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Analysis of Chinese Government Scholarship for International Students Using Analytical Hierarchy Process (AHP)

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Abstract: China's improving economic status is playing a vital role in the international race for soft power. The Chinese government has been investing considerably in the education sector in an attempt to attract international students from different countries by offering many scholarships each year. Scholarships cover tuition fees, medical costs, and provide a living allowance for students. The previously reported ambiguous results about this scholarship program needed to be confirmed. This paper examined the Chinese Government Scholarship program to determine the satisfaction level of international students with the program. We used a sample of 150 international students that were receiving this scholarship at different universities in Nanjing, Jiangsu Province, China. We used the Analytical Hierarchy Process to quantify the overall satisfaction level of the international students. Descriptive statistics were then used to analyze the responses of the international students about the Chinese Government Scholarship. The Chinese Government Scholarship significantly affected international students. Additionally, most of the students were satisfied with the scholarship program. We suggest that the Chinese government should continue the scholarship policy by improving the education system to enhance the learning environment for international students.

Keywords: international students; Chinese Government Scholarship; Analytical Hierarchy Process (AHP)

1. Introduction

The “One Belt and One Road” project was started by Chinese President Xi Jinping for the development of the country, emphasizing the collaboration of China with Central Asia. This project aimed to stimulate the economic growth of the entire region by developing the central and western areas of China. The five goals of this project are: (1) facilitation of trade, (2) policy coordination, (3) liberalization and investment, (4) financial cooperation, and (5) capacity building and people connectivity.

The Chinese government initiated educational reforms with the purpose of promoting connectivity with the world through education. The quality of education in Chinese educational institutes was improved as a result of these reforms. The Chinese government offers different types of scholarships for international students such as the Chinese Government Scholarship, Ministry of Commerce (MOFCOM) Scholarship, University-Based Scholarship, Chinese Academy of Science (CAS) and The World Academy of Sciences (TWAS) President Scholarship, Confucius Scholarship, and Provincial Government Scholarship. Many professors also provide financial assistance to international students from the funding received for research projects.

The Chinese Government Scholarship is broader in scope compared with other scholarships offered by the Chinese government. The China Scholarship Council (CSC), headquartered in Beijing, is the institute that manages this program. According to the CSC, 338 higher education institutes

and universities available in different provinces in China can enroll international students by offering this scholarship. These universities offer admission to international students in various disciplines. Medicine, engineering, arts, management, economics, and Chinese language programs are the most popular studies in China.

The Chinese Government Scholarship is divided into two main categories: bilateral and non-bilateral. In the bilateral program, the educational sections of the Chinese embassies and consulates in other countries arrange admissions for international students into Chinese universities. In the non-bilateral program, students directly approach universities to obtain admission. The scholarship can be fully or partially funded. The fully-funded scholarship pays for tuition fees, accommodation, comprehensive medical insurance, and provides a monthly stipend. The partially-funded scholarship covers only tuition fees and students pay for the remainder of their expenses themselves. However, many international students also study in Chinese universities and their costs are covered by their own governments.

The Chinese Government Scholarship also includes a research grant for international students. These grants help international students to pay publication fees, laboratory expenses, conference fees, study tour costs, workshop fees, and other costs related to their study. This scholarship is intended to increase cultural harmony, build healthy relationships with other countries, and help to promote the Chinese language in other countries.

To determine the efficacy of the scholarship program, the satisfaction level of the students with the scholarship is often used. This indicator helps the government to analyze the effectiveness of the scholarship program and assists with decision-making. Therefore, these results must be valid and reliable. Otherwise, decision-makers will base their decisions on false or deceptive information, which can lead to poor decision-making. For this reason, knowing the point of view of the international students about the scholarship program is essential.

This study aims to examine the Chinese Government Scholarship to determine the satisfaction level of international students. Considerable research has been conducted to examine education programs for international students in different countries. However, only a few studies focus on the effectiveness of scholarships for international students. To the best of our knowledge, no systematic research has been conducted to determine the satisfaction level of international students with the Chinese Government Scholarship.

This study analyzed the quality of education, living situation, ability to cover expenses with the given stipend amount, and other relevant factors to determine the overall satisfaction level of international students, including the improvement in their personal life, education, economy, culture, and society in their home country as a result of their study. We focused on the international students in Bachelor, Master, and Ph.D. programs receiving the Chinese Government Scholarship and studying in different universities in the Nanjing district, Jiangsu Province, China.

A structured questionnaire was created, requesting the personal information of the students and containing questions about the scholarship program and Chinese education. Overall, we found significant evidence that most of the students are satisfied with the Chinese Government Scholarship.

The rest of the paper is organized as follows. The next section reviews work completed by other authors on the Chinese Government Scholarship and its historical perspective. The third section details the sample selection, data collection procedures, and the data analysis technique employed. The fourth section provides an empirical analysis of the study. The last section concludes the study and outlines the policy implications.

2. Literature Review

2.1. Chinese Government Scholarship

The Chinese Government Scholarship is the primary component of the official development assistance (ODA) program in China. The purpose of this program is to provide free education to

international students in China. The primary objectives of this program are to promote Chinese culture and language, as well as to soften the Chinese image at the international level. The success of this program depends on the post-secondary experience and the exposure of international students to promote a positive image of China at the international level. This program has been in place for more than 50 years, during which the Chinese government has granted a large number of scholarships to international students [1].

The Chinese government offers many scholarships to international students from different countries every year. This scholarship program helps to produce talent that positively contributes to the development of the students' home countries. It also facilitates educational, technological, economic, scientific, and trade cooperation between countries. Most of the international students in China are from African countries. Since the late 2000s, the majority of scholarships have been offered to graduate students, and more recently these have been expanded to include new disciplines including economics, management, education, and other social science studies [2].

The findings of a study of Beijing and Shanghai indicated that international students were satisfied with the Chinese Government Scholarship and their educational experience in China. Respondents highlighted the positive aspects of this scholarship, indicating that the program helps to build long, positive, and friendly relationships between China and their home countries. The findings also suggested that this scholarship helps spread goodwill and increases China's soft power [3].

To compete at the international level, establishing a strong economy and robust education system in the country is necessary. The Chinese government undertook several measures along with economic reforms to improve the quality of education. With these continuous efforts, the Chinese government was able to attract international students into the country. Devising the scholarship policy for international students was an integral part of the education system for international students. However, gaps still exist in the Chinese education system that, if filled, would enable the country to fully compete at the international level. The Chinese government had to revise and improve the scholarship system for international students by supporting and encouraging the participation of local governments [4].

The Chinese government needs to comprehensively reform the education system to improve the soft power of China. Reforms should include plans to convert the planned economy into a market economy and improve the education system for international students. Given the current situation, these goals could be accomplished by (1) familiarizing the public with the importance of the Chinese Government Scholarship Program, (2) learning from the experience of other countries that provide such scholarship programs, (3) progressively increasing the funding of the scholarship program, (4) appropriately increasing the monthly allowance of international students to cover daily expenses, and (5) creating an excellent scholarship management system [1].

Previous studies have focused on the role of the Chinese government in improving the quality of education in China. Those studies discussed the educational reforms implemented by the Chinese government to expand the international standing of Chinese education. A few studies have emphasized the effectiveness of the scholarship system for international students. However, this study focuses on the satisfaction level of international students with the Chinese Government Scholarship program and the effect of Chinese education on the personal life, education, economy, culture, and society of the home countries of the international students.

2.2. Historical Perspective of Chinese Government Scholarship

International students started to study in China with its transformation to the People's Republic of China. In 1950, Tsinghua University accepted the first batch of 33 international students from European countries [5]. In 1956, the Chinese government decided to offer scholarships to international students. Initially, they provided 50 scholarships to international students that only covered their daily expenses. They also extended 30 self-financed academic positions to international students from Western countries, but only a few students took advantage of this offering [6]. In 1958, the Chinese

government decided to increase the number of scholarships to attract more international students. From 1958 to 1960, they offered scholarships to approximately 2000 international students from 40 countries. Those scholarships covered their tuition fees, accommodation expenses, and provided a monthly stipend. Most of those students were from Asian and African countries. They learned the Chinese language at least one year before starting their in-country studies [3].

In 1966, the Chinese government suspended the scholarship program for a few years without providing any reason. They restricted all Chinese embassies and consulates in other countries from accepting new international students for study, and also suspended the study of international students who were studying in China at that time. This was a difficult time for international students in China. The Chinese government paid a travel allowance to international students who were sent back to their home countries. Initially, the suspension of their study was for one year, but this period was extended for six more years [6].

In 1970, the Chinese government formed an education team to lobby to attract international students under the umbrella of the state Council. It established education centers in Chinese embassies and consulates. In 1972, the Chinese government reinstated the policy for inviting international students for study. Initially, 200 such scholarships were granted to international students from two countries, Zambia and Tanzania. In the subsequent year, 300 more scholarship and 200 self-financed academic positions were made available to a variety of countries. From 1972 to 1976, a total of 2100 international students from 72 countries visited China for post-secondary study [6].

The decade of the 1980s was a golden period for international students studying in China. The government increased the number of international students and expanded the number of subject academic fields from 52 to 300 available to international students. They also increased the number of universities that accepted international students from 42 to 82 and reduced the language barrier by adopting English as the primary language of instruction for international students [6].

In 1995, the government passed its first education law, termed “the People’s Republic of China Education Law” that provides legal protection for the policy of inviting international students for study, a step that strengthened the overall scholarship program for international students [6]. In 1997, the government took initiative to regularize the scholarship program for international students by establishing a regulatory body called the “China Scholarship Council” (CSC) affiliated with the Ministry of Education. The scholarship program was then transferred to CSC from the Ministry of Foreign Affairs. After establishing the CSC, the Chinese government devised a policy to announce a large number of scholarships for international students every year. The CSC is liable for handling universities with admissions and scholarships for international students, and was extended in 2000 to include the conduct of an annual review of such scholarships [7].

Between 1995 and 2000, a total of 407,000 international students visited China from more than 160 different countries, with the government awarding 88,000 scholarships, an average of 17,600 per year. In 2003, 6153 scholarships were awarded to international students, a number of scholarships that increased in subsequent years to 6715 in 2004 and 10,000 in 2006 [3].

In 2014, a total of 377,054 international students studied in China from 203 countries, with the government awarding scholarships to 9.8% of such students. These students enrolled in 775 research institutes, colleges, and universities in different provinces. These international students were mainly from the U.S., Thailand, and the Republic of Korea [8].

In 2015, a total of 397,635 international students visited China from 202 countries, 5.46% more than the preceding year. These students studied in 811 colleges, research institutes, and universities in 31 provinces, autonomous regions, and municipalities across China. The Chinese government awarded 40,600 scholarships to international students with the remainder being self-financed. About 184,799 international students were admitted for academic degrees, an increase of 20,405 students compared to the previous year [9].

3. Materials and Methods

3.1. Sampling and Data Collection

We selected Nanjing district, Jiangsu Province, China as a sample site for our study. Nanjing is among the most popular destinations for higher education international students in China. We selected a sample of 150 international students who are receiving Chinese Government scholarships in different universities. We used a structured questionnaire to collect the desired data which consisted primarily of closed-ended questions intended to elicit the level of student satisfaction with the scholarship program. The questionnaire included mostly closed-ended questions and mainly addressed the satisfaction level of international students with the Chinese Government Scholarship. We also collected suggestions from students for improving the scholarship system. We distributed the questionnaires among international students by approaching their dormitories and classes in their respective universities and also provided a web-based questionnaire to different universities to collect the highest number of responses. We received a total of 150 positive responses from international students from different countries.

3.2. Econometric Model

We developed a quantitative index by using the Analytical Hierarchy Process (AHP) to quantify the overall satisfaction level of international students. Furthermore, we calculated the descriptive statistics by using the frequency distribution and converting it into a percentage to analyze responses. We used the Yaahp 6.0 software (Shanxi Yuan Jue Ce Software Technology Co., Ltd., Taiyuan, China) to apply the AHP.

Analytical Hierarchy Process (AHP)

The AHP is a multi-criteria decision-making approach used to solve complex problems. The creator of AHP claims that the process is natural to our general thinking and intuition. AHP associates logic and intuition and provides the ability to rank choices. AHP makes a pair-wise comparison of different elements using weights to measure the qualitative or quantitative performance of an element. The weights range from 1 to 9, with 1 meaning “absolutely less valued than”, 4 meaning “equal”, and 9 for “absolutely more important than” [10].

For many years, AHP has become an important tool for researchers and decision-makers to order complex data. In the literature, many studies have used the AHP tool in different areas such as resource allocation, etc. The distinctive feature of AHP is that it integrates different techniques such as Fuzzy Logic, Linear Programming, and Quality Function Deployment, enabling users to benefit from different methods to easily achieve their main goal [11].

Another prominent feature of AHP is that it allows decision-makers to solve a complex problem, exercise an analytical approach, and use both subjective and objective approaches in decision-making. Some studies focus on AHP as a theory of measurement that addresses measurable items that have more importance in decision-making theory, models of the brain, and conflict resolution. AHP starts with defining the major goal of the problem. The next level contains the main elements that lead to the major goal. The last layer includes setting the alternatives of the underlying issues. Each hierarchical level is connected to the others [11].

4. Empirical Analysis

4.1. Respondent Profiles

To become familiar with respondents and their backgrounds, we asked preliminary questions of the students about their gender, degree, year of study, and social class. We also asked about their visiting or studying abroad experience and their familiarity with the Chinese language prior to arriving in China. We inquired about their willingness to study in China without a scholarship and about “One Belt and One Road” to understand their familiarity with this popular Chinese project.

Figure 1a,b show that male respondents participated more in this study compared to female respondents. First year Ph.D. students participated most in this study. Mostly, participants belonged to middle class families. They had no experience in visiting another country for educational or other purposes before visiting China and most respondents did not learn Chinese prior to arrival. Mostly, respondents would not have agreed to study in China without the scholarship. Comparatively, most of the respondents were aware of the “One Belt and One Road project.”

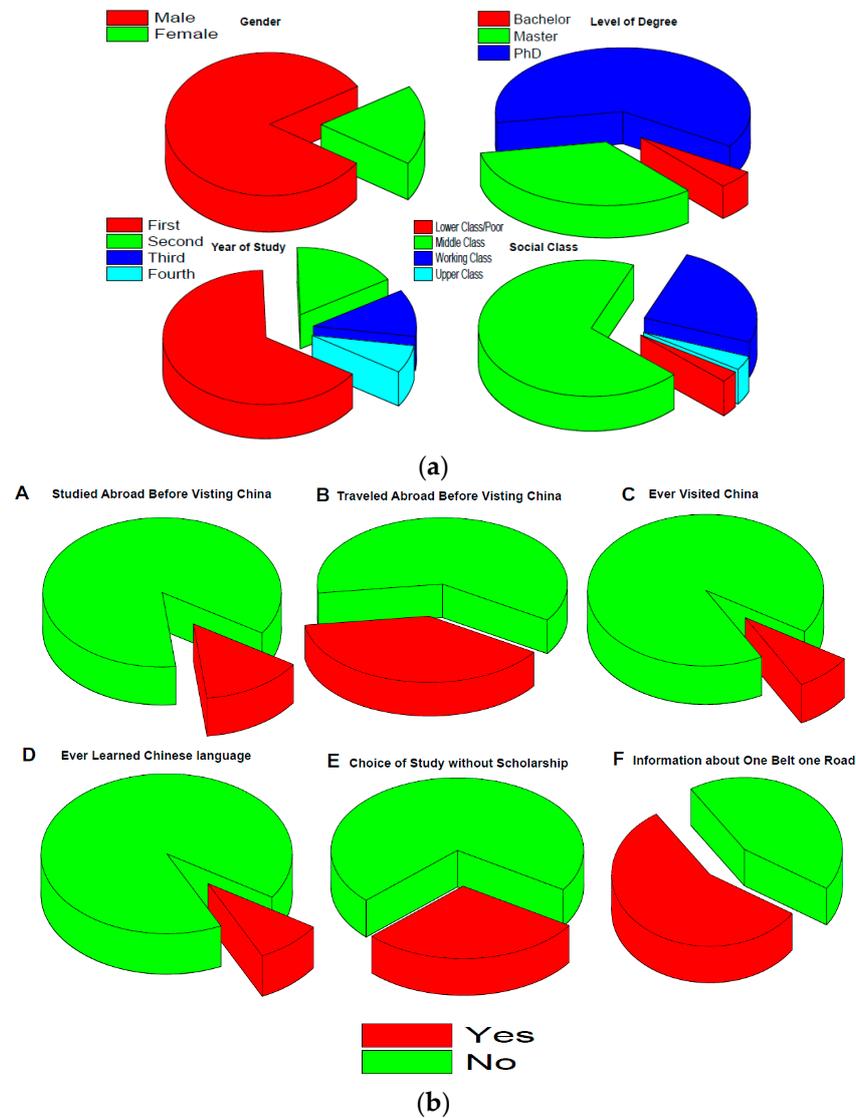


Figure 1. (a) Respondent profiles (specific). (b) Respondent profiles (general).

4.2. Quantitative Index Development with the Analytical Hierarchy Process (AHP)

First, we defined the goal of the model for applying the AHP. At the second layer, we identified significant elements, which led to the goal of the model. At the third layer, we divided significant elements into more sub-criteria. At the last layer, we defined the alternatives of the model. We calculated the comprehensive weights for the criteria and weights for the sub-criteria by using this model. After, we multiplied the score of each respondent with the comprehensive weights of the criteria and the weights of the sub-criteria. We then summarized the score for each respondent, as shown in Table 1.

Table 1. Quantitative index of the overall satisfaction level of international students using the Analytical Hierarchy Process (AHP).

| Criteria | Sub-Criteria | Weight | Comprehensive Weight |
|---|---|--------|----------------------|
| Improvement in Personal Life of Students | Increase in research capabilities | 0.319 | 0.1603 |
| | Improvement in teaching capabilities | 0.179 | |
| | Promote the Chinese language | 0.0806 | |
| | Be a preferential candidate for jobs in Chinese running projects | 0.1437 | |
| | Be financially strong and able to support their family by finding a job | 0.2777 | |
| Improvement in Education of Home Counties | Improvement in faculty members | 0.1026 | 0.4668 |
| | Improvement in teaching pattern | 0.1295 | |
| | Strong research culture development | 0.2414 | |
| | Improvement in education curriculum | 0.061 | |
| Improvement in Economy of Home Countries | Increase in awareness of higher education | 0.4655 | 0.0953 |
| | Decrease in unemployment | 0.0613 | |
| | Improvement in long-term economic growth | 0.1441 | |
| | Improvement in the level of income | 0.1329 | |
| | Fostering of technological innovation | 0.2722 | |
| Improvement in Culture and Society of Home Counties | Improvement in performance of government and private sector | 0.3895 | 0.2776 |
| | Promotion of Chinese language | 0.0904 | |
| | Adoption of positive norms of Chinese | 0.0685 | |
| | Improvement in the relationship between countries | 0.4355 | |
| | Building an institutional level relationship of countries | 0.1748 | |
| | Upgradation of expertise in new technology | 0.2307 | |

4.3. Quantitative Descriptive Analysis of Overall Satisfaction Level of International Students

We calculated the mean and comprehensive values of all leading indicator questions for the overall satisfaction level of the international students, as shown in Table 2. We used the final score of the respondents to measure the mean value. We used the interaction of the weighted average score calculated using the AHP and the final score of the respondents to measure the comprehensive value.

Table 2 presents the quantitative descriptive analysis of the overall satisfaction level of international students by comparing students from Pakistan and other countries in terms of four main indicators that include improvements in their personal life, as well as improvements in the education level, economy, culture, and society in their home countries, as shown in Figure 2. We asked many questions related to these primary indicators and used the Likert scale to collect the responses. The mean values of these questions show that most of the students' responses were positive, whereas the comprehensive values also fell above average on the positive side. The mean and comprehensive values of the Pakistani students laid more on the positive side compared with students from other countries. This shows that Pakistani students were more satisfied compared with the students from other countries.

Table 2 shows that both students from Pakistan and other countries believe that a Chinese education will improve their personal lives. International students learn many research and teaching pattern tools during their study period in China, which improve their research and teaching capabilities. Every international student learns basic Chinese during their study. They can promote the Chinese language in their home countries. The Chinese government is running development projects in many countries, so the students that graduate from China can be potential candidates for jobs in these international Chinese projects, through which they can financially support themselves and their families.

Table 2 reveals that students from both Pakistani and other countries consider that a Chinese education will improve the education level of their home countries. Most of the Ph.D. graduates will join the teaching profession in colleges and universities. As a result, faculty members that graduate from Chinese institutions can use the Chinese teaching pattern to teach students in their home countries. They can create a strong research culture and improve the educational curriculum in their home countries. Their study experience in China can also be a helpful source of awareness of higher education.

Table 2. Quantitative descriptive analysis of the overall satisfaction level of international students.

| Criteria | Sub-Criteria | Pakistani Students (n = 83) | | Other Countries Students (n = 67) | |
|---|---|--------------------------------|---------------------|--------------------------------------|---------------------|
| | | Mean Value | Comprehensive Value | Mean Value | Comprehensive Value |
| Improvement in Personal Life of Students | Increase in research capabilities | 4.2771 | 4.1678 | 4.0597 | 3.8796 |
| | Improvement in teaching capabilities | 4.2892 | | 3.8955 | |
| | Promote the Chinese language | 3.5904 | | 3.6269 | |
| | Be a preferential candidate for jobs in Chinese running projects | 3.7470 | | 3.6866 | |
| | Be financially stable and able to support their family by obtaining a job | 4.3494 | | 3.8358 | |
| Improvement in Education of Home Counties | Improvement in faculty members | 4.1084 | 4.2393 | 3.7164 | 3.9017 |
| | Improvement in teaching pattern | 4.0361 | | 3.8507 | |
| | Strong research culture development | 4.2289 | | 3.9552 | |
| | Improvement in education curriculum | 4.0000 | | 3.7015 | |
| | Increase awareness of higher education | 4.3614 | | 3.9552 | |
| Improvement in Economy of Home Countries | Decrease in unemployment | 3.4940 | 3.8615 | 3.3284 | 3.7112 |
| | Improvement in long-term economic growth | 3.6867 | | 3.6418 | |
| | Improvement in the level of income | 3.7711 | | 3.5522 | |
| | Fostering of technological innovation | 3.9518 | | 3.7761 | |
| | Improvement in performance of government and private sector | 3.9518 | | 3.8060 | |
| Improvement in Culture and Society of Home Counties | Promotion of Chinese language | 3.8675 | 4.2640 | 3.5522 | 3.9724 |
| | Adoption of positive norms of Chinese | 3.8554 | | 3.5821 | |
| | Improvement in the relationship between countries | 4.4940 | | 4.0149 | |
| | Building an institutional level relationship between countries | 4.1687 | | 4.0448 | |
| | Upgradation of expertise in new technology | 4.1807 | | 4.1194 | |



Figure 2. Main indicators of overall satisfaction level of international students.

Table 2 highlights that both students from Pakistan and other countries believe that a Chinese education will be helpful for the economy of their home countries in many ways. This education will support international students in finding a job in their home and other countries, which will decrease the unemployment rate, and increase the level of personal and family income. A Chinese education will foster technological innovation and improve the performance of the government and private sectors. Ultimately, such practices will help achieve sustainable and long-term economic growth in their home countries.

Table 2 also indicates that students in both Pakistan and other countries believe that they can apply many practices in Chinese culture learned during their study period in China, which can help improve their own culture and society. They can adopt many of the positive Chinese norms including their social behavior, balanced diet, exercise habits, and sleep and work schedules. Chinese education can also help improve the relationships between countries and build institutional-level relationships. Chinese education can also enhance the ability of students to use new technology. Lastly, students that have graduated from Chinese institutions can promote the Chinese language in their home countries.

4.4. Comparison of the Chinese Education System with Other Countries' Education Systems

Usually, students choose different countries for their post-secondary studies, selecting the best option based on various criteria. Table 3 describes the response of international students when comparing the Chinese education system with their other international options for studying.

Table 3 reveals that most of the respondents agreed with the view that the Chinese education system is better compared with the education system of their other country options in terms of having better quality research (57% of respondents) and more advanced use of technology (55% of respondents). However, most respondents (77%) argued that they faced a language barrier during their study in China. Overall, respondents believed the education system of their other choice of country was better than the Chinese education system in terms of university ranking (59% of respondents) and admission criteria strictness (55% of respondents). Respondents had a similar response when comparing the Chinese education system with the education system of their other choice of country regarding education curriculum and qualified faculty members.

Table 3. Comparison of the Chinese education system with other countries' education systems.

| Comparison of the Chinese Education System with Other Countries' Education Systems | Chinese Education System | Other Country's Education Systems |
|--|--------------------------|-----------------------------------|
| (1) Better quality research | 57% | 43% |
| (2) Better university ranking | 41% | 59% |
| (3) Admission criteria strictness | 45% | 55% |
| (4) Language barrier | 77% | 23% |
| (5) Advanced technology usage | 55% | 45% |
| (6) Better education curriculum | 50% | 50% |
| (7) More qualified faculty members | 50% | 50% |

4.5. Academic Help for Students with Scholarship

Table 4 demonstrates that 68% of respondents agreed with the given statements, whereas 9% of respondents disagreed with these statements. Scholarships were generally considered to be beneficial for international students, providing free access to many facilities related to their study, such as access to research databases, usage of laboratory items, presenting papers in conferences, publishing papers in journals, attending academic workshops, and access to library books and stationery items.

Table 4. Academic help for students with scholarships.

| Statement | Strongly Disagreed | Disagreed | Neutral | Agreed | Strong Agreed |
|--|--------------------|-----------|---------|--------|---------------|
| (1) Free access to research databases | 3% | 5% | 22% | 43% | 28% |
| (2) Free usage of lab items | 2% | 3% | 20% | 33% | 42% |
| (3) Free to publish papers in journals | 2% | 2% | 27% | 39% | 29% |
| (4) Free to present research papers at international conferences | 2% | 5% | 32% | 37% | 24% |
| (5) Free attendance at academic workshops | 3% | 5% | 24% | 38% | 30% |
| (6) Free access to library books | 2% | 4% | 15% | 41% | 38% |
| (7) Free stationary items for study | 11% | 19% | 21% | 27% | 23% |

4.6. Coverage of Daily Expenses with Scholarships

Table 5 shows that 44% of respondents agreed that they can pay for their daily expenses with their scholarship, whereas 32% of respondents disagreed, meaning that most international students can cover their expenses using their scholarship, except for major expenses. Respondents stated they could pay for medical costs, traveling cost within a city, accommodation, recreational expenses, utility bills, food, and essential clothing. However, it is difficult for them to bear the cost of traveling home or to other cities or provinces in China.

Table 5. Ability to cover daily expenses with the received scholarship.

| Statement | Strongly Disagreed | Disagreed | Neutral | Agreed | Strong Agreed |
|---|--------------------|-----------|---------|--------|---------------|
| (1) The medical cost of seasonal sickness | 7% | 16% | 29% | 33% | 15% |
| (2) The medical cost of serious illness | 9% | 19% | 28% | 27% | 17% |
| (3) Traveling cost within Nanjing | 20% | 19% | 23% | 29% | 8% |
| (4) Traveling cost to other cities | 21% | 26% | 27% | 20% | 6% |
| (5) Traveling cost to visit home | 35% | 23% | 15% | 19% | 7% |
| (6) Accommodation rent | 1% | 9% | 17% | 43% | 31% |
| (7) Recreational activities | 8% | 18% | 31% | 33% | 11% |
| (8) Utility bills | 13% | 17% | 24% | 30% | 15% |
| (9) Standard meals | 11% | 14% | 21% | 40% | 14% |
| (10) Essential clothes, shoes, etc. | 13% | 17% | 26% | 34% | 10% |

4.7. Satisfaction with Study and Stay in China

Table 6 shows that 56% of respondents were satisfied with their study and stay in China, whereas 19% were dissatisfied, meaning that most of the international students were satisfied with their study and stay in China. They were satisfied with the teaching methodology, curriculum, laboratory equipment, study rooms, research workshops, research conferences, study and recreational tours, library, and other facilities.

They were dissatisfied to some extent with the canteen food available at the university. This may be due to the diversified cultures of international students. They were also dissatisfied to some extent with the playing areas or gymnasium facilities and complaint resolution. Although Chinese universities have provided enough fitness facilities for international students, they charge a high fee for using gymnasium equipment. Chinese universities have also established complaint resolution procedures to deal with international students, but their performance needs to be improved.

Table 6. Satisfaction with study and stay in China.

| Statements | Strongly Dissatisfied | Dissatisfied | Neutral | Satisfied | Strong Satisfied |
|-------------------------------|-----------------------|--------------|---------|-----------|------------------|
| (1) Teaching methodology | 3% | 5% | 21% | 47% | 23% |
| (2) Curriculum | 1% | 7% | 24% | 47% | 21% |
| (3) Laboratory equipment | 1% | 3% | 21% | 43% | 31% |
| (4) Study rooms | 4% | 5% | 21% | 43% | 27% |
| (5) Research workshops | 1% | 9% | 29% | 41% | 21% |
| (6) Research Conferences | 1% | 11% | 27% | 45% | 17% |
| (7) Study tours | 7% | 19% | 27% | 32% | 15% |
| (8) Recreational tours | 9% | 15% | 31% | 30% | 15% |
| (9) Library books | 5% | 9% | 23% | 40% | 23% |
| (10) Research databases | 1% | 9% | 23% | 44% | 24% |
| (11) Accommodation facilities | 9% | 13% | 17% | 46% | 15% |
| (12) Canteen food | 21% | 21% | 30% | 23% | 4% |
| (13) Stipend amount | 9% | 17% | 33% | 35% | 6% |
| (14) Gymnasium/playing areas | 9% | 21% | 25% | 37% | 8% |
| (15) Complaint resolution | 9% | 24% | 28% | 31% | 8% |

5. Discussion and Conclusions

The objective of this study was to analyze the Chinese Government Scholarship received by international students, with a focus on Pakistani students, to understand their satisfaction with this scholarship program. We used a structured questionnaire to collect data from international students, which included questions about their personal information, scholarship, educational plans, satisfaction with the university, and many others. We also requested their suggestions for improving the scholarship system. We approached international students from different universities in Nanjing, who are receiving the Chinese Government Scholarship. We received 150 positive responses.

We used the AHP to construct a quantitative index to measure the overall satisfaction level of international students. Furthermore, we estimated the descriptive statistics by using the frequency distribution and then converted it into a percentage to analyze the responses of international students about the Chinese Government Scholarship. We found that the Chinese Government Scholarship had a substantial effect on international students. We found that most students were satisfied with the Chinese education system, scholarship, and living in China. The AHP findings showed that Pakistani students are more satisfied as compared to students from other countries. This indicates that this scholarship program significantly affects the personal life of the students, and the education, economy, culture, and society of the home countries of the students.

Results from the comparison of the Chinese education system with the education system of other countries showed that the Chinese education system is comparatively better than that of many

other countries. These results suggest that some improvements in the Chinese education system are required. The Chinese government should improve the admission criteria for international students in Chinese education institutions, and measures should be implemented to upgrade the ranking of Chinese education institutions at the global level. They should provide a more conducive learning environment to international students by minimizing the language barrier.

Results from the descriptive analysis showed that most of the students were satisfied with the academic help provided to students with scholarships, such as the usage of laboratory items, free research publications, and others. From the viewpoint of most of the respondents, they can cover their daily expenses using the scholarship funding, such as recreational expenses, utility bills, food, and others. The results also highlighted that most of the respondents were satisfied with their study in China in terms of teaching methodology, curriculum, laboratory equipment, and study rooms.

The results of the study showed that international students are satisfied with their learning environment during their study period in China. They learned the Chinese language, new techniques for scientific research, academic paper writing, and about their field of studies. They improved their ability to use new technology and software to conduct scientific research by attending research workshops. They also enhanced their presentation skills by participating in research conferences and presentations during classes. As the universities arranged study tours for international students, they also gained practical experience from those tours. They were familiarized with Chinese history and culture by visiting historical places and learning from Chinese friends and teachers.

Our study has several limitations. Our analysis was not based on a representative sample of all international students studying in China. Our sample was only based on international students who were studying in different universities in Nanjing, China. Nanjing is one of the major destinations for international students in China. We cannot rule out the importance of the use of a representative sample, which may reveal different results. This can be achieved with future research in this area.

Policy Recommendations

International students visit China from many countries for the purpose of studying. Although China is not an English-speaking country, Chinese universities offer admissions to international students in both English and Chinese. Most international students join academic programs that are offered in English. However, some international students, especially at the undergraduate level, also visit China to join academic programs offered in Chinese. Most of the international students face a communication barrier during their studies and in daily living, which ultimately affects their learning during their stay in China.

We recommend that Chinese universities should provide a more conducive environment to international students, especially by offering more English elective courses to international students. They should train university administrative staff in English. However, countries that send their students to China should also teach the Chinese language to their students prior to sending them to China to study. This would help minimize the language barrier, and the learning ability and adaptation to Chinese culture of international students could be improved. Ultimately, this investment of the Chinese government into education will be productive for international relationships, the economy, and increasing China's global soft power.

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References

1. Qing, X. Discussions on Current Situation of Chinese Government Scholarship Scheme for International Students and Its Monetization Reform. *Bull. Sci. Technol.* **2011**, *3*, 463–466.
2. Niu, C. China's Educational Cooperation with Africa: Toward New Strategic Partnerships. *Asian Edu. Dev. Stud.* **2013**, *3*, 31–45. [[CrossRef](#)]
3. Dong, L.; Chapman, D.W. The Chinese Government Scholarship Program: An Effective Form of Foreign Assistance? *Int. Rev. Edu.* **2008**, *54*, 155–173. [[CrossRef](#)]
4. Hui, L. An Analysis of the Scholarship System for Foreign Students in China. *J. High. Edu. Manag.* **2008**, *2*, 77–80.
5. Zhang, X. *Study in China*; China Intercontinental Press: Hong Kong, China, 2003.
6. Zhengping, T.; Lang, X.; Guping, Z. *Sino-Foreign Educational Exchange History*; Guangdong Education Press: Guangzhou, China, 2004.
7. Ministry of Education PRC. *Action Scheme for Invigorating Education towards the 21st Century*; Ministry of Education PRC: Beijing, China, 2000.
8. Ministry of Education PRC. *China Attracts More Overseas Students in 2014*; Ministry of Education PRC: Beijing, China, 2015.
9. Ministry of Education PRC. *China Releases Report on Foreign Students for 2015*; Ministry of Education PRC: Beijing, China, 2016.
10. Strasser, S.E.; Ozgur, C.; Schroeder, D.L. Selecting a Business College Major: An Analysis of Criteria and Choice Using the Analytical Hierarchy Process. *Am. J. Bus.* **2002**, *17*, 47–56. [[CrossRef](#)]
11. Nguyen, H.L.; Fong, C.-M.; Ho, C.-T. Using Analytical Hierarchy Process in Decision Analysis—The Case of Vietnam State Securities Commission. *IBusiness* **2010**, *2*, 139–144. [[CrossRef](#)]



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