



MAIN CHALLENGES FACING THE PERFORMANCE OF CONSTRUCTION PROJECTS IN IRAQ

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ABSTRACT

Construction industry is complex in its nature because it contains large number of parties as clients, contractors, consultants, stakeholders, shareholders, regulators and others. Construction projects in Iraq suffer from many problems and complex issues in performance such as cost, time and safety. Construction companies usually perform several construction projects at the same time. Projects differ by complexity, duration, budget, variety of works, and number of implementers. Also the results of the projects are varying some of them have been executed successfully, other terminated with losses or accidents.

INTRODUCTION

Efficient construction projects can provide a solid platform for reviving the Iraqi economy and for building a more balanced and independent economy during stable political conditions. Performance of construction projects is related to many topics and factors such as time, cost, quality, client satisfaction; productivity and safety. Construction industry in Iraq suffers from many problems and complex issues in performance. While individual organizations have been measuring their performance for many years, there has been little consistency in the data. The performance can be measured by key indicators for evaluation. The performance of the construction industry is affected by national economies.

In last five years, there were many projects which finished with poor performance because of many evidential reasons such as: obstacles by client, non-availability of materials, road closure, amendment of the design and drawing, additional works, waiting for the decision, handing over, variation order, amendments in Bill of Quantity (B.O.Q) and delay in receiving drawings. There are other indicators for problems of performance in Iraq such as: project management, coordination between participants, monitoring, feedback and leadership skills. In addition, political, economic and cultural issues are three important indicators related to failures of projects' performance in Iraq. In order to overcome performance problem, all construction parties need to reflect on good practices to minimize effects of those factors and to overcome completely the impact of these main challenges. However, this study aims at identify the factors of time, cost and quality affecting the performance of construction projects, as those factors refer to main challenges facing construction project in Iraq during the last five years. This study is to highlight the challenges faced by the construction Industry in general.

MATERIALS AND METHODS

Construction Management and Performance:

There is a strong relation between project management and project performance. Management in construction industry is considered as one of the most important factors affecting performance of works. Brown and Adams (2000) studied a new approach to the measurement of the effect of Building Project Management (BPM) on time, cost and quality outputs using 15 'cases' derived from UK data. The evaluation undertaken demonstrates that BPM as it is presently implemented in the UK fails to perform as expected in relation to the three predominant performance evaluation criteria; time, cost and quality.

Performance Indicators

This summary refers to the main factors affecting performance of construction projects through previous studies. Following are some of the observations:

- Some researcher stated that the allocation of risk among the contracting parties in a construction contract is an important decision leading to the project success.
- Time schedule preparation by predicting production rate using simulation.
- Some researchers studied a cost monitoring system for Iraq contractors.
- Factors were grouped together to five main groups which are:



- Managerial: managerial factors are mainly related to experience, decisions, procurement, control, productivity, communication and claims factors.
- Financial: financial factors are mainly related to loans, cash flow, profit, expenditures, material wastages, equipment cost and usage, and variation order.
- Business growth: Business growth factors are mainly related to managerial development, size of projects, type of work and number of projects.
- Business environment: Business environment factors are mainly related to regulations, awarding, economy, owner involvement and accounting practices.
- Political: Political factors are mainly related to delay, closure, lack of resource, high cost of materials, banks policy and dealing with suppliers

RESULTS OF THE STUDY

This research discusses the factors facing performance within construction Organizations in Iraq.

A structured questionnaire and technical data collection approaches are considered to study the impact of various attributes and factors affecting performance. In addition, the questionnaire can assist to study the attitude of owners, consultants and contractors towards the factors that affect on performance in the construction industry.

ANALYSIS OF DATA COLLECTION

Labor categorization factor:

Total Numbers of required Labor during Construction stage in each residential project			
Skilled Labors:	120	Un-skilled Labor:	320

Cost Quality Categorization:

Cost Details	Planning = Actual	Planning Greater than Actual	Planning Less than Actual
No of Project	4	13	3
Percentage of Planning Cost /Actual Cost	20.0%	65.0%	15.0%

Quality Categorization factor

Quality Details Tests:		
Type of Test	% Failure Test	% Passing Test
Sand Test	10.00%	90.00%
Gravel Test	11.00%	89.00%
Cement Test	14.00%	86.00%
Steel Test	0.00%	100.00%
Cubic Test for concrete	24.00%	76.00%
core test for concrete	12.00%	88.00%

Environment Impact factors

Environment Impact	Question	% of Yes	% of No
1-	Does the project substantially increase the risk of fire, explosion, or hazardous chemical release?	100.0%	0.0%
2-	Does the project require bulk quantities of hazardous materials or fuels to be stored on-site for >3 months?	100.0%	0.0%
3-	Does the project create or substantially contribute to human health hazards?	95.0%	5.0%
4-	Will the project increase vehicle traffic in the area by >20% or cause substantial congestion?	95.0%	5.0%



5-	Do project design features cause or contribute to transportation safety hazards?	85.0%	15.0%
6-	Does the project provide inadequate access for the anticipated volume of people or traffic, or for emergency vehicles and personnel?	90.0%	10.0%

Client Satisfaction Factors:

Client Satisfaction	Question	% of Yes	% of No
1	Is Information coordination available between owner and project parties?	92.0%	8.0%
2	Are there any disputes between owner and project parties?	79.0%	21.0%
3	Is the client satisfied on the project?	72.0%	28.0%

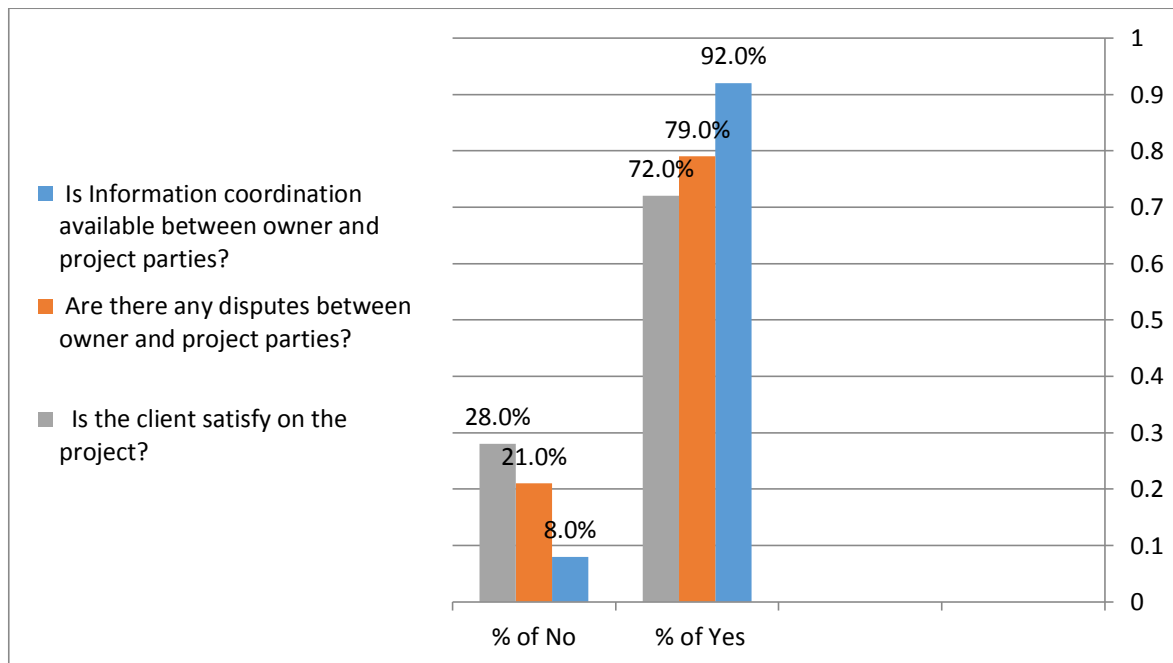


Fig: show the Client Satisfaction Factors and percentages.

CONCLUSION

Construction industry is considered as an important sector in the world as it develops and achieves the goals of society. The performance of the construction industry is affected by clients, contractors, consultants, stakeholders, regulators, national economies and others. The main aim of this study is to identify the local factors affecting the performance of construction projects in Iraq. Generally it is observed that owners are highly satisfied with projects which are handled by professional consultants and contractors as they have few defects.

Owners are not satisfied with projects because of many reasons such as: poor quality, problems in cost and time performance, weak coordination or relationship between projects participants, occurrence of accidents through implementation stage, claims and disputes

REFERENCES

1. Abdel-Razek Refaat H., Abd Elshakour M Hany and Abdel-Hamid Mohamed, (2007), Labor productivity: Benchmarking and variability in Egyptian projects, International Journal of Project Management, Vol. 25, PP. 189-197.



2. Assaf Said A, Bubshait AbdulAziz.A, Atiyah Sulaiman and Al-Shahri, Mohammed, (2001), The Management of construction company overhead costs, International Journal of project Management, Vol. 19, PP. 295-303.
3. Augusto Mario, Lisboa Joao, Yasin Mahmoud and Figueira Jose Rui, (2006), Benchmarking in a multiple criteria performance context: An application and a conceptual framework, European Journal of Operational Research, Vol. 184, PP. 244 -254
4. Becerik Burcin, (2004), A review on past, present and future of web based project management and collaboration tools and their adoption by the US AEC industry, International Journal of IT in Architecture, Engineering and Construction, Vol. 2, No.3, PP. 233 – 248
5. Brown Andrew and Adams John, (2000), Measuring the effect of project management on construction outputs: a new approach, International Journal of Project Management, Vol. 18, PP. 327-335
6. Chan Albert P.C., (2001), Time – cost relationship of public sector projects in Malaysia, International Journal of Project Management, Vol.19, PP. 223-229
7. Dissanayaka Sunnil M. and Kumaraswamy Mohan M., (1999), Comparing contributors to time and cost performance in building projects, Building and Environment, Vol. 34, PP. 31- 42
8. Enshassi Adnan, Al-Hallaq Khalid and Mohamed Sherif, (2006), Causes of contractor's business failure in developing countries: The case of Palestine, Journal of construction in Developing Countries, Vol. 11, No. 2, PP. 1-14
9. Frimpong Yaw, Jacob Oluwoye and Lynn Crawford, (2003), Causes of delay and cost overruns in construction of groundwater projects in a developing countries; Ghana as a case study, International Journal of Project Management Vol. 21, PP. 321-326.
10. George D. and Mallery P., (2003), SPSS for window Step by Step, fourth edition. Goh Bee Hua, (2005), IT barometer 2003: survey of the Singapore construction industry and a comparison of results, ITcon Vol. 10, PP. 1 – 13.
11. Karim K. and Marosszeky M., (1999), Process monitoring for process re- engineering - using key performance indicators, International conference on construction process reengineering, CPR 99, Sedney UNSW 12-13 July, Building Research center.
12. Tolosi Peter and Lajtha Gyorgy, (2000), Toward improved benchmarking indicators, Telecommunications Policy, Vol. 24, PP. 347-357.

WEB STIES

[1] <http://www.wbdg.org/project/pm.php....June>, 2013.

[2] www.emeraldinsight.com/doi/abs/10.1108/09699981311303044./March,2012