

PROJECT MANAGEMENT DURING TIMES OF ECONOMIC CRISIS: THE CZECH EXPERIENCE

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ABSTRACT

The recent large-scale global economic recession attracts analyses often from a macroeconomic perspective. There exists an evident gap in that the real consequences at the microeconomic level merit little attention. In today's environment, Project Management remains the vehicle of choice for organisations and enterprises wishing to implement strategic and multidimensional programmes. This paper explores the results of research conducted over a three-year period (2007 – 2010) using a sample of companies operating in the Czech Republic. The quantitative and qualitative data obtained from an expert survey reveal significant changes in the management of projects subject to the economic crisis. In addition, the paper permits the reader a clearer understanding of the tangible impact of the crisis on Project Management for a given country.

JEL CLASSIFICATION & KEYWORDS

■ O22 ■ D22 ■ M19 ■ PROJECT MANAGEMENT ■ GLOBAL CRISIS ■ CZECH REPUBLIC ■

INTRODUCTION

Kerzner's prediction that "executives will be facing increasingly complex challenges the next decade", became reality sooner than forecasted. "These challenges will be the result of high escalation factors ... accompanied by a mild recession ..." (Kerzner, 2006, p. 1). The challenges are of catastrophic portions. The economic crisis plagued the entire planet (Buti & Székely, 2009) and shook all economies worldwide (Čevorová et al., 2010). The impact on enterprise (Kislingerová & Krause, 2010) affects all aspects of business. The authors identify impacts being production volume, sales, turnover, profit, employment rate, debts, investment, bank loans, new product introduction, and advertising. Management must function under more challenging and uncertain situations (Geraldí et al., 2008). The close link between strategy and Project Management needs to be kept vital (Meskendahl, 2010). Ironically, the economic crisis and Project Management share certain characteristics. Both are unique, high risk, and temporary.

Crisis is a natural stage within the economic cycle. However, the circumstances leading to the current crisis left few enterprises prepared to cope with the severe conditions within their respective life-cycles. There is an evident gap in knowledge and literature available on Project Management during periods of substantial economic downturn. One reason is the difficulty in managing projects under crisis and the strides taken by enterprises and Project Management methodologies to avoid such potential situations. In addition, a crisis of this magnitude has not been witnessed in the history of modern Project Management (Hřůzová, 2010b; Kerzner, 2006).

Lastly, the crisis continues and reverberates globally. The recession is still very fresh, more or less unexpected (Buti & Székely, 2009), all-embracing, more or less unpredictable.

Lessons learnt from the crisis impact on Project Management remain to be developed and shared. Nevertheless, analyses and discussion on this topic is available (Geraldí et al., 2008; Hällgren & Wilson, 2008; Hällgren & Wilson, 2011; Hřůzová, 2010a; Hřůzová, 2010b; Hřůzová, 2011).

The authors believe that the research presented in this paper contributes to the current level of knowledge of impacts and in treatment of crises in projects.

Research question

There is an evident gap, especially on the micro level, in the literature available on the influence of economic stress on Project Management. This becomes increasingly crucial given the extended duration of the present crisis but also in that Project Management is the option of choice for the implementation of corporate strategy as well as corporate requirements in the current competitive and global business environment. The research questions are therefore, twofold: 'What is the impact of the economic crisis on Project Management in our country during the monitored period?' (*Jaký je u nás dopad ekonomické krize na projektový management ve sledovaném období?*) and 'What are responses to the economic crisis from the Project Management perspective?' (*Jakými způsoby reaguje projektový management na ekonomickou krizi?*).

Research methodology

Questionnaire design and layout

The first section recognises the circumstances experienced by Project Managers during the period from 2007 to 2009 and then in 2010, using sample organisation resident in the Czech Republic. The latter includes ten main questions comprising eight closed- and two open-ended questions. Five of the closed-ended questions are multiple-choice, one of which is divided into four sub-questions. Three multiple-choice questions contain an option for 'other' for comments. Two closed-ended questions utilise a four-point ranking-scale with categories of: 'None or Negligible', 'Small', 'Noticeable', and 'Large'. One closed-ended question operates with a five-point ranking-scale in categories of: 'Not at all', 'Seldom', 'Occasionally', 'Often or Very Often', and 'Always'. Section Two identifies the demographic profile of the respondents and consists of five closed questions and the final voluntary open-ended question.

A covering letter accompanies the questionnaire that provides additional information and explanation of the purpose of the questionnaire, guarantees of anonymity and confidentiality.

Data collection

Imperative to the nature of the study, one hundred fifty experienced Project Management practitioners are solicited to participate in the research. Participation is entirely voluntary with no financial or other incentives.

In order to facilitate access, the questionnaire is accessible by respondents on the Internet. Directions as well as a link to the site accompanied the invitation to participate in research. Using an expert sampling method permitted distribution via e-mail.

Data were collected using a standardised format obtainable through the on-line survey questionnaire. They were collected anonymously via the web link and continuously after completion of each survey. To increase sample size and its response rate, data is collected in two tranches: from September to October 2010 and the more recent from March until May 2011. During these periods, 48 usable questionnaire responses are collected generating a response rate of 32% - slightly higher due to the type of sample used. No requested for clarification are received during the data collection phase.

Data analysis

Demographic characteristics of respondents

Although not planned as such, the profile of the respondents is balanced and represents corporate structure based on size. Twenty-one per cent of respondents report on an identical level that their company is a small, medium, or large company for a total of 63%. The remaining 37% represents multinational organisations. Categorisation as to small, medium, or large is consistent with the European Union criteria wherein small businesses employ fewer than 50 employees, medium-sized enterprises with 50-250 employees, large companies with more than 250 personnel.

In terms of the length of companies' market exposure, a large majority of organisations (81%) has been present for more than 10 years, 10.5% characterise less than 5 years, and 8.5% between 5 to 10 years. In the way of legal form, fifty-three per cent are limited companies (Ltd.), followed by 45% as joint-stock company. None may be identified as a cooperative or another type of association, university, municipality or non-governmental organisation. The remaining 2% embodies other types of business.

Ownership includes one-third held locally by Czech citizenry, ten per cent by a foreign owner, and 56% by a joint domestic and foreign partner. Respondent positions within their respective enterprises comprise project managers (29%); project team members (6%); managers and members of a Project Management office (17%); project board members and as well as higher management (25%). Others include employees indirectly involved in Project Management as is the case of functional managers (13%) and other positions (10%).

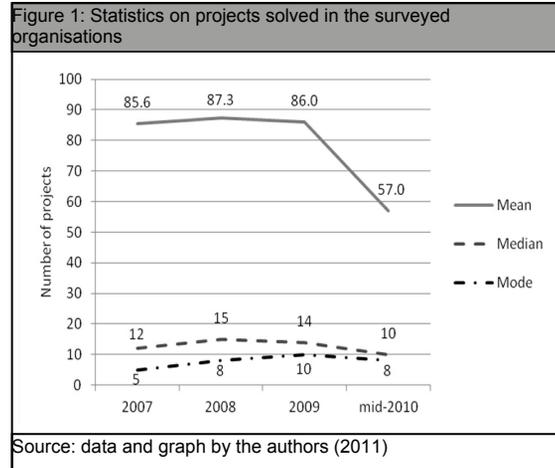
Empirical results – research question number one

Results demonstrate that except for one responding company, projects constitute a means by which desired outcomes are achieved. The data exhibit that respondents' companies commonly deploy projects (53% often or very often and 39% always) thus signalling project-driven organisations.

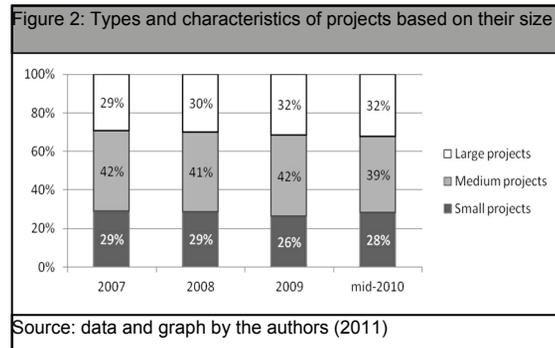
The research question concentrates on the impact of the economic crisis during the monitored period and seeks answers on when, how often, and the type and character of the projects conducted during this period of economic stagnancy. Figure 1 displays the quantitative data and basic descriptive statistics.

The data for 2010 represent results comprising the first half of the year only. The mean value (Figure 1) influenced by the sum of the data and extremes in the data is therefore distorted by outlier data. In terms of the median, the value

of projects ranges from 10 in mid-2010 to 15 in 2008. Comparing mean and median values, one views that the data distribution is positively skewed. The mode value indicates that the most commonly observed number of projects performed by a company ranges from 5 to 10 during the period with a peak in 2009 and a valley surprisingly in 2007. The overall decrease in the project numbers for surveyed companies is 9 per cent comparing 2009 to 2007. The whole year 2010 will most probably reveal a rise.

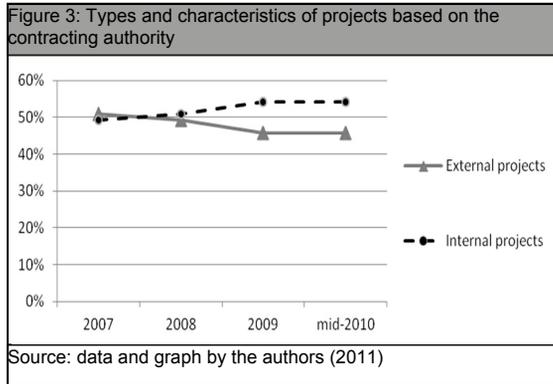


Figures 2 to 6 express further details of the projects from different perspectives and relative values.

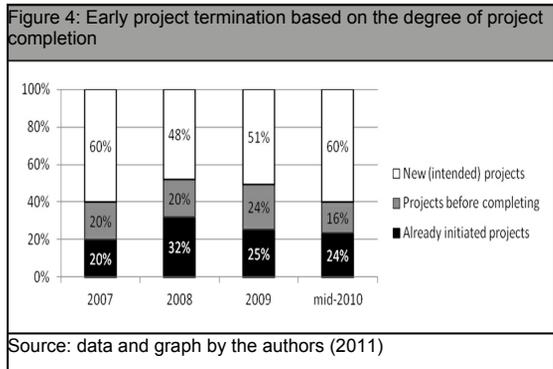


Based on the project scale (Figure 2), medium projects are the most frequent type during the time frame followed by large projects. Small projects comprise less than one-third of all projects. One may not speculate that this is a result of the crisis because the level in mid-2010 is the same as in 2007. Changes in project size breakdown structure are minimal over the period. Whereas the most frequent are medium projects, the highest year-on-year development (1.15) is recorded in the absolute values for large projects in 2009 that may be indicative of a first recovery tendency. Classification of the projects according to their size is based on the common convention of each particular company. Large projects in small companies do not compete against small projects in large companies.

The tendency of the project contracting authority (Figure 3) to concentrate on internal projects depicts 2008 followed by a decline of the external projects in about 10 percentage points in 2009 and mid-2010 in favour of internal projects. This identifies that during the economic slowdown the companies halt their external orders. Free capacities could be exploited by internal projects mainly.



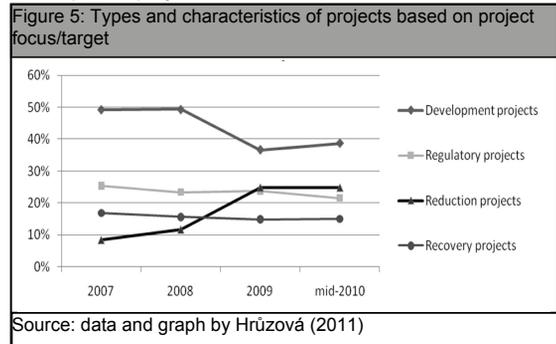
The ensuing concern relates to project life-cycle (Figure 4) in which the degree of project completion affected by the economic crisis.



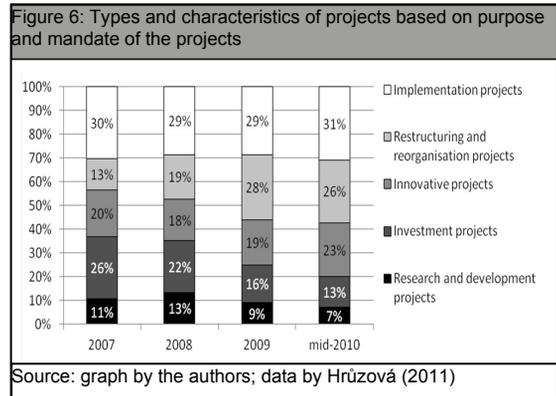
Generally, the economic crisis influences all projects despite their degree of completion but more so, newly initiated projects. From the optimistic viewpoint, the figure expresses the rational decisions made on the cancellation of projects by Project Managers and companies respectively. Indirectly this also indicates that the situation has not been as catastrophic to stop projects before completion and relates to a region of 20 to 24% (16% in mid-2010). The data for projects already initiated, which capture a similar course as those before completion, rise to less than one-third of the projects. On the contrary, a negative viewpoint shows that incurred sunk costs are not negligible and constitute a range of 20-30% of projects. More so, about 20% of the initiated projects in some lower cost level. What is not seen from the relative data is the increasing tendency of new (intended) projects cancellation. Their earlier termination expressed in the relative data is highly significant (10.7 times in 2009 and 11 times greater by mid-2010) but far from disastrous in the absolute numbers (80 projects during the whole period).

Development projects are those designed for the strategic growth of a company, and include new product development, training, business partners and ventures. Regulatory projects concern a decree, order or regulation published/announced by EU, government, headquarters, top management etc., e.g. legislation, environmental directives, requirements in quality, requirement on suppliers, and investment limitations. Reduction projects relate to a restriction in any sense e.g. cost reduction, redundancy, closure of a subsidiary. Recovery projects are connected with the market and in-company recovery and revival of a part or sections of company activities, e.g. recruitment, launching new products.

While regulatory projects and recovery projects (Figure 5) experience inertia, reduction projects increased 2.5 times on a year-on-year basis in 2009 at the expense the development projects.



Research and Development projects seek new technical or other solutions. Investment projects deal with financial or capital investments. Innovative projects solve and implement issues in the company, e.g. operational change for process management, and include modernisation. Restructuring and reorganisation projects are connected with any large change within the company, e.g. implementing new organisational structure, new technical processes as in changing chemical processes for biochemical ones, replacing operations management with process management. Implementation projects are designed for implementing into practice, e.g. implementing ISO, information system deployment.

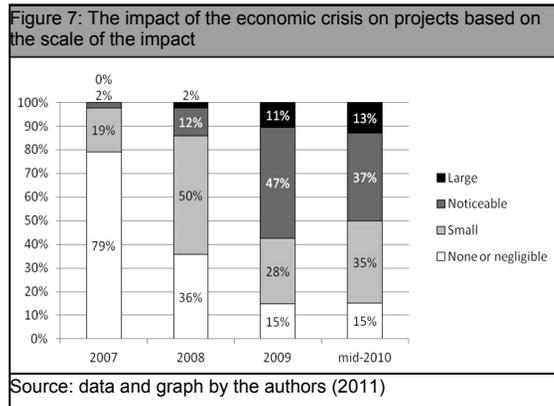


Investment projects (Figure 6) are markedly reduced during the period (by 13 percentage points), Research and Development slightly dropped (by 4 percentage points) while Innovative endeavours continuously increase from 2008 (by 3 percentage points during the period), and Restructuring and reorganisation projects grow significantly (by 13 percentage points). These trends are logical and are of no surprise. Implementation projects despite the most frequent are nearly stable.

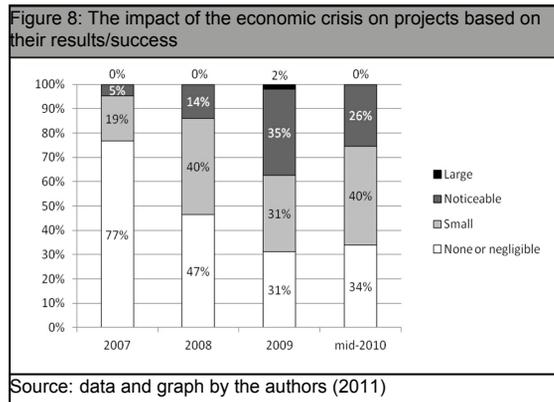
After having surveyed the projects described, the particular impact of the economic crisis on the projects is analysed. Figures 7 and 8 indicate further details of the impact from various perspectives and relative values.

The data illustrate (Figure 7) the particular impact of the economic crisis on projects in terms of the number and range. As the most common, none or negligible impact is recorded in nearly eighty per cent in 2007, small in 50% in 2008, noticeable in less than fifty per cent in 2009, and again

noticeable impact in less than 40% in mid-2010. It is important to note that the impact scale of the category 'Large' is not significant (maximum 13% in mid-2010) but increases over time (from 0% in 2007).



The impact of the economic crisis on the projects is also seen from the perspective by which the crisis impacts the projects (scope, time, and costs), and therefore, their success (Figure 8). Comparing results with the quantity of projects and success, the impact on the latter is slighter especially by mid-2010. This may explain the various adjustments undertaken by the enterprise in combatting the consequences of the crisis.



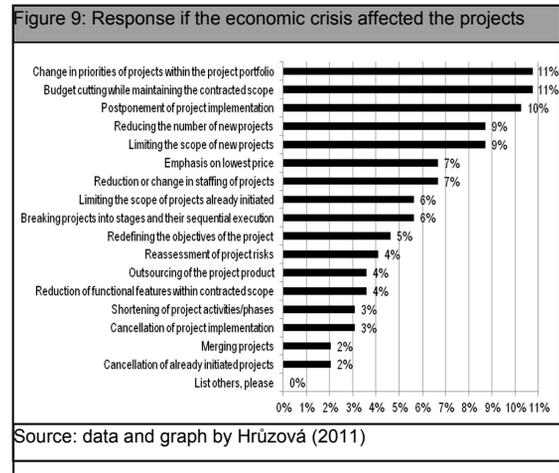
Empirical results – research question number two

Figure 9 addresses the second question: 'What are responses to the economic crisis from the Project Management perspective?'

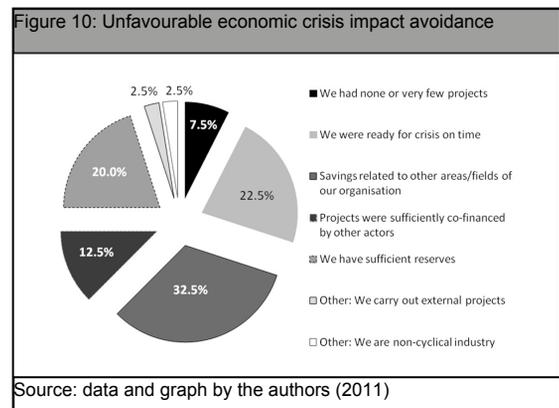
This multiple-choice question offers 17 possibilities plus one 'other'. The data plotted on figure 9 are related directly to and only to Project Management issues. However, the execution of these solutions may not be the responsibility of a single team member or particular project manager but might be the authority of the project board or project stakeholders.

The 'appealing' response (Figure 9) lies with the responsibility of the project board or the Project Management office and transmits a positive message – considering project priorities during the whole project life-cycle within a company project portfolio is among the best selections. Reducing a project budget is in practice often a standard easily-available method. The question remains if it is a wise choice. All of these responses despite their order are related to project triple-constraint imperative or triad:

scope, time, and cost. The ease of response used and especially its costs and benefits may differ from company to company; project to project.



Some companies were not affected by the economic crisis significantly at all. Figure 10 presents how they manage to avoid the unfavourable impact.



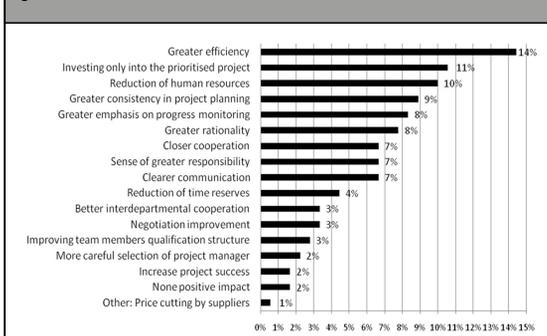
Approximately one-third (32.5%) of unaffected companies (Figure 10) states that they did not need to implement project changes due to the project cost cutting as savings were not related to the projects themselves but to other internal endeavours, processes, functional departments, or external operations.

Enterprises include the declaration that 'we were ready for the crises' to validate this variety of avoidance prevalent in 22.5% of cases. Although valiant on their part, the authors do not believe that any entity was fully ready to cope with the crisis but rather capitalised on the time-lag while the economic impact spread throughout the globe.

One-fifth of companies claim that they had sufficient internal reserves. It is worth mentioning that the reasons cited were that the projects were adequately co-financed through other actors (banks, business partners, European Union programmes etc.) who doubtlessly needed to remain in a healthy state. As with the previous pronouncement, the authors question the trustworthiness of this claim.

Any new experience should be considered as a challenge even if it is negative one. How companies perceive impacts of the economic crisis on Project Management from any possible favourable viewpoint is displayed in Figure 11.

Figure 11: Favourable lessons learnt from the economic crisis



Source: data and graph by the authors (2011)

The above ways employed by the companies (Figure 11) can be identified among the 'Golden Rules' (excluding inefficient 'reduction of human resources', 'reduction of time reserves', and 'none positive impact') of how to manage projects. At the top, greater efficiency is highlighted as a vital mean for coping with the crisis. The other ways have either a direct or indirect influence on Project Management efficiency.

Conclusion

This research paper opens new issues, interesting also for their relevance, that the authors' sense require further study and resolution. The results of the current undertaking include the empirical data, replies to the research questions, and the participant audience. Recognising the latter as experts in the field of Project Management, the survey results are probably more positive than in the general population. The sample size and concentration on one country are equally limitations to be considered in future research activities. Nonetheless, this new information and research results contribute to the existing academic and practical body of knowledge and offers an opportunity for reflection.

In summary, the key findings are:

- Project Management is the business method of choice to manage tasks in the surveyed country as 92% of respondents rely on this process often up to always;
- Projects did not disappear during the economic crisis period – the mode value of projects indicates a minimum of five projects per company during the study period;
- Enterprises differentiate and prioritise projects in order to be more efficient and to survive the crisis through the reduction of new projects (in the absolute data), and of small projects, and external projects exemplars of this attitude (in the relative data);
- The most frequent types of projects in the monitored period are medium-sized and internal ones;
- Just new (intended) projects were cancelled sooner followed by already initiated ones. The data demonstrate more frequent cancellation in size but for not many companies;
- 82% of respondents indicate that they are not affected significantly by the economic crisis (this finding however, cannot be generalised) and that the impact avoidance is mostly done with no savings related to Project Management;
- Conversely, if companies are affected, the impact is mostly 'noticeable' in size while 'large' or 'noticeable' in project success;

- The most frequent response of the affected companies is a change in project priorities and project budget cuts. Budget cuts reflected the level of contracted price;
- Based on the data, the culmination year of the crisis impact on Project Management is 2009 for the monitored period;
- Of particular significance, the research establishes that development projects enjoyed the greatest frequency among all projects, based on their focus, during the study period notwithstanding a decline in 2009, in favour of reduction projects;
- Based on the purpose of the projects, implementation projects are the most frequent, followed by restructuring and reorganisation projects, and innovative projects. All of them with an increase, while investment projects and Research and Development projects are reduced.

Acknowledgment

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References

- Buti, Marco, and Székely, István. "Economic Crisis in Europe: Causes, Consequences and Responses." *European Economy*. European Commission. 14 Sept. 2009. 30 May 2011 <http://ec.europa.eu/economy_finance/publications/publication15887_en.pdf>.
- Čevorová, Nina, Drotár, Martin, Spálovský, Mojmír, and Straňák, Peter. "Response to a global economic crisis – impacts on private sector." *Acta Oeconomica Pragensia* 2010 Feb. 2010. 30 May 2011 <<http://www.vse.cz/aop/abstrakt.php3?IDcl=308>>.
- Geraldi, Joan, Kutsch, Elmar, and Lee-Kelley, Liz. "The Titanic sunk, so what? Project manager response to unexpected event." *International Journal of Project Management* 28 Aug. 2010: 547-558.
- Hällgren, Markus, and Wilson, Timothy. "The nature and management of crises in construction projects: Projects-as-Practice observations." *International Journal of Project Management* 26 Nov. 2008: 830-838.
- Hällgren, Markus, and Wilson, Timothy. "Opportunities for learning from crises in projects." *International Journal of Managing Projects in Business* 4 5 Apr. 2011: 196-217.
- Hrůzová, Helena. "Adaptation of Project Management in and over a Period of Economic Crisis." *International Scientific Conference on A New Theory of Economics and Management of Organisations*, Prague, 15 Oct. 2010. Ed. Eva Kislingerová, and Josef Krause. Prague: Oeconomica, 2010. [CD-ROM].
- Hrůzová, Helena. "Economic Recession as a Risk Factor in Project Management." *How after crisis: Proceedings of the International Scientific Conference*, Prague, 15-16 June 2010. Ed. Eva Kislingerová, and Josef Krause. Prague: Oeconomica, 2010. 80-84.
- Hrůzová, Helena. "Exploring Impacts of Economic Crisis on Project Management in the Czech Republic." *Conference Proceedings of the 5th annual volume of International Days of Statistics and Economics at VŠE Prague*, Prague, 22-23 Sept 2011. Prague: Oeconomica, 2011. [CD-ROM].
- Kerzner, Harold. *Project Management: A Systems Approach to Planning, Scheduling, and Controlling*. New Jersey: Wiley, 2006.
- Kislingerová, Eva, and Josef Krause, ed. *Proceedings of the International Scientific Conference on A New Theory of Economics and Management of Organisations*, Prague, 15 Oct. 2010. Prague: Oeconomica, 2010. [CD-ROM].
- Meskendahl, Sascha. "The influence of business strategy on project portfolio management and its success – A conceptual framework." *International Journal of Project Management* 28 Dec. 2010: 807-817.