# Supply Chain Practices, Operational Performance- Evidence from Moroccan Firms

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**Abstract:**

*This study aims to identifying the impact of supply chain practices on the operational performance of Moroccan oil and fuel services firms by achieving the following sub-objectives. Frist, Identify the level of application of supply chain practices for Moroccan firms for oil and fuel services. Second, identify the relationship between supply chain practices and the operational performance of Moroccan firms for oil and fuel services. Third, identify the impact of supply chain practices and their components on the operational performance of Moroccan oil and fuel services. Finally, Provide recommendations for Moroccan firms and similar firms and industry to provide fuel and oil services and other industries and decision makers interested in the subject of oil in Morocco. As well as academics interested in the subject of supply chain. The study population include all branches of Moroccan firms for oil and fuel services. The study sample include 220 firms in the morocco capital Rabat. However, the study sample select in stereogram method. The study response include of managers and technicians in the fuel stations of the firms. The questionnaire consisted of three parts: First part relates to the demographic characteristics of the sample, represented by (gender, age, educational qualification, administrative level. The second part of the questionnaire consisted of independent variables (supply chain practices). The third part is the relationship with customers. 220 questioners were distributed to all the technicians and technicians working in the firms. (18) Were identified as incomplete and 202 remained (and 8% of the total) were canceled.*

*This study find that the Moroccan oil and fuel service firms medium applied the supply chain practices, with the largest application of internal operations practices, then the relationship with the supplier and finally the customer relationship practices. Moreover, this study emphasizes that the relationship between the variables of supply chain practices is very strong, as is the relationship between each element with the overall practice of the supply chain. The study also shows that there is a strong correlation between the elements of supply chain practices and operational performance. In addition, the results of this study show that there is an impact of supply chain practices on operational performance. As for the elements of supply chain practices, the internal processes have the greatest impact and then the relationship with the supplier, while it is found that there is no statistically significant relationship with customers in the operational performance of the Moroccan firms.*

**Key words**: Supply Chain; Relationships with Supplier; Relationships with Customer; Internal Processes; Operational Performance.

## 1. INTRODUCTION

The growth gutter of globalization, customer growth and customer growth has resulted in "business improvement waves" and over the past decades has been beginning to manage objectives and results, through total quality control, then TQM, business re-engineering, knowledge management, and TB management. As a result, the supply chain for operators, contractors and suppliers will be difficult to convince them to do.

Supply chains are becoming increasingly important because of the cost constraint that can be achieved in order to achieve what the organization wants. The new and large waves coming from opportunities fall into the walls between the organization and its customers and between the organization and suppliers. Thus, supply chain management relates to the

flow of information, materials, services, and money through any activity in a way that maximizes the effectiveness of operations, ie, introducing new tools, changing or modifying known methods, so that success is the proper achievement of the processes.

Stevenson (2002) defines the supply chain as a continuum of organizations - facilitations, functions and activities of organizations that are involved in the production and delivery of the product and service. The relay begins with the major suppliers of raw materials and extends in all ways to the end customer. Moreover, (Harrison and Gavish, 1999) defines it as a business network of facilities and distribution alternatives where the functions of material processing and conversion of materials to semi-processed materials and complete products, and the distribution of complete products to the workers, are found in all industrial and service organizations, Although the complexity of the chain varies from one industry to another and from one company to another.

Through continuous visits to oil and fuel service stations in Morocco, there are a number of problems related to the supply chain, such as many complaints due to delay in the receipt of hydrocarbons, in addition to the congestion of tankers firms  wishing to supply fuel from the refinery (supplier). Moreover, literature related to this subject, such as (sha'ar, 2011; Hamdan, 2013; Abu-Zeid, 2014; Miguel and Brito, 2011; Tanco et al. Al., 2015; Skipworth Study, et. Al., 2015). The problem of this study is to answer the following key question:

1.  Is there an impact of supply chain practices on the operational performance of Moroccan oil and fuel service firms?

Based on the components of the supply chain (relationships with suppliers, internal processes, and customer relationships), this question is divided by the following sub-questions:

1. Is there a relationship with suppliers in the operational performance of Moroccan oil and fuel services?
2. Is there an impact of internal operations on the operational performance of Moroccan oil and fuel services?
3. Is there an impact of customer relations on the operational performance of Moroccan oil and gas services?

This study aims to identifying the impact of supply chain practices on the operational performance of Moroccan oil and fuel services firms. By achieving the following sub-objectives:

1. Identify the level of application of supply chain practices for Moroccan firms for oil and fuel services.
2. Identify the relationship between supply chain practices and the operational performance of Moroccan firms for oil and fuel services.
3. Identify the impact of supply chain practices and their components on the operational performance of Moroccan oil and fuel services.
4. Provide recommendations for Moroccan firms and similar firms and industry to provide fuel and oil services and other industries and decision makers interested in the subject of oil in Morocco. As well as academics interested in the subject of supply chain.

Supply chain management is an important issue in which firms can provide their products and services with the required quality, space, time and price. The results of this study are for Western firms, where recommendations will be made to improve the overall performance of Moroccan oil and fuel firms. The results of this study are also important for other similar and similar firms as well as other industries and decision makers. This study took into account key components of the supply chain and examined its impact on operational

performance. The results were simulated and conducted in the same direction as the previous studies, thus enhancing the importance of supply chain practices and their impact on performance. Global Diversified Systems Examined Supply Chain Management.

## 2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

### Supply Chain Practices

The successful management of the supply chain is in the successful implementation of the chain's practices, which reflect the company's activities, which seek to improve supply chain management and thus achieve the mission and objectives of the company such as improving organizational performance and gaining competitive advantage.

Supply chain practices are relationships that connect the plant to other terminals within the chain and are suppliers and customers, as well as through internal processes carried out by the same plant Kuei et. Al. (2001). It was defined by Li, et. Al. (2006) as a flow of information and products involving all relevant parties, and serves as a link between suppliers and customers. In contrast, Chia, et. Al. (2009) in defining internal flow chain practices, which can be measured by the quality of services, new services added annually, the ability to deliver in a timely manner, and reducing waste.

Wong and Wong (2011) defined it as the group's activities to effectively manage its supply chain. Gorane and Kant (2015) describe supply chain practices with the company's activities to improve the efficiency of supply chain management. Supply chain practices are defined as activities undertaken by the Company to effectively manage the supply chain, which can be measured by the Company's ability to strengthen its relationship with supply chain suppliers represented by suppliers and customers, and through its

internal operations to ensure quality Products and services provided to customers. The researcher used three supply chain practices : (Relationships with suppliers; customer relations and internal processes).

## Supply Chain Component

The supply chain consists of activities undertaken by the company to manage the supply chain as a party within the supply chain. The courses dealt with different activities or practices when examining the relationship between these practices and the organizational performance of firms. Some considered it to be an exchange of information and materials, while others considered it to be a relationship with suppliers and customers. Where Li, et al. Al. (2006) identified the following practices: (strategic relationship with suppliers, customer relationship, level of information sharing, quality of information sharing).

Sha'ar 2014 (dealing with the following practices: communication and information exchange, customer relations) (2011), which dealt with the following variables: Supply chain management practices (independent variables) represented by information sharing, long-term relationships, advanced planning systems, Internet efficiency, supply chain architecture, And the structure of the distribution network. Also (2012), the relationship with suppliers was adopted Relationship with distributors, intermediaries, and customer relationships as supply chain practices, and Prajogo et al. (2013) are similar in supply chain components with this lesson. The supply chain has been divided into three sections: supplier relationship, internal processes, and relationship Spina, et al. (2015), which divided supply chain practices into performance management, demand planning and forecasting, supply planning, inventory planning, distribution planning, process and sales planning, customer collaboration, production planning and detailed scheduling , Transport planning and

order management). This study has chosen the following practices for supply chain practices: relations with suppliers, relations with customer and internal processes.

## Relations with Suppliers

Tracey and Tan (2001) identified the relationship with suppliers as contributing to production through the provision of materials and components related to the quality required or through their involvement in the production of the product or service to the customer in quality, Product design process. Stank et al. Al. (2001) as the degree to which the Organization can be considered as the principal supplier to its business partner. As Li, et. Al. (2006).

The practice of the supply chain as a long-term relationship that the company brings together the suppliers you are dealing with to improve planning for firms, including joint planning to reduce lost time and effort and more effective task execution. He considered) Lee, et. Al. (2007) added that supplier relationship management includes adherence to vendor selection rules, information sharing rules, and rules related to the participation of suppliers, Supplier in internal activities.

Relations with suppliers are recognized as the company's partnership with suppliers within its supply chain. These relationships involve the sharing of information; materials and activities; the need for efficient implementation; joint planning; problem solving and product design. Its importance is to improve the use of time and the organization of effort in carrying out the tasks and activities of the chain.

## Relations with Customer

This practice refers to all activities used to manage customer complaints, build long-term relationships with them, and improve their satisfaction. Where Greenbeg (2002) sees the relationship with customers as providing a high quality service to the customer in order to gain satisfaction and be the first

concern for the company. This type of relationship reduces the uncertainty associated with transactions and improves the loyalty of customers and thus improve productivity. Li (2006) noted the relationship with customers for an integrated set of practices that are used to manage customer complaints, build long-term relationships with customers, and improve customer satisfaction. Lee, et al. Al. (2007), it is necessary to provide a quick and easy-to-measure system for customer requests to contain costs, improve performance and reliability in the relationship with customers.

Flynn et al. Al. (2010) considers that the relationship with customers involves the core competencies derived from coordination with key customers. Prajogo et al. (2013) defines this relationship as requiring the company to analyze market responses to its products and improve its ability to adapt to changing requirements and expectations. Customer relations include all activities related to customer needs, customer service, customer complaints management), access to feedback and customer satisfaction. Both Isa and Sheikh (2014) define the relationship with customers as the emergence of multiple sentiments that converge in two or more extremes where relations assume that there are occasional or continuous interactions organized for exchanges of a different nature in a period of time in which substantive treatment of real events takes place.

From the point of view of this study, these relationships lead to gaining customer confidence and reducing problems in providing goods and services to them, which is reflected in the provision of high quality goods and services at the lowest cost. Customer relations are defined as referring to the links between Jordanian companies and their customers. These are long-term relationships aimed at improving customer satisfaction with the products and services provided by the stations through the use of quality products and services, and attention to customer needs and service.

## Internal Processes

Operational performance is the end result of all activities, functions and duties of the company. Daft (2001) has been confirmed as comparing the results of activities and practices carried out by the company with the objectives. Carton (2004) sees organizational performance as the financial level as the measure of change in the financial position of the organization, or the financial outputs that resulted from the management decisions and the implementation of these decisions by the members of the organization. The final results of the operations and activities of the company. Al-Amiri and Al-Ghalebi (2411) expressed performance as achieving organizational objectives efficiently and effectively Attia (2015) mentioned several definitions that addressed this concept, including organizational performance is a multidimensional concept for all areas of performance, both financial and operational Level of customer satisfaction.

## Literature Review

There are many studies discuss this topic, one of these studies is Li, et al. Al. A, study (2006)entitled "The impact of supply chain management practices on competitive advantage and organizational performance" The aim of the study was to identify the impact of supply chain management practices (supplier relationships, customer relations, level of information sharing, quality of information sharing, and delays) in organizational performance and competitive advantage. The study sample consisted of 165 organizations and data collection The results of the study indicated that high levels of implementation of supply chain management practices improve the competitive advantage and organizational performance of firms.

While Kim study (2006) which entitled "Effects of supply chain management practices, integration and competition capability on performance"

The aim of the study  was to identify the relationships between supply chain management practice and competitiveness (cost leadership, customer service, creative marketing technology, product differentiation) and the level of supply chain integration (integration with suppliers, in-house integration, integration with customers) and organizational performance ) market performance, financial performance, and customer satisfaction (. data were collected by a questionnaire distributed to the supply chain or senior management managers of managers at 594 companies from small and large Korean industrial companies. the results showed the father of a Rissah that the efficiency of the integration of the supply chain play do a  t  important Ratio for small businesses to improve organizational performance, either for big companies, the close relationship between the level of supply chain management practices and competitiveness with a greater moral impact in improving organizational performance.

Diab, et. al. (2015) in his study which entitled "The Impact of Green Supply Chain Management Practices on Organizational Performance: A Study of Jordanian Food Industries" He tested the impact of supply chain practices on organizational performance in the food industry in Jordan. The data were collected by a questionnaire distributed to (6) companies from food manufacturing companies in Jordan The results of the study indicated a significant impact of the performance management practices of the supply chain Organizational structure. Moreover, Gomez-Cedeno, et. al. (2015) in his study which entitled "Impact of human resources on supply chain management and performance" discuss the impact of human resources in supply chain management and performance and its impact affect customer satisfaction and organizational performance. The study used the descriptive approach and collected the data by means of the questionnaire distributed to a sample of (844) Spanish industrial companies, which concluded that human resources management practices

have a direct and indirect effect direct supply chain management, which plays a role in the relationship between human resources management and supply chain management outputs, the supply chain plays a role as mediator in the relationship between supply chain management performance and organizational performance.

Spina, et. al. (2015) conducted a study which entitled "The Influence of Supply Chain Management Practices in the Enterprise Performance". The aim of the study was to test the relationship between supply chain management practices (performance management, demand planning, forecasting, and planning) (Supply, Inventory Planning, Distribution Planning, Operations Planning, Sales, Customer Cooperation, Production Planning, Detailed Scheduling, Transportation Planning and Order Management) and Operational Performance. The study collected data by questionnaire from a sample of (844) the results of the study showed that supply chain management practices have a significant impact on timely delivery, accuracy of forecasting, number of days of storage, and total inventory management costs in operational performance.

## 3. METHODOLOGY
### Study Model
Figure (1) shows the study model and its independent variables, namely supply chain practices (Supplier relationships, internal processes, customer relations), and dependent variable Operational performance for Moroccan Oil & Gas Services.
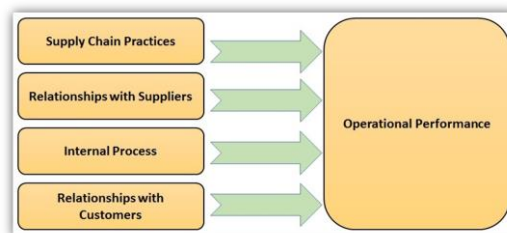


**Figure (1) Shows the Study Model**

Related to the problem of this study and its questions, to identify the impact of supply chain practices on the operational performance of Moroccan firms for oil and fuel services, this study seeks to examine the following zero hypotheses:

> **"There is no statistically significant effect of supply chain practices on the operational performance of Moroccan firms, at the (α≤ 0.05).**

The main hypotheses derive from the following hypotheses:

1. **"**There is no statistically significant impact of relationships with suppliers on operational performance of Moroccan firms, at the (α≤ 0.05)
2. "There is no statistically significant effect of internal processes on the operational performance of Moroccan firms, at the (α≤ 0.05)". )".
3. "There is no statistically significant impact of relationships with customer on operational performance of Moroccan firms, at the (α≤ 0.05)".

## Study population, sample, Sample procedure and Study instrument

This study examines the impact of the supply chain practices on the performance of the Moroccan firms for oil and fuel services. This study assumed as descriptive and causal study. In order to achieve the objective of this study the researcher developed questionnaire rely on the theoretical framework and to develop it through the Jury. The researcher used SPSS program to analyze the study data. This study calculates the validity tool and regression analysis to test impact, and the results were compared results of previous studies.

The study population includes all branches of Moroccan firms for oil and fuel services. The study sample includes 220 firms in the Moroccan capital Rabat. However, the study sample select in stereogram method. Furthermore, selecting the

stations in the Moroccan capital Rabat come for two main reasons:

1. Due to the large number of fuel stations deployed in morocco.
2. The density of the number of petrol stations in the Moroccan capital Rabat.

The study response include of managers and technicians in the fuel stations of the firms, and 75 (the questionnaire was submitted to a sample of managers number) manager and technicians. Moreover, the researcher used a questionnaire to investigate the impact of supply chain practices on the performance of the Moroccan firms for oil and fuel services. The questionnaire consisted of three parts: First part relates to the demographic characteristics of the sample, represented by (gender, age, educational qualification, administrative level. The second part of the questionnaire consisted of independent variables (supply chain practices). The third part is the relationship with customers. The researcher applied the Likert scale with five-dimensional to find out the impressions of the trainees and technicians on each paragraph as follows: 1: completely disagree 2: disagree 3: slightly agree 4: agree 5: completely agree.

The study data were collected from two main sources: secondary sources and primary sources. The secondary data was collected through the theoretical frame of reference of the study variables and the return to books, studies, articles, researches, journals, letters, theses and the web in order to build the model of study and develop its change and poor. While the preliminary data were collected through the questionnaire developed on the basis of previous studies and developed through the jury.

220 questioners were distributed to all the technicians and technicians working in the firms. (18) Were identified as incomplete and 202 remained (and 8% of the total) were

canceled. Then, they were introduced into the analysis program In order to verify the normal distribution of the study sample and the validity and stability of the study tool, SPSS used the following tests:

## Normal distribution.

| Ser. | Var. | KS (z) | Sig |
|------|------|--------|-----|
| 1 | Relationship with the supplier | 1.057 | 0.188 |
| 2 | Internal processes | 1.644 | 0.004 |
| 3 | Relationship with customers | 0.878 | 0.443 |
| | Total degree of independent variables | 0.987 | 0.289 |
| | Operational performance | 1.477 | 0.033 |

**Table 1: shows the normal distribution**

Table (1) shows that there is a natural distribution of the responses on the relationship with the supplier and the relationship with the customers and the total number of changes in the supply chain, where the value of significance is more than the significance of the internal processes and the operational performance of the target indication.

## Instrument Validity, Stability

The validity of the content has been confirmed by presenting it to a group of arbitrators and specialists in this field from the Moroccan universities and based on the recommendations of the jury. This study used The Cronbach alpha coefficient to ascertain the extent of internal consistency. Table (2) shows the alpha values for all the study variables. All the variables of the study obtained a level of alpha that is above the acceptable limit of 60%.

| Ser. | Var. | KS (z) |
|------|------|--------|
| 1 | Relationship with the supplier | 0.83 |
| 2 | Internal processes | 0.91 |
| 3 | Relationship with customers | 0.78 |
| 4 | Operational performance | 0.76 |
| | Total degree | 0.89 |

**Table 2: shows Cronpach alpha for all study variables**

## Study sample Characteristics

Table (3) shows the study sample according to the gender

| Gender | Repetition | Percentage |
|--------|-----------|------------|
| Male | 188 | 0.93 |
| Female | 14 | 0.07 |
| Total | 202 | 0.443 |

**Table 3: shows study sample according to gender**

We note that the study sample include 188 male with percentage 93% while the female percentage is 7% only. This result mean that most of people working in the field of oil and fuel services are from male.

Table (4) shows the study sample according to the age

| Age | Repetition | Percentage |
|-----|-----------|------------|
| 20-30 | 13 | 0.06 |
| 31-40 | 84 | 0.42 |
| 41-50 | 61 | 0.30 |
| More than 50 | 44 | 0.22 |
| Total | 202 | 100% |

**Table 4: shows study sample according to Age**

Table (4) shows the study sample Characteristics according to age. We note that 84% of the study sample age are between 31-40. While the percentage of the category 20-30 only represent 6% of the study sample.

Table (5) shows the study sample according to the management level.

| Management Level | Repetition | Percentage |
|------------------|-----------|------------|
| High level | 2 | 0.01 |
| Medium level | 39 | 0.19 |
| Low level | 161 | 0.80 |
| Total | 202 | 100% |

**Table 5: shows study sample according to management level**

Table (5) shows the study sample Characteristics according to management level. We note that 80 % of the study sample are

from low level management. While the percentage of high level management only represent 1% of the study sample.

Table (6) shows the study sample according to the qualification.

| Qualification | Repetition | Percentage |
|---|---|---|
| Less than bachelor | 121 | 0.599 |
| Bachelor | 78 | 0.386 |
| Master | 2 | 0.010 |
| PHd | 1 | 0.005 |
| Total | 202 | 100% |

**Table 6: shows study sample according to management level**

Table (6) shows the study sample Characteristics according to qualification. We note that 59.9 % of the study sample are from less than bachelor. Followed by bachelor with percentage 38.6%.

## 4. EMPIRICAL RESULTS AND DISCUSSION

### Relationship between variables

To examine the relationship between the independent variables, as well as their relationship with the dependent variable, the Pearson double test was used. Table (7) shows the correlation between study variables.

| Ser. | Var. | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1 | Relationship with the supplier | 1 | | | | |
| 2 | Internal processes | 0.823** | 1 | | | |
| 3 | Relationship with customers | 0.876** | 0.832** | 1 | | |
| 4 | Supply chain | 0.933** | 0.928** | 0.947** | 1 | |
| 5 | Operational performance | 0.855** | 0.894** | 0.802** | 0.857** | 1 |

**Table 7: shows the correlation between variables**
**\*\* Correlation is significant at 0.001 level (2- tailed).**

Table (7) shows that the relationship between independent variables is very strong, moreover, (r) level come between (0.823 and 0.876). In addition, there is a strong relationship between the components of the supply chain and operational

performance (r) come between (0.802 and 0.894). Thus, the internal processes have a stronger relationship with the operational performance, followed by the relationship with the supplier, and the relationship with the customers. The relationship between supply chain practices and operational performance was strong (r= 0.857).

Table 7 shows the averages of the supply chain variables which range from (3.12 to 4.52) and the standard deviation is between (0.49 and 0.57). This means that respondents agree on the medium to high importance of independent variables. As well as that there is the highest application of internal processes followed by relations with the supplier, and finally the relationship with customers that were below the t tabular which equal 2.

| Ser. | Var. | Mean | STDV. | T | Sig. |
|------|------|------|-------|---|------|
| 1 | Relationship with the supplier | 3.44 | 0.51 | 7.776 | 0.000 |
| 2 | Internal processes | 4.52 | 0.49 | 22.546 | 0.000 |
| 3 | Relationship with customers | 3.12 | 0.57 | 1.897 | 0.155 |
|  | Average for independent variables | 3.73 | 0.50 | 10.537 | 0.000 |
| 4 | Operational performance | 4.21 | 0.54 | 18.563 | 0.000 |

**Table 8: shows the means, standard deviations and T test between variables**

Table 8 shows that the relationship with the supplier obtained mean of 3.44 with standard deviation of 0.51. While, the internal operations mean was 4.52 with standard deviation of 0.49. Moreover, the mean of the relationship with customers 3.12 with standard deviation 0.57. The operational performance also achieved mean of 4.21 and a standard deviation of 0.54. The overall mean of the independent variables was 3.73 and a standard deviation of 0.50, which means that the supply chain practices are of medium importance as the calculated T is higher than the T tabular. The table also shows that the arithmetic mean of the dependent variable is 4.21 and the standard deviation is 0.54 indicating the high importance of the

operational performance since the calculated T is higher than the T tabular.

Table (9) shows the means, standard deviations and T test for all figures related with relationships with suppliers items.

| Ser. | Var. | Mean | STDV. | T | Sig. |
|---|---|---|---|---|---|
| 1 | The company has a supplier database | 4.32 | 0.61 | 23.231 | 0.000 |
| 2 | The company exchanges information with the refinery through a specialized information network | 4.27 | 0.67 | 19.78 | 0.000 |
| 3 | There is a joint training program between the company and the refinery | 1.76 | 0.88 | -14.387 | 1.667 |
| 4 | The company coordinates with the refinery to ensure our request is timely | 4.06 | 0.82 | 12.78 | 0.000 |
| 5 | The company is keen to involve suppliers in organizing and developing the services provided | 2.44 | 1.13 | -4.675 | 0.001 |
| 6 | The company receives a round-the-clock service from the refinery | 1.78 | 0.78 | -13.43 | 0.000 |
| 7 | The company gets from the refinery on fuel according to the specifications and standards required | 4.61 | 0.66 | 24.54 | 0.000 |
| | Total degree | 3.44 | 0.51 | 7.776 | 0.000 |

**Table 9: shows the means, standard deviations and T test for relationship with suppliers items**

Table (9) shows that means ratios relationship with supplier's items are between (1.76 and 4.32) and the standard deviation is between (0.61 and 1.13). The first paragraph which stated "The Company has a supplier database" come in the first place with mean (4.32) and standard deviation (0.61), followed by the second paragraph which stated "The company exchanges information with the refinery through a specialized information network" with mean (4.27) and standard deviation (0.67). While the third paragraph which stated "There is a joint training

program between the company and the refinery" come in the last place with mean (1.76) and standard deviation (0.88). Which indicating that there is a variance about the medium importance of the relationship with the resource, and this confirms that the calculated t is higher than the t-tabular.

Table (10) shows the means, standard deviations and T test for all figures related with internal process items.

| Ser. | Var. | Mean | STDV. | T | Sig. |
|------|------|------|-------|---|------|
| 8 | Internal networks are available for rapid exchange of information | 4.39 | 0.62 | 22.98 | 0.000 |
| 9 | There is a unified information system in all sections of the company | 4.46 | 0.68 | 22.45 | 0.000 |
| 10 | The company conducts periodic meetings between various departments | 3.89 | 0.70 | 12.98 | 0.000 |
| 11 | The company forms teams to do some tasks and solve high problems | 3.91 | 0.79 | 14.99 | 0.000 |
| 12 | The operating costs of most of the Company's stations are appropriate | 4.05 | 0.93 | 2.77 | 0.006 |
| 13 | The company controls the size of the stock through modern systems | 3.22 | 0.65 | 25.18 | 0.000 |
| 14 | The company distributes fuel on the stations at the right time | 4.35 | 0.63 | 21.78 | 0.000 |
| | Total degree | 4.52 | 0.49 | 22.546 | 0.000 |

**Table 10: shows the means, standard deviations and T test related with internal process items**

Table (10) shows that means ratios relationship with internal process items are between (3.22 and 4.46) and the standard deviation is between (0.62 and 0.93). The paragraph number (9) which stated "There is a unified information system in all sections of the company" come in the first place with mean (4.46) and standard deviation (0.68), followed by paragraph number (8) which stated "Internal networks are available for rapid exchange of information" with mean (4.39) and standard

deviation (0.62). While the paragraph number (13) which stated "The Company controls the size of the stock through modern systems" come in the last place with mean (3.22) and standard deviation (0.65). Which indicating that there is agreement on the high importance of internal processes, assuring that t calculated higher than t tabular.

Table (11) shows the means, standard deviations and T test for all figures related with relationship with customers items.

| Ser. | Var. | Mean | STDV. | T | Sig. |
|---|---|---|---|---|---|
| 15 | The number of pumps in each station is sufficient for customer service | 3.28 | 0.79 | 3.498 | 0.001 |
| 16 | The company is interested in studying customer complaints carefully | 4.63 | 0.73 | 23.224 | 0.000 |
| 17 | The company learns the customer's high or low prices through billboards | 2.23 | 1.00 | -9.388 | 0.000 |
| 18 | The company takes care of customers to develop business | 4.22 | 0.84 | 15.453 | 0.000 |
| 19 | The company provides a place to line up the banks at each station | 3.51 | 0.98 | 6.243 | 0.000 |
| 20 | The company provides a charger for electric drive batteries | 4.93 | 0.85 | -13.564 | 0.000 |
| 21 | The company offers additional services such as free shipping | 2.09 | 0.80 | -11.876 | 0.000 |
| | Total degree | 3.12 | 0.57 | 1.897 | 0.155 |

**Table 11: shows the means, standard deviations and T test for relationship with customer items**

Table (11) shows that means ratios relationship with customer items are between (2.09 and 4.93) and the standard deviation is between (0.73 and 0.98). The paragraph number (20) which stated "The company provides a charger for electric drive batteries" come in the first place with mean (4.93) and standard deviation (0.85), followed by paragraph number (16)  which stated "The company is interested in studying customer complaints carefully" with mean (4.63) and standard deviation (0.73). While the paragraph number (21) which stated "The

Company offers additional services such as free shipping" come in the last place with mean (2.09) and standard deviation (0.80). Which shows that there is agreement on the importance of the medium relationship with customers.

Table (12) shows the means, standard deviations and T test for all figures related with Operational performance items.

| Ser. | Var. | Mean | STDV. | T | Sig. |
|------|------|------|-------|---|------|
| 22 | The customer receives the services according to the required specifications | 4.62 | 0.59 | 27,874 | 0.000 |
| 23 | The customer receives the services in a timely manner | 4.47 | 0.58 | 25.574 | 0.000 |
| 24 | Customer receives financial facilities for customers (such as payment facilities) | 2.83 | 1.17 | -2.434 | 0.018 |
| 25 | The company's customers are constantly increasing | 4.11 | 0.79 | 13.887 | 0.000 |
| 26 | The company reduces costs through research and development | 4.01 | 0.95 | 10.112 | 0.000 |
| 27 | The cost of the services of the company is less compared to competitors | 4.08 | 0.84 | 12.907 | 0.000 |
| 28 | The company has the ability to respond quickly to changes in demand | 4.32 | 0.85 | 14.990 | 0.000 |
| 29 | Company sales are acceptable compared to competitors | 4.06 | 0.69 | 14.779 | 0.000 |
| | Total degree | 4.21 | 0.54 | 18.563 | 0.000 |

**Table 12: shows the means, standard deviations and T test related with Operational performance items.**

Table (12) shows that means ratios relationship with customer items are between (2.83 and 4.47) and the standard deviation is between (0.58 and 1.17). The paragraph number (23) which stated "The customer receives the services in a timely manner" come in the first place with mean (4.47) and standard deviation (0.58), followed by paragraph number (22) which stated "The customer receives the services according to the required specifications" with mean (4.62) and standard deviation (0.59).

While the paragraph number (24) which stated "Customer receives financial facilities for customers (such as payment facilities)" come in the last place with mean (2.83) and standard deviation (1.17). Which indicating that there is agreement on the high importance of operational performance.

## Simple Regression

The main hypothesis which states that: "There is no statistically significant effect of supply chain practices on the operational performance of Moroccan firms, at the (α≤ 0.05)". Table (13) shows the simple regression to measure the effect of supply chain practices in the operational performance of Moroccan firms for oil and fuel services.

| Dependent variable | r | $R^2$ | F | Freedom degree | Regression coefficients | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Independent variable | Beta | t | Sig. |
| Operational performance | 0.882 | 0.778 | 420.435 | 201 | Supply chain practices | 0.976 | 21.764 | 0.000 |

**Table (13) shows the simple regression to measure the effect of supply chain practices in the operational performance of morocco firms for oil and fuel services.**

The results of the statistical analysis in Table (13) showed a relationship between the supply chain practices and the operating performance of morocco firms for oil and fuel services. The correlation coefficient (r = 0.882, Sig = 0.000 <0.005). While the level of supply chain practices (77.8%) is explained by the level of operational performance, where ($R^2$= 0.778, Sig = 0.000, F =420.435). moreover, the value of ß= (0.976) which means that there is an impact of supply chain practices in operational performance where (Beta= 0.976, t= 21.764, Sig= 0.000). This confirms an effect and therefore we reject the null hypothesis and accept the Alternative hypothesis which states "There is statistically significant effect of supply chain practices on the operational performance of Moroccan firms, at the (α≤ 0.05)".

## The first sub hypothesis

There is no statistically significant impact of relationships with suppliers on operational performance of Moroccan firms, at the (α≤ 0.05)". Table (14) shows the simple regression to measure the effect of relationships with suppliers in the operational performance of Moroccan firms for oil and fuel services.

| Dependent variable | R | $R^2$ | F | Freedom degree | Regression coefficients | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Independent variable | Beta | t | Sig. |
| Operational performance | 0.846 | 0.716 | 220.675 | 201 | Supply chain practices | 0.845 | 13.863 | 0.000 |

**Table (14) shows the simple regression to measure the effect of relationships with suppliers in the operational performance of Moroccan firms for oil and fuel services.**

The results of the statistical analysis in Table (14) showed a relationship between the relationship with suppliers and the operating performance of Moroccan firms for oil and fuel services. The correlation coefficient (r = 0.846, Sig = 0.000 <0.005). While the level of practice of relationships with suppliers (71.6%) is explained by the level of operational performance, where ($R^2$= 0.716, Sig = 0.000, F =220.675). moreover, the value of ß= (0.845) which means that there is an impact of supply chain practices in operational performance where (Beta= 0.845, t= 13.863, Sig= 0.000). This confirms an effect and therefore we reject the null hypothesis and accept the Alternative hypothesis which states "There is statistically significant impact of relationships with suppliers on operational performance of Moroccan firms, at the (α≤ 0.05)".

## The second sub hypothesis

There is no statistically significant effect of internal processes on the operational performance of Moroccan firms, at the (α≤ 0.05)". )". Table (1**5**) shows the simple regression to measure the effect of internal processes in the operational performance of Moroccan firms for oil and fuel services.

| Dependent variable | r | $R^2$ | F | Freedom degree | Regression coefficients | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Independent variable | Beta | t | Sig. |
| Operational performance | 0.898 | 0.807 | 488.117 | 201 | Supply chain practices | 0.906 | 23.675 | 0.000 |

**Table (15) shows the simple regression to measure the effect of internal processes in the operational performance of Moroccan firms for oil and fuel services.**

The results of the statistical analysis in Table (15) showed a relationship between internal process and the operating performance of Moroccan firms for oil and fuel services. The correlation coefficient (r = 0.898, Sig = 0.000 <0.005). While the level of internal process (80.7%) is explained by the level of operational performance, where ($R^2$ = 0.807, Sig = 0.000, F =488.117). moreover, the value of ß= (0.906) which means that there is an impact of supply chain practices in operational performance where (Beta= 0.906, t= 23.675, Sig= 0.000). This confirms an effect and therefore we reject the null hypothesis and accept the Alternative hypothesis which states "There is statistically significant effect of internal processes on the operational performance of Moroccan firms, at the (α≤ 0.05)". )".

### The third sub hypothesis
There is no statistically significant impact of relationships with customer on operational performance of Moroccan firms, at the (α≤ 0.05)". Table (1**6**) shows the simple regression to measure the effect of internal processes in the relationships with customer of Moroccan firms for oil and fuel services.

| Dependent variable | r | $R^2$ | F | Freedom degree | Regression coefficients | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Independent variable | Beta | t | Sig. |
| Operational performance | 0.804 | 0.647 | 186.443 | 201 | Supply chain practices | 0.818 | 14.878 | 0.000 |

**Table (16) shows the simple regression to measure the effect of relationships with customer in the operational performance of Moroccan firms for oil and fuel services.**

The results of the statistical analysis in Table (16) showed a relationship between relationships with customers and the operating performance of Moroccan firms for oil and fuel services. The correlation coefficient (r = 0.804, Sig = 0.000 <0.005). While the level of internal process (64.7%) is explained by the level of operational performance, where ($R^2$= 0.647, Sig = 0.000, F =186.443). moreover, the value of ß= (0.818) which means that there is an impact of supply chain practices in operational performance where (Beta= 0.818, t= 14.878, Sig= 0.000). This confirms an effect and therefore we reject the null hypothesis and accept the Alternative hypothesis which states "There is statistically significant impact of relationships with customer on operational performance of Moroccan firms, at the (α≤ 0.05)".

## 5. CONCLUSIONS

1. This study shows that the Moroccan oil and fuel service firms medium applied the supply chain practices, with the largest application of internal operations practices, then the relationship with the supplier and finally the customer relationship practices. This finding is consistent with the study of (Li, et. Al., 2006) and Wong and Wong, 2011).

2. This study emphasizes that the relationship between the variables of supply chain practices is very strong, as is the relationship between each element with the overall practice of the supply chain. The study also shows that there is a strong correlation between the elements of supply chain practices and operational performance. This result is consistent with the studies of (Miguel and Brito و2011; Prajogo et al. Al., 2013; Elwan and Ogunyemi, 2012, and Gomez-Cedeno, et al. Al., 2015).

3. The results of this study show that there is an impact of supply chain practices on operational performance. As

for the elements of supply chain practices, the internal processes have the greatest impact and then the relationship with the supplier, while it is found that there is no statistically significant relationship with customers in the operational performance of the Moroccan firms. This finding is consistent with( Koh, et al. Al., 2007; Prajogo, et. Al., 2013; Spina, et. Al., 2015; Diab, et al., 2015).

## 6. RECOMMENDATION AND FUTURE STUDIES

### Recommendation
1. Focus on coordination between supply chain parties.
2. Increased control over operating costs.
3. The company follows up on relations with suppliers to improve internal processes because of their positive impact on operational performance.
4. Pay attention to joint training programs with suppliers in order to benefit from mutual experiences.
5. Pay more attention to internal processes, especially higher costs, to reduce operating costs.
6. Work on improving the elements of supply chain practices together because there is a strong relationship between them.
7. Pay attention to the provision of chargers for batteries of electric cars because of the increasing demand for them.

### Future Studies
1. Conduct similar research on the hydrocarbons sector in other countries and compare results.
2. Conduct similar studies from the perspective of customers and suppliers.
3. The introduction of other variables has an impact on the supply chain.

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