IMPACT OF SUPPLY CHAIN MANAGEMENT PRACTICES ON SUPPLY CHAIN PERFORMANCE IN IRANIAN OIL AND GAS COMPANIES

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Abstract

Purpose of the study: This study aims to examine the influence of supply chain management practices on the performance of the supply chain in oil and gas companies in Iran.

Methodology: This is quantitative survey-based research and sampling is a simple random in which data are collected through a standard questionnaire. The questionnaires are distributed among 170 respondents in west oil and gas companies in Iran. The sample consists of 78% male and 22% female, who are mostly from the age range of 35-45. For hypotheses testing, descriptive statistics and structural modeling systems are used through SPSS and AMOS software to investigate the relationships between variables.

Main Findings: The finding reveals that all supply chain management practices, namely supply chain unity, information sharing, and partner relationship management, have a significant positive impact on supply chain performance.

Applications of this study: The findings of the study can be implemented in the oil and gas industry to enhance supply chain performance. Besides, chain managers will understand the effects of implementing effective and high-quality supply chain unity, information sharing, and partner relationship management in performing of the supply chain in their companies.

Novelty/Originality of this study: This study contributes to the literature by utilizing the social exchange theory in the relationship between supply chain management practices and supply chain performance in oil and gas companies.

Keywords: Supply Chain Unity, Information Sharing, Partner Relationship Management, Supply Chain Performance, Oil and Gas Companies.

INTRODUCTION

Nowadays, competition has become by supply chains rather than individual companies. The results of the competition revealed that organizations’ performance is affected by suppliers and customers (Jawaad & Zafar, 2020). Therefore, organizations have tried to improve their supply chain performance (Saleheen, Habib, and Hanafi, 2018). According to previous researchers such as Bstieler, Hemmert, & Barczak (2017), supply chain performance is related to decision making in terms of power. Wang, Pfohl, Berbner, & Keck (2016) investigate supply chain performance comparable to the strategy of product development by concentrating on efficiency and potential benefits sought by supply chain members. Besides, Cho, Ke, & Han (2019) believe that cooperative and competitive positioning in supply chain logistics exists. Also, oil and gas are among the most significant crude materials. Petroleum has been the primary industry in Iran since the 1920s that has an important role in the improvement of other industries (Mohamedi, 2010). Evolutions in markets, customers’ needs, and technology can influence the competitiveness of organizations, which needs continuous tactics in supply chain management of the oil and gas business.

Singhry & Abd Rahman (2019) assert that social exchange theory perceives the adequacy of supply chain management and concentrates its examination on finding the conditions in structures that produce various practices and behaviors. Supply chain management, as a united approach to managing the process of materials and goods, information, and cash flow, can respond to these conditions (Mohelská & Sokolová, 2014; Reche, Junior, Estorilio & Rudek, 2020). It is a collection of methods which is used to unify suppliers, manufacturers, storehouses, and department stores effectively, produce required products in specified value, given time, and place to be distributed to customers. The objective of supply chain management is to give the most extreme customer service at the least cost conceivable. As a customer uses the output of a process, customer service is important for being concentrated in companies. Therefore, all expenses of the chain can be minimized and customers’ needs can also be met with better quality (Hsiao, Chen, & Chin, 2017). Supply chain management gives more attention to concentrate on materials, information, and cash flow from sellers to customers or from customers to sellers. In recent decades, an augmentation of the popularity of supply chain unity reveals the relations of all supply chain members and coordinates partners’ aims with each other (Jadhav, Orr, & Malik, 2019). Although supply chain management practices provide advantages, some obstacles make it hard to implement (Suryanto, Haseeb, & Hartani, 2018) such as 1) and lack of commitment to the development of an effective supply chain and lack of understanding on the importance of supply chain collaboration, 2) lack of trust, 3) lack of unified objectives among partners, 4) inadequate information systems, 5) participating in a huge amount of supply chains, which creates weak relationships among supply chain members. Thus, supply chain management practice is concentrated on customer service. One of the dimensions of supply chain management practices in supply chain unity which is a term in which a
company can cooperate with partners and its main suppliers based on its structure, inter-organizational strategy, methods, and behavior. This is a process to be conducted to comply with the customer's requirements (Vijayasarathy, 2010).

Moreover, information sharing is another important dimension of supply chain management practices that may impact on supply chain performance. The need for quality information for the design and delivery of services has been shown in several studies, such as Vijayasarathy (2010). Information sharing is a commitment to quality and understanding of the real needs of customers (Sener, Barut, Dag, & Yildirim, 2019). Employees need to know the customer's needs to gain optimal quality (Kim & Choi, 2016). In this regard, information sharing may cause a higher understanding of customer's needs. Finally, partner relationship management is a significant order that effective individuals use to win others' support. This can help them whether others' project fails; their project will be successful. Partnership relationships should be focused on superior supply chain networks. Powerful connections eventually enhance supply chain performance as far as inventory velocity, responsiveness, delivery time, product development process duration, and costs (Dubey, Gunasekaran, Childe, Papadopoulos, Luo, & Roubaud, 2020).

Due to the importance of supply chain management, many scholars' consultants, and business managers have reviewed and analyzed it (Feldmann & Müller, 2003). Supply chain management is a vital aspect for building a feasible competitive edge for services and products in an inexorably packed marketplace (Ben-Daya, Hassini, & Bahroun, 2019). Regardless of the expanded consideration paid to supply chain management, the literature is still weak to offer and introduce different dimensions such as supply chain unity, information sharing, and partner relationship, which help to practice of supply chain management (Nazifa & Ramachandran, 2019). Besides, in most manufacturing and service organizations in Iran, still traditional views in supply chain planning for the provision of a product exits. Thus, supply chain units of a product, information sharing, and partner relationship do not pay much attention. Specifically, managers decide mostly based on their earnings and profits, which may lead to higher costs of producing a product or providing a product or service with more cost to the final consumer and therefore leading to less competitive power of organizations. Moreover, there are no studies to find the effect of supply chain management practices on supply chain performance in oil and gas companies. Thus, this study aims to find the effect of supply chain management practices (supply chain unity, information sharing, partner relationship) on supply chain performance in oil and gas companies in Iran.

Our study contributes to the literature by fulfilling the current research gaps about the supply chain management practices and supply chain performance in oil and gas companies and their respective obstacles. Moreover, this paper aims to contribute towards managers by providing them with the required theoretical base to implement the supply chain management practices with their partners, apply supply chain unity, and share information to have a higher supply chain performance. The study also identifies the obstacles for supply chain management practices and recommends potential solutions to overcome these obstacles to have higher supply chain performance.

LITERATURE REVIEW

Oil & Gas Industry

The oil and gas industry has been the world's driving wellspring of vitality since the mid-1950s. This industry has become a leader and has crucial effects on the development of other industries (Khalil, Jan, Tong, & Berawi, 2017). According to Ghosh, Abraham, Palvia, & Nemati (2020), globally, Iran is the fifth largest producer of natural gas and oil, third-largest proven oil, and second natural gas reserves. The industry's segments are 1) the upstream, which consists of exploration and production activities (Chima, 2007), 2) the downstream consists of processing, transportation, marketing, and distribution of petroleum products (Akam, 2020).

As of now, the primary issue confronting the oil business is to limit the expense of the creation and supply of finished products to consumers. The supply chain of an organization is connected to both upstream providers and downstream merchants as materials, information, and capital flow. For whatever length of time that oil organizations have required a phalanx of merchants to keep their systems constantly re-supplied, there has been a supply-chain. Thus, powerful supply chain management can build the productivity and competitiveness of a petrochemical plant and its supply. In other words, in Iran's oil and gas supply chain system, few suppliers will have a constrained effect on their supply chains. Zaid, Jaaron, & Bon (2018) claim that supply chain management practices play significant administrators in the business to lead the advancement of supply chain management. This is progressively being perceived, as significant oil organizations, for instance, believe that a coordinated supply chain, as opposed to inward tasks, will turn into the essential root of performance enhancement (Ahmad, de Brito, Rezaei, & Tavasszy, 2017). Regardless of the requirement for more prominent supply chain management practices in Iran's oil and gas industry, evidence shows that a huge amount of oil companies have doubts about the adequacy of their supply chains. Also, a minority of companies believe that they have enough abilities to upgrade their supply chain performance (Ahmad et., 2017). Since oil and gas organizations shift from the practices of holding all required capacity in-house to a more elevated level of outsourcing, higher integration, and supply chain management capability become significantly important (Basheer, Siam, Awn, & Hassan, 2019).
Supply Chain Management Practices and Supply Chain Performance

According to Jermsittiparsert, Suduean, Sriyakul, & Khumboon (2019), supply chain performance is related to cost or customer response, which can evaluate the aftereffects of corporate tasks, including goal achievement and financial outcome. In this manner, all the choices of an endeavor will be made with the thought of cost reduction. Therefore, operational and inventory costs in supply chain management could be utilized to evaluate the exhibition. However, Walton (1996) asserts that supply chain performance is linked to customer response, which can be changed based on customer needs and demand.

Past studies assessed the linkage between supply chain performance and communication technology (Chen, Das, & Ivanov, 2019), enterprise resource planning systems (Chauhan & Singh, 2017). Social exchange theory has been using in supply chain research to assess performance (Croppanzano, Anthony, Daniels, & Hall, 2017), united supply chain (Love, Lane, Kuehl, Hudson, Harding, Clancy, & Fry, 2020), coordination of supply chains, and information sharing (Kim & Chai, 2017), competitive and cooperative positioning in supply chain relationships (Cho et al., 2019). While these are significant floods of exploration, there is a requirement for research examining the effect of supply chain management practices (supply chain unity, information sharing, partner relationship), and supply chain performance.

Supply Chain Unity

Supply chain unity is an important practice for supply chain management, which can be used for having cooperation with partners and its main suppliers based on its structure, inter-organizational strategy, methods, and behavior (Vijayasarathy, 2010). Love et al. (2020) investigate the differences of performance evaluation in a single institution and a supply chain. They comply with certain indexes to evaluate the performance of the automation supply chain; according to this argument that it is better to design the systems of performance evaluation for each industry individually concerning its specific characteristics. They suggest that the use of similar systems in factories with even identical industries and activities is not practical. However, different indexes, verification periods, and methods of data collection can be employed based on the company's strategies, democratic level of previous evaluation systems and their information systems, and relationships. Besides, Ojha, Sahin, Shockley, & Sridharan (2019) believe if the level of unity increases in the supply chain, consequently the quality of the product, delivery, flexibility of the process, and cost management will improve in comparison with the past. Also, Azmi, Hamid, Hussin, & Ibrahim (2017) evaluate the effects of supply chain unity on competitive capabilities. The author argues that the level of supply chain unity can affect the competitive capabilities in big companies instead of small firms. Gustin (2001) examines the computerization of united protection, and they find that united companies computerize their business processes more frequently; therefore, companies can gain greater benefits such as inventory savings and reduction of delays (Bag, Wood, Mangla, & Luthra, 2020). Besides, Kim & Chai (2017) suggest the causal relationship between the performances of supply chain management and the level of supply chain unity. The authors find that supply chain unity may play a more important role in the competition of supply chain management. Also, close interrelationships between the competitive capabilities and supply chain management performance exist and may have more meaningful effects on the competition of supply chain management.

United supply program-planning, production, and distribution of supply chains using genetic algorithms are well mentioned and investigated by (Nezamoddini, Gholami, & Aqlan, 2020). The authors conducted the modeling of materials flow with a united approach throughout the supply chain in sections of supply, production, and distribution in a factory, and they indicate that the costs decrease in the proposed model. Moreover, Mohebbi, Shahidi, Akbarzadeh Totonchi, & Ghodduisi (2006) examine the united supply chain perspectives effects on the competitive capabilities of food and drink industries in Iran. The authors show that internal and external unity have a positive effect on the improvement of the company's competitive capabilities. It is noteworthy that internal unity also improves competitive capabilities through external unity.

Information Sharing

Another important practice of supply chain management is information sharing. Commitment to quality is strongly emphasized to understand the real needs of customers. Employees need to know the customer's needs to gain optimal quality (Kim & Choi, 2016). According to Otchere, Annan, & Anin (2013), who monitored a group of successful companies of Cocoa Industry companies, success is due to high investment in information technology. The authors believe that an overall strategy of a supply chain should make improvements in product provision and development to create optimal effects in terms of cost and quality.

Information sharing between organizations depends on an ongoing and highly secured channel that conveys messages starting with one association then onto the next completely and transparently. Ojha et al. (2019) assert that information sharing is to extend internal functions to the supply chain framework and further to different companies to shape a participation network, on which data is shared to upgrade supply chain performance. Although perfect data sharing is gainful to organizations, exact information exchange is essential.

Wang, Wang, Hu, Gong, Ren, & Xiao (2020) state that incomplete, mutilated, and fragmented information sharing is one of the main considerations that lessen corporate performance, and issues such as confusion of scope planning,
excessive stock, wasteful delivery, low-quality customer service, and even decrease of benefits. Hsu, Tan, Kannan, & Leong (2009) mention that information sharing is exceptionally significant for supply chain members. It is particularly crucial to decrease the uncertainty of demands for the manufacturing companies at the front end of the supply chain and to have no admittance to information on end-consumers' requirements. Thusly, assessing all parts of data sharing from various perspectives is a significant key to satisfying the exhaustive sharing of information. According to Kotzab, Darkow, Bäumler, & Georgi (2019), supply chain partners who trade information commonly can perform as a solitary substance. Together, they could comprehend the necessities of the end-user greater and henceforth can react to market change faster. Some past studies such as Abdulameer & Yaacob (2020) suggest that having collaborations such as information sharing build trust and commitment in investments, which lead to higher performance and satisfaction. Similarly, Tseng, Wu, & Nguyen (2011) suggest that sharing information, sales reports, data, information technologies with partners improves the performance supply chain, and therefore enhances sales revenues, profit, and on-time delivery rate.

Howbeit, inaccurate, and delayed information have dysfunctional effects on supply chain management (Nakandala,
Smith & Lau, 2020). Asymmetric information in the supply chain, opportunistic behavior, and different interests of supply chain partners can affect the quality of information (Feldmann and Müller, 2003). Therefore, companies require to consider their data as a strategic asset that streams with the least delay and distortion.

**Partner Relationship Management**

Improvement of supply chain performance through partners’ relationship management is investigated by some researchers such as (Agarwal, Singh, & Agariya, 2017). According to Bstieler et al. (2017), there are some important factors in partner relationship management such as 1) the duration of relationships between the company and other members of the supply chain, 2) the trust of supply chain members with each other, 3) the partners’ commitment to continue the relationships in the supply chain, and 4) the degree of supply chain members' dependence with each other. Most prior studies believe a positive relationship between partners’ relationship management and supply chain performance (Barber, Garza-Reyes, Kumar, & Abdi, 2017).

Töth-Király, Bóthe, Mári, Rigó, & Orosz (2019) propose that business associations need to esteem the significance of joint effort and division of assignments. In this way, a partnership is fundamental to supply chains. Besides, Storey & Kocabasoglu-Hillmer (2013) characterize partnership as a procedure for creating a long-term association with suppliers. Therefore, enterprises could upgrade strategies in their organizations. Along these lines, the partnership helps upgrade an enterprise’s performance from different perspectives. Through coordinated effort and division of tasks, they may amplify singular enthusiasm as well as offer the dangers of their tasks. Barak & Javanmard (2020) believe that cautious strategic planning and good partnership preparation are fundamental for union achievement in Iran. Given the above writing, the examination structure is built to investigate the supply chain management practices (supply chain unity, information sharing, and partner relationship management) relationship with supply chain performance in oil and gas companies in Iran.

**METHODOLOGY**

**Research Framework**

The research framework for our study is proposed to represent the hypotheses relationship among variables, as shown in Figure 1. Our framework contains three supply chain management practices, namely, supply chain unity, information sharing, and partner relationship management. Besides, supply chain performance is used as the dependent variable in this research. These variables are aligned with the social exchange theory, which is widely used in supply chain studies (Cook and Whitmeyer, 1992). In light of the demonstrated variables, our research framework is independent interfacing variables and dependent variables, as illustrated in Figure 1.

The hypotheses concerning the proposed framework can be enhanced to examine the association between independent variables and the dependent variable. The detail of the hypothesis for this study is presented below:

**H1. Supply chain unity has a significant positive effect on supply chain performance in oil and gas companies in Iran.**

**H2. Information sharing has a significant positive effect on supply chain performance in oil and gas companies in Iran.**

**H3. Partner relationship management has a significant positive effect on supply chain performance in oil and gas companies in Iran.**

**Data Collection**

This study is practically based on its objectives. The population of this research includes the national broadcasting company of Kermanshah Province oil products in Iran because of the importance of this area in exploiting oil and gas. The number of population is 305 people. The following Cochran's formula is used to determine the sample size:
The questionnaire is interpreted and evaluated by experts and modified concerning their comments. All the items in the current questionnaire are designed to be evaluated on Likert’s 5-point scale. Scales to determine respondent’s feedback on the questions given, especially the impact of supply chain management practices on supply chain performance in oil & gas companies in Iran. The questionnaires are distributed to 170 respondents, such as managers, directors in the broadcasting company of Kermanshah Province oil products in Iran. According to Lambert and Harrington (1990), nonresponse bias is assessed by comparing the responses of early and late respondents. Based on demographic information in the survey, 78% of respondents are male, whereas only 22% of respondents are female. Besides, the largest age range from the respondents is from age 35-45, with 87 respondents. Besides, most respondents have bachelor’s degrees with 45%, followed by post-graduate holders with 32%.

**Figure 1:** Framework of the Study

![Figure 1: Framework of the Study](image)

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**Measurement Scale Assessment**

Table 1 depicts the results of the overall fit model. We adapt the confirmatory factor analysis (CFA) approach recommended by Marsh, Guo, Dicke, Parker, & Craven (2020) to assess the unidimensionality of the measurement scales. Pre- assumption and model testing for fitness analysis of this study necessitate that the information meets the entirety of the previously mentioned, and the following criteria (Barki & Hartwick, 2001) 1) probability and Chi-Square statistic, 2) value of Chi-Square /DF is ≤2.0 or 3.0, the p-value must be ≥0.05, 3) Degrees of Freedom must be positive, 4) Goodness of Fit Index (GFI) must be ≥0.90, 5) CFI (Comparative Fit Index) must be ≥0.90, 6) RMSEA (Root Mean Square Error of Approximation) must be ≤0.08, 7) Normed-Fit Index (NFI) coefficient with values ≥0.90. The results show that the variables RFI, AGFI, GFI NFI confirm the model. Since the RMSEA value is close to zero, so, the proposed model is acceptable.

**Table 1:** The items tested for overall model fit

<table>
<thead>
<tr>
<th>Index</th>
<th>Amount</th>
<th>Desired range</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square</td>
<td>$x^2$</td>
<td>$0 &lt; \frac{x^2}{df} &lt; 5$</td>
<td>good</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation</td>
<td>RMSEA</td>
<td>0.096</td>
<td>RMSEA &lt; 0.05</td>
</tr>
<tr>
<td>Root-mean-square</td>
<td>RMR</td>
<td>0.025</td>
<td>RMR ≥ 0</td>
</tr>
<tr>
<td>Goodness of fit</td>
<td>GFI</td>
<td>0.977</td>
<td>GFI &gt; 0.9</td>
</tr>
<tr>
<td>Adjusted goodness of fit index</td>
<td>AGFI</td>
<td>0.914</td>
<td>AGFI &gt; 0.85</td>
</tr>
<tr>
<td>Normalized fit index (Bentler-Bonett)</td>
<td>NFI</td>
<td>0.958</td>
<td>NFI &gt; 0.90</td>
</tr>
</tbody>
</table>
As shown in Table 4, in our results, all three hypotheses are supported. As predicted in H1, supply chain unity positively impact supply chain performance in oil and gas companies in Iran since the coefficient is 0.38 with p-value <0.01. This means that as the supply chain unity increase, the supply chain performance will improve in oil and gas companies in Iran. Thus, our result is consistent with previous literature (etc. Vijayasathy, 2010; Jadhav et al., 2019). Moreover, there is a positive correlation between information sharing and supply chain performance concerning the path coefficient of 0.25 with p-value<0.01; therefore, H2 is confirmed, which is also supported by Vijayasathy (2010), Tóth-Király et al. (2019), and Abdulameer & Yaacob (2020). Likewise, the results of H3 indicate that there is a significant positive relationship between partner relationship management and supply chain performance in oil and gas companies in Iran with a coefficient of 0.27 and p-value<0.01. This means that as the partner relationship management increase, supply chain performance will improve. Our finding is similar to the results of studies such as (Tóth-Király et al., 2019).

### FINDINGS & DISCUSSION

#### Reliability & Validity

In this study, the reliability of the questionnaire is assessed by Cronbach's alpha test, as recommended by Garver and Mentzer (1999). Whatever the value is closer to one, higher reliability of the questionnaire can be achieved, particularly, Cronbach's α between 0.7 ~ 0.9 shows good reliability, and above 0.9 represents high reliability. The overall Cronbach's alpha of the questionnaire is equal to 0.89. Cronbach's alpha is calculated for each construct separately as follows: supply chain unity =0.864, information sharing=0.806, partner relationship management= 0.801, supply chain performance = 0.776. All of the constructs have an α higher than 0.7, showing that there is a good internal consistency of the derived results. Table 2 depicts the results of reliability.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach's Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply chain unity</td>
<td>0.864</td>
</tr>
<tr>
<td>Information sharing</td>
<td>0.806</td>
</tr>
<tr>
<td>Partner relationship management</td>
<td>0.801</td>
</tr>
<tr>
<td>Supply chain performance</td>
<td>0.776</td>
</tr>
</tbody>
</table>

The validity of the questionnaire is evaluated through content validity. In this regard, a questionnaire is developed, and a sample of it is given to the expert's panel to study and give their comments. So, their comments and corrections are applied to the questionnaire. Besides, Ahire, Golhar, & Waller (1996) suggest that convergent validity using the NFI coefficient with values higher than 0.90 shows strong validity.

#### Normality Tests

Table 3 shows the results of normality assumptions. Evaluation of the normal distribution of variables has been done by the Kolmogorov - Smirnov test (Lilliefors, 1967). The results of the data analysis suggest that the supply chain performance variable follows a normal distribution, but other variables do not follow a normal distribution. Therefore, the Spearman correlation coefficient is used to test the research hypotheses. If the significant level is less than 0.05, we conclude that the variables are statistically significant. Since the multivariate normality assumption is not established in this study to compare different models with the same data and to select the most appropriate ones, the rotation method can be used. According to Feng, Huang, & Bao (2019), rotation is a method of resampling with the replacement of a sample (Which is assumed to show a representative community sample). This method can help to have a more accurate estimation of the parameters and standard errors associated with them in situations where a multivariate normality assumption is violated.

<table>
<thead>
<tr>
<th>Variable</th>
<th>ityQuant</th>
<th>Variance</th>
<th>Average</th>
<th>Amount of Z</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply chain unity</td>
<td>170</td>
<td>0.721</td>
<td>3.33</td>
<td>1.390</td>
<td>0.042</td>
</tr>
<tr>
<td>Information sharing</td>
<td>170</td>
<td>0.532</td>
<td>3.57</td>
<td>1.449</td>
<td>0.030</td>
</tr>
<tr>
<td>Partner relationship management</td>
<td>170</td>
<td>0.598</td>
<td>3.55</td>
<td>1.394</td>
<td>0.041</td>
</tr>
<tr>
<td>Supply chain performance</td>
<td>170</td>
<td>0.657</td>
<td>3.45</td>
<td>1.273</td>
<td>0.078</td>
</tr>
</tbody>
</table>

#### Structural Equation Modeling (SEM)

Following the above discussion, after normality and model fitness tests, we investigate the appropriateness of the research model employing SPSS and AMOS software. Figure 2 shows the effect of independent variables (supply chain unity, information sharing, partner relationship management) on the dependent variable (supply chain performance). As the results show, supply chain unity has a 38% impact on information sharing. Moreover, information sharing and partner relationship management have 25% and 36% effects on supply chain performance, respectively.
CONCLUSION

In this study, we used a sample of west oil and gas companies in Iran to examine the effects of supply chain management practices, particular supply chain unity, information sharing, partner relationship management (independent variables) on supply chain performance (dependent variable) based on social exchange theory. To test our hypotheses, we used the structural equation model. The main findings are summarized as follows.

The results indicate the cooperation of oil and gas companies in Iran with its partners and suppliers based on its structure and inter-organizational strategy enhance its supply chain performance. Similarly, information sharing can lead to a high understanding of customer's needs, which consequently improve the supply chain performance (Vijayasarathy, 2010). Also, partner relationship management consisting of supply chain member trust and commitment of partners in oil and gas companies can improve their weakness, and therefore, enhance the performance of the supply chain.

Implications of The Study

Our findings bear implications in the areas of both academia and business. The present research contributes to the body of knowledge, including social exchange theory, by finding a relationship between supply chain management practices and supply chain performance. Also, this research will help practitioners to recognize significant factors that have been proven to either cause an obstacle or an improvement of supply chain performance. From a manager's viewpoint, this study demonstrates why supply chain unity should be considered to improve supply chain performance. Firms that figure out how to accomplish this relationship advantage incredibly by improving their working edges, cost efficiencies, and in general increase sustainable competitive advantages. Additionally, this examination assists supply chain managers, particularly the individuals who have an enthusiasm for building profound supplier relationships which looking into partnership relationships and information sharing among selected suppliers and customers to enhance the performance of the supply chain. Positive partnerships will leverage collaboration and provide resources that are significantly progressively hard to impersonate by different competitors.

There are some recommendations to enhance supply chain performance through supply chain management practices. First, it is recommended that the feedback systems are used to being informed of customers' views, appropriate scheduling of inter-organizational meetings, and convenient access to relevant information in real-time through the organizational sections. Second, it is suggested that chain members provide each other with their important and

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**Table 4:** Results of Hypothesis Testing

<table>
<thead>
<tr>
<th>No.</th>
<th>Description of path</th>
<th>Path coefficient</th>
<th>T-value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Supply chain unity</td>
<td>0.38**</td>
<td>2.92</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>Supply chain performance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2</td>
<td>Information sharing</td>
<td>0.25**</td>
<td>2.45</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>Supply chain performance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3</td>
<td>Partner relationship management</td>
<td>0.27**</td>
<td>2.47</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>Supply chain performance</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Standardized path coefficients are on single-headed arrows. The values of the t-tests are significant at *p* < 0.05; **p** < 0.01

**Figure 2:** ESM model
confidential information and they do not apply any regulations and restrictions to communicate with each other. They may also offer information that can help other partners. Third, it is expected that members maintain and develop relationships with suppliers to guarantee future cooperation by offering a reliable warranty. They may invest in their relationships to promote productivity. Finally, members may try to use fewer supply chain systems and they instead try to maintain their relationships with suppliers through incentives such as the sale of a part of the company’s shares to suppliers.

LIMITATION AND STUDY FORWARD

This study focused mainly on the oil and gas companies in Iran. It is suggested that future researchers stretch out this research to different industries and different nations, or conduct a comparative analysis between several industries. Besides, other factors determining supply chain performance may be considered to improve the value of the exploration results.

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AUTHORS CONTRIBUTION

The first author contributed in the process of studying the entire data, literature review, categorizing data, arranging in units, reducing data, validity checks, and data interpretation, and checking of the data analysis process. The second author contributed to the preparation of research plans, research problems, data collection, and evaluating the data analysis process. The third author contributed to the literature review, data collection, and interpretation of results.

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