

The Impact of Efficient Supply Chain Practices on the Performance of Women in the Construction Industry

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ABSTRACT

The achievement of the construction sector is contingent upon the active participation of women as well as the implementation of efficient supply chain practices. This particular facet necessitates the focus and consideration of modern scholarly research and policymakers. Therefore, this research aims to analyze the effects of supply chain (SC) practices, including information exchange, customer interactions, and supplier strategic partnerships, on supply chain integration within the construction industry in Iraq. This study also examines the mediating function of supply chain integration in the relationship between information sharing, customer relationships, supplier strategic partnerships, and women's performance within the construction industry in Iraq. Primary data was collected from employees in the construction business in Iraq who are involved in supply chain activities. The research also utilized the Structural Equation Modelling (SEM) technique known as Partial Least Squares (PLS) to examine the associations between the variables. The results of the study demonstrate that there is a favorable correlation between information exchange, customer interactions, and supplier strategic alliances with supply chain integration in the construction sector in Iraq. The results of the study also revealed that the integration of the supply chain significantly acts as a mediator between information exchange, customer relationships, supplier strategic partnerships, and the performance of women in the construction industry in Iraq. The study provides guidance to policymakers in formulating policies aimed at enhancing women's performance through the implementation of efficient supply chain practices.

KEYWORDS: Information Sharing, Customer Relationships, Supplier Strategic Partnership, Supply Chain Practices, SC Integration, Women Performance, Construction Industry.

INTRODUCTION

The construction industry plays a pivotal role in fostering economic growth and enhancing the overall standard of living within a nation. This particular industry plays a critical role in its interaction with different other sectors since it generates multiplier effects through both forward and backward linkages. It is widely recognized that building projects are inherently complicated and encompass a broad range of activities. The construction industry holds considerable importance in the advancement of nations, and this holds true for the socioeconomic landscape of Iraq as well (Lima et al., 2021). Due to its strategic location and long history in the Middle East, Iraq's construction industry is a vital component of the nation's infrastructure, economic growth, and urban growth. However, this industry has also encountered numerous obstacles due to political instability, decades of war, regional issues, and disparities (Mason, 2017). Iraq has been grappling with significant upheavals, with a primary emphasis on the rehabilitation and reconstruction of its infrastructure subsequent to a prolonged period of devastating battles. The construction sector in Iraq has primarily prioritised the advancement of infrastructure, encompassing various elements such as bridges, airports, sanitary facilities, and public works projects. Iraq has seen substantial devastation as a result of prolonged periods of warfare, leading to a pressing need for initiatives focused on rehabilitation and reconstruction. The current focus of the Iraqi government is on allocating resources toward large-scale projects aimed at effectively addressing the infrastructural requirements of the nation. International investment and aid have served as significant sources of support for many initiatives (Buniya et al., 2021). The security situation is widely acknowledged as a significant factor impeding the growth of the building industry. The presence of persistent instability, security vulnerabilities, and conflicts has had a deterrent effect on both domestic and foreign investors, resulting in a deceleration of progress across multiple projects. However, the Iraqi government is implementing a range of measures aimed at improving the legislative framework governing the construction industry, with the objective of facilitating project execution and enticing international capital inflows (Neamat & Yitmen, 2017). Despite a rise in labor demand, the industry in Iraq continues to grapple with shortages of competent personnel, resulting in escalated project prices and delays.

Information sharing relates to the transfer of knowledge, insights, and data amongst various parties operating within a certain industry. The exchange of information within the construction sector assumes a crucial role in facilitating innovation and advancing industrial development. The act of sharing information fosters collaborative efforts among many departments, companies, and individuals. The practice enables companies to consolidate their expertise, information, and resources, hence facilitating the advancement of novel solutions and ideas (Zaheer & Trkman, 2017). The exchange of information regarding client preferences, market trends, and competitor strategies allows businesses to remain knowledgeable and up-to-date with the dynamics of the industry. The acquisition of this information holds significant importance in order to effectively respond to the evolving market conditions and make informed decisions based on data analysis. In sectors characterised by intricate supply chains, the exchange of information among manufacturers, suppliers, and distributors plays a crucial role in promoting transparency in logistics operations and reducing lead times (Gunasekaran et al., 2017). It facilitates the identification

of possible bottlenecks and enables the optimization of processes. Customer relationship management (CRM) is the set of rules, technology, practices, and strategies employed by businesses to cultivate and manage their interactions with customers across the entirety of the customer lifecycle. The primary objective of customer relationship management (CRM) is to enhance customer loyalty, satisfaction, and retention through the comprehension of consumer preferences and wants, and the provision of tailored and individualized experiences (Ferrer-Estévez & Chalmeta, 2023). Customer Relationship Management (CRM) systems are designed to effectively manage and organize many types of data, such as purchase history, contact details, preferences, and interactions. This data facilitates firms in acquiring insights into customer demand and subsequently tailoring their services to meet those demands. Customer Relationship Management (CRM) facilitates organizations in engaging customers through many channels, including traditional media, online chat platforms, and social media networks. The act of actively interacting with clients in a manner that is pertinent and prompt serves to enhance trust and foster stronger connections (Meena & Sahu, 2021). CRM is a valuable tool that aids businesses in delivering personalized experiences to their clients. By comprehending and managing past contacts and customer preferences, firms are able to customize their product recommendations, messaging, and service offerings to cater to individual wants. CRM systems play a crucial role in supporting sales teams by facilitating the tracking of sales, identification of opportunities, management of sales pipelines, and identification of cross-selling and upselling prospects. These functionalities ultimately contribute to the improvement of customer satisfaction and the streamlining of the sales process. CRM plays an important part in facilitating effective customer assistance through the management and recording of client complaints, issues, and queries. The implementation of efficient and timely resolutions to problems significantly contributes to the cultivation of client loyalty (Rahimi & Kozak, 2017). CRM also facilitates the acquisition of client feedback, thereby aiding firms in comprehending consumer satisfaction levels and identifying areas for development. A supplier strategic relationship refers to a durable and cooperative association between an entity and its suppliers that extends beyond the conventional buyer-supplier dynamic. In the context of this connection, it is possible for both sides to engage in collaboration and cooperation in order to acquire creative values, get a competitive edge, and achieve shared objectives. The establishment and growth of this partnership are contingent upon the presence of shared goals, trust, and a commitment to mutual success (Kim, Chiou, & Calantone, 2018). Both suppliers and companies have the potential to establish aligned aims and aspirations in order to cultivate relationships that are mutually advantageous and durable. The achievement of a successful partnership necessitates the presence of effective collaboration and communication. Regular collaborative meetings and frank talks have the potential to foster robust working partnerships (Kim & Chai, 2017).

Throughout history, women have encountered marginalization within the construction sector, particularly in positions of leadership and technical expertise. The limited representation of women in the construction sector can be attributed to the influence of societal conventions, gender bias, and stereotypes. Females are highly represented in non-technical positions within the construction sector, namely in areas such as human resources, project management, and administration. These roles require competencies in planning, organizational skills, and communication, which are areas where women demonstrate exceptional proficiency (Afolabi et al., 2019). The underrepresentation of women in engineering and technical positions has prompted efforts to encourage their participation in professions such as architecture, project engineering, and civil engineering. Women in the

construction industry have exhibited an impressive aptitude for meticulousness, effective communication, and adept managerial skills. Moreover, they have shown their ability to cultivate robust connections with both clients and stakeholders (Sunindijo & Kamardeen, 2017). However, women in this particular sector encounter additional challenges, including but not limited to disparities in remuneration, limited prospects for career progression, and insufficient backing and guidance. The industry exhibits a cultural norm of male dominance, resulting in the creation of numerous obstacles that prevent women from accessing successful prospects. Efforts focused on eliminating gender stereotypes and promoting diversity have been undertaken to reshape societal opinions regarding the involvement of women in the construction industry. Many firms are currently recognizing the significance of gender diversity in fostering productivity and innovation. The main objective of this study is to establish a comprehensive framework for effectively addressing and surmounting the aforementioned issues. This study examines the influence of information exchange, customer relationships, supplier strategic partnerships, and supplier integration on the performance of women in the construction sector. Rotimi et al. (2023) have undertaken research on the performance of women in the construction business.

This paper is structured into the following sections, with the first section serving as an introduction. The following portion encompasses a comprehensive assessment of relevant research papers, while the next section is dedicated to the meticulous collection of data and the rigorous application of technique. The fourth section of the paper covers a comprehensive analysis of the findings, followed by an examination of the potential implications and limitations of the study.

LITERATURE REVIEW

Some construction organizations have implemented initiatives aimed at empowering and providing assistance to women within the profession. These initiatives include leadership development, mentoring programs, and tactics that aim to promote and foster work-life balance. There have been many instances of women making significant strides in the construction business, assuming positions of project management and leadership within this field (Ghanbaripour et al., 2023). Past study has demonstrated that the inclusion of gender-diverse teams in the construction industry can result in enhanced company performance and more effective decision-making. It is important to recognize that promoting gender diversity and fostering the performance of women may contribute to the advancement and development of industries across many sectors. This research examines many elements that have the potential to improve the overall performance of women in the construction business.

The act of sharing information within a supply chain integration context promotes teamwork, facilitates decision-making processes, and enhances overall operational efficiency. The sharing of pertinent insights and data among organizations might potentially yield a multitude of advantages. The act of exchanging information enables organizations to have immediate access to data regarding production resources, inventory quantities, and demand projections throughout the entirety of the supply chain. The implementation of this transparency initiative would facilitate proactive responses and informed decision-making among all parties (Wong, Wong, & Boon-itt, 2020). By having access to information, different stakeholders are able to engage in more effective collaboration and participation. The coordination of schedules, alignment of activities, and optimization of inventory management among manufacturers,

suppliers, retailers, and distributors enables the efficient handling of client demands. The minimization of lead times in the supply chain can be achieved through the sharing of logistical and manufacturing data. The utilization of real-time information has the potential to optimize operational processes, ensure adherence to delivery timelines, and reduce order-to-delivery durations. The utilization of real-time data pertaining to stock levels, needs, and sales has the potential to enhance inventory management capabilities within organizations (Munir et al., 2020). Organizations have the ability to mitigate the financial burden of excessive carrying and inventory costs, while simultaneously minimizing shortages and preventing stockouts. When stakeholders, enterprises, and shareholders together exchange information regarding past sales, market trends, and client orders, the process of forecasting becomes more precise. This enhanced accuracy facilitates the alignment of inventory and production levels with the specific demands of the customer (Fatorachian & Kazemi, 2021). Therefore, the act of exchanging information within the context of supply chain integration encompasses various advantageous elements that enhance the responsiveness, efficiency, and customer-centricity of the supply chain. This discussion leads to the following hypothesis:

Hypothesis 1: *The positive impact of information sharing on supply chain integration.*

The establishment and maintenance of strong customer relationships are crucial factors that contribute to the promotion of supply chain integration and the improvement of the overall effectiveness and efficiency of the supply chain. When an organization places a high emphasis on cultivating robust client relationships within its supply chain strategy, it results in a multitude of advantages. Customer relationship management (CRM) centers around catering to the demands, anticipations, and inclinations of customers. The methodology employed by the individual in question facilitates the coordination of supply chain operations in order to efficiently fulfill customer requirements (Alshurideh, Alsharari, & Al Kurdi, 2019). Establishing a strong connection with clients can facilitate more accurate demand forecasting. The comprehension of customer behavior and needs aids companies in effectively strategizing inventory levels and production plans, hence mitigating the potential risks associated with excessive inventory and stock shortages. Robust customer relationships foster a climate of collaboration between customers and organizations. The collaborative sharing and strategic planning of sales and demand data facilitate effective coordination between parties involved, allowing for the optimization of distribution and production methods (Tiwari, 2021). When organizations possess a comprehensive comprehension of market demand patterns, they are able to optimize their inventory management strategies in alignment with the demand. Consequently, this optimization results in the reduction of carrying costs and the improvement of supply chain efficiency. Effective customer relationship management involves the implementation of accurate and timely communication strategies with customers. This facilitates the management of client demand transformation within the supply chain and contributes to the enhancement of customer service. Companies that possess robust customer relationships are capable of effectively overseeing order fulfillment operations, hence improving on-time delivery performance and reducing order processing time (Wong et al., 2020). Satisfied consumers have the potential to exhibit brand loyalty, while good customers can contribute to repeated commercial transactions and improve client retention. This discussion leads to the following hypothesis:

Hypothesis 2: *The positive impact of customer relationships on supply chain integration.*

The establishment of strategic partnerships with suppliers plays a crucial role in facilitating the integration of the supply chain, hence promoting collaboration, efficiency, and overall performance. When organizations cultivate strategic relationships with their suppliers, it promotes the alignment of aims and facilitates a higher degree of coordination. The establishment of strategic partnerships facilitates regular contact between organizations and their suppliers, thereby enhancing the transparency of information sharing. This, in turn, promotes improved collaboration and reduces the occurrence of misalignment (Lo et al., 2018). Suppliers engaged in strategic relationships demonstrate a prioritization of the goals and expectations of the organization. This strategic approach enhances reliability in terms of product quality, responsiveness, and adherence to delivery schedules, thereby aligning with the evolving trends of the market. The inclusion of suppliers inside the supply chain facilitates a more streamlined procedure, resulting in enhanced synchronization and reduced lead time in distribution and production operations. Strategic alliances contribute to the enhanced responsiveness and adaptability of supply chains in response to fluctuations in supply, market dynamics, and consumer demand (Chaudhuri, Boer, & Taran, 2018). In order to effectively navigate uncertain fluctuations, it is imperative for suppliers to demonstrate adaptability and engage in collaborative efforts with enterprises to identify and implement viable solutions. Strategic partnerships with suppliers facilitate the effective management of potential risks and generate a comprehensive comprehension of operational processes. This heightened awareness subsequently facilitates the development of contingency plans and methods for mitigating risks. Being aware of shared aims and goals promotes dedication and teamwork, ultimately resulting in mutual success. When suppliers are regarded as partners, they become more committed to the organization's achievements. Strategic alliances have the potential to foster enduring commitments, enhance predictability, and promote stability within the supply chain. This discussion leads to the following hypothesis:

Hypothesis 3: *The positive impact of Supplier strategic partnership on supply chain integration.*

The supply chain serves as a mediating component in facilitating the relationship between women's performance and the sharing of information. The presence of effective information exchange throughout the supply chain facilitates improved integration of the supply chain, hence significantly impacting the performance of women within the organization. When the sharing of real-time data is efficiently implemented among employees within the supply chain, it enables them to acquire pertinent knowledge and valuable insights, hence facilitating the development of improved decision-making processes and the efficient execution of activities. This led to enhanced staff performance (Vanpoucke, Vereecke, & Muylle, 2017). The interaction between entities within a supply chain is influenced by the level of supply chain integration. When the supply chain is effectively integrated, it facilitates close collaboration among the businesses and enables them to share information, hence yielding various benefits (Panahifar et al., 2018). Therefore, supply chain integration serves as a beneficial mediator, facilitating the exchange of information, which is a crucial factor in the achievement of a contemporary organization. Consequently, this leads to an enhancement in the performance of women. This discussion lead to the following hypothesis:

Hypothesis 4: *The mediating role of supply chain integration between information sharing and women performance.*

The mediating function of supply chain integration in the relationship between customer relationship and employee performance. Specifically, it examines how the level of integration within an organization's supply chain can influence the association between employee performance and customer relationships, with a particular focus on the performance of women employees. Establishing customer relationships can lead to favorable outcomes for people within organizations. Customers are more likely to provide positive feedback to a firm when they experience satisfaction. This not only enhances the motivation of employees but also contributes to an improvement in their performance. Moreover, promoting pleasant client interactions can contribute to the attainment of employees' achievements, so enhancing their overall performance (Zhu, Krikke, & Caniëls, 2018). Strong customer connections have the potential to facilitate enhanced collaboration and communication between customers and organizations. This, in turn, can support the integration of the supply chain, as customers may offer valuable insights that enable organizations to align their distribution and manufacturing processes more effectively. Supply chain integration has the potential to decrease inefficiencies and enhance internal procedures, hence facilitating personnel in the execution of their jobs. Enhanced coordination, optimized operational processes, and prompt access to information from suppliers have the potential to positively impact employee performance (De Vass, Shee, & Miah, 2018). Therefore, the mediating effect of supply chain integration is strengthened when there is an improvement in customer relations, leading to enhanced employee performance at the supply chain integration level. Organizations have the capacity to establish an optimized and harmonious corporate environment, hence resulting in enhanced overall performance. This discussion lead to the following hypothesis:

Hypothesis 5: The mediating role of supply chain integration between customer relationships and women performance.

The integration of supply chains is a crucial factor in the achievement of organizational success, particularly in the improvement of employee performance and the development of strategic connections with suppliers. The process of integrating the supply chain entails the synchronization of systems, information flows, and processes between the organization and its strategic suppliers. The integration of communication and collaboration systems resulted in improved transparency and efficiency in interactions, facilitating rapid responses to market developments. The establishment of mutually beneficial and cooperative partnerships fosters improved outcomes. The integration of supply chains facilitates the efficient movement of information, services, and goods from suppliers to customers, resulting in reduced inventory costs, shorter lead times, and optimized logistics and transportation (Delic, Eysers, & Mikulic, 2019). When suppliers are in alignment with the aims and objectives, they will contribute to the desired outcomes by providing assistance in dependable and timely deliveries, offering responsive support, and delivering high-quality products. In a supply chain that is well-linked, the performances of women can be precisely ascribed and assessed based on specific actions. This capability empowers organizations to devise appropriate and equitable performance incentives for both strategic suppliers and employees. The alignment of incentives with the success of the supply chain has the potential to foster shared commitment and drive improvements toward achieving performance targets (Scuotto et al., 2017). Therefore, the integration of the supply chain serves as a beneficial mediator between strategic interactions with suppliers and the performance of women, thereby playing a crucial role in achieving lasting success and establishing a competitive edge. This discussion leads to the following hypothesis:

Hypothesis 6: The mediating role of supply chain integration between strategic supplier relationships and women's performance.

RESEARCH METHODS

This article examines the effects of information sharing, customer relationships, and supplier strategic partnerships on supply chain integration. Additionally, it explores the mediating role of supply chain integration in the relationship between information sharing, customer relationships, supplier strategic partnerships, and women's performance in the construction industry in Iraq. Primary data was collected from employees in the construction business in Iraq who are involved in supply chain activities. The constructs in this study were assessed using questions derived from previous research. For instance, the construct of information sharing was measured using a set of five items adapted from Colicchia, Creazza, Noè, and Strozzi's (2019) study. Similarly, the construct of customer relationship was assessed using a set of five questions adapted from Astuty, Zufriзал, Pasaribu, and Rahayu's (2021) research. The construct of supplier strategic partnership was measured using a set of five items adapted from Mehdikhani and Valmohammadi's (2019) study. Additionally, the construct of supply chain integration was assessed using a set of five questions derived from Novais, Maqueira, and Ortiz-Bas's (2019) research. Lastly, the construct of women's performance was measured using a set of five items adapted from McNulty et al.'s (2020) study.

The employees who are involved in supply chain operations within the construction business are considered the responders. The surveys were sent to the chosen participants through in-person visits conducted within the construction business. The researcher distributed a total of 534 surveys, however, only 292 responses were deemed authentic, resulting in a response rate of roughly 54.38%. Furthermore, the present study employed the structural equation modeling technique known as smart PLS to examine the associations between the variables. The smart PLS is a highly efficient instrument that is specifically designed to handle primary data. It is particularly adept at generating optimal outcomes when applied to extensive datasets and intricate frameworks (Hair Jr, Howard, & Nitzl, 2020). The study included three predictors, namely information sharing (IS), customer relationships (CRL), and supplier strategic partnership (SSP). In addition, the research also incorporated a mediating variable referred to as SC integration (SCI) and a dependent variable known as women's performance (WPR). These variables are given in Figure 1.

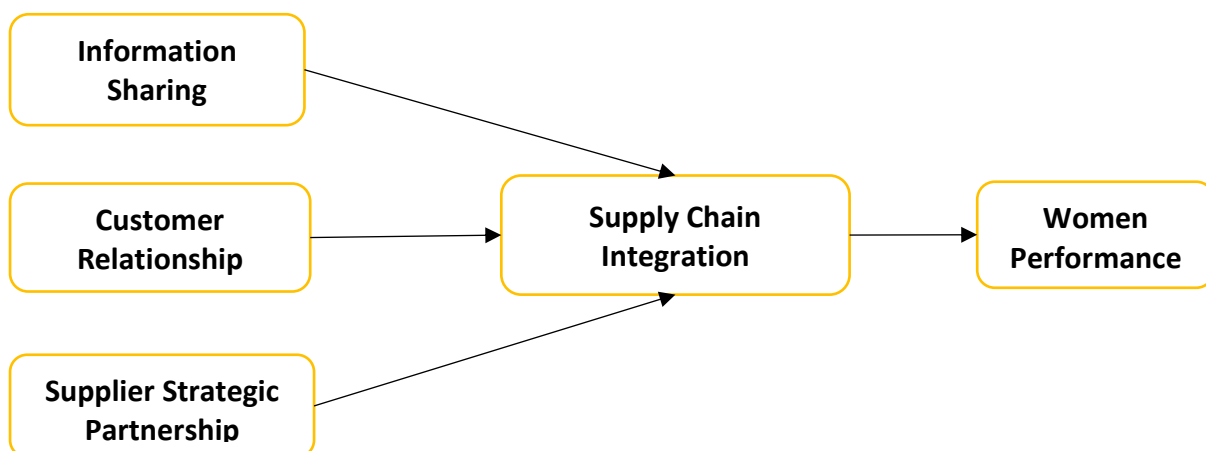


Figure 1: Theoretical Model.

RESEARCH FINDINGS

The study examines the convergent validity by assessing the correlation among the items. The assessment of dependability is conducted through the utilization of composite reliability (CR) and Alpha. The obtained values for both measures surpass the threshold of 0.70. Also, the evaluation also includes the utilization of average variance extracted (AVE) as well as factor loadings. It is important to note that both criteria exhibit values beyond 0.50. The results of this study indicated a strong positive association among the variables. These figures are mentioned in Table 1.

Table 1: Convergent Validity.

Constructs	Items	Loadings	Alpha	CR	AVE
Customer Relationship	CRL1	0.848	0.756	0.859	0.671
	CRL2	0.834			
	CRL5	0.774			
Information Sharing	IS1	0.750	0.798	0.868	0.623
	IS3	0.755			
	IS4	0.831			
	IS6	0.817			
Supply Chain Integration	SCI1	0.846	0.878	0.908	0.626
	SCI2	0.906			
	SCI3	0.710			
	SCI4	0.854			
	SCI5	0.658			
	SCI6	0.743			
Supplier Strategic Partnership	SSP1	0.844	0.897	0.929	0.765
	SSP2	0.882			
	SSP3	0.911			
	SSP4	0.859			
Women Performance	WPR1	0.844	0.897	0.754	0.676
	WPR3	0.911			
	WPR4	0.882			
	WPR5	0.859			

The present study analyses the discriminant validity of the variables, which refers to the extent of correlation between them. The evaluation of the association between variables is conducted through the utilisation of Fornell Larcker and cross-loadings techniques. In this analysis, it is observed that the magnitudes of the values indicating the relationship of the variable in question with itself are greater than those indicating its association with other variables. The results of this study suggest a weak association between the factors. These figures are mentioned in Table 2 and Table 3.

Table 2: Fornell Larcker.

	CRL	IS	SCI	SSP	WPR
CRL	0.819				
IS	0.686	0.789			
SCI	0.529	0.647	0.791		
SSP	0.481	0.630	0.603	0.874	
WPR	0.481	0.630	0.603	0.435	0.874

Table 3: Cross-loadings.

	CRL	IS	SCI	SSP	WPR
CRL1	0.848	0.601	0.473	0.433	0.433
CRL2	0.834	0.542	0.361	0.308	0.308
CRL5	0.774	0.535	0.448	0.420	0.420
IS1	0.588	0.750	0.529	0.560	0.560
IS3	0.701	0.755	0.432	0.532	0.532
IS4	0.469	0.831	0.539	0.438	0.438
IS6	0.442	0.817	0.531	0.467	0.467
SCI1	0.357	0.487	0.846	0.501	0.501
SCI2	0.456	0.581	0.906	0.584	0.584
SCI3	0.410	0.405	0.710	0.339	0.339
SCI4	0.414	0.520	0.854	0.501	0.501
SCI5	0.387	0.453	0.658	0.373	0.373
SCI6	0.483	0.592	0.743	0.508	0.508
SSP1	0.348	0.471	0.496	0.844	0.453
SSP2	0.406	0.596	0.537	0.882	0.674
SSP3	0.428	0.564	0.546	0.911	0.541
SSP4	0.496	0.568	0.529	0.859	0.645
WPR1	0.348	0.471	0.496	0.844	0.844
WPR3	0.428	0.564	0.546	0.911	0.911
WPR4	0.406	0.596	0.537	0.882	0.882
WPR5	0.496	0.568	0.529	0.859	0.859

The study also examines the discriminant validity, which refers to the correlation between variables. The Heterotrait Monotrait (HTMT) ratio is employed for verification purposes, with values below 0.85 being considered acceptable. The results of this study suggest a weak association between the factors. These figures are mentioned in Table 4.

Table 4: Heterotrait Monotrait Ratio.

	CRL	IS	SCI	SSP	WPR
CRL					
IS	0.893				
SCI	0.642	0.762			
SSP	0.572	0.747	0.668		
WPR	0.572	0.747	0.668	0.455	

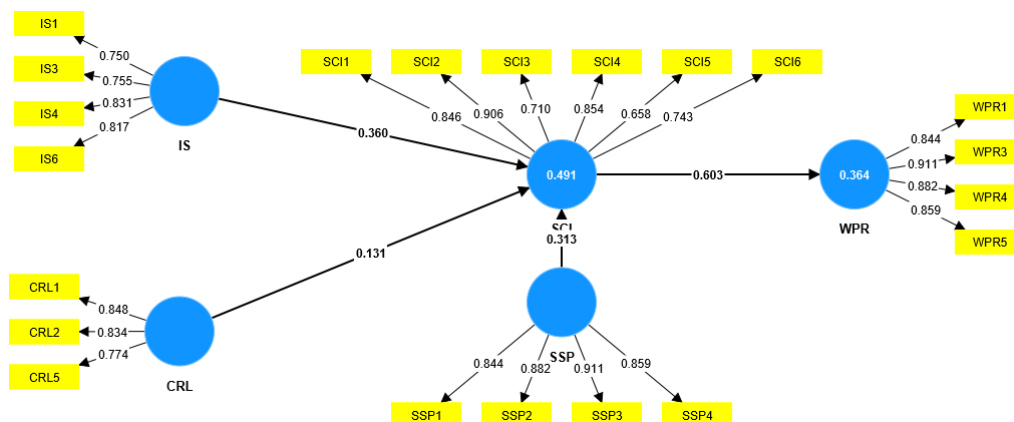


Figure 2: Measurement Model Assessment.

The results of the study demonstrate that there is a favorable correlation between information sharing, customer relationships, and supplier strategic alliances with supply chain integration in the construction industry in Iraq. This supports the acceptance of hypotheses H1, H2, and H3. In addition, the results also revealed that the integration of supply chain management has a substantial mediating role in the relationship between information sharing, customer relationships, supplier strategic partnerships, and women's performance in the construction industry in Iraq. These findings support hypotheses H4, H5, and H6. These figures are mentioned in Table 5.

Table 5: A Path Analysis.

Relationships	Beta	Standard deviation	T statistics	P values
CRL -> SCI	0.131	0.064	2.051	0.041
IS -> SCI	0.360	0.062	5.828	0.000
SCI -> WPR	0.603	0.041	14.738	0.000
SSP -> SCI	0.313	0.053	5.923	0.000
CRL -> SCI -> WPR	0.079	0.037	2.143	0.033
SSP -> SCI -> WPR	0.189	0.042	4.499	0.000
IS -> SCI -> WPR	0.217	0.041	5.301	0.000

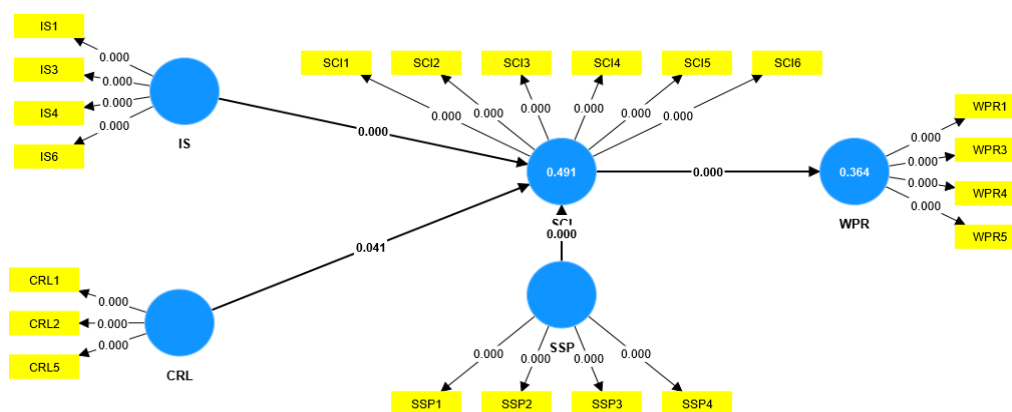


Figure 3: Structural Model Assessment.

DISCUSSIONS

The findings of the study indicate that the act of sharing information has a significant and beneficial function in the process of integrating the supply chain. The theory was further validated by a previous study conducted by Alzoubi and Yanamandra (2020). As per their assertions, supply chain partners engage in the exchange of data pertaining to production schedules, inventory levels, and demand projections, hence augmenting transparency and visibility throughout the supply chain. The utilisation of transparency aids the partner in comprehending the contextual framework of well-informed decisions. The exchange of information facilitates enhanced collaboration and coordination among supply chain stakeholders, enabling them to access up-to-date data and efficiently collaborate in addressing supply disruptions, demand fluctuations, and other operational obstacles. The notion was also supported by Novais et al. (2019). The bullwhip effect refers to the phenomenon in which fluctuations in demand are magnified as they propagate through the supply chain. The sharing of knowledge and data plays a crucial role in lowering the bullwhip effect and reducing uncertainty, hence resulting in more predictable and consistent demand patterns. The provision of precise and

punctual information empowers supply chain collaborators to promptly address consumer needs and market developments, thereby enhancing their competitive advantage. The act of sharing information can play a crucial role in minimizing and recognizing risks within the supply chain. By effectively detecting disruptions, organizations are able to implement risk management methods and engage in proactive planning.

The findings of the study indicate that there is a positive correlation between customer relationships and supply chain integration. The theory was also validated by the research conducted by Saragih et al. (2020). Robust customer relationships facilitate enhanced visibility into customer demands. When organizations possess a comprehensive comprehension of customer requirements, preferences, and ordering patterns, they can effectively align their inventory and production management processes. This alignment results in a well-developed integration of the supply chain. The establishment of effective collaboration and communication channels between manufacturers, suppliers, and customers facilitates precise planning and demand forecasting. By closely engaging with their customers, manufacturers, and suppliers are able to proactively anticipate fluctuations in demand, enabling them to promptly respond to these fluctuations and enhance the integration of their supply chains. The implementation of personalization and customization strategies for products holds considerable significance while fostering robust customer relationships emerges as a crucial factor for the firm's success. Yu, Zhang, and Huo (2019) have also provided empirical evidence in support of this idea. The integration of client needs into the supply chain and production processes is crucial for ensuring the accurate and timely delivery of items to the intended customers. The acquisition of customer insights and feedback plays a pivotal role in the advancement of product enhancements and innovations. Engaging customers in the product development process is instrumental in the creation of offerings that effectively cater to their preferences and needs. Moreover, aligning customer demand with product development efforts contributes to the optimization of supply chain integration.

The findings of the study indicate that there is a favorable impact of supplier strategic relationships on the integration of supply chains. The theory was further supported by Shukor et al. (2021). Supplier strategic connections, also known as strategic collaborations and partnerships, encompass enduring and intimate alliances between organizations and their primary supplier. Strategic alliances foster the establishment of efficient and transparent communication channels between suppliers and their respective organizations. Such communication plays a pivotal role in facilitating the exchange of information, collaborative decision-making, and coordination, all of which are essential for achieving supply chain integration. In the context of a supplier strategic relationship, it is imperative for all parties involved to dedicate considerable effort and time towards cultivating a sense of commitment and trust, thereby fostering the potential for a successful partnership. The hypothesis was also supported by Han and Huo (2020). The establishment of a strategic relationship with suppliers, as per their perspective, fosters commitment and trust, hence contributing to the success of the collaboration. Trust plays a pivotal role in enabling transparent information exchange, facilitating cooperation, and ultimately enhancing supply chain integrations. In the context of supplier strategic relationships, organizations and suppliers collaborate to align their aims and goals toward a shared target. This shared vision facilitates the alignment of strategies and processes, ultimately resulting in the successful integration of the supply chain. The strategic relationship involves the collaborative undertaking of contingency planning and risk management, which in turn facilitates the formulation of strategies aimed at eliminating said contingencies and fostering an integrated supply chain.

The findings of the study indicate that there is a mediating effect of supply chain integration on the relationship between information sharing and women's performance. The idea was also supported by Lee et al. (2022a). According to their assertions, the integration of supply chains, particularly in relation to the sharing of information, has the potential to greatly improve the performance of the personnel inside the organization. Effective sharing of information inside the supply chain enables employees to access vital data and insights, empowering them to make timely decisions and enhance overall performance. The exchange of information within supply chain integration is enhanced when employees acquire real-time data pertaining to demand projections, inventory levels, and production plans, resulting in improved accuracy and efficiency. The provision of precise and punctual data would enable women to promptly address market swings or trends and make informed decisions. Effective collaboration and coordination among employees from different departments can be facilitated by the seamless movement of information within the supply chain. The integration of production, procurement, sales, and marketing departments facilitates the sharing of information, hence enhancing the overall execution of tasks.

The findings of the study indicate that there is a mediating effect of supply chain integration on the relationship between customer relationships and women's performance. The idea was also supported by Lee et al. (2022b). According to their assertions, the integration of supply chains plays a pivotal function in augmenting client connections and the performance of women inside the sector. The integration resulted in enhanced customer service, heightened employee engagement, and overall corporate success. Supply chain integration facilitates the smooth dissemination of customer feedback among different organizational units, such as marketing, sales, and customer support. This information plays a pivotal role in enabling employees to comprehend customer pain points, expectations, and preferences, thereby empowering them to deliver efficient service. The integration of customer information into the supply chain enables women to efficiently address customer complaints and queries. This, in turn, facilitates accurate and prompt replies, ultimately resulting in customer satisfaction and the cultivation of confidence in the organization. Moreover, the implementation of an integrated supply chain would effectively synchronize consumer demands, while providing employees with immediate access to real-time data pertaining to purchase history, customer preferences, and interactions. Consequently, this will result in a consistent and enhanced customer experience.

The findings of the study indicate that there is a mediating effect of supply chain integration on the relationship between supplier strategic partnerships and women's performance. The integration of supply chains facilitates the exchange of information and promotes effective communication between an organization and its suppliers, as well as its female workforce. In a supply chain characterized by strong integration, the objectives of an organization, its female workforce, and suppliers are harmonized, and employees possess a clear comprehension of how their respective responsibilities significantly impact the overall prosperity of the company. Supply chain integration fosters collaborative relationships with suppliers, hence enhancing employee performance through tight cooperation with suppliers to mitigate interruptions and identify effective solutions. This strategy fosters a culture of creativity and collaboration, thereby enhancing the capacity to effectively address difficulties.

IMPLICATIONS

This study makes a substantial contribution to the existing body of literature. The construction sector in Iraq is playing a significant role in the country's economic situation. The Iraqi government is currently promoting the inclusion of women in the construction industry, aiming to foster gender equality and offer them equitable economic opportunities. However, they continue to encounter some obstacles that can be surmounted. This study attempts to present a comprehensive set of ideas for policymakers, industrialists, and managers to effectively create policies that might enhance the participation and contribution of females within the construction sector. This article examines the impact of information exchange, customer relationship management, and supplier strategic alliances on the integration of supply chains. The report provides guidance to policymakers in formulating policies aimed at enhancing women's performance through the implementation of good supply chain practices. Additionally, this research article examines the mediating effect of supply chain integration on the relationship between information sharing, customer relationships, supplier strategic partnership, and women's performance.

CONCLUSION

The construction industry in Iraq is playing a crucial role in fostering economic growth and development. The Iraqi government has made significant contributions towards the enhancement of its infrastructure, encompassing the construction and improvement of bridges, highways, and airports. Following the devastating impact of armed conflict, efforts have been undertaken to commence the process of reconstruction. The Iraqi government has initiated multiple development projects aimed at fostering economic growth and enhancing public services. Iraq has made significant investments in the enhancement of its infrastructure, encompassing the construction and improvement of roads, bridges, airports, and public amenities. Ongoing reconstruction endeavors have been undertaken, particularly in response to the severe devastation resulting from armed conflicts and wars. There has been a growing inclination among international corporations to explore investment opportunities within Iraq's building sector. The construction business has historically been characterized by a predominantly male-dominated culture, and societal norms and expectations have imposed constraints on the extent of female involvement within this sector. In recent years, there have been numerous developments and modifications implemented to promote gender diversity. Accessing on-site jobs in the construction business poses challenges for women. However, there have been several chances available for women to pursue managerial, support, and administrative roles within the construction sector. The inclusion of vocational training and improved access to education have played crucial roles in creating novel avenues for women within the construction industry. Women who possess appropriate training and educational qualifications have the potential to meet the requirements for managerial and technical positions within the sector. In addition to international organizations, the Iraqi government is implementing a range of measures aimed at promoting women's engagement and fostering gender equality within the workforce, with a particular focus on the construction sector. However, the industry in question is currently encountering many obstacles. This article serves as a valuable resource to address and overcome these concerns. The present study has determined that the act of sharing information has a substantial function in augmenting the level of integration within supply chains. Real-time information plays a crucial role in enabling organizations to adapt to market changes, hence facilitating the achievement of their

objectives. Customer interactions play a crucial function in comprehending customer demand and requirements, hence enhancing firm profitability. Moreover, the establishment of robust supplier strategic connections by organizations will contribute to the mutual sharing of risk between the business and its suppliers, leading to a heightened prioritization of the firm's objectives by the suppliers. The integration of supply chains is expected to have a positive impact on the performance of women in the business.

LIMITATIONS

The work presented here has made a substantial contribution to the existing body of literature. However, it is important to acknowledge that there are certain limitations inherent in the study. These limitations can be addressed and overcome in future research endeavors. This study has examined the effects of information exchange, customer relationship management, and strategic alliances with suppliers on the integration of supply chains. In forthcoming times, the implementation of collaborative planning, risk management, and resilience, as well as the development of information technology infrastructure, will be of utmost importance. Second, this paper has examined the mediating role of supply chain integration in the relationship between information sharing, customer relationship, and supplier strategic partnership, and women's performance. In upcoming research, researchers may employ supply chain transparency, supply chain flexibility, and data sharing and visibility as intermediary factor in the context of information sharing, customer interactions, supplier strategic partnership, and women's performance. Moreover, this particular approach is predominantly employed in economically disadvantaged nations, hence raising concerns about its applicability in developed countries. In subsequent periods, this paradigm has the potential for use within industrialized nations.

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