



**Airport Passenger Service Quality Evaluation Study - An example of
Chongqing Jiangbei Airport**

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Abstract

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<p>As the scale of China's air transport business grows steadily, people's income levels have risen significantly, with correspondingly higher demands on living standards. As airports are places where passengers stay for longer periods of time, passengers are increasingly concerned about their overall perception of the services provided by airports and are increasingly concerned about the level of airport services. Airport service is one of the key elements of airport operation, and its level of service is a direct reflection of the airport's management level. This paper takes the service quality of Chongqing Jiangbei Airport as an example. By studying domestic and international theoretical findings on service quality and passenger happiness, the current situation of domestic and international research is explained. Finally, corresponding improvement strategies and supporting measures are proposed. This will enable Chongqing Jiangbei Airport to attract more potential passengers by providing a better level of service quality, improve the airport's own brand image, and increase passenger satisfaction and loyalty.</p>
Key words Airport passenger services, Satisfaction measurement, Airports

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1 Introduction

1.1 Background and significance of the chosen topic

Passenger services at civil aviation airports are seen as an important part of the current social economy. Airports, as places where domestic and international travellers stay for longer periods of time, are also increasingly concerned with their overall perception of the services they provide. As a result, passengers and the aviation industry are increasingly concerned about the level of service provided by airports. For airports, it is a common challenge for every airport in China to improve their core competitiveness, establish a good corporate environment in the minds of passengers and enhance the importance of the quality of airport services to win higher satisfaction from passengers. This is due to the quality of airport services not only affects the satisfaction of passengers with airport services, but also has a very important impact on the transportation of airlines. Scientific and accurate appraisal of the customer quality level of service at civil airports and the improvement of airport service quality not only provide passengers with quality services, but also become a key step for airports to enhance their core competitiveness and attract airlines to cooperate with them. Therefore, this paper for Chongqing Jiangbei Airport service quality evaluation research is to Chongqing Jiangbei Airport airport airport passenger service future planning as the direction, close to the current and future development of the airport in this period of time, for strengthening Chongqing Jiangbei Airport passenger service capacity, effective improvement of passenger services, and try to help as new powerhouses of regional economic and social development.

1.2 Thesis structure

This study will be presented in six chapters. Chapter 1 is a description of the background and significance of this study and the structure of this study. Chapter 2 analyses and discusses the basic organisation of Chongqing Jiangbei Airport Group and the passenger services at Chongqing Jiangbei Airport in the past year, in preparation for the subsequent investigation and analysis of this study. Chapter 3 introduces the research related to airport passenger services, i.e. the theoretical framework of this study. Chapter four carries out the study, using the literature method, SWOT analysis and questionnaire survey method to further rationalise the study. Chapter five takes the satisfaction measure and conducts and reliability and validity analysis and presents the findings. Chapter 6 is a discussion of the paper, including the main problems presented by the findings and the reasons for them and suggestions and reflections for further research to address the problems. The Overlay matrix is a good reflection of the structure of this paper Table 1.

Table 1.Overlay matrix (adapted from Peltonen 2017, 3)

Investigative questions	Theoretical framework (chapters)	Results (chapters)	Questionnaire questions
Airport Traffic	3.1	6.1.1	1-3
Aircraft Guidance Service	3.2	6.1.2	4-7
Check-in	3.3	6.1.3	8-14
Security and Joint Inspection Service	3.4	6.1.4	15-18
Waiting Service	3.5	6.1.5	19-25
Boarding Service	3.6	6.1.6	26-28
Baggage Services	3.7	6.1.7	29-32
Transit Service	3.8	6.1.8	33-35
Airline Delay Service	3.9	6.1.9	36-37

2 Background

2.1 Chongqing Airport Group Overview

Chongqing Jiangbei International Airport was opened on 22 January 1990. It has three runways; three terminals with a total of 737,000 square metres. Among them, the T1 terminal is 20,000 square metres, the T2 terminal is 180,000 square metres, the T3 terminal is 537,000 square metres, the apron is 1.66 million square metres, there are 180 parking spaces and 250,000 square metres of cargo storage. The airport is capable of handling large passenger aircraft such as the Airbus A380 and can meet the operational needs of 45 million passengers, Cargo and mail containing 1.1 million tonnes throughput and 373,000 aircraft movements per year. In recent years, Chongqing Jiangbei International Airport has seen rapid growth in transport production, and its route network is becoming more and more complete, with airport accessibility greatly enhanced.

Chongqing Jiangbei International Airport belongs to the Jiangbei Airport Group, which consists of seven subsidiaries: Airport Ground Service Company, Information and Communication Network Company, Airport Service Company, Airport VIP Company, Airport Logistics Company, Airport Economy Company and China-Singapore Commercial Company, and its member companies include Jiangbei Airport Company, Qianjiang Airport Company, Wushan Airport Company and Yuwu Airport Company.

1. Airport Ground Service Company

It is engaged in passenger transportation ground services, cargo transportation ground services, aircraft stopover ramp services, passenger and cargo sales agency business and other services related to air transportation, excluding airport fuel and aviation food and other business items involving administrative permits. There are three main departments in passenger services, namely the Customer Service Department, the Domestic Passenger Department and the International Passenger Department. The main work of the Domestic Passenger Department includes check-in, transit and baggage distribution. The main work of the International Passenger Department includes check-in, transit, baggage distribution, customs and border control, etc. The main work of the Customer Service Department includes dispatching, inbound and outbound services, special passenger services, flight delay services, etc.

2. Information and Communication Company

The corporation is in charge of planning information network development as well as the annual operation plan for the group companies, establishing the information management system of the Group and formulating relevant technical standards. This includes organising the formulation of operational standards, rules and regulations, and operating procedures for the various businesses under the jurisdiction of the company, and establishing management systems such as company standardisation. At the same time, it is responsible for supervising and implementing, organising and carrying out the operation and maintenance of airport information network systems, organising and carrying out communication services within the jurisdiction of the airport, being responsible for the operation and maintenance of relevant facilities and equipment, organising and carrying out business operations of information and communication systems, implementing effective new technology management and research and development work according to the business development needs of the Group, developing competitive industry information products and exploring external markets etc.

3. Airport Services Company

It is mainly engaged in business travel services, green property cleaning, car park management, luggage packing, printing services, hotel management, insurance sales agency and air ticket sales agency and its extended services. The company consists of four functional departments and seven business departments. The functional departments include Administration and Personnel Department, Quality and Safety Department, Finance Department and Market Research and Development Department, while the business departments are Airport Pepsi, Tourism Distribution Centre, Printing Department, Comprehensive Protection Department, Business Travel Service Department, Airport Hotel and Aviation Spa Hotel.

4. Airport VIP Company

It is a professional organization that provides services for the arrival and departure of dignitaries, business VIPs, two-class and business jet passengers at Jiangbei Airport.

5. Airport Logistics Company

Mainly engaged in the transportation, transit and storage of freight.

6. Airline Economy Company

The company mainly relies on the policy innovation of the demonstration zone, focusing on building aviation headquarters, air cargo, aviation maintenance training, aviation display, aviation services

and other airside industries, implementing the core area of the demonstration zone development planning, land acquisition, land remediation and development, infrastructure construction and management, asset management, industrial investment, etc.

7. Sino-Singapore Commercial Company

It is mainly engaged in the management of commercial resources such as shopping malls, car park management, venue rental, design, production, agency and publication of advertisements.

In summary, the above subsidiaries with a strong relevance to passenger services are AirPort Ground Service Company and Airport Services Company.

2.2 Chongqing Airport passenger services in 2022

In recent years, the aviation industry has been hit hard by the global New Coronary Pneumonia and the number of passengers at each airport has decreased sharply accordingly. This study focuses on Chongqing Jiangbei International Airport and uses the actual situation of Chongqing Airport Group in 2022 as the background for the passenger service study of Chongqing Jiangbei International Airport.

In 2022, Chongqing Jiangbei Airport, Qianjiang Airport, Wushan Airport and Xianmishan Airport of Chongqing Airport Group Company are expected to have a passenger throughput of 21.781 million, a cargo and mail throughput of 414,000 tons and 191,000 flight movements. Among them, Jiangbei Airport is expected to handle 21.6 million passengers, 414,000 tons of cargo and mail, and 188,000 flights and landings, down 39.6%, 13.2% and 33% respectively year-on-year; Qianjiang Airport, Wushan Airport and Xiannushan Airport are generally stable.

In 2022, Chongqing Airport Group will focus on building a world-class airport cluster and an airport-type national logistics hub in Chongqing, and the construction of an international aviation hub will move forward steadily. The quality of airport operations has continued to improve. At present, Jiangbei Airport has opened and resumed nine new international passenger routes and two international cargo routes, and Air China's "Yujing" and "Yuqian" express routes have achieved a 30-minute cut-off time, with the annual flight normal rate reaching 96%. "The "Heart to Heart" service brand was selected as a typical example of brand building in state-owned enterprises in 2021 was authorized by the Supervision and Administration Bureau of State-owned Assets under

the State Council , and Jiangbei Airport won the Airport International Association's Voice of the Customer Award in 2021.

Meanwhile, to actively overcome the impact of the epidemic, Chongqing Airport Group enriched its business model and strengthened the development of commercial resources. Jiangbei Airport has completed the investment of 20,000 square metres, creating a toy-themed boarding area, a drive-in cinema, a shared massage chair in the terminal and other new businesses, and successfully introducing international brand Cartier and other first shops in Chongqing airports. Vigorous investment in the revitalisation of unused property resources. The project of West Area Passenger Overnight Accommodation and Integrated Service Centre was completed, the planning of outdoor advertising in the West Area was successfully approved, and the terms and conditions for the contracting and operation of East Terminal Passenger Overnight Accommodation were optimized and ready for opening. To continuously improve modern corporate governance, we must always insist on transformation and creativity as the first driving force for development. For example, the disposal of the "zombie enterprise" of the Airport Ground Services Company was successfully completed, enabling the Airport Services Company to turn a loss into a profit. In fact, the Airport Group continues to stimulate the vitality of its talent team and optimize the career development path of its staff to achieve a career development model of "small steps" for its employees. The Group also established an innovative reference standard for the selection and screening of management staff, and selected and rotated a number of outstanding second- and third-level management staff to optimise the structure of the talent team. (Deco 2023a, 3)

3 Theoretical framework

Airport services have been explored for more than a few years, the construction of airports has become increasingly perfect, and the quality of airport services has been studied by more scholars in the civil aviation industry. Based on the actual situation of each place, with the construction of corresponding service indicators, complete the reliable construction and development of the overall system, while the constructive advice measures about the improvement of service quality has a good reference value for other airports passenger service quality, etc., all of this contributes to a higher level of quality in airport facilities.

A study on the quality of airport services is usually divided into three areas: research on passenger expectations and satisfaction, research on airport service quality evaluation systems, and research on the optimisation of airport service programmes.

A study of passenger expectations and satisfaction:

3.1 Airport Traffic Service

In their research, Wang Yikai and Ma Chi pointed out that apart from general functions, car parks should also be equipped with reasonable relationships with terminals and other buildings. They point out that most of the airport car parks have unreasonable planning, limited parking functions and not maximizing parking resources, and suggest improvements to the current problems of airport car parks in China. (Wang Yikai & Ma Chi 2012, 43-45)

In his study, Wang Jun scholars also stated that to improve airport passenger service satisfaction, car park construction is an aspect that must be focused on, especially expanding car parks to increase parking spaces and strengthening car park management, which includes aspects such as import and export release efficiency. (Wang Jun 2021, 49)

3.2 Aircraft Guidance Service

The new technology's adoption in domestic airports highlights the core value of the new infrastructure, which is elaborated in a study by Xie Haifeng, Xiang Yaocheng and other scholars. The study constructed a model for the construction of intelligent terminals and proposed the concept of a future terminal model. (Xie, Haifeng, Xiang, Yaocheng & Yao, Yanbin 2021, 95-99)

3.3 Check-in Service

In his study, Wang Jun mentioned that airports should provide self-check-in and self-check-out services and self-service security and self-clearance services. Airports can simplify their work, facilitate passengers' journeys, ease the pressure on airports and improve the efficiency of airports in serving passengers. (Wang Jun 2021, 49-50)

3.4 Security and Joint Inspection Service

Taking Baiyun Airport as an example, Fang Miao argues that we should strengthen the training of frontline service personnel, focus on the enhancement of service consciousness, vigorously promote the construction of self-service for passengers, create BY Airport's distinctive service brand, enhance BY Airport's influence while creating economic value, promote the high-quality development of BY Airport's services, and Improving the service management system and opening up the road to a future generation of first-class airports, strengthening the service education and training system and other aspects A new journey. (Fang Miao 2019, 39-45)

3.5 Waiting Service

For research on non-aviation services, Giacomo Del Chiappa et al. used the fuzzy method to study the quality of airport catering services, identifying the characteristics of food and beverage services that performed most importantly in consumer satisfaction, and emphasizing age as a moderator of consumer satisfaction. (Xu Han 2019, 118-119)

In terms of improving the shopping and dining environment at airports, Wang Jun suggested, based on the survey results, that airports need to improve the layout of food and beverage and the dining environment, and introduce more varieties of food and beverage to better serve passengers. The shopping environment should be expanded in terms of the size and number of merchandise shops, as well as the airport's leisure and entertainment facilities to improve passenger satisfaction. (Wang Jun 2021, 50)

3.6 Boarding Service

In his research, Wang Mingbo proposes that airports should introduce "diversified" services in boarding services, and strive to provide passengers with "precise, fine, exquisite and wonderful" services in order to improve passenger satisfaction. (Wang Mingbo 2012, 43-44)

3.7 Baggage Service

Liu Tao and other scholars have made innovative designs to improve the efficiency of baggage security check mode, one-dimensional code tag identification, and traditional belt transportation of baggage at Daxing Airport, using intelligent equipment to improve the efficiency of processing, and adopting solutions such as baggage tag tracking to improve the experience of flying and the perfection of remedial measures afterwards. (Liu Tao, Cao Tie & Zhang Ping 2019, 26-27)

Skorupski and Uchroński conduct a study on security screening scanning systems in airports to clarify how the performance of screening systems can be improved by upgrading baggage screening equipment and increasing the number of training sessions. (Xu Han 2019, 118-119)

3.8 Transit Service

In their study, three scholars, Xu Mo-dot, Zhang Xiao-hua and Jiang Jun, proposed that there are mainly problems regarding airport transit in terms of design concepts, baggage security and data access, and that attention should be focused on achieving process flexibility in transit, promoting collaborative sharing of passenger data and other advancing the construction of smart transit. (Xu Mo-dot, Zhang Xiao-hua & Jiang Jun 2022, 34-36)

Chen Wenchang proposes the "5Es" standard to improve transit services at Chongqing Jiangbei International Airport, promote the establishment of an international transportation hub with a standardized transit system, and enhance the world-class competitiveness of Jiangbei International Airport. (Chen Wenchang 2020, 43-47)

3.9 Airline Delay Service

Regarding services in terms of flight delays, Wang Xueyun points out in her study that flight delay service satisfaction is extremely closely related to passenger service satisfaction, and that it is especially important to deal with the relationship between the two and to take timely remedial measures for flight delays to re-establish passenger satisfaction and customer loyalty. (Wang Xueyun 2016, 117-119)

Tian Jia scholars also point out that improving flight delay service satisfaction can be done from several aspects, such as the ticketing link, the waiting link and the closing cabin link, as a way to reduce the negative emotions of passengers and prevent them from occurring. (Tian Jia 2014, 201)

A study on the evaluation system of airport service quality

Guo Ling station combined with satisfaction assessment theory, launched a survey and empirical analysis of airport passenger satisfaction, with the aim of finding a public service capacity improvement strategy suitable for its development. (Guo Ling Station 2016, 121-123)

Li Lili and other scholars point out that in order to improve customer satisfaction, it is clear that the quality of the service industry is customer satisfaction. Customer satisfaction is determined by the gap between the actual services received by customers and their expectations. Upgrading the service level and strengthening the service awareness contain a vital role in enhancing the expectation and satisfaction of passengers. (Li Lili & Wang Wenjuan 2007, 55)

In his thesis, Li Ruijie scholars carried out research for the specific case of Chengdu through PEST method and SWOT model, designed questionnaires according to SERVQUAL model, and concluded that the improvement of service quality of Shuangliu Airport can be proposed in terms of optimizing the talent system and drawing up reliable incentive schemes. (Ruijie Li, 2019)

The airport performance quality appraisal model based on OWA operator and delta fuzzy number was proposed by Liu Yumin and other scholars in the study. Eventually, the study succeeded in establishing an airport quality of service evaluation system. (Yumin Liu, Qianqian Kang & Ning Wang 2016, 76-79)

Study on the optimisation of airport services projects

According to Li Wenwen, "Airport service quality is a subjective feeling of passengers, which is a comparison between the level of service passengers expect the airport to provide and the level of service the airport actually provides, and is the service quality perceived by passengers". (Li Wenwen, 2014, 21)

The 10 elements of service-quality that determine the level of customer perceived service delivery were presented by the US service management research group Parasuraman, Zeithaml and Berry, who constructed a service quality gap model to validate the factors in their study. (A-Parasuraman, Valarie A-Zeithaml & Leonard L Berry 1985, 41-50)

Natalisa.Diahh's study of the domestic air transport service market in Indonesia found that the punctuality of flights greatly influences passengers' judgement of the level of performance. In terms of the service provider's perspective, increased employee satisfaction can lead to employees

becoming more enthusiastic, proactive and positive in doing their service work, thus helping to improve the quality of service to passengers. (Saraswati B & Hanaoka S 2013, 2161-2176)

Pantouvakis and Renzi compared passenger service quality perceptions of different ethnic groups and the results showed that passenger perceptions of service quality at airports vary considerably between racial groups and that airports should therefore take more account of passenger variation and diversity when improving quality of service.(Pantouvakis A & Renzi M F 2016, 90-98)

The theory that there is a strong but unequal association between service quality and customer contentment was developed by Parasuraman in his research.(Parasuraman A, Zeithaml V A. & Berry LL 1988, 41-50)

Commentary

In general, research on the appraisal of airport quality of service has been divided into the three major areas:

1. The study of passenger expectations and satisfaction. The main purpose is to meet the expectations of passengers, so that passenger satisfaction is the basis for the survival of service providers. The investigation of passenger expectations and satisfaction is the starting point for management of quality of service at airports.
2. A survey of the service excellence rating system at airports. The quality evaluation system is usually used for standard testing and operational performance assessment. The study of service evaluation systems is a typical practical application of theory, where domestic and international academicians use different methods or theoretical bases in order to evaluate the service quality of airports from different aspects.
3. Research on the optimisation of airport service programmes. This section is very practical and relevant, and usually involves research on how to improve the efficiency and satisfaction of certain services, usually those closely related to passenger experience. For example, constructive suggestions are made in terms of security checks, catering, etc., as appropriate to the location.

According to the current state of research, there is a wealth of research on airport service quality evaluation. The author's next step will be to analyze and propose solutions to the current situation and problems encountered in the process of evaluation of Jiangbei Airport's service quality in Chongqing, based on the existing literature, using the questionnaire survey method and the SWOT

analysis method to ensure Chongqing Jiangbei Airport's future transformation and upgrading to improve airport service quality and enhance passenger satisfaction.

4 Research methods

The purpose of this paper is to understand the quality of passenger services at Chongqing Jiangbei Airport and to use the information collected to make recommendations for the development of passenger services at Chongqing Jiangbei Airport. A combination of quantitative and qualitative methods will be used.

Methods such as surveys, or other methods of collecting mathematical figures are often referred to as being quantitative, which are grounded in statistic and statistical models.

Non-statistical methods, such as those involving interviews, observations or information gathered from different documents are known as qualitative methods.(Grönfors & Vilkkä 2011, 4; Tuomi & Sarajärvi, 2019, chapter 3; Vilpas 2013, 1)

Summarizing information is usually done using financial research, while trying to understand the phenomenon and find out the implication is usually used as qualitative research. (Kananen 2017, 32)

Therefore, this study decided to use literature analysis, SWOT analysis, questionnaire method. The research was presented in a more complete and rational way.

4.1 Literature Analysis Method

This refers to the method of analysis in which the nature and condition of the object of study is ascertained through the study of the domestic and international literature collected on the thesis, and from which one's own views are derived. The method is widely used to collect and organize the literature, while using it as a basis for scientific understanding of the facts (Thomson Sangster 1680).

Firstly, I will make full use of the rich collection of the school library to consult and record relevant books, newspapers, magazines and other materials on issues relating to passenger services at airports both at home and abroad that I have searched and read.

Then, I will make use of the digital resources (including journals, master's theses, etc.) on the university library website to collect professional journals, dissertations and other materials related to Chongqing Jiangbei International Airport, and obtain information useful for thesis writing through collation. At the same time, the search engine is used wisely and fully to explore other effective paths to access materials that are needed but not available in the library's digital resources.

Finally, a site visit to Chongqing Jiangbei Airport was conducted and the relevant information obtained was subjected to a comprehensive analysis of the current situation of Jiangbei Airport's current service quality, and then combine literature, relevant theoretical knowledge and methods to enable Chongqing Jiangbei Airport to better establish its own brand image by providing a better level of service quality.

4.2 SWOT Analysis Method

SWOT analysis is defined as the researcher's initiative to present a comprehensive picture of the strengths, weaknesses, opportunities and threats associated with the subject of the study in relation to its domestic and foreign competitive context and competitive conditions. S represents strengths, W represents weaknesses, O represents opportunities and T represents threats. (Andrews 1971) Therefore, the researcher will comprehensively analyse and collate the actual competitive environment and conditions regarding airport development at Jiangbei Airport, and list out the closely related aspects of passenger services at Jiangbei Airport to reasonably analyse and elaborate the current situation of passenger services at Jiangbei Airport.

S: Good geographical location. Chongqing Jiangbei International Airport, the third largest airport in China, is also one of the largest international airports , it is located in the central and western part of mainland China. At present, Jiangbei International Airport is one of the biggest mountain airports in the Asia , with two runways and a modern integrated terminal building. It is the intersection of road, rail, waterway and air traffic in China.

The quality of airport operations continues to improve. Jiangbei Airport has moved steadily forward in building an international aviation hub by focusing on becoming a world-class airport cluster in Chongqing and an airport-type national logistics hub. With the rapid development of Chongqing Municipality, Chongqing Jiangbei International Airport will also continue to maintain a high rate of development, it provides an efficient, convenient and comfortable inbound and outbound experience for global passengers while also promoting the development of the aviation economy in central and western China and enhancing the overall economic development of the region.

Tourism drives the development of commercial resources at the airport. In recent years, Chongqing has become one of the hot cities for tourism in China, and because of this, the development of tourism in Chongqing also directly and indirectly contributes to growth of the airports, such as facilitating development of airport commerce and food and beverage services. At the same time, the development of tourism has prompted the airport sector to continuously improve and refine various

facilities, increase the characteristics of the city, improve the quality of service and actively develop commercial resources.

W: The airport lacks special services. Jiangbei Airport faces competition for passengers from airports in neighbouring cities such as Chengdu and Wuhan, while the positioning of Jiangbei Airport is mainly to serve the smooth flow of passengers in and out of the port, lacking personalisation in the process of serving passengers. For example, there is a lack of passenger services that include the characteristics of the airport or the city when passengers enter and leave the airport, resulting in a poor impression of the passengers.

The terminal building facilities and environment need to be improved. In general, the quality of the environment in T2 at Jiangbei Airport is a concern. Because of the terminal's age, the service hardware is ageing and the facilities and equipment are old and outdated. However, because the new airport is still being planned, T2 will continue to be used for a certain period of time and the terminal facilities and environment will require continued upgrading.

The terminal building is congested. The main city of Chongqing currently has only one airport - Chongqing Jiangbei International Airport. As Bishan Airport is still under planning, the terminal building appears to be exceptionally busy and the corresponding check-in, security and boarding lanes are quite crowded and the work process is slow.

O: Government policy support. The 20th National Congress of the Communist Party of China (CPC) report proposes to "promote the construction of a twin-city economic circle in the Chengdu-Chongqing region". Meanwhile, the Chongqing Municipal People's Government 2023 Work Report points out that Chongqing Jiangbei International Airport should grasp the twin cores to lead and link the region, and to promote a breakthrough in the construction of the twin-city economic circle in the Chengdu-Chongqing region. In this process, Chongqing Jiangbei International Airport is an important generator to advance the construction of the Chengdu-Chongqing twin-city region economic circle and is a key link to continue supporting both regions and accelerate the construction of itself into a world-class airport cluster in Chengdu and Chongqing, and become an internationally competitive international aviation hub.

The Chengdu-Chongqing Airport Cluster is a synergistic cooperation. Chongqing Airport Group Co., Ltd. is actively building a world-class airport cluster development pattern of "twin hubs in the city and four major airport clusters in Chengdu and Chongqing". Through synergy and cooperation, we will drive business cooperation and jointly develop a global route network. At the same time, we will actively explore and make use of the aviation business cooperation among the Chengdu-Chongqing airport cluster, strengthen the coordination of regional operations in Chengdu

and Chongqing, optimize the use of airspace resources, and make every effort to improve the normal level of flights.

T: Construction of regional airports is hot. At present, Chengdu, which is adjacent to the west of Chongqing, has already formed two large and busy airports, Shuangliu and Tianfu, as the core, with many other regional airports around. The neighbouring areas of Chongqing, such as Neijiang, Suining and Guang'an, have also put forward the idea of building their own civil aviation airports. In the future, these airports may overlap with Jiangbei Airport airspace, and Jiangbei Airport's passenger traffic may face a great diversion.

The rise of high speed rail is taking over passengers. After the initial formation of Chongqing's high-speed rail network, more than 95% of the aviation market from Chongqing to the four provincial capitals of Guiyang, Kunming, Xi'an and Wuhan has been eaten up by high-speed rail. Routes to cities with 2-4 hours of high-speed rail operating time from Chongqing are in the competitive area of high-speed rail and airlines. Factors such as the fare gap between high-speed rail and airlines, the punctuality of civil aviation, and the road traffic conditions in the cities all influence the travel choices of passengers.

4.3 Questionnaire Method

Questionnaires are usually used as a tool for investigators to conduct surveys and surveys in response to research questions. Questionnaires are usually formulated in the form of questions and seek responses from the respondents. The questionnaire method, on the other hand, is used by the researcher to collect reliable information by using a controlled measurement method, such as a questionnaire, to measure the question under study.

In this paper, in order to measure passenger service satisfaction at Chongqing Jiangbei Airport, the researcher created and designed questionnaires around different aspects of passenger service at Jiangbei Airport and distributed them to different occupational groups to fill in and finally get the real comments from passengers to help the study.

1. Chongqing Jiangbei International Airport Passenger Service Satisfaction Assessment

Passenger service quality refers to whether the quality of service provided by the service provider to the service recipient on the passenger journey meets the needs of the service recipient. Passenger service satisfaction refers to the pleasure that a passenger feels after his or her needs have been met, and is a comparison between what the passenger expected before the flight and what he or

she actually feels after the flight. The more customer feedback, the improved the value of the passenger service provided, and conversely, the lower the quality of the passenger service provided.

2. Principles for the selection of satisfaction evaluation indicators

Comprehensiveness. The evaluation indicators in the passenger perception-based satisfaction evaluation index system can include all the services that Jiangbei Airport can provide, It enables the evaluation indicator system to fully reflect the status of passenger satisfaction with airport performance and makes the evaluation results more objective.

Operability. The evaluation indicators in the airport passenger service satisfaction evaluation index system are easy to understand and can truly reflect the intrinsic attributes of the services provided by Jiangbei Airport, so that it is easy to compare and score, so that in the questionnaire survey, passengers can accurately understand the specific meaning of each evaluation indicator and can objectively evaluate the advantages and disadvantages of the objects involved in the evaluation indicators.

Importance. It is important that the evaluation index system based on passenger service satisfaction at the airport can clearly measure the quality and level of services provided by Jiangbei Airport, so that the data collected can be analysed and summarised to better improve the level of passenger service at Jiangbei Airport.

Independence. It is required that the connotation of each evaluation index in the passenger perception satisfaction evaluation index system should not be substituted for each other, and the different evaluation indexes should have a certain degree of distinction between them, and the selection of indistinguishable evaluation indexes should be avoided as far as possible.(Li Ying 2023, 245-249)

3. Questionnaire design

Based on the Airport Council International (ACI) global airport passenger satisfaction scale and the actual situation of Chongqing Jiangbei Airport passenger service, the index system of Chongqing Jiangbei Airport passenger service satisfaction evaluation was constructed. In the questionnaire, "A1-A9" denotes the primary indicators of the study, "B1-B37" denotes the secondary indicators of the study, and there are 37 questions related to the indicator system. 37 questions are listed in Table 2 below, and the questionnaire questions are listed in the Appendix. The questionnaire was designed on the basis of the survey indicator system. The survey was conducted for Chinese

passengers who had experienced flying at Chongqing Jiangbei International Airport, and the survey was conducted randomly. 135%. To facilitate the survey analysis, the top 100 questionnaires were finally selected as the data source for this research paper.

Table 2

Main survey objectives	Tier 1 indicators	Secondary indicators
Passenger Service Satisfaction at Chongqing Jiangbei Airport	Airport Traffic A1	Airport accessibility B1
		Traffic guidance sign B2
		Car Park Finder Service B3
	Aircraft Guidance Service A2	Cue sign prominence B4
		Enquiry Service B5
		Knowledge of flight and terminal information B6
		Terminal Radio B7
	Check-in A3	Waiting time at check-in counter B8
		Check-in staff service attitude B9
		Self-service check-in equipment integrity B10
		Check-in area queuing order B11
		Check-in is told that the airline cannot offer free checked baggage service B12
		Overweight baggage check-in B13
		Complaint handling B14
	Security and Joint Inspection Service A4	Security Waiting Situation B15
		Service attitude of security personnel B16

		Customs, border and quarantine clearance speed B17
		Individual baggage unpacking service B18
Waiting Service A5		Cleanliness of the airport environment B19
		Wi-Fi Internet Service B20
		Ease of access to drinking water B21
		Number of power sockets B22
		Types of food and drink, tastes and prices B23
		Shop arrangement, degree of clear pricing B24
		Currency exchange, number of ATMs B25
Boarding Service A6		Number of seats at boarding gate B26
		Boarding Order B27
		Boarding gate staff attitude B28
Baggage Services A7		Number of luggage trolleys B29
		Baggage packing service B30
		Baggage claim speed B31
		Baggage Integrity B32
Transit Service A8		"Yuyue Transit" Service B33
		Airport signage during transit B34
		Transit staff attitude B35
Airline Delay Service A9		Flight Delay Information Notice B36
		Flight Delay Follow-up Service B37

4. Satisfaction calculation method

In the calculation of the overall airport satisfaction score, it is important to ensure that all types of airport passenger service content are equally important to each other. Therefore, the nine indicators of Chongqing Jiangbei Airport Passenger Service Satisfaction Measurements constructed in our study are all equally weighted: airport traffic, aircraft guidance service, check-in, security/connection screening, waiting for service, check-in and baggage service, transit and late delivery of service.

The formula for calculation is: Chongqing Jiangbei Airport Passenger Service Overall Satisfaction Score = (Airport Traffic + Passenger Guidance Service + Check-in + Security / Joint Checking + Waiting Service + Check-in Service + Baggage Service + Transit Service + Flight Delay Service) Satisfaction Score ÷ 9.

For each indicator score of the satisfaction measure, five options were set for each question in the questionnaire, which were measured according to the LIKERT five-point scale method. The Likert scale was originally developed by the social psychologist Likert in 1932 and is currently one of the most commonly used sum-of-scores scales. The scale usually involves a set of statements in which strongly agree, agree, not really agree, disagree and strongly disagree are recorded as 5, 4, 3, 2 and 1 for each statement respectively. (Likert 1932) The resulting total score is the sum of the scores obtained from the respondent's answers to each question, which expresses the strength of the respondent's attitude and the different states on the scale. In contrast to other scales, this scale is more widely used to measure multidimensional and complex concepts or attitudes, is easier to design and has higher reliability.

Therefore, this questionnaire gives a grade of 5 to "very satisfied", 4 to "satisfied", 3 to "average" and 2 to "dissatisfied". This questionnaire gives a grade of 5 to "very satisfied", 4 to "satisfied", 3 to "average", 2 to "dissatisfied" and 1 to "very dissatisfied". The specific formula is: Satisfaction score = "Very Satisfied" ratio × 5, "Satisfied" ratio × 4, "Average" ratio × 3. The proportion of "average" × 3, "unsatisfied" × 2, "very unsatisfied" × 1.

5. Questionnaire reliability and validity analysis

In order to obtain the actual satisfaction of passenger service at Chongqing Jiangbei Airport, the author sent out a questionnaire to the general public to conduct a survey from April 19, 2023 to May 4, 2023. Based on the 100 total questionnaires, the researcher collected 93 valid

questionnaires, resulting in a 93% questionnaire return rate. After the questionnaires were returned, further reliability analysis of the questionnaires was required to verify whether the results were reasonable and informative.

① A method used to verify that data is true and reliable is known as reliability analysis. In order to test the degree of concordance of the results achieved when respondents answer the questions accurately and therefore are given repeated measurements using a survey of research subjects. When the results are shown, a Cronbach alpha of more than 0.8 indicates that the scale has a strong reliability. A coefficient of above 0.7 means that the results are acceptable to the survey participants. However, if the value is higher than 0.6, the scale should be modified, it does not mean that the scale has no reference value, but if the value is lower than 0.6, then the scale must be reset for the design questions. Based on the above theory, this paper used SPSS26 to analyse the reliability of the nine indicator systems in the questionnaire: airport traffic, flight guidance service, check-in, security/joint check, waiting service, boarding service, baggage service, transit service and flight delay service, and the specific scores are presented in Table 3 following.

Table 3

Tier 1 indicators	Secondary indicator numbers	Cronbach α coefficient values
Airport Traffic A1	3	0.876
Aircraft Guidance Service A2	4	0.933
Check-in A3	7	0.948
Security and Joint Inspection Service A4	4	0.921
Waiting Service A5	7	0.947
Boarding Service A6	3	0.961
Baggage Services A7	4	0.917
Transit Service A8	3	0.965
Airline Delay Service A9	2	0.904

According to the confidence analysis results, the Cronbach alpha coefficients for the nine level 1 indicators of airport transportation, flight guidance service, check-in, immigration/transfer check,

terminal service, boarding service, baggage service, transit service and airline delay service were all above 0.8, indicating that the reliability of the scale's pass rate and the data collected from the questionnaire were acceptable.

② Effectiveness analysis verifies the conceptual validity of information about a research variable or dimension. For example, it tests the appropriateness of the layout of the research questions or verifies whether the questions are set in scientific terms. Currently, validity analysis is divided into KMO tests and Bartlett's spherical tests.

KMO tests are an indication of the coefficients of simplicity and partial correlation for comparisons between variables. The specific values are those between 0 and 1. As for the measure, Kaiser states: "0.9 and above is a perfect fit, 0.8 is a perfect fit, 0.7 is a fair fit, 0.6 is a poor fit, and 0.5 and below is a very poor fit. The greater the correlation between the factors, the more suitable the original variables are for factor interpretation. When the sum of the squares of the simple correlation coefficients between all dimensions is close to zero, it means that the correlation between the variables is weak and the original variables are less suitable for factor analysis". (Kaiser, H. F. 1970, 401-415)

The Bartlett sphericity test is used primarily to test for interdependence between variables. To arrive at common factors, the premise is that the covariates are independent of each other. As long as the Bartlett's sphericity test results in a value less than 0.05, the data can be subjected to a factor element analysis. The factor analysis will be displayed through a table of common factor equations and the size of the expression is the 'extracted' value from the table of common factor equations. Results greater than a value of 0.5 mean that the dimensionality of the variable can be expressed. In order to be reasonably expressible in terms of common factors then the extracted value must be greater than 0.7.

Therefore, the first step was to conduct a KOM test, using SPSS26 to test all the secondary indicators in the questionnaire. The breakdown of marks is illustrated in Table 4 below.

Table 4

KMO and Bartlett's test		
KMO Number of sampling tangibles	0.919104	
Bartlett's test of sphericity	Approximate cardinality	5829.862085
	Freedom	666.000000
	Significance	0.000

According to the results, the KOM test value was 0.919104. According to the theoretical results, if the result is greater than 0.9 and close to 1, it indicates a good fit, and Bartlett's spherical test was 0.00, which is less than 0.05, indicating that there is a strong correlation between the variables and it is reasonable to use factor analysis. Next, factor analysis was conducted in Table 5.

Table 5

Common factor variance		
Secondary indicators	Initial	Extraction
Airport accessibility B1	1	0.689
Traffic guidance sign B2	1	0.8
Car Park Finder Service B3	1	0.845
Cue sign prominence B4	1	0.857
Enquiry Service B5	1	0.839
Knowledge of flight and terminal information B6	1	0.728
Terminal Radio B7	1	0.776
Waiting time at check-in counter B8	1	0.787
Check-in staff service attitude B9	1	0.837
Self-service check-in equipment integrity B10	1	0.803
Check-in area queuing order B11	1	0.836
Check-in is told that the airline cannot offer free checked baggage service B12	1	0.865
Overweight baggage check-in B13	1	0.794

Complaint handling B14	1	0.857
Security Waiting Situation B15	1	0.728
Service attitude of security personnel B16	1	0.808
Customs, border and quarantine clearance speed B17	1	0.867
Individual baggage unpacking service B18	1	0.777
Cleanliness of the airport environment B19	1	0.859
Wi-Fi Internet Service B20	1	0.808
Ease of access to drinking water B21	1	0.81
Number of power sockets B22	1	0.847
Types of food and drink, tastes and prices B23	1	0.781
Shop arrangement, degree of clear pricing B24	1	0.819
Currency exchange, number of ATMs B25	1	0.813
Number of seats at boarding gate B26	1	0.903
Boarding Order B27	1	0.916
Boarding gate staff attitude B28	1	0.87
Number of luggage trolleys B29	1	0.745
Baggage packing service B30	1	0.839
Baggage claim speed B31	1	0.828

Baggage Integrity B32	1	0.804
"Yuyue Transit" Service B33	1	0.865
Airport signage during transit B34	1	0.863
Transit staff attitude B35	1	0.811
Flight Delay Information Notice B36	1	0.821
Flight Delay Follow-up Service B37	1	0.868
Extraction method: Principal component analysis		

According to what was mentioned earlier, the wider the number of values for "extraction", the nicer the articulation of the expression of common factors. In general, acceptable values are higher than 0.5, and when they are greater than 0.7, they indicate that the expression of the common factor for change is very reasonable. According to the results of the above Table 3, only one of the 31 secondary indicators, "airport accessibility", has a value of 0.689 or less than 0.7. Therefore, the scale will be analysed by removing the indicator "airport accessibility" to ensure that the results are reasonable. The data in the scale will be removed in the analysis to ensure the reasonableness of the results.

5 Satisfaction assessment results

5.1 Respondent Information

According to the survey results, 100 questionnaires were surveyed and returned, 17 of which were from males, accounting for 17% of the total respondents, and 83 were from females, accounting for 83% of the total respondents. Among them, 27 respondents were aged 18-30, 23 respondents were aged 31-40, 42 respondents were aged 41-50 and 8 respondents were aged 50-60. As can be seen from the results, the group with the largest proportion of education in the surveyed population was tertiary, followed by secondary school and below, 32% were bachelors and the smallest group of respondents was masters.

In terms of motivation for flying, the majority of traveler travelled by air because of the need to travel, 14% travelled for work and the remaining 11% travelled to visit friends and relatives. The survey of the number of air travels in the last year found that the domestic airline industry is gradually recovering after the New Crown epidemic and people are gradually starting to resume travelling across the provinces, but airport passenger volumes are still further recovering. Therefore based on the results it can be seen that the frequency of one and more and other number of air travels per year gained the most selectors in the past year.

See Table 6-10 for specific data.

Table 6

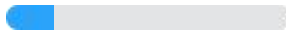
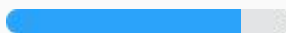

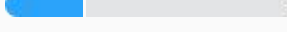
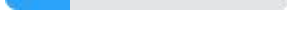
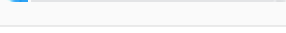
Options	Total	Proportion
Male	17	 17%
Female	83	 83%
Number of valid entries	100	

Table 7

Options	Total	Proportion
41-50 years	42	 42%
18-30 years	27	 27%
31-40 years	23	 23%
50-60 years	8	 8%

60+ years	0	0%
Number of valid entries	100	

Table 8

Options	Total	Proportion
High school/junior college and below	33	33%
Tertiary	34	34%
Undergraduate	32	32%
Master and above	1	1%
Number of valid entries	100	

Table 9

Options	Total	Proportion
Work	14	14%
Travel	75	75%
Visiting friends and family	11	11%
Number of valid entries	100	

Table 10

Options	Total	Proportion
Once a week or more	1	1%
Once a month or more	1	1%
Once a year or more	52	52%
Other	46	46%
Number of valid entries	100	

5.2 Satisfaction scores for each indicator

1. In the section of satisfaction with traffic, there are 3 secondary indicators, the results were analysed for validity, the question of "the convenience of entering and leaving the airport" was removed. The results indicate that, the average satisfaction rate of this section is 4.46, including 4.59 for the question "traffic guidance signs", including 2 people who are very dissatisfied with this item. The satisfaction score for "car park finding service" was 4.32, including 14 people who were "average" and 4 people who were "dissatisfied" with this item. "The satisfaction level is shown in the graph. The details of satisfaction are shown in the Table 11-12.

Table 11

Traffic guidance sign B2		Average score for this question: 4.59
Options	Total	Proportion
5	67	67%
4	22	22%
3	9	9%
2	2	2%
1	0	0%
Number of valid entries	100	

Table 12

Car Park Finder Service B3		Average score for this question: 4.32
Options	Total	Proportion
5	57	57%
4	24	24%
3	14	14%
2	4	4%
1	1	1%
Number of valid entries	100	

2. The section of satisfaction with airline guidance service contains 4 secondary indicators. The average satisfaction rate of this section was 4.54. "Signage visibility" was 4.57, and 93% of the total number of people were very satisfied and satisfied with this question. The satisfaction rate for "Information Service" was 4.54, with 90% of the total number of passengers being very satisfied and satisfied, but 7% of passengers were "average" and 3% were "dissatisfied" with the service. However, 7% of passengers were "average" and 3% were "dissatisfied" with the service. "The satisfaction level for this question was 4.5, with 89% of passengers being very satisfied and satisfied and 1% being "dissatisfied". The level of satisfaction for the question "Terminal announcements" was 4.54, with 11% of passengers saying they were "average". The details of satisfaction are shown in the Table13-16.

Table 13

Cue sign prominence B4		Average score for this question: 4.57
Options	Total	Proportion
5	65	65%
4	28	28%
3	6	6%
2	1	1%
1	0	0%
Number of valid entries		100

Table 14

Enquiry Service B5		Average score for this question: 4.54
Options	Total	Proportion
5	67	67%
4	23	23%
3	7	7%
2	3	3%

1	0	 0%
Number of valid entries	100	

Table 15

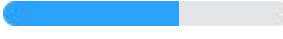
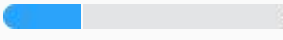
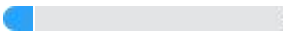
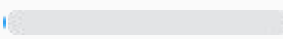
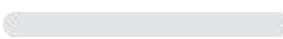

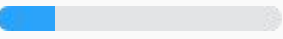
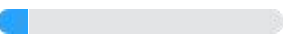
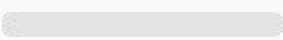
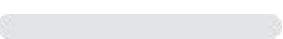
Knowledge of flight and terminal information B6		Average score for this question: 4.5
Options	Total	Proportion
5	62	 62%
4	27	 27%
3	10	 10%
2	1	 1%
1	0	 0%
Number of valid entries	100	

Table 16

Terminal Radio B7		Average score for this question: 4.54
Options	Total	Proportion
5	67	 67%
4	21	 21%
3	11	 11%
2	1	 1%
1	0	 0%
Number of valid entries	100	

3. Satisfaction with the check-in process, which consists of 7 secondary indicators. The average satisfaction rate for this section was 4.46. The satisfaction rate for "Waiting time at check-in counter" was 4.47, with 4% of passengers expressing "dissatisfaction" with this service. "The satisfaction

rate for this question was 4.61, with 94% of passengers being "very satisfied and satisfied", which is high. "The level of satisfaction with the self-service check-in equipment was 4.52. The level of satisfaction with the queue in the check-in area was 4.55, which exceeded the average level of satisfaction in this section, but 7% of passengers were satisfied with this service. "Fair". "The question "I was told at check-in that the airline could not provide free checked baggage service" was 4.3, which did not meet the average satisfaction level of all indicators in this questionnaire. 17% of passengers were "average", 2% were "unsatisfied" and 2% were "very unsatisfied". The satisfaction rate for "overweight baggage handling" was 4.36, including 3% of passengers who were "dissatisfied" with this service. The satisfaction rate for "Complaint handling" was 4.4, which did not reach the average satisfaction rate for this segment. The details of satisfaction are shown in the Table 17-23.

Table 17

Waiting time at check-in counter B8		Average score for this question: 4.47
Options	Total	Proportion
5	62	62%
4	27	27%
3	7	7%
2	4	4%
1	0	0%
Number of valid entries	100	

Table 18

Check-in staff service attitude B9		Average score for this question: 4.61
Options	Total	Proportion
5	68	68%
4	26	26%
3	5	5%

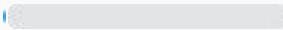
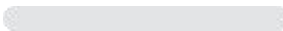
2	1	 1%
1	0	 0%
Number of valid entries		100

Table 19


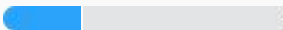
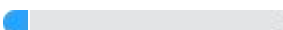
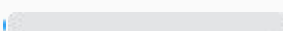
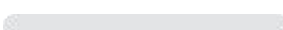
Self-service check-in equipment integrity B10		Average score for this question: 4.52
Options	Total	Proportion
5	63	 63%
4	27	 27%
3	9	 9%
2	1	 1%
1	0	 0%
Number of valid entries		100

Table 20


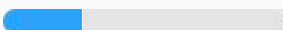
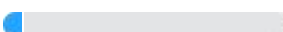
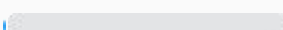
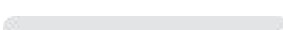
Check-in area queuing order B11		Average score for this question: 4.55
Options	Total	Proportion
5	64	 64%
4	28	 28%
3	7	 7%
2	1	 1%
1	0	 0%
Number of valid entries		100

Table 21

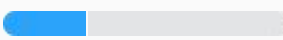
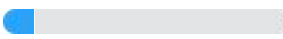
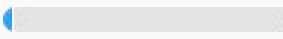
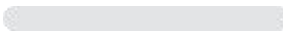
Check-in is told that the airline cannot offer free checked baggage service B12		Average score for this question: 4.3
Options	Total	Proportion
5	57	57%
4	22	22%
3	17	17%
2	2	2%
1	2	2%
Number of valid entries	100	

Table 22

Overweight baggage check-in B13		Average score for this question: 4.36
Options	Total	Proportion
5	55	55%
4	28	28%
3	15	15%
2	2	2%
1	0	0%
Number of valid entries	100	

Table 23

Complaint handling B14		Average score for this question: 4.4
Options	Total	Proportion
5	57	57%

4	29	 29%
3	11	 11%
2	3	 3%
1	0	 0%
Number of valid entries	100	

4. The section on satisfaction with security/joint inspection services contains 4 secondary indicators, with an average satisfaction rate of 4.5. 4.47 for the question on "waiting situation for security inspection" and 4.55 for the question on "attitude of security personnel". The satisfaction rate for "speed of customs, border control and quarantine clearance" was 4.5. The satisfaction rate for "separate baggage unpacking service" was 4.47. The satisfaction rate for "waiting situation at security check" and "separate baggage unpacking service" in this section was 4.47. In this section, the questions "waiting time for security check" and "separate baggage unpacking service" did not reach the average satisfaction level. The details of satisfaction are shown in the Table 24-27.

Table 24


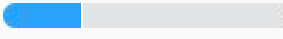
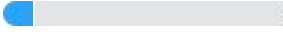
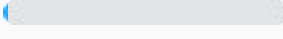
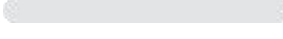
Security Waiting Situation B15		Average score for this question: 4.47
Options	Total	Proportion
5	61	 61%
4	27	 27%
3	10	 10%
2	2	 2%
1	0	 0%
Number of valid entries	100	

Table 25

Service attitude of security personnel B16	Average score for this question: 4.55
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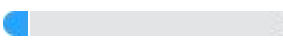
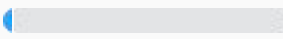
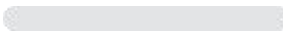
Options	Total	Proportion
5	64	64%
4	28	28%
3	7	7%
2	1	1%
1	0	0%
Number of valid entries	100	

Table 26

Customs, border and quarantine clearance speed B17		Average score for this question: 4.5
Options	Total	Proportion
5	61	61%
4	30	30%
3	7	7%
2	2	2%
1	0	0%
Number of valid entries	100	


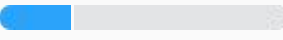
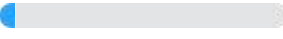
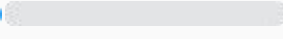
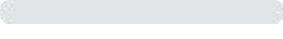
Table 27

Individual baggage unpacking service B18		Average score for this question: 4.47
Options	Total	Proportion
5	62	62%
4	26	26%

3	9	 9%
2	3	 3%
1	0	 0%
Number of valid entries	100	

5. The section of satisfaction with waiting services contains 7 secondary indicators, and the average satisfaction level of this section is 4.39, which is low. The average satisfaction level of this question is 4.39, which is low. "Cleanliness of airport environment" is 4.62, which is high. The level of satisfaction with "Wi-Fi Internet access" was 4.38, with 5% of passengers being "dissatisfied" or "very dissatisfied" with this service. "The number of power outlets was 4.24, which was lower than the average for this segment, with 6% of travellers "dissatisfied" and 1% "dissatisfied". 6% of travellers were "dissatisfied" and 1% were "very dissatisfied". The satisfaction level of 4.19 for the question "Type, taste and price of food and drink" is low, with 23% of passengers being "average" and 4% being "dissatisfied" or "very dissatisfied" with this service. 23% of passengers were "average" and 4% were "dissatisfied" or "very dissatisfied". "The level of satisfaction with this question was 4.38, with more than 50% of travellers saying they were "very satisfied" with this service. "Currency exchange, number of ATMs" The satisfaction rate for this question was 4.38, with 15% of travellers saying that this service needed to be improved. The details of satisfaction are shown in the Table 28-34.

Table 28

Cleanliness of the airport environment B19		Average score for this question: 4.62
Options	Total	Proportion
5	69	 69%
4	25	 25%
3	5	 5%
2	1	 1%
1	0	 0%

Number of valid entries	100	
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Table 29

Wi-Fi Internet Service B20		Average score for this question: 4.38
Options	Total	Proportion
5	62	62%
4	20	20%
3	13	13%
2	4	4%
1	1	1%
Number of valid entries	100	

Table 30

Ease of access to drinking water B21		Average score for this question: 4.54
Options	Total	Proportion
5	66	66%
4	25	25%
3	7	7%
2	1	1%
1	1	1%
Number of valid entries	100	

Table 31

Number of power sockets B22		Average score for this question: 4.24
Options	Total	Proportion


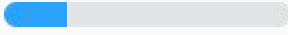
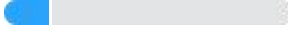
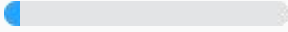
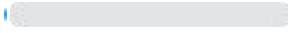
5	55	 55%
4	22	 22%
3	16	 16%
2	6	 6%
1	1	 1%
Number of valid entries		100

Table 32


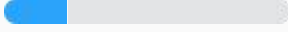
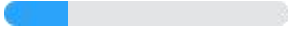
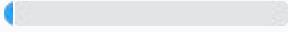
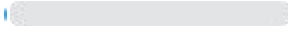

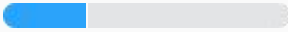

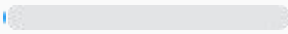
Types of food and drink, tastes and prices B23		Average score for this question: 4.19
Options	Total	Proportion
5	51	 51%
4	22	 22%
3	23	 23%
2	3	 3%
1	1	 1%
Number of valid entries		100

Table 33

Shop arrangement, degree of clear pricing B24		Average score for this question: 4.38
Options	Total	Proportion
5	55	 55%
4	29	 29%
3	15	 15%
2	1	 1%

1	0	0%
Number of valid entries	100	

Table 34

Currency exchange, number of ATMs B25		Average score for this question: 4.38
Options	Total	Proportion
5	55	55%
4	30	30%
3	13	13%
2	2	2%
1	0	0%
Number of valid entries	100	

6. The average satisfaction rate for the boarding service segment was 4.56. The satisfaction rate for "Number of seats at the boarding gate" was 4.51, with 3% of passengers being "dissatisfied" with this service. "Over 90% of passengers were "very satisfied" or "satisfied" with this service. The satisfaction level of 4.63 for "attitude of staff at the boarding gate" is high. The specific satisfaction situation is shown in the Table 35-37.

Table 35

Number of seats at boarding gate B26		Average score for this question: 4.51
Options	Total	Proportion
5	62	62%
4	30	30%
3	5	5%

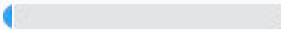

2	3	 3%
1	0	 0%
Number of valid entries		100

Table 36


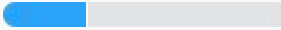
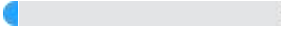
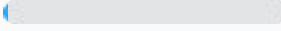
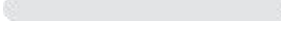

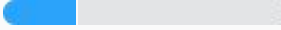
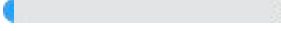
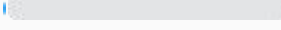
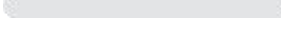
Boarding Order B27		Average score for this question: 4.55
Options	Total	Proportion
5	64	 64%
4	29	 29%
3	5	 5%
2	2	 2%
1	0	 0%
Number of valid entries		100

Table 37

Boarding gate staff attitude B28		Average score for this question: 4.63
Options	Total	Proportion
5	69	 69%
4	26	 26%
3	4	 4%
2	1	 1%
1	0	 0%
Number of valid entries		100

7. The average satisfaction level of this section was 4.44. The satisfaction level of "Number of luggage trolleys" was 4.52, with more than 60% of passengers being "very satisfied" with this service. The satisfaction rate of "baggage packing service" was 4.52. The satisfaction rate of "baggage claim speed" was 4.27, which is lower than the average satisfaction rate of this segment. The satisfaction level of "luggage intactness" was 4.44, with 3% of passengers being "dissatisfied" with this service. The details of satisfaction are shown in the Table 38-41.

Table 38

Number of luggage trolleys B29		Average score for this question: 4.52
Options	Total	Proportion
5	61	61%
4	31	31%
3	7	7%
2	1	1%
1	0	0%
Number of valid entries		100

Table 39

Baggage packing service B30		Average score for this question: 4.52
Options	Total	Proportion
5	62	62%
4	29	29%
3	8	8%
2	1	1%
1	0	0%
Number of valid entries		100

Table 40

Baggage claim speed B31		Average score for this question: 4.27
Options	Total	Proportion
5	54	54%
4	29	29%
3	10	10%
2	4	4%
1	3	3%
Number of valid entries	100	

Table 41

Baggage Integrity B32		Average score for this question: 4.44
Options	Total	Proportion
5	59	59%
4	29	29%
3	9	9%
2	3	3%
1	0	0%
Number of valid entries	100	

8. Satisfaction with "transit services", which contains 3 secondary indicators, has an average satisfaction rate of 4.52, including "Yue transit service", "airport signage during transit" and "attitude of transit staff". The highest satisfaction rate was 4.54 for "attitude of transit staff" and the lowest was 4.5 for "Yue transit service", as shown in the Table 42-44.

Table 42

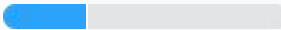

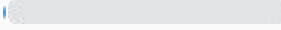
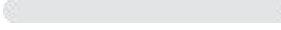
"Yue Transit" Service B33		Average score for this question: 4.5
Options	Total	Proportion
5	61	61%
4	29	29%
3	9	9%
2	1	1%
1	0	0%
Number of valid entries	100	

Table43

Airport signage during transit B34		Average score for this question: 4.52
Options	Total	Proportion
5	62	62%
4	29	29%
3	8	8%
2	1	1%
1	0	0%
Number of valid entries	100	

Table 44

Transit staff attitude B35		Average score for this question: 4.54
Options	Total	Proportion
5	63	63%

4	29	 29%
3	7	 7%
2	1	 1%
1	0	 0%
Number of valid entries	100	

9. The average satisfaction rate for the flight delay service segment, which contains two secondary indicators, is 4.41, and it can be seen that 3% of passengers are "dissatisfied" with the "flight delay follow-up service", as shown in the Table45-46.

Table 45


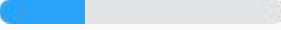
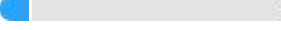
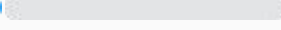
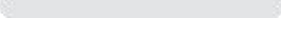

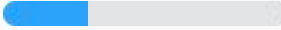

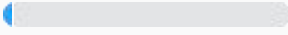
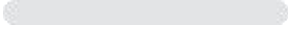
Flight Delay Information Notice B36		Average score for this question: 4.47
Options	Total	Proportion
5	59	 59%
4	30	 30%
3	10	 10%
2	1	 1%
1	0	 0%
Number of valid entries	100	

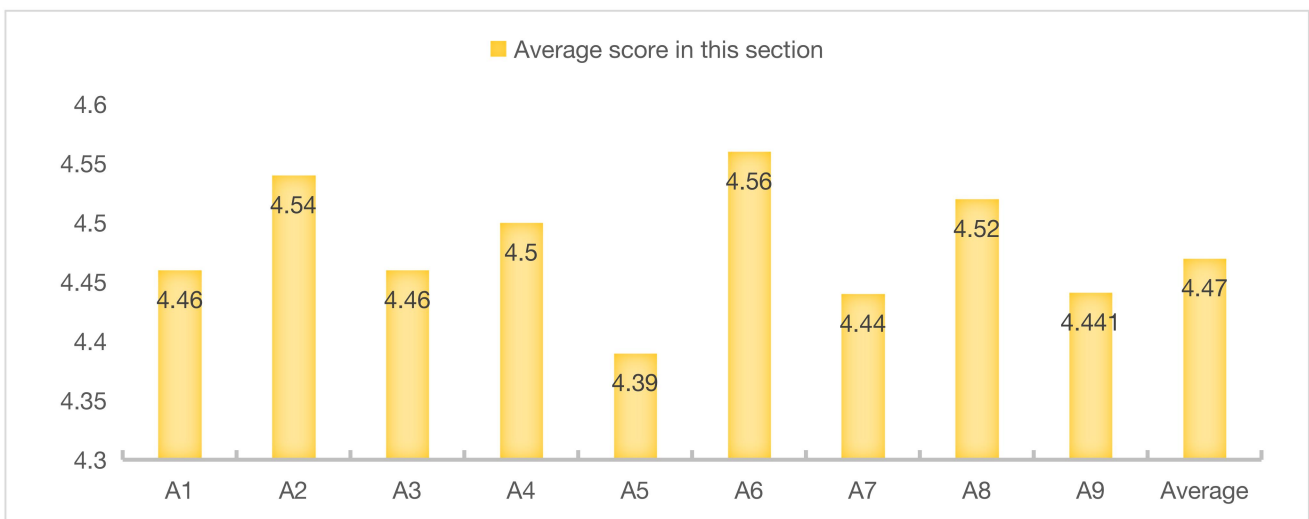
Table 46

Flight Delay Follow-up Service B37		Average score for this question: 4.35
Options	Total	Proportion
5	54	 54%
4	30	 30%

3	13	 13%
2	3	 3%
1	0	 0%
Number of valid entries	100	

In summary, when comparing the nine level 1 indicators together, it can be seen that the best passenger satisfaction experience was in the boarding service, while the lowest overall passenger satisfaction score was in the waiting service section. Below the overall questionnaire average satisfaction of 4.47 are the five Level 1 indicators of transportation to and from the airport, check-in, waiting service, baggage service and airline delay service, car park car search service, being informed at the check-in desk that the airline cannot check baggage for free service, overweight baggage handling, complaint handling, Wi-Fi internet service, number of power outlets, types, tastes and prices of food and beverage, arrangement of shops, clear price indication The 12 secondary indicators are as follows: the extent of currency exchange, the number of ATMs, the speed of baggage claim, the degree of baggage intactness, and the follow-up service for flight delays. As shown in the Table 47.

Table 47



6 Discussion

6.1 Main problems and causes of passenger services at Jiangbei Airport

6.1.1 Airport transport services

The main problem in terms of traffic flow is the car park car finder service. According to the survey, there are problems with the car finding system and car park order at Chongqing Jiangbei International Airport. Passenger departures and arrivals are located far from the car park and require extensive signage and walking to reach them. At the same time, there is too much similarity within the car park, with different areas not being specifically marked, and the degree to which vehicle owners and passengers can accurately identify where their vehicles are parked is low. For situations where vehicles are waiting for people, especially online vehicles waiting for passengers usually choose to be on the arterial roads of the car park, thus often resulting in blocked vehicles in the car park and inconvenient access.

6.1.2 Ride guidance service

According to the results, the overall satisfaction level of the passenger guidance service is high, but there are still some problems. Passengers generally report that it is difficult to get a clear picture of the terminal before checking in, so they download third-party software and use it to check the check-in counter and terminal, otherwise it is easy to go to the wrong terminal.

6.1.3 Check-in services

In terms of check-in procedures, the main problems were in three areas: being told at check-in that the airline could not provide free checked baggage services, overweight baggage procedures, and complaint handling. According to the survey, Chongqing Jiangbei International Airport has problems with low-cost airline check-in and checkout. The specific manifestations are: when passengers purchase their tickets, some of the low-cost airlines do not emphasise to passengers the instruction that they do not check their luggage for free for the sake of profit. As a result, many passengers who bought tickets on low-cost airlines were unaware of the situation and were told to check in at the check-in counter on the day of travel, only to be told that they would need to go to another counter for a separate baggage charge and then return to this counter to check in again. Some passengers were unable to accept the high cost of separate baggage charges and therefore had disputes with airport staff, delaying the check-in process for other passengers and resulting in a large number of complaints.

6.1.4 Security and Joint Checking Services

In this section, it can be seen that passengers are very concerned about the service attitude of security staff, while the speed of airport security checks also usually affects passenger satisfaction. The survey found that T2 at Chongqing Jiangbei International Airport has fewer flights than T3 due to its long lifespan, so there are fewer security check lanes and large queues resulting in slow security checks. Meanwhile, complaints about the separate baggage opening process mainly stem from passengers' lack of knowledge about security screening and the attitude of security staff during the bag opening process, which can affect passenger satisfaction.

6.1.5 Waiting service

The most common problems found in this survey were in the areas of Wi-Fi, the number of power outlets, the types, tastes and prices of food and drink, the arrangement of shops, the degree of price indication, currency exchange and the number of ATMs. The survey found that the Wi-Fi at the airport was poorly utilised by passengers, with slow internet access, and that passengers usually used their own mobile networks for convenience. While waiting for their flights, travellers often cannot find power outlets and the airport fails to set up mobile power rental, resulting in a lack of power for travellers' mobile devices such as mobile phones and computers. Also, there is a lack of personalised services when it comes to passenger spending. The food and beverage offerings in the terminal building are less diverse, of average taste and higher in price, resulting in more dissatisfaction among travellers. Finally, the number of currency exchange and ATM machines is low, which causes inconvenience to passengers who do not handle mobile payments.

6.1.6 Check-in service

The results show that the overall satisfaction of passengers in this segment is high. However, Chongqing Jiangbei International Airport still needs to improve the number of seats at the boarding gates and the maintenance of order at the gates, including improving the overall quality of boarding services to increase passenger satisfaction.

6.1.7 Baggage Service

Passenger satisfaction with baggage services is low in terms of the speed of baggage claim and the degree of baggage integrity. The results show that passengers at Chongqing Jiangbei International Airport generally report that baggage collection is slow and that there are many cases of baggage damage during transportation. The survey found that Chongqing Jiangbei International Airport currently uses manual handling for baggage transportation, the number of workers is small and the workload is large, for example, arrival luggage, workers need to manually carry it to the transport

truck and then transport it to the baggage transfer station, and then the staff will manually carry it to the conveyor one by one, the efficiency is slow and it is easy to receive different degrees of damage during transportation, which also causes passenger complaints.

6.1.8 Transit Service

In terms of transit services, the feedback received from passengers at Chongqing Jiangbei International Airport indicates that the airport is currently receiving a lot of satisfaction with the "Yuyue Transit" programme, and that the transit signs in the terminal are very visible and clear, and the transit staff are very friendly.

6.1.9 Airline service

It is always important for airports to do a good job with their extension services. According to the survey results, passengers are mainly dissatisfied with the delayed flight follow-up service at Chongqing Jiangbei International Airport. The survey found that Chongqing Jiangbei International Airport needs to further improve its ability to provide meals and accommodation to passengers after flight delays. The airport group is currently planning a hotel for passenger accommodation, and the hotels currently in operation at the airport are expensive and have poor infrastructure facilities. The airport's customer service team is currently responsible for special passengers and handling complaints, and has not formed a professional team to deal with flight delays.

6.2 Strategies to improve the quality of passenger services at Jiangbei Airport

6.2.1 Improving airport facilities

Improve information on boarding floors and check-in counters. It is recommended that terminal information be marked in advance at the passenger purchase stage, and that SMS messages be used to inform passengers in advance to reduce the number of passengers going to the wrong terminal. At the same time, in case of emergency, emergency shuttle buses can be set up in the terminal to help passengers who are nearing boarding time and have gone to the wrong terminal to reach the correct check-in counter as soon as possible.

Improve the construction of parking facilities. Firstly, as the demand for new energy vehicles rises and the sales of new energy vehicles increase, the airport should increase the number of charging piles to provide convenient services for new energy vehicle owners. Secondly, to address the issue of car park signage, the airport can bind the car owner and the parking space for positioning. After entering the car plate number in the payment platform, the car owner can directly see the walking

navigation roadmap to the parking space in the platform, thus facilitating the inbound and outbound car owners and passengers, and avoiding the difficult situation of finding a car due to similar parking spaces. Finally, regarding the problem of vehicle congestion, the airport car park can be set up as a separate pick-up area for internet-approved vehicles, separate from the parking area for private cars, to avoid congestion caused by internet-approved vehicles waiting for passengers and driving slowly in the car park artery for a long time.

Improve the charging facilities in the isolated area of the terminal. Firstly, mobile charging stations could be added, using rental for a fee. Secondly, charging ports with charging cables can be installed at the boarding gates for passengers who do not carry charging cables with them. Furthermore, unlimited charging can be added to the armrests of some seats for the convenience of passengers. This will alleviate the situation where passengers are unable to board the aircraft due to the lack of charging jacks, resulting in their mobile devices running out of power.

6.2.2 Improve the efficiency of passenger handling

Address the issue of airlines not offering free checked baggage. Airlines should emphasise to passengers in their ticketing channels whether their tickets include free checked baggage to deepen their impression of their choice when purchasing tickets. At the same time, at check-in counters, for airlines that do not include checked baggage, a separate counter should be established for this purpose and staff should take the initiative to guide passengers with luggage to it. The check-in and baggage charges will be handled uniformly at this counter, thus avoiding the situation where passengers temporarily find that their luggage is overweight and need to go to other counters. This is to improve the efficiency of the check-in process and passenger satisfaction.

Improving transit efficiency. Transit is the core of building an international aviation hub. Chongqing Airport should actively promote free ticket changes and refunds across airlines, set up exclusive counters, security check lanes and boarding areas for express flights, and fully implement 30-minute pre-departure cut-offs to enhance the competitiveness of air travel and continuously improve the transit function. At the same time, we will actively promote the "Yuyue Transit" service, so that more transit passengers can experience the convenience and efficiency of transit services. At the same time, Jiangbei Airport should continue to give full play to its "highland transit" location and comparative advantages, establish a transit evaluation and reward mechanism, promote the inclination of guarantee resources to transit routes, continue to develop western highland routes, and strengthen and improve the air corridor into Xinjiang and Tibet. Accelerate the construction of route networks.

Improve the speed of security checks. Chongqing Jiangbei Airport can introduce LED screens to display the real-time number of people in line at each security checkpoint on a large screen, so that passengers can keep abreast of the current passenger queue and the serial numbers of relatively free security checkpoints, thus enabling the orderly diversion of passengers in line for security checks. In addition, Chongqing Jiangbei Airport should actively promote the "Easy Check" fast track security channel, allowing passengers to book security checks in advance to reduce the waiting time in the queue. At the same time, staff should be set up at the security checkpoint to guide passengers through the application process, so as to reduce the pressure on the number of passengers at other security checkpoints and improve the overall speed of airport security.

6.2.3 Improve passengers' knowledge of security screening

Strengthen the publicity of security screening and raise passengers' awareness of it. Airports should start with propaganda, increase propaganda efforts, make some procedures and notices for air travel, put them in places where passengers can easily notice them, make relevant laws and regulations into bulletin boards for passengers to see, make relevant small announcements as well as large screens to play them in a cycle, set up security knowledge browsing areas, and take their own security knowledge booklets, so that passengers can recognise the importance of security checks and cooperate with them, making security checks work more. This will make the security screening process smoother.

Improve the soft services in security screening and reduce the rejection of security screening by passengers. In the security screening waiting area, staff should give full play to their subjective initiative and bring human services into play to make customers feel comfortable and warm, revealing the presence of warmth in the strict security screening work. For example, they should put up signs prohibiting the carrying of lighters and knives, assist people with disabilities and the elderly, answer their questions and do what they can for them, provide them with the day's newspaper to read, and allow babies to have a sip of water or milk powder when they go through the security check without having to pour it out. For people with disabilities who have difficulty getting around, allow escorts to enter the security waiting area or staff to provide wheelchairs for them, etc.

6.2.4 Improve staff service attitude

Improve the working environment for staff. Promote the "home" culture brand, organise staff sports events and create sports and cultural activities for different groups, so that staff can have fun. The staff canteen meals should be upgraded, the variety of meals enriched, the dining environment improved and the satisfaction level of logistics continuously enhanced. At the same time, we will

continue to optimise shuttle bus services, upgrade intelligent bus stops in the field and renovate staff shift lounges to effectively enhance staff's sense of access and well-being.

Enhance staff professionalism. To strengthen staff execution, through the promotion and implementation of corporate development strategies, so that staff consciously integrate their work behavior into the overall action of implementing corporate strategies, staff should comprehensively understand corporate intentions in a timely manner, follow work arrangements, master work principles and skills, improve work quality, work standards and work timeliness, and complete work plans. To establish a work inspection and supervision system, timely check the completion of staff work, work with the situation, the implementation of rules and regulations, to ensure that each employee work accurately in place and completed on time, especially to inspect the workflow with the role of the preceding and following links, in order to achieve the effective street connection of the work links, while avoiding the phenomenon of shifting responsibilities, and ultimately complete the objectives and tasks of the enterprise in various periods to achieve the enterprise Strategic objectives. (Li Hui 2017, 138)

6.2.5 strengthen the sense of differentiated services at the airport

Introduce service facilities with Chongqing characteristics. Jiangbei Airport should combine the characteristics of Chongqing city and use the Bayu cultural heritage into the terminal design to introduce some services and surroundings with urban characteristics. This will provide travellers with personalised and differentiated services with city characteristics, while also using the differentiated services as a characteristic promotional window, which will help to enhance the international reputation of Chongqing city and Jiangbei Airport. For example, consider introducing themed activities such as cultural exhibitions and facilities such as special theme restaurants in the airport's terminal to enhance uniqueness.

Use big data technology to provide personalised consumer activities for passengers. Jiangbei Airport should work with airlines and internet technology companies to collect passenger consumption preferences, such as seating preferences and food preferences, using a big data information system, with technical support from the Jiangbei Airport App. Personalised and differentiated services can be provided to customers based on their location, occupation, tastes and purpose of travel to make them feel at home. For example, you can recommend food and drink, flight seating arrangements, lounge options, local customs, car hire, hotels, one-stop butler services, etc. By differentiating the services you offer from the passenger's point of view, you can provide the services they need. If you find out during check-in that it is the guest's birthday that day, you can give them a small gift with airport commemorative meaning to show your blessings, etc. At the same time, we should take a market-oriented approach, vigorously develop new industries and make new

platforms better and bigger. Create a first-class airport business complex. Relying on the advantages of our commercial cooperation with Singapore Changi Airport, we will continue to bring in domestic and international leading enterprises to the terminal, accelerate the investment of unused resources in Terminal T3A, and promote the opening of the recruited shops as soon as possible. We will continue to enrich the business format in the building, increase the area of duty-free shops and the variety of duty-free products, and explore the introduction of VR experiences, aerospace exhibitions and new energy vehicle exhibitions, to create a multi-styled airport consumer mall.

6.3 Own learning

This project on airport passenger services has been a great experience for the author. Based on the author's own six-week internship experience at Chongqing Jiangbei Airport and the research findings in this paper. The author believes that she has gained a lot of useful knowledge during her bachelor's degree and has gained a good understanding of airport passenger service to improve satisfaction, so that she can better combine theoretical knowledge and practical experience in her future studies and life, and test the truth with practice.

I am grateful for the process of completing this project, and I cherish the time I spent at Chongqing Jiangbei Airport during my internship and at Chongqing Institute of Science and Technology writing my thesis, both of which helped the author to learn to balance work, study and life.

I would like to thank Heini and Ying Wu for their invaluable guidance to the author and the project, and Director Ding Wenyuan and Ms Wang Can for their practical guidance during the internship at Chongqing Jiangbei Airport. It is thanks to your guidance that the author was able to complete the research and writing of this project on schedule.

Finally, I hope that the results of the project and the author's suggestions for Chongqing Jiangbei Airport will be applied to the process of improving passenger service at Chongqing Jiangbei Airport. Overall, the authors are satisfied with the results of the project and hope that the findings will be beneficial to the aviation industry.

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Appendices

Appendix 1. Passenger service satisfaction questionnaire of Chongqing Jiangbei Airport

Chongqing Jiangbei Airport passenger service quality satisfaction research questionnaire

Dear passengers,

shalom! In order to let you enjoy a pleasant air travel, to provide you with more satisfactory service, in this survey to understand your satisfaction with the service quality of Chongqing Jiangbei Airport, so that the airport to constantly improve the service work, improve the service quality. Please take 2 minutes to fill out this questionnaire, thank you. 🌹

Part I: Personal information

Your gender: [Multiple choice] *

- man woman

Your age: [Multiple choice] *

- From 18 to 30 years old 31- -40 years old 41- -50 years old From 50 to 60 years old is over 60 years old

Your degree: [Multiple choice] *

- High school / technical secondary school and below junior college undergraduate course Master of and above

Most of your destinations [single choice] *

- work travel visit one's relatives and friends

Frequency of flight in the last year [single choice] *

- Once a week or more Once a month or more Once a year or more other

Part two: Scale questions

Airport traffic satisfaction

1. Convenience of airport entry and exit [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

2. Traffic guidance signs [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

3. Car search service [Single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

Take the opportunity to guide the service satisfaction

4. Sigage age [Single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

5. Inquiry service [Multiple choice choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

6. Knowledge degree of flight and terminal information [Single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

7. Terminal broadcast [Single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

Check-in flight satisfaction

8. Check-in counter waiting time [Single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

9. Service attitude of check-in personnel [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

10. Integrity of self-service check-in equipment [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

11. Order order in check-in area [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

12. The check-in office was told that airlines cannot check in baggage service for free [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

Check for excess baggage

13. [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

14.Complaint handling [Multiple choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

Security check / joint inspection service satisfaction

15.Waiting situation for security check [Multiple choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

16.Service attitude of security personnel [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

17.Customs, border defense and quarantine clearance speed [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

18.Baggage separate bag opening service [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

Waiting for flight service satisfaction

19.Airport environment cleanliness [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

20. Wi-Fi Internet Access Service [Single-choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

21. Convenience of drinking water access [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

22. Number of power sockets [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

23. Food type, taste, and price [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

24. Store arrangement, clearly marked price degree [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

25. Currency exchange, ATM machine number [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

Satisfaction with the boarding service

26. Number of boarding gate seats [Single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

27. Boarding Order [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

28. Gate Staff Attitude [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

Luggage service satisfaction

29. Number of luggage carts [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

30. Packing service [Single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

31. Baggage retrieval speed [single-choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

32. Baggage integrity [Single-choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

Transfer service satisfaction

33. "Yuyue Transfer" service [Single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

34. Airport identification during the transit process [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

35. Transfer staff attitude [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

Satisfaction with air delay service

36. Flight delay information notification [single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1

37. Flight delay follow-up service [Single choice] *

Very satisfied (5 points), satisfied (4 points), general (3 points), dissatisfied (2 points), very dissatisfied (1 point)

5 5 4 3 2 1 1