

Evaluation and prioritization of determinant factors on successful implementation of strategic plans of Oil Company (case study: Aghajari Oil and Gas Production Company)

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Abstract

The present research aims to evaluate and prioritize determinant factors on successful implementation of strategic plans of oil company (case study: Aghajari Oil and Gas Production Company). This study is a descriptive-survey and cross-sectional in terms of timeline. The study subjects include 7592 staffs working at Aghajari Oil and Gas Production Company employees of which using Cochran formula 365 staffs were selected. Research instrument is a standard questionnaire. To measure questionnaire validity and reliability, content analysis and Cronbach's alpha coefficient (0.83) were used respectively. data analysis was performed in PLS and SPSS software and the same time, path coefficient, coefficient of determination, structural reliability coefficient (CR), f2 Cohen coefficient and t test was used to data analysis. The results showed that the involvement of employees, strategy formulation methods, political behavior and comprehensiveness of the strategic plan implementation have a significant and positive influence on the successful implementation of Aghajari Oil and Gas Production Company.

Key Words: Employee's participation, Strategy formulation methods, Political behavior, comprehensiveness of the strategic plan implementation

Introduction

Perhaps, in viewpoints of many managers in different organizations, survival and success of organizations in today's tumultuous and changing world is consciousness managers and leaders in adopting the most appropriate strategies for their own organizations. But an important issue in strategic management process is to implementation of strategies (Hrebiniak 2006). To impellent a strategy is by far much more difficult than its formulation so that strategy implementation is the key to competitive success requiring some specific measures (Hrebiniak, 2013). In 1999, Fortune magazine in a paper claimed that 70 percent of failure in strategic organization management process is not only results from weakness of (CEO) chief executive officer in the strategies but also because of their lack of success in implementing

Strategies, (Kaplan and Norton, 2010). On the other hand, a study by the Economist Institute in 2004 was conducted on 276 companies and showed during last three decades 57% of companies have been failed in implementing their strategies (Li et al, 2008). So it can be noted that strategy implementation is the most important management challenge of all kinds of companies as far as CEO of British Petroleum (BP) on importance of implementation strategies notes: our issue is not strategy formulation, but is its implementation. Strategic success is obtained if the right strategies are properly implemented in the organization (Lashgar Blooki, 2011). Ghafarian and Tavfizi attribute this to complexity of the business environment, expansion of the scope, nature and evolution as well as administrative restrictions (Ghafarian and Tavfizi, 2011). In recent decades, strategy implementation has become a key challenge for managers and organizations. On the other hand, there are a variety of factors that affect the success or failure of the strategies implementation so that the people are involved in the strategy implementation including systems and mechanisms used in the implementation process of the strategy (Li et al, 2008). In every field of activity, there are countless factors that might affect expected results. The strategy can only succeed when these factors are under the control and applied skillfully and these factors are success critical elements (Khaliq farsangi 2009). The initial idea behind success factors was introduced by D. Ronald Daniel in late 1961 (Rockart, 2001). According to the definition by Rockart, J. and Bullen critical success factors point to a few areas in each project or business, as if lead to the desired results, it will ensure performance and competitive advantage for organization (Rockart, J. and Bullen, 2003). Here we will address the question that what are determinant factors in success of strategic plans of Oil Company?

Methodology

As library study and literature review and field methods were used and it aims to identify the characteristics, preferences and behavior of individuals as well as field methods such as questionnaires were used by referring to them, it can be noted that this study is descriptive-survey in terms of nature and research method.

The population, sampling method and sample size

According to the description given in the target population, given spatial and temporal scale of study, study population included oil and gas exploitation company employees 7592 Aghajari Oil and Gas Production Company with different ages and gender, which have common characteristics. There are several techniques for determining the sample size strictest methods, including mathematical methods to calculate sample size. If the variables (questions) are interval type and population size is limited to the following equation used where N is the population size (Momeni, 2007: p. 220).

(2-3)

$$n = \frac{\frac{z^2 pq}{d^2}}{1 + \frac{1}{N} \left(\frac{z^2 pq}{d^2} - 1 \right)}$$

Error level in Human Sciences Research is usually 0.5.

According to sample size 365 questionnaires were distributed among staffs and experts.

Instrument

Three methods was used to data collection Likert scale (table 1) is a distance measure by which the respondent show their attitude and belief about the phenomenon or topic and so the researcher will be able to determine respondent attitude.

Questionnaires reliability and validity

Table 1: reliability of research variables

Variable		Quest ion	Numb er of questi ons	Cronba ch's alpha
factors on successful implementation of strategic plans	The strategy formulation	1-5	5	0.74
	Staffs participation	6-7	2	0.78
	Political behavior	8-10	3	0.74
	Comprehensive implementation of the Strategic Plan	11-17	7	0.85
The successful implementation of strategic plans	The successful implementation of strategic plans	18-20	3	0.84

Data Analysis

Kolmogorov - Smirnov test for normality of data distribution, analysis of variance to determine the

significance of difference between variables, Friedman test for significant differences between the study variables and population mean test were adopted to determine the relationship between variables and test research hypotheses.

Descriptive Statistics

Information on demographic data analysis can be seen in Table 1. According to the results 303 subject (83.01 percent) male and 62 females (16.99 percent) female were considered. Other details can be seen in Table 1.

Inferential statistics

Normal and non-normal distribution of data To determine the normal and non-normal data, Kolmogorov - Smirnov test (K-S) was used. According to the K- S test, normal distribution hypothesis was confirmed in 0.05 and data were normal.

Table 2: construct reliability

Variable		
	The strategy formulation	0.85
factors on successful implementation of strategic plans	Staffs participation	0.79
	Political behavior	0.91
	Comprehensive implementation of the Strategic Plan	0.74
The successful implementation of strategic plans	The successful implementation of strategic plans	0.86

The average variance extracted (AVE): average variance extracted (AVE) is used to convergent validity showing high correlation of a construct compared with other constructs. The value of this coefficient varies from one and is accepted to a value higher than 5.0 (Fornell & Larcker, 1981). In following table values of these coefficient for each factor is used.

Table 3: average variance extracted

Variable		AVE
factors on successful implementation of strategic plans	The strategy formulation	0.520
	Staffs participation	0.671
	Political behavior	0.559
	Comprehensive implementation of the Strategic Plan	0.512
The successful implementation of strategic plans	The successful implementation of strategic plans	0.595

Cronbach's alpha coefficient: Cronbach's alpha is another factor that varies from 0 to 1 and accepted when it is greater than 0.7 (Cronbach, 1951). The

following table shows the values of these coefficients for each factor.

Table4: Cronbach's alpha coefficient

Variable		Question	Number of questions	Cronbach's alpha
factors on successful implementation of strategic plans	The strategy formulation	1-5	5	0.74
	Staffs participation	6-7	2	0.78
	Political behavior	8-10	3	0.74
	Comprehensive implementation of the Strategic Plan	-17 11	7	0.85
The successful implementation of strategic plans	The successful implementation of strategic plans	-20 18	3	0.84

1. Fornell-Larcker index

Fornell-Larker criterion refers to the fact that the square root of the variance values as given (AVE) any constructs should be greater than the correlation values of that constructs with other construct. Correlation values between latent variables in the model in the latent variable correlations with aspects of the software is smart pls and its characteristic is that it original element equals to 1 (Hanafizadeh and Zare, 2012). This is specified in Table 5.

5: Initial data entered in Excel given latent variables

Variable	The strategy formulation	Staffs participation	Political behavior	Comprehensive implementation of the Strategic Plan	The successful implementation of strategic plans
The strategy formulation	1	0	0	0	0
Staffs participation	0.65	1	0	0	0
Political behavior	0.59	0.51	1	0	0
Comprehensive implementation of the Strategic Plan	0.60	0.54	0.39	1	0
The successful implementation of strategic plans	0.34	0.29	0.52	0.45	1

Then values on the main diagonal matrix with are replaced with square root of the variance values as given in the above-mentioned AVE alternative that finally we get to Table 6.

Table 6: Fornell-Larkr

Variable	The strategy formulation	Staffs participation	Political behavior	Comprehensive implementation of the Strategic Plan	The successful implementation of strategic plans
The strategy formulation	0.72	0	0	0	0
Staffs participation	0.65	0.82	0	0	0
Political behavior	0.59	0.51	0.75	0	0
Comprehensive implementation of the Strategic Plan	0.60	0.54	0.39	0.72	0
The successful implementation of strategic plans	0.34	0.29	0.52	0.45	0.77

As mentioned, the values in the diagonal of the matrix must be greater than all the values in the corresponding column, as it can be seen this is case to all columns.

Structural equation modeling

1- Coefficient of determination:

The coefficient of determination is the first key criteria used for this purpose in software, measuring relationship between the amounts of variance as on a latent variable by the total amount of variance. The value of this coefficient varies 0-1 and larger quantities are desirable. Chin (1988), indicated that values close to 0.67 is optimum, close to 0.33 is normal and close to 0.19 is weak.

Table 7: R²

Variable	R ²
Strategic Plan (Factor)	0.692
Strategic Plan	0.701

Path coefficients: path coefficients indicate the strength of relationship between two variables. Some researchers believe that the path coefficient greater than 0.1 indicates a certain amount of contribution in the model (Hanafizadeh and Zare, 2012). The following table shows such coefficients for variables.

Table 8: Path coefficients

Routes	Path coefficient
factors on successful implementation of strategic plans → The successful implementation of strategic plans	0.375
The strategy formulation → The successful implementation of strategic plans	0.574
Staffs participation → The successful implementation of strategic plans	0.841
Political behavior → The successful implementation of strategic plans	0.749
Comprehensive implementation of the Strategic Plan → The successful implementation of strategic plans	0.362

Path coefficients should at least be significant at probability level of 0.05 (i.e. t is greater than 1.96) so that using bootstrap technique is visible on the model. For this purpose, two-tailed t test was used (Hanafizadeh and Zare, 2002). Using the internal model hypothesis can be evaluated. By comparing the calculated t value for each factor hypothesis can be confirmed or rejected. Thus, if the value of t-

statistic is greater than the absolute value of 1.96 it is significant at 95% and if the value of t-statistic is more than 2.58, the coefficient is significant at 99% confidence level (Hanafizadeh and Zare, 2002) . Test results of significant conceptual model coefficients is depicted in the figure below. Calculated values on the arrows shows t-statistic value.

Another factor that is considered in assessing the validity of the model is Cohen's coefficient (Cohen, 1998). This measures whether an independent latent variable has significant impact on the dependent variable or not. this value is calculated on coefficient of determination and its formula is as follows:

$$f^2 = \frac{R^2}{1-R^2}$$

Values between 0.02-0.32 indicates low impact, 0.15-0.35 indicates the average and >0.35 indicates greater effect of the independent variable on the dependent variable (Cohen, 1998 Gefen et al, 2005;) given software limitations in the calculation of this parameter follow paths are considered.

Table 9: Cohen coefficient

Variable	f ²
Strategic Plan (Factor)	2.45
Strategic Plan	2.34

The results of hypothesis testing

It should be noted that one of the limitations of software Smart PLS model is in the calculation of the fitting indicators.

Table 10: research hypotheses

Number theory	Hypotheses	Path coefficient	T-statistic	Results hypothesis
1	factors on successful implementation of strategic plans → The successful implementation of strategic plans	0.375	2.427	Confirmation
2	The strategy formulation → The successful implementation of strategic plans	0.574	2.440	Confirmation
3	Staffs participation → The successful implementation of strategic plans	0.841	2.562	Confirmation
4	Political behavior → The successful implementation of strategic plans	0.749	2.273	Confirmation
5	Comprehensive implementation of the Strategic Plan → The successful implementation of strategic plans	0.362	1.982	Confirmation

Results of inferential statistic

There are four hypotheses in this research:

1. Staffs participation has a significant impact on successful implementation of strategic plans of Aghajari Oil and Gas Production Company
2. The strategy formulation has a significant impact on successful implementation of strategic plans of Aghajari Oil and Gas Production Company

3. Political behavior has a significant impact on successful implementation of strategic plans of Aghajari Oil and Gas Production Company
4. Comprehensive implementation of the strategic plan has a significant impact on successful implementation of strategic plans of Aghajari Oil and Gas Production Company.

First hypothesis:

Staffs participation has a significant impact on successful implementation of strategic plans of Aghajari Oil and Gas Production Company. The hypothesis was confirmed. According to the results of the test path coefficient, coefficient of determination, construct reliability coefficient (CR), f² Cohen coefficient and t test Staffs participation has a significant impact on successful implementation of strategic plans of Aghajari Oil and Gas Production Company. This is in line with results of Mbarkyan et al., (2015), Marjani and Rostami (2014), Safdari Ranjbar and Akbarpoor Shirazi (2014), Aboueye Ardakan et al., (2014), Yaghubi and Jalal Kamali (2012), Haghghi et al., (2009), Ogbid and Harrington (2011), Brons et al., (2008), Dietrich and Letonin (2005), Dobni, (2003), Ribnak and Snow (1986), Nobel (1999).

Second hypothesis

The strategy formulation has a significant impact on successful implementation of strategic plans of Aghajari Oil and Gas Production Company. The hypothesis was confirmed. According to the results of the test path coefficient, coefficient of determination, construct reliability coefficient (CR), f² Cohen coefficient and t test strategy formulation has a significant impact on successful implementation of strategic plans of Aghajari Oil and Gas Production Company. This is in line with results of Mbarkyan et al., (2015), Marjani and Rostami (2014), Safdari Ranjbar and Akbarpoor Shirazi (2014), Aboueye Ardakan et al., (2014), Yaghubi and Jalal Kamali (2012), Haghghi et al., (2009), Ogbid and Harrington (2011), Brons et al., (2008), Dietrich and Letonin (2005), Dobni, (2003), Ribnak and Snow (1986), Nobel (1999).

Third hypothesis:

The Comprehensive implementation of the strategic plan has a significant impact on successful implementation of strategic plans of Aghajari Oil and Gas Production Company. The hypothesis was confirmed. According to the results of the test path coefficient, coefficient of determination, construct reliability coefficient (CR), f² Cohen coefficient and t test Comprehensive implementation of the strategic plan has a significant impact on successful implementation of strategic plans of Aghajari Oil and Gas Production Company. This is in line with results of Mbarkyan et al., (2015), Marjani and Rostami (2014), Safdari Ranjbar and Akbarpoor Shirazi (2014), Aboueye Ardakan et al., (2014),

Yaghubi and Jalal Kamali (2012), Haghghi et al., (2009), Ogbid and Harrington (2011), Brons et al., (2008), Dietrich and Letonin (2005), Dobni, (2003), Ribnak and Snow (1986), Nobel (1999).

Fourth hypothesis:

The political behavior has a significant impact on successful implementation of strategic plans of Aghajari Oil and Gas Production Company. The hypothesis was confirmed. According to the results of the test path coefficient, coefficient of determination, construct reliability coefficient (CR), f² Cohen coefficient and t test political behavior has a significant impact on successful implementation of strategic plans of Aghajari Oil and Gas Production Company. This is in line with results of Mbarkyan et al., (2015), Marjani and Rostami (2014), Safdari Ranjbar and Akbarpoor Shirazi (2014), Aboueye Ardakan et al., (2014), Yaghubi and Jalal Kamali (2012), Haghghi et al., (2009), Ogbid and Harrington (2011), Brons et al., (2008), Dietrich and Letonin (2005), Dobni, (2003), Ribnak and Snow (1986), Nobel (1999).

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