

Determination of Factors Affecting Completion of Ownership of Capital Assets Plans in the Holding Company Which is the Contractor of Public and State Buildings and Installations

Mahmoud Rashidi Aghdam

Department of State Management, Tehran Central Branch, Islamic Azad University, Tehran Central, Iran

ABSTRACT

The present research investigates relationship between credit, managerial and control factors in order to carry out ownership of capital assets plans which is important when it comes to waste of material and temporal capital. Research methodology was descriptive-analytical and a researcher-made questionnaire was used to gather data. Population of the research included 985 people of experts and executive managers of contractor organization of public and state buildings and installations and 210 people were selected (based on Cochran's formula) as sample size. SPSS and Lisrel software were used to test the hypotheses and conduct inference and descriptive analysis. Results showed that credit, managerial and control factors have the most importance in fulfillment of ownership of capital assets plans. Furthermore, the hypothesis which investigates the influence of credit factors on fulfillment of Capital Asset Ownership Plan was verified and this factor was the most important obstacle ahead of fulfillment of plans. Managerial and control factors also are the next factors. Respondents believe that planning by risk management, delegation of authority, participation, teaching advisors, contractors and employers, clarification of strategies for on-time feedback, communication skills, are the most important factors ahead of doing plans. In the end of the research, some recommendations have been provided.

KEYWORDS: Capital Asset Ownership Plan, public and state installations credit factors, managerial factors, control factors

INTRODUCTION AND RESEARCH BACKGROUND

Because the resources for Capital Asset Ownership Plan are supplied through government budget or distribution of bonCapital assets or exclusive incomes and delay in their completion will result in waste of financial and human resources, the present tries to investigate factors and obstacles ahead of the completion of the mentioned plans. Therefore, the main question of the research is that which of the credit, managerial and control factors influence on the completion of the plans and what is the weight of each of the mentioned factors? Which factor is of top importance when trying to solve the problems?

Ghotbi (1999) investigated the factors influencing on the delay of civil plans in Iranian airports and categorized them in 8 general parts like inappropriate financial regulations, absence of applicable planning in definition of projects, inappropriate financial estimation and wrong estimation of costs, defective designing and inadequate study and designer groups which lack information on executive affairs, weakness of contractor and so on. Dousti (1999) believed that the following factors are reasons for delay and costs increase in Construction Jihad civil projects in execution and completion phase: lack of balance between budget and work volume, prolongation of execution time, lack of evaluation of the works, lack of on-time credits allocation, inexact primary studies and estimations, increase in work volume in execution time and Taherioun believes that the factors involved in the planning and execution of plans, i.e. organization of management and planning, executive systems, consultant engineers and contractors are the most important factors in identification of delay factors which are classified as follows:

Alayee (2002) classified the reasons for delay in completion of 10 projects: lack of familiarity of executive managers, project manager, advisors and contractors with project manager knowledge, inappropriate organizational culture and structure in executive sectors, contractors and consultants for planning, inappropriate analysis and execution of project, definition of projects in an improper way, lack of enough facilities and authorities, substitution and change in project participants, improper selection of consultants and contractors and so on.

Mokhtari et al (2010) conducted a research titled "investigation of factors affecting civil projects success" in hospitals and on 10 select samples whose employer was contractor organization of public and state buildings and installations. In this research, conditions of sample hospitals were investigated in 7 basic pivots. Hossein Fahimi Azad (2002) in his master degree thesis investigated the causes for lack of on-time completion of civil projects and results of ill-timed completion of dams' projects in Khorasan province. The following hypotheses were formulated for the present research based on the literature review:

*Corresponding Author: Mahmoud Rashidi Aghdam, Department of State Management, Tehran Central Branch, Islamic Azad University, Tehran Central, Iran. Email: rashidi_ml10@yahoo.com

- Credit factors influence on the on-time completion of civil projects of Samanholding company contractor organization of public and state buildings and installations.
- Managerial factors influence on the on-time completion of civil projects of Samanholding company contractor organization of public and state buildings and installations.
- Control factors influence on the on-time completion of civil projects of Samanholding company contractor organization of public and state buildings and installations.

RESEARCH LITERATURE

Research conceptual model

A conceptual model was formulated for the present research based on literature review and it will be tested in the next parts of the paper.

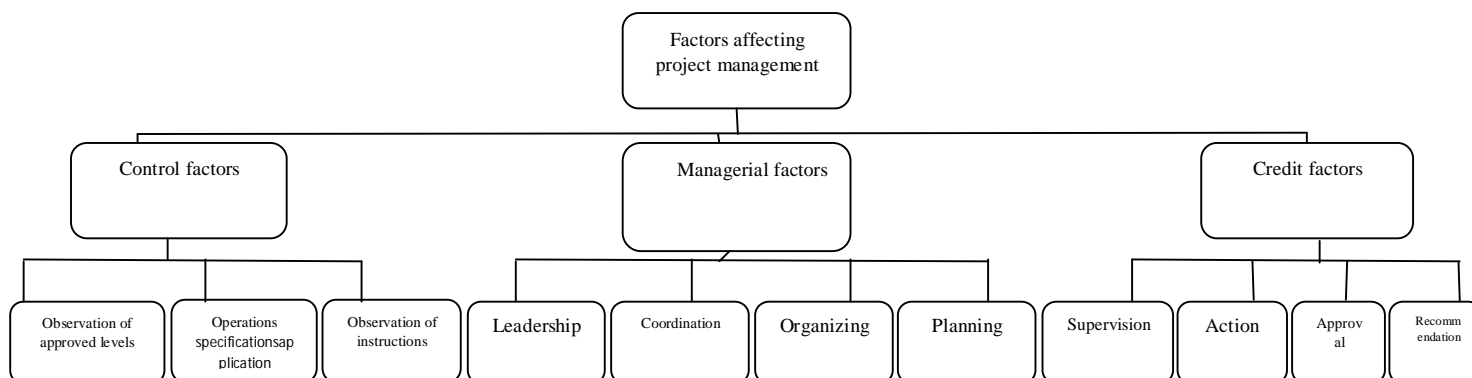


Figure 1. Research conceptual model

RESEARCH METHODOLOGY

The present research is an applied research from its goal point of view and its methodology is "descriptive survey" method. Population of this study included experts and executive managers of the contractor organization (985 people). 210 questionnaires were received and were used for analysis. This sample size was obtained through Cochran's formula. In this research, the following tools were used for increasing content validity of the questionnaires:

1. Use of the opinions of supervisor and advisor professors, experts and research specialists
2. study of similar questionnaires, papers, books and journals.
3. primary distribution of the questionnaire among 6 experts and 30 of contractor organization employees and implementation of their corrective opinions.

Furthermore, Cronbach's alpha was used to measure the reliability of the questionnaire. This method is used for calculation of internal coordination of measurement tools. Variance of the points of each sub-set of questionnaire questions and total variance must be calculated in order to be able to calculate Cronbach's alpha. Then, the following formula is used to calculate alpha.

$$r_a = \frac{J}{J-1} \left(1 - \frac{\sum S_j^2}{S^2} \right)$$

Table 1. reliability calculation by means of Cronbach's alpha

FACTORS EFFECTIVE IN THE COMPLETION OF PROJECTS	RESPONSES	QUESTIONS	ALPHA VALUE
CREDIT FACTORS	20	11	%84
MANAGERIAL FACTORS	20	8	%82
CONTROL FACTORS	20	5	%86

Descriptive statistical analysis tools like frequency, percentage, cumulative percentage, range, mean, median, mode and standard deviation were used. Analytical (inference) statistics was used to draw conclusions about population from sample characteristics.

RESULTS

Results of data inference analysis which ranks factors and tests research hypotheses within the framework of methodology principles are as follows:

Research hypotheses test

There is significant relationship between influence of credit factors and completion of Capital Asset Ownership Plan of Ministry of Housing and Civil Construction

Table 2. Binomial test for investigation of influence of credit factor on the completion of Capital Asset Ownership Plan

	grouping	number	Observed probability	Tested probability	Significance level
Group 1	<= 3	51	.24	.50	.000
Group 2	> 3	159	.76		
sum		210	1.00		

According to the results of factor analysis, experts recognize credit factor as the most important obstacle ahead of completion of civil projects.

-there is significant relationship between influence of managerial factors and completion of Capital Asset Ownership Plan.

Table 3. Binomial test for investigation of influence of credit factors influence on Capital Asset Ownership Plan

	grouping	number	Observed probability	Tested probability	Significance level
Group 1	<= 3	63	.30	.50	.000
Group 2	> 3	147	.70		
sum		210	1.00		

According to the results of factor analysis, experts recognized managerial factors as the second obstacle ahead of the completion of civil projects.

-there is significant relationship between control factors and completion of Capital Asset Ownership Plan.

Table 4. Binomial test for investigation of influence of credit obstacles in Capital Asset Ownership Plan

	grouping	number	Observed probability	Tested probability	Significance level
Group 1	<= 3	58	.28	.50	.000
Group 2	> 3	152	.72		
sum		210	1.00		

According to the results of factor analysis, experts recognized control factors as the third obstacle ahead of the completion of civil projects.

-investigation of difference of the means of studied obstacles between the two groups of experts and managers

Table 5. Results of Man-Witney test for investigation of difference of means of opinions of managers and experts

OBSTACLE	GROUPS	NUMBER	MEANS	Man-Witney	Z	SIGNIFICANCE LEVEL
credit	managers	25	129.94	1701.500	-2.146	.032
	experts	185	102.20			
managerial	managers	25	119.84	1954.000	-1.262	.207
	experts	185	103.56			
control	managers	25	128.20	1745.000	-2.001	.045
	experts	185	102.43			

From managers point of view, the importance of credit and control factors and also managerial factors (despite insignificance) were higher than the opinions of experts because they had higher means.

Conclusions and recommendations

Results of hypotheses tests showed that credit factors are the most important obstacles ahead of the on-time completion of plans. In other words, Capital assets, 23.19% of the obstacles ahead of on-time completion of projects are due to these factors.

Furthermore, results showed that experts believed that managerial factors are also important obstacles ahead of projects completion. Eigen value of this factor predicts 10.94% of the obstacles ahead of on-time completion of projects. Therefore, 10.94% of the obstacles ahead of on-time completion of projects are due to managerial factors.

Results of the research showed that control factors are also important obstacles ahead of the completion of the civil projects. Eigen value of this factor was 10.90% which is the third and final important factor. In general, results of factor analysis showed that the three factors allocate 45.04% of the obstacles ahead of on-time completion of projects. In other words, 45.04% of the reasons for ill-timed completion of projects were due to credit, control and managerial factors and the remaining 55% was related to environmental factors, wrong policy-making and so on which were not considered in the present research. Study of the difference in managers' and experts' opinions showed that management factor did not have significant difference in the two groups' opinions. However, there is significant difference between the opinions of the two groups on control and credit factors and this shows that means of opinions of managers on credit and control obstacles and also managerial factors (despite insignificance) is higher than experts' opinions.

First subsidiary hypothesis: a more proper definition of operational goals has significant influence on removal of obstacles.

Second subsidiary hypothesis: planning accompanied by risk management has a significant influence on removal of obstacles and has the last place in ranking (seventh rank).

Third subsidiary hypothesis: delegation of authority is one of the factors for removal of obstacles and has the fifth rank.

Fourth subsidiary hypothesis: participation is one of the factors of removing the obstacles and has the 1st rank.

Fifth subsidiary hypothesis: teaching advisors, employers are an important factor in removing the obstacles and has the 4th rank.

Sixth subsidiary hypothesis: exact feedback strategies have significant influence on removal of the obstacles and have the 2nd rank.

Seventh subsidiary hypothesis: experts evaluated communication skills as one main factor in removal of the obstacles and has the third rank.

According to the results, the following recommendations are presented:

1. the factor "use of risk management" must receive more concentration in planning for completion of projects.
2. Deconcentration and delegation of power to others can be effective in the progress of projects.
3. Presentation of effective solutions in order to increase participation in execution of projects
4. Holding teaching courses for consultants, employers and contractors
5. Investigation of systematic and environmental factors which are effective in on-time completion of civil projects of contractor and their mutual influence on each other.

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