



Original research article

## Relationship between project success factors, project success criteria and project success in SME: Evidence from selected European transitional economies

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### ABSTRACT

This paper aims to examine the use of project management practices in small and mid-size enterprises (SME) and to identify which project success factors (SF) and project success criteria (SC) contribute to project success. The research studies project success factors (SF) and project success criteria (SC) in SMEs such as: a causal relationship between project SF and project SC; perception of SC under full time and non-full time project managers and the use of project management tools within projects in SMEs. The survey includes a sample of 70 Slovenian and 54 Serbian SMEs. Methodologically, the t-test has been used to identify differences in key characteristics between the two countries. The Man-Whitney test was also used for group comparison. The research shows how certain project SF correlate to project SC and project success. The results strongly indicate that client consultation is a key project SF. Project manager role and soft skills as key project SC directly influence on project success. Organizations employing full-time project managers achieve better appreciation among their users than those who do not. Project goal setting was detected as the most important project SC in both countries. Results also strongly confirms that early feedback and continuous engagement to be key principles of agile methodology, which emphasizes “customer collaboration over contract negotiation”. We find that agile principles most highly correspond to contemporary approaches, particularly for stakeholder engagement, iterations and operating through a feedback culture. The findings contribute to the development of existing literature on project management and its practices and show key project SF and key project SC in SMEs. Results in this research have special meaning for researchers and managers in the field of strategic and project management, project selection and implementation, as well as performance of SMEs. This study contributes to the advancement of research in project management considering project SF and key project SC for better project success.

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## 1. Introduction

Growing global competition and market demand is a driving force behind business innovation so that enterprises might maintain reliable prices, meet deadlines as well as provide the same quality of goods

and services. [1] argue that the ability to innovate is an important resource for ensuring the sustainable success of the SMEs. Determinants such as cost, quality, delivery speed and reliability are all decisive in selecting products and services; [2], [3] and [4]. How competitive a business is stems from their business processes which determine the quality, innovation

and productivity (efficiency) of the services / products they offer [1], [5]-[9].

Typical research questions that must be addressed in order to pinpoint Success Criteria (SC) in project management: (1) what are key project Success Factors (SF) in SMEs in emerging economies that lead directly or indirectly to project success; (2) what project SC should be the measures of successfully implemented projects; (3) what practices are currently used in SMEs in transition countries and how might SMEs based on project SF and project SC improve not only project success but SMEs performance as well.

Still a contentious area of research, numerous studies over the last two decades have tried to address these questions through examining well-developed project management knowledge areas and wide use of project management practices, as well as project management practices as they relate to project SF and project SC to company performance [3], [4], [10] - [18]. Moreover, other studies, when examining external risk factors, have also found that they significantly impact project success [19] - [21]. Actively accounting for such factors, according to the research, therefore should aid in developing project strategies by bettering the chances of a positive outcome which include projects of strategy implementation, evaluation and control [22].

An iron triangle of time, cost and project performance has been frequently cited as being key to project SC [3], [4], [12], [14], [15], [18] and [23]. Other "Soft criteria" (e.g., the satisfaction of stakeholder groups) have also been the focus of research in order to locate the most applicable SC [24] - [27]. Further, there is yet a research gap in investigating project management practices in SMEs from transitional economies where companies are not able to produce profits in an open, competitive market even when functioning under effective management as they operate inconsistently between their competencies against what they are realistically capable of achieving [2]. SMEs are one area of research that may provide a microcosm of study that highlights SF in project management. SMEs account for 99 per cent of all economic activity in the EU and are critical to the economy as an engine of economic and social development [12] and [28]. SMEs demonstrate a higher capacity of generating employment and promoting innovation [12], [28], [29].

This paper studies the use of project management practices, including aspects of project SF and project SC against a sample located in SMEs in transition countries of Slovenia and Serbia and proposes

suggestions for project success and higher SME performance. It analyses the use of project management practices including project SF and project SC in two transition economies to break down possible similarities and differences between two countries and set recommendations for further implementations. Transitional economies are generally understood to be those which were centrally managed from the former Eastern Bloc of the Cold War. This paper investigates Slovenia (as an EU member) and Serbia (as candidate for EU membership).

The aim of this study is to show the importance of the use of project management SF and SC to achieve greater efficiency and competitiveness of SMEs. The main goal of this research is to investigate the key project management SF and SC challenges and trends for project success in SMEs, as well as propose further efforts to be taken in project management to improve practices which might be useful for practitioners and researchers in SMEs.

## 2. Literature review

### 2.1 The transition economies in Europe - Case of Slovenia and Serbia

Constituting a pillar of the European Union (EU) economy, the majority of SMEs operates in the private sector and act as a main driver of economic growth, innovation and employment. SMEs generate two-thirds of all jobs in the private sector, thereby providing for a secure employment growth rate. However, SMEs frequently need to turn to external sources in order to assure their competitiveness as shown by [30].

Transition economies have a unique history as companies within the had previously been a part of a relatively closed economy that was strongly orientated to local markets whereby there was no need to use modern management concepts due to a lack of competition and secured returns through planned economies. Since many transition countries have since the end of the cold war transformed into more open economic models, they have been equally forced to compete in global markets. R&D projects has a strong positive impact on GDP growth and a higher impact in well-developed economies under conditions of sustainable economic development and globalization [31]. The need, then, for modern managerial concepts such as project management has been recognized as being useful for project and company performance.

Management in SMEs comes under market requirements, as such company owners are forced to use a range of project management tools (Figure 1). The use of these tools correlates to the resistance which may occur in management as well as corresponds to success of project-management initiatives and SME performance. Slovenia and Serbia are the most representative ex-Yugoslav transition countries and have multiple similarities: strong production-oriented economies (mechanical engineering, a large presence of the auto industry in terms of parts and vehicle manufacturing, as well as electrical engineering) and a sizable service sector.

Sharing a close economic interlink, Slovenia and Serbia have very similar economies [7], [32], [33].

- (1) Both are former socialist countries but now representatives of European transition economies.
- (2) Their institutional and socio-political transition has been completed, but their Socio-economic transition is still in progress.
- (3) The use of project management and related resistances to change in this study has its origins in the common cultural, political and social background of both countries.
- (4) Slovenia and Serbia as economies face similar challenges such as:
  - Progress in Slovenia and in Serbia in reforms and restructuring.
  - Heavy foreign investment.
  - The need to expedite corporate restructuring.
  - Restricted access to finance and resources leading to a stronger need for optimization
  - Internal growth.
  - An urgent need to increase the productivity of state-owned and privately-owned companies.
- (5) Due to Slovenia's early entry and economic progress, there are also significant differences between it and Serbia in the EU projects carried out.

These challenges require the application and use of project-management tools. Hence, the findings in this research may assist managers in SMEs located in the transition countries.

## 2.2 Projects and projectification

Organizations of all types use projects as means to turn strategic initiatives into reality [34]. The Project Management Institute [35] defines project management as “a temporary endeavor undertaken to create a unique product, service, or result.”. Project success directly relates to project management success. An unsuccessful project, however, is characterized by not having achieved the project objectives, show [36] and [37]. [38] relates project success to meeting project requirements in terms of their time, quality and costs. As has been found in other studies, successful project management can increase project success [10], [12].

The term “projectification” according to [39] refers to the concept that projects have taken an inordinate amount of energy, time and resources in the everyday life of the individual as well as the economy. In their review of research already undertaken on the subject, [40], [41] find that projectification has had a direct impact on society. However, [42] note that projectification, despite projectification's creep, has neither been a cure all for organizational issues nor for individuals. [43] even goes so far as to analyze how projectification has divulged into research sub streams where it has affected real world outcomes, such as in finance or development.

Contemporary trends in project management follow the practice where documentation should be created only in an “in-time” fashion and in which documentation is done in real time as the project unfolds. [44] argued in their work that projectification breaks with bureaucratic models which are more traditional as projectification is generally more flexible. [44] also goes on to argue that projectification also allows for the reuse and rediscovery of bureaucratic procedures and practices.

In order to analyze projectification, [45] found that the project, the project's portfolio and its organization relate to its knowledge management system, value delivery, project performance and decision-making system. The organization itself was the most influential factor of value management. A similar conclusion was drawn from [46], which also analyses organizational energy and maturity. Furthermore, in another paper [47] describe the potential negative influence of an unclear SME hierarchy and project performance. Therefore, the organization and portfolio alignment can influence value delivery. Most of these factors are addressed in PMBOK Guide 7 [48], the most recent PMI publication which goes beyond mere project cost, schedule and scope to stress the importance of value management and taking an adaptive approach.

Organizations in Serbia and in Slovenia strive to be more project oriented. This may come in stark contrast to more advanced economies which have lower levels of projectification. To provide a perspective on the extent of projectification present in terms of the share of project work in more advanced economies, Germany, Norway and Iceland were found to have projectification rates of 34.7%, 36.2% and 27.7%, respectively [40]. Serbian and Slovenia, by comparison, have had a greater access to EU funds thereby providing them a greater opportunity.

### 2.3 Project-success factors (SF) and project-success criteria (SC)

There is a clear distinction between project SF and project SC. Factors determining project success are those inputs to the management system which lead directly or indirectly to project success, prove [12], [38], [49] define the most important project SF as: user participation, stakeholder relationship, project manager emotional intelligence, communication skills, leadership skills and top management support [21], [24] and [49] found that soft skills of project managers significantly contribute to the project success. [50] outline intellectual capital, sound project case, key manpower competency and effective stakeholder engagement as key project SF. Project teamwork has also been indicated to be a key project SF, claims [51].

Project SC are the measures by which success or failure of a project is judged [12], [14]. Many other studies [3], [4], [15] and [18] suggested key project SC to be time, cost and performance as well as the importance of quality and time as environmental and safety performance criteria. [12], among others [11], [14], [37] and [52], have suggested project SC include clearly defined project objectives, top management support, resource allocation, project planning and control, as well as customer requirements and risk management. Furthermore, [50] recommend that project SC include a clear policy on the part of the donors and the recipient government, strong local ownership of the project, effective consultation during the planning phase, high motivation and interest, as well as compatible rules and procedures.

Since combinations of project type, industry, sector, complexity and other such variables make each project unique, it is not simple to define project criteria. Therefore, the authors here propose general project SC be established by which multiple projects may be graded differently using the same scale from [18] which this research has examined.

## 3. Methodological procedures

### 3.1 Research questions

Our steps largely proceed parallel to those proposed in [12]. The use of different project management including SF and SC were here analyzed to identify distinct characteristics in SMEs in project orientation. Research Questions (RQ) in our research are:

RQ (1): Which are the most important project SF and project SC in SMEs?

RQ (2): Is there any significant difference between SMEs in terms of their perception of SC under full time and non-full time project managers?

RQ (3): Which project management tools are applied in SMEs?

RQ (4): Are there any significant differences found between Serbian and Slovenian SMEs?

### 3.2 Measures

In order to analyze any potential differences between the SMEs of the two countries and to answer the research questions, a survey instrument was adapted from that reported in [12], who themselves explored project tools and techniques in SMEs. The questionnaire included the following sections: (1) project SC; (2) project SF; (3) project key-decision makers; (4) the use of project management tools; (5) general data on the organization (company size, industry, project type and data on the participants of the survey). The questions required single or multiple choices, although some included an open form when the view of the respondent was required (Appendix 1). The respondents reported the use of project SF and SC based on how frequently they include each SF and SC on projects through 4-point Likert scale (1 - Never, 2 - Rarely, 3 - Often, 4 - Almost always). In order to focus on SMEs, micro and large organizations were excluded (approximately 60% of all respondents). The t-test has been used to identify differences in key characteristics between the two countries. Data analysis was performed using SPSS software 27.0. The two samples from each country were thoroughly reviewed prior to their final analysis. The data gathered were collectively entered into the same database used for analysis.

### 3.3 Sample

The empirical research conducted was performed among SMEs located in Serbia and Slovenia. Those

from Serbia originally were made up of SMEs that had working ties to the Faculty of organization Sciences through other studies that had been conducted; however, the number of SMEs was expanded to all reporting to the questionnaire. Those from Slovenia were all (3007) SMEs which have been registered in the public database of business entities (AJPES). Snowball sampling was utilized to collect a larger base sample.

A sample of 124 SMEs was gathered (Table 1). A cover letter and invitation to participate in the study and a link to the web survey was then sent via e-mail to SMEs addresses. The survey was anonymous, and respondents decided to participate voluntarily. Project managers and practitioners were invited to fulfil questionnaires.

Via online surveys in Serbian and Slovenian distributed to organizations practicing project orienta-

tion, the research was conducted separately in each country from April to June 2021. Upon distribution of the survey, all respondents gave their expressed consent verbally to participate in the research. The response rate for SMEs was approximately 10%. The questions used in the survey were selected to pinpoint distinctions between organizations in how they approached and proceeded with project orientation, particularly in terms of SC.

After the questionnaires were filled by the participants, the statistical package SPSS was used for analyzing the results. The Man-Whitney test was also used for group comparison, but the results stayed the same as with the parametric t-test. The procedure we have used improves on current methods that have been applied by attending the analysis with project management tools used in SMEs as well as applying mutual statements across com-

**Table 1.** Sample size and respondents

Characteristic	Serbia (%)	Slovenia (%)	Characteristic	Serbia (%)	Slovenia (%)
<b>Organizational structure</b>			<b>Project duration</b>		
Projectized	26 (48.1)	34 (20.0)	Under 3 months	9 (16.7)	21 (30)
Project-matrix	9 (16.7)	12 (17.1)	3-6 months	14 (25.9)	26 (37.1)
Project Management Office	3 (5.6)	19 (27.1)	6-12 months	18 (33.3)	12 (17.1)
Functional	16 (29.6)	25 (35.7)	Over 12 months	13 (24.1)	11 (15.7)
<b>Type of project – the most common</b>			<b>Project staffing</b>		
Technical, technological (product development, projects in production)	6 (11.1)	34 (48.6)	1-10 people	46 (85.2)	64 (91.4)
Other technical projects (construction)	3 (5.6)	11 (15.7)	10-30 people	6 (11.1)	6 (8.6)
ICT projects (software development)	18 (33.3)	8 (11.4)	>30 people	2 (3.7)	0 (0)
Service projects for other organizations	7 (13.0)	9 (12.9)	<b>Firm size</b>		
Public sector projects (public tenders, public procurement)	8 (14.8)	2 (2.9)	Small (10-49 employees)	25 (46.3)	33 (47.1)
Education organization projects	7 (13.0)	1 (1.4)	Medium (50 - 249 employees)	29 (53.7)	37 (52.9)
Event organization projects (tourism)	1 (1.9)	3 (4.3)	<b>Industry</b>		
Other	4 (7.4)	2 (2.9)	Non-economy	11 (20.4)	0 (0)
<b>Current Job Position (in organization)</b>			Economy - production activity	6 (11.1)	45 (64.3)
Owner/managing director	0 (0)	8 (11.4)	Economy - service activity	32 (59.3)	24 (34.3)
Technical Director	3 (5.6)	1 (1.4)	Other	5 (9.3)	1 (1.4)
Director or manager of business function	9 (16.7)	14 (20)	<b>Education level</b>		
Process administrator	7 (13)	7 (10)	Vocational or high school	5 (9.3)	14 (20.0)
Project manager	9 (16.7)	10 (14.3)	Undergraduate studies	22 (40.7)	38 (54.3)
Member of the project team	24 (44.4)	19 (27.1)	Postgraduate studies	23 (42.6)	17 (24.3)
Other	2 (3.7)	11 (15.7)	PhD	4 (7.4)	1 (1.4)

panies, regardless of size. The first set of analysis investigated key differences between Serbian and Slovenian SMEs, as well the role of project manager in achieving project success. The analysis highlights the correlation among project SF and SC separately for each factor.

The Cronbach alpha for project SC is 0.725 and 0.79 for project SF, which implies internal consistency of the data (higher than 0.7 is taken as acceptable). The final analysis incorporates a principal component analysis which has been applied to the research in order to identify categories of project-oriented variables for both countries. The procedure follows the following three steps: 1. Sample Adequacy, 2. Factor extraction and total variance explanation and 3. Factor rotation.

Information about samples and respondents are given in the following table. Table 1 lays out all background into the organization that participated in the survey and whose responses were then analyzed. The organizations are broken down into structure as well as type of project and project duration, as well as what area of the economy it operates in Table 1.

The sample consists of SMEs located in Serbia and Slovenia, 54 respondents (43.5%) from Serbia and 70 respondents (56.5%) from Slovenia. Most of the organizations in Serbia use project organizational structure (44.4%), while in Slovenia use functional organizational structure (35.7%). The majority of respondents were members of project teams (Serbia - 44.4%, Slovenia - 27.1%) and the director or manager of the organization (Serbia - 16.7%, Slovenia - 20%).

## 4. Results

The analysis of project SC indicates that both Serbia and Slovenia consider the same success measures to be equally important. The highest score was for appreciation by users, while the lowest was for appreciation by project personnel. For Serbia, meeting the budget was given the lowest value. Table 2 outlines SC as delineated by country.

The highest score for Serbian SMEs was found to be for setting goals and objectives. All organizations, regardless of what country of the organization regarded risk management to be the lowest SC. Moreover, all SMEs also regarded goal setting as the most important, but there was a left between Serbian and Slovenian SMEs as the former considered silent consultation to also be most essential while the latter reported resource allocation to be. Table 3.

Table 3 outlines what SMEs considered to be the most important SF as determined by the organization's country of origin. The results have further underscored the significant dissimilarities in influential decision makers between organizations from Serbia and Slovenia, specifically the owner/managing director and project manager roles which are viewed as being more influential in Slovenian organizations as compared to Serbian ones. The board of directors and project steering committee in SMEs is considered to be the least important decision maker in all organizations, regardless of country of origin. Table 4 outlines what respondents viewed to be the most influential decision makers, as delineated by country.

**Table 2.** Most important project SC

Project success criteria	Country	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Meets required quality standard	Serbia	54	3.07	.723	-1.478	.142
	Slovenia	70	3.26	.652		
Meets specification	Serbia	54	3.28	.685	.168	.867
	Slovenia	70	3.26	.674		
Appreciation by users	Serbia	54	3.35	.677	-1.896	.060
	Slovenia	70	3.56	.528		
Completed within budget	Serbia	54	2.96	.823	-1.424	.157
	Slovenia	70	3.16	.694		
Completed within schedule	Serbia	54	3.19	.754	.637	.525
	Slovenia	70	3.10	.725		
Appreciation by project personnel	Serbia	54	2.96	.751	.274	.785
	Slovenia	70	2.93	.644		

**Table 3.** Most important project SF

Project success factor	Country	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Clear goals/objectives	Serbia	54	3.52	.666	-.088	.930
	Slovenia	70	3.53	.607		
Senior management support	Serbia	54	3.06	.712	-1.454	.148
	Slovenia	70	3.24	.711		
Resource allocation	Serbia	54	3.15	.878	-1.357	.177
	Slovenia	70	3.34	.720		
Planning, monitoring and control	Serbia	54	3.15	.737	-.487	.627
	Slovenia	70	3.21	.759		
Client consultation	Serbia	54	3.30	.743	.082	.935
	Slovenia	70	3.29	.684		
Risk management	Serbia	54	2.87	.702	-1.305	.194
	Slovenia	70	3.04	.751		

**Table 4.** Influential decision makers on the projects

Decision maker	Country	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Owner/managing director	Serbia	54	2.85	1.089	-2.725	.008**
	Slovenia	70	3.31	.692		
Project manager	Serbia	54	3.28	.878	-2.104	.038*
	Slovenia	70	3.57	.604		
Functional managers	Serbia	54	2.72	.998	-1.112	.248
	Slovenia	70	2.90	.705		
Project Steering Committee	Serbia	54	2.46	1.004	-.470	.632
	Slovenia	70	2.54	.846		
Board of directors	Serbia	54	2.41	1.037	-.710	.481
	Slovenia	70	2.54	1.073		

Note. Likert scale: 1 – not influential decision maker, 2, 3, 4, 5 – the most influential decision maker

Participants were asked to evaluate who are the most influential decision makers on the projects. Likert scale from 1 to was used. Results show that in both countries project managers are detected to be the most influential decision makers. Results for Slovenia show mean value 3,28 and in Serbia show mean value 3,57 on 5- stage Likert scale.

According to the data collected and presented in Figure 1. Slovenian organizations apply more project management tools, specifically project milestones/ stage-gate processes and critical path methods. 30% of organizations use Agile methodology - SCRUM, while majority use project management teams to realize their projects (Figure 1).

As noted in Table 4, project managers are most influential in terms of decision making. Table 5 lays out differences according to those organizations which possess an identifiable full-time project manager and those who do not. The results seem to point

to organizations employing full-time project managers achieving better appreciation among their users than those who do not.

The 11 statements outlined in Table 6 detail project management orientations in SMEs. Slovenian SMEs value previous experience more than Serbian SMEs which may play a key factor in project management for the project to be successful despite failures in project management (Table 6).

Results show that well-defined project management process has been detected as the highest evaluated orientation in SMEs in both countries (3.43 and 3.50 on a scale from 1 to 4, where 4 indicates high importance). Slovenian SMEs report being more process oriented as is also shown in the Table 3. Planning, monitoring and control were detected to be more important project SC in Slovenian SMEs in comparison to Serbian SMEs. This may be due to a predominance of non- IT SMEs within the Serbian sample.

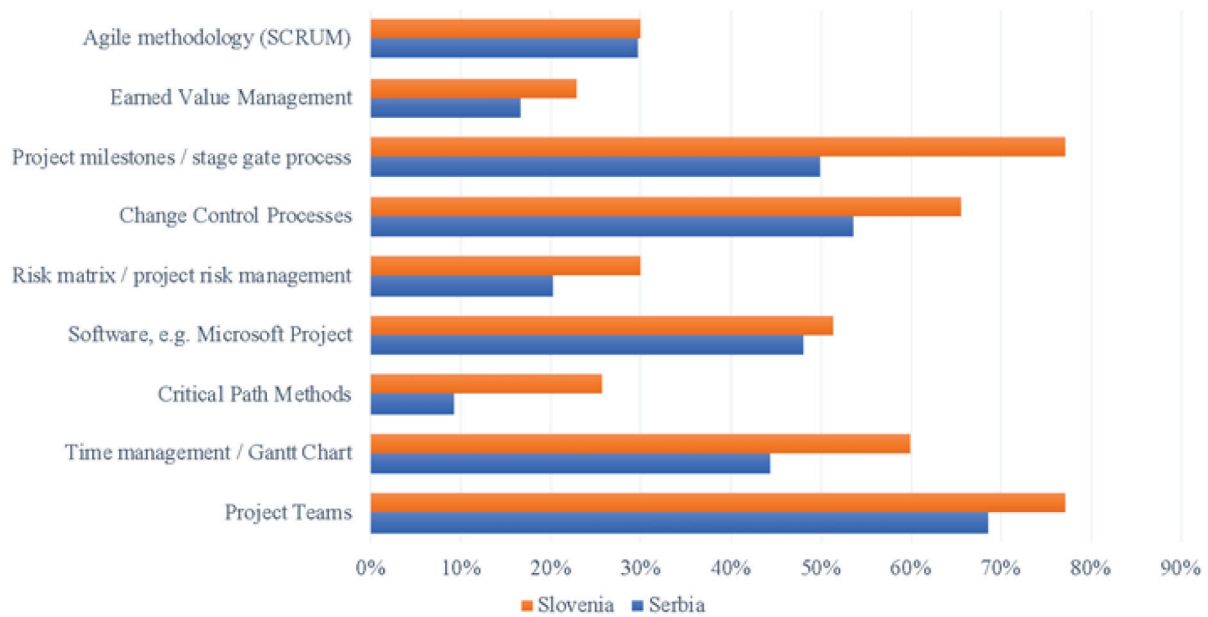


Figure 1. Project management tools

Table 5. Most important project SC and relation to one or more full-time identifiable project managers

Project success criteria	Full-time identifiable project managers	N	Mean	Std. Deviation	t	Sig. (2-tailed)																																																				
Meets required quality standard	Yes	76	3.25	.614	1.487	.140																																																				
	No	48	3.06	.783			Meets specification	Yes	76	3.34	.644	1.584	.116	No	48	3.15	.714	Appreciation by users	Yes	76	3.55	.551	1.993	.048*	No	48	3.33	.663	Completed within budget	Yes	76	3.14	.706	1.341	.182	No	48	2.96	.824	Completed within schedule	Yes	76	3.20	.749	1.149	.253	No	48	3.04	.713	Appreciation by project personnel	Yes	76	2.99	.683	.878	.382	No
Meets specification	Yes	76	3.34	.644	1.584	.116																																																				
	No	48	3.15	.714			Appreciation by users	Yes	76	3.55	.551	1.993	.048*	No	48	3.33	.663	Completed within budget	Yes	76	3.14	.706	1.341	.182	No	48	2.96	.824	Completed within schedule	Yes	76	3.20	.749	1.149	.253	No	48	3.04	.713	Appreciation by project personnel	Yes	76	2.99	.683	.878	.382	No	48	2.88	.703								
Appreciation by users	Yes	76	3.55	.551	1.993	.048*																																																				
	No	48	3.33	.663			Completed within budget	Yes	76	3.14	.706	1.341	.182	No	48	2.96	.824	Completed within schedule	Yes	76	3.20	.749	1.149	.253	No	48	3.04	.713	Appreciation by project personnel	Yes	76	2.99	.683	.878	.382	No	48	2.88	.703																			
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Sample adequacy was assessed prior to the implementation of a principal component analysis (PCA, Table 7).

Variables for Serbia and Slovenia were analyzed individually. The correlation matrix analysis revealed multiple coefficients greater than a 0.3. Kaiser-Meyer-Olkin measure is higher value than 0.6. Bartlett's Test of Sphericity also yields statistically significant results, which indicate the factorability of a correlation matrix. The PCA analysis revealed two components for Serbia and Slovenia, which explain the 49.03 variances for Serbia and 44.54% for Slovenia.

Figure 2 plots the components for Serbia within rotated space to display categories between variables in project orientation.

Component 1 (C1) is composed of elements that represent close collaboration and engagement on projects as well as skills of project managers. Component 2 (C2) comprises organizational aspects of project management; the complexity of project as well as external factors affects projects. Figure 3 plots the same components for Slovenia to display categories between variables in project orientation within rotated space.



**Table 6.** Project management orientations in SMEs - level of agreement to statements

Statements	Country	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Q4a. Previous experience is key in order to implement an effective project-management system.	Serbia	54	2.91	.708	-2.434	.016*
	Slovenia	70	3.20	.628		
Q4b. It is necessary to have a well-defined project management process to successfully implement projects.	Serbia	54	3.43	.716	-.622	.535
	Slovenia	70	3.50	.608		
Q4c. Project management is directly affected by the organization's structure.	Serbia	54	3.24	.725	.885	.378
	Slovenia	70	3.13	.679		
Q4d. Closely working with suppliers is part of the projects carried out by my organization.	Serbia	54	2.78	.883	-1.664	.099
	Slovenia	70	3.03	.761		
Q4e. The project manager's skills mainly determine the projects' success of my organization.	Serbia	54	3.17	.771	-.152	.879
	Slovenia	70	3.19	.572		
Q4f. Closely working with client organizations is integral to projects carried out within my organization.	Serbia	54	3.31	.773	-.558	.578
	Slovenia	70	3.39	.597		
Q4g. The measures for success criteria in my organization sufficiently determine project success.	Serbia	54	2.91	.784	.608	.544
	Slovenia	70	2.83	.659		
Q4h. My organization carries out sufficient research before undertaking a new project.	Serbia	54	3.04	.951	1.482	.141
	Slovenia	70	2.80	.827		
Q4i. My organization generally undertakes complex projects.	Serbia	54	2.91	.784	-.609	.544
	Slovenia	70	2.99	.648		
Q4j. External factors (such as market demand, government regulations) chiefly determine the success of projects within my organization.	Serbia	54	2.81	.913	-.377	.707
	Slovenia	70	2.87	.760		
Q4k. In spite of possible failures of project management, a project may still be successful.	Serbia	54	2.37	.708	-2.453	.016*
	Slovenia	70	2.67	.653		

**Table 7.** Sample Adequacy and Total Variance Explained

Sample Adequacy and Total Variance Explained	Serbia	Slovenia
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.734	.712
Bartlett's Test of Sphericity	<.001	<.001
Total Variance Explained	49.03	44.54

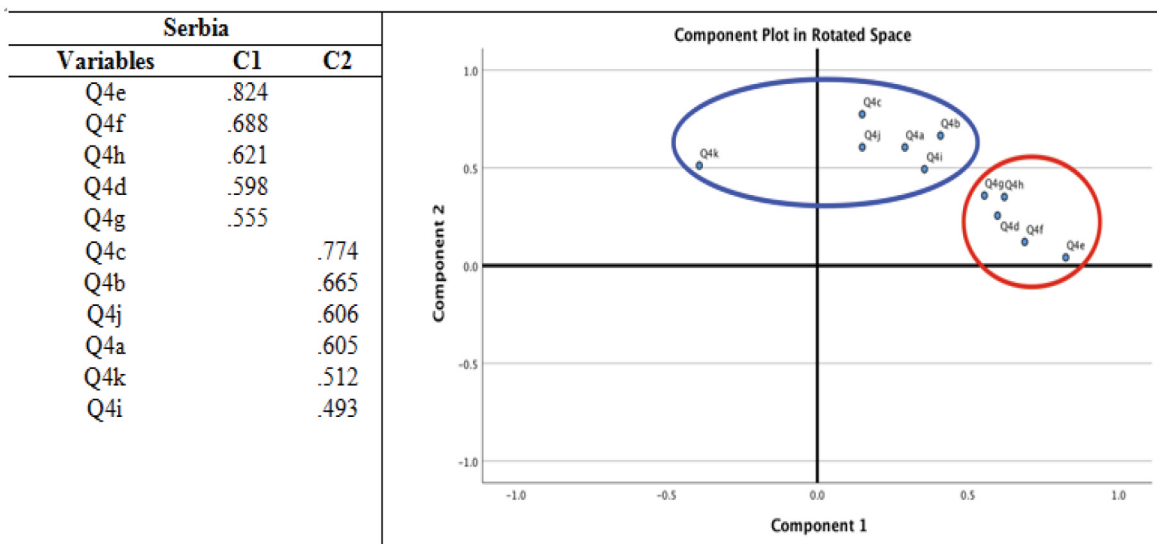


Figure 2. Component Plot in Rotated Space – Serbia

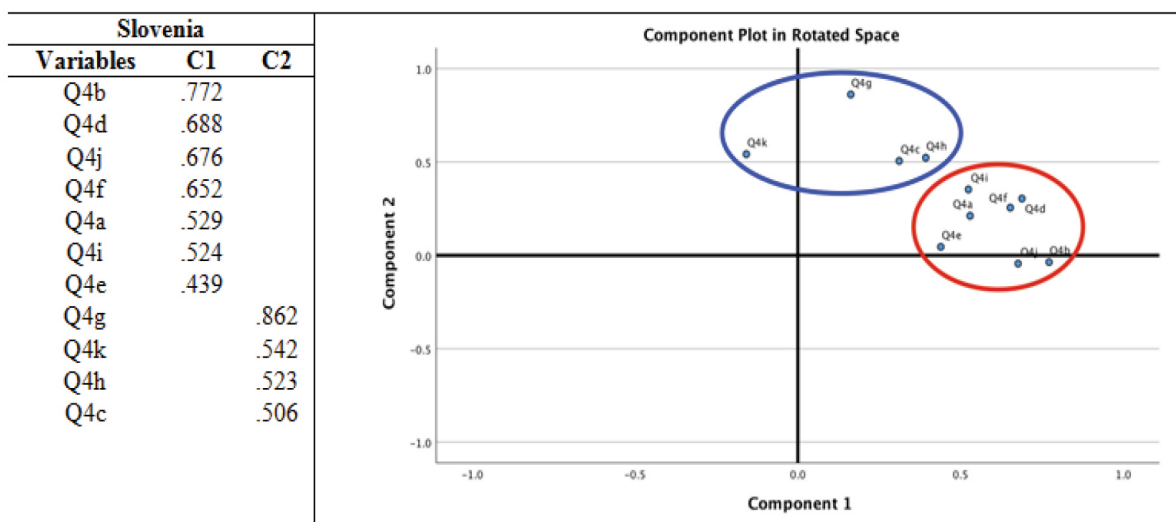


Figure 3. Component Plot in Rotated Space – Slovenia

Component 1 represents well-defined project management processes compared to component 1 for Serbia collaboration with suppliers and clients includes analysis of external factors. Component 2 marks the definition of SC as the most important, while also taking into account the organizational structure, research and analysis and failure of project management.

### 5. Discussion

Projectification is of increasing importance for those who are striving to participate in EU projects as projectification is necessary to do so in order to access finance as well as incorporate education and

development along EU lines. Slovenia and Serbia are two countries that offer fruitful data for case studies that may show how projectification has come to influence project management in terms of these countries' respective development as well as projectification influencing the output of SMEs. Since SME's are organizations that have particular issues in innovation and financing, Horizon Europe 2020-2021's third pillar seeks SMEs are to undergo or further their projectification to advance innovation and investment. The success rate of SMEs can be an indicator for how effective projectification has been in achieving its aims.

SMEs have been considered to analyze differences among project orientation in ex-YU countries. Our study provides additional support for considerable insight in project success analysis of the SMEs

and substantiates previous findings of [13], [53] - [56].

The research yields other interesting results that shed light on how certain SF may correlate to other SC. For instance, the results strongly indicate that the project-manager role results in a higher appreciation by the user (SC). This is striking as it is also found that while client consultation is important as a SF, it only correlates directly to appreciation of the users. Although our results differ slightly from those of [57] - [59], it can nevertheless be argued that project manager role and soft skills directly influence on project success, while customer satisfaction is not related with project maturity and expected project outcomes.

Our research also strongly confirms that early feedback and continuous engagement to be key principles of agile methodology, which emphasizes "customer collaboration over contract negotiation". We find that agile principles most highly correspond to contemporary approaches, particularly for stakeholder engagement, iterations and operating through a feedback culture. According to [60] and [61] agile approach and learning have positive effect on project success. [62] conducted research that supports the finding that shared, multiple stakeholder perception and engagement leads to more informed decisions and better motivated employees. [63] also claimed in their study that the ability to clearly communicate across multiple levels (i.e., between the project, organization, and team groups with the project manager) was a crucial factor for success in the IT field.

30% of the Serbian and Slovenian SMEs were found to actively utilize agile methodology in their projects as well as that 50% of all SMEs apply some PM software in practice. However, not all the criteria factors for agile methodology. Milestones and stage gates were more likely to be used among Slovenian SMEs as well as the active use of timelines and the Critical Path Method. This may stem from the fact that Slovenian SMEs report being more process oriented to be more in line with PMBOK Guide 6 [35]. Serbian SMEs are more skeptical to use such methods even in spite of an increase in the number of employees they hire. Overall, the use of a critical path method in Slovenia points to better outcomes in project management using agile methodology.

Serbia and Slovenia greatly diverge in their project orientations in terms of their collaboration and organization aspect which was evident for Slovenia in terms of their processes in project management as well as research and analysis. For Serbian SMEs, their focus was found to be placed onto strategic aspects of project management and collaboration and engagement aspects. However, this may be due to a

predominance of non-IT SMEs within the Serbian sample. As put forward by [64], the evidence we found points to SF and SC may differ during project implementation, and further support the idea of different perceived outcomes and project evaluations by different stakeholders, claim [65].

Given the nature of startups and the ability to create SMEs under lower start-up costs within the IT industry, entrepreneurial orientation (EO) is disproportionately represented among IT SMEs featured within this study as well as in others research. For instance, on the basis of their findings, [66] recommend that project management professionals take into account the effect that EO has on SMEs so that their goals may be best aligned within the organization in order to achieve better results.

The main contribution this research may offer to the wider body of literature is that it has taken a significant sample of responses from divergent but similar regional economies. It has found that while SC and SF may be shared between them, they also conflict in terms of what is the most substantial by country. Therein, there is no consensus, but the difference may stem from different knowledge management systems in both countries. Moreover, as proposed by [67], knowledge management plays a significant role in project success analysis; the evidence found points to significant differences between the Serbian and Slovenian companies studied.

## 6. Conclusion

This paper aims to make a two-fold contribution to enterprises in transitional economies in relation to how they utilize project management tools. First, the research attempts to establish similarities in the understanding of how project management tools are used in relation to challenges, drivers, and practices. These are first identified to extract common guidelines for the use of project management tools that might be of use to any enterprise operating in a transitional economy. Secondly, the differences in the use of project management tools were pinpointed and through their analysis, lessons that Slovenia and Serbia enterprises may learn from each other were found. These might facilitate these same or similar enterprises into further improvement in using such tools as well as in strengthening their adaptiveness in an evolving transitional market. The findings in this paper show the experiences of the use of project management tools and practice in Slovenian and Serbian companies. Differences between countries are relatively small.

The main limitation is that the research has been carried out in only two countries, which would call for further research to incorporate more (transitional) countries to strengthen the generalizability of the results. In addition, it would be beneficial to extend research into further areas, such as: (1) comparison studies conducted in real time both Serbia and Slovenia; (2) the scope of the individual countries studied should be widened to include other emerging economies; (3) in order to obtain differences and similarities in the project SF, project management practices should be compared in countries reporting higher GDP rates and transitional countries; and (4) in order to obtain a wider range of results based on company structure and organization, project management practices between micro, SMEs and large companies should also be taken into account and compared. Future research should also try to incorporate structural equation modelling to better delineate comparisons project SF and project SC. Finally, only exploratory factor analysis was used for each project SF and not compared to any other analytical methodologies which may determine a difference in results.

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