

جامعة الجميع الذكية - ESU

كلية الإدارة - ماجستير الإدارة

عنوان البحث:

أثر مبادئ إدارة الجودة الشاملة على إدارة سلسلة التوريد في قطاع النفط والغاز في المملكة العربية السعودية.

Impact of Total Quality Management Principles on Supply Chain Management in Oil and Gas Sector in KSA.

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Introduction:

Supply chain management, or SCM, is the process of making, controlling, and improving a set of systems. The goal is to provide the best service for the least amount of money. A customer is anyone who uses an object that comes from these processes. To make as much money as possible, a company needs to think about the pros and cons of each supply chain choice. Oil and gas companies can get a lot out of making their supply lines work better. Companies must now learn about and use SCM to stay competitive on the world market and make more money (Alahmad, 2021, p. xx).

The oil and energy business in Saudi Arabia brings in a lot of money and changes the energy market around the world. Total Quality Management (TQM) is a set of ideas that aims to make goods and services better by involving all workers in ongoing growth (Abd-Elwahed & El-Baz, 2018). These ideas have become more important in controlling the supply chain of the industry in recent years.

TQM helps the oil and energy business run more easily and save money, which is one of its main benefits. TQM can help find waste and mistakes in the supply chain and get rid of them by getting everyone to work together to improve quality. This saves money for the company. TQM can also make it easier for teams and buyers to talk to each other and work together (Abd-Elwahed & El-Baz, 2018). This makes the supply chain run more smoothly and with fewer problems.

Research Problem:

- To look at how the Total Quality Management (TQM) ideals of continuous improvement, information analysis, focused on customer needs, teamwork, and making choices based on data can change how well the supply chain works in

the oil and gas industry in Saudi Arabia. This will focus on things like freedom, cost, strategy decisions, clarity, and speed of performance.

- To evaluate how the use of TQM ideas is linked to how well the supply chain management works in Saudi Arabia's oil and gas industry.
- To give advice to Saudi Arabian oil and gas companies on how to use TQM ideas to improve how well their supply chain works, make them more competitive, and improve their overall performance.

Importance of Research:

Research is very important if the oil and gas business wants to figure out how to make things better. It helps us understand how Total Quality Management (TQM) can make the business safer, more efficient, and cheaper. Research can show us how to make things better, lose less, and make people happier. It also lets us see how things like training employees, improving processes, and analyzing data affect results. So, study is a very important part of making oil and gas businesses better at what they do.

Research Hypothesis:

Following are the variables of study:

Quality Practices	Supply Chain Performance
Continuous Improvement	Supply Chain Flexibility
Information Analysis	Supply Chain Cost
Customer Needs	Strategic decision of supply chain
Collaboration and team empowerment	Supply chain visibility
Data-Driven decision making and Analysis	Delivery time in supply chain

H1: Supply chain flexibility improves with continuous improvement.

H2: Continuous improvement positively affects supply chain costs.

H3: Strategic decisions in supply chain benefit from continuous improvement.

H4: The visibility of the supply chain gets better with continuous improvement.

H5: Delivery time in supply chain is positively influenced by continuous improvement.

H6: Information analysis leads to more flexible supply chains.

H7: Supply chain costs are positively impacted by information analysis.

H8: Strategic supply chain decisions improve with information analysis.

H9: Supply chain visibility increases due to information analysis.

H10: Information analysis helps shorten delivery times in supply chains.

H11: Supply chain flexibility is positively affected by addressing customer needs.

H12: Customer needs' focus positively influences supply chain costs.

H13: Strategic supply chain decisions improve when focusing on customer needs.

H14: The visibility of the supply chain improves by focusing on customer needs.

H15: Focusing on customer needs reduces delivery times in supply chains.

H16: Collaboration and team empowerment enhance supply chain flexibility.

H17: Supply chain costs benefit from collaboration and team empowerment.

H18: Strategic supply chain decisions get better with collaboration and team empowerment.

H19: Supply chain visibility improves with collaboration and team empowerment.

H20: Delivery times in supply chains are reduced by collaboration and team empowerment.

H21: Data-driven decision-making and analysis lead to more flexible supply chains.

H22: Supply chain costs are positively impacted by data-driven decision-making and analysis.

H23: Strategic supply chain decisions improve with data-driven decision-making and analysis.

H24: Data-driven decision-making and analysis enhance supply chain visibility.

H25: Delivery times in supply chains are reduced with data-driven decision-making and analysis.

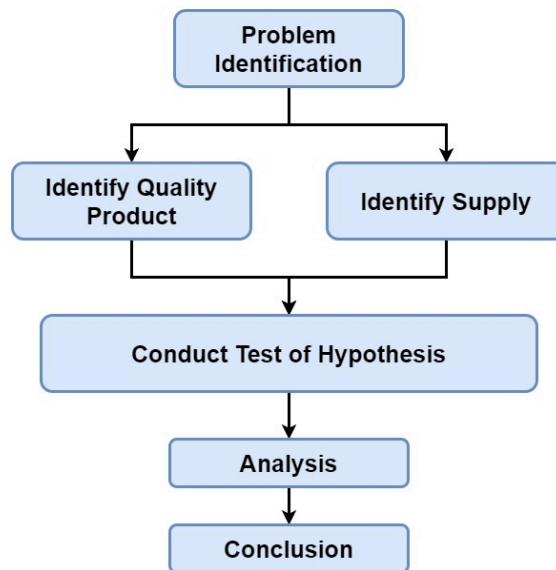
Literature Review:

Total quality management (TQM) is a way of running a business that aims to make the company perform better and make customers happier by constantly improving how things are done, and the products and services offered. It involves everyone in the company and focuses on not just meeting, but exceeding what customers expect and need. The main goals of TQM are to always get better, to get employees involved, and to use data to find and fix problems (Alahmad, 2021, p. xx).

In the oil and gas industry, TQM can be useful because it can help make things safer, more efficient, and cheaper. By using TQM principles in managing their supply chains, companies can improve the quality and reliability of what they offer, reduce waste and the need to redo work, and make customers more satisfied.

When looking at TQM in the context of supply chain management in the oil and gas industry, independent variables might be things like training and involving employees, efforts to improve processes, managing the quality of suppliers, and using data analysis to find and get rid of flaws. Dependent variables might be things like how satisfied customers are, the quality of products, and how efficiently operations run (Abd-Elwahed & El-Baz, 2018).

Research Methodology:



Research Structure:

Sample selection would be using the non-probability convenience sampling. Data would be collected from public and private sectors present in Saudi Arabia using google forms. We will use Google forms to share the questionnaire with people who work in the Oil and Gas industry in Saudi Arabia, and they will fill it out. The questionnaire will be adapted.

Research Limits:

There might be some limitations that can affect how valid and how widely we can apply the results of this study. We need to keep these in mind when we look at the findings. Some of these limitations are:

The study might only have a small number of participants. This could limit how much we can apply the findings to the whole of Saudi Arabia's oil and gas industry.

- Data Collection: The data collected for the study might be limited to a specific time or place. This could affect how well we can use the results in different times or places.

- Bias: There could be biases in the data we got, like if people chose themselves to take part, if people wanted to look good, or if there was a bias in how people responded. These could affect how valid the findings are.
- Causation: The study might not have shown a clear cause-and-effect relationship between TQM principles and different parts of supply chain management. Other factors that the study didn't look at might also affect the things we're studying.
- External Factors: There might be outside factors that affect the things we're studying, like the economy or politics, that the study didn't account for.
- Measurement instruments: The tools used in the study, like surveys or questionnaires, might have problems with how valid and reliable they are. This could affect how accurate the findings are.

References:

1. Alahmad, Y. Y. (2021). The relationship between supply chain management practices and supply chain performance in Saudi Arabian firms. *American Journal of Industrial and Business Management*, 11(01), 42-59. <https://doi.org/10.4236/ajibm.2021.111004>
2. Abd-Elwahed, M. S., & El-Baz, M. A. (2018). Impact of implementation of total quality management: An assessment of the Saudi industry. *South African Journal of Industrial Engineering*. <https://doi.org/10.7166/29-1-1902>