Artículo de investigación

Investigating the effect of alignment between portfolios management and the strategy of the organization on portfolios success in an oil & gas company

Investigar el efecto de la alineación entre la gestión de carteras y la estrategia de la organización sobre el éxito de las carteras en una empresa de petróleo y gas

Investigando o efeito do alinhamento entre o gerenciamento de portfólios e a estratégia da organização no sucesso de portfólios em uma empresa de petróleo e gás

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Abstract

The aim of this study was the effect of alignment between portfolios management and strategy of the organization on portfolios success in Iranian Oil & Gas Company. This study was applied and correlational. In the first phase, using previous literature and interviewing the elites, the indicators were identified then proposed a questionnaire, the validity of which was confirmed using experts' ideas as well as convergent validity and the reliability of questionnaires was obtained as 0.81 using Cronbach's alpha. In the next phase, to test model and investigate the alignment status of research statistical population that is the company, 99 managers and employees were selected as sample. To analyze data, structural equation test through PLS software was used. The results showed that:

1-Strategic alignment of portfolios and the strategy of organization affects the portfolio's success positively and has a significant relationship with it.

2-Strategic alignment of portfolios and the strategy of organization affects the realization of organization benefits positively and has a significant relationship with it.

Resumen

El objetivo de este estudio fue el efecto de la alineación entre la gestión de carteras y la estrategia de la organización sobre el éxito de las carteras en Iranian Oil & Gas Company. Este estudio fue aplicado y correlacional. En la primera fase, utilizando literatura previa y entrevistando a las élites, se identificaron los indicadores y luego se propuso un cuestionario, cuya validez se confirmó con ideas de expertos y validez convergente, y la confiabilidad de los cuestionarios se obtuvo como 0,81 usando alfa de Cronbach. En la siguiente fase, para probar el modelo e investigar el estado de alineación de la población estadística de investigación que es la empresa, se seleccionaron 99 gerentes y empleados como muestra. Para analizar los datos, se utilizó la prueba de ecuación estructural a través del software PLS. Los resultados mostraron que:

1-La alineación estratégica de las carteras y la estrategia de organización afecta positivamente el éxito de la cartera y tiene una relación significativa con ella.

2-La alineación estratégica de las carteras y la estrategia de organización afecta positivamente

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3-The portfolios success aff ects the realization of organization benefits positively and has a significant relationship with it.

Keywords: Strategy of the Organization, Alignment, Portfolios Management, Portfolios Success, Realization of Organization Benefits, Project Management.

la realización de los beneficios de la organización y tiene una relación significativa con ella.

3-El éxito de las carteras afecta positivamente la realización de los beneficios de la organización y tiene una relación significativa con ella.

Palabras clave: estrategia de la organización, alineación, gestión de carteras, éxito de carteras, realización de beneficios de organización, gestión de proyectos.

Resumo

O objetivo deste estudo foi o efeito do alinhamento entre o gerenciamento de portfólios e a estratégia da organização sobre o sucesso dos portfólios na Iranian Oil & Gas Company. Este estudo foi aplicado e correlacional. Na primeira fase, utilizando a literatura prévia e entrevistando as elites, os indicadores foram identificados e, em seguida, proposto um questionário, cuja validade foi confirmada por meio de idéias de especialistas e validade convergente e a confiabilidade dos questionários foi obtida em 0,81 usando o alfa de Cronbach. Na fase seguinte, para testar o modelo e investigar o status de alinhamento da população estatística da pesquisa que é a empresa, 99 gestores e funcionários foram selecionados como amostra. Para análise dos dados, foi utilizado o teste de equações estruturais por meio do software PLS. Os resultados mostraram que:

1-Alinhamento estratégico de portfólios e a estratégia de organização afeta positivamente o sucesso do portfólio e tem uma relação significativa com ele.
2-O alinhamento estratégico de portfólios e a estratégia de organização afetam positivamente a realização dos benefícios da organização e possuem uma relação significativa com ela.
3 - O sucesso das carteiras afeta positivamente a realização dos benefícios da organização e tem relação significativa com ela.

Palavras-chave: Estratégia da Organização, Alinhamento, Gestão de Portfólios, Sucesso de Portfólios, Realização de Benefícios da Organização, Gerenciamento de Projetos.

Introduction

When the strategy of business is interpreted by the level of project goals, the professional uniqueness of each project such as the speed in proposing to the market or superior quality is identified among other factors. Perceiving the challenge ahead of aligning portfolios management and business strategy, project managers, and his team can manage their projects in today competitive space. Of course, this alignment is considered as one of the challenging issues for the organization because the goals of organizations strategy aren't often transferred to the different levels of the organization profoundly and aren't congruent with organization projects. Lack of alignment leads to failure of market opportunities and proposing a solution is difficult for companies. So that perceiving this alignment can be considered as one of the most important challenges of effective project management in organizations. Projects can be regarded as major components of organizational strategy in most of the companies especially project-driven ones (Shenhar, AJ; Dvir; Srivannaboon, S; Milosevic D.Z. (2007). Today, the organizations have to turn to strategic management of the project to achieve competitive advantages. To do this, they need to make some instructions to create alignment between projects and organizations business strategy. The project managers also have to think more strategically and are responsible for their organization achievements so project managers and his team aren't merely responsible for finishing the project. Alignment models and studies are great contributions to strategic project management. Despite major agreement on the importance and suitability of alignment study in organizations, the problem which still exists is lack of precise and testable definition of alignment to determine whether the organization is in an appropriate status or not (Venkatraman, N. (1989). "). Investigating the conducted studies in the field of alignment represents inadequacy of relevant models to understand and test alignment. Although the importance of

investigating alignment among organizational layers has been mentioned by researchers, a written guide is less found to translate this concept to the required levels. As a result, researchers have used their own models without testing the validity of these methods in order to measure and test alignment (Drazin, Robert, and Andrew H. Van de Ven. (1985)).

The conducted studies show that there isn't also a much attention and knowledge about the alignment of organization strategy and portfolios in Iran and strategic approach in project management has been neglected so this study can be considered as an effective step to align portfolios management and organization strategy.

Rearch Literature

Business Strategy. The concept of strategy isn't new in the society, it was rooted in the first days of writing about war, published in famous works such as Sun Tzu (written around 400 BC) (1998) and Von Clausewitz (written after the Napoleonic wars in the early eighteenth century (1993). The philosophers of the early war didn't have any problem defining the strategy. They regarded it as an effort to find the best method for ensuring the victory in the war or battle (Aleksandrovna Maximova and Aleksandrovich Belyaev, 2017). They usually used to determine different strategies and align them with seemingly the most appropriate conditions.

Alignment of Organization Strategy with Portfolio Management

The criteria of portfolio success can be identified given the definition of main goals of portfolio management including maximizing the value of portfolios, making a balance among portfolios and alignment of projects with strategic goals of the organization (Nejad and, Keshtkar (2018), Cooper, Robert G., Scott J. Edgett, and Elko J. Kleinschmidt. (2000), Keshtkar M. M. (2016).). This definition shows that to determine portfolios success, the evaluation of each single project success cannot be merely relied upon and in fact, the projects cannot be evaluated independently and regardless of their relationship with each other. Actually, although the success of each one of projects should be considered as the main aspect of portfolio success, portfolio success includes other aspects such as strategic alignment, projects synergy and balancing the resources, evaluation of which is, of course, difficult to the great extent and sometimes impossible (Keshtkar M. M., 2011).

The alignment of portfolio success and business strategy is an internal interaction and cooperation so that the activities of portfolios support achievement of strategic goals continuously. This alignment should be noted in following cases:

1-Choosing the projects and portfolio management
2-Leading and controlling projects to support strategic goals of a company
3-Performing determined projects to support business strategies
4-Proposing information to high layers of the organization to form business strategy

In order to evaluate, the following factors and indicators have been extracted as the components of evaluating alignment between portfolios management and organization strategy.

Table 1. The summary of indicators and components of strategic alignment extracted from the literature

	Main components of alignment	Indicators
1	Guide	Using a written guideline to start projects to evaluate alignment with organization .strategy(Archer, Norm P., and Fereidoun Ghasemzadeh. (1999))
		Using a written guide to evaluate alignment among projects (Archer, Norm P., and .Fereidoun Ghasemzadeh. (1999))
2	Goals	The share of portfolios in achieving short-term and long-term goals (Rad, Parviz F., and Ginger Levin. (2006)).

		The rate of alignment between portfolios and organization strategy (Shenhar, A. J., Dvir, D., Guth, W., Lechler, T., Milosevic, D., Patanakul, P., ... & Stefanovic, J. (2007)., Srivannaboon, Sabin, and Dragan Z. Milosevic. (2006)).
3	Perspective	The rate of using internal and external potentials associated with business strategy (5, Shenhar, A. J., Dvir, D., Guth, W., Lechler, T., Milosevic, D., Patanakul, P., ... & Stefanovic, J. (2007)., Srivannaboon, Sabin, and Dragan Z. Milosevic. (2006),16). The rate of alignment between portfolios perspective and organization strategy (Shenhar, A. J., Dvir, D., Guth, W., Lechler, T., Milosevic, D., Patanakul, P., ... & Stefanovic, J. (2007)., Srivannaboon, Sabin, and Dragan Z. Milosevic. (2006)).
4	Specifications of project outputs	The rate of alignment between specifications of project outputs and organization strategy (Shenhar, A. J., Dvir, D., Guth, W., Lechler, T., Milosevic, D., Patanakul, P., ... & Stefanovic, J. (2007)., Srivannaboon, Sabin, and Dragan Z. Milosevic. (2006)).
5	Evaluation criteria	-Defining and determining project evaluation criteria -The alignment of project evaluation criteria with organization strategy (Shenhar, A. J., Dvir, D., Guth, W., Lechler, T., Milosevic, D., Patanakul, P., ... & Stefanovic, J. (2007)., Srivannaboon, Sabin, and Dragan Z. Milosevic. (2006)).
6	Tools	The alignment of used management tools in projects such as planning, controlling quality, budgeting and etc. and organization strategy (Shenhar, A. J., Dvir, D., Guth, W., Lechler, T., Milosevic, D., Patanakul, P., ... & Stefanovic, J. (2007)., Srivannaboon, Sabin, and Dragan Z. Milosevic. (2006) and (Gonzáles Llontop anf Otero Gonzáles, 2017).
7	Culture	The alignment between value criteria in projects environment and organization strategy (Shenhar, A. J., Dvir, D., Guth, W., Lechler, T., Milosevic, D., Patanakul, P., ... & Stefanovic, J. (2007)., Srivannaboon, Sabin, and Dragan Z. Milosevic. (2006)).
8	Strategic concentration	Precise and correct perception of organizational strategic goals (Rad, Parviz F., and Ginger Levin. (2006), Holmes, S. J., & Walsh, R. T. (2005).). Explicit relationship between portfolios and organization strategy (Rad, Parviz F., and .Ginger Levin. (2006)) The concentration of projects on organization competitive advantage source such as delivery speed, distinctive quality, cost leadership (Shenhar, A. J., Dvir, D., Guth, W., Lechler, T., Milosevic, D., Patanakul, P., ... & Stefanovic, J. (2007)., Srivannaboon, Sabin, and Dragan Z. Milosevic. (2006)).
9	Prioritizing projects	Prioritizing projects in allocating the sources based on available strategic resources (Archer, Norm P., and Fereidoun Ghasemzadeh. (1999), Englund, Randall L., and Robert J. Graham. (1999)). Categorizing strategic resources of the organization to be allocated to portfolios (M.G. Kaiser, et al., (2014).). Categorizing portfolios based on organization strategic goals to make decisions (Archer, Norm P., and Fereidoun Ghasemzadeh. (1999)).
10	Project management processes	-Being aware of project management processes in the organization -Using the solutions of project management in some projects -Learning the solutions and standards of project management in whole organization (Cooper, Robert G., Scott J. Edgett, and Elko J. Kleinschmidt. (2000), Vergopia, Catherine. (2008)) -Developing project management solutions and providing relevant documentaries in whole organization -Defining some measures to evaluate organization with standards and best practices -Continues improvement of current processes to achieve more effectiveness

Portfolio Success. Organization portfolios are managed by portfolio management, a wider concept than project management. Effective management of portfolio supports the organization to move towards its strategic goals in the turbulent and competitive market of business and align the investments of organization with organization strategies. Portfolio management is a newer concept than project management which is defined for integrated management of organization projects. Similar to project management, this concept has been highlighted by most of the management researchers and standardized by the US Project Management Institute and a precise knowledge body has been defined for it. Based on the definition of US Project Management Institute, portfolio management means coordinated management of one or several portfolios to achieve organizational strategies and goals. It includes relevant organizational processes by which the organization evaluates, chooses, prioritizes and allocates its limited internal resources to achieve organizational strategies aligned with its attitude, goals, and values better. Portfolio management proposes suitable information to support or modify organizational strategies and investment decisions.

Given the main goals of portfolio management including maximizing the value of the portfolio, balancing portfolios and aligning projects with organization strategic goals, portfolio success can be better defined (Cooper, Robert, Scott Edgett, and Elko Kleinschmidt, 2001).

Given the conducted investigations and study of the models and suggested factors in the field of evaluating portfolio success, following factors have been considered as the criteria for evaluating project success in the current study:

Table 2. The summary of portfolio success criteria extracted from literature

	Portfolio success criteria
1	Time performance (Dietrich, Perttu, and Päivi Lehtonen. (2005) Khosravi, Shahrzad, and Hamidreza Afshari. 2011,Shenhar, Aaron J., et al. (2001) ,Söderlund, Jonas. 2004)
2	Cost performance (Dietrich, Perttu, and Päivi Lehtonen. (2005) Khosravi, Shahrzad, and Hamidreza Afshari. 2011,Shenhar, Aaron J., et al. (2001) ,Söderlund, Jonas. 2004)
3	Quality (Dietrich, Perttu, and Päivi Lehtonen. (2005) Khosravi, Shahrzad, and Hamidreza Afshari. 2011,Shenhar, Aaron J., et al. (2001) ,Söderlund, Jonas. 2004)
4	Environmental considerations (Dietrich, Perttu, and Päivi Lehtonen. (2005) Khosravi, Shahrzad, and Hamidreza Afshari. 2011,Shenhar, Aaron J., et al. (2001) ,Söderlund, Jonas. 2004)
5	Employer's satisfaction (Khosravi, Shahrzad, and Hamidreza Afshari. 2011,Shenhar, Aaron J., et al. (2001))
6	Balancing portfolio risk (Meskendahl, Sascha. (2010) , Chao, Raul O., and Stylianos Kavadias. (2008), Chao, R. O., Kavadias, S., & Gaimon, C. (2009).)
7	Balancing resource allocation (Holmes, S. J., & Walsh, R. T. (2005)., Englund, Randall L., and Robert J. Graham. (1999), Meskendahl, Sascha. (2010) ,Martinsuo, Miia, and Päivi Lehtonen. (2007))

Organization Benefits Realization.Realization of benefits is a part of evaluating portfolio performance that without considering the obtained results and achievements arising from its execution for the organization and business macro goals, a correct attitude cannot be proposed for evaluating a project. These factors raise the questions such as whether the organization reaches predicted sales, income, and profit in the created business environment. To evaluate the rate of benefit realization, the following cases have been also used as the measures to evaluate benefits realization:

Table 3. The summary of criteria of benefits realization extracted from literature

	benefits realization factors	Measures
1	Business Performance	Rate of capital return, break-even point, profitability(Vergopia, Catherine. (2008), Meskendahl, Sascha. (2010), Atkinson, R (1999).)
2	Readiness for the future	Organizational learning, creating new infrastructure, promoting processes, written experiences, developing human resource knowledge and skills (Shenhar, AJ; Dvir; Srivannaboon, S; Milosevic D.Z. (2007), Shenhar, A. J., Dvir, D., Guth, W., Lechler, T., Milosevic, D., Patanakul, P., ... & Stefanovic, J. (2007)., Englund, Randall L., and Robert J. Graham. (1999))

Methodology

This study was applied and correlational. In the first phase, using previous literature and interviewing the elites, the indicators were identified then proposed as the questionnaire, the validity of which was confirmed using experts' ideas as well as convergent validity and the reliability of questionnaires was obtained as 0.81 using Cronbach's alpha.

In the next phase, to test model and investigate the alignment status of research statistical population that is the company, 99 managers and employees were selected as sample. To analyze data, structural equation test through PLS software was used.

Findings

Structural equation modeling using PLS. In this part, the effectiveness or ineffectiveness of mentioned factors is investigated using PLS and following that, the indicators of evaluating the factors and determination coefficient of factors are also investigated.

Analyzing the hypotheses. Figure 1 & 2 shows the research model in Smart PLS environment. Following that, each hypothesis is analyzed separately.

T Values are the numbers between the circles in figure 2 shows the significance of variables' effects on each other. If the number is more than 1.96, that means there is a positive and significant effect. If it is within +1.96 to -1.96, there is no significant effect and if it is smaller than 1.96, that means there is a negative but significant effect.

Covariance are the numbers between the circles in figure 1, if they are higher than 0.6, that means there is a strong relationship between these variables if they are within 0.3 to 0.6, the relationship is average and if they are below 0.3, there is a weak relationship.

Figure 1 and 2 respectively show the result of performing research proposed model in Smart PLS in two modes of displaying rate of effect mode & significance mode.

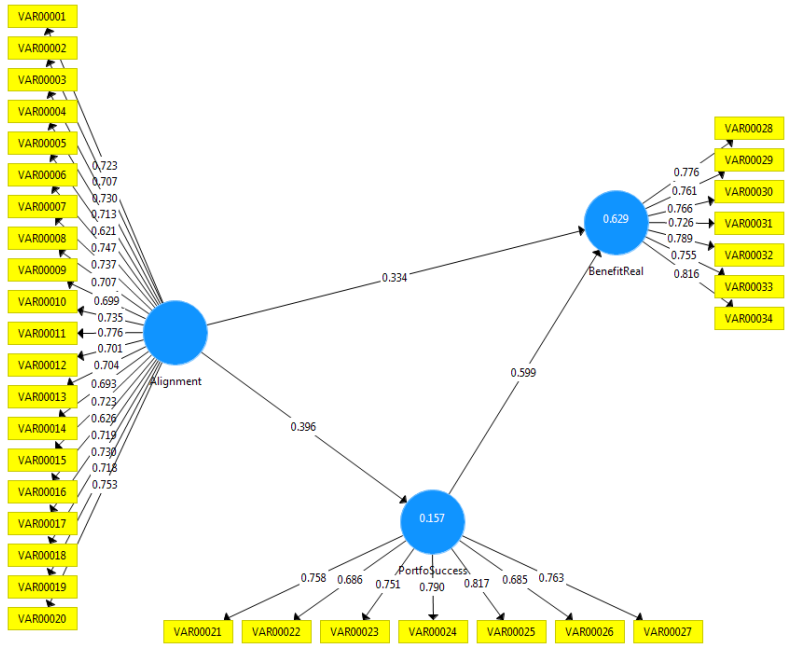

Fig. 1. The result of performing research proposed model in Smart PLS, displaying the rate of effect mode

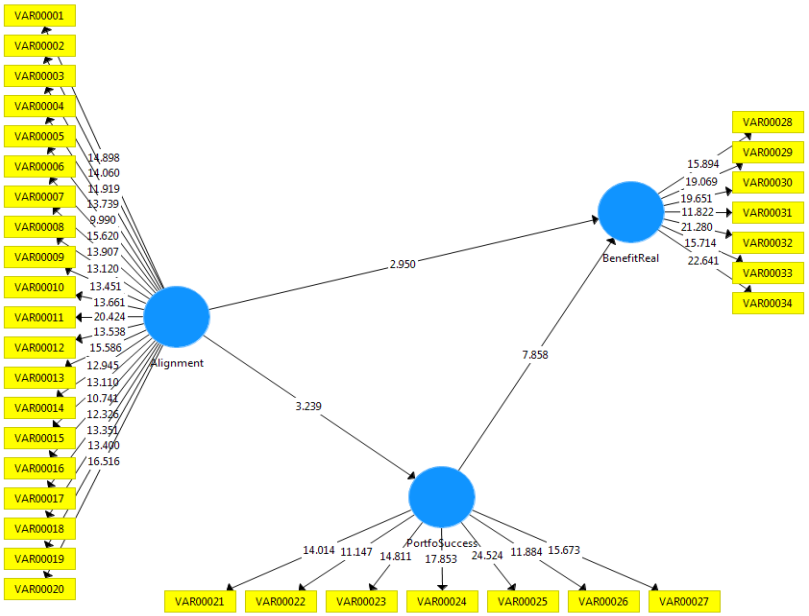

Fig. 2. The result of performing research proposed model in Smart PLS, displaying model in significance mode

Hypothesis 1:

H1: The alignment between organization strategy and portfolio management affects portfolio success positively.

As it is seen in figure 1, the alignment has an effect of 0.396 on portfolio success. Because the rate of this effect (+0.396) is within 0.3 and 0.6 so it indicates that the effect is average. Moreover, the value of T=3.239 in figure 2 which is higher than +1.96, proves the significance of the effect. Therefore: the abovementioned hypothesis is confirmed.

Hypothesis 2:

H2: The alignment between organization strategy and portfolios management affects the benefit realization positively.

As it is seen in figure 1, the alignment has an effect of 0.334 on benefit realization. Number 2.950 is its T Value in figure 2 that is higher than +1.96 so indicates the significance of the effect. That means alignment has a positive and significant effect on benefits realization and because the value of this effect (+0.334) is within 0.3 and 0.6 so this effect is average low. Finally, we conclude that the abovementioned hypothesis is confirmed.

Hypothesis 3:

H3: Portfolio success has a positive effect on benefit realization.

As it is seen in figure 1, the portfolio success has an effect of +0.559 on benefit realization. Number 7.858 is also its T Value in figure 2 that is higher than +1.96 so indicates the significance of the effect. That means portfolio success has a positive and significant effect on benefits realization and because the value of this effect 0.559 is within 0.3 and 0.6 so this effect is average to high. Finally, we conclude that the abovementioned hypothesis is confirmed.

Reliability and validity of the model

To investigate the reliability of load factors coefficients research measuring model, Cronbach's alpha and compositional reliability (CR), and to ensure validity, the convergence of variance mean shared among each structure with its own indicators (AVE) has been calculated, the results of which have been mentioned in table 4. Given the higher Cronbach's alpha and CR than 0.7, the reliability of the model is confirmed. Also, given the obtained AVE is higher than 0.5, the validity of the model is also confirmed.

Table 4. The reliability and validity of the measurement model

Latent Variable	Cronbach's Alpha	Composite Rel.	AVE
Alignment	0.949	0.954	0.51
Benefit Realization	0.885	0.911	0.593
Portfolio Success	0.871	0.9	0.564

Results

The aim of this study was the effect of alignment between portfolios management and strategy of the organization on the success of portfolios in the company. The results showed that: a- Strategic alignment of portfolios and the strategy of organization affects portfolios success positively and has a significant relationship with it. B- Strategic alignment of portfolios and the strategy of organization affects the Benefit realization positively and has a significant relationship with it. C- The success of portfolios affects the Benefit realization positively and has a significant relationship with it.

Recommendations

The first step to modify the current status in this company is that the benefits improving business results should be identified. When the benefits are managed correctly, the organizations will realize their highest capital return. Previous studies show that few

organizations have performed benefit realization effectively. In fact, most of the organizations don't have any approach for benefits realization management and as the recent findings also show, these organizations will lose the opportunity of ensuring projects achievement to predicted strategic effect and realization of benefits.

This company should focus more on implementing project management and portfolio management practices to achieve better results. The company may complete the projects successfully but they rarely connect the projects to the business goals and the reason is often a failure in identifying the predictable benefits and therefore, this value hasn't been realized.

The company should valorize project and portfolio management as a strategic ability leading to changes and act better than other competitors. It has been mentioned in a study that the organizations, using the best benefits realization practices, have had 67% less waste than other projects.

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