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The Effect of Establishing Think Tank from the View of Change Management on Organizational Performance: Case Study of Main Offices of Port and Maritime of Hormozgan Province

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Abstract: This study aimed to evaluate the effect of think tank establishment from the view of change management on organizational performance in mina office of port and maritime office of Hormozgan province. The present study is descriptive-survey. In the present study, at first by descriptive statistics, the required features were defined. Then, in inferential statistics, at first by Kolmogrov-Smirnov test, the collected data distribution is investigated. To analyze data, after determine validity and reliability, to evaluate the proposed model, SPSS software is applied. To evaluate the questionnaire questions, Likert scale is used. The study population is staffs of Shahid Rajayi port and managers of port, of which the sample is selected by stratified random method. The sample is 267. The studies have shown that collective thinking, establishment of acceptance system and evaluation of recommendations and creativity were effective on organization performance. Among the studied variables, collective thought had the highest score and this showed the importance of this variable.

Keywords: change management, organizational performance, Think tank establishment

INTRODUCTION

In pathology of sustainable development of country, strategic planning and strategic management are necessary. Futurism and strategic management in implementation of development system and achieving new technologies in Iran can fulfill identification to use the external instruments and global trends are also acquired and based on the relationship and interaction between these two variables of development can be considered. In this process, thinking centers play important role. There are various synonyms for think tank. Based on the term function, think tank is a good title and people in these centers are the groups performing thought activity on definite issue. Think tank is a private or state unit, non-profit or profit acting independently in presenting the views and the aim is to create idea and study in decision making and

policies in cultural, social, political, economic and defensive fields and presenting ideas to problems, challenges and futurism in required issues of managers and policy makers (state or private sector) and helping to make decision for them.

Think tank is a center to gather opinions and new specializations relevant with organization activities by which much ability is provided to solve the problems of organizations. The necessity of rapid formulation of policies and decision making models namely in developing countries is not possible without using new ideas, documentation of experiences and experts opinion and creative people. The position of Iranian ports based on special conditions of Persian Gulf port has caused that for competition with the ports of region and increase of the share of marine and business fleet, besides using advanced equipment, the effective capabilities on the development of ports like man power capabilities, development and research and other items are taken into attention. This chapter is called study generality and includes statement of problem and study problem, significance of study, study purpose, analytic model of study, hypotheses of study and finally definition of terms. As the managers can not analyze all problems, situations and opportunities and we need experts in different fields of organization, think tank by collecting these creative people and experts can close this gap. These items can link power and knowledge and eliminate the weakness of policy making and decision making and besides solving the organizational problems can solve study principles in this dynamic and complex era (Dehghan, 2008). This study attempts to answer this question that what is the effect of establishing think tank from the view of change management on organizational performance?

THEORETICAL BASICS

Think tank is the organization organizing researches to solve different problems and supports presenting solutions to solve these problems (Godman, 2005). A group or organized institution to perform studies and solving problems namely at technological and military environments (Kraster, 2001), is the organization presenting scientific-social theories like physic sciences research laboratories (Marsh, 1994). A comprehensive definition of this term in Oxford English Dictionary is as "The institution or research organization presenting ideas and counseling about the political, commercial or military issues and is associated with institutes, academic and political centers. It supports the theorists and elites to provide analysis and political recommendations for decision making (Mirza Amini, 2006). Various definitions of job performance are presented. The common point in all these definitions is the performance of duties on delegated responsibilities. According to a definition, some people consider human resources performance as the way or productivity. We should consider that performance is a concept beyond input or output and is the sum of behaviors regarding the job (Grifin, 1998, 123). Human performance is defined as the result of a set of acts to achieve goal based on a special standard. The acts include observed behavior or non-observed mental processing (e.g. problem solving, decision making, planning and reasoning). In performance, the result is important and regarding performance, some people use performance to do the process and duties. In comprehensive plan of performance evaluation, performance is the results and work process, in evaluation, the work method and work process with the results with the process are considered performance and are judged about it (SOltani, 2004, 2).

REVIEW OF LITERATURE

Hatch (2009) in issues regarding strategy, states that goals are complex as the relationship between beneficiaries, top management and staffs of organization is formed. The communication channels by

which goals are formed and responsibilities are defined can guide strategy performance. The goal with its flow inside the organization injects a type of attitude and awareness into automatic aspects of strategy process. In a study done by Setak (2008) "Group decision making with multiple qualitative criteria states that a method is presented to evaluate the qualitative issues of industrial environment or parliament decision making environments. The important point is that in most decision making issues, there is no exact information but the decision maker attempts to choose one solution among the inexact information. In a study done by Kasalyi (2010) "The position and role of participative management in urban management of new cities (Pardis new city), it is stated that today, new cities are formed with the aim of creating a residential space for citizens and to reduce problems of metropolises based on different policies and goals. New nature of these spaces increases the importance of planning and considering urban management in these places. The results of study proposed that to achieve a healthy society and reduce problems in new cities, we should create participative management by new city management structure (civil engineering company) and create non-concentration system in planning process and decision making and effective use of local institute participation. Tabarsa (2010) states that think tanks are established to close the gap in policy making system and decision making and helping managerial forces of organizations to relate power and knowledge by research aids and had the responsibility of thought and government support with the role of politics research and problems solving. These centers can create new ideas and present it to the government with relationship with research centers and Universities in using new opportunities and create benefits for the society.

CONCEPTUAL MODEL OF STUDY



Figure 2-1 Conceptual model of study

STUDY HYPOTHESES

Main hypothesis

There is a significant relationship between establishing think tank and organizational performance of main office of port and maritime of Hormozgan.

Sub-hypothesis

- There is a significant relationship between establishing acceptance system and evaluation of recommendations and organizational performance of main office of port and maritime of Hormozgan.
- There is a significant relationship between using collective thinking and organizational performance main office of port and maritime of Hormozgan.
- There is a significant relationship between creativity of employees and organizational performance of main office of port and maritime of Hormozgan.

STUDY METHOD

The study method is descriptive-survey. First, to determine the think tank indices, the followings are performed: 1- Evaluation of review of literature and extraction of initial indices based on library studies, 2- Evaluation of the views of experts and lecturers to identify the extracted indices. In second stage, to collected information, a questionnaire with 22 items (Saati, 2013) in three dimensions is used.

The study population is managers and staffs of main office of port and maritime of Hormozgan province as 874. The sampling in this study is stratified. It is required to compute the sample size by Cochran's formula based on population size:

$$n = \frac{Z_{1-\alpha/2}^{2} N pq}{d^{2}(N-1) + Z_{1-\alpha/2}^{2} pq}$$

In this formula, *n* is sample size, N study population size, α significance level (first type error), *d* is sampling error, p, q are the effective percent and non-effective percent of attribute and z is standard normal distribution for α . As we have no exact information of p, q, their values are 50%. By considering significance level 5% and sampling error 5%, the sample size is 267. Based on the share of different groups of study population, the required sample is selected based on the same ratio of groups.

Study sample and population of Shahid Rajayi port				
Study sample	Share	Study population	Unit	No.
60	22.3	195	Port and special zone	1
42	15.7	137	Marine	2
13	5	43	Technical and maintenance	3
18	6.8	59	Engineering and civil	4
37	14	123	Management and resources development	5
97	36.2	317	Management field	6
267	100	874	Total	

Table 1

To achieve the required sample, 267 questionnaires are distributed, collected and analyzed. The data of study are collected by the following methods and measures: 1- Library studies: The study of books, paper, journals and internet, 2-

Questionnaire: The reason of using this method is that responses of questionnaire questions are quantitated easily and they are analyzed and many people can be studied. To evaluate the hypotheses of a questionnaire in three fields as 1) Acceptance system and evaluation of recommendations, 2) Collective thinking, 3) Creating creativity fields at five-item Likert scale ranging from very low, low, average, high and very high and are defined with 21 questions and division of variables is shown in the following Table.

Table 2 Division of questionnaire			
Creating creativity fields	Collective thinking	Acceptance system and evaluation of recommendations	Field
15-21	10-15	1-9	Question NO.

Source: Saaty (2013)

In this study, to determine reliability of questionnaire, Cronbach's alpha method is used by SPSS software. This coefficient indicates overlapping of questionnaire questions.

This coefficient states whether the respondents answered the questionnaire questions accurately? This coefficient is used to compute the internal consistency of measures. After computation of Cronbach's alpha, reliability of questionnaire is 0.93.

Table 3 Reliabiity sta	tistics
Cronbach's alpha	Ν
0.929	21

In this study, for descriptive analysis of data, frequency distribution Table and charts is used. For inferential analysis of data, one-sample t –test is used. To evaluate the proposed model, SPSS software is applied. To evaluate questions of questionnaire, Likert scale as one of the most common scales in researches namely behavioral science researches is used. The applied spectrum is five-item scale in which the value starts from very low to very high.

DESCRIPTIVE RESULTS

The summary of descriptive statistics is shown in Table 4.

Table 4 The results of "relevant unit" variable				
Collective percentage	%	F	Item	Variable
70.8	70.8	189	Man	Gender
100	29.2	78	Woman	
30	30	80	Below 30 years	

contd. table 4

Collective percentage	%	F	Item	Variable
85.1	55.1	147	40-30 year	Age
96.3	11.2	30	50-40 year	
100	3.7	10	Above 50 years	
18.7	18.7	50	Single	Marital Status
100	81.3	217	Married	
15	15	40	Associate	
73.8	58.8	157	BA	
99.6	25.8	69	MA	Degree
100	0.4	1	PhD	
2.2	2.2	6	Chief of office	
14.6	12.4	33	Expert responsible	
69.7	55.1	147	Expert	Position
97.4	27.7	74	Employee	
100	2.6	7	Other	
25.5	25.5	68	5-1 year	
48	22.5	60	10-5 year	
78	30	80	15-10 year	Experience
94.1	16.1	43	25-15 year	
100	5.9	16	Above 25 years	
22.5	22.5	60	Port and special zone	
38.2	15.7	42	Marine	
43.1	4.9	13	Technical and maintenance	Relevant unit
49.8	6.7	18	Engineering and civil engineering	

THE STUDY VARIABLES ANALYSIS

The results of explorative factor analysis (construct validity)

To evaluate construct validity of measures, Exploratory factor analysis is applied. As shown in Table 5, as Kaiser Meyer Olkin(KMO) is 0.931, the data are suitable for factor analysis. Also, the results of Bartlett's Test of Sphericity is significant (Sig.<0.05), it means that H1 is supported, it means that the variables have significant correlation.

KMO stati	Table 5 stics and the results of Bartlett's Test of S	phericity
Kaiser-Meyer-Olkin Measure of Samp	bling Adequacy.	.931
Bartlett's Test of Sphericity	Approx. Chi-Square	3380.514
	df	210
	Sig.	.000

International Journal of Applied Business and Economic Research

Table 6 shows the share of variables in factors after varimax rotation. Each variable is in a factor with high significant correlation.

Questionnaire questions	Factors				
	Recommendation system	Collective thinking	Creativity		
1	0.714	-0.02	0.207		
2	0.778	0.095	0.075		
3	0.719	0.318	0.147		
4	0.723	0.234	0.239		
5	0.716	0.132	0.234		
6	0.709	0.093	0.158		
7	0.733	0.168	0.138		
8	0.736	0.23	0.223		
9	0.724	0.213	0.303		
10	0.242	0.804	0.299		
11	0.216	0.746	0.338		
12	0.22	0.755	0.328		
13	0.262	0.521	0.485		
14	0.266	0.641	0.325		
15	0.207	0.721	0.067		
16	0.155	0.24	0.766		
17	0.288	0.177	0.675		
18	0.24	0.261	0.745		
19	0.187	0.276	0.643		
20	0.166	0.196	0.775		
21	0.089	0.126	0.73		

 Table 6

 The results of estimation of factor loads after Varimax rotation

As factor loading of questions in different dimensions is above 0.5, there is a relatively high correlation between the questions of three dimensions of questionnaire and none of questions should be eliminated. The construct validity of questionnaire is supported.

The investigation of normality of distribution of applied variables in statistical tests

For probability of using parametric tests, at first the normality of distribution of applied variables in tests is investigated. To evaluate normality of data, Kolmogrov-Smirnov (K-S) test is used. The questions are classified in the form of the effect of three variables of recommendation system, collective thinking and creativity on organization performance and by statistical tests, the effect of these three variables and their result (think tank) on performance of main office of ports and maritime of Hormozgan province were evaluated. At first, the normality of statistical distribution of these variables is tested. The test of hypotheses of normality of mentioned variables and results of Kolmogrov-Smirnov test as shown in Tables 7-9:

The hypothesis test of normality of distribution of the variable of the effect of establishing the acceptance system and evaluation of the recommendations on performance of main office of port and maritime of Hormozgan province

H₀: The variable of recommendation system has normal distribution.

H₁: The variable of recommendation system has no normal distribution.

K-S test for "Recommendation system" variable			
		Recommendation system	
N		267	
Normal Parameters ^{a,b}	Mean	3.6521	
	Std. Deviation	.76297	
Most Extreme Differences	Absolute	.082	
	Positive	.047	
	Negative	082	
Kolmogorov-Smirnov Z		1.344	
Asymp. Sig. (2-tailed)		.054	

Table 7	
K-S test for "Recommendation system"	" variable

a) Test distribution is Normal.

b) Calculated from data.

It is observed that sig value (significance level) is bigger than 0.05. This means that normality of distribution of recommendation system is not rejected. For hypothesis test of this variable, parametric tests are applied.

The hypothesis test of normality of distribution of the variable of the effect of using collective thinking on performance of the main office of port and maritime of Hormozgan province

H_o: The variable of collective thinking has normal distribution.

H₁: The variable of collective thinking has no normal distribution.

	Table 8 K-S test for "collective thin	king" variable	
		Collective thinking	
N		267	
Normal Parameters ^{a,b}	Mean	3.8340	
	Std. Deviation	.65807	
Most Extreme Differences	Absolute	.098	
	Positive	.040	
	Negative	098	
Kolmogorov-Smirnov Z		1.256	
Asymp. Sig. (2-tailed)		.061	

a) Test distribution is Normal.

b) Calculated from data.

International Journal of Applied Business and Economic Research

It is observed that sig value (significance level) is bigger than 0.05. This means that normality of distribution of collective thinking is not rejected. For hypothesis test of this variable, parametric tests are applied.

The hypothesis test of normality of distribution of the variable of the effect of creating creativity of employees on performance of the main office of port and maritime of Hormozgan province

H_o: The variable of creativity has normal distribution.

H₁: The variable of creativity thinking has no normal distribution.

	K-5 test for creativity	Variable	
		Creativity	
N		267	
Normal Parameters ^{a,b}	Mean	3.8265	
	Std. Deviation	.57432	
Most Extreme Differences	Absolute	.103	
	Positive	.076	
	Negative	103	
Kolmogorov-Smirnov Z		0.985	
Asymp. Sig. (2-tailed)		.109	

Table 9
K-S test for "creativity " variable

a) Test distribution is Normal.

b) Calculated from data.

It is observed that sig value (significance level) is bigger than 0.05. This means that normality of distribution of creativity is not rejected. For hypothesis test of this variable, parametric tests are applied.

The hypothesis test of normality of distribution of the variable of the effect of establishing think tank on performance of the main office of port and maritime of Hormozgan province

H_o: The variable of think tank has normal distribution.

H₁: The variable of think tank thinking has no normal distribution.

	Table 10 K-S test for "think tank " variable		
		Total	
N		267	
Normal Parameters ^{a,b}	Mean	3.7592	
	Std. Deviation	.64017	
Most Extreme Differences	Absolute	.093	
	Positive	.050	
	Negative	093	
Kolmogorov-Smirnov Z		1.117	
Asymp. Sig. (2-tailed)		.089	

a) Test distribution is Normal.

b) Calculated from data.

It is observed that sig value (significance level) is bigger than 0.05. This means that normality of distribution of think tank is not rejected. For hypothesis test of this variable, parametric tests are applied.

STUDY HYPOTHESIS TEST

First hypothesis: Establishment of think tank is effective on performance of main office of ports and maritime of Hormozgan province

For first hypothesis test as the variable distribution is normal and the aim is comparison of the mean of population with one value, one-sample t-test is used. The result of this test is shown in Table 11.

Table 11
One-sample t-test of the effect of establishing think tank on performance of main office of
ports and maritime of Hormozgan province

	Test Value =	3				
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence	Interval of the Difference
					Lower	Upper
Total	19.378	266	.000	.75917	.6820	.8363

Sig.(2-tailed) is less than 0.05, significance of the difference of mean of population is shown (μ ""3). On the other hand, due to positive confidence interval of the mean difference form the assumed value, the bigger mean of population from 3 is concluded (μ >3). Thus, first hypothesis is supported.

Second hypothesis: Establishing acceptance system and evaluation of recommendations is effective on performance of main office of ports and maritime of Hormozgan province

For first hypothesis test as the variable distribution is normal and the aim is comparison of the mean of population with one value, one-sample t-test is used. The result of this test is shown in Table 12.

Table 12
One-sample t-test of the effect of establishing acceptance system and evaluation of recommendations on
performance of main office of ports and maritime of Hormozgan province

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Recommendation system	13.966	266	.000	.65210	.5602	.7440

Sig. (2-tailed) is less than 0.05, significance of the difference of mean of population is shown ($\mu \neq 3$). On the other hand, due to positive confidence interval of the mean difference form the assumed value, the bigger mean of population from 3 is concluded ($\mu>3$). Thus, second hypothesis is supported.

Third hypothesis: Using collective thinking is effective on performance of main office of ports and maritime of Hormozgan province

For third hypothesis test as the variable distribution is normal and the aim is comparison of the mean of population with one value, one-sample t-test is used. The result of this test is shown in Table 13.

 Table 13

 One-sample t-test of the effect of using collective thinking on performance of main office of ports and maritime of Hormozgan province

	$Test \ Value = 3$						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference		
					Lower	Upper	
Collective thinking	20.707	266	.000	.83396	.7547	.9133	

Sig.(2-tailed) is less than 0.05, significance of the difference of mean of population is shown (μ "3). On the other hand, due to positive confidence interval of the mean difference form the assumed value, the bigger mean of population from 3 is concluded (μ >3). Thus, third hypothesis is supported.

Fourth hypothesis: Creating creativity of employees is effective on performance of main office of ports and maritime of Hormozgan province

For fourth hypothesis test as the variable distribution is normal and the aim is comparison of the mean of population with one value, one-sample t-test is used. The result of this test is shown in Table 14.

 Table 14

 One-sample t-test of the effect of creating creativity of employees on performance of main office of ports and maritime of Hormozgan province

	Test Value =	Test Value = 3						
	t	df	Sig. (2-tailed)	Mean D <u>i</u> fference	95% Confidence Interval of the Difference			
					Lower	Upper		
Creativity	23.514	266	.000	.82647	.7573	.8957		

Sig. (2-tailed) is less than 0.05, significance of the difference of mean of population is shown (μ "3). On the other hand, due to positive confidence interval of the mean difference form the assumed value, the bigger mean of population from 3 is concluded (μ >3). Thus, fourth hypothesis is supported.

The comparison of the effect of constitution variables of think tank on performance of main office of port and maritime of Hormozgan province

As it was said, the effect of think tank establishing variable on performance of main office of port and maritime of Hormozgan province was observed in the form of three variables of the effect of establishing

acceptance system and evaluation of the recommendations, using collective thinking and creativity of employees and in this section, we rank the effect on performance of main office of port and maritime of Hormozgan province. The exploratory factor analysis showed that there was correlation among three macro-variables and for their ranking, Friedman test regarding k dependent variables is applied. Table 15 shows the result of this test for three variables:

Table 15 Friedman test for ranking effective factors on performance of main office of port and maritime of Hormozgan province

Test Statistics ^a				
N	267			
Chi-Square	15.535			
df	2			
Asymp. Sig.	.000			

a) Friedman Test

Sig. value is less than 0.05 and shows that there is a significant difference between the means of three variables. It means that the effect of three variables on performance of main office of port and maritime of Hormozgan province is not similar. Table 16 shows ranking of the effect of mentioned factors:

 Table 16

 Ranking the effect of constituting variables of think tank on performance of main office of ports and maritime of Hormozgan province

Ranks	Mean Rank
Recommendation system	1.83
Collective thinking	2.14
Creativity	2.03

The above Table shows that the variable of using collective thinking has the highest effect on performance of main office of port and maritime of Hormozgan province and variables of creating creativity of employees and acceptance system and recommendations are in the next ranks.

CONCLUSION

The analysis and evaluation of the study questions showed that: Validity of questions of questionnaire and its dimensions was suitable. Cronbach's alpha coefficient is used in this questionnaire. As this coefficient is higher than 0.7, it shows good validity and for questionnaire of this study, the value is 0.93 and it shows that the measure has good validity. Study measure has good validity. The results of main hypothesis test showed that establishing think tank had positive, direct and significant relationship with organizational performance in main office of port and maritime of Hormozgan province. The results of sub-hypothesis test showed that using collective thinking was effective on organizational performance in main office of port and maritime of Hormozgan province. The results of second sub-hypothesis test showed that using collective thinking was effective on organizational performance in main office of Hormozgan province. The results of second sub-hypothesis test showed that using collective thinking was effective on organizational performance in main office of Hormozgan province. The results of second sub-hypothesis test showed that using collective thinking was effective on organizational performance in main office of Hormozgan province. The results of second sub-hypothesis test showed that using collective thinking was effective on organizational performance in main office of Hormozgan province. The results of second sub-hypothesis test showed that using collective thinking was effective on organizational performance in main office of Hormozgan province. The results of third sub-hypothesis test showed that

creating creativity of employees was effective on organizational performance in main office of port and maritime of Hormozgan province. Based on the data analysis, there was a positive, direct and significant relationship between establishing think tank on organizational performance in main office of port and maritime of Hormozgan province. It is proposed to the managers that besides establishing this system and exercising establishing it in organization, using collective thinking, absorbing participation of elites, creating creativity in employees can absorb the support of top managers in this regard. Based on the data analysis, establishing acceptance system and recommendations was effective on organizational performance of main office of port and maritime of Hormozgan province. Thus, it is proposed to the managers of organization to establish a reference to receive recommendations in organization and reduce the costs, innovate the methods of presenting new services of organization, satisfaction of beneficiary of services and activities, increase of work commitment, intimate relationship of employees with authorities can be provided and can improve performance in organization. As shown, using collective thinking is effective on organizational performance in main office of port and maritime of Hormozgan province. Thus, it is proposed to the managers of main office of port and maritime to develop participative management method in organization and by methods of collecting others thoughts (e.g. brain storming, Delphi method, etc.) attempted to provide this ground. Also, by participative management method and participation of employees and participation of employees in decision making can increase work motivation and improve performance in organization. As shown in the results of fourth sub-hypothesis test, creativity of employees is effective on organizational performance in main office of port and maritime of Hormozgan province. Thus, it is proposed to the managers of main office of ports and maritime to encourage the creativity of change in systems and procedures and by creativity methods as giving value to creative people, nonbureaucratic structure, and participative management) improve organization performance.

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