

## QUALITY MANAGEMENT IN PROJECT MANAGEMENT CONSULTING. A CASE STUDY IN AN INTERNATIONAL CONSULTING COMPANY

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**Abstract**

The present paper addresses quality management from the specific perspective of project management consulting service providers, in the framework of large infrastructure projects. Because of their supposed superiority in knowledge and experience, project management consultants have an ultimate responsibility for the proper implementing of the project. Therefore, quality management in consulting organizations should focus on critical success factors. As there is no consensus yet regarding the most important aspects of the consulting activity on which depend the achievement of the project aims, there is scope for further investigating this subject. Here, the case of a project management consulting organization involved in large infrastructure projects in Romania, Bulgaria, Moldova, Ukraine and Serbia is analyzed. Data collected through a questionnaire-based survey among international consultants and support personnel suggest that factors related to leadership style and communication skills are more closely tied to the success of the project than more technical aspects. The results constitute an empirical evidence of main success factors for specialized consulting services in project management and can be useful in improving business and project performance and achieving business excellence.

**Keywords:** quality management, consulting services, critical success factors, business performance

**JEL Classification:** M10, O1, L2

**Introduction**

Ambitious infrastructure development programs adopted in Central and Eastern European Countries (CEECs) have created new market opportunities for project management consultants. For CEECs the infrastructure is among the most important factors of national

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or regional economic competitiveness, together with macroeconomic stability, goods market efficiency, labor market potential and level of workforce training (World Economic Forum, 2013); scholars have indeed demonstrated the positive relationship between infrastructure and economic and social development (Ihuah, et al., 2014).

However, the capacity to realize a sustained rhythm of infrastructure development depends on the ability to attract financing resources (mainly EU funds), which in turn require compliance with high standards in project design and implementing. This generates a demand for high quality project management consulting services. On the other hand, consulting organizations are selected based on their reputation, or, in other words, the success of the projects they assisted in the past.

Quality management systems were implemented for infrastructure projects on a large scale, especially for companies managing multiple or mega projects in construction. Although many studies have been conducted to study quality management practices within various industries, there is a distinct deficiency of relevant studies on consulting industry as a whole and consulting for infrastructure in particular since researchers are more interested in analyzing quality and costs of projects (Soetanto, et. al., 2001) rather than quality management. Simultaneously, more efforts should be made toward analyzing the case of business services quality and eventually designing an instrumental framework for quality assessment.

For infrastructure, there is evidence that implementing quality management systems may improve communication between all stakeholders involved, cuts costs and improve control of subcontractors, resulting in improved productivity, better margin and increased market share (Motwani and Kumar, 1996). However, most of the studies were not specifically designed to examine performance criteria for projects in consulting industry. Some studies suggested that implementation of ISO standards can be beneficial for companies by improving overall performance and quality awareness (Mo and Chan, 1997; Parsa and Keivani, 1997; Thelen, 1997).

Consultants and their teams have to properly identify and understand the impact of each project success factors in to improve performance and increase project success rate. In this way, the chances of achieving project objectives could increase substantially considering the classical constraints of time, resources and budget.

### **1. Theoretical background**

Efficient implementation of quality management in projects is important for improving performance for virtually all consulting company. In the literature, there is a significant number of studies investigating the effects of various quality management practices on quality (Dow et. al., 1999), operational performance (Samson and Terziovski, 1999) or business performance (Adam et. al, 1997).

Literature on consulting for project management suggests that there are many factors that influence a project's success and there is no consensus on a particular set of critical success factors. Providing consulting for successful implementation of a project usually include a wide variety of criteria. However, in the simplest terms, the success can be considered to incorporate four basic issues. A project is generally considered to be successfully implemented if: a) it is finished in time (time criterion); b) the cost does not exceed the

planned budget (monetary criterion); c) achieve all the goals initially set (efficacy criterion); d) it is accepted and used by the customers for whom the project is intended (customer satisfaction).

Most of the results demonstrates that quality management practices are significantly linked with quality and operational performance, but they have unclear effects on business excellence (Arias, et al., 2014). Another study (Forker, et. al, 1996) emphasize that quality support a company to acquire competitive advantages by fulfilling client needs. Nevertheless, those performance indicators are not appropriate for infrastructure projects. Sharma and Gadenne (2002) emphasized relationship between quality management system and organizational and business performance in general.

However, consulting for project management has changed over the years (Ceptureanu, 2015). Müller and Jugdev (2012) made a comprehensive review of the literature on this topic for the last 40 years and reach the conclusion that there is a significant increase in the set of factors affecting the success of a project and considered by those involved, in our case the consultants. The 80s were marked by an emphasis on planning and control tools, as well as customer relations focus and project team professionalization (Morris, 1988; Pinto and Slevin, 1988). Performance evaluation criteria such as time, budget and functionality have dominated this period and turned gradually to more subjective factors such as customer satisfaction. The 90s have shown an increasing interest in behavioral and interpersonal factors and increased awareness of how project management is about managing human resources to achieve results, not necessarily about managing work itself (Turner and Müller, 2006). A subsequent study by Müller and Turner (2007) showed that differences in projects' success interpretations depends specifically on the local culture and complexity of the projects.

Generally, it has been accepted that time, quality and cost are the main factors in the performance measurements of a project (Barkley and Saylor, 1994) while additional criteria have been suggested to be considered by others (Kumaraswamy and Thorpe, 1996), including quality of works or fulfilling stakeholders' requirements.

Today, for consultants, project's success and implicitly quality of consulting service is commonly considered as a combination of:

- Project's critical success factors, variables that can be acted upon to increase success chances (Morris and Hough, 1987; Turner and Zolin, 2012);
- Criteria for measuring projects' success, what are those measures on which the success of the project is evaluated (key performance indicators) (Wateridge, 1995). Evidently, project management consulting should focus on these elements.

Success means different things to different people and in the case of consulting for project management, the situation is no different (Ceptureanu, 2015). One common hypothesis is if a project is completed on time, within budget and agreed quality, then the project is considered successful. The existing evidence suggests that this is far from the truth. Since the late 60s, project management researchers have tried to discover what factors lead to project success (Baker, et al., 1974:25, 1988; Pinto and Slevin, 1988; Lechler, 1998). Most of the initial studies have focused more on the reasons leading to project failure than its success (Balachandra and Raelin, 1984; Hall, 1980), so consultants would focus on these factors to provide qualitative consulting services.

According to Pinto and Slevin (1988) full completion within budget and with a satisfied customer are common elements that measure the success of a project, hence the consultant should emphasize these factors. However, they suggest that there are few topics in project management, which are discussed so often and yet so rarely agreed to, which makes consulting companies to consider various factors when are offering their services. Yet the precise specifications of these services (applying and submitting a proposal, monitoring, actual project management, managing subcontractors etc.) may be a source of competitive advantage and business excellence, main consulting companies offering comprehensive sets of services.

The success of consulting services for an infrastructure project can be indicated by project performance. The performance of it will be dependent on various factors including its complexity, contractual arrangements, competency of project manager and consultant etc. Most project objectives, however, include multiple criteria, including time, cost, quality and safety. Consulting in project management usually must compromise between these criteria, adding an additional one, total cost of service for beneficiary. Additionally, the consultant must consider if compromises are agreed by the project manager and client, the project could still be accepted as a success, even if some of the objectives have not been fully met.

Shenhar, et al. (2002) analyzed 127 different projects, arguing that the critical success factors are not common to all projects, for various reasons. A seemingly obvious reason is that not all projects are alike. Each project is different and every project operates in its own environment. As an example, they suggest that projects of considerable uncertainty must be managed by consultants differently from projects with a lower degree of uncertainty.

The first systematic classification of critical success factors is done by Schultz, et al. (1987), identifying two groups of factors – strategic and tactical – which determine performance of the project in different phases of the project life cycle. For example, the strategic factors include support from top management and good planning of the project. Tactical factors include customer consulting, selection and training of human resources. Moreover, Pinto and Slevin (1988) increased the range of success factors by considering the specifics of the various stages of the project life cycle.

We considered important for our research the following factors, based on Leon approach (Leong et. al, 2014):

- Cost factor is the degree to which a project is completed within the estimated budget (Bubshait and Almohawis, 1994). Final or total cost has been used in the literature as measurement for project performance on a regular basis (Andi and Minato, 2003).
- Time factor measure a project in terms of completion. For a consultant, it is crucial to complete project on time (Lim and Zain Mohamed, 2000). Moreover, implementation according to schedule is considered as one of the main requirements by clients (Latham, 1994).
- Quality factor, in consulting industry, represents the totality of features required for a provided service to satisfy a given need of client (Parfitt and Sanvido, 1993). For consultants, quality emphasizes the capability to establish requirements with conformance to the quality standard (Ganaway, 2006) and is related to non-conformance report in the ISO 9000 standard, set out in Clause 4 of the ISO 9000.

• Client's satisfaction means the ratio between actual outcome and the expected outcome (Locke, 1970). This factor has become a challenging issue for consultants because it includes all clients' dissatisfactions like overspend in project cost, delay of completion or poor quality. Quality is always closely related to the measurement of clients' satisfaction (Soetanto and Proverbs, 2004).

Research has shown that impact success factors can vary in different phases of the project life cycle and in terms of success measures identified by consultants. Alexandrova and Ivanova (2012) presents a list of critical success factors relevant for projects with European financing, factors that were identified by literature review and from a pilot study performed in Bulgaria in 2012. The resulting critical success factors are as follows:

- Project Manager Competence;
- Support from the contracting authority;
- Clarity of project objectives;
- Support of top management;
- Team members' competence;
- Level of motivation for project's team members;
- Effective communication between project stakeholders;
- Quality of subcontractors;
- Accuracy in documenting and archiving project information;
- Effective coordination of project activities;
- Compliance with the rules and procedures established by the contracting authority;
- Systematic control of project implementation;
- Access to organizational resources;
- SMART planning;
- Competence and adequate support from external consultants.

This paper uses this list as a starting point to assess critical factors to which we have added 6 new factors considering literature and our own expertise. They are as follows:

- The purpose of the project is well defined;
- Objectives are clear and accepted;
- Significant support from management;
- Parties involved in the project have the required expertise for project implementation;
- The risks are identified and managed;
- Management style of project manager is essential for project success.

## 2. Research Methodology

### 2.1 Background

The analysis was performed in an international counselling company. The company (we agreed not to disclose its name, hence in the paper it will be simple called “company”) has its Central and Eastern Europe coordinating office in Bucharest and operates in the following countries: Albania, Armenia, Austria, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Estonia, Georgia, Greece, Kazakhstan, Kosovo, Kyrgyzstan, Latvia, Lithuania, Macedonia, Malta, Moldova, Montenegro, Poland, Romania, Russia, Serbia, Slovakia, Tajikistan, Turkey, Turkmenistan, Ukraine, Hungary and Uzbekistan.

For this paper, two key business sectors for the company, namely transport (10 projects) and environment (water, wastewater and waste management – 6 projects) were considered, for the following countries: Romania, Bulgaria, Republic of Moldova, Ukraine, and Serbia. The sample consists of company’s employees involved in various roles in 16 European funded infrastructure projects, in the above-mentioned countries.

### 2.2 Sample size and structure

To determine the sample size consisting of employees with the role of consultant or support staff involved in infrastructure projects of public interest with European funding the

following formula applies (Cătoi, 2009),  $n = \frac{z^2 * p * q}{e^2}$

where:

n = sample size;

z = confidence level; z = 0.95

p = proportion of people engaged in projects (estimation); p = 0.80

q = complement of p, i.e. the percentage of cases that do not possess the attribute (i.e., those not engaged in projects) and is determined by the relation 1 – p; q = 0.20

e = maximal perceived error, e = 0.05

After applying the formula, we consider that the investigated sample will include 58 respondents i.e. 57.7.

The sampling method used was random sampling (probabilistic) method because all people are part of the research unit have equal opportunities to be selected and placed in the sample research. Once picked one respondent, it is no longer considered for selection following sample components.

### 2.3 Questionnaire design and testing

The research was done using an individual, highly structured and dissimulated questionnaire (Cătoiu, 2009). The questionnaire includes questions about project performance important for consultant (questions Q1, Q2\_1, Q2\_2, Q2\_3, Q2\_4, Q2\_5 and Q2\_6, Q3 and Q4), questions about the factors that impact the success of a project (Q5 – Q23). The questionnaire consists of closed questions. Scale types used in the performance of questions in the questionnaire is Likert scale questions. The questionnaire was tested for formulation and complexity on three people chosen randomly from the sample. The individuals selected for the sample were contacted either directly by e-mail (Romania) or indirectly through a company representative in the target country in question. This solution was chosen to provide a speedy data collection. Questionnaires were filled in electronic format provided and returned via e-mail. Once the data were collected, they were analyzed using SPSS 17.0 statistical program.

### 2.4. Data analysis

Quality management variables influence on project performance was tested with regression analysis. (Table no. 1)

**Table no. 1: Regression result**

Quality management variable		Standard error	Significance
Cost factor	0.004	0.022	0.842
Client satisfaction	0.177	0.022	0.000
Non-conformance report	0.064	0.041	0.115
Time factor	0.344	0.048	0.000

We also performed Reliability Analysis, which involves identifying the degree of precision that measures a characteristic scale. This step was carried out using Cronbach's coefficient alpha for internal consistency, which indicates the inter-item consistency of the scale is based on the average analyzed and the correlations between the items of the scale. (Table no. 2)

Cronbach's alpha is commonly used as a measure of the internal consistency of how well the items in the set are correlated to each other. It is not uncommon for researchers to suggest a threshold value of 0.7 (Nunnally and Bernstein, 1994). According to the internal consistency index value (0.694) shown in table no. 3, the variables analyzed show a very good correlation, which means that the items were accurately perceived (correctly) and have left no room for interpretation by all respondents, suggesting a high internal consistency as well as a high level of reliability of the survey instrument.

**Table no. 2: Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q1. Please specify if from your point of view "successful project management" is the same thing as "successful project".	69.36	20.310	.128	.272	.680
Q2_1. Consulting for a project is considered successful when project is completed in time	68.58	19.803	.310	.646	.642
Q2_2. Consulting for a project is considered successful when it project implemented in its budget	68.45	20.067	.270	.670	.648
Q2_3. Consulting for a project is considered successful when all project objectives are achieved	68.04	20.258	.395	.539	.635
Q2_4. Consulting for a project is considered successful when the strategic objectives of the company who is implementing the project are achieved	68.49	19.180	.468	.449	.621
Q2_5. Consulting for a project is considered successful when the project is accepted and used by the beneficiary	68.47	18.809	.479	.635	.617
Q2_6. Consulting for a project is considered successful when project stakeholders are satisfied	68.47	19.032	.410	.603	.627
Q3. Consulting for a project could be still considered successful if it is implemented in a longer period of time than initially planned, with a budget over the estimated one but it achieves all its objectives and it is accepted and used by the beneficiary?	69.16	21.658	.027	.348	.688
Q5. For consultant, a project to be successful – <i>clarity of its scope and goals are ...</i>	67.91	21.158	.236	.325	.652
Q6. For consultant, a project to be successful – <i>achieving its objectives is ...</i>	67.80	21.385	.303	.354	.649
Q7. For consultant, a project to be successful – <i>top management support is...</i>	68.00	21.148	.247	.361	.651
Q8. For consultant, a project to be successful – <i>access to the organization's resources is...</i>	68.27	19.832	.518	.427	.623
Q9. For consultant, a project to be successful – <i>support from the contracting authority is...</i>	68.11	21.136	.149	.275	.664
Q10. For consultant, a project to be successful – <i>following the contracting authority's rules and procedures is</i>	68.20	20.200	.452	.426	.631
Q11. For consultant, a project to be successful – <i>the quality of the sub-contractors' services is</i>	68.07	22.069	.050	.452	.672
Q12. For consultant, a project to be successful – <i>the quality of the contractors' works is ...</i>	67.82	21.781	.194	.467	.657
Q13. For consultant, a project to be successful – <i>the works execution control is...</i>	67.80	22.274	.077	.435	.665

**Table no. 3: Cronbach alpha coefficient of internal consistency Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.663	.694	17

### 3. Results

Correlation determined the links between any given project performance indicator and quality management factors. These shows significant but weak correlation with client satisfaction and time factor and very weak correlation with other significant project performance indicators. (Table no. 4)

**Table no. 4: Correlation result**

Variable	Quality management variables
Cost factor	Not significant
Client satisfaction	Weak
Nonconformance (quality) factor	Very weak
Time factor	Weak

One of the most interesting results of the research is that more than half of respondents (53% overall) believe that successful project management is the same as "successful project". As such, for most of those involved in implementation of projects, regardless of their position (project manager, consultant or support staff position), to successfully manage a project is equivalent to fulfil customer expectations. In other words, the consultants involved in providing consulting in project management do not make a distinction between the two concepts. The causes are, in our opinion, multiple: even if a project does not fulfil objectives set by contract, a common occurrence in infrastructure projects are financial corrections and budget overruns, it does not affect fees of consulting firms but the project beneficiary. Often the success fee is charged to the contract, and any corrections are caused by legal issues, frequent changes in legislation, especially in public procurement making it difficult successful completion of a project.

Another interesting fact is that of those who did not agree with the statement (32% total) only 15% are project managers (team leader, project manager or project responsible) or have a position involving management responsibilities (Deputy Team leader).

In terms of the "successful project" concept confirmed the issues identified by the bibliographical study which defines this concept. All aspects record high percentage (over 70% of respondents), of which nearly matches the achievement of project objectives unanimity (91%) of those questioned in. While that is important, a project to satisfy all stakeholders (77%) than only customer for that project is executed (75%). Furthermore, the results achieved to question Q3 which respondents were asked to confirm or deny the claim such that a project can be considered successful if conducted over a period of time, with a budget exceeding the initial estimate but achieve all objectives initially established and accepted and used by the beneficiary for the project is intended to show that 60% of them are "agree" and "strongly agree" while 23% still have not formed an opinion (disagree nor disagree with the statement). By correlating these results with those recorded question Q4 which sought to determine the frequency of similar cases to the one shown in Question Q3 in project management in the target area at the time of the research, which shows that 52% of those surveyed believe that this happens "often" or "very often" and 38% believe that the only times you encounter a similar case although projects exceeding the period and estimated budget chances are that they be considered "successful projects" if they met their objectives and are accepted by the recipient.

Analyzing the responses received in relation to the factors that have the greatest impact on the consulting service and the success of a project respondents produced the following ranking based on percentages recorded for each of the items in terms of maximum impact on the success of a project (marked as "very important") (Table no. 5):

**Table no. 5: Ranking of critical success factors**

No.	Critical success factor	Question	Total score %
1	Leadership style of consultant	Q22	86.7
2	Consultant team competence	Q17	78.3
3	Fulfil the purpose and objectives of the project	Q6	76.7
4	Quality of consultant control over contractor activities	Q12	76.7
5	Quality of consultant control over activities implemented	Q13	76.7
6	Consultant competence	Q16	75
7	Quality and effectiveness of communication between project stakeholders	Q23	71.7
8	All parties involved (contracting authority, consultant, building contractors, sub-contractors, etc.) must have the required expertise for project implementation	Q14	70
9	Effective coordination of project activities by consultant	Q19	68.3
10	Identifying and managing risks by consultant	Q15	63.3
11	Support for consultant from top management	Q7	60
12	Support from the contracting authority	Q9	56.7
13	Quality control of services provided by sub-contractors	Q11	56.7
14	Motivating consulting team	Q18	51.7
15	Fulfilment of rules and procedures established by the contracting authority	Q10	41.7
16	Access of consultant to organizational resources	Q8	36.7
17	Accuracy in documenting and archiving	Q21	36.7
18	Flexibility in planning project activities	Q20	31.7

Comparing these results with those acquired by Alexandrovna and Ivanova (2012) these are:

- Consultant Competence => 81.8%
- Compliance with the rules and procedures => 78.0%
- Consulting team competence => 66.7%
- Quality of services provided by sub-contractors => 66.7
- Support from the top management => 64%

*(Results from initial study)*

- The management style consultant (leadership) => 86.7%
- Consulting team competence => 78.3%
- Fulfill the purpose and objectives of the project => 76.7%
- Quality of sub-contractors => 76.7%
- Control of execution => 76.7%

*(Own study results)*

#### 4. Discussion

Most of the companies adopt quality management to become competitive by improving quality of their products or services (Deming, 1982; Garvin, 1988; Steeples, 1992) while consulting companies implement quality management systems to assess and improve project performance, their main business.

Various studies (Ahmed et. al, 2005) demonstrate that infrastructure contractors will hire a consulting company to ensure the overall and specific quality of the project, usually detailing their requirements in the contract. That means consultant will have a checklist to evaluate project performance from client perspective. According to our research, client satisfaction and time factor have shown significant positive relationship with quality management variables. At the same time, client satisfaction and time factor have weak but significant correlation. That further proves that time criteria are always important for clients' satisfaction, as is proven in other studies (Parasuraman, et al., 1988).

On the other hand, cost factor does not show significant or positive relationship with quality factor. For cost the result is not significant because infrastructure projects are complex and usually involve additional cost (e.g. due to variation orders, changes in legislation etc.). Some of the costs will be covered by main contractors when project is completed and the source of the problem is hard to identify.

Concerning the second part of our research, only "consultant team competence" emerge in both our study and Alexandrova and Ivanova's among the most important factors that impact quality of consulting service. The fact that in our study "quality of consultant control over contractor activities" and "quality of consultant control over activities implemented" appear in the top five factors is normal and to be expected given that type of project analyzed – infrastructure, regardless of industry: transport, environment – water and waste water, waste, energy etc.

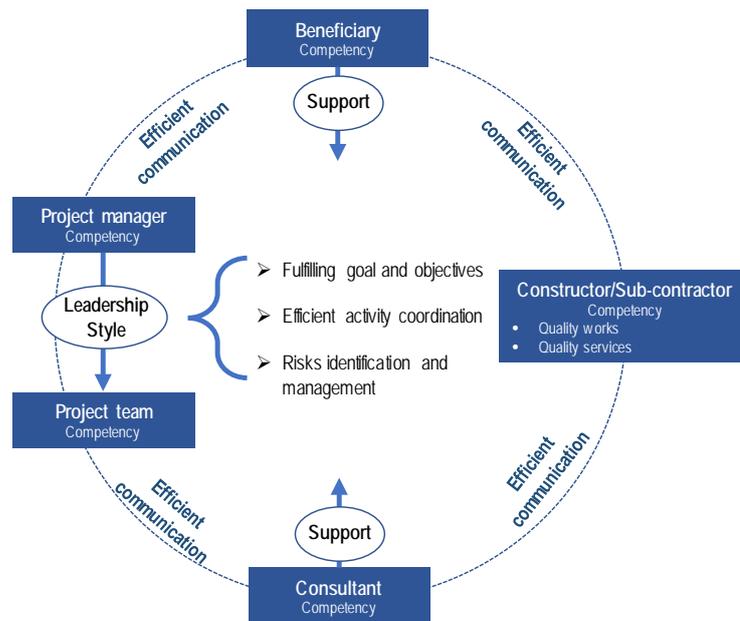
The most important result of the second part of our study is that "management style of consultant" is ranked first, differentiating from "competence" (factor ranked no. 6 in the ranking), which means technical knowledge of consultant. This result is part of the trend outlined by studies in recent years arguing that the project manager identifies leadership as a very important critical success factor. Kerzner (Atencio, 2013) argues that "project managers are often selected or not depending on their management style (leadership)". Also, the link between project success and ability and leadership style of the person managing it was identified and demonstrated in a study led by Muller and Turner (2007). Atenció (2013) mentions that although his driving style is considered a success factor at the organizational level for a long time, however, this concept has been adopted relatively recently in project management. This assertion is supported by other authors like Dvir, et al. (2005), Turner and Muller (2005; 2006) or Jiang (2014).

In the aforementioned study, Jiang (2014) states that if we look at things from the perspective of the model developed by Yang (2011) consultant leadership style influence project success through teamwork and the results of this study – "consulting team competence" ranked as the second most important critical success factor – which indicates the importance of team and teamwork.

Another interesting aspect is that of the factors analyzed more than 50% of the respondents eight of factors relates to human resources (Q22, Q17, Q16, Q23, Q14, Q7, Q9 and Q18) only three are related to project management (Q6, Q19 and Q15) and the remaining three relate to quality assurance (Q12, Q13 and Q11).

Based on these results a conceptual model to improve overall quality of consulting services was developed. It is based on fourteen critical success factors that have registered more than 50% of total received answers is graphically illustrated as in Figure no. 1. In this model the beneficiary is a central, regional or local public authority, which access European funding and wants to run a particular program or project to make an investment that meets the needs of the population in a given area, which can be a territorial-administrative unit (ATU), several ATUs, a county, region or entire country. The consultant is a specific consulting firm that was selected following a procurement process (public tender). It could be a local or international company or an association of companies. Both entities offer their support to project team, which are responsible for implementing the project and how the contractor meets its contractual requirements.

The study shows unequivocally that the project management capacity of consultants and beneficiaries has not improved in the last several years which is a significant signal. Given the multitude of short courses available for example in Romania, many of them financed by Human Resources Development programs, and trainings organized by European programs' management authorities for their employees supervising or monitoring projects, apparently, the results should have been different. However, 60% of respondents did not consider that consultants' capacity to manage projects has improved.



**Figure no. 1: Conceptual framework for critical success factors in assuring quality in infrastructure projects consulting services**

For those who answered affirmatively, they were consequently asked to determine the most important 3 elements that have led to improved capability to successfully manage an infrastructure project among both beneficiaries and consultants. First was ranked factor "better coordination and communication with stakeholders and the project team" (42%), the second "personally extremely experienced" (33%), and the third "experience of the

consultants' firm" (25%). It follows that through the improved communication between parties involved in project implementation, the ability of consultants to manage projects has improved. It is obvious that this is the result of lessons learned from project implementation.

Another important aspect is the use of increasingly better prepared consultants. This statement has to be understood by taking into account that most respondents were local experts. More than five years ago, the proportion of international experts was higher compared to the present situation in which only the team leader or a highly-specialized consultant are foreign experts with international experience. The third aspect should be considered in the same context, of the transition from teams mostly international (at least in terms of key experts of the projects) to teams of local consultants and experts who have accumulated enough experience to work in European funded projects in key positions.

Concerning beneficiaries, the issues identified are related to lessons learned from the implementation of European projects over the years. Moreover, public authorities have received formal and informal training, received or were involved in the transfer of knowledge and on-the-job training throughout the implementation of the projects, in various projects components and specific activities. The fact that communication between customer and consultant have improved should be understood in the context of enabling a balance of powers. An experienced beneficiary will communicate much better with a consultant because he knows what he wants and how to get to it. Also, such an entity agrees easier to solutions provided by the consultant and as such communication process is improved.

### **Conclusions**

One topic analyzed the relationship between project performance indicators and quality management variables. The findings indicate that client satisfaction and time factor have positive and significant relationship with quality management implemented while other project performance indicators do not seem to show significant correlation.

Although this study was conducted in a single company, this is an international consulting company specialized in providing support for infrastructure projects, with a presence in all countries of Eastern Europe. To make research possible, we used Leong approach and Alexandrovna and Ivanova approach for the 2 parts of our research.

We believe that our paper contributes to quality management and project performance literature, providing a point of view from consultants involved in infrastructure projects. There are relatively few international players able to apply for such projects, making the research more interesting. Moreover, this framework includes leadership style of consultant as a critical success factor has been identified in the research as the most important in the context in which it was conducted. As such, this paper demonstrates, with the necessary limitations, how important is the leadership style in the context of specific projects in the context of infrastructure projects with European financing. And this is happening in a context where there are sophisticated project management tools available which apparently, for some, make project management a matter of competence and tools rather than human resources.

We also hope the study results represent an impetus for theorists to bring new evidence in this direction but also for practitioners to focus their efforts on these key areas. For the latter, it is important to understand the importance of leadership style for both main

consultant and consulting team. Practice and reality on the ground showed that leadership style it is more important than technical competence for main consultant.

Pragmatically, highlighted aspects lead to improved quality in consulting process for project management and project management capabilities both for beneficiaries and consultants. These elements can represent milestones according to which time, energy and budgets can be targeted to increase the number of successful projects as a result of business excellence.

### References

- Adam E.E., Corbett L.M. and Flores B.E., 1997. An international study of quality improvement approach and firm performance. *International Journal of Operations & Production Management*, 17(9), pp. 842-873.
- Ahmed S. M., Aoieong R. T., Tang S. L. and Zheng D.X.M., 2005. A comparison of quality management systems in the construction industries of Hong Kong and the USA. *International Journal of Quality & Reliability Management*, 22(2), pp. 149-161.
- Alexandrova M. and Ivanova L., 2012. Critical success factors of project management: empirical evidence from projects supported by EU programmes. *The International ASECU Conference on Systematic Economics Crisis: Current Issues and Perspectives*, Skopje, Macedonia.
- Ali, S. and Rahmat, I., 2010. The performance measurement of construction projects managed by ISO-certified contractors in Malaysia. *Journal of Retail & Leisure Property*, 9(1), pp. 25-35.
- Andi, A. and Minato, T., 2003. Design documents quality in the Japanese construction industry: factors influencing and impacts on construction process. *International Journal of Project Management*, 21(7), pp. 537-546.
- Atencio M., 2013. *A critical success factors framework that includes leadership competencies for successful delivery of projects*. PhD thesis, University of Salford. Available at <<http://usir.salford.ac.uk/30638/1>> [Accessed 8 August 2016].
- Baker, B.N., Fisher, D. and Murphy, D.C., 1974. *Factors affecting project success*, National Technical Information Services, N-74-30092, September.
- Bubshait, A. and Almohawis, S.A., 1994. Evaluating the general conditions of a construction contract. *International Journal of Project Management*, 12(3), pp. 133-136.
- Catoiu, I., 2009. *Cercetari de marketing – tratat*. Bucuresti: Editura Uranus.
- Captureanu, E.G., 2015. Survey regarding resistance to change in Romanian innovative SMEs from IT Sector. *Journal of Applied Quantitative Methods*, 10(1), pp. 105-116.
- Captureanu, E.G., 2015. Employee's reaction to change in Romanian SMEs. *Review of International Comparative Management*, 16(1), pp. 77-87.
- Captureanu, E.G., 2015. Research Regarding change management tools on EU SMEs, *Business Excellence and Management Review*, 5(2), pp. 28-32.
- Deming, W.E., 1982. *Quality, Productivity, and Competitive Position*. MIT Centre for Advance Engineering Study: Cambridge, Mass, USA.
- Dow, D., Samson, D. and Ford, S., 1999. Exploding the myth: do all quality management practices contribute to superior quality performance? *Production and Operations Management*, 8(1), pp. 1-27.

- Dvir, D., 2005. Transferring projects to their final users: The effect of planning and preparations for commissioning on project success. *International Journal of Project Management*, 23(4), pp. 257-265.
- Forker, L.B., Vickery S.K. and Droge C.L.M., 1996. The contribution of quality to business performance. *International Journal of Operations & Production Management*, 16(8), pp. 44-62.
- Ganaway, N.B., 2006. *Construction Business Management: A Guide to Contracting for Business Success*. Butterworth-Heinemann, London, UK.
- Garvin, D., 1988. *Managing Quality*. New York: Free Press, USA
- Ihuah, P.W., Kakulu, I.I., and Eaton, D., 2014. A review of Critical Project Management Success Factors (CPMSF) for sustainable social housing in Nigeria. *International Journal of Sustainable Built Environment*, 3, pp. 62-71.
- Jiang, J., 2014. The Study of the Relationship between Leadership Style and Project Success. *American Journal of Trade and Policy*, 1(1), pp. 51-55.
- Latham, M., 1994. *Constructing the Team*. London: HMSO.
- Lechler, T., 1998. When it comes to project management, it's the people that matter: an empirical analysis of project management in Germany. In F. Hartman, G. Jergeas, J. Thomas, eds., 1998. *The nature and role of projects in the next 20 years: research issues and problems*, Calgary University of Calgary, pp. 205-215.
- Leong, T.K., Zakuan, N., Saman, M., Ariff, M., and Tan, C.S., 2014. Using Project Performance to Measure Effectiveness of Quality Management System Maintenance and Practices in Construction Industry. *The Scientific World Journal*, [e-journal] Article ID 591361, 9 pages. <http://dx.doi.org/10.1155/2014/591361>.
- Lim, S. and Zain Mohamed, M., 2000. An exploratory study into recurring construction problems. *International Journal of Project Management*, 18(4), pp. 267-273.
- Locke, E.A., 1970. Job satisfaction and job performance: a theoretical analysis. *Organizational Behavior and Human Performance*, 5(5), pp. 484-500.
- Mo, J.P.T. and Chan, A.M.S., 1997. Strategy for the successful implementation of ISO 9000 in small and medium manufacturers. *The TQM Magazine*, 9(2), pp. 135-145.
- Morris, P., 1988. Managing project interfaces. In Cleland, D.I., King, W.R., eds., 1998. *Project Management Handbook*, Second edition, New York: Van Nostrand Reinhold, pp. 902-909.
- Morris, P.W. and Hough, G.H., 1987. *The Anatomy of Major Projects*. New York: John Wiley and Sons.
- Motwani, J. and Kumar, A., 1996. A roadmap to implementing ISO 9000. *International Journal of Quality & Reliability Management*, 13(1), pp. 72-83.
- Muller, R. and Turner, J., 2007. Matching the project manager's leadership style to project type. *International Journal of Project Management*, 25, pp. 21-32.
- Müller, R. and Jugdev, K., 2012. Critical Success Factors in Projects: Pinto, Slevin, and Prescott – the elucidation of project success. *International Journal of Managing Projects in Business*, 5(4), pp. 757-775.
- Nunnally, J.C. and Bernstein, I.H., 1994. *Psychometric Theory*, 3rd Ed. New York: McGraw-Hill

- Parasuraman, V.A., Zeithaml, L.L., Berry, 1988. Service quality: a multi-item scale for measuring consumer perceptions of quality. *Journal of Retailing*, 64, pp. 13-40.
- Parfitt, M.K. and Sanvido, V.E., 1993. Checklist of critical success factors for building projects. *Journal of Management in Engineering*, 9(3), pp. 243-249.
- Parsa, A. and Keivani, R., 1997. Making the most of quality management systems. *Construction Manager*, 1, pp. 16-17.
- Pinto, J.K. and Slevin, D.P., 1988. Project Success: Definitions and Measurement Techniques. *Project Management Journal*, 19(1), pp. 67-2.
- Samson, D. and Terziovski, M., 1999. The relationship between total quality management practices and operational performance. *Journal of Operations Management*, 17(4), pp. 393-409.
- Schultz, R.L., Slevin, D.P. and Pinto, J.K., 1987. Strategy and Tactics in a Process Model of Project Implementation. *Interfaces*, 17, pp. 34-46.
- Sharma, B. and Gadenne, D., 2002. An inter-industry comparison of quality management practices and performance. *Managing Service Quality*, 12(6), pp. 394-404.
- Shenhar, A.J., Tishler, A., Dvir, D., Lipovetsky, S. and Lechler, T., 2002. Refining the search for project success factors: A multivariate, typological approach. *R&D Management*, 32(2), pp. 111-126.
- Soetanto, R., Proverbs, D.G. and Holt, G.D., 2001. Achieving quality construction projects based on harmonious working relationships – clients' and architects' perceptions of contractor performance. *International Journal of Quality & Reliability Management*, 18(5), pp. 528-548.
- Soetanto, R., Proverbs, D.G., 2004. Intelligent models for predicting levels of client satisfaction. *Journal of Construction Research*, 5(2), pp. 233-253.
- Steeple, M.M., 1992. *The Corporate Guide to the Malcolm Baldrige National Quality Award*. Business One Irwin, Homewood, Ill, USA.
- Wateridge, J.H., 1995. IT projects: a basis for success. *International Journal of Project Management*, 13(3), pp. 169-172.
- World Economic Forum, 2013. *Regional Competitiveness Report*. Geneva: World Economic Forum
- Thelen, M.J., 1997. ISO 9000 and TQM in SITA research and development. *The TQM Magazine*, 9(4), pp. 265-269
- Turner, J.R. and Müller, R., 2005. The project manager's leadership style as a success factor on projects: a literature review. *Project Manage Journal*, 2(36), pp. 49-61.
- Turner, J.R. and Müller R., 2006. *Choosing Appropriate Project Managers: Matching their leadership style to the type of project*. Project Management Institute, Newton Square, PA, USA.
- Turner, R. and Zolin, R., 2012. Forecasting Success on Large Projects: Developing Reliable Scales to Predict Multiple Perspectives by Multiple Stakeholders Over Multiple Time Frames. *Project Management Journal*, 43(5), pp. 87-99.
- Yang, C. and Huang, R.H., 2011. Key success factors for online auctions: Analysis of auctions of fashion clothing. *Expert Systems with Applications*, 38(6), pp. 7774-7783.