

Risk Management in Real Estate Projects (Application on MENA Countries)

Mohamed El Agroudy, MEng., CCT, PMP, TRC
Chairman, Misr for Services & Maintenance, Cairo, Egypt
Lecturer, Arab Academy for Science & Technology, Cairo, Egypt
magroudy@hotmail.com

Abstract

Risk is defined as a discrete occurrence that may affect the project for better or worse. Risk management is the process concerned with conducting risk management planning, identification, analysis, responses, and monitoring and control on a project. The objectives of project risk management are to increase the probability and impact of positive events, and decrease the probability of events adverse to the project. The Real Estate fortune in the Arab countries is estimated at about \$23 Trillion USD. The Real Estate Investment Sectors in Arab & Islamic countries were affected by the International financial crisis. In an attempt to identify the Risk Break down Structure (RBS) in the Real Estate Projects in Arab and Islamic countries, a questionnaire survey was conducted to a sample representing different organizations working in this field. Consisting of two main parts, the questionnaire concentrates on the risk components at different risk categories to explore the RBS in the first part. In the second part, risk response strategies were adopted for the negative risks or threats. The survey results build the Real Estate projects Risk Break down Structure. Classifying the risks into Technical, Organizational, External and Project Management related categories, each category was analyzed showing that the most important factors were: lack of financing, international market conditions, prioritization and project dependencies and finally, preliminary/actual study discrepancies. Negative risk response includes: avoidance, transfer and mitigation.

Keywords

Risk Management processes, Real Estate Projects.

1. Introduction

Project risk is an uncertain event or condition that, if it occurs, has a positive or a negative effect on a project objective. A risk has a cause and, if it occurs, a consequence (PMBOK® Guide, 2010). Risk management is the systematic process of planning for, identifying, analyzing, responding to, and monitoring project risk. It involves processes, tools, and techniques that will help the project manager maximize the probability and consequences of positive events and minimize the probability and consequences of adverse events. Project risk management is most effective when first performed early in the life of the project and is a continuing responsibility throughout the project. Risk management planning process starts with risk identification, risk analysis containing qualitative and quantitative analysis, risk response planning and finally, risk monitoring and control (Figure 1).

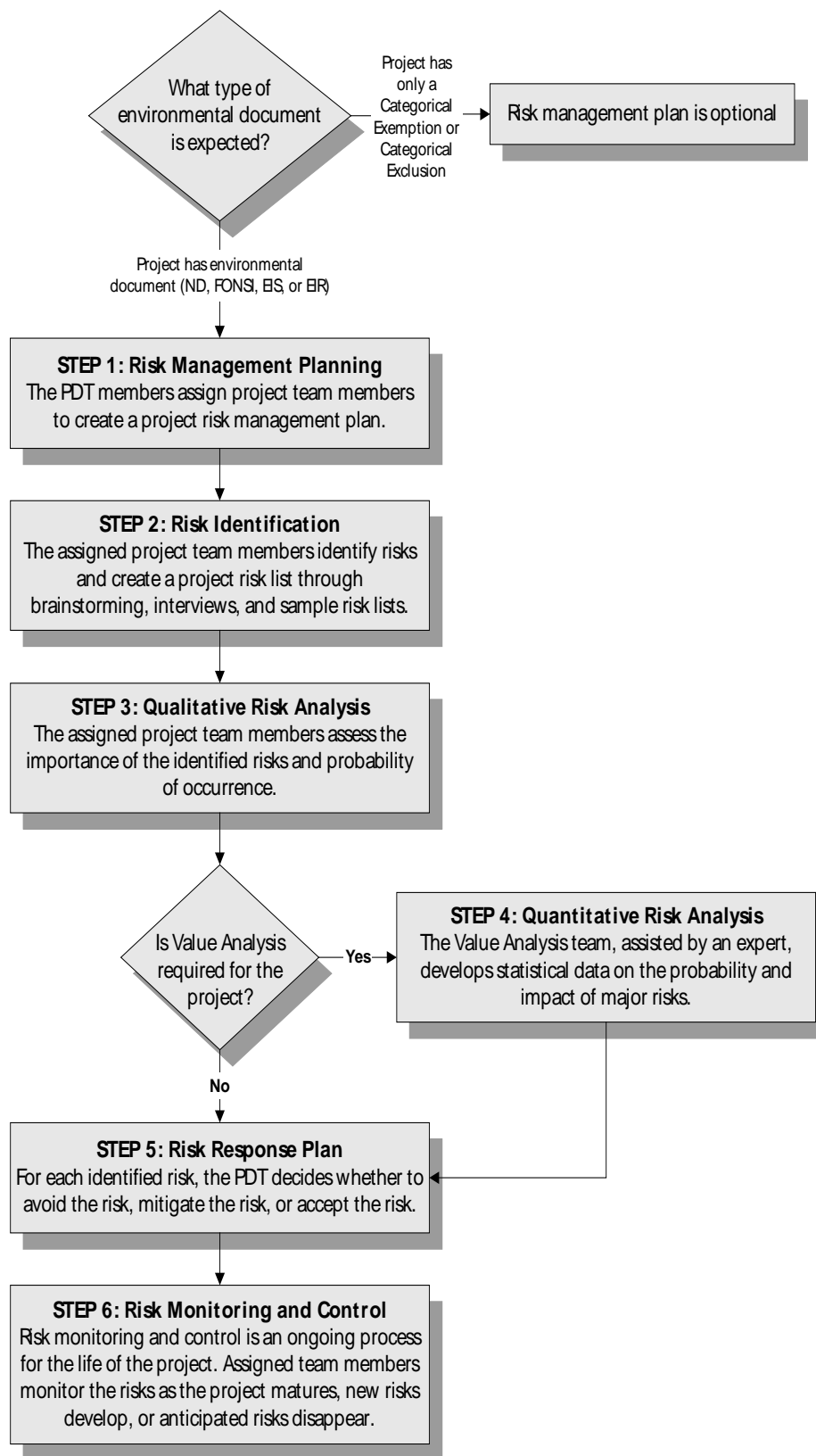


Figure 1: Risk Management Process Flow Chart

2. Risk Identification

To identify risk, more than one gathering information technique can be used: Brain storming, Delphi technique, SOWT analysis and Fishbone technique. Using these techniques, risk register containing various types of risk would be the result. Each group of risks could be categorized under one of the following groups forming risk breakdown structure: External, Organizational (internal), Technical and Project Management related risks. A risk breakdown structure (RBS) is one approach to providing such a structure, but it can also be addressed by simply listing the various aspects of the project .Risk categories may be revisited during the Risk Identification process .A good practice is to review the risk categories during the risk management planning process prior to their use in the risk Identification process. Risk categories based on prior projects may need to be tailored, adjusted, or extended to new situations before those categories can be used on the current project. Figure 2 shows typical RBS for a common range of projects.

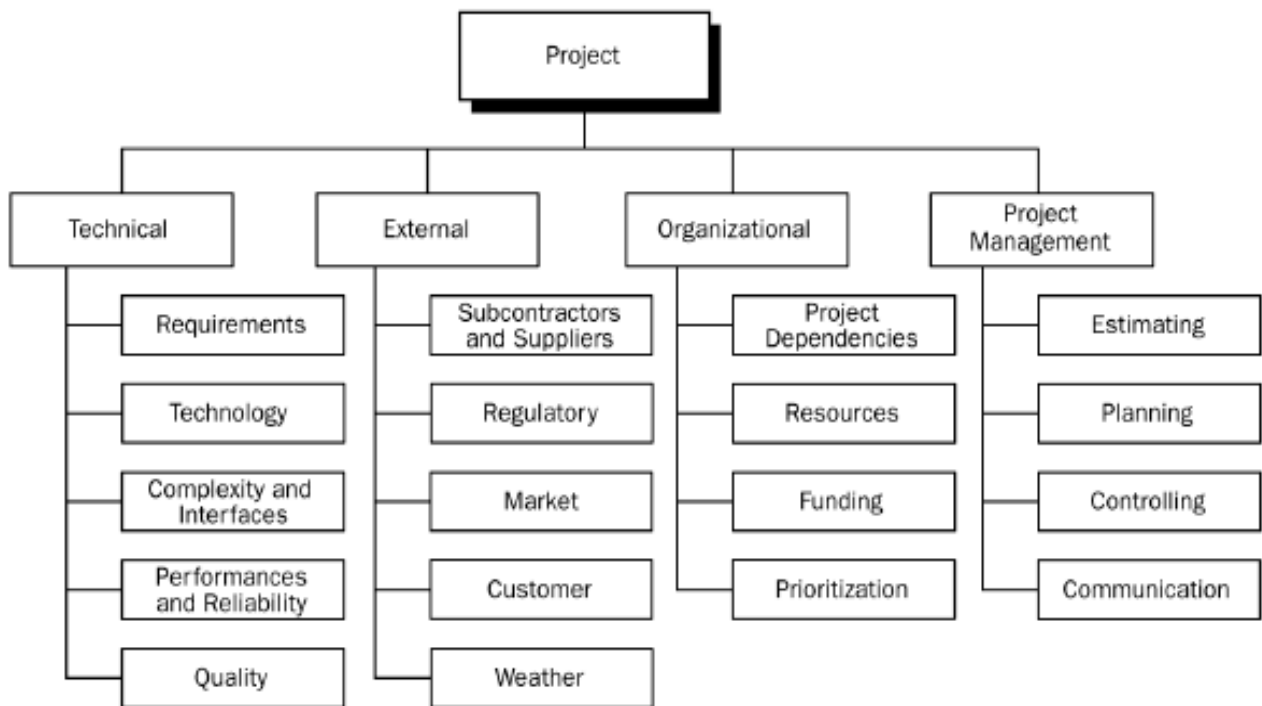


Figure 2: Risk Brack down Structure (RBS)

3. Importance of Risk Management in Real Estate Projects

The Real Estate fortune in the Arab countries is estimated at about 23 Trillion US\$ (AURD, 2009). Real Estate Investment Projects in Arab & Islamic countries were affected by the International financial crisis starting 2009. Moreover, they were also affected by the Arab revolutions spring in many contries like Tunisia and Egypt. In Egypt, for example, real estate sector share reached about 25% of the national income by the end of 2008 while it started decreasing after the international financial crisis till becoming about 17% after the revolution of January 25. As a result, project risk management became of vital role for major real estate projects as a tool for forecasting risks and challenges in this industry.

4. Questionnaire Design and Analysis

A questionnaire survey was conducted on a sample of real estate investment parties (Developers, Consultants, Contractors) companies in the Middle East and North Africa (MENA) countries. Sixty questionnaires were distributed to companies from more than ten countries to collect their opinion about the probable types of risks associated with their real estate projects, namely: owners, consultants, and contractors. Consisting of two main parts: the first part measures the importance of each of the four risk categories (External, internal, Technical and Project Management related) while the second part measures the importance of the different risk items under the four categories. Finally, it was requested to write down suggestions to treat these risks. The questionnaire was designed on a numerical scale; an expert was asked to give a degree between 0 and 10 to reflect his/her opinion in the degree of importance for each risk factor. In this study, forty eight questionnaires were collected out of the sixty. The data are gathered and then analyzed to assign the resultant degree for each risk category and risk item based on the summed opinion of all experts. Table 1 presents the percentage of importance of each of the four risk categories in real estate projects.

Table 1: Importance Degree of Risk Categories

Risk Category	% of Importance
External Risks	87 %
Organizational (Internal) Risks	76 %
Project Management Related Risks	69 %
Technical Risks	55 %

It was noticed that the external risk category which include (International real estate market, Customer behaviour towards real estate projects, Price fluctuation of land and building material, Contractors and suppliers capabilities and Force majeure like: wars, revolutions, earthquakes Etc.) has got the highest score among the four risk groups. Following was the internal risk category which include (Funding, HR availability, Prioritization and Project dependencies) then the project management related risk category including (Technical pre-project studies, Planning, Estimating, Monitoring and control and Communication between project parties). Finally, came the technical risk category including (Quality issues, Complexity and interference and Technology).

Looking at first part of questionnaire results, external risk category seems to have the biggest effect on the real estate projects compared with the other risk categories which make sense as it is clear that the outside environment of the real estate projects would affect the performance and continuity of the project (example of Island volcano dust smother, Japan earthquake and Egyptian revolution). At the mean time internal risk category has less effect than external but still plays an important role in real estate projects (example of Lack of funding and resources, not clear project dependencies and prioritization). On the other hand, project management related risk category has more effect than that of technical risk category as project management could either facilitate the application of real estate investment process (if watched carefully and applied correctly) or exert a negative effect on the whole process. Technical risk category has the least effect as most of real estate projects do not require special requirement in technology or innovation.

Second part of questionnaire measured the importance of the different risk items under the four categories. For the first category, External risk, we have got five risk items: International real estate market, Customer behaviour towards real estate projects, Price fluctuation of land and building material, Contractors and suppliers capabilities and Force majeure. International real estate market had the most influence while customer behaviour towards real estate projects together with price fluctuation of land and building material have got the next influence then force majeure and finally Contractors and suppliers capabilities (Figure 3). International real estate market affected all MENA countries after the financial crisis especially Gulf area while it was less effect on some real estate market which has low connection with world banking system like Egypt.

Internal (organizational) risk category, second category, includes four risk items: Funding, HR availability, Prioritization and Project dependencies. Funding, for sure, had the most influence while prioritization came in the second stage then human resource availability and finally project dependencies (Figure 4). Funding is the major factor in most projects and in specific in real estate projects when it plays a great role to help in the marketing image of the developing company and taking into consideration that real estate financing banks have now more restrictions when dealing with these projects after the financial crisis and mortgage problems.

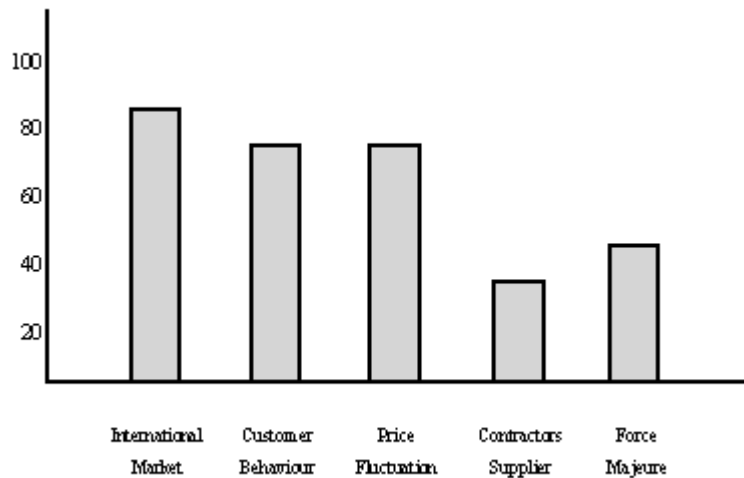


Figure 3. External Risk

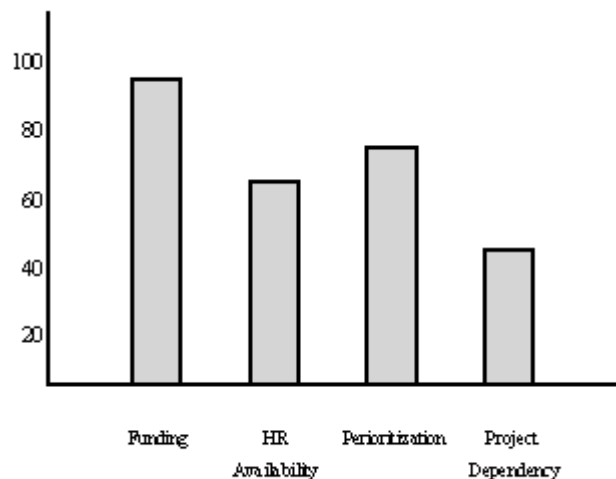


Figure 4. Internal (Organizational) Risk

For the third category, Project Management related risk, we have identified five risk items: Technical pre-project studies, Planning, Estimating, Monitoring and control and Communication between project parties. Estimating had the most influence while technical pre-project studies together with planning have got the next influence then monitoring and control and finally communication between project parties (Figure 5). Estimating is an important item in project feasibility study and there is always a clear difference between cost estimate and actual cost for example affecting the project net profit, that is why most real estate developers concentrate on preliminary estimates of the project.

Technical risk category, fourth category, includes three risk items: Quality issues, Complexity and interference and Technology. Complexity and interference of the projects had the most influence while quality issues came in the second stage finally technology (Figure 6). Interference of the projects could cause a lot of troubles to the project success, especially we talking about large scale real estate projects which need good care in coordinating between project parties during different project phases: concept, design, implementation and operation.

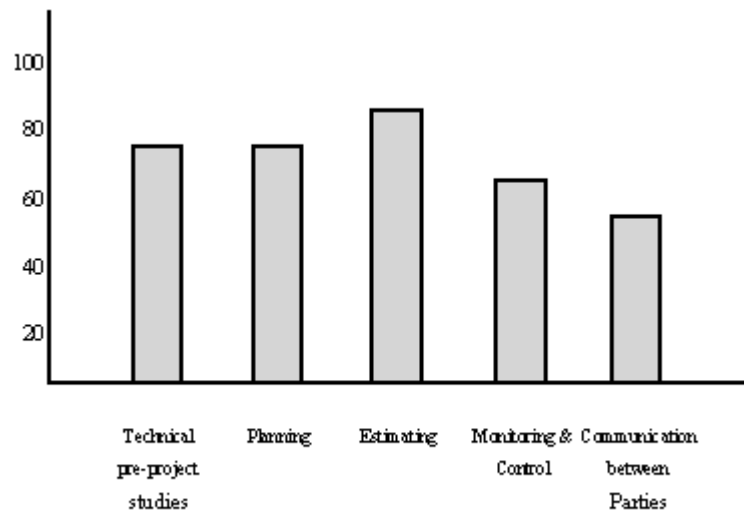


Figure 5. Project Management Related Risk

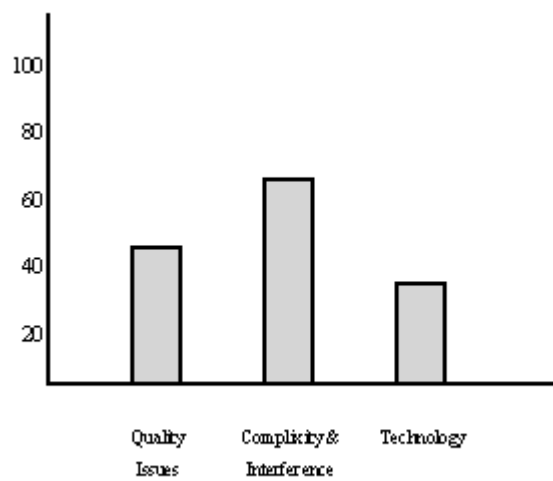


Figure 6. Technical Risk

5. Conclusion

To identify Risk Break down Structure (RBS) in the Real Estate Projects in Arab and Islamic countries, a questionnaire survey was conducted to a sample representing different organizations working in this field. Consisting of two main parts, the questionnaire concentrates on the risk components at different risk categories to explore the RBS in the first part. In the second part, risk response strategies were adopted for the negative risks or threats. The survey results build the Real Estate projects Risk Break down Structure. Classifying the risks into Technical, Organizational, External and Project Management related categories, each category was analyzed showing that the most important factors were: International market conditions, lack of financing, preliminary/actual study discrepancies and finally complexity and interference of the projects. Negative risk response includes: avoidance, mitigation, transfer and acceptance.

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