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Value chain analysis and managing supply chain costs

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A B S T R A C T

The study aimed to reveal the effect of value chain analysis (VCA) of internal and external activities to manage and reduce product costs along the supply chain (SC) in industrial facilities in the Red Sea State in Sudan from the point of view of managers, financial managers and accountants there, from the basic dimensions of value chain analysis represented by VCA of suppliers' activities, VCA for product design activities, VCA for production activities, and VCA for customer activities. The supply chain costs are defined in just-in-time (JIT), target costing (TC), and activity-based costing (ABC). The study revealed that analyzing VCA contributes to managing and reducing product costs along the supply chain by exploiting the interrelationships and overlap between the value chain analysis and the supply chain for each supplier's production and customer activities.

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1. Introduction

The modern business environment has led to the emergence of competitive markets due to the disappearance of trade barriers and geographical boundaries between products and markets, increasing customer aspirations for the availability of products in the right place, in the fastest time, and with the highest quality, at the lowest cost. It is difficult for many establishments to adapt to the current business environment. Therefore, the importance of industrial establishments being linked to partnerships and alliances with their suppliers and customers has emerged under the name supply chain to maximize the value provided to the customer at the lowest possible cost through cooperation and coordination between the parties of the chain, which includes a group of suppliers and manufacturers. To meet the requirements and desires of customers, to achieve high levels of responsiveness and efficiency (Zbib et al., 2003; Dubey et al., 2020; Linkov et al., 2020; Arora et al., 2021). Based on the concept of the supply chain, each facility specializes in performing activities with a comparative advantage and returns the rest of the activities to other, more efficient facilities. Thus, many product costs have become determined outside the facility's boundaries in connection with suppliers. Therefore, traditional efforts to reduce the cost, which is limited to the organizational boundaries of the facility, are sufficient considering the modern business environment. Therefore, the trend towards cost management along the supply chain has emerged (Boute et al., 2014). As a result, management accounting has responded to these developments in the business environment by developing methods and tools for management accounting that are based on not adhering to the boundaries of the organizational facility and paying attention to the external parties associated with it in reducing the cost and improving the quality of its products. Among these tools is value chain Analysis, which considers that the activities carried out by any party along the supply chain represent part of creating value for the customer, and therefore, it is not limited to each facility within its borders and alone only. Still, the relationships and links between the activities performed along the supply chain must be considered (Fayard et al., 2012). The study aims to demonstrate the impact of value chain analysis practices on product cost along the supply chain and to examine the cost of products along the supply chain in industrial companies from the point of view of financial managers and accountants. From the above, the research problem is the lack of a specific and clear mechanism for managing supply chain costs through the use of value chain analysis to understand and analyze the structure of costs and try to explain the factors driving them and use the information provided by value chain analysis to identify deficiencies and inefficiency in performance activities and operations along the supply

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chain, in addition to the need for Sudanese companies to have sufficient knowledge of ways to employ value chain analysis in managing costs and improving their level of performance. In short, the problem of the research lies in the ambiguity of vision and the absence of an accurate evaluation of the impact of value chain analysis practices on product costs along the supply chain. The supply chain in industrial companies in Sudan, the relationship between them, and the need to measure it from the financial managers' and accountants' perspectives. Based on the above, the research problem can be identified in the main question: What is the impact of value chain analysis practices on product costs along the supply chain in industrial companies in Sudan from the point of view of managers, financial managers, and accountants?

2. Theoretical framework and hypotheses development

2.1 Value Chain Analysis (VCA)& Managing supply chain (SC) cost

According to Koc and Bozdag (2017), the value chain is the set of activities carried out to design, produce, market, provide, and support its products to create value for its customers. These activities are the distinct material and technological activities that the company undertakes to produce a product of value to customers (Horngren et al., 2012) defined it as a group of successive enterprise activities that add benefit or value to goods and services so that they are arranged in the form of a value chain, which is represented in research and development, design and production, marketing and distribution, and customer service. VCA is a useful way to think about how we deliver value to customers and review all processes and the activities that can be done to maximize this value (Al-HAshimi & Al-ardawe, 2020). VCA aims to improve efforts to reduce the cost and improve the quality of the product by identifying the characteristics and functions of the product and the activities that contributed to it, analyzing the relationships between the internal activities of the value-hosting facility, and identifying areas of excellence in value-hosting activities (Donovan et al., 2015). Conducting value chain analysis for supply chain facilities relies on the efforts of a team consisting of management accountants, design and production engineers, marketing managers, customers, and suppliers of the main facility to identify the strengths, weaknesses, opportunities, and threats that provide a future vision for the supply chain, which represents the basis for making appropriate decisions to strengthen Competitive advantage (Blocher, et al., 2010), According to Al-HAshimi and Al-ardawe (2020), Agndal and Nilsson (2010), Holweg and Helo (2014) and Dekker (2003), the VCA in the SC is analyzed through the following steps: identify and analyze the value chain activities of the main facility, as well as activities related to its customers and suppliers, focus on strategic activities and determine the cost allocated to each activity, and determine the cost drivers for each activity.

The supply chain represents a group of interconnected companies that participate in production, starting from the entry of raw materials from the supplier through the conversion processes and ending with providing the required final products to customers. The supply chain consists of suppliers, manufacturers, customers, distributors, and retailers, but the number of members of the supply chain varies from one chain to another; this depends on the nature of the products provided, conditions of demand, and the nature of competition (Al-HAshimi & Al-ardawe, 2020). The supply chain aims to develop performance and reduce costs through optimal exploitation of resources, providing materials at just in time and at just in price, reducing the amount of inventory to the lowest possible level, organizing and coordinating the flow of information and products between supply chain partners, fulfilling customer desires, and improving the competitive position of the supply chain (Fayard et al., 2012; Piontkowski et al., 2012). Supply chain cost management is based on the integration between the analysis of the inter-value chain and the analysis of internal cost drivers (by focusing on managing costs associated with activities that affect the facility and its partners (Fayard et al., 2012). According to Kulmala et al. (2002), supply chain cost management is a tool to achieve the lowest cost through cooperation and coordination among supply chain members to manage and reduce costs. He et al. (2022) and He and Yin (2020) indicated that supply chain cost management is an integrated set of cost management tools applied between the supplier and the buyer through coordinated actions to find ways to manage the cost through joint efforts. Value chain analysis (VCA) within the framework of the supply chain management model includes analyzing basic, supporting activities, and cost drivers (CDA), both the supplier's performance and the project's capabilities for each link in the chain from the customer's perspective, as each facility in the supply chain seeks to improve its cost position through coordination and joint improvement of value chain performance that achieves optimal exploitation. To the capabilities of the supply chain and thus reduce the final cost of the product and to provide distinct and different products, each facility seeks to reshape the value chain to create real or potential value for customers (Fearne et al., 2012; Taylor, 2005; Buadit et al., 2023; Fotiadis et al., 2022). The target costing method can be relied upon as a method for managing supply chain costs for purchasing activities from suppliers, product design activities, and selling activities to customers (Al-HAshimi & Al-ardawe, 2020; Sharaf-Addin, 2021; Čečević & Antić, 2021), based on the above, the following hypotheses were formulated;

H_1: *VCA of suppliers' activities affects the TC of supply chain*.
H_2: *VCA of product design activities affects the TC of supply chain.*
H_3: *VCA of customer activities affects the TC of supply chain.*
As for (Yang et al., 2021); (Yao & Hsu, 2018); (Ye et al., 2022), the Just-in-Time JIT method has multiple benefits for managing and reducing costs in supply chains; therefore, attention must be paid to the specific time method to achieve the goals of reducing the quantity, cost, and time of holding. The just-in-time production method represents a method of continuous improvement to achieve the immediate performance of the purchasing and production process while excluding sources of loss that occur during the production process and activities that do not add value to reduce cost, improve quality

and improve performance, which is subsequently reflected in the meeting needs and desires customers, accordingly, several studies have indicated the benefit of the activity-based costing (ABC) in the production stage, which contributes to excluding activities that do not add value to the product, and thus reducing the costs of the suppliers' activities, and production activity (Jalfan & Hasoon, 2023; Arts et al., 2023; Al-Mekhlafi & Eddin Othman, 2023; Naderi et al., 2024; Chirenda et al., 2021; Masthoff et al., 2021; Jarrar et al., 2021). The following hypotheses can be formed for the study:

H4: *VCA of production activities affects the JIT of supply chain.*
H5: *VCA of suppliers' activities affects the JIT of the supply chain.*
H6: *VCA of suppliers' activities affects ABC of the supply chain.*
H7: *VCA of production activities affects ABC of the supply chain*.

3. Methods

The study population comprises industrial companies in the Red Sea State in Sudan. The study sample includes managers, financial managers, accountants, and internal auditors in industrial companies. The study relied on a primary data collection source, the questionnaire, using a descriptive-analytical approach. 150 questionnaires were distributed to the sample members from which they were collected. 133, and 121 questionnaires were valid for analysis. It was analyzed with partial least squares (PLS).

4. Result & Discussion

4.1 Assessing Measurement Model

Convergent Validity: It measures the variance of latent variable loadings. It is calculated by average variance extracted (AVE) and indicator loadings (Hair Jr, Joseph F. et al., 2010; Fornell & Larcker, 1981; Chin, 1998). Factor loading must be no less than 70%, and (AVE) must be no less than 50% (Hair Jr, Joe et al., 2021) (Bagozzi & Yi, 1988); Table 2 and Fig. 1 show that the AVE > 50%, and factor loading is greater than 70%; this confirms high of convergent validity. Consistency Reliability: Consistency Reliability is used to measure the consistency of results across items in the same test (Hair Jr, Joseph F. et al., 2010) internal consistency validity is measured by Composite reliability (CR) and Cronbach's alpha (CA), and that CA must be no less than 86% (Cronbach, 1951; Hair Jr, Joe F. et al., 2017; Gefen et al., 2000) and CR must be no less than 70% (F. Hair Jr et al., 2014). Table 1 and Fig. 1 show that the CA and CR values of all latent variables (VCA and managing SC costs) and their loadings are greater than 70%; this confirms the high internal consistency reliability.

Table 1
Assessing Measurement Model

Variables	Dimensions	items	Loading	AVE	CA	CR
Managing Supply Chain (SC) Costs	Activity- Based Costing	ABC1	0.900	0.716	0.867	0.909
		ABC2	0.858			
		ABC3	0.866			
		ABC4	0.752			
	Just- in Time	JIT1	0.926	0.737	0.881	0.918
		JIT2	0.858			
		JIT3	0.871			
		JIT4	0.771			
	Target Costing	TC1	0.915	0.828	0.931	0.951
		TC2	0.916			
		TC3	0.913			
		TC4	0.897			
Value Chain Analysis (VCA)	VCA of Customer Activities	VCA1	0.893	0.727	0.878	0.914
		VCA2	0.918			
		VCA3	0.751			
		VCA4	0.840			
	VCA of Product Design Activities	PDA1	0.900	0.765	0.897	0.928
		PDA2	0.917			
		PDA3	0.894			
		PDA4	0.781			
	VCA of Suppliers' Activities	SA1	0.950	0.833	0.933	0.952
		SA2	0.899			
		SA3	0.876			
		SA4	0.925			
	VCA of production activities	PA1	0.936	0.813	0.924	0.946
		PA2	0.925			
		PA3	0.886			
		PA4	0.858			

After identifying validity and reliability, discriminant validity must be confirmed. Table 2 indicates the discriminant validity of the structure model, as it became clear that the correlation of the latent variable with itself is higher than its correlation with other variables, as explained by Bagozzi & Yi (1988) and Hair Jr (2006), therefore the discriminant validity was confirmed.

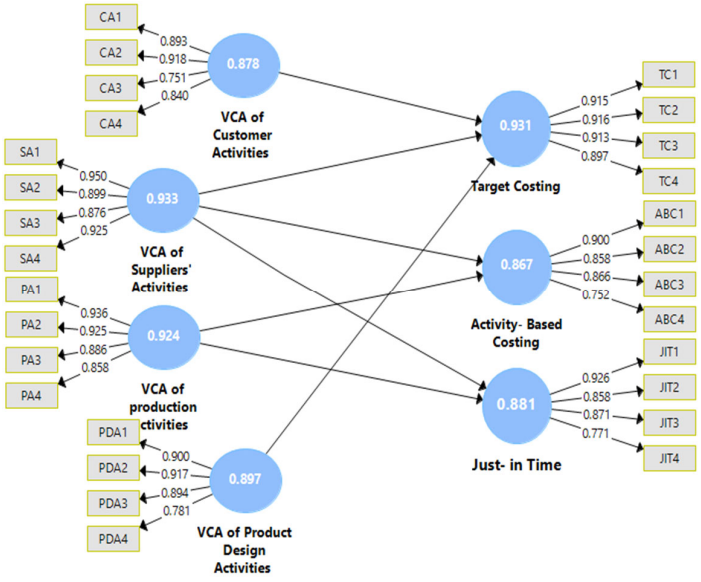

Fig. 1. Assessing Measurement Model

Table 2
Assessing Discriminant Validity

	Activity- Based Costing	Just- in Time	Target Costing	VCA of Customer Activities	VCA of Product Design Activities	VCA of Suppliers' Activities	VCA of production activities
Activity- Based Costing	0.846						
Just- in Time	0.293	0.858					
Target Costing	0.188	0.160	0.910				
VCA of Customer Activities	0.521	0.033	0.457	0.853			
VCA of Product Design Activities	0.404	0.019	0.489	0.804	0.874		
VCA of Suppliers' Activities	0.453	0.216	0.450	0.399	0.334	0.913	
VCA of production activities	-0.144	-0.001	0.389	0.132	0.238	0.205	0.902

4.2 Assessing structural model

There are several measures to ensure the suitability of the structural model in PLS-SEM, the most important of which are the coefficient of determination (R^2) and effect size (F^2). (R^2) It refers to the variance in the dependent variable explained by the independent variable (Elliott & Woodward, 2007; Hair Jr, Joseph F. et al., 2006, 2010) refers to the variance in the dependent variable that is explained by the independent variable. The model is considered substantial if the R^2 greater than 0.67, moderate if the R^2 between 0.33- 0.67, and weak if the R^2 between 0.19 - 0.33. (Chin, 1998) the model is considered acceptable if the R^2 value is greater than 0.10. Table 3 shows that the R^2 values are weak but acceptable (greater than 0.10), confirming the structural model's suitability. (F^2) determines the effect size of independent variables on the dependent variables (Hair et al., 2011). The model is considered to have a large effect if the F^2 above 0.35, a medium effect if the F^2 between 0.15- 0.35, a small effect if the F^2 between 0.02- 0.15, and no effect if the R^2 less than 0.02 (Chin, 1998). Table 3 shows the values of F^2, where we notice that the size effect of VCA of suppliers' activities on activity-based costing is medium. There is a small effect

of VCA product design activities on the target costing, a small effect of the VCA of suppliers' activities on just-in-time, a small effect of the VCA of suppliers' activities on target costing, a small effect of the VCA of production activities on activity-based costing, no effect of the VCA of customer activities on target costing, and no effect of VCA of production activities on just- in time,

Table 3
Assessing Structural Model

	R Square	F Square	Result
VCA of Customer Activities → Target Costing	0.333	0.002	No Effect
VCA of Product Design Activities → Target Costing	0.333	0.058	Small Effect
VCA of Suppliers' Activities → Activity-Based Costing	0.264	0.330	Medium Effect
VCA of Suppliers' Activities → Just-in-Time	0.049	0.051	Small Effect
VCA of Suppliers' Activities → Target Costing	0.333	0.123	Small Effect
VCA of Production Activities → Activity-Based Costing	0.264	0.079	Small Effect
VCA of Production Activities → Just-in-Time	0.049	0.002	No Effect

4.3 Hypothesis Testing

According to the data in Table 4 and Fig 2 extracted from the PLS-SEM, for testing the effects of the independent variables on the dependent variables, it was revealed that there is no effect at a 0.05 significance level of VCA of customer activities on target costing, as the effect rate reached 0.065, which indicates the rejected the H1. There is a small positive effect at a 0.01 significance level of VCA of product design activities on target costing, as the effect rate reached 0.332, which indicates the acceptance of the H2. There is a medium positive effect at a 0.001 significance level of VCA of suppliers' activities on Activity-Based Costing, as the effect rate reached 0.504, which indicates the acceptance of the H3. There is a small positive effect at a 0.05 significance level of VCA of suppliers' activities on Just-in-Time, as the effect rate reached 0.226, which indicates the acceptance of the H4; there is a small positive effect at a 0.001 significance level of VCA of suppliers' activities on target costing, as the effect rate reached 0.313, which indicates the acceptance of the H5. There is a small negative effect at a 0.01 significance level of VCA of production activities on activity-based costing, as the effect rate reached -0.247, which indicates the acceptance of the H6. There is no effect at a 0.01 significance level of VCA of production activities on Just-in-Time, as the effect rate reached -0.247, which indicates the acceptance of the H7.

Table 4
Research Hypotheses Test

	St. Beta	T Value	P Values	Result
VCA of Customer Activities → Target Costing	0.065	0.579	0.563	Rejected
VCA of Product Design Activities → Target Costing	0.332	3.067	0.002	Accepted**
VCA of Suppliers' Activities → Activity-Based Costing	0.504	7.096	0.000	Accepted***
VCA of Suppliers' Activities → Just-in-Time	0.226	2.232	0.026	Accepted*
VCA of Suppliers' Activities → Target Costing	0.313	4.038	0.000	Accepted***
VCA of production activities → Activity-Based Costing	-0.247	2.840	0.005	Accepted**
VCA of production activities → Just- in Time	-0.047	0.360	0.719	Rejected

Significant at P***<0.001, P**<0.01, p*<0.05

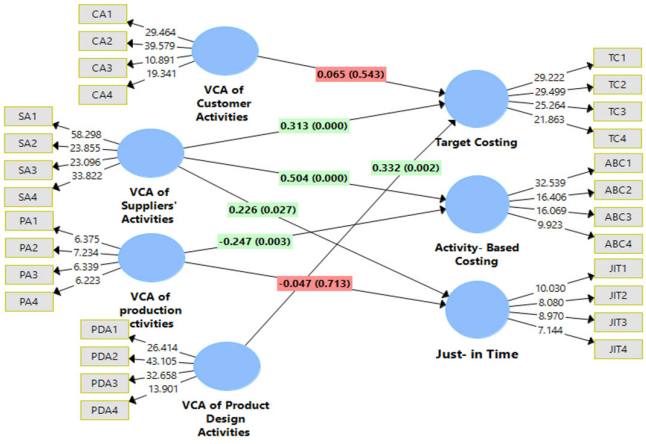

Fig. 2. PLS-Structural Equation Model

5. Conclusion

Accounting studies related to value chain analysis and supply chain cost management focused on analyzing the internal activities of the value chain represented by product design and production activities. Therefore, the focus was on cost management methods for internal operations. To avoid this deficiency, the researcher tries to focus on the comprehensive

analysis of internal and external activities of the value chain. A framework has been built to analyze value chain activities in managing and reducing supply chain costs in industrial companies in the Red Sea State in Sudan, as it is no longer sufficient to manage the cost of activities within the boundaries of the facility to support its competitive position, which requires that the cost management of activities be extended to include the external parties associated with them. Therefore, it must manage the relationships between the company and its suppliers and customers in light of the information resulting from the value chain and analyze the value chains of its suppliers and customers. From the results of the study, it was found that some value chain activities positively impact managing and reducing supply chain costs, while others negatively impact managing and reducing supply chain costs. Among them, it does not affect the management or reduction of supply chain costs.

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References

Agndal, H., & Nilsson, U. (2010). Different open book accounting practices for different purchasing strategies. *Management Accounting Research, 21*(3), 147-166, http://dx.doi.org/10.1016/j.mar.2010.04.001

Al-HAshimi, A., & Al-ardawe, A. (2020). Implementing Target Costing within the Supply Chain to Lean Costs: Case Study in Najaf Cement Factory. *Journal of Xi'an University of Architecture & Technology,* , 1308-1320.

Al-Mekhlafi, M. A., & Eddin Othman, M. S. (2023). The role of activity based costing system in cost control in saudi manufacturing firms. *International Journal for Quality Research, 17*(2), http://dx.doi.org/10.24874/IJQR17.02-19

Arora, A., Arora, A., Anyu, J., & McIntyre, J. R. (2021). Global value chains' disaggregation through supply chain collaboration, market turbulence, and performance outcomes. *Sustainability, 13*(8), 4151, http://dx.doi.org/10.3390/su13084151

Arts, T. M., Ginting, C. N., & Ginting, R. (2023). Activity Based Costing Method As The Basis For Determining Service Rates In The Radiology Unit At Royal Prima Hospital Medan. *International Journal of Health and Pharmaceutical (IJHP), 3*(4), 662-667, https://doi.org/10.51601/ijhp.v3i4.218

Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science, 16*, 74-94, http://dx.doi.org/10.1007/BF02723327

Boute, R., Bruggeman, W., & Vereecke, A. (2014). Cost management in the supply chain: An integrated approach–Part 1. *Cost Management,* (November/December), 11-15.

Buadit, T., Ussawarujikulchai, A., Suchiva, K., Papong, S., & Rattanapan, C. (2023). Green productivity and value chain analysis to enhance sustainability throughout the passenger car tire supply chain in Thailand. *Journal of Open Innovation: Technology, Market, and Complexity, 9*(3), 100108, http://dx.doi.org/10.1016/j.joitmc.2023.100108

Čečević, B. N., & Antić, L. (2021). TARGET COSTING SUITABILITY FOR IMPROVEMENTS OF LEAN SUPPLY CHAINS. *Facta Universitatis, Series: Economics and Organization,* , 203-216, https://doi.org/10.22190/FUEO210123014N

Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern Methods for Business Research, 295*(2), 295-336.

Chirenda, J., Nhlema Simwaka, B., Sandy, C., Bodnar, K., Corbin, S., Desai, P., Mapako, T., Shamu, S., Timire, C., & Antonio, E. (2021). A feasibility study using time-driven activity-based costing as a management tool for provider cost estimation: lessons from the national TB control program in Zimbabwe in 2018. *BMC Health Services Research, 21*, 1-16, https://doi.org/10.1186/s12913-021-06212-x

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16*(3), 297-334, http://dx.doi.org/10.1007/BF02310555

Dekker, H. C. (2003). Value chain analysis in interfirm relationships: a field study. *Management Accounting Research, 14*(1), 1-23, https://doi.org/10.1016/S1044-5005(02)00067-7

Donovan, J., Franzel, S., Cunha, M., Gyau, A., & Mithöfer, D. (2015). Guides for value chain development: a comparative review. *Journal of Agribusiness in Developing and Emerging Economies, 5*(1), 2-23, http://dx.doi.org/10.2499/9780896292130_01

Dubey, S., Singh, R., Singh, S. P., Mishra, A., & Singh, N. V. (2020). A brief study of value chain and supply chain. *Agriculture Development and Economic Transformation in Global Scenario,* , 177-183.

Elliott, A. C., & Woodward, W. A. (2007). *Statistical analysis quick reference guidebook: With SPSS examples*. Sage.

F. Hair Jr, J., Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research. *European Business Review, 26*(2), 106-121, https://doi.org/10.1108/EBR-10-2013-0128

Fayard, D., Lee, L. S., Leitch, R. A., & Kettinger, W. J. (2012). Effect of internal cost management, information systems integration, and absorptive capacity on inter-organizational cost management in supply chains. *Accounting, Organizations and Society, 37*(3), 168-187, https://doi.org/10.1016/j.aos.2012.02.001

Fearne, A., Garcia Martinez, M., & Dent, B. (2012). Dimensions of sustainable value chains: implications for value chain analysis. *Supply Chain Management: An International Journal, 17*(6), 575-581, https://doi.org/10.1108/13598541211269193

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39-50, https://doi.org/10.2307/3151312

Fotiadis, T., Folinas, D., Vasileiou, K., & Konstantoglou, A. (2022). *Marketing and the customer value chain: integrating marketing and supply chain management*. Routledge.

Gefen, D., Straub, D., & Boudreau, M. (2000). Structural equation modeling and regression: Guidelines for research practice. *Communications of the Association for Information Systems, 4*(1), 7, https://doi.org/10.17705/1CAIS.00407

Hair Jr, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: updated guidelines on which method to use. *International Journal of Multivariate Data Analysis, 1*(2), 107-123, https://doi.org/10.1504/IJMDA.2017.087624

Hair Jr, J., Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage publications.

Hair Jr, J. F. (2006). Successful strategies for teaching multivariate statistics. Paper presented at the *Proceedings of the 7th International Conference On,* 1-5.

Hair Jr, J. F., Babin, B. J., & Anderson, R. E. (2010). A global p-erspect-ivie. *Kennesaw: Kennesaw State University,*

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice, 19*(2), 139-152, https://doi.org/10.2753/MTP1069-6679190202

He, Y., Ray, S., & Yin, S. (2022). Retail power in distribution channels: A double-edged sword for upstream suppliers. *Production and Operations Management, 31*(6), 2681-2694, https://doi.org/10.1111/poms.13712

He, Y., & Yin, S. (2020). Cost analysis in global supply chains. *Operations Research Letters, 48*(5), 658-665, https://doi.org/10.1016/j.orl.2020.08.006

Holweg, M., & Helo, P. (2013). Defining value chain architectures: Linking strategic value creation to operational supply chain design. *International Journal of Production Economics, 147*, 230-238, https://doi.org/10.1016/j.ijpe.2013.06.015

Horngren, C. T., Datar, S. M., & Rajan, M. V. (2012). Cost Accounting A Managerial Emphasis, Global Edition. *Essex, UK: Pearson Education Limited,*

Jalfan, A. R., & Hasoon, A. M. (2023). Cost Reduction Using Activity-Based Costing (ABC) Technique (An Empirical Study In Al-Raklim Factory/Babel Tires Factory). *World Economics and Finance Bulletin, 18*, 122-132.

Jarrar, Q., Belkadi, F., & Bernard, A. (2021). An Activity-Based Costing Model for Additive Manufacturing. Paper presented at the *IFIP International Conference on Product Lifecycle Management,* 492-507, https://dx.doi.org/10.1007/978-3-030-94335-6_35

Koc, T., & Bozdag, E. (2017). Measuring the degree of novelty of innovation based on Porter's value chain approach. *European Journal of Operational Research, 257*(2), 559-567, https://doi.org/10.1016/j.ejor.2016.07.049

Kulmala, H. I., Paranko, J., & Uusi-Rauva, E. (2002). The role of cost management in network relationships. *International Journal of Production Economics, 79*(1), 33-43, https://doi.org/10.1016/S0925-5273(00)00061-X

Linkov, I., Carluccio, S., Pritchard, O., Ní Bhreasail, Á, Galaitsi, S., Sarkis, J., & Keisler, J. M. (2020). The case for value chain resilience. *Management Research Review, 43*(12), https://doi.org/10.1108/MRR-08-2019-0353

Masthoff, M., Schneider, K. N., Schindler, P., Heindel, W., Köhler, M., Schlüchtermann, J., & Wildgruber, M. (2021). Value improvement by assessing IR care via time-driven activity-based costing. *Journal of Vascular and Interventional Radiology, 32*(2), 262-269, https://doi.org/10.1016/j.jvir.2020.09.017

Naderi, M., Nazari, A., Shafaat, A., & Abrishami, S. (2024). Enhancing accuracy in construction overhead cost estimation: a novel integration of activity-based costing and building information modelling. *Smart and Sustainable Built Environment,*

Piontkowski, J. O., Hoffjan, A., Lachmann, M., & Schuchardt, L. D. (2012). Determinants of the Implementation and Long-Term Use of Interorganizational Cost Management Tools–An Experimental Investigation. *Performance Measurement and Management Control: Global Issues, 25*, 223-246. http://dx.doi.org/10.1108/S1479-3512(2012)0000025012

Sharaf-Addin, H. H. H. (2021). Implementation of target costing in the Saudi Arabian food and beverages industry: the mediating role of supply chain management. *Management & Accounting Review (MAR), 20*(2), 85-115, http://dx.doi.org/10.24191/MAR.V20i02-04

Taylor, D. H. (2005). Value chain analysis: an approach to supply chain improvement in agri-food chains. *International Journal of Physical Distribution & Logistics Management, 35*(10), 744-761, https://doi.org/10.1108/09600030510634599

Yang, J., Xie, H., Yu, G., & Liu, M. (2021). Achieving a just–in–time supply chain: The role of supply chain intelligence. *International Journal of Production Economics, 231*, 107878, https://doi.org/10.1016/j.ijpe.2020.107878

Yao, M., & Hsu, T. (2018). An efficient search algorithm for obtaining the optimal replenishment strategies in assembly-type just-in-time supply chain systems. *Journal of Industrial and Production Engineering, 35*(2), 118-128, https://doi.org/10.1080/21681015.2017.1422041

Ye, Y., Suleiman, M. A., & Huo, B. (2022). Impact of just-in-time (JIT) on supply chain disruption risk: the moderating role of supply chain centralization. *Industrial Management & Data Systems, 122*(7), 1665-1685, https://doi.org/10.1108/IMDS-09-2021-0552

Zbib, I. J., Rakotobe-Joel, T., & Rigoli, R. (2003). Target costing: the key to supply chain excellence. *International Business & Economics Research Journal (IBER), 2*(11), https://doi.org/10.19030/iber.v2i11.3856