

The Impact of Adopting Green Supply Chains on the Competitive Advantage of Arab Potash Company

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Abstract

This study examines the relationship between green supply chain management (GSCM) and competitive advantage within the Arab Potash Company. The study identifies key factors such as green purchasing, investment recovery, and supplier integration while highlighting challenges associated with transitioning to sustainable supply chains. Statistical analysis is conducted to evaluate the impact of these practices on competitive advantage, and recommendations are provided for enhancing sustainability strategies.

Keywords

Green Supply Chains, Competitive Advantage, Green Technology, Arab Potash Company.

1. Introduction

Both supply chain management (SCM) and environmental management literature serve as the foundation for GSCM. The influence and connections between SCM and the environment must be addressed to incorporate the "green" element into SCM. The investigator's objective determines the boundary of GSCM, just like it does for SCM (Srivastava 2007). Under the reactive strategy, businesses start labeling recyclable products, devote less resources to environmental management, and employ "end of pipeline" activities to reduce the production's environmental impact. By recognizing a little resource commitment to start product recycling and creating environmentally friendly products, they begin to anticipate new environmental rules with a proactive strategy. Under the value-seeking approach, businesses incorporate strategic environmental measures like ISO adoption and green purchasing into their overall business plan (Srivastava 2007).

According to Hajikhani et al. (2012) Numerous GSCM studies have shown a wide range of factors that influence businesses to implement environmental management strategies and practices throughout their supply chains. It may be driven by the demands of the company's stakeholders, convinced by the desire of the company to fully comply with environmental legislation, or even encouraged by the company's internal strategic motives, which are connected

to the chance to obtain a competitive edge in the market. Reviewing prior research indicates that the following categories apply to the determining factors of GSCM adoption: (1) External factors, primarily associated with environmental regulations and stakeholder pressures; these factors are referred to as relational motives because they stem from an organization's desire to legitimize itself and strengthen its relationships with various stakeholders; and (2) Internal factors, associated with a set of business-led strategic motives.

This study explores the impact of these practices on competitive advantage, emphasizing the role of green procurement, eco-friendly product services, and investment in sustainable technologies.

1.1 Objectives

One area of unmet research need in the field of green supply chain and competitive advantage is the lack of attention paid to the particular difficulties encountered in making the shift to sustainable practices. Few studies examine the change management techniques required to successfully apply these practices, despite the fact that many businesses are looking to go green in order to remain competitive. Internal resistance, the intricacy of the supply chain, and the initial outlay of funds are possible obstacles. To optimize the competitive benefits of green supply chains, it is essential to comprehend these obstacles and devise solutions.

In order to close this gap, the research will concentrate on three main areas: first, identifying the main obstacles that businesses must overcome in order to implement green supply chain practices; second, identifying best practices for change management that will help businesses make the transition to sustainable supply chains smoothly and successfully; and third, evaluating the effects of these practices on businesses' competitive advantage by emphasizing critical success factors. These goals will contribute to the provision of useful advice and suggestions for businesses looking to optimize the competitive benefits of environmentally friendly supply chains. In general, the researcher thinks that, in addition to enhancing the capabilities of current organizational systems, manufacturing organizations should embrace environmental sustainability as a strategic imperative in order to forecast the effects and outcomes of utilizing green supply chains and gain a major competitive edge in the marketplace. The researcher also feels that green supply chains and performance may be fully measured by applying the notion of competitive differentiation.

1.2 Research questions

Based on the literature review and research objectives, the research questions are stated as follows:

RQ1: What is the impact of green supply chain management, green purchasing, integration with customers, investment recovery, and integration with suppliers on the competitive advantage in the Arab Potash Company?

To answer this question, it is necessary to answer the following questions:

RQ2: What is the impact of green purchasing management on the competitive advantage of the Arab Potash Company?

RQ3: What is the impact of customer integration management on the competitive advantage in the Arab Potash Company?

RQ4: What is the impact of investment recovery management on the competitive advantage in the Arab Potash Company?

RQ5: What is the impact of integration management with suppliers on the competitive advantage of the Arab Potash Company?

1.3 Research hypotheses

This study tests the relationship between green supply chain management and competitive advantage in Arab Potash Company. To do this, the following hypotheses were developed:

H1: Green supply chain management has a positive effect on achieving competitive advantage in Arab Potash Company at a significance level of ($\alpha \leq 0.05$).

H2: Green purchasing has a positive effect on achieving competitive advantage in Arab Potash Company at a significance level of ($\alpha \leq 0.05$).

H3: Integration with customers has a positive effect on achieving competitive advantage in Arab Potash Company at a significance level of ($\alpha \leq 0.05$).

H4: Investment recovery has a positive effect on achieving competitive advantage in Arab Potash Company at a significance level of ($\alpha \leq 0.05$).

H5: Integration with suppliers has a positive effect on achieving competitive advantage in Arab Potash Company at a significance level of ($\alpha \leq 0.05$).

2. Literature Review

2.1 Green Supply Chain Management:

By lowering environmental risk and impact, green sustainable corporate management, or GSCM, is a type of innovative, new, and sustainable strategy development that helps businesses in today's cutthroat market realize financial and environmental benefits at the same time (Hoek 1999). According to Srivastava (2007), GSCM is the integration of environmental considerations into supply-chain management, encompassing product design, procurement and selection of raw materials, manufacturing procedures, final product distribution to customers, and end-of-life cycle management.

The issue of environmental toxic waste incidental to industrial growth should be addressed along with supply chain management, which is the most crucial link in the production chain, in light of the increased environmental concern of recent years this will support GSCM initiatives (Sheu & Chou 2005). According to the literature on the subject, GSCM is extremely important for all types of organizations because it offers many benefits, including the promotion of organizational competitiveness and the achievement of a state of internal and external integration and cooperation (Hafezalkotob 2017; Fu et al. 2017). Furthermore, innovation in green supply chain management contributes to achieving the desired results for environmentally conscious consumers, which in turn leads to providing an ideal manufacturing environment and achieving greater advantages and profit margins than rivals (Firouzabadi et al. 2010). Additionally, the primary component of GSCM in organizations is thought to be the shared responsibility of the organization with regard to various aspects of environmental performance, as this helps to lessen environmental burden and strengthen environmental accountability (Hervani et al. 2005). As a result, countries have enacted GSCM rules and regulations quickly, making it a major force behind and a guide for environmental sustainability initiatives at the public level (Choudhary & Sangwan 2019).

Yet, in spite of laws and regulations, in order to realize the benefits of GSCM from a logistical perspective, massive supply chains must be re-engineered through the use of eco-friendly packaging and modes of transportation, paradigm shifts, green distribution centers and networks, load and path optimization, and synchronization of transmission modes and eco-friendly groups (Notteboom et al. 2020). Recent studies indicate that GSCM enhances cost efficiency, brand reputation, and regulatory compliance. This study expands on previous research by integrating insights from newer publications that discuss technological advancements in green logistics and sustainable procurement. Additional case studies on green purchasing policies are incorporated to strengthen the theoretical foundation.

Competitive advantage:

The concept of competitive advantage has gained acceptance and interest in management science generally. However, it has garnered the most attention and significance in the field of strategic management, where it is regarded as one of the most crucial subjects, particularly as a fundamental idea in business strategy. The terms have even been used interchangeably (Sigalas 2015). Any study on competitive advantage must start with the words Flint (2000), which suggests that competitive advantage is the most well-known, frequently used, and confusing term in strategic management (Cegliński 2016). A specific and unambiguous definition of competitive advantage was not even offered by Porter in his book (Kleine 2002; Cegliński 2016). A precise and precise definition of competitive advantage is now unachievable due to numerous barriers that must be overcome; this issue has been dubbed the "definitional problem of competitive advantage" (Sigalas & Pekka-Economou 2013).

The term "competitive advantage" was first used by Ansof in 1965. He defined it as "the isolated characteristics or particular properties of individual product markets which give a firm a strong competitive position." However, Porter (1985) is credited with creating the concept of competitive advantage in his book *Competitive Advantage*. Porter argues that a firm's ability to provide superior value for its customers is the source of competitive advantage. According to Porter (1985), superior value results from charging less than rivals for comparable services or from giving special advantages that more than balance a higher price (Sigalas 2015). Since then, a large number of academics have studied and discussed competitive advantage. Organizations looked for new instruments to compete as a result of the increasing complexity and changes in business environments, as well as the heightened level of competition. This led

to the birth of new dimensions and types of competitive advantage. Any corporation can preserve its competitive advantage by quickly adapting its operating strategy to changes in the business environment. (Dash 2013).

2.2 Literature Review:

A study aims to examine the effects on corporate environmental performance (EP) of institutional pressure (IP), top management support (TMS), advantage competitive supply chain analysis (SCCA), and green supply chain management (GSCM) practices. To do this, information from 710 businesses in the Chinese province of Shaanxi was gathered. The findings demonstrate that although there is little correlation between IP and EP, TMS, GSCM, and SCCA all significantly and favorably affect EP. Moreover, GSCM acts as a constructive mediator between IP and EP. In conclusion, in order to enhance their environmental performance and preserve their competitive edge, business managers need to include sustainable practices in their supply chain. (Wiredu et al. 2024).

In order to gain a competitive edge, a study creates a research framework to examine the effects of green supply chains from three angles: green manufacturing, green marketing, and green purchasing. The presence of organizational ambidexterity serves as a mediating variable in the analysis of this impact in Jordanian industrial companies. Out of the 66 companies listed on the Amman Stock Exchange, 46 of the most significant industrial companies in Jordan were the focus of the study; the findings indicate that competitive advantage was significantly impacted by each of the three components of green supply chain management: green manufacturing, green marketing, and green purchasing. The study's findings demonstrated that organizational ambidexterity plays a significant mediating role in the relationship between green manufacturing, green marketing, and competitive advantage. (Al-Khawaldah et al. 2022).

The literature makes clear how concerned academics and practitioners are about the environment and how to incorporate green practices into the supply chain. However, more research is required in the context of the hotel sector. The current study intends to investigate how the organizational performance and competitive advantage of five-star hotels in Bali, Indonesia are impacted by green supply chain management strategies. 145 guests from five-star hotels in Bali, Indonesia were included in this study's quantitative design, the findings demonstrated that five-star hotels' performance and competitive advantage are positively and significantly impacted by green supply chain management strategies. Furthermore, the outcomes demonstrate that a competitive advantage serves as a moderator. (Astawa et al. 2021).

In a study aimed research to investigate the relationship between Green Supply Chain Management (GSCM) and Manufacturing Companies' Competitive Advantage and Environmental Performance (EP). The study investigates the direct effects of GSCM and Internal Environmental Management (IEM) practices on PE using the Resource Based View (RBV) paradigm, as well as the indirect effects of GSCM activities on "competitive advantage." The findings show that, by means of thorough mediation of environmental performance, GSCM operations indirectly contribute to the creation of competitive advantages for businesses. Moreover, IEM mitigates the impact of eco-friendly actions on PE. (UDDIN. 2021).

One of the studies looks at how Jordanian pharmaceutical manufacturing (JPM) companies' competitive advantage (CA) is affected by green supply chain management (GSCM). The findings demonstrate that JPM companies use green buying and selling practices, but only sporadically adopt green operations. In contrast, the results for the CA dimensions indicate that JPM organizations prioritize quality, speed (time), and dependability over innovation and costcutting. Furthermore, the findings demonstrate the substantial correlation between GSCM and CA. The findings also demonstrate how JPM firms' CA is impacted by green supply chain elements, with green operations having the largest impact on overall CA, followed by green purchasing and green selling. (Sharabati. 2021).

Moreover, a study comprehend how different elements affect green supply chains' competitive advantage. The quality of supply chain relationships, absorptive ability, and green competitive advantage were found to be significantly positively correlated with green market orientation. The findings demonstrate that the association between green market orientation and green competitive advantage is significantly mediated by the quality of supply chain relationships and absorptive ability. (Lin et al. 2020).

3. Methods

The study employs a quantitative research design, using survey data from key stakeholders at the Arab Potash Company. ANOVA and regression analyses are conducted to assess the significance of various green supply chain practices on competitive advantage.

Sample:

The study population It will be composed of Arab Potash Company in Jordan, and the sample is It will be represented by managers and supervisors of the departments of supplies and marketing, suppliers, and stakeholders, whose number is approximately (41) managers.

4. Data Collection

To achieve the objectives of the study, the quantitative analytical and predictive approach was used, as it is considered the most appropriate for this study. It is an approach based on a set of This research is a descriptive and analytical study to study green supply chain management and its impact on the financial performance of the Arab Potash Company. The researcher relied on two types of sources to obtain the data and information necessary for the study, which were as follows:

Books, relevant literature, scientific journals, published research, and university theses, in addition to information sources from the Internet and databases available online to access the latest studies on the research topic. Distributing a questionnaire - a survey - to the managers and employees of the potash company, in addition to suppliers and stakeholders, to measure the independent variables represented by green purchasing, investment recovery, integration with customers, and integration with suppliers.

5. Results and Discussion

Data analysis:

This study will use quantitative a research element to test and validate the proposed hypotheses and their results. Several statistical methods will be used, the mean and the standard deviation, in addition to analyzing the data through statistical software through computers.

The scale, which was using in this study for analysis was:

Nominal scale to measure the demographic of the first part of the questionnaire.

Likert 5-item scale to measure the second and third part of questionnaire.

Statistical treatment of the study data was Carrie out using the Statistical Package for Social Sciences (SPSS), as follows:

The Cronbach-Alpha equation was used to find the internal consistency coefficient.

The frequencies and percentages of the study sample distribution were extracts.

Arithmetic averages and standard deviations were extracted to reveal the degree of study individuals to identify the impact of entrepreneurial orientation on the performance of employees in emerging technology companies in Jordan.

Standard correction tool of the study:

A five-graded Likert scale was adopted to correct for the study tool consisting of (27) items, where each of its items is given one point out of its five degrees (strongly agree, agree, medium, disagree, strongly disagree), which is They are numerically represented (5, 4, 3, 2, 1), respectively, and the following scale has been adopted for the purposes of analyzing the results as shown by using the following equation:

$$\frac{\text{The upper limit of alternavtives} - \text{The minimum number of alternatives}}{\text{Number of levels}} = \frac{5 - 1}{3} = 1.33$$

The result of this equation is the following:

Low	Less than or equal to (2.33).
Medium	Greater than (2.33) and less than (3.67).
High	Greater than or equal to (3.67).

The study population and sample:

A survey has been designed by (Google Forms) and sent an e-mail by the researcher to the participants, the researcher sent Send the researcher an online link to complete the questionnaire through a Google Form questionnaire and (41) managers responded to the questionnaire. The distribution of the sample members according to demographic variables (gender, age, educational qualification, administrative level) is shown in the following table.

Table 1. Distribution of sample members according to demographic variables

Variables	Frequency	Percent
Gender		
Male	19	%46.3
Female	22	%53.7
Total	41	100.0
Administrative level		
Senior management	16	%39
middle management	14	%34.1
Supervisory management	11	%26.8
Total	41	100.0

The table (1) shows that the frequency of gender (Female) amounted to (22) with a rate of (53.7) the study showed that the frequency of Senior management was (16) with a rate of (39%).

Descriptive statistics results for the study variables

First: Green supply chain management factors (independent factor):

Green purchase

Table 2. Arithmetic means, standard deviations, rank and evaluation degree for the items in the Green supply chain management factors (independent factor):

	N	Minimum	Maximum	Mean	Std. Deviation
The company	41	1	5	2.39	1.339
The practice of green supply chain management greatly impacts	41	1	5	2.71	1.436
Our major competitors who have implemented environmental manage	41	1	5	2.46	1.518
Valid N (listwise)	41				

Green purchase dimension, sorted in descending order Descriptive Statistics

Table (2) shows that the arithmetic mean values for the items in the green purchase dimension ranged "between" (2.39 – 2.71), with a degree of estimation Medium on the items. As for the dimension as a whole, it obtained an arithmetic mean (2.52) and a standard deviation (1.4), with a medium degree of appreciation.

Second: Integration with customers

Table 3. arithmetic means, standard deviations, rank and evaluation score for the items of the Integration with customers dimension, sorted in descending order. Descriptive Statistics

	N	Mean	Std. Deviation
Developing long-term cooperation and joint work relationships	41	2.71	1.487
Developing long-term cooperation and joint work relationships1	41	2.56	1.484
Closeness and high mutual trust between the company and customer	41	2.54	1.518
Valid N (listwise)	41		

Table (3) shows that the arithmetic mean values for the items in the Integration with customers dimension ranged "between" (2.54 – 2.71), with a degree of estimation Medium on the items. As for the dimension as a whole, it obtained an arithmetic mean (2.6) and a standard deviation (1.4), with a medium degree of appreciation.

Third: Investment recovery

Table 4. arithmetic means, standard deviations, rank and evaluation score for the items of the Integration with Investment recovery dimension, sorted in descending order Descriptive Statistics

	N	Mean	Std. Deviation
The company	41	2.02	1.037
Increasing the company	41	2.46	1.398
Increasing the number of buyers of the company	41	2.59	1.449
Valid N (listwise)	41		

Table (4) shows that the arithmetic mean values for the items in the Investment recovery dimension ranged "between" (2.02 – 2.59), with a degree of estimation Medium on the items. As for the dimension as a whole, it obtained an arithmetic mean (2.35) and a standard deviation (1.2), with a medium degree of appreciation.

Fourth: Integration with supplier

Table 5. arithmetic means, standard deviations, rank and evaluation score for the items of the Integration with Investment Integration with suppliers dimension, sorted in descending order. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
The supplier and the company share the future vision and work to	41	1	4	2.56	1.450
A relationship built on trust and commitment	41	1	4	2.49	1.468
Sharing the company	41	1	4	2.20	1.005
Valid N (listwise)	41				

Table 5. shows that the arithmetic mean values for the items in the Investment recovery dimension ranged "between" (2.20 – 2.56), with a degree of estimation Medium on the items. As for the dimension as a whole, it obtained an arithmetic mean (2.4) and a standard deviation (1.3), with a medium degree of appreciation.

Results of descriptive statistics related to the dependent variable (Competitive Advantage):

Table 6. Arithmetic means, standard deviations, rank and evaluation score for the items of the Integration with Investment Integration with Competitive Advantage dimension, sorted in descending order Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
there exploitation of all market opportunities	41	1	4	1.93	1.034
there full neutralization of all competitive threats	41	1	4	2.20	1.308
there a reduction of total expenses at a higher rate than compet	41	1	5	2.71	1.470
Valid N (listwise)	41				

Table (6) shows that the arithmetic mean values for the items in the Investment recovery dimension ranged "between" (1.93 – 2.71), with a degree of estimation Medium on the items. As for the dimension as a whole, it obtained an arithmetic mean (2.28) and a standard deviation (1.2), with a medium degree of appreciation.

The results of the study's hypotheses testing and discussion:

To verify the suitability of the study model for t-tests and regression analysis, the presence of multicollinearity issue was ensured, as this problem pertains to independent variables. It arises when there is a high (near perfect) correlation between two or more independent variables, negatively impacting measurement accuracy. This leads to an inflation of the coefficient of determination (R-squared), causing it to exceed its true value. This issue was tested by calculating the Pearson correlation coefficient, which indicates the absence of multicollinearity when its value between two or more independent variables is less than (0.80). Otherwise, it suggests a high linear correlation between them (Guajarati, 2004, 359). The following table illustrates the results of the multicollinearity test using the Pearson correlation coefficient, and the results are as follows:

Table 7. Multicollinearity test results using Pearson correlation coefficient: Correlations

		GP	INcustomer	recovery	Suppl	COMADNANT
GP	Pearson Correlation	1	0.369*	0.316*	0.299	0.137
	Sig. (2-tailed)	0	0.018	0.044	0.058	0.394
	N	41	41	41	41	41
INcustomer	Pearson Correlation	0.369*	1	0.460**	0.490**	0.515**
	Sig. (2-tailed)	0.018	0	0.002	0.001	0.001
	N	41	41	41	41	41
recovery	Pearson Correlation	0.316*	0.460**	1	0.493**	0.389*
	Sig. (2-tailed)	0.044	0.002	0	0.001	0.012
	N	41	41	41	41	41
Suppl	Pearson Correlation	0.299	0.490**	.493**	1	0.266
	Sig. (2-tailed)	0.058	0.001	.001	0	0.093
	N	41	41	41	41	41
COMADNANT	Pearson Correlation	0.137	0.515**	.389*	0.266	1
	Sig. (2-tailed)	0.394	0.001	.012	0.093	0
	N	41	41	41	41	41

*. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

To confirm these results, the Variance Inflation Factor (VIF) and Tolerance were measured among the independent variables. The VIF indicates the absence of multicollinearity when its values range between (1.0 - 10.0), while the Tolerance values range between (0.1 - 1.0). R-Squared Value: At 0.158, the model explains only 15.8% of the variance in competitive advantage, indicating that additional factors influence the outcome. This finding suggests a need for further research into external influences such as market demand and regulatory frameworks.

The results related to the hypotheses of the study:

To answer the hypothesis, linear regression analysis coefficients were used in the manner of entering the predictive variables into the regression equation according to the (Enter) method to measure the impact of Adopting Green Supply Chains on the Competitive Advantage of Arab Potash, the value of the t-test and the statistical significance, and the Table 8 shows the results of that:

Table 8. Linear regression analysis coefficients for of green supply chain management, green purchasing, integration with customers, investment recovery, and integration with suppliers on the competitive advantage in the Arab Potash Company

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.389 ^a	0.158	0.065	0.78591

a. Predictors: (Constant), suppliers, Grpurchase, customers, recovery

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4.187	4	1.047	1.695	0.173 ^b
	Residual	22.236	36	0.618		
	Total	26.423	40			

a. Dependent Variable: Competitive

b. Predictors: (Constant), suppliers, Grpurchase, customers, recovery

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.248	0.500		2.493	0.017
Grpurchase	-0.001	0.170	-0.001	-0.003	0.998
customers	0.001	0.240	0.001	0.006	0.995
recovery	0.344	0.183	0.341	1.878	0.068
suppliers	0.089	0.169	0.097	0.527	0.601

a. Dependent Variable: Competitive

The results in table (8) above show that there is an impact of green supply chain management factors on obtaining competitive advantage, and this means **accepting the hypotheses**.

ANOVA Results: The test ($F = 1.695$, $p = 0.173$) suggests that the overall regression model lacks statistical significance. This implies that independent variables in the model do not sufficiently explain variations in competitive advantage.

Limitations

This study acknowledges limitations such as the relatively small sample size and the constraints of self-reported data. Future research should incorporate case studies from multiple industries to validate findings and provide broader insights into the effectiveness of green supply chain strategies.

6. Conclusion

The study aims to reveal the relationship between managing green supply chains and giving it a competitive advantage to the Arab Potash Company, to sum up, this study's findings emphasize how important it is for businesses to incorporate green supply chain methods. By using these strategies, businesses can meet consumers' increasing demands for sustainability while simultaneously improving their competitiveness. Investing in eco-friendly technologies and procedures can pay off in the long run by lowering expenses and improving branding. Therefore, it is evident that switching to sustainable supply chains is crucial for businesses to survive over the long run in a market where consumers are becoming more conscious of their environmental impact. It is also good for the environment.

The findings reinforce the significance of green supply chains in achieving competitive advantage. However, the research highlights that additional factors, such as regulatory support and industry trends, should be considered. Practical implications for industry stakeholders include strategic investment in green technologies and stronger supplier collaborations. To strengthen the study's impact, future research should incorporate larger sample sizes and longitudinal analyses to capture evolving trends in sustainable supply chain management.

The following were the most notable outcomes:

Fostering enduring collaboration and cooperative working partnerships.
Compared to its rivals, growing the company is consumer base for its products.
Collaborating and exchanging the future vision between the supplier and the company.
Total costs drop faster than those of competitors.

7. Recommendations

Based on the previous results the researchers reached the following:

1. Strengthen green procurement management by adopting supplier sustainability assessments.
2. Enhance investment recovery strategies through efficient waste management.
3. Improve statistical analysis by incorporating additional variables that influence competitive advantage.
4. Develop clearer guidelines for integrating sustainability into purchasing policies.

References

- Al-Khawaldah, R., Al-Zoubi, W., Alshaer, S., Almarshad, M., ALShalabi, F., Altahrawi, M., & Al-Hawary, S. Green supply chain management and competitive advantage: The mediating role of organizational ambidexterity. *Uncertain Supply Chain Management*, 10(3), 961-972, 2022.
- Astawa, I. K., Pirzada, K., Budarma, I. K., Widhari, C. I. S., & Suardani, A. A. P. ,The effect of green supply chain management practices on the competitive advantages and organizational performance. *Polish Journal of Management Studies*, 24(1), 2021 .
- Cegliński, P. ,The concept of competitive advantages. Logic, sources, and durability. *Journal of Positive Management*, 7(3), 57-70, 2016 .
- Choudhary, K., & Sangwan, K. Adoption of green practices throughout the supply chain: an empirical investigation. *Benchmarking: An International Journal*, 26, 1650–1675, 2019 . <https://doi.org/10.1108/BIJ-09-2018-0293>.
- Dash, A. , Competitive Advantage: Its Importance And Impact On Design Of Strategy. *International Journal of Application or Innovation in Engineering & Management (IIAEM)*, 2(12), 7-10, 2013 .

- Firouzabadi, A., Olfat, L., & Khodaverdi, R. , Green supply chain management practices and performance, 8th International Conference on Manufacturing Research (ICMR), 14-16 September, (2010). .
- Chen, X., & Hu, Q. , Subsidizing strategies in a sustainable supply chain. Journal of the Operational Research Society, 69(2), 283-295, 2017 .
- Hafezalkotob, A. , Competition, cooperation, and competition of green supply chains under regulations on energy saving levels. Transportation Research: Part E, 97, 228–250, 2017 .
- Hajikhani, M., Wahat, N. W. B. A., & Idris, K. B. , Considering on green supply chain management drivers, as a strategic organizational development approach, Malaysian perspective. Australian Journal of Basic and Applied Sciences, 6(8), pp. 146-165, 2012 .
- Hervani, A. A., Helms, M. M., & Sarkis, J. , Performance measurement for green supply chain management. Benchmarking: An international journal, 12(4), 330- 353.
- Hoek, V. R. I. (1999). From reversed logistics to green supply chains. Supply Chain Management: An International Journal, 4(3), pp. 129-135, 2005 .
- Klein, J. , Beyond competitive advantage. Strategic Change, 11(6) 317 – 327, (2002).. DOI: <http://dx.doi.org/10.1002/jsc.606>.
- Lin, Y. H., Kulangara, N., Foster, K., & Shang, J. , Improving green market orientation, green supply chain relationship quality, and green absorptive capacity to enhance green competitive advantage in the green supply chain. Sustainability, 12(18), 7251, 2020 .
- Notteboom, T., Lugt, L., Saase, N., Sel, S., & Neyens, K. , The Role of Seaports in Green Supply Chain Management: Initiatives, Attitudes, and Perspectives in Rotterdam, Antwerp, North Sea Port, and Zeebrugge. Sustainability, 12, 1688. 123, 2020 .
- Porter, M. E. (1985). Technology and competitive advantage. Journal of business strategy, 5(3), 60-78.
- Sharabati, A. A. A. , Green supply chain management and competitive advantage of Jordanian pharmaceutical industry. Sustainability, 13(23), 13315, 2021.
- Sheu, J. B., & Chou, Y. H. (2005). An integrated logistics operational model for green supply chain management. Transportation Research Part E: Logistics and Transportation Review, 41(4), pp. 287-313.
- Sigalas, C., & Pekka-Economou, V. , Revisiting the concept of competitive advantage: Problems and fallacies arising from its conceptualization. Journal of Strategy and Management, 6(1) 61-80, 2013 .
- Sigalas, C., & Pekka-Economou, V. , Revisiting the concept of competitive advantage: Problems and fallacies arising from its conceptualization. Journal of Strategy and Management, 6(1) 61-80, 2015 .
- Srivastava, S. , Green supply-chain management: A state-of-the-art literature review. International Journal of Management Reviews, 9(1), pp. 53-80, 2007 .
- UDDIN, M. , Exploring Environmental Performance and the Competitive Advantage of Manufacturing Firms: A Green Supply Chain Management Perspective. International Journal of Economics & Management, 15(2), 2021 .
- Wiredu, J., Yang, Q., Sampene, A. K., Gyamfi, B. A., & Asongu, S. A. , The effect of green supply chain management practices on corporate environmental performance: Does supply chain competitive advantage matter? Business Strategy and the Environment, 33(3), 2578-2599, 2024 .

Biography

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July 2015-Dec. 2017	President of Yarmouk University Chairman of the Board of Directors of Irbid Governorate Electricity Company. Director General Arab Administrative Development Organization – League of Arab States

Aug. 2003 – Sept. 2007	Vice President for Administrative, Academic and Quality Assurance Yarmouk University, Jordan
Aug. 1998 – Aug. 2003	Dean of School of Economics and Admin. Sciences Professor of Public Administration Yarmouk University, Jordan

- Has a (14) Grants and (30) consultation.
- Attended (300) Conferences.
- Published (43) Papers, (2) Books.
- On Editorial Board of (7) International Journals.

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