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The Effect of Transformational Leadership Style on the Sustainable Performance of manufacturing Industry in Iraq: The mediating role of Social Responsibility

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Abstract. *This study aimed to examine the mediating role of social responsibility on the relationship between transformational leadership Style and the sustainable performance of manufacturing industry in Iraq. To achieve this objectives the study used descriptive analytical approach through develop questionnaire to collect data from the sample which consists (357) managers who work in manufacturing industry in Iraq. A total of (340) suitable questionnaire were retrieved for statistical analysis, the study used Statistical Package for the Social Sciences software (SPSS. 25) and Structure Equation Model (SEM) to analyses the collecting data and test the hypothesis. The study results showed that, there is impact of transformational leadership Style on the sustainable performance of manufacturing industry in Iraq, there is impact of transformational leadership Style on the social responsibility of manufacturing industry in Iraq, there is impact of social responsibility on the sustainable performance of manufacturing industry in Iraq, and there is mediating role of social responsibility on the relationship between transformational leadership Style and the sustainable performance of manufacturing industry in Iraq. In light of these findings the study recommended that In order to be more general, the next research has to involve obtaining data from other organizations in another sector in Iraq.*

Keywords: Transformational Leadership, Sustainable Performance, social responsibility, industrial companies, Iraq.

JEL Codes: A13, C12, C83, L10.

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1. Introduction

A good manufacturing industry (MI) has a vision and mission to meet the goals to be completed in the period of the industrial revolution 4.0. It would be preferable if the MI was constantly improved and developed. One of the goals of the manufacturing business is to grow or preserve its competitive advantages. According to (Birasnav et al., 2013; Crawford, 2003; Desky et al., 2020), today's corporate environment is becoming more competitive, and the MI is essential to survive.

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Scholars are paying more attention to sustainable development. The researchers are looking into measures to enhance organisations' long-term success. Sustainability is determined by how well we manage our environment (Kahle & Gurel-Atay, 2013). On the one hand, in recent years, an increasing number of organisations have recognised that not just economic success, but also environmental and social performance, should be prioritised (Bombiak & Marciniuk-Kluska, 2018). Furthermore, as a result of increased environmental awareness, stakeholders are increasing pressure on organisations to enhance sustainable performance (i.e., environmental, economic, and social performance) (Ghazilla et al., 2015).

On the other hand, because the manufacturing industry contributes greatly to the economic growth of emerging nations (Fuzi et al., 2020), it frequently prioritises commercial rewards over social and environmental concerns (Hubbard, 2009). Manufacturing enterprises' energy-intensive carbon emissions, for example, are one of the leading drivers of environmental challenges such as global warming, air pollution, and solid waste (AlKhidir & Zailani, 2009). As a result, it is critical for manufacturing enterprises to address environmental challenges while maintaining a balance of economic, environmental, and social performance.

Pro-environmental behaviours (PEBs) are often implemented to solve environmental challenges and enhance the long-term performance of industrial enterprises (Huang et al., 2021). PEBs are environmental behaviours that have a beneficial influence (Iqbal & Ahmad, 2020). Previous research has looked on PEB-specific characteristics such as organisational citizenship behaviour towards the environment (OCBE), for example (Iqbal & Nawaz, 2021; Khan et al., 2021). OCBE is required and crucial for every organisation and every area within an organisation. OCBE, on the other hand, has gotten less attention from scholars and employers. As a result, there is an urgent need to concentrate on OCBE and sustainability concerns. According to previous research, leadership is also a predictor of long-term performance. Sustainable leadership (Unsworth et al., 2013) and responsible leadership (Lamm et al., 2013) have been researched as independent variables that increase manufacturing organisations' long-term success.

The impact of leadership on the organisation differs as well. One of the most essential things that businesses can do to survive in today's competitive environment is to improve their company performance by establishing and refining their leadership style. According to Gelard et al. (2014), one facet of transformational leadership is that leaders may persuade followers to go above and beyond their own self-interest in order to benefit the MI. Charisma (providing a vision and mission, instilling pride, and gaining respect and trust), inspiration (communicating high expectations, using symbols to focus efforts, and expressing important goals in a simple way), intellectual stimulation (encourage intelligence, rationality, and problem solving), and individual judgement (giving personal attention, treating each employee individually, and training and advising the employees) are characteristics of transformational leaders.

Transformational leadership, according to (Sunarsi et al., 2020; Supriadi et al., 2020; Quddus et al., 2020; Purwanto et al., 2020), is a leader who can change employees and inspire people, for example, by inspiring their colleagues. Hulpia et al. (2011), Kadiyono et al. (2020), and Purwanto et al. (2021) investigated the effect of transformational leadership on the performance of the MI through MI learning and innovation, demonstrating that the research variables are interrelated. Transformational leadership, MI learning, MI innovation, and performance are all beneficial elements. Ojokuku et al. (2012) also performed study, which



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revealed that both charismatic and bureaucratic leadership styles had a detrimental impact on MI performance.

Transactional and authoritarian leadership styles have little influence on MI performance. Transformational leadership has a beneficial impact on the MI's performance. Samad (2012) performed similar study, demonstrating that innovation and transformational leadership are favourably connected to MI performance. Choudhary et al. (2013) discovered that transformational leadership and servant leadership had a good influence on learning in the MI.

Based on the above discussion, the goal of this study is to determine how transformational leadership affects sustainability performance, particularly in the Iraqi manufacturing industry and to examine how social responsibility can mediate the relationship between transformative leadership and sustainability performance in the Iraqi manufacturing industry. In this sense, the study fills a gap and contributes important information to the literature on leadership and sustainable performance because little is known about such relationships, specifically how transformational leadership affects the sustainable performance of Iraq's manufacturing industry. The study is divided into five sections. In the first section, headed Introduction, we described the primary research problem. In the second portion, we created a theoretical framework that builds on previous research on this subject. The investigation's approach was described in full in the third section. The fourth section proposes data analysis and hypothesis testing. Finally, in the fifth section, the findings are presented, together with an overview of previous research.

1.1. Research objectives

The research sought to investigate the influence of transformative leadership on sustainability performance in the Iraqi manufacturing industry. The research also looked at how social responsibility can mediate the relationship between transformative leadership and sustainability performance in the Iraqi manufacturing industry, leaders may work together to improve sustainability performance, the working environment, and foster collaborative engagement with community institutions. Furthermore, the study looked at leaders' perspectives and perceptions of workplace sustainability performance in connection to company activities.

1.2. Research hypotheses

The study seeks to test the following hypothesis:

H0₁: There is no impact of transformative leadership on sustainability performance in the Iraqi manufacturing industry.

H0₂: There is no impact of transformative leadership on social responsibility in the Iraqi manufacturing industry.

H0₃: There is no impact of social responsibility on sustainability performance in the Iraqi manufacturing industry.

H0₄: There is no mediating role of social responsibility on the relationship between transformative leadership and sustainability performance in the Iraqi manufacturing industry.



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2. Literature Review

Leadership studies have always piqued the interest of many academics (Yukl & Michel, 2019). Many ideas and approaches for effective leadership have been proposed, notably in organisational behaviour and human management. Hughes et al. (2006), for example, divided leadership into three categories: leaders, members, and conditions. Leaders, people, and conditions were recognised as three parts of the leadership process in the majority of leadership studies. Furthermore, many researchers have emphasised successful leadership that inspires members to freely pursue organisational goals (Lowe & Gardner, 2000), with self-sacrifice recognised as a desirable and necessary leadership characteristic (Avolio & Bass, 1995; Conger & Kanungo, 1987).

Employees are encouraged to be more inventive and ambitious in their pursuit of organisational goals by leaders. Leaders must utilise current tactics to favour employee suitability; provide a clear vision and efficient communication, as well as individual concern, are critical parts of leadership style to create organisational dedication after employee pleasure (Waqas et al., 2017). Because of its importance for organisational efficiency, it has been one of the most researched subjects in recent decades (Ng, 2017).

To be competitive and sustainable in today's fast-paced and highly competitive economic market, businesses must invest in creativity and innovation. Employee opinions of leadership, processes, and policies in the organisation that encourage or hinder creativity and innovation must be prioritised as facilitators of innovative outputs. Companies must be able to innovate and be innovative in order to get a competitive edge. It can also help to improve employee performance and reduce stressors (He et al., 2019).

Scholars from several professions have endeavoured to comprehend the critical factors that drive creativity and inventiveness. Mumford et al. (2002), for example, highlight a wide range of components in their assessment, including climate, individual performance capacity, strategy, and organisation. Prior research on the antecedents of creativity and innovation has concentrated on personal (leadership qualities) and contextual (supporting environment for innovation) factors (Wang et al., 2014).

Xian et al. (2020) feel that further research is needed to better understand the factors that impact workers' creative and organisational innovative behaviour in order to improve overall employee performance. As a result, this study looks at leadership and organisational innovation, as well as hindrance and challenge stressors (Nasir et al., 2020).

Transformational leadership was chosen over all other leadership theories because it has been demonstrated to produce and promote creativity and innovation. Bass (1985) defined a transformational leader in this sense as someone who pushes subordinates to go above and beyond their expectations. The transformational leader is energetic, proactive, and capable of persuading both themselves and their followers to accept change (Nasir et al., 2020). Transformational leaders, according to Ergeneli et al. (2007), urge their staff to go beyond their personal self-interests for the sake of their organisations. Regardless of the theoretical explanation, there is minimal evidence to substantiate the previously indicated relationships (Xian et al., 2020).



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Businesses' sustainability is a non-static phenomenon due to a variety of factors such as global climate conditions, scarce resources, and insecure, competitive global scenarios, an immediate increase in population, political instability, economic crisis, and new innovative technologies globally (Demir et al., 2021). The fundamental difficulty for businesses is not only to achieve high levels of performance, but also to maintain their place in the global market while contending against all incoming unknown difficulties. Similarly, the German government launched the fourth industrial revolution in 2011, increasing the precariousness of firms (Oztemel & Gursev, 2020).

According to the literature, today's sustainability means ensuring long-term success in the global market, and companies are even investing in new business expansion strategies, employees, product design, processes, value chains, and culture to maintain global performance (ALNasser et al., 2013; Schaltegger & Wagner, 2011). Regrettably, many organisations underestimated their investment in technology since they continued the traditional style of operating. As a result, the start of the fourth industrial revolution (Industry 4.0) creates new issues all over the world, not just in manufacturing but in practically every industry, including education, finance, health, transportation, and energy (Imran et al., 2019; Oztemel & Gursev, 2020). As a result, because it deals with sociological, environmental, and economic concepts, the field of sustainability is heavily polluted.

3. Research methodology

The comprehensive analysis of social phenomena using quantitative approaches, or number-crunching, is referred to as quantitative research. Quantitative research is concerned with the development and use of numerical models, theories, and questions regarding miracles. The estimate technique is fundamental to quantitative research because it provides a convincing link between experimental observation and the scientific statement of quantitative relationships (Sekaran, 2010).

This study relied on the analytical descriptive approach due to its suitability to the nature of the current study, where the theoretical literature related to the subject of the current study was reviewed in books or scientific periodicals, in addition to developing a questionnaire as a main tool for collecting data from the study sample.

3.1. Research Respondents

Respondents for this research include those who operate at the administrative level in Iraq's manufacturing industry, with the respondents chosen based on who is most influenced by this system. Furthermore, the researcher investigated the critical information that might be acquired from this group of around (4300) persons.

3.2. Sample of the Research

Based on the sample size decision processes given by Krejcie and Morgan (1970), the required sample size for this study was (340), the study sample, according to Leveugle (2009), consisted of (357) people in the case of incomplete data, with a 95% confidence level and +/-5% margin of error.

Random sampling technique was used to select the study participants, 357 questionnaires were distributed to respondents by the researcher. A total of 340 valid questionnaires were recovered for statistical analysis,



representing (95.23%) of the total disseminated questionnaires, and an acceptable rate for scientific study. The table below depicts the distribution of the research sample based on demographic factors.

Table 1: Characteristics of the study sample according to the demographic variables

Variable	Categories	Frequency	Percentage %
Age	20-29 years	62	18.23%
	30-39 years	113	33.23%
	40-49 years	90	26.47%
	50 and above	75	22.05%
Education Level	bachelor’s degree	160	47.05%
	Master	115	33.82%
	PhD	65	19.12%
	Total	340	100%

3.3. Research Model

The current study contains two types of variables, independent variables and dependent variables, as follows:

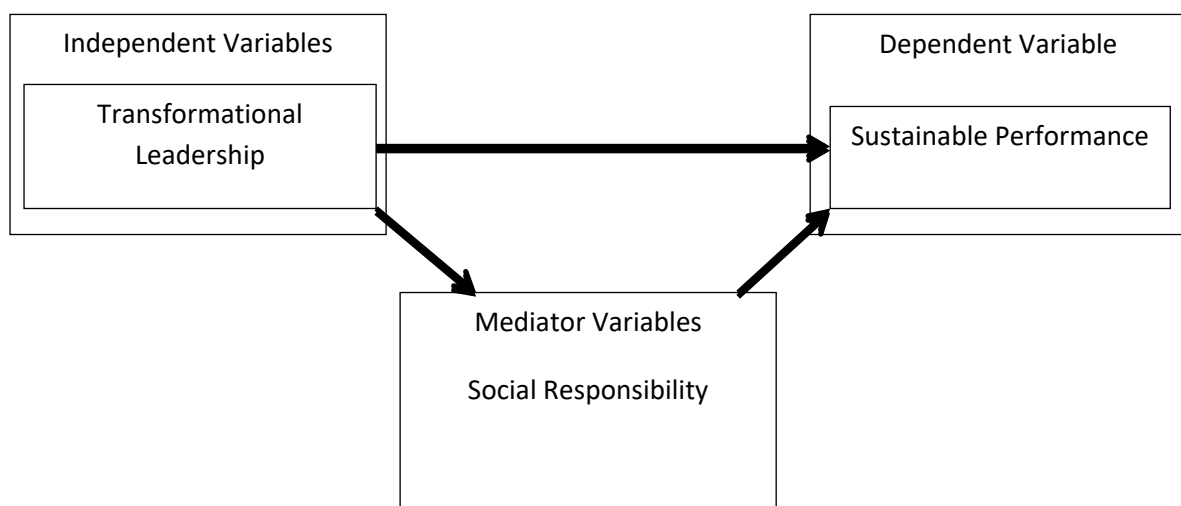


Figure 1: Research Model, prepared by researcher relied on the previous works

3.4. Study Instrument



In the current study, the researcher's major data gathering approach was a questionnaire. The questionnaire is made up of a series of questions that are linked together in such a way that they satisfy the aim that the researcher is attempting to achieve through the challenge offered by her inquiry. Furthermore, the questionnaire is a search tool that includes a series of questions as well as other data requests in order to gather information from the individuals under consideration, and the questionnaires are low cost and do not require much effort, the questionnaire frequently has standard answers that make it easy to collect and organize data.

A questionnaire based on the Likert scale was employed in this study; with five options ranging from strongly agree to strongly disagree to a relative weight (5-1). The questionnaire was broken into four components, which are as follows:

First Section: concerned with the personal data of the respondents (Age and Education level).

Second Section: concerned with the independent variable (Transformational Leadership).

Third Section: concerned with the dependent variable (Sustainable Performance).

Fourth Section: concerned with the mediator variable (social responsibility).

3.5. Validity of the Study Instrument

The validity of the research tool was confirmed through the use of the internal construction, in which the instrument was applied to an exploratory sample of (40) individuals, randomly selected from within and outside the study community, and the correlation coefficient was calculated between the individual's degree on the paragraph and its overall score on the tool, as shown in Table (2).

Table 4: Correlation coefficients among the instrument paragraphs

Item No.	Correlation coefficient	Item No.	Correlation coefficient	Item No.	Correlation coefficient
1.	.456*	9.	.513*	17.	.499*
2.	.349*	10.	.546*	18.	.562*
3.	.542**	11.	.542**	19.	.448*
4.	.455*	12.	.585**	20.	.468**
5.	.612**	13.	.472*	21.	.463**
6.	.385*	14.	.553*	22.	.511**
7.	.576**	15.	.472*	23.	.394*
8.	.467**	16.	.531*	24.	.356*

* means significant at the level ($\alpha \leq 0.05$)

** means significant at the level ($\alpha \leq 0.01$)

According to Table (2), appropriate scale indicators for the study tool were obtained, as correlation coefficients varied between (.612-.349), all of which are statistically significant at the level (0.05).

3.6. Reliability of the Study Instrument



The Cronbach's Alpha was used to determine the reliability of the study tool. The internal consistency coefficient of the study instrument will be extracted by randomly selecting (40) respondents. Table No. (3), displays the Cronbach Alpha reliability coefficient for the parameters of the study instrument.

Table 3: Cronbach's Alpha for the variables of the study instrument

Variable	Number of Items	Cronbach alpha coefficient
Transformational Leadership	8	0.80
Sustainable Performance	8	0.82
Social Responsibility	8	0.79

Table (3) shows that the Cronbach's Alpha coefficient for the independent variable was (0.80), while the Cronbach's Alpha coefficient for the dependent variable was (0.82), and the Cronbach's Alpha coefficient for the mediator variable was (0.79), which are regarded acceptable for scientific research purposes.

3.7. Data Analysis Techniques

To test the hypotheses of the study, descriptive and analytical statistical methods were used, using the Statistical package for Social Sciences - SPSS 25.

1. Descriptive statistics (frequencies, percentage, mean, and standard deviation).
2. Structural Equation Modeling- SEM in the Amos v.21 program.

4. Findings and discussion of findings

4.1. Descriptive Analysis

This section provides a descriptive assessment of the construct under consideration in the current investigation. The Minimum, Maximum, Mean, and Standard Deviation scores on the 26 questions in this study were derived according to the characteristics of leadership styles and social responsibility outlined below.

Table 4: Descriptive Analysis for leadership styles Variable

No.	Variables	Min	Max	Mean	SD
1	Transformational Leadership	1.00	5.00	3.65	.779
2	Sustainable Performance	1.00	5.00	3.68	.787
3	Social Responsibility	1.00	5.00	3.67	.707

Table 4 shows the results of the descriptive analysis for the independent variable (Transformational Leadership); was at moderate level of agreement with mean (3.65) and standard deviation (.578), while the dependent variable (Sustainable Performance) was at high level with mean (3.68) and standard deviation (.787), and the mediator variable (Social Responsibility) was at moderate level with mean (3.67) and standard deviation (.707).



4.2. Measurement Model

This research intends to validate the main construct namely leadership, social capital, and organizational culture using pooled CFA procedure. The Pooled-CFA method was chosen because it is more efficient, comprehensive, and free of model identification issues (Awang et al., 2015; Awang, 2014). To analyse the correlation among the constructs, all constructs are pooled together and connected using the double-headed arrows depicted in Figure 1. The model fit was evaluated by comparing the fitness indexes of this structural model to the literature's threshold indexes, as shown in Table 5.

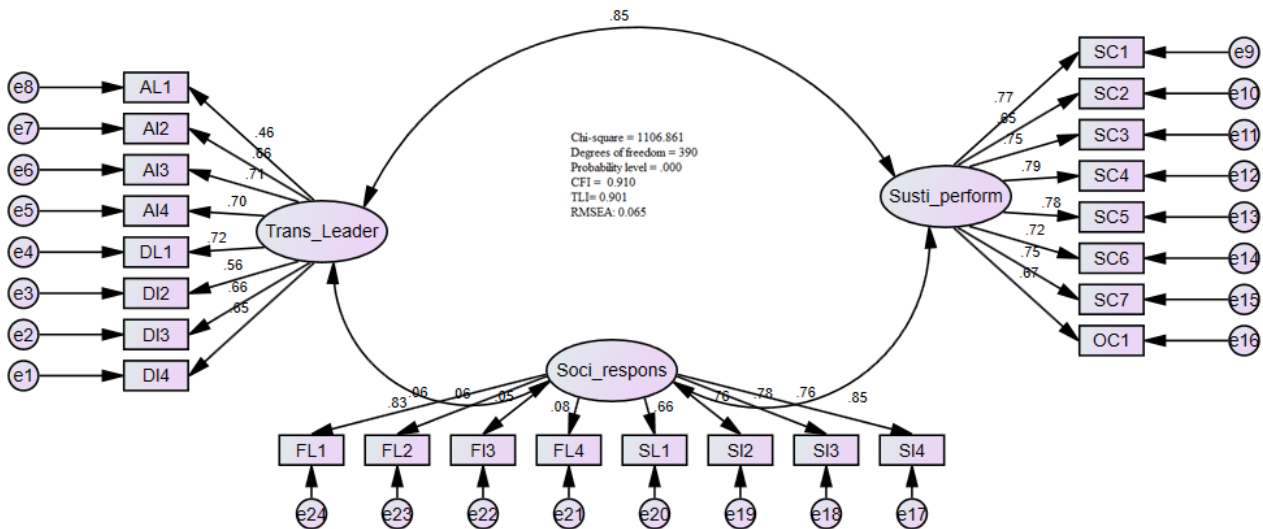


Figure 1: Pooled Confirmatory Factor Analysis Measurement Model.

Table 5: The Assessment of Fit for the Structural Model

Name of category	Name of index	Fit Criteria	Level of acceptance	Comments
Absolute fit	RMSEA	=0.08	0.065	Meet the required level \leq 0.08
1. Incremental fit	CFI	0.90 or greater	0.910	Meet the required level \geq 0.8
	TLI	0.90 or greater	0.901	Meet the required level $>$ 0.8
2. Parsimonious fit	Chisq/df	$1.0 = \chi^2 / df = 5$	2.838	Meet the required level \leq 4.0



As shown in Figure 1, the final measurement model consists of 30 items, and fitness indexes (RMSEA, TLI, CFI, and Chisq/df) had achieved the required level.

4.2.1 The Standardized Regression Weights

Figure 2 illustrates the relationship between overall influence factors, user satisfaction and techno trust. To begin, the overall fit of the model was evaluated using three model fit categories: absolute fit (Chi-square, RMSEA, and GFI), incremental fit (CFI), and parsimonious fit (Chi-square/df) to ensure that it adequately represented the whole collection of casual relationships.

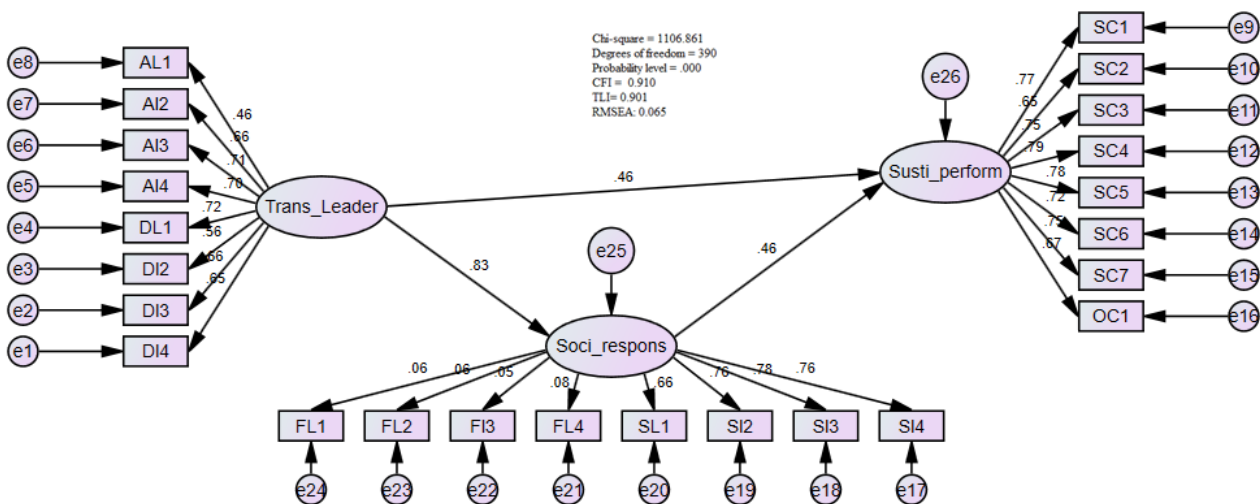


Figure 2: The Standardized Path Coefficient between Constructs in Model

This study offered 4 hypotheses, three of which are direct hypotheses and one of which is indirect hypotheses. The study specifically attempts to investigate the following paths:

H01: There is no impact of Transformational Leadership on Sustainable Performance in manufacturing Industry in Iraq.

H02: There is no impact of Transformational Leadership on Social Responsibility in the manufacturing Industry in Iraq.

H03: There is no impact of Social Responsibility on Sustainable Performance in the manufacturing Industry in Iraq.



H04: There is no mediating role of Social Responsibility on the relationship between Transformational Leadership and Sustainable Performance in the manufacturing Industry in Iraq.

Table 6: The Standardised Regression Weights of Constructs Regression Path

Construct	Path	Construct	Beta Estimate	Standard Error	Critical Region	P-Value	Result
Susti_perform	<---	Trans_Leader	.508	.093	5.487	***	Significant
Soci_respons	<---	Trans_Leader	.907	.076	11.919	***	Significant
Susti_perform	<---	Soci_respons	.464	.084	5.516	***	Significant

The first hypothesis stated that based on the findings illustrated in Table (6), Transformational Leadership was found to have an effect on Sustainable Performance in manufacturing Industry in Iraq ($\beta=0.508$, $p=0.000$). In other words, when Transformational Leadership went up by 1, Sustainable Performance went up by 0.508. Thus, the above research hypothesis is supported.

The second hypothesis stated that based on the findings illustrated in Table (6), Transformational Leadership was found to have an effect on Social Responsibility in manufacturing Industry in Iraq ($\beta=0.907$, $p=0.000$). In other words, when Transformational Leadership went up by 1, Social Responsibility went up by 0.907. Thus, the above research hypothesis is supported.

The third hypothesis stated that based on the findings illustrated in Table (6), Social Responsibility was found to have an effect on Sustainable Performance in manufacturing Industry in Iraq ($\beta=0.464$, $p=0.000$). In other words, when Social Responsibility went up by 1, Sustainable Performance went up by 0.464. Thus, the above research hypothesis is supported.

4.2.2 Mediation Hypotheses

The mediation Hypothesis stated that the mediating effect of Social Responsibility, and it was hypothesized that Social Responsibility mediates the relationship between Transformational Leadership and Sustainable Performance in the manufacturing Industry in Iraq. In this study, the researcher assessed the direct effect, as well as the indirect effect of influence factors on user satisfaction. Hence, if the direct effect of Transformational Leadership on Sustainable Performance is significant, the researcher could determine if Social Responsibility (SR) mediated the relationship between Transformational Leadership (TL) and Sustainable Performance (SP). The role of a mediator is to provide an indirect effect of leadership on social capital. Thus, the researcher tested the mediation effect using bootstrapping as discussed below.

4.2.3 Mediation Effect Using Bootstrap Approach



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Preacher and Hayes (2008) bootstrapping the indirect effect technique was used in this study to assess the presence of mediation effect, where mediation occurred when the lower bound (LB) and upper bound (UB) values of the indirect effect did not straddle a 0 in between.

H010: In the Iraqi service sector, organisational culture plays a moderating role in the interaction between authoritarian leadership and social capital.

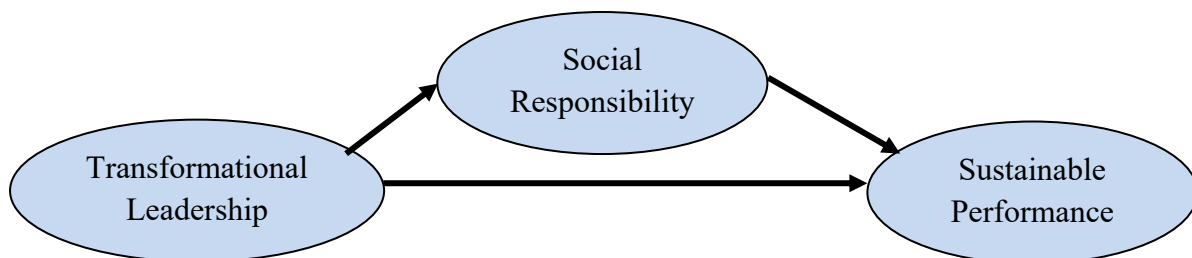


Table 7: Bootstrapped for Indirect Effect

Mediator	Standardised Indirect Estimate	95% Confidence Interval (CI)		
		Lower Bound (LB)	Bound	Upper Bound (UB)
TL → SR → SP	0.398	0.333		0.464
	Standardised Direct Estimate			
TL → SR → SP	0.256	0.185		0.320

The research revealed that the lower limit was 0.333 and the upper bound was 0.464 (both upper and lower bounds are in the positive zone), as shown in Table 7. That is, the Social Responsibility mediates the relationship between Transformational Leadership and Sustainable Performance in the manufacturing Industry in Iraq.

5. Conclusion

The goal of this study was to better understand the role of Social Responsibility in mediating the link between Transformational Leadership and Sustainable Performance in Iraq's manufacturing industry. To do this, we gathered data from around 340 managers from various organizations and asked them to complete a questionnaire. To evaluate the given data, a Structural Equation Modeling (SEM) approach was presented.

The descriptive analysis for the independent variable (Transformational Leadership) yielded a moderate level of agreement with mean (3.65) and standard deviation (.578), while the dependent variable (Sustainable Performance) yielded a high level of agreement with mean (3.68) and standard deviation



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(.787), and the mediator variable (Social Responsibility) yielded a moderate level of agreement with mean (3.67) and standard deviation (.707).

Also, the results showed that, there is impact of Transformational Leadership on Sustainable Performance in manufacturing Industry in Iraq, there is impact of Transformational Leadership on Social Responsibility in the manufacturing Industry in Iraq, there is impact of Social Responsibility on Sustainable Performance in the manufacturing Industry in Iraq, and there is mediating role of Social Responsibility on the relationship between Transformational Leadership and Sustainable Performance in the manufacturing Industry in Iraq.

Waldman et al. (2006) observed that transformational leadership influenced organizational SR practices positively. Likewise, Du et al. (2013) observed a significant impact. Nonetheless, the current study confirmed the previous researchers' findings, and we argue that transformational leadership has a significant impact on firms' SR practices.

According to certain studies (De Hoogh & Den Hartog, 2008; Mazutis & Zintel, 2015), the ethical components of leadership styles have a significant impact on firms' CSR initiatives. Similarly, the current study supports the assumption that leadership styles have a significant impact on SR practices in firms. The SR practices are thought to have an influence on the financial success of the firms. Based on our findings, we advocate that organizations pick ethical leaders or managers who will manage firms in an ethical manner, so promoting SR practices and, as a result, positively influencing the organization's financial return.

There are some limitations to the study. Initially, the amount of data used in this study was little. Furthermore, it only applies to Iraq's industrial industry. It cannot be used in all situations. In order to be more general, the next research has to involve obtaining data from other organizations in another sector in Iraq.

References

AlKhidir, T.; Zailani, S. (2009). Going green in supply chain towards environmental sustainability. *Glob. J. Environ. Res.* 2009, 3, 246–251.

AlKhidir, T.; Zailani, S. (2009). Going green in supply chain towards environmental sustainability. *Glob. J. Environ. Res.* 2009, 3, 246–251.

AlNasser, A., Yusoff, R. Z., & Islam, R. (2013). Relationship between hard total quality management practices and organizational performance in municipalities. *American Journal of Applied Sciences*, 10(10), 1214.

Avolio, B.J and Gardner, W.L. 2005(). *Authentic leadership development: Getting to the root of positive forms of leadership. Leadersh. Q. Vol 16, 2005, 315–338.*

Birasnav, M., Albufalasa, M., and Bader, Y. (2013). The role of transformational leadership and knowledge management processes on predicting product and process innovation: an empirical study developed in Kingdom of Bahrain. *Tékhne* 11, 64–75.



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Bombiak, E.; Marciniuk-Kluska, A. (2018). Green human resource management as a tool for the sustainable development of enterprises: Polish young company experience. *Sustainability* 2018, 10, 1739.

Choudhary, V., Mushrif, S. H., Ho, C., Anderko, A., Nikolakis, V., Marinkovic, N. S., et al. (2013). Insights into the interplay of Lewis and Brønsted acid catalysts in glucose and fructose conversion to 5-(hydroxymethyl) furfural and levulinic acid in aqueous media. *J. Am. Chem. Soc.* 135, 3997–4006

Conger, J.A. and Kanungo, R.N. Toward a behavioral theory of charismatic leadership in organizational settings. *Acad. Manag. Rev.* Vol 12, 1987, 637–647.

Crawford, C. B. (2003). Exploring the relationship between knowledge management and transformational leadership. In ALE 2003 Conference, Anchorage, Alaska, USA, 16–19.

De Hoogh, A. H., & Den Hartog, D. N. (2008). Ethical and despotic leadership, relationships with leader's social responsibility, top management team effectiveness and subordinates' optimism: A multi-method study. *The Leadership Quarterly*, 19(3), 297-311.

Demir, A., Budur, T., Omer, H. M., & Heshmati, A. (2021). Links between knowledge management and organisational sustainability: Does the ISO 9001 certification have an effect? *Knowledge Management Research & Practice*, 19, 1–14.

Desky, H., Mukhtasar, M. I., Ariesa, Y., Dewi, I. B. M., Fahlevi, M., Nur, M., et al. (2020). Did trilogy leadership style, organizational citizenship behaviour (OCB) and organizational commitment (OCO) influence financial performance? evidence from pharmacy industries. *Systemat. Rev. Pharm.* 11, 297–305.

Du, S., Swaen, V., Lindgreen, A., & Sen, S. (2013). The roles of leadership styles in corporate social responsibility. *Journal of Business Ethics*, 114(1), 155-169.

Ergeneli, A., Gohar, R., and Temirbekova, Z. (2007). Transformational leadership: its relationship to culture value dimensions. *Int. J. Intercult. Relat.* 31, 703–724.

Fuzi, N.M.; Habidin, N.F.; Janudin, S.E.; Ong, S.Y.Y. Environmental management accounting practices, management system, and performance: SEM approach. *Int. J. Qual. Reliab. Manag.* 2020, 37, 1165–1182.

Fuzi, N.M.; Habidin, N.F.; Janudin, S.E.; Ong, S.Y.Y. Environmental management accounting practices, management system, and performance: SEM approach. *Int. J. Qual. Reliab. Manag.* 2020, 37, 1165–1182.

Gelard, P., Boroumand, Z., and Mohammadi, A. (2014). Relationship between transformational leadership and knowledge management. *Int. J. Inform. Sci. Manag.* 12, 67–82

Ghazilla, R.A.R.; Sakundarini, N.; Abdul-Rashid, S.H.; Ayub, N.S.; Olugu, E.U.; Musa, S.N. Drivers and barriers analysis for green manufacturing practices in Malaysian SMEs: A preliminary finding. *Procedia CIRP* 2015, 26, 658–663.



(online) = ISSN 2285 – 3642

ISSN-L = 2285 – 3642

Journal of Economic Development, Environment and People

Volume 12, Issue 2, 2023

URL: <http://jedep.spiruharet.ro>

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Ghazilla, R.A.R.; Sakundarini, N.; Abdul-Rashid, S.H.; Ayub, N.S.; Olugu, E.U.; Musa, S.N. Drivers and barriers analysis for green manufacturing practices in Malaysian SMEs: A preliminary finding. *Procedia CIRP* 2015, 26, 658–663.

Huang, X.; Huang, S.; Shui, A. Government spending and intergenerational income mobility: Evidence from China. *J. Econ. Behav. Organ.* 2021, 191, 387–414.

Hubbard, G. Measuring organizational performance: Beyond the triple bottom line. *Bus. Strateg. Environ.* 2009, 18, 177–191.

Hubbard, G. Measuring organizational performance: Beyond the triple bottom line. *Bus. Strateg. Environ.* 2009, 18, 177–191.

Hughes, D.; Rodriguez, J.; Smith, E.P.; Johnson, D.J.; Stevenson, H.C. and Spicer, P. Parents' ethnic-racial socialization practices: A review of research and directions for future study. *Dev. Psychol*, Vol 42, 2006, 747–770.

Hulpia, H., Devos, G., and Van Keer, H. (2011). The relation between school leadership from a distributed perspective and teachers' organizational commitment: examining the source of the leadership function. *Educ. Admin. Quart.* 47, 728–771.

Imran, M., Salisu, I., Aslam, H. D., Iqbal, J., & Hameed, I. (2019). Resource and information access for SME sustainability in the era of IR 4.0: The mediating and moderating roles of innovation capability and management commitment. *Processes*, 7(211), 1–25.

Iqbal, Q.; Ahmad, N.H. Challenges for Pakistani SMEs in Industry 4.0: Applications of Disruptive Technologies. In *Challenges and Opportunities for SMEs in Industry 4.0*; IGI Global: Hershey, PA, USA, 2020; pp. 12–21.

Iqbal, Q.; Nawaz, R. Rife Information Pollution (Infollution) and Virtual Organizations in Industry 4.0. In *Research Anthology on Digital Transformation, Organizational Change, and the Impact of Remote Work*; IGI Global: Hershey, PA, USA, 2021; pp. 117–135.

Kadiyono, A. L., Sulistiobudi, R. A., Haris, I., Wahab, M. K. A., Ramdani, I., Purwanto, A., et al. (2020). Develop leadership style model for indonesian teachers performance in Education 4.0 era. *Systemat. Rev. Pharm.* 11, 363–373

Kahle, L.R.; Gurel-Atay, E. *Communicating Sustainability for the Green Economy*; ME Sharpe: New York, NY, USA, 2013.



(online) = ISSN 2285 – 3642

ISSN-L = 2285 – 3642

Journal of Economic Development, Environment and People

Volume 9, Issue 2, 2019

URL: <http://jedep.spiruharet.ro>

e-mail: office_jedep@spiruharet.ro

Kahle, L.R.; Gurel-Atay, E. *Communicating Sustainability for the Green Economy*; ME Sharpe: New York, NY, USA, 2013.

Khan, N.U.; Irshad, A.U.R.; Ahmed, A.; Khattak, A. Do organizational citizenship behavior for the environment predict triple bottom line performance in manufacturing firms? *Bus. Process Manag. J.* 2021, 27, 1033–1053.

Krejcie & Morgan (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, #30, pp. 607-610.

Lamm, E.; Tosti-Kharas, J.; Williams, E.G. Read this article, but don't print it: Organizational citizenship behavior toward the environment. *Group Organ. Manag.* 2013, 38, 163–197.

Leveugle, R., Maistri, P & Vanhauwaert, P. (2009). *Statistical Fault Injection: Quantified Error and Confidence*. Conference: Design, Automation and Test in Europe, DATE 2009, Nice, France, April 20-24, 2009.

Lowe, K.B and Gardner, W.L. *Ten years of the leadership quarterly: Contributions and challenges for the future. Leadersh. Q, Vol 11, 2000, 459–514.*

Mazutis, D., & Zintel, C. (2015). Leadership and corporate responsibility: A review of the empirical evidence. *Annals in Social Responsibility*, 1(1), 76-107.

Mumford, M. D., Scott, G. M., Gaddis, B., and Strange, J. M. (2002). Leading creative people: orchestrating expertise and relationships. *Leadersh. Q.* 13, 705–750.

Nasir, J., Ibrahim, R. M., and Sarwar, M. A. (2020a). A conceptual study on investigating the effect of innovation, transformational leadership and work stressor on employee performance of SMEs in Pakistan. *J. Manage. Info.* 7, 259–281.

Ng T.W. *Transformational leadership and performance outcomes: Analyses of multiple mediation pathways. The Leadership Quarterly, Vol 28, No 3, 2017, 385–417.*

Ojokuku, R. M., Odetayo, T. A., and Sajuyigbe, A. S. (2012). Impact of leadership style on organizational performance: a case study of Nigerian banks. *Am. J. Bus. Manag.* 1, 202–207

Oztemel, E., & Gursev, S. (2020). Literature review of Industry 4.0 and related technologies. *Journal of Intelligent Manufacturing*, 31(1), 127–182.

Oztemel, E., & Gursev, S. (2020). Literature review of Industry 4.0 and related technologies. *Journal of Intelligent Manufacturing*, 31(1), 127–182.



(online) = ISSN 2285 – 3642

ISSN-L = 2285 – 3642

Journal of Economic Development, Environment and People

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URL: <http://jedep.spiruharet.ro>

e-mail: office_jedep@spiruharet.ro

Purwanto, A., Asbari, M., and Santoso, T. I. (2021a). Education Management Research Data Analysis: Comparison of Results between Lisrel, Tetrad, GSCA, Amos, SmartPLS, WarpPLS, and SPSS For Small Samples. *Nidhomul Haq: Jurnal Manajemen Pendidikan Islam* 382–399

Purwanto, A., et al. (2020). Did transformational, transactional leadership style and organizational learning influence innovation capabilities of school teachers during covid-19 pandemic? *Systemat. Rev. Pharm.* 11, 299–311.

Quddus, A., Nugroho, B. S., Hakim, L., Ritaudin, M. S., Nurhasanah, E., Suarsa, A., et al. (2020). Effect of ecological, servant dan digital leadership style influence university performance? evidence from indonesian universities. *Systemat. Rev. Pharm.* 11, 408–417

Samad, S. (2012). The influence of innovation and transformational leadership on organizational performance. *Procedia-Soc. Behav. Sci.* 57, 486–493.

Schaltegger, S., & Wagner, M. (2011). Sustainable entrepreneurship and sustainability innovation: Categories and interactions. *Business Strategy and the Environment*, 20(4), 222–237.

Sekaran, U. (2010). *Research Methods for Business: A Skill-Building Approach*. 4th Edition, John Wiley & Sons, UK.

Sunarsi, D., Rohaeni, N., Wulansari, R., Andriani, J., Muslimat, A., Rialmi, Z., et al. (2020). Effect of e-leadership style, organizational commitment and service quality towards Indonesian School Performance. *Systemat. Rev. Pharm.* 11, 472–481

Supriadi, O., Musthan, Z., Sa'odah, R. N., Haryanti, Y. D., Marwal, M. R., Purwanto, A., et al. (2020). Did transformational, transactional leadership style and organizational learning influence innovation capabilities of school teachers during covid-19 pandemic? *Systemat. Rev. Pharm.* 11, 299–311.

Unsworth, K.L.; Dmitrieva, A.; Adriasola, E. Changing behaviour: Increasing the effectiveness of workplace interventions in creating pro-environmental behaviour. *J. Organ. Behav.* 2013, 34, 211–229.

Waldman, D. A., Siegel, D. S., & Javidan, M. (2006). Components of CEO transformational leadership and corporate social responsibility. *Journal of Management Studies*, 43(8), 1703-1725.

Wang, C.-J., Tsai, H.-T., and Tsai, M.-T. (2014). Linking transformational leadership and employee creativity in the hospitality industry: The influences of creative role identity, creative self-efficacy, and job complexity. *Tour. Manag.* 40, 79–89

Waqas, M., Muqaddas, J. and Taimoor, H. Influence of transformational leadership components on job satisfaction and organizational commitment. *Pakistan Journal of Commerce and Social Sciences*, 2017, 147–166.



(online) = ISSN 2285 – 3642

ISSN-L = 2285 – 3642

Journal of Economic Development, Environment and People

Volume 9, Issue 2, 2019

URL: <http://jedep.spiruharet.ro>

e-mail: office_jedep@spiruharet.ro

Xian, J., Li, B., and Huang, H. (2020). Transformational leadership and employees' thriving at work: the mediating roles of challenge-hindrane stressors. *Front. Psychol.* 11:1400.

Yukl, G. and Michel, J.W. *Proactive influence tactics and leader member exchange. Power Infl. Organ, Vol 1177, 2019, 87–103.*