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ATINER's Conference Paper Series

CIV2013-0639

**Practices, Barriers and Challenges of
Risk Management Implementation in
Albanian Construction Industry**

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URL Conference Papers Series: www.atiner.gr/papers.htm

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ISSN 2241-2891
23/10/2013

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This paper should be cited as follows:

Keçi, J. and Mustafaraj, E. (2013) "Practices, Barriers and Challenges of Risk Management Implementation in Albanian Construction Industry"
Athens: ATINER'S Conference Paper Series, No: CIV2013-0639.

Practices, Barriers and Challenges of Risk Management Implementation in Albanian Construction Industry

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Abstract

The Albanian construction sector has for some time been suffering from problems that result in increased cost and time and in decreased quality. One of the main reasons of this situation is not managing the risks, which is about thinking ahead, simulating and searching for better solutions.

This study investigates the current attitude on the use of risk management practices in the construction industry. The main methodology used starts with a comprehensive literature review, followed by structured questionnaire and interviews with the construction professionals in Albania. The data collected were analyzed, identifying the main obstacles and challenges facing the organizations, and suggesting a few recommendations.

The overall result indicate that risk management application is not high and quite informal due to an unsupportive culture, lack of information and knowledge, lack of technical experience in implementing and interpreting the outputs, etc. This suggests that there is a need to systematically improve the RM in industry by using different strategies to increase both organizations and individual's knowledge and skills.

By focusing on overcoming these barriers through integrating risk management in organizational culture, maximum use of experience, making an early start of risk identification and assessment, right attitude toward risk, and training of employees; organizations can integrate the risk management tools and techniques receiving benefits realized by these practices.

Keywords: Risk Management, Barriers, Construction Industry, Albania

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Introduction

The construction industry as a sector, accounts for 10% of the Albanian's GDP, having an output of more than \$ 1.2 billion (INSTAT, 2011). These figures are similar to the European countries. In the European Union countries, the construction sector is one of the most dominating forces of the economy as it comprises 10% of the total EU GDP and 7% of the total employment (Garcia, 2005). The same trend is also seen in UK, where this industry accounts 10% of the country's GDP giving an output of £80 billion and employing around 1.4 million people (Hernandez et al., 2008).

In Albania, the construction sector during the last decade has turned out to be an important factor in the overall macro economical growth of the country. It is one of the most dynamic sectors of the economy due to its weight in the overall GDP and the high growth rates evidenced in this sector.

According to the gathered data, the construction activity is concentrated mostly in the major urban centers; local and governmental activity mainly concerned on public works: infrastructure and engineering constructions. Private sector construction is mainly focused on the residential buildings for individuals and families that comprise about 82% of the total financing of this sector. The total number of enterprises involved in construction in 2011 is over 4543 with 35000 employees. In the construction sector, the number of private clients is higher than the public ones especially in dwellings, hotels, trade buildings, industrial buildings and a small part of the infrastructure objects. On the contrary, the cult buildings, social-cultural buildings, health buildings, administrative buildings etc, are financed by public clients. (Ozdemir et. al., 2013)

Construction projects, due to its complexity, and future oriented features are constantly exposed to risks. Theoretically, risk is usually defined as a positive or negative deviation of a variable from its expected value. However, in our everyday life it is considered only as a loss. In order to have a smooth and successful implementation of the project, the manager, must have a deep knowledge about risks. Risk management constitutes the strategy to avoid losses and use available chances. It requires a precise assessment of the possible situations and scenarios occurring in the future. The main goal is to minimize or totally avoid the possibilities of any failure in achieving the project goals.

Nowadays, risk management is an organized and regulated practice in developed countries. In countries such as United States of America, United Kingdom and Canada, risk management has become a universal management process involving quality of thought, quality of process and quality of action (Sesel, 2003). In contrast, in developing countries there are still problems on understanding and implementing these methods.

In these conditions, the aim of this investigation is to identify the current attitude regarding the importance of project risk and risk management, and to uncover why risk management does not have a great implementation. To

answer these questions and to accomplish our main goal a general survey was carried to find out the main barriers and search for possible solutions.

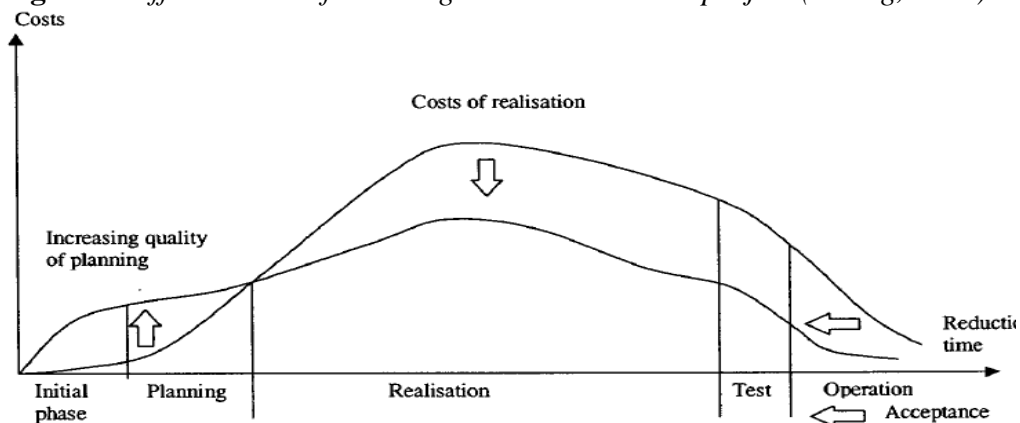
Overview of Risk Management in Construction Industry

Risk is a multi-face concept. It can be expressed as “the potential for unwanted or negative consequences of an event or activity” (Rowe, 1977), “a threat and a challenge” (Flanagan and Norman, 1993), “a combination of probability of an event occurring and its consequences for project objectives” (International Standards IEC62198, 2001). According to PMI PMBoK (PMI, 2004), risk includes upside effects, the opportunities, but traditionally focuses on the downside, i.e. the negative effects. A review of risks definitions lead to the following faces of project risk: an event that focuses on the future, emphasize the negative effects, deals with the probability and consequences.

A variety of risk definitions have been utilized also in construction projects, and there is not any standard description or methods available to explain the basis on what risk assessment is established. The level and scope of those risks vary from project to project and are tied directly to the context (the environment in which the project will be built such as geography, local regulations, etc.) and content (physical elements of the project such as scope, budget, materials, etc.) of the project (Davis and Prichard, 2000). Risk in construction cannot be eliminated but can be managed once taken. It can be controlled, minimized, transferred or shared. In these conditions the management of risk has become a key element for the completion of the project within time scheduled and planned budget, and has been frequently examined from 1987 till today. For risk management, there is not a single universal approach that can be followed to manage and control risks. Construction requires the application of different types of resources to see a completed facility such as a multi-story building, an industrial project, or even a small room. These resources might include basic construction materials, manpower, equipment and technology, time and money. Each of these resources has some risks associated with it. For example, the risk of injuries or damage to the workforce and equipment, not completing the project as scheduled or on budget, or any means losses to the contractor as well as more losses and delays to the client. These resources, along with associated risks, should be identified and managed to minimize losses and increase profits.

The risk management process, initially deals with the identification of the risks, then the analysis, evaluation and monitoring. There are many techniques that deal with risk management. Forbes et. al., 2010 (Forbes, 2010) in their study observed that there were 36 different techniques applied to risk management problems. However, only a few of these risk techniques were successfully applied in the construction industry (Akintoye and MacLeod 1997, Bajaj et. al 1997, Wood and Ellis 2003).

Figure 1. Effectiveness of RM usage in a construction project (Schieg, 2006)



It has been carried out an extensive literature review on barriers of risk management, resulting in a long list of possible barriers (Table 1). One of the most commonly obstacle encountered to effective implementation of risk management is inertia which manifests through personnel not wanting to adopt new procedures. Not talking about risk is another culture related obstacle to an effective risk management process. In some of the companies, there is a belief that senior management do not want to hear any bad news. Thus, many of the employers try to make individual initiatives to overcome a problem, which in time can grow bigger and will become more dangerous. Prohibitively High Cost of risk management or huge funding/resource requirements is also a regularly encountered obstacle. A lot of companies do not consider spending on risk management, even though they are aware of the fact that some precautions need to be taken in order to minimize the risks.

Table 1. Barriers of risk Management Implementation

	Akintoye and MacLeod (1997)	Baloi and Price (2003)	Tang et al (2007)	Hlaing et al (2008)
Lack of information and knowledge			x	x
Lack of practical experience				x
Lack of political, financial.. stability				
Lack of time	x		x	
Lack of money		x	x	
Lack of familiarity and understanding		x	x	x
Lack of policy and procedures			x	x
Lack of organization support				
Lack of transparency among stakeholders				

Lack of joint risk management			x	
Lack of formal risk management			x	
Lack of expertise to lead RM team				
Lack of cooperation and commitment among construction team members				
No guidelines on the standart procedure of managing risk		x	x	
Multiplicity of variable factors in construction projects				
Unsupportive culture	x			
Comunication and transparency with project stakeholders				
Availability of resources		x	x	
Not enough historical data		x	x	
Difficulties in interpreting the results		x		
Insufficient ongoing project information for decision making			x	

Research Methodology

Selection of Tirana as Study Area

The resources limitation made it impossible to conduct a global survey, targeting mainly a specific study area of Albania. The construction practitioners surveyed were based in the capital, Tirana, basically because a large percentage of professionals are developing their activity there. Moreover, based on official sources, Tirana is the centre of the construction sector in Albania. More than 75% of the total number of all construction companies nationwide is based here. Tirana's construction rate is ten times higher than in any other city in Albania. The greater Tirana and the Tirana-Durres corridor have become the heartland for new industrial, commercial, and services activities, developing new industrial area. The most of Albanian and foreign enterprises are concentrated in Tirana. The structure of employment is: 77% service sector, 13.2% construction and transport, 10.7% industry, etc (2001).

It was decided to use the construction practitioners as respondents, including designers, contractors, project managers and planning organizations, superintendents, and specialist from other fields related to construction. Project managers are in charge managing the project in the name of the government and/or private investor to ensure the projects are being complied according to their interests, on time, budget and quality. Planning organizations works with the general planning of the project, deciding the development strategies. Superintendents have dual roles: To act as agents of clients in conveying the clients' instructions to contractors, and as certifiers for the purpose of issuing certificates and making decisions as to reasonable measures of value of work, quantities, or time. (Tang et. al., 2007). The selected population was believed to have experience varying from 3 up to more than 25 years in delivering significant projects in different sectors, including building projects, industrial and heavy industry projects, etc.

Research Methodology

The research methodology adopted for this study is a triangulated approach adopting the literature review, structured questionnaire and further interviews to collect the data. This approach was selected based on Love et al. (Love et al., 2002) who reviewed the benefits of this triple method:

- (i) A single method may not reveal some aspects of the obtained results obtained due to the method limitations;
- (ii) Triangulation facilitates gain complete understanding of a given construction management research phenomenon;
- (iii) Triangulation enables both qualitative and quantitative data collection to be used.

The questionnaire was selected as the principal survey method, selecting the population from 2 sources: (i) the general construction companies list published by Chamber of Commerce and Industry of Albania, (ii) a customized list of construction companies prepared from yellow pages and other sources. The questionnaire survey was administered by the means of two different ways: Firstly, by email questionnaire; and secondly, through distribution by the researcher to the selected companies. The design was developed from literature review of past researches focused on risks in construction. It was organized in three sections. The first section solicited background information about the respondents and the organization. The second section focused on the current practices of risk management and identified the perception of benefits from RM usage. The third section focused on the identification of barriers and challenges for the successful implementation of risk management techniques. The survey included open-ended interviews, asking participants to provide reasons and giving suggestions. Prior to distributing the questionnaire, a preliminary pilot study was conducted with one academic and two project managers to test whether the questions are intelligible, easy to answer, unambiguous, etc. Valuable feedbacks were obtained and after a small refinement, the questionnaire has been finalized. A total of 90 questionnaires were distributed to the construction companies, from which 52 usable questionnaires were gathered.

Table 2. *Breakdown of the responses*

Total no of questionnaire sent	Total valid responses received	Questionnaires returned uncompleted	Percentage of valid responses
90	52	6	57.78%

Data Analysis and Results

All returned questionnaires were thoroughly checked for completeness and suitability in the statistical analysis. To evaluate the opinion of the respondents,

most questions applied a five point Liker scale, and other questions applied multichoice. Further interviews included open- ended questions in order to gather the respondents experience and suggestions on inherent problems, barriers and challenges to implementation of RM. This strategy needs the use of different statistical techniques to analyze the collected data. A mean index formula was adapted to analyze the liker questions (Abd. Majid, 1997).

$$Mean_Index = \frac{\sum a_i x_i}{N}$$

Where:
 ai- constant expressing the weight of each response (1 to 5)
 xi- frequency of the response
 N- total number of responses

The fieldwork in this study allows following each completed questionnaire by an interview to test and interpret the results of the questionnaire, and to collect synthesis opinions.

Respondents Profile

Respondents to the questionnaire hold different positions in the construction industry mainly including designers, contractors, project managers and planning organizations, superintendents, and specialist from other fields related to construction. The total number of valid respondents is 52, and the distribution is as follows:

Table 3. Respondent job position

Project Managers	Client	Designer	Contractors	Superintendents	Other Fields
19.2 %	7.7 %	34.6 %	19.2 %	13.5%	5.8 %

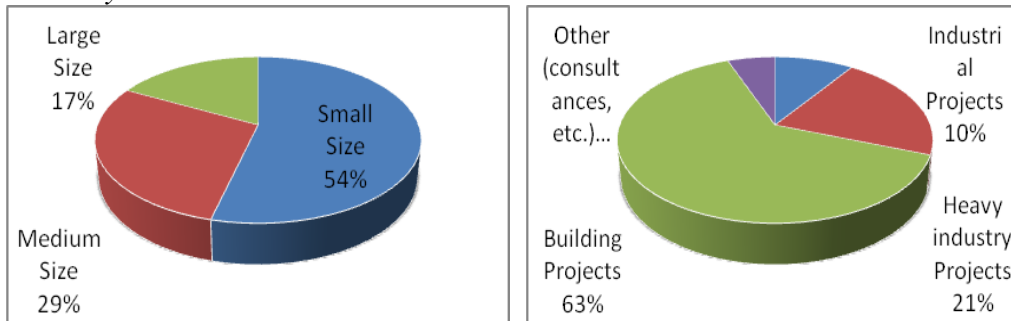
About sixty percent of respondents held senior positions on their organization and most of the respondents, 52% have more than ten years practical experience in the construction sector.

Table 4. Respondent practical experience

Under 5 years	6-10 years	11-15 years	16-20 years	Above 21 years
19.2 %	23 %	15.4 %	32.8 %	9.6 %

Figure 2 depicts information about the size of respondents' organizations and the type of projects they are involved in. The size of the companies is decided on the number of the technical employees, as follows: 1-5→small size, 6-10→medium size, 11-more→large size.

Figure 2. Size of Respondent Organizations and Sector of Construction Industry Involved



The results show that major part of construction companies are small sized companies involved in building projects. 67% is using reinforced concrete constructions for their projects.

Current Practice of Perception and Application of RM

Risk is a multi face concept. Especially in construction industry, as a future – oriented industry, the probability of multi dimensional risks is always present. In order to obtain an insight into the perception and understanding of RM and to examine the current practices adopted a short definition of project risk and risk management was asked. Only 51.9% of the respondents answered to this question defining project risk as:

- A future event that may risk the well going of the project (22.2%)
- Uncertain events that may be caused by uncertainty in financial market, market competitiveness, law and regulations, etc (22.3 %)
- Unexpected events that may happen when the project is not well planned (55.5%)

For the same purpose, the respondents were asked to express their perception on project risk management techniques. 71.1% of the respondents equalized RM techniques to a detailed planning, which shows a gap in the perception and understanding of these practical techniques.

Respondents were next asked to identify the main risk management techniques being used in their projects. 92% had never been involved directly or indirectly in the practice of managing risk. Further interviews resulted that 40% of the respondents heard about risk management only occasionally. Figures 4-5 summarize the practices adopted by the respondents.

Figure 3. *Frequency of Using RM*

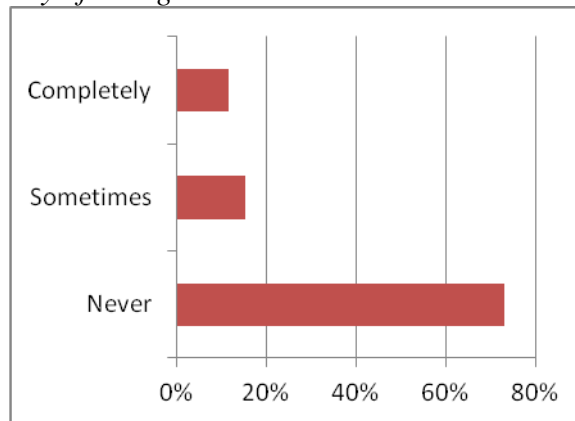
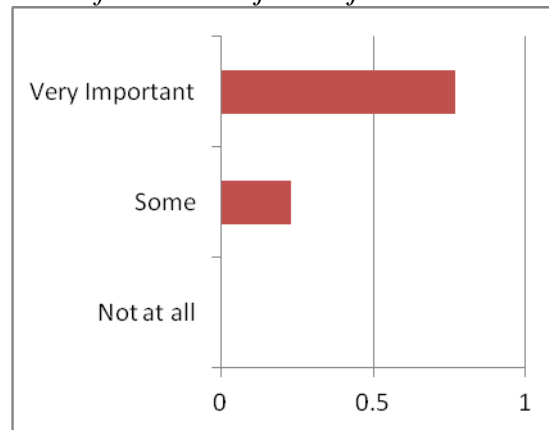


Figure 4. *Effectiveness of RM on Project Objectives*



Risks can be associated to different factors such as: financial factors, technical factors, design and construction factors, organizational factor, policy and political factor, weather and environmental factor, etc. Depending on their assessed probability of occurrence and impact on project objectives they can be considered as acceptable and/or unacceptable, and a tailored- based response plan will be prepared.

Barriers to Risk Management Implementation

The findings of the survey indicate the low level if risk management implemetation in Albanian construction industry. The above statistics clearly point out that project staff, mainly, relies on their own intuition, experience and in a traditional way of planning. To better understand the barriers to risk management, some possible factors that may affect risk management implementation were further investigated. Respondents were asked to identify from their experience the most important barriers to risk management. To do this they were asked weather they agreed with a number of sdugester barriers, by responding on a scale 1-5, where 1=*strongly disagree* and 5= *strongly agree*.

A statistical analysis using main index formula (Abd. Majid, 1997) was performed, and main results are shown in the table below.

Table 5. *Rank of Risk management Barriers*

Barrier to risk management implementation	Score	Rank
Unsupportive culture	4.56	1
Lack of information and knowledge	4.32	2
Lack of practical experience	4.32	3
Lack of policy and procedures	4.05	4
Lack of expertise to lead RM team	4.02	5
No guidelines on the standart procedure of managing risk	3.97	6
Lack of organization support	3.79	7
Lack of money	3.64	8
Difficulties in interpreting the results	3.16	9
Lack of transparency among stakeholders	3.16	10
Lack of political, financial.. stability	3.08	11
Lack of time	2.98	12
Lack of cooperation and commitement among construction team members	2.56	13
Availability of resources	2.45	14
Not enough historical data	2.22	15
Lack of formal risk management	2.2	16
Lack of joint risk management	2.18	17
Insufficient ongoing project information for decision making	2.18	18
Multiplicity of variable factors in construction projects	2.1	19
Comunication and transparency with project stakeholders	2.07	20

Unsupportive culture

The most important barrier resulted to be unsupportive culture, which is necessary for a wide acceptance of RM as an vital practical tool in project sucess. There is no push from construction industry' culture and no evidence support from the companies management board. In the majority of cases the companies management boards are extremely critical to the sucessfully implementation of RM.

Lack of information, knowledge and practical experience on risk management techniques

The second most important obstacle to RM implementation resulted to be “Lack of information and knowledge” and “Lack of practical experience on RM implementation”. The overall survey noted that there was a lack of knowledge on risk management equalizing it to a detailed planning process.

Lack of Policy

The third ranked barrier was “Lack of policy” which is directly related to “Unsupportive culture”

Difficulties in interpreting the results

This barrier refers specifically to the difficulties in implementing the technique and interpreting its results which comes as a result of the “Lack of information, knowledge and practical experience on risk management techniques”.

The general suggestion was that top management should provide training to develop expertise and come up with a workable guideline. Furthermore, the majority of the respondents feel very strongly that the implementation of risk management should be promoted by all who have a direct interest in the construction industry, including the government.

Improving Risk Management Implementation in Albanian Construction Industry

During further self-administrated interviews conducted, the respondents offered different suggestions on how risk management implementation can be improved in Albanian construction industry:

- Integrate risk management in organizational culture: The process can be made more formal in case financial penalties will be given for non-compliance. A respondent suggested that *“risk register may become a contract requirement”*

- Right attitude towards risks: The interviews pointed out that the industry was seen as being risk-averse. It was explained by the respondents as cited:

“RM require too much effort, we always add contingency anyway”

“Risks are inevitable; it will cost what it costs”

“Why should we use RM techniques? We have always done this way and nothing happened to us”

“We will start the project and fix the problems during the way; No need for RM”

Organization must promote the concept of risk responsibility in their culture.

- Make an early start of risks identification: The construction projects start with the very early stage of the project-idea and the feasibility study. So, risks should be examined very early before the design stage and certainly before actual projects commence on site.

- Maximum use of the experience: Experience is very valuable to risk management process. One of the respondents remarked that there is an *“increasing number of inexperienced staff within the construction industry in order to reduce the costs”*.

The suggestion is not to rely only on past experience, but not to discount it.

- Training: Both government and private construction organizations need to focus on the importance of risk management in their systems.

“Organizations’ top management must encourage innovative solutions to enhance earned value through risk management processes, instead of working in a traditional way”

“Organizations’ policies need to include clear motivational clauses to encourage employees to develop themselves and to acquire new techniques”

“Training programs should be provided by the educational system/universities”

Conclusions

This paper discussed the main problems affecting construction industry, examining the possible barriers and looking for suggestions to successfully implementation. We used data collection through a literature review, structured questionnaire and further interviews with construction practitioners. Results showed that construction practitioners understand the potential benefits of an effective, user-oriented risk management, but there are also many obstacles to its implementation.

‘Unsupportive culture’, ‘Lack of information, knowledge and practical experience on risk management techniques’, ‘Lack of Policy’, ‘Difficulties in interpreting the results’, etc. resulted to be the most important barriers which may be overcome through an integration of RM in organizational’s culture, having a right attitude toward risk, making a maximum use of the experience, and most important providing training for the staff.

Considering the long and difficult process of practical implementation, the need for commitment and efforts in user oriented scientific research is of main importance.

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