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[CHEN YIN](#) , [OTHMAN BIN MOHAMED](#) ^{*} , [KHO MEI YE](#)

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Article

Investigating the Critical Success Factors for Tourism PPP Projects in China

Chen Yin ¹, Othman Bin Mohamed ^{2,*} And Kho Mei Ye ³

¹ Department of Quantity Surveying, Faculty of Built Environment, Universiti Malaya, 50603 Kuala Lumpur, Malaysia; 17222156@siswa.um.edu.my

² Department of Quantity Surveying, Faculty of Built Environment, Universiti Malaya, 50603 Kuala Lumpur, Malaysia; othmanmohamed@um.edu.my

³ Department of Quantity Surveying, Faculty of Built Environment, Universiti Malaya, 50603 Kuala Lumpur, Malaysia; meiye@um.edu.my

* Correspondence: othmanmohamed@um.edu.my; Tel.: + +60 13-742 2228

Abstract: This research aims to explore and analyze the critical success factors (CSFs) that increase the likelihood of successful implementation of tourism PPP projects in China. As an important step toward developing such a protocol, this study identifies and examines 22 critical success factors for tourism PPPs based on a systematic research approach, which includes a rigorous literature review, and semi-structured interviews. A questionnaire survey was conducted to evaluate the relative importance of these 22 CSF. The results show that the top three critical success factors for China's tourism PPPs are: adequate project evaluation and demonstration; political support and stability; clear and stable policy documents on PPP. Factor analysis indicated that the 22 CSFs could be grouped into five principal success factor groups. These insights are expected to profoundly influence the development of policies related to tourism PPPs, providing a structured framework to enhance the efficiency and success of these ventures.

Keywords: tourism; public-private partnership; critical success factors; China

1. Introduction

Tourism has experienced rapid growth since the early 1900s, eventually becoming the largest industry globally, surpassing both the petroleum and automobile sectors. Now, tourism has increasingly become an important pillar industry of the national economy in many emerging countries[1]. Over the past few decades, tourism has played a pivotal role in many European countries, acting as a catalyst to stimulate the development of the economy, improve the viability of less developed areas, and increase the living conditions of local people[2].

In China, tourism harbors significant potential for development, buoyed by favorable geography and a large population. Recognized by the government as a strategic pillar of the national economy, tourism serves as a vital force in driving domestic demand, boosting investment, and stabilizing economic growth under the new normal of China's economy[3]. According to the "13th Five-Year" Tourism Development Plan, tourism contributed substantially to the national economy, accounting for 10.8% in 2015[4]. Furthermore, preliminary estimates from 2017 show that the total revenue of China's tourism industry reached 5.4 trillion yuan, making a 15.1% increase, with a comprehensive contribution to social employment of 10.28%[3].

Despite these promising developments, fueled by supportive government policies, the tourism sector faces several challenges[3]. These include substantial initial investments, prolonged return periods, and difficulties in securing financing[5], which collectively pose hurdles to the industry's expansion.

In light of this scenario, the mode of Public-private partnership (PPP) emerges as an important strategy for overcoming the financing bottleneck in tourism development[5]. The implementation of

PPPs in the tourism sector not only leverages the expertise of industry leaders but also fosters closer collaboration between the private and public sectors, thereby ensuring sustained growth in the industry[6]. Additionally, the PPP model facilitates a synergistic effort between public and private entities, which is instrumental in accelerating the recovery of the tourism industry from the severe impacts of the pandemic[7].

The adoption of PPP in the tourism sector began in earnest in 2014, following strong advocacy from the Chinese government to employ PPPs as a means to stimulate tourism development[8]. In support of these initiatives, the government has enacted a series of policies and regulations aimed at bolstering the growth of tourism-related PPP projects[9]. Since that pivotal year, the Chinese State Council, Ministry of Finance, Ministry of Culture and Tourism, along with other relevant ministries and commissions, have issued 46 documents to support, regulate, and guide the application of the PPP model[10].

Despite sustained enthusiasm from both public and private sectors for PPPs in tourism sector[11], the complexity of these projects demands further scholarly attention. Tourism scholars, in particular, have emphasized the need for more extensive theoretical and empirical research on tourism PPP projects[12]. Unique challenges in the tourism sector, such as seasonal fluctuations, significant spatial variation, and broad industrial correlations, add layers of complexity not as prevalent in other sectors like municipal engineering, transportation, urban comprehensive development, medical and health care, agriculture, pension, education[4,13]. These factors contribute to the limited number of tourism PPP projects in China, indicating that the application of PPPs in this sector is still in its nascent stages. The experience with tourism PPPs is relatively underdeveloped, with few successful or failed case studies to guide future projects [4].

Despite the growing interest in PPPs in tourism, there remains a noticeable lack of research focused on the critical success factors for these projects. Addressing this gap, this study explores the key factors influencing the implementation of tourism PPP projects in China. The findings aim to enhance decision-making processes for both government bodies and private contractors, thereby promoting the sustainable development of the tourism industry. Additionally, this research has led to the creation of a checklist of critical success factors tailored to tourism PPP projects. This tool is intended to aid further academic research and improve the performance of tourism PPPs in China, ultimately facilitating the broader development of the industry.

The structure of the remainder of this paper presents as follows. Section 2 is literature that offers a brief background and an initial identification of critical success factors for PPP projects using the method of desk literature review. Section 3 is a research methodology, using factor analysis to analyze the success factors which were collected by questionnaire survey. Following is the discussion of the results, and the critical success factors specific to the tourism PPP projects in the context of China are obtained. Subsequently presents the research implications, limitations, and the direction of future research. Finally, the conclusions of the research are made.

2. The Identification of CSF for Tourism PPP Projects

2.1. Success Factor Defined

The phrase “success factors” was first used in the area of information systems and project management[14]. In a project, success factors are those elements that the team members are required to pay more attention to throughout the life of the project as they show how much progress has been made in a given area[15]. It was defined by Rockart in 1982 as “those few areas of activity in which favorable results are absolutely necessary for a manager to reach his/her goals” [14]. In the context of public-private projects, success may mean different things for various stakeholders[16]. Kwak et al., (2009) said that the identification of success factors has been taken as the first important step toward the development of an efficient PPP procurement[17].

2.2. Success Criteria

Success criteria are significant to allocate resources appropriately, in the last decade, the success criteria in the construction industry have gotten increasing attention. Significant research results have been achieved in some sectors like health, rural development, and education. For example, Diallo & Thuillier, (2004) conducted an empirical study on specific success criteria for international development projects, and assessed the project success from the perceptions of seven stakeholders[18]. Ahadzie et al., (2008) strongly opined that environmental impact and customer satisfaction are two important success criteria aside from the iron triangle criteria of time, cost, and quality [19]. Ogunlana, (2010) contented safety, effectiveness, the satisfaction of stakeholders, efficient use of resources and reduced conflicts are important criteria in measuring the success of large construction projects[20].

2.3. Critical Success Factors of PPP Projects

Building a successful PPP depends on many factors related to political, economic, financial, and other categories. Studying CSFs in the procurement stage of a PPP, can help to improve the success chance of PPP projects[21].

During the past few decades, the issue of critical success factors for the PPP has received significant attention from academic and industry practitioners[22]. Many key ingredients for delivering successful PPP projects have been discovered by researchers worldwide[23]. For instance, Tam, (1999) summarized a set of factors for a successful BOT project, including an experienced, equitable and simple governing body and structure, and uncorrupted and honest political regime, an intact contractual agreement, a structured set of regulations and legal system, a large and reliable consortium, an experienced construction organization, and no intervention politics[24]. Akintoye et al., (2003) analyzed the data collected from 68 interviews and eight PFI cases, the results confirmed that the detailed risk analysis and appropriate risk allocation, drive for faster project completion, curtailment in project cost escalation, encouragement of innovation in project development, and maintenance cost being adequately accounted for should be hinge on for PFI projects[25].

Panayides et al., (2015) investigated the effect of institutional factors (regulatory quality, market openness, ease to start a business and enforcing contracts) in the success of a port's PPP through the empirical investigation of a large number of port samples[26]. Olusola Babatunde et al., (2012) identified nine CSFs in public-private partnerships[27]. Liu et al., (2015) developed a life-cycle CSF framework embedded with "learning mechanisms", which will enable stakeholders in both the public and private sectors to have a better understanding of the key factors for the successful implementation of PPP contracting strategies[28].

Ameyaw & P.C. Chan, (2016) established five critical success factor groups (CSFGs) using factor analysis, these five key CSFGs are: A commitment of partners; Strength of consortium; Asset quality and social support; Political environment; and National PPP unit[29]. Kahwajian et al., (2014) not only identified twenty-two critical success factors that may contribute to the PPP projects in the Syrian construction industry. In addition, they also compared Syria and four other countries for the top five CSFs for PPP implementation (Malaysia, Australia, Hong Kong, and the United Kingdom) [30]. The results as shown in the Table 1 that there are many differences in the ranking of the top five CSFs for PPP projects in different countries. Kwofie et al., (2016) also agreed that the development of critical success factors in the PPP model is highly contextualized [31]. Moreover, the critical success factors of different types of projects have different levels of importance[32].

Based on the findings of existing studies, it is evident that the CSFs for PPP projects exhibit variation across countries and sectors. Despite the fact that the mode of PPP is gaining prominence and increased usage in many sectors in China nowadays, the tourism sector is a newcomer, with limited experience with the PPP procurement method compared to other sectors in terms of PPP experience and maturity. As such, the CSFs identified for PPP projects in the tourism sector may differ from those in more established sectors, reflecting the unique challenges and dynamics within this particular industry. However, there is a paucity of research effort on critical success factors in

tourism PPP projects in China. Thus, the focus of this study was to examine the CSFs in PPP on tourism projects in the context of China.

Table 1. Top five CSFs for PPP projects in specific five countries.

Syria	UK	Australia	Hong Kong	Malaysia	Ranked
Favorable legal framework	Strong and good private consortium	Commitment and responsibility of public and private sectors	Favorable legal framework	Good governance	1
Political support	Appropriate risk allocation and risk sharing	Appropriate risk allocation and risk sharing	Commitment and responsibility of public and private sectors	Appropriate risk allocation and risk sharing	2
Good governance	Available financial market	Strong and good private consortium	Strong and good private consortium	Favorable legal framework	3
Stable macroeconomic environment	Commitment and responsibility of public and private sectors	Good governance	Stable macroeconomic environment	Sound economic policy	4
Appropriate risk allocation and risk sharing	Thorough and realistic assessment of the costs and benefits	Project technical feasibility	Appropriate risk allocation and risk sharing	Available financial market	5

Source: Kahwajian et al., (2014).

3. Research Methodology

3.1. Research Data Collection

This study aims to investigate what factors are critical to the successful implementation of tourism PPP projects in China. For the purpose of this study, there were two stages of data collection, qualitative data collection, and quantitative data collection. Qualitative data collection consists of two aspects, first is to collect data by adopting content analysis for the previous literature reviews, a preliminary list of 37 critical success factors was obtained. Then ten follow-up interviews with rich experience practitioners in the area of tourism PPP in China were held to discover specific issues and provide explanations in more detail specified to tourism PPP projects. The method of interview is considered a relatively reliable technique to obtain worthwhile information and flexibility of responses. As a result of these processes, a list of 22 critical success factors (shown in Table 2) was finalized and formulated into a questionnaire for further research.

Table 2. Critical success factors for PPPs determined from literature and interview.

ID	Critical Success Factors	Source
CSF01	Political support and stability	[22,32–35]
CSF02	Clear and stable policy document on PPP	[33,35]
CSF03	Adequate project evaluation and demonstration	[22]
CSF04	Well-designed and flexible contracts	[36,37]
CSF05	Proper government supervision	[34]

CSF06	Government credit	[22]
CSF07	Transparency and competitive bidding process	[22]
CSF08	Sound PPP laws and regulations	[33–35]
CSF09	Stable macroeconomic conditions and sound economic policy	[22,33,35]
CSF10	Demand and debt-paying ability of the project	[38]
CSF11	Cost control	[22,35]
CSF12	Available Financing	[22,33,34,39]
CSF13	Adequate resources and professional personnel	[35]
CSF14	A strong private consortium	[22,33,36,40]
CSF15	Appropriate risk allocation and risk sharing	[22,33,35,37]
CSF16	Trust, openness, and constant communication between parties	[22,35]
CSF17	Thorough and realistic assessment of the costs and benefits	[33,37]
CSF18	Comprehensive project feasibility study and business viability	[33,36]
CSF19	Multi-benefit objectives, a good relationship between the sectors	[22]
CSF20	Rigorous project preparation process	[36]
CSF21	Ecological environment and cultural relic protection	Interview
CSF22	Introduce the PPP experts and intermediaries	Interview

Subsequently, a quantitative questionnaire survey was conducted between 12th April and 20th September 2022, the aim is to identify and rank the most critical success factors for tourism PPP projects in China. The questionnaire consisted of two main sections, the first section is the background of the respondents; In the second section, the respondents were required to rate the importance of each success factor using a seven-point Likert scale (1=extremely less important and 7= extremely important). Prior to the formal questionnaire, a pilot study was conducted with a couple of practitioners and academic scholars in PPP to validate the questionnaire in March 2022. Then the questionnaire survey was purposively sent to experts and practitioners involved in PPPs to collect their opinions and rank the 22 critical success factors for tourism PPP projects adopted for this study.

The purposive sampling technique was used to select the appropriate respondents[41], the sampling frame used for this study was a list of PPP experts registered in the CPPPC. These target experts all have relevant experience with PPP projects in practice or academics. Finally, 125 valid questionnaires were received representing a 22.74% return rate. The demographic background of the respondents shows in Table 3. It can be seen from the table that over half of the respondents possessed more than 4 years of PPP experience, and approximately half of them holding position in middle management or above. In addition, among these experts, 14.4% were from the university or research institutions, 9.6% from the public sector, 30.4% from private companies, 32.8 from advisory institutions, and 12.8 from banks and other agencies. This ensures the diversity of the sample and increases the validity of the data.

Table 3. The demographic background of the questionnaire respondents.

Characteristics	Category	Number	Percentage (%)
Sector of respondents	Universities or research institutions	18	14.4
	Public sector	12	9.60
	Private sector	38	30.40
	Advisory institution	41	32.80
	Other	16	12.80
	Total	125	100
	Staff	41	32.80
Position of respondents	Primary management	20	16.00
	Middle management	25	20.00
	Senior management	39	31.20
	Total	125	100
	3 years below	45	36.00

Years of working or research experience	4-7 years	39	31.20
	8-10 years	24	19.20
	11-15 years	6	4.80
	16-20 years	6	4.80
	21 years and above	5	4.00
	Total	125	100

3.2. Analysis Technique

Two statistical analyses were carried out, namely the relative importance index and factor analysis. The relative importance index was used to determine the relative importance of each success factor and to rank all factors[37]. Whilst the factor analysis was utilized to condense and cluster the individual factors identified from a larger set into a smaller and more crucial subset based on the scores of the responses.

3.2.1. Relative importance index

The relative importance index (RII) was employed to rank all the success factors and determine the significance levels for each factor[37]. The formula of the RII is as follows:

$$RII = \frac{\sum_{i=1}^N W_i}{A * N}$$

where, W is the weighting given to each factor by the responder, ranging from 1 to 5, i is the order of the specific responder. A is the highest weight, and N is the total number of respondents. The outcome of the analysis – mean score, SD, RII values, and ranks for 22 critical success factors for tourism PPP projects are shown in Table 4.

Table 4. Mean score, SD, RII, and ranks of success factors for Tourism PPP Projects.

ID	Critical success factors	MS	SD	RII	Rank
CSF03	Adequate project evaluation and demonstration	5.74	1.033	0.819	1
CSF01	Political support and stability	5.65	1.24	0.807	2
CSF02	Clear and stable policy document on PPP	5.60	1.04	0.800	3
CSF10	Demand and debt-paying ability of the project	5.50	1.119	0.785	4
CSF06	Government credit	5.38	1.03	0.769	5
CSF11	Cost control	5.36	0.987	0.766	6
CSF09	Stable macroeconomic conditions and sound economic policy	5.36	1.035	0.766	7
CSF17	Thorough and realistic assessment of the costs and benefits	5.36	1.066	0.766	8
CSF08	Sound PPP laws and regulations	5.36	1.073	0.766	9
CSF15	Appropriate risk allocation and risk sharing	5.35	1.01	0.765	10
CSF14	A strong private consortium	5.33	1.061	0.761	11
CSF19	Multi-benefit objectives, a good relationship between the sectors	5.28	1.202	0.754	12
CSF16	Trust, openness, and constant communication between parties	5.27	1.095	0.753	13
CSF18	Comprehensive project feasibility study and business viability	5.26	1.206	0.752	14
CSF07	Transparency and competitive bidding process	5.24	1.003	0.749	15
CSF12	Available Financing	5.24	1.117	0.749	16
CSF13	Adequate resources and professional personnel	5.22	1.015	0.746	17
CSF05	Proper government supervision	5.21	1.117	0.744	18
CSF22	Introduce the PPP experts and intermediaries	5.19	1.306	0.742	19
CSF20	Rigorous project preparation process	5.16	1.234	0.737	20

CSF04	Well-designed and flexible contracts	5.10	1.201	0.728	21
CSF21	Ecological environment and cultural relic protection	4.77	1.186	0.681	22

According to the seven-point Likert scale, If the value of the mean score is ≥ 4.5 , then it is regarded as critical. Nevertheless, in instances where two or more factors exhibit the same mean score, priority is given to the one with the smallest standard deviation when determining the ranking. Table 4 presents that all the identified success factors were considered critical for the implementation of the tourism PPPs in China.

The outcome shows that the top five critical success factors for tourism PPP projects in China included: 1) Adequate project evaluation and demonstration; 2) Political support and stability; 3) Clear and stable policy document on PPP; 4) Demand and debt-paying ability of the project; 5) Government credit. Whilst ecological environment and cultural relic protection emerged as the least important factor for tourism PPP projects in China.

3.2.2. Factor Analysis Technique

Factor analysis (FA) developed by C. Spearman in 1904, is a statistical analysis technique that uses an index system to analyze or measure the direction and degree of influence of each influencing factor change on the overall change of objective phenomenon. It can help to identify fewer factors that can explain most of the observed variables by simplifying a larger correlation matrix[19,42]. Factor analysis was employed in this study to determine which variables might be assessing facets of the identical fundamental dimensions. The results are presented in Table 5–9. The average commonality of each variable after factor extraction was greater than 0.7 (Table 5).

Table 5. Communalities of the factor analysis.

ID	Critical success factors	Initial	Extraction
CSF01	Political support and stability	1	0.875
CSF02	Clear and stable policy document on PPP	1	0.767
CSF03	Adequate project evaluation and demonstration	1	0.75
CSF04	Well-designed and flexible contracts	1	0.76
CSF05	Proper government supervision	1	0.585
CSF06	Government credit	1	0.833
CSF07	Transparency and competitive bidding process	1	0.769
CSF08	Sound PPP laws and regulations	1	0.754
CSF09	Stable macroeconomic conditions and sound economic policy	1	0.789
CSF10	Demand and debt-paying ability of the project	1	0.706
CSF11	Cost control	1	0.804
CSF12	Available Financing	1	0.710
CSF13	Adequate resources and professional personnel	1	0.779
CSF14	A strong private consortium	1	0.743
CSF15	Appropriate risk allocation and risk sharing	1	0.853
CSF16	Trust, openness, and constant communication between parties	1	0.764
CSF17	Thorough and realistic assessment of the costs and benefits	1	0.736
CSF18	Comprehensive project feasibility study and business viability	1	0.777
CSF19	Multi-benefit objectives, a good relationship between the sectors	1	0.872
CSF20	Rigorous project preparation process	1	0.658
CSF21	Ecological environment and cultural relic protection	1	0.781
CSF22	Introduce the PPP experts and intermediaries	1	0.663

Extraction method: principal component analysis.

The KMO measure of sampling adequacy and Barlett’s test of sphericity (Table 6) for the extraction of individual factors were conducted to examine the appropriateness of factor analysis in this study. The KMO value of this study is 0.917, indicating a favorable level of shared variance. Besides, the statistic test for Barlett’s sphericity chi-squared value is 2304.923 with a small significance level (p-value is 0.000), suggesting that the population correlation matrix is not an identity matrix (Table 7). Therefore, it can be concluded that factor analysis was appropriate for this study for the requirements of KMO value and Barlett’s test of sphericity are both met. Moreover, Cronbach’s alpha coefficient of 0.957 indicated the research instrument used exhibited good reliability[43].

Table 6. The results of KMO and Bartlett’s test.

Kaiser-Meyer-Olkin measure of sampling adequacy		0.917
Bartlett’s test of sphericity	Approx. χ^2	2304.923
	Df	231
	Sig.	0.000
	Approx. χ^2	2304.923

Principal components analysis was used to identify the critical success factors of tourism PPPs, along with Promax rotation (Presented in Table 8). The eigenvalue and factor loading thresholds were set at commonly accepted high values of 1.0 and 0.5 respectively[21,42]. As shown in Table 9, All factor loadings were greater than 0.5. and Five components with eigenvalues greater than 1.0 were extracted that accounted for 76.022% of the variance in responses. Figure 1 is the corresponding scree plot associated with each success factor.

Table 7. Correlation matrix of factor analysis for 22 critical success factors.

[illegible]

CSF 13	0.467	0.575	0.618	0.538	0.528	0.341	0.422	0.421	0.522	0.533	0.732	0.614	1										
CSF 14	0.622	0.61	0.668	0.45	0.493	0.474	0.441	0.533	0.626	0.691	0.587	0.709	0.673	1									
CSF 15	0.299	0.496	0.646	0.384	0.535	0.52	0.608	0.5	0.41	0.551	0.576	0.475	0.481	0.486	1								
CSF 16	0.392	0.528	0.549	0.544	0.534	0.493	0.667	0.643	0.454	0.521	0.468	0.566	0.445	0.547	0.729	1							
CSF 17	0.487	0.473	0.578	0.389	0.486	0.498	0.469	0.45	0.532	0.58	0.689	0.543	0.596	0.608	0.578	0.551	1						
CSF 18	0.467	0.477	0.49	0.461	0.462	0.45	0.501	0.568	0.557	0.709	0.57	0.653	0.492	0.657	0.499	0.599	0.723	1					
CSF 19	0.332	0.51	0.495	0.49	0.599	0.375	0.599	0.609	0.489	0.603	0.648	0.574	0.603	0.617	0.629	0.652	0.695	0.766	1				
CSF 20	0.338	0.503	0.445	0.37	0.421	0.421	0.451	0.516	0.498	0.491	0.482	0.457	0.48	0.459	0.524	0.57	0.606	0.638	0.769	1			
CSF 21	0.218	0.349	0.364	0.407	0.421	0.232	0.461	0.554	0.358	0.41	0.375	0.469	0.493	0.471	0.352	0.502	0.456	0.636	0.691	0.632	1		
CSF 22	0.271	0.295	0.343	0.245	0.404	0.334	0.402	0.463	0.384	0.442	0.29	0.361	0.339	0.467	0.352	0.364	0.454	0.536	0.592	0.466	0.555	1	

Note: Kaiser–Meyer–Olkin measure of sampling adequacy = .917; Bartlett test of sphericity = 2304.923; significance = 0.000.

Table 8. Rotated component matrix.

ID	Critical success factors	Component				
		1	2	3	4	5
CSF11	Cost control	0.796				
CSF13	Adequate resources and professional personnel	0.756				
CSF03	Adequate project evaluation and demonstration	0.607				
CSF17	Thorough and realistic assessment of the costs and benefits	0.590				
CSF14	A strong private consortium	0.58				
CSF10	Demand and debt-paying ability of the project	0.537				
CSF12	Available Financing	0.533				
CSF21	Ecological environment and cultural relic protection		0.788			
CSF22	Introduce the PPP experts and intermediaries		0.765			
CSF19	Multi-benefit objectives, a good relationship between the sectors		0.69			
CSF18	Comprehensive project feasibility study and business viability		0.686			
CSF20	Rigorous project preparation process		0.652			
CSF01	Political support and stability			0.790		
CSF06	Government credit			0.760		
CSF09	Stable macroeconomic conditions and sound economic policy			0.750		
CSF15	Appropriate risk allocation and risk sharing				0.786	
CSF16	Trust, openness, and constant communication between parties				0.680	
CSF07	Transparency and competitive bidding process				0.668	
CSF05	Proper government supervision				0.526	
CSF04	Well-designed and flexible contracts					0.772
CSF08	Sound PPP laws and regulations					0.527
CSF02	Clear and stable policy document on PPP					0.515

Extraction method: principal component analysis. Rotation method: Varimax with Kaiser normalization. A Rotation converged in 17 iterations.

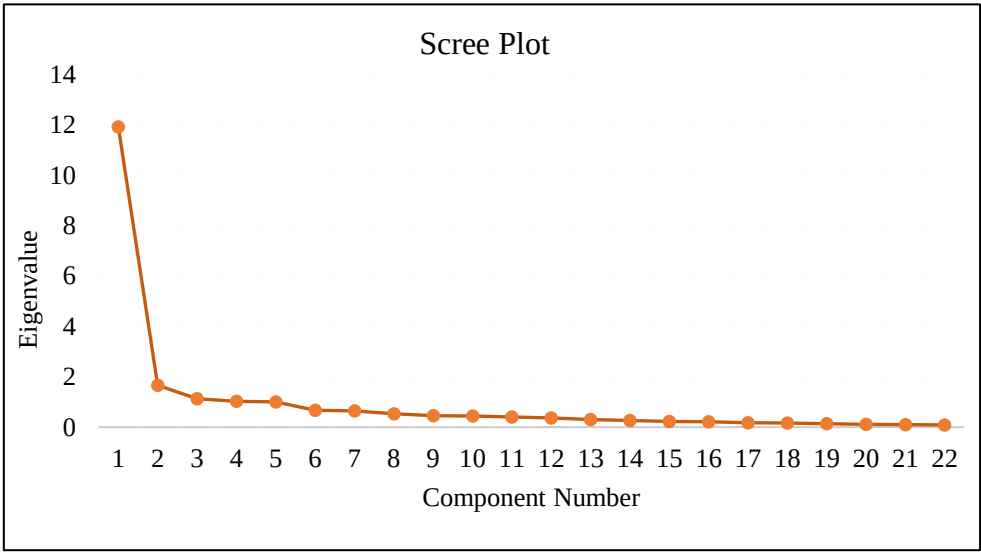


Figure 1. Scree plot of the 22 CSFs of factor analysis.

Table 9. Structure of Principal Factors Extraction and Promax Rotation on the 22 CSFs of Tourism PPPs.

Item	Factor loading	Eigenvalue	Percent of variance explained	Cumulative percent of variance explained
<i>Factor group 1: Project implementation ability</i>		11.909	18.313	18.313
Cost control	0.796			
Adequate resources and professional personnel	0.756			
Adequate project evaluation and demonstration	0.607			
Thorough and realistic assessment of the costs and benefits	0.590			
A strong private consortium	0.580			
Demand and debt-paying ability of the project	0.537			
Available Financing	0.533			
<i>Factor group 2: Effective procurement process</i>		1.654	17.695	36.008
Ecological environment and cultural relic protection	0.788			
Introduce the PPP experts and intermediaries	0.765			
Multi-benefit objectives, a good relationship between the sectors	0.690			
Comprehensive project feasibility study and business viability	0.686			
Rigorous project preparation process	0.652			
<i>Factor group 3: Favorable political and economic environment</i>		1.13	15.560	51.568
Political support and stability	0.790			
Government credit	0.760			
Stable macroeconomic conditions and sound economic policy	0.750			
<i>Factor group 4: Commitment between parties</i>		1.026	13.779	65.348
Appropriate risk allocation and risk sharing	0.786			
Trust, openness, and constant communication between parties	0.68			
Transparency and competitive bidding process	0.668			
Proper government supervision	0.526			
<i>Factor group 5: Sound investment environment</i>		1.005	10.675	76.022
Well-designed and flexible contracts	0.772			
Sound PPP laws and regulations	0.527			
Clear and stable policy document on PPP	0.515			

4. Results and Discussion of factor analysis

According to the outcome of the factor analysis, all 22 critical success factors for tourism PPP projects can be grouped into five principal factors as follows:

- Factor group 1: Project implementation ability;
- Factor group 2: Effective procurement process
- Factor group 3: Favorable political and economic environment
- Factor group 4: Commitment between parties
- Factor group 5: Sound investment environment

It is worth noting that the naming of the component was made subjectively based on the inherent relationships among the variables. Other researchers may have different interpretations.

4.1. Factor Group 1- Project Implementation Ability

This factor group account for 18.313% (in Table 8), seven critical success factors under project implementation ability, including (1) cost control; (2) adequate resources and professional personnel; (3) adequate project evaluation and demonstration; (4) thorough and realistic assessment of the costs and benefits; (5) a strong private consortium; (6) demand and debt-paying ability of the project; (7) available financing.

Ahmad et al., (2021) argued that cost plays a pivotal role in the success of PPPs projects since it influenced the overall budget[44]. The cost of a PPP project is mainly comprised of construction, operation, and maintenance costs. *Cost control* is ranked as the sixth most critical factor for tourism PPPs, it is very important to the successful implementation of any PPP project and relates to whether the costs associated with each phase are delivered in the best possible way and in a timely manner[45]. Moreover, each PPP project needs to invest a large number of resources like professional personnel, material, finances, and technologies to achieve certain success. The successful implementation of PPP projects relies heavily on *adequate resources and professional personnel*[46].

Adequate project evaluation and demonstration, and a specific PPP project plan is not only the basis for the project's economic feasibility, risk management, and objective achievement, but also fundamental for saving the whole life cycle cost of the project and realized value for money. Therefore, an adequate project evaluation and demonstration, and a specific PPP project plan play a significant role in improving the performance evaluation capability of the government and reducing the cost of social capital[47]. *A thorough and realistic assessment of the costs and benefits* is vital to the tourism PPP projects. Given that tourism projects entail substantial investments and operate within complex systems, cost overruns and unmet profit expectations can significantly impact stakeholders' enthusiasm. Properly managing revenue allocation among relevant stakeholders is crucial to maintaining their engagement and commitment to the project. A thorough and realistic assessment of the costs and benefits can coordinate the conflicts of each stakeholder of the project, balance the cost and profit of each party, fully mobilize the enthusiasm of each party to participate in the project, and promote the pace of successful implementation of tourism PPP projects[48,49].

In China, after the government initiates a project, it requires the participation of social investors, called the private sector. *A strong and responsible private consortium* is essential for a successful PPP project. Private sector capability includes many aspects such as outstanding tourism project planning and operation ability, performance capability, financing capability, complete project implementation plan, and experience in PPP projects[48]. *The demand and debt-paying ability of the project* ranked fourth among the 22 critical success factors. The results show a collective view of the importance of this factor for tourism demand. It is important because of the high degree of uncertainty about whether this type of project will achieve the expected economic returns. The main risk faced by private investment institutions is lower than expected demand, which may delay loan repayment and create more debt and interest for the investor. Some interviewees emphasize the importance of accurately identifying project needs and avoiding homogeneous projects in tourism projects to achieve project objectives and their return[50].

A PPP project can attract investment if it is sustainable, financially viable, and profitable. With the huge upfront investment in tourism PPP projects, the effectiveness of *efficient and mature financial markets*, stimulating market vitality and social creativity, the benefits of low financing costs and diversified financial products could provide incentives for the private sector to participate in tourism PPP projects[46].

4.2. Factor Group 2: Effective Procurement Process

This underlying group consists of five CSFs including: (1) ecological environment and cultural relic protection; (2) introduce the PPP experts and intermediaries; (3) multi-benefit objectives, a good

relationship between the sectors; (4) comprehensive project feasibility study and business viability; (5) rigorous project preparation process.

Generally, tourism PPP projects involve the development of natural tourism landscapes or cultural heritage with special characteristics. *The ecological environment and cultural relic protection* are related to whether tourism projects can achieve sustainable development. However, the private sector tends to pursue short-term economic profit and save costs, often neglecting the protection of the ecological environment and cultural relics. Moreover, tourism PPP projects involve a lot of professional knowledge, and the public and private parties may lack the corresponding professional talents, the *introduction of experts from third-party professional institutions* can effectively realize the fairness of the interests of both public and private parties.

A *multi-benefit objective* is another important component related to effective procurement, a good relationship between the sectors can help to negotiate smoothly in the procurement process[48]. Tourism PPPs have a complex and sensitive nature, *comprehensive project feasibility study and business viability* often determine the details of the availability of required technology and resource such as materials and labor to ensure whether it is within the project team's capacity to produce such products or services and whether they can make a profit[51]. In addition, *a rigorous project preparation process*, fully planning the project and making a long-term layout of the project according to the local conditions is vital to the success of the tourism PPP projects given tourism resource diversity and complexity[52].

4.3. Factor Group 3: Favorable Political and Economic Environment

There are three CSFs under this underlying group. These CSFs are related to the favorable political and economic environment of PPP projects and they are: (1) political support and stability; (2) government credit; (3) Stable macroeconomic conditions and sound economic policy.

According to the opinions of the PPP experts, *political support and stability* is the most critical success factor for tourism PPPs. The reason is that without the necessary political support, public spending and work on PPP projects will not be agreed upon [51]. Within China's hierarchical political structure, local governments often bring in enterprises for their political performance, the incentives may be greatly magnified by the local government. However, when the government leadership changes, there is a "new official ignoring the old account" and because the government lacks the *credit*, the conditions of the contract signed by the local government are not fulfilled, resulting in the project not being solved in time, causing the PPP project to fail to achieve the expected objectives, even lead to the project failure[47]. *Stable macroeconomic conditions and sound economic policy* is a cornerstone to promote economic growth and ensure project success. Due to a large amount of investment and uncertainties in tourism PPP projects, which greatly hinder private sector investment, how to ensure reasonable investment returns and risk sharing for the private sector has become the key to the success of tourism PPP projects.

4.4. Factor Group 4: Commitment between Parties

The fourth underlying factor group contains four CSFs, including (1) appropriate risk allocation and risk sharing; (2) trust, openness, and constant communication between parties; (3) Transparency and competitive bidding process; (4) proper government supervision.

Reasonable risk allocation saves time and cost for project implementation, as well as motivates the private sector to cooperate in tourism PPPs. During negotiations in the procurement process, both public and private sectors were recommended to respect each other, maintain *continuous communication* between the parties, and discuss project objectives with clarity, *trust*, and *openness* to ensure the successful implementation of PPP[53]. It is necessary for them to work together, and cooperate for the success of the partnership and its sustainability[51].

Transparency and competitive bidding process for PPP projects make full use of the fair competition of the market economy, through which a more competitive private sector can be selected, providing guarantees for the successful implementation of complex tourism PPP projects. Due to the long-term and capital-intensive nature of tourism PPP projects, in practice, various departments such as finance,

development and reform commission, industry and commerce, audit, tourism, etc. have their own approval and supervision powers, there are many problems such as multiple government departments, a mismatch between the whole life cycle of the project and the term of office of officials, and non-disclosure of project cooperation information, which cause many tourism PPP projects to be terminated prematurely. In the current economic transition phase in China, where the market mechanism is still evolving, tourism PPP project companies comprise various complex interest groups. Therefore, it is imperative to institute *proper government supervision* to ensure the successful execution of tourism PPP projects.

4.5. Factor Group 5: Sound Investment Environment

In factor group 5, there were three CSFs that were strongly associated with this underlying factor group. They are (1) well-designed and flexible contracts; (2) sound PPP laws and regulations; (3) clear and stable policy documents on PPP.

The operational contract serves as the cornerstone for all collaborations among parties involved in financing, construction, and operation. Within this contract, the model of cooperation and the respective risks and responsibilities of each party are clearly delineated. Given the lengthy and intricate nature of tourism PPP projects, which are susceptible to influence from legal, economic, and environmental factors, tourism PPP guidelines play a vital role in project identification and directing private investment toward priority areas within the tourism industry. In this regard, well-designed and flexible contracts are crucial for fostering effective cooperation.

After 2014, the Ministry of Finance and the Development and Reform Commission of China issued a series of PPP-related documents and management measures, however, due to the serious lack of PPP laws and regulations, some important issues of PPP projects are not explained in detail. In practice, there are problems such as blindness in setting up PPP institutions, vague understanding of PPP projects, unclear legal definitions, and many restrictions in signing framework agreements with project companies when signing framework agreements with projects. Therefore, only a few successful tourism PPP projects have been implemented. Since 2014, with the new changes in the national economy and the increase in demand for public infrastructure and services, PPP has gradually attached importance, some interview experts noted that even though the Chinese government authorities issued some guidelines to support and promote the PPP in the tourism industry, from the demonstration projects announced by the Ministry of Finance, the landing and contracting rate are not high, especially the private sector are not willing to participate in PPP, the main reason for this phenomenon is that there is lack of clear and continuity policy and documents protection, which results in private sector in a wait-and-see situation.

5. Implication, Limitations, and Future Research

This present study aimed to explore the critical success factors for the tourism PPP projects in the context of China. The findings of the current study contribute to the knowledge as well as helpful to the practice.

To our knowledge, this is the first study in the literature offering information on critical success factors of tourism PPP projects in the context of China. First, this study contributes to the literature on project success and sets a benchmark for future researchers. It enriches the knowledge in the field of PPP in terms of critical success factors for tourism projects in pursuit of better performance. The identified checklist of CSFs for tourism PPPs can be adopted for further studies, and ranked critical success factors can be employed to do the comparison research for later scholars. In addition to the theoretical implications, this study also has huge strategic practical implications for policymakers and private investors on the importance of success factors of tourism PPP projects implementation in China. It emphasizes the need to “do right” development projects: the success factors that have strong impacts on the performance of the PPP projects.

Nevertheless, there are still several limitations to this study, firstly, interviews and questionnaires were conducted during the period of the pandemic of Covid-19, the critical success factors may have significant differences compared to normal periods due to the various special

management and operation during the pandemic. Extending the investigation to a comparison study could enrich understanding at different times. Additionally, the success factors adopted were identified from the literature, and complemented by the practitioners of the tourism PPP projects. This might be the critical success factor unique to the tourism PPP projects in China, it would therefore be useful if this is considered as part of any further research to advance the systematic understanding of the determinants of success factors in tourism projects in a broader range.

6. Conclusion

There are many factors that contribute to the success of a tourism PPP project. As tourism PPP is still in its initial stages of development in China, conducting a study on the CSFs would provide a more comprehensive understanding of the crucial individual factors that influence the success of tourism PPP projects. This study has presented the findings through a questionnaire survey conducted in China. The approach of the relative importance index of response data from the survey respondents was employed to rank the relative importance of a catalog of 22 critical success factors in the context of China. The top five critical success factors for the development of successful tourism PPPs in China are adequate project evaluation and demonstration; political support and stability; clear and stable policy documents on PPP; demand and debt-paying ability of the project; government credit.

Thereafter, factor analysis was used to identify the principal success factor groups. Five underlying success factor groups accounted for 76.022% of the overall 22 variances in responses generated for CSFs for tourism PPP projects. They are project implementation ability; effective procurement process; favorable political and economic environment; commitment between parties; sound investment environment. These five factor groups thus serve as the fundamental components of CSFs for tourism PPP project development. Both the public government and private sector should give utmost consideration to these factors to ensure the successful implementation of tourism PPP projects.

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