HUMAN CAPITAL IN PROJECT RISK MANAGEMENT

Gabriela Kormancová

Abstract

This paper deals with the human capital in project risk management. Unexpected risks can occur anytime during the whole project life cycle and may endanger the project performance. Therefore project risk management might be helpful in identifying risks, their analysis, monitoring and evaluation. Particular stages of project are connected with specific tasks which require complex knowledge and competencies of project manager and project team members. We want to highlight the importance of human capital for successful project risk management.

Key words: project risk management, human capital, project.

JEL Code: M21, O15

Introduction

In the past, risk management used to represent only smaller part of the company and managers did not consider this area as crucial. However, the situation has changed and companies nowadays acknowledge the importance of risk management and perceive the need to treat this area more carefully.

1 Project risk management

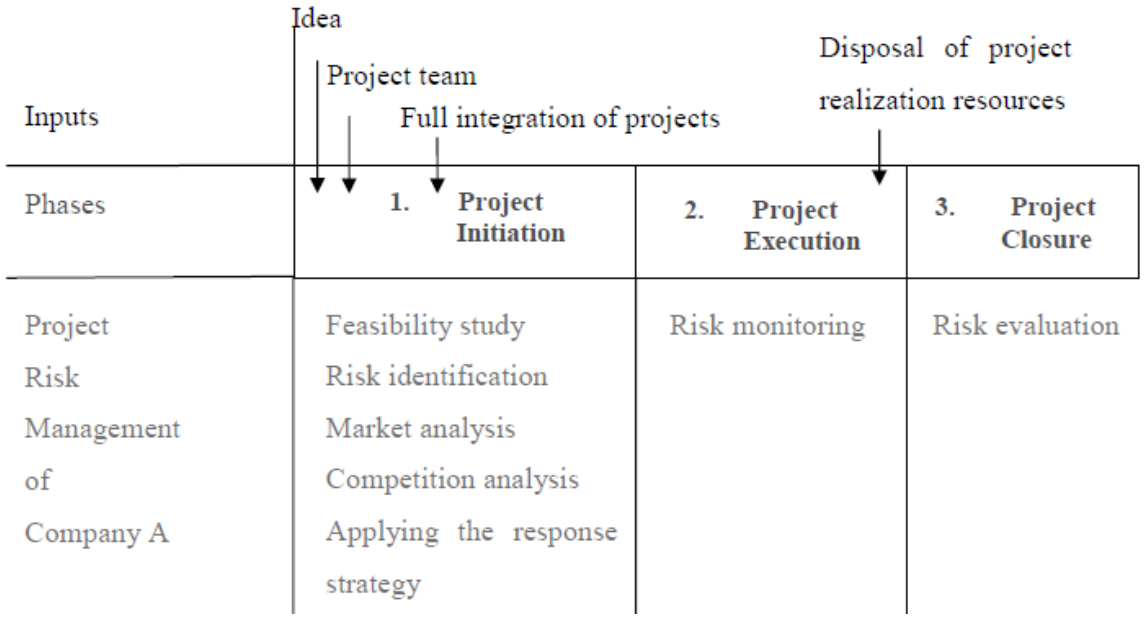
Risk management assures that almost all problems are discovered early enough so that there is time to recover from them without missing schedules or overspending the budget (Tamak, Bindal, 2013).

In an effort to simplify the procedure (so called "risk management") it should be paid attention to three general links: identification, quantification (assessment) and reaction. The problem of risk was also reflected in the project management standards: PMBOK and PRINCE 2 (Dziadosz, Rejment, 2015).

According to Wanderley et al. (2015) when risk management methods are used, they are often simplistic and users have little trust in the results of their risk analysis results. Given the increasing interest in risk management in the software industry, for applying risk management more widely, it is necessary to provide comprehensive support for risk

management, guidelines for application, support communications between the stakeholders and be credible.

Figure 1: Project risk management according to project life cycle



Source: Adapted by author from: Svozilová, A. *Projektový management.* Praha : Grada Publishing, 2011.

Companies often identify project risks according to previous experience especially dealing with small projects. The nature of projects is very similar because of repeating character and therefore they do not use any of official methods which are appropriate for risk management. In complex projects more sophisticated methods of risk management are used following project management standards as mentioned above.

Raydugin (2013) identifies three dimensions of risk management:

1. *Vertical* (hierarchy): integration of the risk management system at work package-project-business unit-corporate levels;
2. *Horizontal* (disciplines): integration of various project disciplines from engineering, procurement and construction to safety, project services, etc.;
3. *In-Dept* (coordination): integration of risk management activities among project owners, partners, contractors and major stakeholders.

In this paper we deal mainly with in-dept dimension of risk management to highlight the responsibility of project team members during the whole project life cycle.

1.1 Tasks of project team members in risk management process

It is necessary to mention that people are an important source of risks in projects. However, they are also crucial in handling risks during the whole project life cycle.

All risk management activities starts, of course, at the beginning of the project planning process. The project manager needs to seek all potential risks identified by team members as well as by stakeholders and possible end users.

Theodoulides et al. (2016) stress the leadership´s ability which is crucial in the rapidly changing environment in order to guide and manage change successfully. In our case we understand a project as a tool of change which can contribute to the further development of a company.

Table 1: Tasks of project team members in project risk management

Risk management steps	**Roles**	**Tasks**
Risks identification	Project manager	Select risk identification team. Potential participants include: - Project team, support group; - Representatives from other elements of a program; - Partners or suppliers; - Customers and employees; Decide which risks are necessary to be analysed further.
	Risk identification team	- Identify which risk factors are relevant for a project and rate their potential for indicating risk; - Identify potential risks for a project, identify the conditions that could increase potential negative effect on a project;
Risks analysis	Project manager	Consider the level of risk for a project and decide whether to continue with a project or not.
	Risk identification team	Review each risk item and estimate: - Probability of risk occurrence; - Loss if the risk occurs; - Quantify the value of risk; - Rank identified risks;
Risks handling	Project manager	- Incorporate risk measures into project plan; - Document the required contingency plan and estimated costs and effort;
	Project team and project manager	- For each key risk, identify an approach how to handle a risk, estimate the effort or cost required for this action;
Risks monitoring	Project manager	- Regularly review and update the status for each key risk to ensure that risks are under control; - For any risk out of control revise the mitigation action or follow contingency plan;

		- Prepare the Status report related to risks;
	Project team	Be aware of other potential risks and communicate them with the project team: - Identify new risks and analyse them; - Participate in regular evaluation and update the risk register;

Source: Adapted by author according to Tamak, J., Bindal, D. "An Empirical Study of Risk Management & Control", *International Journal of Advance Research in Computer Science and Software Engineering*, Vol. 3, Issue 12, 2013:3-4

In order to monitor all of the previously mentioned tasks that need to be fulfilled during the project life cycle, internal and external mechanisms are available which will mitigate or fully eliminate project risks or threats.

In certain type of projects, the role of risk manager is crucial in order to help project team members to tackle all possible risks. Many authors (e.g. Rabechini, de Carvalho, 2013) believe that risk manager is an important element for administering the non-routine undertakings that can bring better results to projects.

Peixoto et al. (2014) identified the difficulty in their research in influencing the project team to dedicate more time to risk management activities. Van Os et al. (2015) show that risks posed a threat to the identity of the project team, resulting in a discourse focused on attributing responsibility for risks to outsiders and that polarized their relations with stakeholders. Consequently, the project team tried to eliminate risks by withholding information from the stakeholders they regarded responsible for inflicting risks on the project.

In order to fulfil tasks displayed in Table 1, individual competencies of project team members are required. These are presented in details in Chapter 2.

2 Competencies of project manager and project team members

International Project Management Association (IPMA) defines the competency as "the application of knowledge, skills and abilities in order to achieve the desired results. Experience plays a significant but indirect role in competence" (Individual Competence Baseline, IPMA, 2015).

Competence development is influenced with activities provided in project, programme or portfolio. There are various ways how to develop individual competencies including self study, couching, mentoring, further education and training.

According to Individual Competence Baseline (IPMA, 2015) the three competence areas are as follows:

- *People competences* (10 elements) – these consist of the personal and interpersonal competences required to successfully participate in or lead a project, programme or portfolio;
- *Practice competences* (14 elements) - these are the specific methods, tools and techniques used in projects, programmes or portfolios to realise their success;

In this area, ***the individual has to identify, prioritise and mitigate the main risk (negative effects) and opportunity (positive effects)*** and assess, and engage with stakeholders.

- *Perspective competences* (5 elements) – under this heading come the methods, tools and techniques through which individuals interact with the environment, as well as the rationale that leads people, organisations, and societies to start and support projects, programmes and portfolios.

2.1 Research methodology

The research was based on a convenience sample of 50 project manager from various types of industries in Slovakia. The data were collected in May 2016 through self-administered questionnaires that took not less than 10 minutes to complete, which consisted of three sections: (a) profile of respondents (incl. experience and education), (b) competencies that project managers find crucial, (c) how do project mangers propose to improve their individual competencies. In second section, 5-point Likert scale was used to identify the most important competencies according to respondents.

2.2 Results

The focus of this research was to explore three main competence areas and identify their most important elements according to project managers in Slovakia. Presented below are the main findings in this research.

Profile of respondents

Of the 50 respondents, 55 percent work in multinational companies, 30 percent in medium-sized companies and 15 percent in small companies. Over half (55 percent) of the respondents were male while 45 percent were female. Most participants were within the 25-35 yeas age range (35 percent). About 60 percent of project managers had more that 5 years experience in

managing projects. Most of them (70 percent) had university education. About 40 percent of respondents work in IT industry.

Individual competencies of project mangers

Using the three competence area according to IPMA, the respondents used in projects mainly competence area "People" (including elements: e.g. leadership, teamwork, negotiation etc.) (65 percent), following the competence area "Practice" (25 percent). One of the elements included in this group (together 14 elements) is the competence to identify, prioritise and mitigate the main risks and opportunities in a project. The least preferred competence area was "Perspective" (including elements: e.g. strategy, culture and values, standards and regulations etc.) used by 10 percent of project managers. In the conclusion of this section, project managers were asked to prioritise all competencies from these three groups. Within the top 10, the competency to identify, prioritise and mitigate the main risk and opportunities was not included. As found in older studies, our results showed that risk management is still neglected by project managers in Slovakia.

How to improve individual competencies of project mangers

More than half (75 percent) of the respondents stated that further education and training is needed in order to develop their individual competencies. They want to concern mainly on competence area "Perspective" which includes the methods, tools and techniques through which individuals interact with the environment. On the contrary, just a small number of respondents mentioned the necessity of improvement their competencies in "Practice" area which include risk management element.

This finding thus mainly indicates that the competence "to identify, prioritise and mitigate the main risks and opportunities in a project" is needed to be highlighted. The results have useful practical implication for managers of companies in order to consider this topic as a part of future training and education of their project managers.

Conclusion

In this era of the knowledge economy, intellectual capital appears to be the most important competitive factor for any company. The measurement of intellectual capital (and human

capital as a part of it) can help a company to improve its business processes and competitiveness (Relich, 2014).

It is necessary to take into the consideration the dynamics and huge complexity of current projects (Wziatek-Staśko, 2010). This development triggers the demand for flexible and experienced project team members who are able to tackle wide range of risks. As described in the previous parts, project manager is the one, who is responsible for setting the course of actions, monitoring their progress and evaluating other possibilities. Moreover, he can profoundly influence the project customer and his rate of satisfaction with partial and final project deliverables when communicating and handling possible risks arising during the project life cycle.

This paper presents the individual competencies of project managers and their perception of their importance. Our results show that the competence regarding risk management is not considered as crucial by project managers in our research. This result is not in accordance with the list of essential competencies for project manager (project specialist) identified by Ministry of Labour, Social Affaires and Family of the Slovak Republic on their "*Selected characteristics of occupations"* portal (www.istp.sk). These results have useful implication for companies in Slovakia in order to consider this topic as a part of future training and education of their project managers.

References

Dziadosz, A., Rejment, M. "Risk analysis in construction project - chosen methods", *Procedia Engineering*, Vol 122, 2015: 258-265

International Project Management Association, *Individual Competence Baseline*, Zurich, 2015.

Peixoto, J. et al. „Project Risk Management Methodology: A Case Study of an Electric Energy Organization", Procedia Technology, Vol. 16, 2014: 1096-1105

Rabechini, R., de Carvalho, M.M. „Understanding the Impact of Project Risk Management on Project Performance: an Empirical Study", *Journal of Technology Management & Innovation*, Vol. 8, 2013: 64-78

Raydugin, Y. *Project Risk Management: Essential Methods for Project Teams and Decision Makers*. New Jersey: Wiley, 2013

Relich, M. “Measuring Intellectual Capital in the Context of new Product Development“, *Proceedings of the 6th Europena conference of intellectual capital (ECIC 2014)*, 2014: 153-160

Svozilová, A. *Projektový management.* Praha : Grada Publishing, 2011.

Theodoulides, L. et al. *Neostrategic Management: An International Perspective on Trends and Challenges*. Switzerland: Springer, 2016.

Tamak, J., Bindal, D. “An Empirical Study of Risk Management & Control”, *International Journal of Advance Research in Computer Science and Software Engineering*, Vol. 3, Issue 12, 2013:3-4

Van Os, A. et al. “Project risk as identity threat: explaining the development and consequences of risk discourse in an infrastructure project”, *International Journal of Project Management*, Vol. 33, Issue 4, 2015: 877-888

Wanderley, M. et al. “Proposal of risk management metrics for multiple project software development”, *Procedia Computer Science*, Vol. 64, 2015: 1001-1009

Wziatek-Staśko, A. “Manager’s motivation as a way to motivate employees”, *Management of Organizations: Systematic Research*, Vytautas Magnus University, Kaunas, no 56, 12/2010: 109-122

Contact

Ing. Mgr. Gabriela Kormancová, PhD.
Department of Corporate Economics and Management
Faculty of Economics, Matej Bel University
Tajovského 10
975 90 Banská Bystrica
SLOVAK REPUBLIC
e-mail: gabriela.kormancova@umb.sk