

## Relative Importance of Project key Success Factors in Country Specific Context

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### Abstract

This research, based on literature review, identifies important project success factors that are clustered under various categories. All project success factors are evaluated by project managers. In order to identify variations among success factors, domestic and international projects are compared. Data is collected from project managers of Pakistani, German and other international companies operating in Pakistan.

### Key Words

Key Success Factors,  
Relative Importance  
Index, Factors Ranking

Results show significant variances in the ranking of factors. The main differences were observed in the national factors where their importance is more in the foreign projects than domestic projects. Results suggest that project managers of international companies shall pay attention to national environment factors for greater chances of getting project success...

### Background of the Research

Projects are employed to generate innovative products, improved procedures, research and development, implementation and development of new business and management consulting (Antonio et al., 2019; Lindner & Wald, 2011; Salazar-Aramayo et al., 2013). Davis (2013) performed a thematic analysis of 29 research articles on project success, concluding that 22 distinct definitions of project success existed because of the different concepts of success factors. Research on project success tried to explore success factors and their role in the project success (Alzahrani & Emsley, 2013).

A comprehensive review of literature from past has made it clear that there exists need for explorations of project success factors. Identification of these factors is vital because although there have been technological and theoretical developments in the field of project management, yet 65% of the projects undertaken do not comply with and complete their objectives (Ibrahim & Geoffrey, 2019; Seiler et al., 2012). Managers and researchers alike have had a keen interest in recognizing success factors due to gap in achievement of project objectives. Furthermore, it has been observed that CSFs help managers and organizations achieve higher performance.

Studies have identified a variety of CSFs based on either theoretical knowledge or through empirical studies (Asgari & Kheyroddin, 2018; Papke-Shield et al., 2010). Most of the studies on success factors have been done in advanced countries and there is significant lack of research that concentrates on success factors in developing countries. For instance, Zhao et al., (2010) and Alzahrani and Emsley (2013) pointed out that attributes of a country are very significant in determining success. Although many external factors are uncontrollable; however, they can contribute to a project's success or failure (Khang & Moe, 2008, Zhao et al., 2010).

Fortune and White (2006) characterized critical success factors into nine elements. They carried out a review of sixty-three articles that were about project key success factors and listed twenty-seven factors. Müller and Turner (2008) and Alvarenga et al. (2019) indicated that leadership style is related to a successful completion of project. Anantmula and Thomas (2010) developed a model in pursuit of improving project performance for global projects.

Pakistan is emerging as an attractive market for the world, having a great potential for growth and development. Pakistan is one of those developing economies which has been a hub for several recent international projects, but they have not received any consequential attention from researchers. There are several challenges which project managers and firms face in the successful project implementation in Pakistan, these factors must be studied in the context of domestic as well as international projects. Therefore, due to growth potential of Pakistan there is a need for studying project success factors in Pakistan.

## Research Questions

This study is conducted to fill the above stated research gaps. The main research queries are:

1. What are the leading success factors for projects executed in Pakistan?
2. What are the differences in rankings of success factors for projects in domestic and international projects?

## Methodology

Success factors previously well-known in project management literature were marked down and content analysis was performed to get assistance in their classification. Similar success factors were grouped in a preliminary list. Final selection of success factors and their grouping was done through discussions with academicians and obtaining feedback from practitioners. Consequently, 28 success factors are found. Table 1 presents literature sources for success factors. All identified success factors have been grouped under four dimensions. These dimensions include: organizational factors, people factors, project-related factors and national factors (Khan, 2014). The main objective of the study is to identify relative importance and compare the differences in mean values of importance in projects of Pakistani, German and other international companies.

**Table 1.** Summary of Critical Factors

Critical factors	Literature
Effective Risk Management	Fortune and White, 2006; Hwang et al., 2013; Reza and Craig, 2018; Ibrahim and Geoffrey, 2019
Good Communication	Salazar-Armayo, 2013; Anantamula & Thomas, 2010
Sufficient Resources	Khang and Moe, 2008; Turner R. J., 2009
Organization Structure	Anantamula, 2008; Antonio et al., 2019
Top Management Support	Parolia, 2011; Turner R. J., 2009
Monitoring and Control	Salazar-Armayo, 2013; Liu et al., 2010
Change Management	Fortune and White, 2006
Organization Maturity	Yang et al., 2011; Lindner and Wald, 2011
End User Involvement	Reza and Craig, 2018
Project Owner Interest	Jha and Iyer, 2007; Müller and Turner, 2008
Stakeholders Involvement	Khang and Moe, 2008; Yang et al., 2011
Project Manager Competence	Davis, 2013; Turner R. J., 2009; Müller and Turner, 2008; Alvarenga et al., 2019
Project Team Competence	Chow and Cao, 2008; Parolia, 2011; Salazar. Aramayo et al., 2013; Ibrahim and Geoffrey, 2019
High Commitment	Chow and Cao, 2008; Jha and Iyer, 2007; Reza and Craig, 2018
Good Leadership	Khang and Moe, 2008; Yang et al., 2011
Small Size of Project	Fortune and White, 2006
Short Duration of Project	Asgari and Kheyroddin, 2018
Clear Realistic Objectives	Khang and Moe, 2008; Seiler, S. et al., 2012
Low Technicality	Zhao et al., 2010; Chow and Cao, 2008; Anantamula, 2008
Realistic Schedule	Fortune and White, 2006; Antonio et al., 2019
Simple Nature of Project	Zhao et al., 2010 Salazar-Aramayo, 2013
Accurate Feasibility Study	Salazar-Aramayo, 2013; Asgari and Kheyroddin, 2018
Political Stability	Zhao et al., 2010
Good Economic Condition	Wang and Yuan, 2011; Zhao et al., 2010
Infrastructure	Ng et al., 2009; Anantamula, 2008; Reza and Craig, 2018
Strength of Legal System	Wang and Yuan, 2011
Social & Cultural	Alvarenga et al., 2019; Wang and Yuan, 2011
Physical Situation	Zhao et al., 2010

Success factors are identified by literature review findings and semi-structured interviews with managers. Positivist approach with descriptive design is applied, and survey is taken as a research strategy. Structured questionnaire in a cross-sectional design was used for collection of data (Hair et al., 2015) settings from project managers. All responses are obtained in the presence of researcher. This is helpful to increase reliability of the information obtained. Four semi-structured interviews were conducted and important feedback on success factors was obtained.

In order to assimilate expert opinion, meetings were arranged with project management academicians and

field study experts. A pilot study was done through interviews with three project managers. Some items were reworded for clarity. Final questionnaire was then used for full-scale field study. In total, 71 responses were obtained mostly from project managers out of which 34 were through questionnaire and 37 were interviews. Many sources were utilized to get appointment for interview including Pakistani-German business forum.

One sample t-test is performed to test importance and significance of identified success factors (Ng & Tang, 2010). Relative importance index values are calculated for all success factors and their differences are compared (Doloi et al., 2012). The mean value of importance of success factors are calculated within a success factor group and compared in Pakistani, German and other international companies (Wang and Yuan, 2011; Seiler et al., 2012).

## Results and Discussions

The results for significance of success factors, relative importance index and factor ranking are discussed as follows:

### Success Factors Significance

All success factors identified through literature study and preliminary interviews are analysed through one sample t-test for their significance. One sample t-test is performed at the test level of 3, which indicates that the factor is important. SPSS One sample t-test analysis is conducted using. All 28 success factors have a significance level of less than 0.05, thus illustrating that they are all important.

### Relative Importance Index

Relative Importance Index (RII) is used to examine importance of identified success factors (Doloi et al., 2012). Analysis is performed on two levels. First, the overall relative importance index values of success factors are calculated. Second, the comparative analysis of relative importance is done for projects of German, Pakistani and other international companies. The attributes of first group, which constitutes all responses, are arranged on their descending order of RII values and ranked. The lists of success factors represented by Pakistani, German and other international companies' samples are also prepared in the same way in order to make comparisons. All results are presented in Table 2. All factors are listed in diminishing order, hence the factors represented in upper half (top 14 factors) can be classified as the most critical success factors.

Project managers' competence is the top ranked success factor (Alvarenga et al., 2019; Müller & Turner, 2008), rightly as he plays a very important role in project success (Hwang & Ng, 2013). However, it is also important to note that most of the responses are obtained from project managers in this research, which might have influenced the overall rating.

**Table 2.** Relative Importance Index Values

Success factors	Total (71)		Pakistan (27)		Germany (20)		Other Int. (24)	
	RII	Rank	RII	Rank	RII	Rank	RII	Rank
Project Manager Competence	0.907	1	0.888	1	0.9	4	0.933	1
Project Team Competence	0.89	2	0.866	4	0.93	1	0.883	4
Good Communication	0.876	3	0.866	6	0.9	3	0.866	8
High Commitment	0.867	4	0.822	9	0.92	2	0.875	5
Clear Realistic Objectives	0.864	5	0.866	3	0.84	7	0.883	3
Top Management Support	0.859	6	0.881	2	0.81	9	0.875	6
Good Leadership	0.856	7	0.866	5	0.86	6	0.841	11
End User Involvement	0.85	8	0.851	7	0.83	8	0.866	7
Project Owner Interest	0.839	9	0.822	8	0.8	12	0.891	2
Effective Monitoring Control	0.839	10	0.807	13	0.86	5	0.858	10
Realistic Schedule	0.819	11	0.814	11	0.78	13	0.858	9
Stakeholders Involvement	0.816	12	0.822	10	0.81	10	0.816	14
Good Economic Condition	0.800	13	0.807	12	0.76	16	0.825	13
Sufficient Resources	0.785	14	0.785	14	0.8	11	0.775	17
Technological Infrastructure	0.771	15	0.77	17	0.76	15	0.783	16
Low Technicality	0.763	16	0.77	18	0.74	18	0.775	18
Effective Risk Management	0.763	17	0.785	16	0.7	20	0.791	15
Political Stability	0.754	18	0.785	15	0.7	21	0.766	19
Change Management	0.746	19	0.733	22	0.78	14	0.733	23
Legal System	0.735	20	0.755	19	0.59	28	0.833	12
Social & Cultural	0.726	21	0.711	23	0.72	19	0.75	21
Organization Maturity Level	0.723	22	0.74	21	0.66	23	0.758	20
Supportive Physical Situation	0.721	23	0.703	24	0.75	17	0.716	24
Accurate Feasibility Study	0.721	24	0.748	20	0.66	25	0.741	22

Short Duration of Project	0.684	25	0.666	25	0.68	22	0.708	26
Organization Structure	0.667	26	0.659	27	0.64	26	0.7	27
Simple Nature of Project	0.661	27	0.666	26	0.6	27	0.708	25
Small Size of Project	0.642	28	0.622	28	0.66	24	0.65	28

### Factors rankings

To analyse importance of factors for achieving project success, a criterion is required to attempt to identify those critical factors. In this study, two criteria are set: First, top-three most important factors in a particular group are classified as critical success factor for project success, irrespective of their mean value, and second, the factors having higher mean value than the average mean values (3.92) of all factors are categorized as CSF for achieving project success (Wang and Yuan, 2011).

### Organizational factors

The mean ratings and their respective rankings of 8 organizational factors are summarised in Table 3. The analysis revealed that practitioners recognized ‘Top management support’ as significant CSF for projects of Pakistani and other international companies. In contrast, for German companies ‘top management support’ is ranked at number three.

**Table 3.** Organizational Factors Comparative Ranking

Organizational Factors	Pakistan (27)			Germany (20)			Other Int. (24)		
	Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank
Top Management Support	4.41	.572	1	4.05	.887	3	4.38	.824	1
Good Communication	4.33	.734	2	4.50	.607	1	4.33	.816	2
Monitoring and Control	4.04	.808	3	4.30	.733	2	4.29	.690	3
Sufficient Resources	3.93	.781	4	4.00	.725	4	3.88	.612	5
Effective Risk Management	3.93	.917	5	3.50	.889	6	3.96	1.042	4
Organization Maturity Level	3.70	.669	6	3.30	.733	7	3.79	.884	6
Change Management	3.67	.679	7	3.90	.852	5	3.67	.868	7
Organization Structure	3.30	.724	8	3.20	.894	8	3.50	1.022	8

Top management support is basically willingness from top management to provide required resources, authority and power. Top management can mobilize resources and provide continuous support to achieve the objectives (Asgari and Kheyroddin, 2018). The importance of communication for successful implementation and completion of projects is well documented (Parolia, 2011). Effective communication is very important in projects in order to avoid duplication of information and to communicate all necessary information (Salazar-Aramayo, 2013). This might be because in Pakistan changes in the plan occur frequently and without top management support it is difficult to fulfil resources requirements; on the other hand German companies normally work as per schedule.

The third most important organizational success factor in Pakistani sample is found to be effective monitoring and control. In sample of German companies, effective monitoring and control is ranked at number two. Monitoring and control is necessary to keep all activities aligned with the project objectives and in accord with the plans (Liu et al., 2010). ‘Sufficient Resources’ is regarded as a CSF for project success in all three samples, while ‘effective risk management’ is considered CSF for project success in Pakistani and other international companies.

### People Factors

Along with ranking of the 7 identified people factors, the mean value and standard deviation are provided in Table 4. In Pakistani company’s project manager is considered as more authoritative as well as responsible for work while project team mainly perform the tasks assigned by the project managers. The German companies are more focused on project team as in German company’s project team tops the ranking. Project managers organise, plan, schedule and control project work and are ultimately responsible for completing project on time and within cost (Reza & Craig, 2018; Sears et al., 2008).

**Table 4.** People Factors Comparative Rankings

People factors	Pakistan (27)			Germany (20)			Other Int. (24)		
	Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank
Project Manager Competence	4.44	.577	1	4.50	.688	3	4.67	.565	1
Project Team Competence	4.33	.620	2	4.65	.587	1	4.42	.776	3

Good Leadership	4.33	.679	3	4.30	.801	4	4.21	.658	6
End User Involvement	4.26	.859	4	4.15	.587	5	4.33	.761	5
Project Owner Interest	4.11	.641	5	4.00	.858	7	4.46	.588	2
High Commitment	4.11	.751	6	4.60	.503	2	4.38	.647	4
Stakeholders Involvement	4.11	.847	7	4.05	.999	6	4.08	.717	7

Majority of the other international companies are from Arab countries and project managers consider project owner as it stands second on the list of leading factors for successful completion. High commitment from project participants keeps them motivated to successfully complete the project (Jha & Iyer, 2007). High commitment is ranked very low (at no. 6) in Pakistani companies this might be because of lack of understanding the importance of commitment.

All ‘people factors’ identified in the study are ranked higher than the average value (3.92) i.e. all of them can be regarded as critical success factors. This means People dimension is conclusive of the fate of project (Alvarenga et al., 2019).

### Project-Related Factors

Table 5 summarises the mean value of importance, standard deviations and their respective ranking. Findings of the study suggest that ‘clear realistic objectives’ is the most importance success factor in this category for all clusters. Fortune and White (2006) also found that a ‘clear realistic objective’ is the leading factor among all factors included in their study. Objectives serve as a guiding principle to success. Success is determined by achievement of objectives. Clear goals certainly provide a guide for direction of a project team’s efforts (Asgari & Kheyroddin, 2018).

**Table 5.** Project-Related Factors Comparative Rankings

Project-Related Factors	Pakistan (27)			Germany (20)			Other Int. (24)		
	Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank
Clear Realistic Objectives	4.33	.620	1	4.20	.834	1	4.42	.584	1
Realistic Schedule	4.07	.874	2	3.90	.718	2	4.29	.550	2
Low Technicality	3.85	.718	3	3.70	.923	3	3.88	.850	3
Accurate Feasibility Study	3.74	.859	4	3.30	.865	5	3.71	1.122	4
Short Duration of Project	3.33	.679	5	3.40	.940	4	3.54	.884	6
Simple Nature of Project	3.33	.679	6	3.00	.649	7	3.54	.779	5
Small Size of Project	3.11	.751	7	3.30	.865	6	3.25	.897	7

Only the top two factors fulfil the mean value (3.92) criteria in order to be included in the critical success factors list. No significant difference has been reported in ranking of project-related factors. There is little difference in the mean values; for example, in Pakistani companies, technical aspects’ mean value is just a little more in comparison to others. However, it is ranked at no 3 in all three samples.

### National Factors

The mean value of the importance of national factors attributed by project managers, standard deviations and their rankings are presented in Table 6

**Table 6.** National Factors Comparative Rankings

National Factors	Pakistan (27)			Germany (20)			Other Int. (24)		
	Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank
Good Economic Condition	4.04	.808	1	3.80	.894	2	4.13	.680	2
Political Stability	3.93	.829	2	3.50	.946	5	3.83	1.049	4
Technological Infrastructure	3.85	.534	3	3.80	.696	1	3.92	.776	3
Strength of Legal System	3.78	.641	4	2.95	.887	6	4.17	.702	1
Social & Cultural Understanding	3.56	.577	5	3.60	.883	4	3.75	.847	5
Physical Situation	3.52	.700	6	3.75	.851	3	3.58	.830	6

The results show diversity in opinion of respondent groups regarding the importance attributed to different national factors introduced in this study. In Pakistani companies, ‘good economic condition’ tops the factor ranking that is ranked second in German and other international companies. Political stability is considered much more important in Pakistani companies compared to German and other international companies. This might be because

of more governmental involvement in local projects compared to German and other international companies. Political stability provides a predictable investment environment (Antonio et al., 2019; Ng et al., 2009). The major difference in ranking of the strength of legal system is may be because of local rules and regulations and laws implemented in Pakistan. It might be difficult for some foreign companies to cope with local human resource regulations and comparatively different environment for work force than their home countries.

## **Conclusion**

The results of field study showed that all tabulated success factors were considered significant by practitioners for success of their projects. This supported validity of results of the literature review and first field study. According to the results, project manager's competence is the most important success factor. However, German companies ranked 'project team competence' as the leading factor.

Group-wise success factors results revealed that among organizational factors, top management support is the leading organizational aspect for projects of Pakistani and other international companies, while for German companies, communication is the leading organizational factor. The most important 'people factor' was found as 'project manager competence' in projects of Pakistani and other international companies. The sample represented by German companies considered project team competence as the most important people factor. Findings of the study show "clear realistic objectives" as the top factor of project-related category across all clusters. In Pakistani companies, good economic conditions was graded as the top factor. In German companies, availability of technological infrastructure was ranked as the most important factor. However, strength of legal system was rated as the leading factor for other international companies. Project managers should keep in mind that in order to achieve all project goals in developing countries they must consider technical, legal, political and economic factors and plan and execute their projects accordingly.

This research has contributed and enhanced the work of previous researchers. Identifying success factors and their role in achieving high performance is helpful for foreign companies. They will be able to focus in right direction to achieve project success. The study found that people factors (e.g., project manager, project team etc.) are the most important so, the organizations should particularly invest in 'people factors' for achieving higher success in their projects. The study provides foundation for further studies in other countries and organizations which would offer further reliability to the findings of this study.

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