

# Project Portfolio Management: A Pilot Survey on the Importance of 'Project Building Stones' in Corporate Life

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## SUMMARY

*Today portfolio management is a priority area. Unfortunately, there is a lack of information on this subject: portfolio management is not a prevailing element in corporate thinking, although the content and method of implementing projects are of key importance for companies. This paper presents a short, general theoretical introduction and the results of a pilot study. These represent the basis of defining future research directions.*

*Keywords: portfolio, project, management*

*Journal of Economic Literature (JEL) code: M59*

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## INTRODUCTION

This paper aims to highlight the importance and possibilities of portfolio management. The pilot results presented verifies the theoretical knowledge and is used to establish further research goals, criteria and activities.

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## RESEARCH BACKGROUND

Project management is a management activity initiated by corporate strategy in order to perform individual and complex tasks (Görög, 2003). (A project is a time-limited effort for creating individual products, services or other outputs.) Project management is the application of knowledge, skills, tools and techniques to project activities to meet the project requirements. One part of project management is project portfolio management.

A portfolio refers to a collection of projects or programs and other work that are grouped together to facilitate effective management of the work to meet strategic business objectives (PMI, 2008).

Improving the processes of single projects may have tangible benefits but a consistent project management model will only be complete when the processes of project portfolio management are also included. Similarly to the logic of managing share/bond portfolios, a systematic approach is required for project portfolio management in selecting, monitoring and supervision. Portfolio management maintains a balance between the

limited corporate resources and the strategic goals (Verzuh, 2006).

The projects or programs of the portfolio may not necessarily be interdependent or directly related. For example, an infrastructure firm that has the strategic objective of maximizing the return on its investments may put together a portfolio that includes a mix of projects in oil and gas, power, water, roads, rail and airports. From this mix, the firm may choose the related projects as one program. All of the power projects may be grouped together as a power program (PMI, 2008). The key to portfolio management is the systematic process of selecting, supporting and managing the firm's collection of projects.

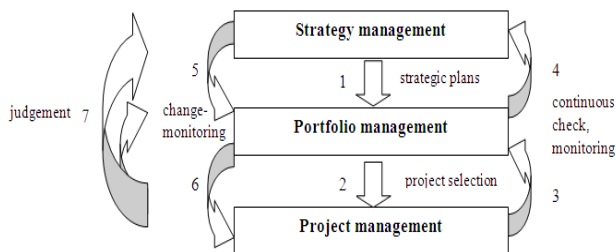
In general, the portfolio or with other expression 'basket' has an original meaning, which is the whole of the company's investments, and the other, new meaning is the projects and programs, processes, resource allocation, planning, organizing and directing methods (Turner, 2008) (Sebestyén, 2009).

In finance the portfolio of assets involves the selection of securities. A combination of assets or securities is called a portfolio. The traditional theory of portfolio postulates that the selection of assets should be based on the lowest risk, as measured by its standard deviation from the mean of expected returns. The modern theory of portfolio emphasizes the need for maximization of returns through a combination of securities whose total variability is lower.

Strategy can be briefly defined as the way of realizing the corporate objectives. In content it means the active or passive adjustment of operation to the changing

environment. The strategy helps to find the most appropriate ways of achieving the objectives; it seeks for competitive advantages; improves the market position of the company; and provides for the allocation of resources. For the whole company the strategy should harmonize or restructure the corporate portfolio against the background of corporate objectives. (The difference between project management and portfolio management can be shown by an airplane metaphor: project management ensures a smooth landing at the end of the route; the responsibility of portfolio management is choosing the right airport for landing (Darits, 2010).)

Figure 1 summarizes the relations between portfolio management, strategic management and project management. A specification of strategic objectives is that they are implemented as projects. Deák (2003) and Pálvölgyi (2011) state that the strategy cannot be realized if the wrong projects are launched.



Source: Csaba Deák and Éva Ligetvári

Figure 1. Relations of strategy-, portfolio- and project management

It can be concluded that strategic management defines the goals and direction for portfolio management through strategic plans (Arrow 1).

Portfolio management selects the projects and makes decision on launching projects/programmes. Programmes launched are under control and supervision of the project management (or program management) (Arrow 2).

Feedback and intervention are facilitated by continuous monitoring and control. Effects on resources are managed by portfolio management and the process also affects strategic management (Arrows 3 and 4).

Changes in strategy need modification in portfolio management. The results are observed in project management and in the implementation of the projects (Arrows 5 and 6). A project portfolio can be successful only if it includes the most favourable projects for the company. It must be considered that terminating or suspending a priority project will unlock resources and allow strategic management to start new projects and highlight other priorities. The aim of portfolio management is to facilitate achieving the corporate vision by the effective use of resources. Modification of a strategy and portfolio can be initiated either due to differences and internal feedback or by changes in the macro- and micro-environment. Fast reaction to changes has a key impact from the point of view of corporate

competitiveness. It may affect the content of a strategy and portfolio and, as a result, the life-cycle of the project as well.

The diverging Arrow 7 shows feedback after the implementation of projects that is necessary for judging its success. In a hierarchic view of success it is to be concluded that on the first level the factors of cost, time and quality (output) are highlighted. The second level expressly analyses conformance to strategy and the third level reflects the assessment of external and internal stakeholders.

The specific components of portfolio management for maintaining harmony with plans of the project and the company are as follows:

- > Scope: project-related decisions are essential
- > Fiscal policy: the organization's budget for the projects financed
- > Strategic and operational objectives: project prioritization criteria
- > Discipline: in project management and handling
- > Accurate information: estimates, cost data, time, resources and past experience
- > Phase gates, milestones: checkpoints of project implementation, filtering out non-conformances.

According to another classification (based on Pap, 2009) there are three necessary factors for successful project portfolio management:

- > management: management is responsible for investment decisions, including launching and completing projects
- > methods: evaluation methods, return calculations (Return on Investment (ROI), Net Present Value (NPV)), supporting decision making. Indicators of project portfolio management can be classified according to quantitative and qualitative indicators. The former class includes revenue growth, cost reduction, NPV, ROI, new markets, increase in number customers, lower level of portfolio business risks, cycle time reduction. The latter class includes e.g. conformance to the corporate vision/strategy and achievement of legal and regulatory compliance.
- > IT support: software packages of “what-if” analysis.

## THE PILOT RESEARCH

Based on the literature overview of project management and portfolio management several questions can be formulated. My research attempts to find answers to the following:

- > Do qualitative or quantitative factors dominate in the project selection process?
- > How should success be evaluated? (Is conformance to strategy examined)?
- > How many priority projects are to be managed in a company?

The research involved a study group of the University of Miskolc, primarily part-time MBA

students. They have the maturity, business experience and business relations for a successful structured interview. The sample consists of easily available members of the target group (Esterby-Smith, 2002). The tool of the structured interview was a survey. The structure and content of the interview provide for equivalence to a questionnaire similar to the well-known organizational research by the Aston group (Balaton and Dobák, 1982).

The structure of the list of questions is the following: after five general, preparatory questions, seven questions examine the corporate project portfolio management in broad terms. The researcher preferred an interview (instead of a written questionnaire) because this process allowed the researcher to explore the deeper relationships, internal priorities, causal relations and explanations behind the answers. As a result, a more refined description is available about the influencing factors and personal opinions. Interview results for each company can be interpreted separately, but the aim was to achieve general validity as the result of the research.

General questions ask the name, main activity and characteristics of the company, and the name and the position of the respondent. Questions in connection with project portfolio management explore the following:

- > number and characteristics of projects running in parallel (classified by subject: business/strategic; technical, investment, IT, organizational development, competence development; product development; classified by scope: local or corporate projects),
- > existence and frequency of priority projects,
- > personal/organizational responsibilities in launching and maintaining projects,
- > the main principles of projects based on the five most important projects actually running (qualitative and quantitative criteria),
- > main criteria of project selection (project size, time limit, complexity, resource needs, likelihood of success),
- > declared and recognizable portfolio management activities and responsibility, and
- > evaluation of success.

*Table 1*  
*Questions of the interview*

General questions	Project portfolio management questions
Name of company	Number and characteristics of parallel running projects
Main activity of company	Existence and frequency of priority projects
Name of respondent	Personal/organizational responsibilities in launching and maintaining projects
Status of respondent	Main principles of projects based on the 5 most important projects actually running
Classification of company (Hungarian, multinational or public service organizations)	Main criteria of project selection
	Declared and recognizable portfolio management activities and responsibility
	Evaluation of successfulness

## RESULTS

This chapter is based on the results of a sample made up of 30 respondents. The answers to the general questions draw a divergent picture about the companies involved. The researcher was able to access companies from the electronics industry, manufacturing of medical devices, fruit and vegetable sales (wholesale) and the building industry.

The distribution of the companies contains three public service organizations (one of the public service organizations was involved twice with different interviewees in order to control the validity of the research), 14 multinational companies and 12 Hungarian companies. It is worth analysing the results of public service, multinational and Hungarian companies separately. Due to the small sample size this paper does not mention the characteristics of the public service companies.

In terms of size, the Hungarian companies can be grouped into small- and medium sized categories and most of the multinationals are large, having more than 500 employees. The sites of multinational companies also belong in the medium-sized category. In harmony with company size and ownership, the respondents are also characteristic. In case of the domestic companies the respondents were the owner-Executive Director, Commercial and/or Marketing Director, sometimes Application Rapporteur or Head of Department for projects. Five respondents from multinational companies were Project Leaders/Project Managers and five were heads of department.

Companies in the research sample come from diverse sectors. Three of them are involved in economic service provision, two are commercial, and another are two social care companies; in addition, agriculture, education and even manufacturing are also represented. The activity of most of the multinational companies (8) is industrial production. Three multinational companies are service oriented and one is in the construction industry.

The Hungarian companies examined run a relatively low number of projects; 4-5 relevant projects are carried out in parallel. These projects are listed as corporate level and high-priority projects. The characteristics of the projects are in line directly with the main activity of the company, so it stands to reason that usually it is the Executive Director who makes decisions about projects and manages the projects. Key factors in evaluating the success of projects are primarily judged on the basis of costs, time and quality/output. This approach can be followed in Figure 2. It can be seen that the dominant factor is increase in revenue; the companies consider it the most important factor in the evaluation. It is important to note that this statement is relevant to the actually running five projects and is based primarily on quantitative indicators and on the analysis of the representation of some qualitative indicators during the

selection process. Another question in the research material approaches this issue from a point of view related to project criteria.

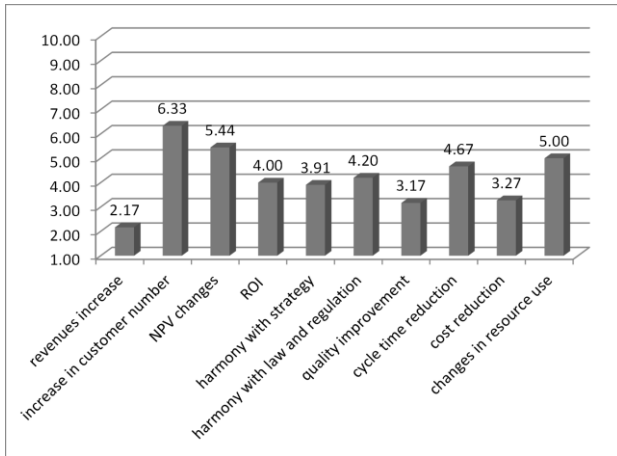


Figure 2. Importance of project selection principles evaluated by the respondents (Hungarian companies) (lower values show higher importance)

In the figures used to display results the lower values show the higher importance of a factor. Value 1 is the minimum. Figure 2 shows that the most important criteria are increasing the revenues, improving quality and reducing costs. The less important ones are increase in customer numbers, Net Present Value (NPV) changes, and changes in use of research.

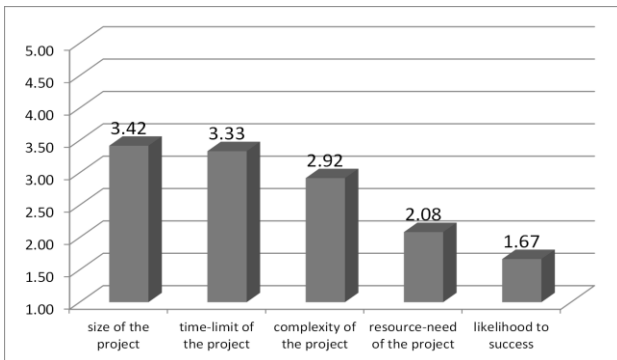


Figure 3. Importance of main project selection factors evaluated by the respondents (Hungarian companies) (lower values show higher importance)

Based on the factors presented in Figure 3, selection is determined firstly by the likelihood of success and secondly by the resource needs of the project. (It is an interesting result that the use of resources was the least determinant in the course of selection.) Domestic companies usually do not launch a project if the necessary resources are missing or the management does not believe in successful implementation.

There are more than ten projects running in each of the multinational respondents in the research. Organizational development and competence development projects are not common but it is interesting

to note that the representation of local (located in a specified geographical field) projects is much higher than that of projects on a corporate level.

A maximum of 5-10 projects have top priority based on the grounds that the problem is relevant to a department/subdivision or that they need special attention because of their benefits or other company aspects.

On a local or corporate level the competence in launching a project differs. The head of unit/department or project manager can be competent in the case of a local project while in connection with a corporate level project top management approval is required.

More than the half of the companies in the sample use declared portfolio management function but overall application is rare. The concrete portfolio management activities are decentralized by type of project (e.g. governmental level applications) and a functional distribution of responsibilities is common: project selection by the (top) management, launching by the project manager, monitoring and controlling by the finance department. In addition to local projects (in companies with about 10 projects) it is more difficult to manage this decentralization than in a company with about 100 projects. Evaluation of success is based on the hierarchical model in each case. Financial indicators have primary importance and the results of the research show that it is followed by the factors harmonious with the strategy and the satisfaction of the stakeholders with similar values. Achieving the first level in the hierarchical model appears as the personal performance of the project manager.

Increase in revenues carries higher importance for multinational companies than quality improvement or cost reduction. (Figure 4.) Reduction of cycle time, increase in customer number and NPV changes have the least influence in the process of project selection. (Figure 4)

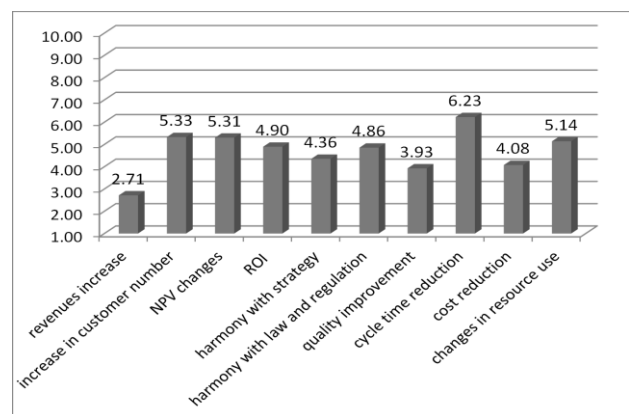


Figure 4. Project selection in case of multinational companies (lower values show higher importance)

Based on the project selection factors presented in Figure 5 it can be seen that ranking is a major challenge in the case of multinational companies. There are small differences in the values of the research results. Likelihood of success and project size may play a

determining role. According to the project size it is interesting to note that a large company can overcome the barriers of a professionally relevant project more easily than a small-sized one.

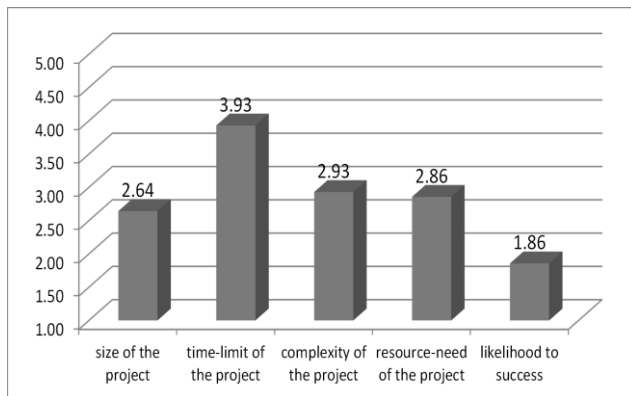


Figure 5. Main factors of project selection (multinational companies) (lower values show higher importance)

## SUMMARY OF THE PILOT SURVEY

Based on the need for profit, the quantitative aspects dominate in project selection in terms of current projects. Increase in revenue (average value 2.6), cost reduction (average value 3) are the most important factors but need for quality improvement is represented with an average value of 3.9 out of 10.

The ‘building stones’ are defined during the project selection process. This means defining the scope of the projects for achieving the business goals. Both types of companies (Hungarian and multinational) in the sample consider the likelihood of success important. The literature highlights the dominance of quantitative factors but the need for success is less pronounced than is shown by the results of this research (Bodie, Kane and Marcus, 2003) (Pinto, 2010).

The assessment method of success is based on the hierarchical model in each examined company, which includes an analysis of the level of harmony with the strategy. The results of the survey show that various levels of the hierarchical model have different priorities. Some differences in priorities do not automatically lead to unsuccessfulness but for a company with many projects running at once, the harmony of cost, time and quality/output means in all events the basis of the performance and competence of the project manager.

The number of manageable projects for domestic companies in the research sample is between 5 and 10. In terms of the future of the company these projects have top priority. The number of projects of a multinational company may be more than one hundred but top priority is given only to less than 10%.

In general it can be stated that the survey verified the theoretical findings (Verzuh, 2006). It also showed that in general declared project management activities are

present in larger companies. The level of separation of general management from project management clearly depends on the size of the company.

The most important factors of project selection are summarised in Table 2.

Table 2  
Summary of conclusions

Topic	Important factors
Principles of project selection	Increase in revenue
	Cost reduction
	Need for quality improvement
Main factors of project selection	Likelihood to success
	Quantitative factors
Assessment method of the success	Based on hierarchical model
	Project manager competence

## FURTHER CHALLENGES OF THE RESEARCH

Based on the survey results presented in this paper, it is worth focusing further research on Hungarian and multinational companies. Public service organizations will be excluded because as a result of the characteristics of their activity, their monopoly market position and the special regulatory systems, their main goal differs from that of companies. Achieving the broadest satisfaction of stakeholders is presented without the need for profit maximization. (The regulated price provides the source for the financial coverage of the necessary costs and reasonable profits for a public sector organization).

It is necessary to define accurately the scope and topic of the research and to classify the companies involved. Portfolio management is usually present in large sized multinational companies that run many projects in parallel. Interviewers and questionnaires shall be sent out to these organizations to be able to collect relevant information about the practical issues.

The results of the survey presented in this paper show that the research can be continued by a relationship analysis between the quantitative and qualitative factors of project selection and the project characteristics. Surprisingly the survey shows that the time-limit of the projects is the least influencing factor. (It is an interesting problem to define the real time-limit of a project. When will it end? In my opinion it is difficult to determine in connection with most of the investment projects.)

It would also be useful to explore what success means for the companies and what the criteria for measuring success are. (Instead of ‘success’ we can use the word ‘efficiency’ but it also needs to be defined.) Conformity between the success and the declared success based on the ex-post evaluation of the project (defined on the levels of the hierarchical model) deserve analysing as well. This problem leads to possibilities of research into the connection between the preliminary and ex-post assessment of projects.

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