Journal of
Value Creating in Business Management
https://www.jvcbm.ir

Volume 4, Issue 1, Spring 2024, Pages 347 to 364

Research Paper (Qualitative)

eISSN: 2980-8359

Designing the alignment model of petrochemical projects with the country's industrial strategies in the Ministry of Petroleum

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Receive:
07 November 2023
Revise:
06 February 2024
Accept:
07 March 2024

Keywords:
Industrial strategies,
Petrorefinery projects,
Technology,
Participation factors,
Human resources

Abstract

The purpose of this research is to design a model for the alignment of petroleum refinery projects with the country's industrial strategies in the Ministry of Oil. The research method is applicable in terms of purpose, qualitative in terms of data collection, and data-based type. The statistical population of the research includes 20 experts and senior managers of the Ministry of Petroleum and Petrorefineries in Tehran, selected by theoretical sampling. To collect and analyze the data, the data-based theory research strategy was used. The data collection tool is a semi-structured interview. Data analysis and model design were done through coding. The findings of the research showed that the alignment of the refinery projects with the country's industrial strategies in the Ministry of Oil, the enablers of the alignment include the maturity of communication and managerial factors and the exercise of authority, strategic technology planning and organizational architecture aligned with technology, partnership factors, human resources (innovation, entrepreneurship, expertise, knowledge), and the distinctive competence factors that lead to the realization of optimization results and reduction of capital and current costs and synergy in both sides of petro-refining and industry. Managers and experts can help to optimize this industry and reduce costs by using the model of aligning petroleum refinery projects with industrial strategies. Based on the results, it is suggested to the planners of the oil industry to try to increase the alignment of the refinery projects with the industrial strategies of the country in order to develop the refineries.

Please cite this article as (APA): Shojaeian, A., Abbaspour Esfadan, G., Valmohammadi, C., & Alirezaei, A. (2024). Designing the alignment model of petrochemical projects with the country's industrial strategies in the Ministry of Petroleum. *Journal of value creating in Business Management*, *4*(1), 347-364.

https://doi.org/10.22034/jvcbm.2024.424277.1235

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Journal of
Value Creating in Business Management
https://www.jvcbm.ir
Volume 4, Issue 1, Spring 2024, Pages 347 to 364

Extended Abstract

Introduction

Strategic alignment or, in other words, strategic fit, is an important and vital concept in how organizations can transform the use of IT in the organization into real improvements in performance. The concept of strategic alignment originates from a set of experimental and conceptual measures in organizational texts, the main purpose of which is organizational performance and thus the fit between factors such as strategy, structure, technology, culture and environment (Primasari, 2022). In today's turbulent business environment, the success of organizations depends on the orientation of all parts of the organization in line with its strategic direction. In such an environment, organizations have no choice but to use technology as a strategic resource in order to achieve their strategic goals, and this is where the concept of alignment of technology and development strategies (strategic alignment) becomes meaningful (McAdam et al, 2017, Visscher et al, 2021). Strategic alignment refers to the use of technology in an appropriate and timely manner; and in balance with strategies, goals, and development needs. The research conducted in the field of strategic alignment shows the existence of a positive and effective relationship between competitive strategies, technology, and organizational performance; and managers who have succeeded in aligning these strategies in their organizations emphasize that creating integration is essential for the survival and success of organizations. (Primasari, 2022). The importance of formulating a development strategy is to obtain a sustainable technological competitive advantage so that to keep the industry in the competitive boundaries. Therefore, it is necessary to have a proper vision of the distinctive technologies of the industry, the products and services that the organization and industry can provide, and the position that the organization or industry intends to be in in the future. The main issue of the present research is: what is the model of alignment of petrochemical projects with the country's industrial strategies in the Ministry of Oil?

Theoretical Framework

Project alignment with strategy

Strategic alignment or, in other words, strategic fit, is an important and vital concept in how organizations can transform the use of IT in the organization into real improvements in performance. The concept of strategic alignment originates from a set of experimental and conceptual measures in organizational texts, the main purpose of which is organizational performance and thus the fit between factors such as strategy, structure, technology, culture and environment (Sadigov, 2022). Strategic alignment has been defined as the extent to which IS strategy supports business strategies and is supported by them (Abdulwase et al, 2020).

Ghatak & Garg (2022) in a research investigated the power transfer project: a framework for aligning the success of the project with the organization's purpose. The result shows that project success has a positive direct relationship with strategy, risk, information technology, and stakeholders. Risk as a mediating variable with contract, information technology, and stakeholders, has a direct relationship with strategy; therefore, the contract has a significant indirect relationship with the success of the project. The proposed framework supports the alignment of project success with organizational goals through critical success factors.

Primasari (2022) investigated strategy formulation to achieve alignment between information technology and business in game companies. The research generated several specific recommendations for gaming companies in the areas of business strategy, IT strategy, organizational infrastructure/process, and IS/IT infrastructure/process. Key strategies derived from this research are strengthening product advertising and marketing and expanding networks with potential consumers, other game manufacturers, and governments.

Research methodology

The research method is applicable in terms of purpose, qualitative in terms of data collection, and data-based type. The statistical population of the research includes 20 experts and senior managers of the Ministry of Petroleum and Petrorefineries in Tehran, selected by theoretical sampling. To collect and analyze the data, the data-based theory research strategy was used. The data collection tool is a semi-structured interview.

Research findings

Data analysis and model design were done through coding. The findings of the research showed that the alignment of the refinery projects with the country's industrial strategies in the Ministry of Oil, the enablers of the alignment include the maturity of communication and managerial factors and the exercise of authority, strategic technology planning and organizational architecture aligned with technology, partnership factors, human resources (innovation, entrepreneurship, expertise, knowledge), and the distinctive competence factors that lead to the realization of optimization results and reduction of capital and current costs and synergy in both sides of petro-refining and industry. Managers and experts can help to optimize this industry and reduce costs by using the model of aligning petroleum refinery projects with industrial strategies. Based on the results, it is suggested to the planners of the oil industry to try to increase the alignment of the refinery projects with the industrial strategies of the country in order to develop the refineries.

Conclusion

The current research was carried out with the aim of designing a model for the alignment of petroleum refinery projects with the country's industrial strategies in the Ministry of Petroleum. The results of this research correspond with the results of Malik Ghasemi (2021), Dos Santos et al, (2021), Nosrati (2021), Mirzaei (2020), Ghatak & Garg (2022), Primasari (2022), Dos Santos et al, (2021), Bentley-Goode et al, (2019), Al-Adaileh (2017), Sniukas et al, (2016), and Canhoto et al, (2021). Ghatak & Garg (2020) in a research investigated the power transfer project: a framework for aligning the success of the project with the organization's purpose. The result shows that project success has a positive direct relationship with strategy, risk, information technology, and stakeholders. Risk as a mediating variable with contract, information technology, and stakeholders, has a direct relationship with strategy; therefore, the contract has a significant indirect relationship with the success of the project. The proposed framework supports the alignment of project success with organizational goals through critical success factors.

According to the results of the research, the following suggestions are presented:

- It is suggested that organizations use new technologies, especially information and communication technology, to create more value; because Fava-centering of the processes of an organization can play a significant role in improving processes and creating more value. This Fava orientation should be done based on a certain procedure and a certain framework so that all its advantages can be detected.
- Information technology governance provides an implementation framework for transformation and change from traditional processes to Fava-oriented processes, which is suggested to be improved in order to reach this framework, which measures the maturity of communication in organizations.