPs were used differently across three nations. The majority of EMPs don't correlate well with financial performance. In addition, Makni et al. (2009) found that three FP measures RoA, RoE, and market returns had a strong and considerable negative influence on the environmental aspect of CSP. However, the findings of the study regarding the impact of environmental performance are in agreement with previous studies and with the theory of stakeholder and accountability. The enhancement of the environmental performance affects the society positively and makes the company environmentally friendly and this has an impact on the performance of the corporations

## 5. Conclusion

The study focuses on the connection between corporate environmental responsibility and business success in the Amman Stock Exchange-listed enterprises. A questionnaire was used to gather the study's data. To provide respondents with a form to complete out, the questionnaire was distributed to them. The key finding is believed there is a connection between corporate environmental responsibility and business performance. Nevertheless, there are signs that the current nature of the relationship between corporate environmental performance and corporate performance may be sustainable, considering other research evidence in the study that showed a correlation between environmental degradation and corporate performance, as well as the existence of some corporate environmental variables' effects on the measurement of corporate performance. In the future, limiting the sample to companies in the same sectors or adding moderating variables to account for sector uniqueness, competitive intensity, and stakeholder power limitations may help to achieve better results when conducting an empirical test in corporate environmental performance and corporate performance.

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