

Project Management in European Structural and Investment Funds Financed Projects in the Czech Republic

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Abstract: Support from European structural and investment funds has a large impact and significantly contributes to the reduction of differences between regions within the European Union. In the case of the Czech Republic the European Union helped from 2004 to 2021 to development of the country with amount of 1,700 billion CZK. This support is mainly offered in the form of subsidies by which individual projects have been supported. 164,537 projects have been implemented in the period from 2004 to the end of the year 2021. In such case of large number of projects financed from public resources is appropriate to manage them effectively and finished successfully. International standards of project management recommend the useful methods, tools and procedures leading to higher efficiency and success. The main goal of the article is to evaluate the knowledge and usage of project management international standards in the organizations implementing the projects financed or co-financed from European structural and investment funds. 171 respondents mainly project managers of this type of projects answer in questionnaire survey. They hardly know international project management standards, and if they do know them, they hardly use them in practice, with the exception of the PRINCE2 methodology, in which they have some certified employees.

Keywords: project management; project management standards; European funds; programming period; Czech Republic

JEL Classification: O22

1. Introduction

The Czech Republic (CZ) received significant support for its development thanks to its membership in the European Union (EU). European Structural and Investment Funds (ESIF) are the main financial resource of support of investment and development projects in CZ. The planning and usage of resources on European level is repeatedly prepared in the seven year-long programming periods (PPs). For each PP support objectives are set at the European and, subsequently, also at the national level.

In the short PP 2004–2006, 13,290 projects were implemented with total support CZK 62 billion CZK (MMR CR, 2022a). In the normal seven-year long PP 2007–2013, 78,473 projects were implemented with total support of CZK 613 billion (MMR, ČR, 2022b). In the current, just

finishing PP 2014–2020, 72,774 projects were implemented as of 31st of October 2022 and CZK 541 billion were refunded from ESIF to the CZ (MMR ČR, 2022c; MMR ČR, 2022d).

In total, from 1st of May 2004 to 31st of December 2021 expenditures to the European budget at the national level amounted to CZK 743.3 billion and total revenues to CZK 1,700 billion, CZ, thus the CZ received CZK 961.5 billion from ESIF in this period (MF ČR, 2022).

The support is managed in the form of subsidies and to a lesser extent in the form of financial instruments such as loans, guarantees and capital contributions (Kostalova, 2017; MMR ČR, 2022e), however, despite the efforts of the government, financial instruments are not used much, and subsidies predominate within the framework of support.

The support system is implemented in the form of a collection of proposals for innovations, changes and/or improvements with various evaluation procedures for selecting the most suitable solutions. The selected solutions are then implemented in the form of projects. The issue of project management is very widespread in the private and public sector, especially fields such as construction, development of information and communication technologies, event management, but also the construction of infrastructure financed or co-financed by government have many years of experience in the field of projects and their management. Mainly, the international project management standards are used as methodology of project management. In this area are available three international project management standards, developed by international associations: Project Management Institute (PMI) from USA, International Project Management Association (IPMA), association active mainly in Europe, and Association for Project Management from Great Britain (PRINCE2).

International project management standard PMI puts the most emphasis on project manager education of all methodologies, which is why it also publishes the most standards. In 2022, the seventh version of the standard was submitted, namely PMBOK GUIDE – seventh Edition: A Guide to the Project Management Body of Knowledge (PMI, 2021) and it is a fundamental resource for project management. In addition, PMI has issued the following standards: The Standard for Earned Value Management; The Standard for Risk management in Portfolios, Programs, and projects; The PMI Guide for Business Analysis; The Standard for Program Management – Fourth Edition; The Standard for Organizational Project Management; The Standard for Portfolio management – Fourth Edition.

International Project Management Association IPMA created three standards: IPMA individuals competence Baseline, ICB version 4, The IPMA Project Excellence Baseline for excellence projects and the IPMA Organizational Competence Baseline for organizations (IPMA World, 2022). In the Czech Republic, a national version of the standard was created, the International Project Management Standard according to IPMA ICB v. 4 (IPMA CZ, 2022).

PRINCE2 stands for Project IN Controlled Environments, and it is a process – based method. (PRINCE2, 2022).

The above-mentioned methodologies have essentially the same aim and focus, namely, to make known the benefits of using project management in practice, certification of project managers, publishing project management methodologies, benefits of usage of project management methods and tools (e.g. usage of project management office (PMO) or project management information systems) and educating young project managers.

These organizations are not only dealing with classic project management (so-called waterfall), but also the topic of agile project management is increasingly appearing in them.

These international project management standards and setting of project management procedures are mainly used for managing projects in the private sector, even though the PRINCE2 methodology was primarily developed for the needs of the public sector in Great Britain. These standards and procedures are declared to be usable in all sectors for all types of projects. Projects financed or co-financed from ESIF in public, private or non-profit sector are special type of projects, but their successful implementation is also dependent on quality of project management.

The European Union (EU) is aware of this fact, which is why it has developed its own free, lean methodology – PM² intended for the field of project management in general, but especially for a group of projects financed by ESIF and other European programs of European funds (PM² Alliance, 2022). The EU is trying to develop this issue and increase the availability of know-how and strengthen the importance of project management and skills in this area within projects financed from the European budget (PM² Alliance, 2022).

However, analyzes in this area in the CZ and abroad show that project management of projects financed or co-financed from ESIF does not reach the required quality (Melecký, 2018). Especially in previous PPs, the issue of project management was not prioritized by subsidy providers, although it was generally recommended, but the actual use in practice was insufficient (Gazda et al., 2011; Kostalova et al., 2017; Zurga, 2018). There are some improvement activities like courses of project management focused on ESIF financed projects, studying programs or subjects at universities (Stanickova, 2016), but it is a question, if it is sufficient. Based on the available analysis is possible to state that there are administrative barriers and insufficient support to these type of projects (Drotar & Sipikal, 2019; Kostalova et al., 2015).

2. Methodology

To fulfill the goal of the research – verifying knowledge and usage of project management international standards and usage of project management methods and tools in practice of projects financed or co-financed from ESIFs, a publicly available database of projects in current PP in the Czech Republic was used. From the total number of 78,473 projects implemented so far in the PP 2014–2020 (MMR, CR, 2022c), a basic group of project solvers outside the field of education (kindergartens, elementary schools, secondary schools) and housing stock regeneration, who are not typical project solvers in the sense of project management, and beyond the operation program Technical Assistance, which serves to finance the administration of operation programs. The basic file after this modification had 6,231 projects. From this group, 623 respondents were randomly selected, i.e. 10% of the base group. Contacts for these respondents were found on their websites. Subsequently, they were approached and sent in two waves in an online questionnaire survey. The result was 171 responses from respondents who answered all questions. Partial responses were not included in the evaluation.

There are 82 respondents from “Public sector”, 43 respondents from “Profit sector” and 46 respondents from “Non-public sector” in the input statistical set (see Figure 1).

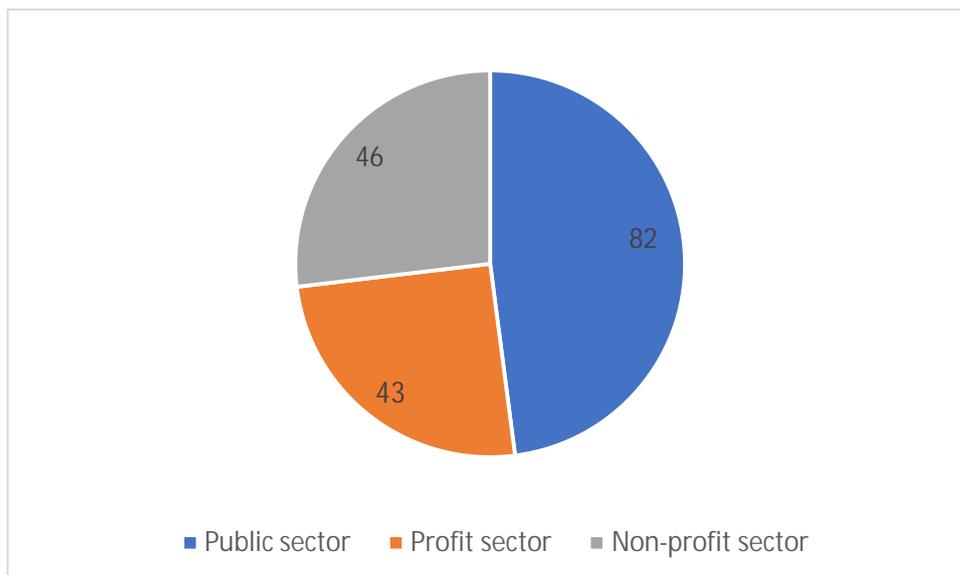


Figure 1: The distribution of the respondents

For analysis of the behavior of the statistical set (input data obtained thanks a questionnaire survey) selected statistical methods from the field of descriptive statistics were used. In particular, it was a clear presentation of the results using frequency tables and graphs.

3. Results

The result in the form of information and knowledge in the area of project management in ESIFs financed or co-financed projects were identified based on the statistical evaluation of inputs data (see questionnaire survey). The results are presented separately in two sub-chapters. Project structure (see sub-chapter 3.1.) and Project management see sub-chapter 3.2.).

3.1. Project Structure

The respondents stated that they mainly implement a smaller number of projects, 94 respondents in the interval 1–10 projects per year, 48 respondents 11–50 projects per year. Those solving a larger number of projects were less represented.

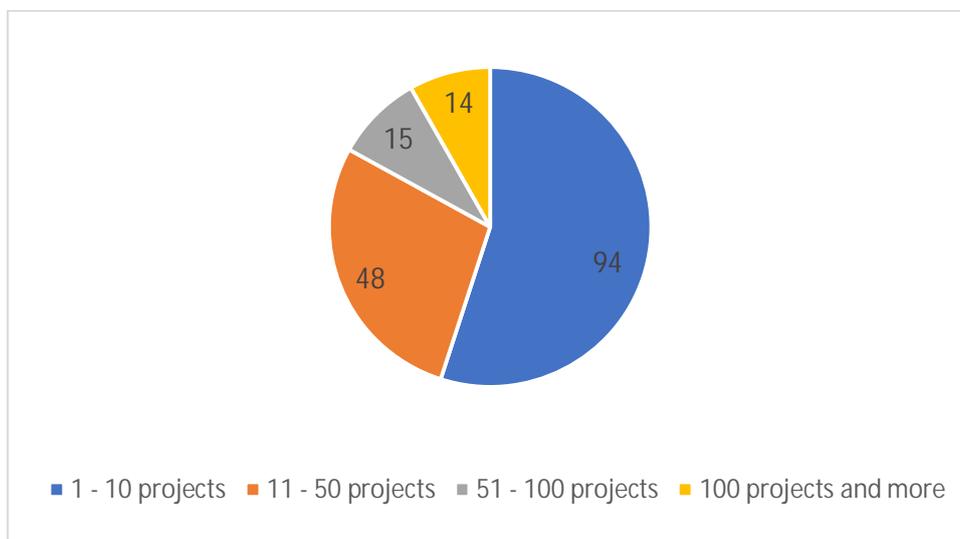


Figure 2: The distribution of the number of projects per year

From this summary, it is possible to draw the conclusion, that most respondents do not deal with a large number of projects, which can lead to a slower pace of gaining experience in this area.

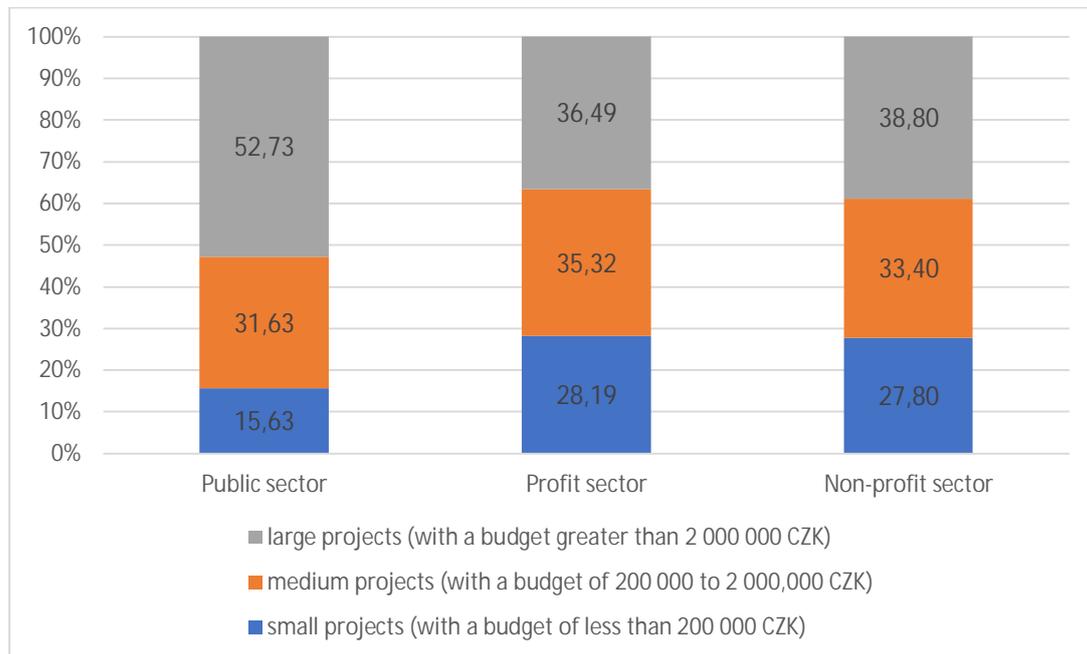


Figure 3: The distribution of the projects according their size

Table 1: The frequency of the projects focusses

	Public sector	Profit sector	Non-profit sector
Investment	61	19	17
Educational	28	10	35
Research and Development	5	22	6
ICT	18	10	2
Infrastructure	38	3	10
Civil engineering	6	4	
Cyber security	3		
Social services	7		18
Reconstruction of cultural monuments	2		
Non-investment	8		6
Culture	2	1	
Environment	2		3
Energetics	2		
Community-led local development			4
Destination management			2
Social life			6
Operational services			2
Employment of target groups			6
Supra-national			2
Innovative		3	
Energy saving technology		3	
Development of social enterprise		1	
Maintenance and repair		1	
Manufacturing		2	
Realization		1	

In the public sector are implemented mainly large projects (see Figure 3), in area of investment, building of infrastructure (see Table 1), in profit and non-profit sectors, the distribution of projects is more even and with a slight predominance of large projects, they are divided into thirds.

In the profit sector, research and development projects, investment projects, educational and implementation of improvement in the area of information and communication technologies (ICT) prevail (see Table 1). In the non-profit sector, mainly projects in the area of education, in the area of social services and investment and infrastructural projects are dealt with.

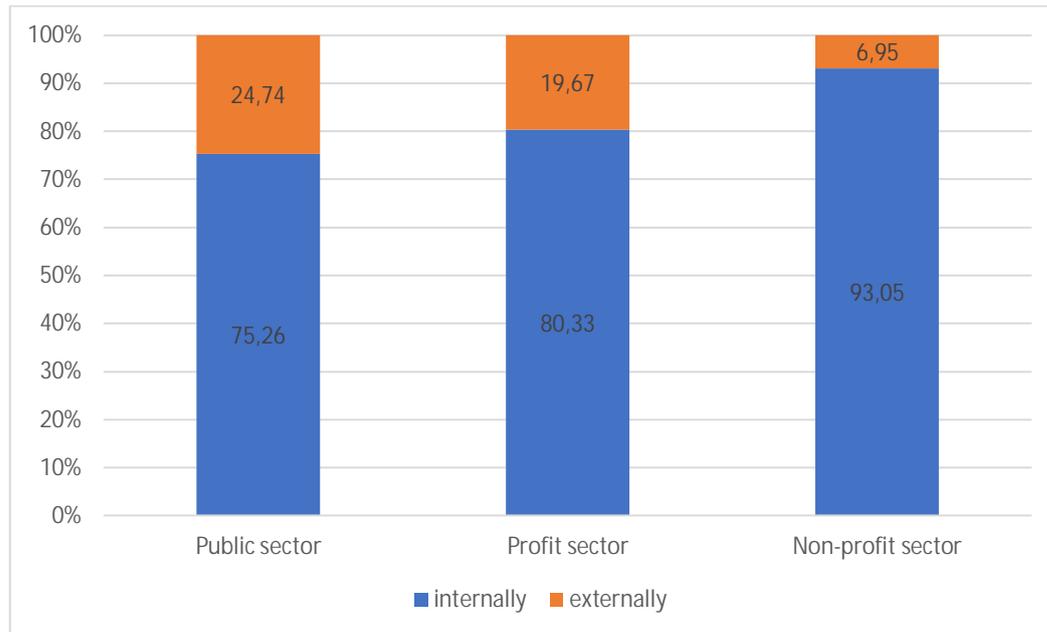


Figure 4: The distribution of the way of projects solving

Project structure is also influenced based on the external or internal project management. Respondents confirmed that the projects are mainly managed by internal project managers and implemented by internal project teams, only 25 % of projects in public sector is managed by external partners. In case of internal project management, the project management maturity and success in project implementation is influenced by knowledge of project management methods and tools and ability to manage the projects effectively.

3.2. Project Management

For evaluation of ability to applicate project management in practice has been selected indicators – existence of PMO, as a center of project management knowledge in the organization and knowledge, usage and certification of project management international standards.

Table 2: The frequency of Project Management Office (PMO) and project management standards

		Total	Public sector	Profit sector	Non-profit sector
PMO	Yes	60	35	12	13
	No	111	47	31	33
Project management standards	Yes	38	17	12	9
	No	133	65	31	37

PMOs are used more in public sector (35 respondents from 82), in contrast to profit and non-profit sectors, where PMOs are used approximately by ¼ respondents. But neither in the public sector do more than 50% of respondents use PMOs. The low level of knowledge of international project management standards confirms the answers of respondents, only 17 (from total 82 respondents) in public, 12 (from total 43 respondents) in private and 9 (from total 46 respondents) in non-profit sectors stated, that they know international project management standards. Furthermore, the answers of only those respondents who stated that they know international project management standards were evaluated.

Table 3: The distribution of the international project management standards

		Total	Public sector	Profit sector	Non-profit sector
PMI	knowledge	25	11	7	7
	practice	3	1	1	1
	certificate	4	1	3	0
IPMA	knowledge	22	9	6	7
	practice	5	2	2	1
	certificate	4	1	2	1
PRINCE2	knowledge	29	14	9	6
	practice	13	5	6	2
	certificate	12	5	4	3
Standard PM ² Methodology	knowledge	11	4	4	3
	practice	0	0	0	0
	certificate	0	0	0	0
other				Six Sigma	

Totally, and in the public and private sectors, the best-known international project management standard among respondents is PRINCE2. Only 20 respondents out of a total of 171 respondents have certified managers, and 12 of them have PRINCE2 certification. In the non-profit sector, knowledge of PMI slightly prevails, but it is only minimally used in practice and there is not even anyone with certification in this standard. The implementation of international standards in practice of respondents is also very low – totally only 21 respondents confirm usage of international project management standards in their practice, if they use any methodology, it is primarily PRINCE2.

4. Discussion

Respondents deal primarily with a smaller number of projects, and the fact that they have less experience and knowledge will also be related to this. The project issue is apparently not dominant and it would be desirable to focus more on the project culture. The low level of project approach implementation is also confirmed by the low number of PMOs in practice of respondents. Awareness of international project management standards is very low. Here is a big drawback. Without theoretical background of knowledge, it is difficult to expect that projects will be managed effectively and successfully. It is a pity that the available know-how in practice of implementation of ESIF financed or co-financed projects is not used more. The issue is generally related to the overall management of knowledge at the level of organizations, overall support for the expansion of knowledge improves skills in project management as well (Dokocil & Lacko, 2019; Dokocil & Smolikova, 2012).

The promotion of PM² on the part of the European Union and especially its partner at the national level is very weak – the methodology intended especially for more effective management of projects financed or co-financed from ESIF is almost unknown and unused. This fact cannot be attributed to the project solvers, but rather to the support providers who define and recommend appropriate procedures for project management. On their part, there should be more massive communication on the topic of what procedures to use, that it is possible to reach for international project management standards, especially PM², which is directly intended for this and is available completely free of charge.

The authors of the article are teachers of project management at the faculties of Czech universities and at the same time participate in research projects at their workplaces. Based on their experience, they recommend to focus also on introducing and enforcing the current trend of Agile Project Management (see the 7th versions of PMBOK (PMI, 2021), PRINCE2 AGILE version (Axelos, 2015), Manifesto for Agile Software Development (Beck et al., 2001) and Šochová and Kunce (Šochová & Kunce, 2014)). The agile approach to project design and management responds to the general global trend in projects, where an increasing number of projects finance or co-financed from ESIF fall into the area of research and development projects of technical innovation. This type of project prevails (see Table 1). In these types of projects that prevails also at universities, the use of classic waterfall projects is not very suitable.

5. Conclusions

Among the project managers financed or co-financed from ESIF, there is very little knowledge of international project management standards, these standards are minimally used in practice and only low numbers of project managers or project team members are certified in some of international project management standards. Based on the previous research and confirmation, it is possible to state that the situation during programming periods does not improve much. The limit of the research is the national limitation, the analysis of a random sample. An analysis of the total number of project solvers financed or co-financed from ESIF would have greater reporting power. Further research would be appropriate to focus on deeper research in this area, whether there is at least partial knowledge of basic project management methods and tools and whether they are used in practice. It would also be interesting to compare it with other countries of Central and Eastern Europe, where support from ESIFs is mainly distributed to reduce disparities and inequalities, e.g. in Slovakia, Slovenia, Croatia, Poland and Baltic states. An analysis between administrative workers, creators of methodologies and recommendations, to what extent they are familiar with international project management standards and can thus incorporate them into their methodologies, would also be interesting.

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