European Journal of Interdisciplinary Research and Development
Volume-19 September 2023
Website: www.ejird.journalspark.org ISSN (E): 2720-5746

THE ROLE OF GREEN PRODUCT QUALITY AND AESTHETIC CAPABILITIES IN ENVIRONMENTAL PERFORMANCE

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Abstract:
Given that the goal of green product quality is to produce environmentally friendly products while considering environmental issues, the impact of green product quality on environmental performance provides a highly useful means to achieve these objectives and mitigate environmental problems. Therefore, this study aims to examine the interactive role played by aesthetic capabilities (the organizational mirror) in the relationship between green product quality and environmental performance in the South Refineries Company, addressing the problem of environmental pollution caused by petroleum products. To achieve this objective, a questionnaire will be developed to ensure the presence of a relationship among the variables of the study. The data will be collected using the questionnaire as the primary data collection tool, designed based on validated foreign scales that have been scientifically tested.

Keywords: aesthetic abilities, organizational women, green products, green product quality, environmental performance.

Introduction

Environmental degradation is one of the most urgent issues in the 21st century. However, different countries have shown varying levels of commitment to addressing these challenges. Currently, more than 80% of greenhouse gas emissions worldwide come from cities, as they are the primary locations for the production of environmentally harmful products and the accompanying impacts of industries. By 2050, it is expected that more than 70% of the world's population will live in urban areas. Therefore, it is essential to address this problem and create an environment that promotes a better quality of life for its citizens and encourages active participation in developing sustainable solutions to meet their needs. Decision-making regarding infrastructure is crucial when dealing with developing countries (Martos et al., 2016: 480).

The environment in which humans live faces unprecedented threats in most countries worldwide, as environmental problems have become significant factors hindering sustainable development of the economy and society. In November 2013, after discussions among relevant government administrations in various countries, agreements were reached in Poland on several issues, including the green climate and greenhouse gas reduction. These agreements aimed to mitigate

the losses resulting from environmental changes. Citizens of every country now pay more attention to environmental issues and exert an increasingly significant influence on decision-making related to environmental performance, which refers to production performance that takes environmental factors into account (Song et al., 2018: 460).

The organizations' focus on performance and the quality of green products is a significant and crucial step towards preserving a healthy and pollution-free environment. The increasing consumer awareness about sustainability is the main driving force behind the growing popularity of green products. In response to the rising general interest in sustainable development, many companies have introduced high-quality green products that compete with and outperform non-green products by reducing environmental risks. The production and consumption characteristics of green products align with concepts that aim to minimize waste and protect the environment, which are essential goals for their production. As a result, green products have gained increasing attention in recent years due to their compatibility with green manufacturing processes, reduced emissions during use, and other environmental advantages. This has led some companies to shift their focus towards the potential benefits of these environmentally friendly products. On the other hand, organizations play a significant role in monitoring the quality of green products and the impact of their operations on environmental preservation. The system at any time and the interaction processes that occur both within the organization's subunits and between organizations involve confidential or public dynamics, reflecting the evolving environmental landscape.

While there are indications and evidence that the three main variables in the study operate individually or in pairs, it is noteworthy that there is a scarcity of studies that have attempted to combine and link these variables in a single theoretical framework.

Therefore, the research problem can be formulated in the following question: "To what extent does product quality influence environmental performance improvement? And does aesthetic capability have an interactive role in the relationship between green product quality and environmental performance?".

Theoretical Framework and Literature Review:

Environmental Performance:

Environmental issues are a significant social concern for most industrial organizations. Despite the acceleration and development of manufacturing processes, there have been negative impacts leading to environmental degradation (Singh et al., 2019). This has prompted governments to establish strict regulations for strong environmental practices, which companies respond to by implementing strategies that enhance good environmental performance, financial performance and reduce negative environmental impacts (Berrone & Gomez, 2009: 103; Hawash et al., 2022; Mohammad & Thajil, 2023; Thajil AL-Abrrow & Abdullah, 2022). There is a pressing need for organizations to utilize environmental protection rules and guidelines, as well as adopt values related to green practices. Additionally, internal factors play a partial role in ensuring environmental performance within an organization that aims to improve its environmental performance. This can be achieved by applying the principles of environmental learning, which allow adaptation to changing conditions, uncertain situations, and commitment from top

management. Building employees' capabilities and fostering a sense of ownership of change are essential in facilitating the necessary changes. Change, when implemented gradually and with shared company values, can be more successful as it fosters greater job satisfaction among employees. This, in turn, positively influences support for environmental improvements by promoting appropriate behaviors aligned with the organization's environmental goals (Magsi et al., 2018).

Furthermore, organizations need assistance in improving their environmental performance through training and development (T&D), as it represents a vital human resource tool to enhance employee efficiency and commitment, thereby affecting the company's creative performance (Song & Choi, 2018). Information technology can also serve as a solution for environmental management and sustainability in two ways. Firstly, it can "green" information technology by integrating environmental sustainability principles into company planning and utilization, thus reducing the negative impacts of information technology on the natural environment (Wang, 2015).

Green Product Quality Concept and Importance

Companies' interest in the environment emerged under the term "green management" in 1990 and gained significant international popularity in the early 20th century. In the current century, green management and corporate social responsibility have become widely discussed topics (Hong et al., 2018: 1). After the European Parliament approved the European Union directives on waste electrical and electronic equipment, hazardous substances restrictions, and ecodesign for energy-using products that generate environmental pollution (Asgharian et al., 2012: 499), some researchers proposed the idea that green management could be a weapon to help companies enhance their competitiveness. It became necessary for the concept of green management in companies to go beyond mere regulatory compliance and encompass pollution prevention and product supervision. Numerous studies have found that green product quality offers several advantages, including its direct impact on performance and its close association with customer satisfaction, loyalty, and repurchase intentions. Currently, attention is shifting from environmentally-friendly operational strategies to a comprehensive focus on green products. Previous relevant studies indicate that companies have the opportunity to be pioneers in green product innovation, allowing them to differentiate themselves and gain a competitive advantage. The environmental burden of products throughout their entire life cycle cannot be denied (Sdrolia and Zarotiadis, 2019: 150; Hamza et al., 2023).

Organizational Aesthetic Capabilities:

The concept of aesthetics in organizations emerged in the 1980s and has since gained significant attention from researchers as an important dimension that has evolved over time with various conceptual aspects in the field of management. In this regard, Italian professor Strati, who specializes in the aesthetic approach, stated that organizational aesthetics is a branch of research in organizational and management studies that originated in 1990. He studied organizational aesthetics employed in organizational environments and highlighted the contribution of aesthetics in employing new methods for organizational inquiry that focus on the work

capabilities of aesthetic knowledge and associated organizational work (Barry & Hansen, 2008: 229). Traditional psychologists of Gestalt perception have traditionally emphasized sensory perception and the aesthetic dimension of organizations. Gestalt theory also adds to contemporary approaches to work in organizations and leadership, which require the ability to generate innovative ideas through a concise understanding of complex and unexpected environments (Biehl-Missal & Herbert, 2014: 251-262).

Furthermore, the concept of aesthetics contributes to the study of architectural designs. Ewenstein and Whyte (2007: 689) emphasized the importance of aesthetic knowledge in organizational practice as an integral part of the work individuals perform within the organization. Aesthetic knowledge involves detailed observation of design work in the field of architectural engineering, including deconstruction, examining its creation, and how it is applied in the design of collaborative projects among practitioners within the organization. (Macdonald, 2004: 1; Hussein et al., 2022; AL-Abrrow, Thajil, Abdullah & Abbas, 2020) focused on product design and examined the issue of aesthetic acceptance of the product and system, targeting the older population on three levels: sensory, cognitive, and physical capability. Expanding on this, Eisenhardt and Martin (2000) demonstrated that organizational aesthetics is a dynamic capability that consists of a set of sub-processes enabling organizations to achieve sustainable competitive advantage, as reported by Dogan et al. (2016: 124), who discussed the concept of organizational aesthetic capability as a vital capacity that enables an organization to confront environmental instability. This capability refers to 1) a source of inspiration and motivation for organization members using visions as values for decision-making, 2) visions and decisions emerging from imagination to enhance creativity and innovation, and 3) recognition of perceptual responses and their communication to organization members (Thajil & AL-Abrrow a, 2023; Thajil & AL-Abrrow b, 2023; Muhammad, Mayea, Madhi & Thajil, 2022).

Theoretical Framework and Study Hypotheses

In order to examine the relationship between green product quality as an independent variable, environmental performance as a dependent variable, and organizational aesthetic capabilities as an interactive variable, a theoretical framework was developed. This framework illustrates the nature of this relationship and provides an initial conceptualization of the set of interrelationships and influences among the research variables, as depicted in Figure 1.

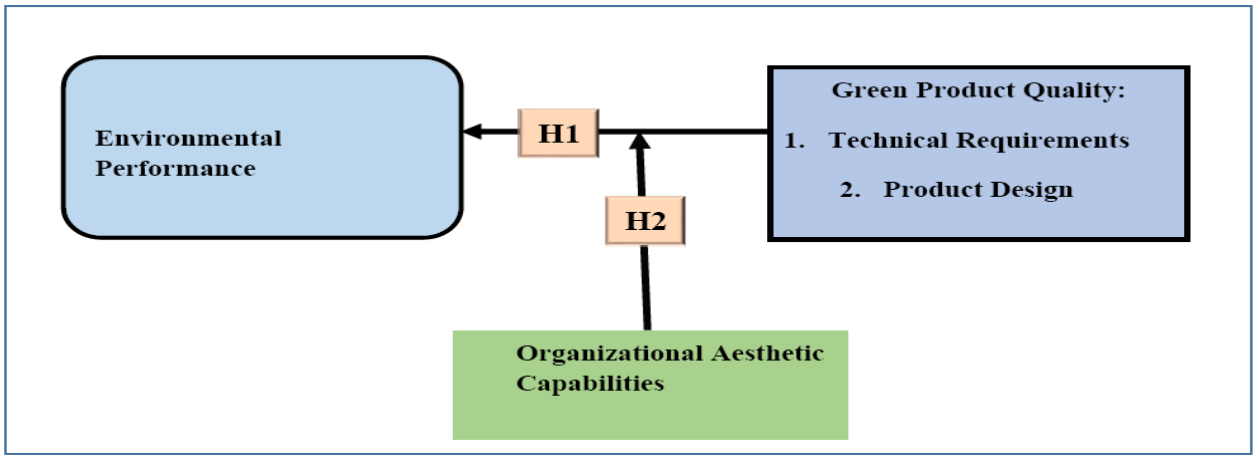

Figure 1 illustrates the conceptual framework of the study.

In order to minimize effort and avoid dispersion in research, it is necessary to develop tentative solutions. The current study aims to validate the accuracy of these solutions. The research is based on two main hypotheses:

H1: There is a significant and statistically meaningful relationship between green product quality and environmental performance.

H2: There is an interactive role of organizational reflection in the relationship between green product quality and environmental performance.

Study Methodology:

The study design refers to the overarching plan that outlines the methods and procedures for collecting and analyzing the required information to address the study objectives, which are determined during the early stages of the research. It ensures that the collected information is suitable for problem-solving purposes (Zikmund et al., 2010: 66). Additionally, it involves analyzing, interpreting, and testing the hypotheses based on time, research questions, and establishing a framework to determine the relationship between variables (Cooper and Schindler, 2014: 125).

In this study, the researchers will adopt the survey methodology (Explanatory Design), which aims to explain the nature of the causal relationship between one or more independent variables and one or more dependent variables (Cooper and Schindler, 2014: 22; Saunders et al., 2009: 140).

Data Collection: In terms of field coverage for this study, the researchers relied on the questionnaire as a data collection tool from the study sample. The questionnaire is considered an important method for data collection and is commonly used in behavioral and social studies when the required data is closely related to individuals' feelings, motivations, beliefs, and attitudes towards a specific topic. It is also useful for collecting data on situations and events that are difficult to observe directly, such as past and future circumstances. The questionnaire was used as the primary source for collecting information and was designed in the form of a booklet, following the Five-Point Likert scale. The response options in this scale include: strongly agree (5), agree (4), neutral (3), disagree (2), and strongly disagree (1). Respondents are asked to choose one of the specified alternatives. The organization of the questionnaire was based on the scales used in previous studies, including Chen et al. (2015), Colfer (2016), and Nitsun (1998).

Description of the Study Sample and Population:

In order to achieve the objectives of the study, a survey was conducted on a group of employees at the South Refineries Company, which is one of the divisions of the Ministry of Oil in Iraq. To ensure an accurate representation of the study population and avoid bias, the researchers utilized a simple random sampling method, as individuals in the research population would have an equal opportunity to be included in the study sample (Hair et al., 2015: 177). A random sample was selected from the study population, consisting of 1425 individuals distributed among the production, health, safety, environment, and quality departments. The selection of individuals was done randomly, based on Sekaran (2016: 264), who provided a table indicating an appropriate sample size of at least 302 individuals.

Data Analysis and Hypothesis Testing:

Descriptive Statistics

In this practical part of the study, we will begin by ensuring the reliability of the study measures (despite using pre-existing scales), which will be done through the Cronbach's Alpha coefficient to verify the reliability and internal consistency of the study measures. Additionally, it is necessary to examine the results of descriptive statistics for the variables and dimensions of this study using some descriptive statistical tools such as mean and standard deviation. Finally, we will explore the correlation coefficient among the study variables and dimensions in order to identify any initial evidence or support for the main and sub-hypotheses of the study. Table 1 illustrates this process.

Table 1: Descriptive Statistics and Correlation among Variables and Their Stability

10	9	8	7	6	5	4	3	2	1	Cronbach's Alpha	SD	Mean		
									1				Technical Requirements	1
								1					Product Design	2
							1			.897	1.156	2.99	Green Product Quality	3
						1			.696**	.897	.985	2.95	Imagination	4
					1			.315**	.412**	.900	.812	2.96	Cultural Awareness	5
				1			.691**	.510**	.534**	.882	.949	3.01	Analysis of Previous Work	6
			1			.678**	.468**	.430**	.403**	.886	.971	2.93	Preservation of Current Models	7
		1			.636**	.585**	.483**	.419**	.392**	.885	.961	2.85	Prediction of Future Paths	8
	1			.631**	.632**	.688**	.681**	.668**	.682**	.872	.777	2.95	Aesthetic Capacities	9
1			.506**	.423**	.182**	.267**	.392**	.404**	.298**	.917	.937	2.58	Environmental Pollution	10
		**. Correlation is significant at the 0.01 level (2-tailed).												

Source: SPSS software Output, Version 23.

Based on the results presented in Table 1, it is evident that the values of Cronbach's Alpha ranged from .872 to .917. This indicates that the values exceeded the threshold of .70 for both the main variables and the six dimensions of the independent variable, confirming their statistical acceptability in managerial and behavioral research (Pallant, 2011:100). The results also indicate a positive correlation between the variables and their dimensions ($p < .01$). Furthermore, there were no significant correlations among the dimensions of the independent variable, which helps avoid issues of linear multicollinearity (Pallant, 2011:151). This provides evidence that there is no overlap among the dimensions of the independent variable that could lead to difficulties in measuring the effects of each dimension on the dependent variable. Similarly, for the interactive variable, the aforementioned table's results provide preliminary support for the study's hypotheses.

Hypotheses Testing:

Path Analysis, available in AMOS V. 23 software, was used to test the main and sub-hypotheses based on the input data from the SPSS software. This analysis is capable of measuring direct impact hypotheses and provides graphical representations of the test results. The Estimate represents the estimated value of the effect coefficient, similar to the beta value in regression analysis. The S.E. represents the standard deviation, while the Critical Ratio (C.R.) represents the critical value that corresponds to the value of (t) in regression analysis. The C.R. value should exceed +-1.96 for hypothesis acceptance. Finally, (P) represents the significance of hypothesis acceptance, with a value below 0.05 considered significant (Tabchnick & Fidell, 2001: 68).

Table 1: Hypothesis Testing for the First Main Hypothesis

	P	C.R.	S.E.	Estimate	The path to the main hypotheses		
Acceptance	***	**6.058**	**.109**	**.382**	**Environmental Performance**	<---	**The Quality of Green Products**
Acceptance	***	**3.900**	**.088**	**.540**	**Environmental Performance**	<---	**The Quality of Green Products: Aesthetic Capacities**

Source: Outputs of AMOS V. 23 program.

Through the table provided, the following findings can be observed:

1. There is a positive significant relationship between green product quality and environmental performance at a significance level of 0.01. This indicates that green product quality has a positive impact on improving the level of environmental performance.
2. There is an interactive role of organizational reflection in the relationship between green product quality and environmental performance at a significance level of 0.01. The magnitude of the organizational reflection as a mediating variable in the relationship between green product quality and environmental performance is 0.54. Meanwhile, the magnitude of the direct relationship between green product quality and environmental performance is 0.38. This highlights the importance of this mediating variable in enhancing the relationship.

Conclusions:

Based on the practical findings and the results of the statistical analysis, the researchers have arrived at several applied conclusions related to the study objectives.

First conclusion: The analysis results indicate the presence of a significant relationship between the independent variable, green product quality, and the dependent variable, environmental performance. This suggests that the study sample managers have a desire to adopt the concept of green product quality to reduce environmental pollution and associated damages to the health of employees and the community in general. The organization should make significant improvements to mitigate the environmental impacts resulting from the product life cycle. The organization should regularly engage in process reengineering with a focus on green perspectives, while fostering a learning culture that encourages sustainable environmental performance. As for the sub-hypotheses of the main hypothesis:

The results show a significant positive relationship between technical requirements and environmental performance. This is attributed to continuous research and optimal utilization of advanced production techniques, which can minimize negative environmental impacts, along with the use of environmentally friendly materials during the production process.

Furthermore, the study results indicate the rejection of the second sub-hypothesis, which suggests a significant positive impact of product/process design on environmental performance. This can be attributed to the company's failure to apply international standards related to product improvement processes and the lack of utilization of modern techniques that require minimal resources and energy.

Recommendations:

Based on the results of the main and sub-hypotheses, the following recommendations can be made:

The need for a comprehensive plan to successfully implement green product quality to significantly reduce environmental impacts throughout the product life cycle and adopt innovative environmentally friendly technologies and processes.

Development of comprehensive strategies to implement organizational reflection to enhance product quality and mitigate environmental pollution, while considering the characteristics and requirements of the Iraqi environment.

Allocation of financial resources to improve environmental performance and conduct necessary awareness campaigns to implement this concept.

Adoption of a scientific approach to incorporate sustainability-oriented innovation practices in the researched company, ensuring the development of new capabilities that support innovation within the organization and encourage individuals to work towards improving manufacturing processes and reducing environmental impacts.

The need for training courses and workshops for both managers and employees in the organization, covering the latest concepts and raising awareness of the concepts and requirements of implementing green product quality-oriented innovation practices and the significant benefits expected from them.

The presented research on environmental performance provides important theoretical and practical insights for managers in enhancing the organization's innovation capabilities, which can be useful in achieving organizational goals and addressing pollution cases.

References

1. Aguilera-Caracuel, J., & Ortiz-de-Mandojana, N. (2013) "Green innovation and financial performance: An institutional approach" Organization & Environment, 26(4), 365-385
2. Asgharian Reza, Salehi Mojtaba, Saleki Zeinab Seyed, Hojabri Roozbeh & Nikkheslat Maryam (2012) "Green product quality, green customer satisfaction, and green customer loyalty" International Journal of Research in Management & Technology, 2(5), pp. 499-503.
3. Bakhsh Magsi, H., Ong, T., Ho, J., & Sheikh Hassan, A. (2018) "Organizational Culture and Environmental Performance" *Sustainability*, *10*(8), 2690

4. Berrone, P., & Gomez-Mejia, L. R. (2009) "Environmental performance and executive compensation: An integrated agency-institutional perspective" *Academy of Management Journal*, *52*(1), 103-126
5. Cabigiosu, A., & Camuffo, A. (2012) "Beyond the "mirroring" hypothesis Product modularity and inter organizational relations in the air conditioning industry" Organization Science, 23(3), pp. 686-703.
6. Hamza, Z. H., Alrikabi, A. A. M., Kamil, K. J., Thajil, K. M., Hasan, A. S., & Hussein, S. A. (2023). THE ROLE OF STRATEGIC LEADERSHIP IN CRISIS MANAGEMENT AN APPLIED STUDY OF A SAMPLE OF TRAINERS IN THE DIRECTORATE OF EDUCATION OF DHI QAR. European Journal of Interdisciplinary Research and Development, 14, 222-235.
7. Hawash, M. K., Taha, M. A., Hasan, A. A., Braiber, H. T., Abd Al Mahdi, R., muhsin Thajil, K., & Albakr, A. M. A. (2022). Financial Inclusion, Foreign Direct Investment, Green Finance and Green Credit Effect on Iraq Manufacturing Companies Sustainable Economic Development: A Case on Static Panel Data. Cuadernos de Economía, 45(128), 53-60.
8. Thajil, K. M., AL-Abrrow, H., & Abdullah, H. O. (2022). The Role of BlockChain Adoption and Supply Chain Practices on Social Commerce. In Artificial Neural Networks and Structural Equation Modeling: Marketing and Consumer Research Applications (pp. 131-148). Singapore: Springer Nature Singapore.
9. Mohammad, A. P. D. M. M., & Thajil, K. M. (2023). FINANCIAL PERFORMANCE IN LIGHT OF KNOWLEDGE MANAGEMENT CORE. European Journal of Interdisciplinary Research and Development, 11, 218-229.
10. Chang Nai-Jen & Fong Cher-Min (2010) "Green product quality, green corporate image, green customer satisfaction, and green customer loyalty" African Journal of Business Management, 4(13), pp. 2836-2844.
11. Clemens, B., & Bakstran, L. (2010) "A framework of theoretical lenses and strategic pur-poses to describe relationships among firm environmental strategy, financial per-formance, and environmental performance" Research Management Review 33, 393–405**.**
12. Colfer, L. J., & Baldwin, C. Y. (2016) "The mirroring hypothesis: Theory, evidence and exceptions" Industrial and corporate change, Vol.25 , No.5, pp 709-738.
13. Colfer, L. J., & Baldwin, C. Y. (2016) "The mirroring hypothesis: Theory, evidence and exceptions" Industrial and corporate change, 25(5), pp 709-738.
14. Cooper Ph. D, M. D. (2000) "Towards a model of safety culture" Safety science, 36(2), 111-136.
15. Cooper, L. (1976) "Mirroring one vehicle to organizational clarity" International Journal of Social Psychiatry, 22(4), pp. 288-295.
16. Ebrahim, M., & Camuffo, A (2016) "Micro dynamics of "Mirroring Hypothesis": When and How Organizational Structure Mirrors Product Architecture" Strategic Management Society, pp1-7.
17. Ebrahim, M., & Camuffo, A(2016) "Microdynamics of "Mirroring Hypothesis": When and How Organizational Structure Mirrors Product Architecture" Strategic Management Society, pp1-7.

18. Govindan, K., and M. Hasanagic. (2018) "A Systematic Review on Drivers, Barriers, and Practices Towards Circular Economy: A Supply Chain Perspective" International Journal of Production Research 56 (1–2): 278–311.
19. Hair Jr, J. F., Wolfinbarger, M., Money, A. H., Samouel, P., & Page, M. o. (2013) "Essentials of business research methods" Routledge.
20. Halkos, G. E., & Tzeremes, N. G. (2013) "A conditional directional distance function approach for measuring regional environmental efficiency" Evidence from UK regions. *European Journal of Operational Research*, *227*(1), 182–189.
21. Harayama, S., Kishira, H., Kasai, Y., & Shutsubo, K. (1999) "Petroleum biodegradation in marine environments" Journal of molecular microbiology and biotechnology, 1(1), PP 63-70
22. Hong Zhaofu, Wang Hao & Yu Yugang (2018) "Green product pricing with non-green product reference" Transportation Research Part E, 115, pp. 1-15.
23. Jawahar, N., Pandian, G. S., Gunasekaran, A., & Subramanian, N. (2015) "An optimization model for sustainability program" *Annals of Operations Research*. doi:10.1007/s10479-015-1928-z.
24. Kim, Y.J., Kim, W.G., Choi, H.M., Phetvaroon, K., (2019) "The effect of green human resource management on hotel employees' eco-friendly behavior and environmental performance" Int. J. Hosp. Manag. 76, 83–93.
25. Thajil, K. M., & AL-Abrrow, H. (2023). The effect of the bright triad on positive innovation in healthcare sector: The mediating role of emotional intelligence. International Journal of Healthcare Management, 1-12.
26. Thajil, K. M., & Al-Abrrow, H. (2023). Effect of personality styles on positive and negative innovation: the mediating role of emotional intelligence and abusive supervision using the structured equation model. International Journal of Organizational Analysis.
27. Muhammad, A. A., Mayea, S. S., Madhi, M. S., & Thajil, K. M. (2022). The role of creativity and leadership in achieving the competitive advantage of banks. International Journal of Research in Social Sciences, 12(4), 889-907.
28. MacCormack, A., Baldwin, C., & Rusnak, J. (2012) "Exploring the duality between product and organizational architectures: A test of the "mirroring" hypothesis" Research Policy, 41(8), pp 1309-1324.
29. Martos A., Pacheco-Torres R., Ordóñez J. & Jadraque-Gago E. (2016) "Towards successful environmental performance of sustainable cities: Intervening sectors. A review" Renewable and Sustainable Energy Reviews, 57, pp. 479–495.
30. Nitsun, M. (1998) "The Organizational Mirror: A Group-Analytic Approach to Organizational Consultancy" Part I—Theory. Group Analysis, 31(3), 245.
31. Saunders, M. N., Lewis, P. and Thornhill, A. (2009) "Research methods for business students" 5th ed., Pearson Education Limited
32. Sdrolia Evangelia & Zarotiadis Grigoris (2019) "a comprehensive review for green product term from definition to evaluation" Journal of Economic Surveys, 33(1), pp. 150–178.
33. Sekaran, U., & Bougie, R. (2016). "Research methods for business: A skill building approach" 7th ed . John Wiley & Sons.

34. Shen Bin, Cao Yifan & Xu Xiaoyan. (2019) "Product line design and quality differentiation for green and non-green products in a supply chain" International Journal of Production Research, pp. 1-17.
35. Singh, S. K., Chen, J., Del Giudice, M., & El-Kassar, A. N. (2019) "Environmental ethics, environmental performance, and competitive advantage: Role of environmental training" *Technological Forecasting and Social Change*, *146*, 203-211
36. Song, M. L., Fisher, R., Wang, J. L., & Cui, L. B. (2018) "Environmental performance evaluation with big data: Theories and methods" *Annals of Operations Research*, *270*(1-2), 459-472.
37. Wang, Q., Dou, J. & Jia, S. (2015) "A Meta-Analytic Review of Corporate Social Re-sponsibility and Corporate Financial Performance: The Moderating Effect of Con-textual Factors" Business & Society, 1-39.
38. Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2010) "Business research methods" 8th ed. Mason, HO: Cengage Learning .
39. Zirger, B. J., & Maidique, M. A. (1990) "A model of new product development: An empirical test" Management science, 36(7), pp. 867-883.
40. Hussein, R. Y., Alrikabi, A. A. M., Madhi, M. S., Mohammed, A. A., Hasan, A. S., & Thajil, K. M (2022). The Role of Job Creation in Achieving Economic Growth.
41. AL-Abrrow, H., Thajil, K. M., Abdullah, H. O., & Abbas, S. (2020). The dark triad and organizational citizenship behavior in health care: The moderating role of positive emotions. Global Business and Organizational Excellence, 39(5), 6-17.