

Study on the Sustainability Value of Public Space Culture Service – Xinjiang International Grand Bazaar, China as an Example

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Abstract:

"Bazaar" is a transliteration of the minority language of Xinjiang Region in China. Its meaning is similar to the "street market". It is the collective name for urban and rural commercial streets and bazaars by ethnic minorities in Xinjiang. Moreover, the significance of "Go to Bazar" to all ethnic groups in Xinjiang is completely different from that of the Mainland, because Bazaar has undertaken more social functions, which can be divided into: (1) commercial trade function (2) cultural heritage function (3) information dissemination function (4) spiritual entertainment function (5) social interaction function (6) educational sensitization function. Through the renewal and development of China's Xinjiang Bazaar in recent years, many Bazaar complexes have built. However, Xinjiang's traditional Bazaar complex has problems such as serious homogenization of commodities, emphasis on short-term effects, and lack of cultural service functions in public spaces. Through 743 questionnaire survey and site mapping records, the growth and peak periods of passenger flow in Xinjiang International Grand Bazaar (The following is referred to simply as XIGB) after reconstruction are analyzed, which is one of the largest in the world. It is found that by increasing the area of cultural service functions in public spaces such as squares, pedestrian streets, and cultural and artistic public spaces, it can not only effectively attract all kinds of people, increase the flow of people, but also make people stay longer and create more shared spaces for citizens to participate in public activities. And stimulate potential consumption and generate higher value. The combination of public space cultural service functions and commercial functions of XIGB is mainly the integration type. Compared with the types of juxtaposition and connection, it can integrate with the urban public space in time and space, with a more powerful openness, inclusiveness and sustainability. Based on the integration type synergy theory to analyze the cultural service function of public space for the economic, environmental and social value of XIGB, the research results show that the transformation and upgrading of XIGB focuses on the culture of public space In terms of service function, it can

give full play to the economic value, space value and social value brought by the synergy effect. This result has certain reference value for the design and operation of Xinjiang Bazaar complex.

Keywords: *Public space culture service function, Synergy effect, Bazaar urban complex, Sustainability value.*

I. INTRODUCTION

1.1 Definition and Features of Bazaar

Derived from Persian in the 15th century, the word “bazaar” is a transliteration of the minority language of Xinjiang Region in China. Its meaning is similar to the “street market”, as the general name of urban commercial streets and markets for ethnic groups in Xinjiang Region [1]. With the rehabilitation and development in the past years, many bazaar complexes emerged in Xinjiang, among which the most famous one is Xinjiang International Grand Bazaar (hereinafter referred to as XIGB) located in Urumqi (Fig 1). Completed in August 2003, it is the largest bazaar in the world at present, aiming at “building a masterpiece of Xinjiang traditional architecture as a landmark complex in the city” [2]. The differences between bazaar complex and mixed-use complex are as follows. (Table I)

1.2 Current Situation of Bazaar Complex

Due to the impact of Internet on traditional business, the operation form of traditional bazaar in Xinjiang Region has been faced powerful challenges in recent years. Through investigation of the bazaar complex in Xinjiang, the author found three obvious problems as follows: (1) The homogeneity trend of business. In recent years, most new-built and renovated bazaar complexes tend to become commercial ones, in which most traded goods are repetitive that cannot get rid of homogeneous competition. (2) Attention only to short-term benefits and commercial appearance, leading to unscientific planning of the bazaar complex construction. Because most of the developers have no experiences in operating the bazaar complex, all they concern about are the commercial space and architectural aesthetics. (3) Lack of vitality and healthy management. At present, the lack of vitality is widespread in bazaar complexes, making it difficult to play bazaar’s due role in the urban space. This is mainly because the developers have over exaggerated the “commercial vitality” driven by economic interests but ignored the “public vitality” inspired by urban attributes.



Fig 1: East facade of the Xinjiang International Grand Bazaar

Source: Photos taken by the author

TABLE I. The difference between bazaar complex and mixed-use complex

	THE SAME	THE DIFFERENCES			
BAZAAR MIXED-USE COMPLEX	accord with the characteristic of commercial	most include religious function	cultural activities prefer outdoor open space	the design is mainly regional or religious style	operators are mainly minorities
COMMERCIAL MIXED-USE COMPLEX	mixed-use complex	very few include religious function	cultural activities prefer indoor open space	the design is mainly modernism style	operators are mainly Hans

Source: Table drawn by the author

1.3 Context and Definition of Study on the Public Space Cultural Service Function of Bazaar

The Chinese government hopes to create a framework in which the government, market and society can participate in the construction of public space cultural service system all together. Due to its large scale, large commercial passenger flow and good traffic accessibility, the bazaar complex in Xinjiang is an excellent spatial carrier for the above objectives, and will inevitably become an essential place for urban public space cultural service in Xinjiang in the future.

Functionally, the bazaar complex can be divided into two types: one is the business function, such as the commerce, catering, entertainment and office; the other is the public space cultural service, such as urban life-style, culture and art, square space, Folklore and religion, public landscape, sports and leisure, community services, education and training, and so on.

The commercial functions support the daily operation of bazaar complex, while the public space cultural service can facilitate the interaction between the bazaar complex and the city, and strongly promote the synergy effect of the bazaar complex at the same time.

II. OVERVIEW

2.1 Current Studies on Bazaar at Home and Abroad

Not much researches on bazaar made by international scholars, that may be related to the fact that the form of bazaar mainly exists in the countries of Middle East and part of West Asia, and most researches are focused on the levels of design form and cultural society. The former mainly includes the design interpretation of XIGB by the CAE academician WANG Xiaodong; the summary of basic architectural features of bazaar in Xinjiang by Emamhusan, and his viewpoints on the regional architectural design of bazaar [3]; the spatial analysis and morphological evolution of “bazaar street” and urban fabric in Dhaka by Ferdous [4], and so on. Studies on the cultural society of bazaar are mainly the papers on bazaar culture and space contributed by Prof. Wang Min of Xinjiang University in China in recent years.

2.2 Current Studies on Synergy Effect of Urban Complex

The study on mixed-use complex synergy effect is a new subject. Most studies focus on the direct synergy effect, only a part are on the indirect and the site synergy effects. Studies of this area mainly include the discussion of Eberhard on synergy effect of mixed-use complex in the city [5]; the overview of CAE academician Wang Jianguo on the possible synergy effects of mixed-use complex [6]; the introduction of ULI Mixed Use Manual, in which the main synergy effects that may result from the mixed use are described in detail [7]; studies of Zhang Yun on the combined space of mixed-use complex based from the perspective of indirect synergy effect; the establishment of collaborative public space design system by Lv Xinlei based on strategy sorting of the design and techniques of urban complex; the monograph and papers of Wang Zhendong on the synergy effect of urban complex.

2.3 Conclusion of the Overview

In conclusion, the biggest difference between the bazaar complex in Xinjiang Region and other mixed-use complexes lies in its public space culture service functions with distinct local features. There are studies on the architecture of bazaar at home and abroad, which basically focus on the design mode and social culture, but few studies are from the perspective of bazaar’s public space cultural service functions. Compared with similar studies, the study on

mixed-use complex from the principle of synergy effect and the perspective of public space cultural service functions has achieved some results, but further exploration is still needed. The study on the public space cultural service functions of bazaar complex based on the principle of synergy effect is just started.

III. PRELIMINARY ANALYSIS

3.1 Current Situation of International Grand Bazaar after Renovation

In 2018, the tourist destination of XIGB, China was comprehensively upgraded, a pedestrian street about 800 meters long with regional features was built. Since the new debut of the pedestrian street, a large number of domestic and foreign tourists have poured in every day. Centered on XIGB, the new pedestrian street connects to the original one in the shape of “T”, and is divided into three zones, with more than 3,300 shops together with the commercial building and square of the original grand bazaar. Among which, Zone A is mainly for cultural creation, tourism and intangible cultural heritage products, Zone B is positioned as an “international fashion” street, and Zone C is the “gourmet” street.

3.2 Problem of Phenomenon

With the reopening of XIGB, the visitor number has increased from the previous 20,000-30,000 person-time daily to more than 100,000, and even exceeded 150,000 on weekends and holidays, something about five-fold increase [8]. During the National Day, the maximum daily flow of visitors unexpectedly reached nearly 300,000. After the reopening, XIGB has been maintaining a high peak flow of visitors from 20:00 to 24:00 every night (Fig 2), that differs obviously from other urban complexes, because during this period of time, the visitor flow in common urban complexes will decrease sharply. According to Baidu heat map, the visitor flows of XIGB and MM Shopping Centre in the same city are compared, the result shows a significant difference in the visitor flow after 21:00 during Corban Festival though the latter has also a popular pedestrian street (Fig 3).

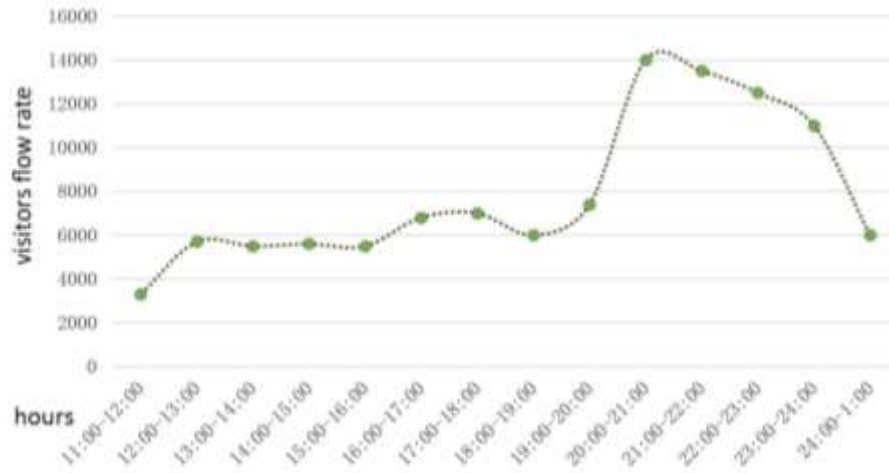


Fig 2: Xinjiang International Grand Bazaar visitor flow/hour (Recorded in 2018.8.26)

Source: Chart drawn by the author

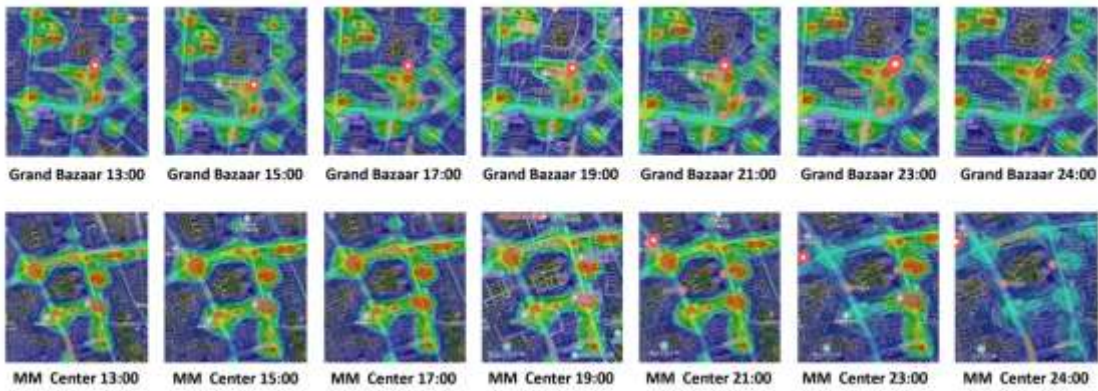


Fig 3: Comparison of Xinjiang International Grand Bazaar and MM Shopping Center in Baidu heat diagram (Recorded in 2018.8.26)

Source: Chart drawn by the author

TABLE II. Comparison of data before and after the reconstruction of Xinjiang International Grand Bazaar

	BUILDING AREA	AREA OF PUBLIC CULTURAL SERVICE FUNCTIONS PLACE	FLOW OF VISITORS ON WEEKDAYS	FLOW OF VISITORS ON WEEKENDS, FESTIVAL AND HOLIDAYS

BEFORE THE RENOVATION OF INTERNATIONAL GRAND BAZAAR	90,000m ²	6,000m ²	20,000-30,000 persons	30,000-40,000 persons
AFTER THE RENOVATION OF INTERNATIONAL GRAND BAZAAR	100,000m ²	19,000m ²	100,000-120,000 persons	140,000-180,000 persons

Source: Table drawn by the author

3.3 Conclusion of Preliminary Analysis

Before and after renovation, the building area of XIGB has no obvious expansion (rising about only 11%). So, what are the main function changes? It is clear that the synergy effect has been created by the original functions and the newly added functions, which significantly improves the sustainability, increases five times more visitor flow, and maintains a higher visitor flow during the evening. Through field research and analysis, the main reasons are concluded as follows: The area of public space cultural service functions such as squares, pedestrian streets and cultural and artistic functions is distinctly expanded (Table II), which brings a better synergy into full play between the public space cultural service functions and commercial functions, thus enhancing the sustainability of the complex. Next, the synergy effect theory is applied to discuss the sustainable value of public space cultural service functions of XIGB.

IV. VALUE OF PUBLIC SPACE CULTURAL SERVICE FUNCTIONS BASED ON SYNERGY EFFECT THEORY

4.1 Definition of Synergy Effect

In the field of architectural design, the synergy effect mainly refers to the organic combination of various functional subsystems of urban complex, which are complementary to each other and could produce a higher value than single-purpose buildings or multi-purpose buildings with stronger sustainability. In brief, the synergy effect of “1+1>2” is the core value of urban complex, and its important feature different from other building types [9].

4.2 Combination Types of Public space Culture Service Functions and Commercial Functions

According to the preliminary results of the research team, the combination of public space culture service functions and commercial functions can be divided into juxtaposition, connection and integration three types (Fig 4). The combined mode of public space cultural service functions and commercial functions of XIGB belongs to the scope of integration type. This type features powerful openness, inclusiveness and sustainability, and can effectively integrate various functional subsystems, making XIGB an important place for citizens' cultural entertainment and leisure to attract a large number of tourists for XIGB at night and weekends.

4.3 Direct Synergy Effect of “Integration”: Enhancing the Economic Value

4.3.1 Research on the main group

Through 743 paper questionnaires and online questionnaires, certain ideas about the users and their consumption habits in XIGB are obtained. Statistics of the respondents show that the main consumer group is between 36 and 55 years old, accounting for 58.4%, and other 46.8% of the consumers have full-time jobs. In the statistics of the retinue of respondents, 50.5% of them travel with friends or colleagues, and 30.5% of them travel with family members (Fig 5). When asked what they would do while they were there, the main answers are shopping, dining, strolling around, meeting friends, leisure and entertainment. The frequency of these consumers to XIGB is mainly once a month (except tourists), and they can be regarded as a relatively loyal consumer group.

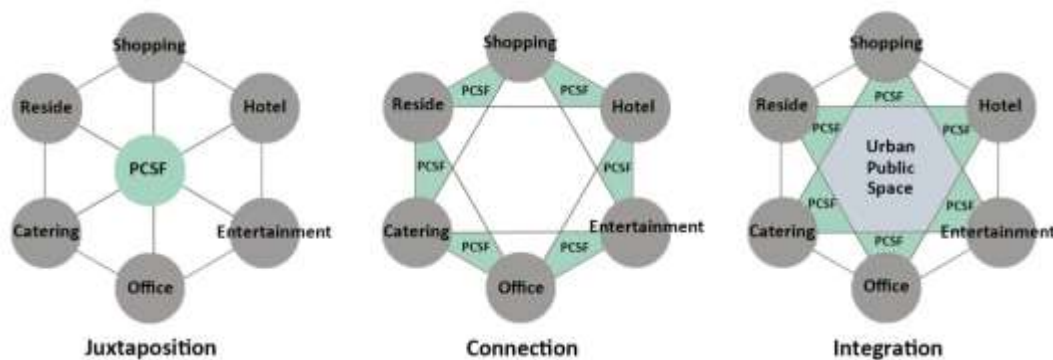


Fig 4: Combination of public cultural service functions and commercial functions

Source: Chart drawn by the author

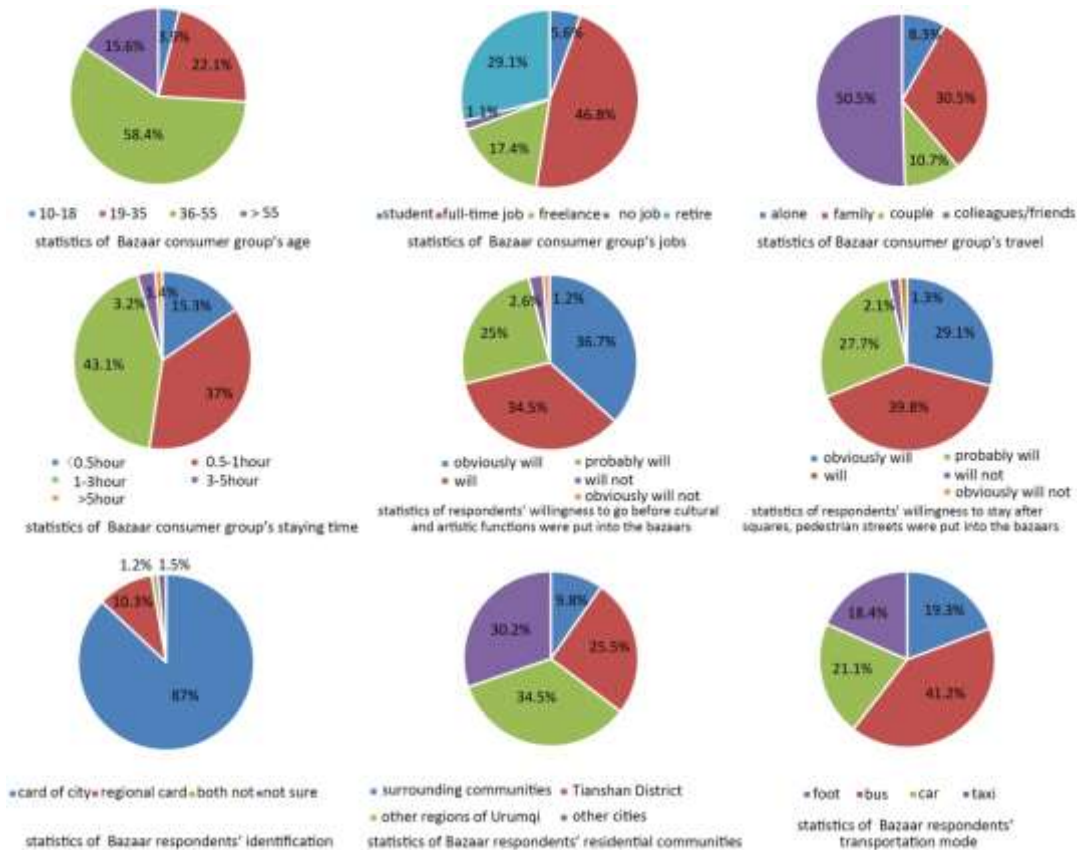


Fig 5: The pie chart of Xinjiang International Grand Bazaar questionnaire analysis

Source: Chart drawn by the author

4.3.2 Analysis of visitor flow

One day of the ethnic minorities is chosen from the Corban Festival, weekdays and weekends in Zone A and Zone B of XIGB respectively, and the visitor flow is counted every hour, in order to calculate the visitor flow per minute and compare the data obtained from three time periods (Fig 6). As is seen from the figure, the visitor flow increased significantly during the Corban Festival, that is directly related to the six-hour performance in the outdoor space of Happy Square during the Corban Festival, such as the folk dance, folk instrument performance, group and individual singing and so on. All of these show that the public space cultural services can gather a large number of people in a relatively short period of time, and indirectly bring the economic value to commercial functions. According to the survey and statistics on the staying time of the respondents, 43.1% of them stayed for 1-3 hours in XIGB, 37% stayed for 0.5-1 hours, and 15.3% stayed for less than 0.5 hours. Then, according to the survey and statistics of the respondent preference for cultural and artistic functions of bazaars, 36.7% of them chose

“obviously will” and 34.5% chose “will” if cultural and artistic functions are put into the large-scale bazaars. Also, according to a survey on the willingness to stay after setting up square and pedestrian street inside the bazaar, 29.1% of the respondents chose “obviously will” stay longer, and 39.8% chose “will” stay longer (Fig 5). The above-mentioned statistics all show that, the respondents have a clear preference for cultural and artistic activities, square and pedestrian streets in public space cultural service functions, which are highly attractive to the respondents.

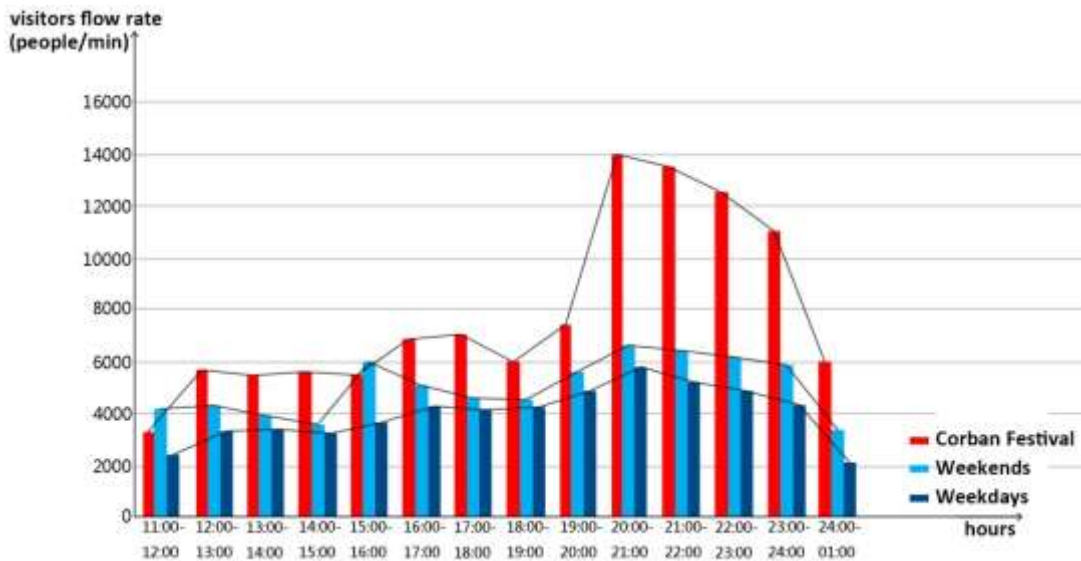


Fig 6: Traffic statistics of Xinjiang International Grand Bazaar in different time periods

Source: Chart drawn by the author

4.3.3 Overall economic benefit

The soaring rent of shops in the upgraded XIGB has made it one of the most expensive complexes in Urumqi. In contrast to the overall unsatisfactory operation of urban complexes in Urumqi in the past few years, it is quite a different story for XIGB, especially during the Corban Festival when the visitors jostle each other in a crowd. This phenomenon is directly related to public space culture service functions which enliven the space. Although the public space culture service cannot generate direct commercial value, it can transform the cost that is input into public space culture service functions and expand the input into a substantial increase of the turnover. The integration type can attract a large number of people to visit XIGB, including those coming for one or more purposes and the local people who occasionally pass by and stay without any purpose. The latter will become potential consumers and create diverse

economic values for XIGB. In addition to the corresponding economic benefits generated by the commercial part, the integration type can improve the overall economic benefits of XIGB. Rents of shops and office space will increase as the overall area of XIGB is becoming more dynamic. The integration type can promote more effective combination of public space cultural service functions and commercial functions, which can not only increase the visitor flow, but also extend the crowd stay even longer. Therefore, the direct synergy effect between them has a huge impetus to promote the economic value of XIGB.

4.4 Indirect Synergy Effect of “Integration”: to Create the Environmental Value

4.4.1 Instructive analysis

The development of XIGB fully considers the connection with urban transportation system, combines the design of cultural and art facilities with the gates of the city, sets up cultural and art facilities in the pedestrian street and interior space. By connecting the cultural and artistic functions with the three-dimensional space of the bazaar, XIGB will create a diverse and multi-level art space.



Fig 7: Comparison of indoor and outdoor popularity at the same time in Xinjiang International Grand Bazaar

Source: Photos taken by the author

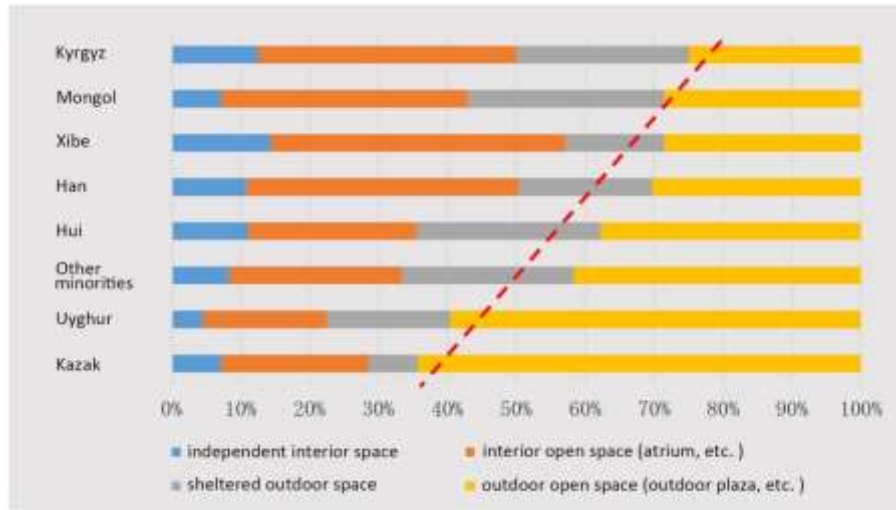


Fig 8: Cross analysis of openness of cultural and artistic activities and the different ethnic groups

Source: Chart drawn by the author

4.4.2 Analysis of equilibrium of distribution of pedestrian flow

Except a relatively closed cultural and artistic space, the Banquet Art Grand Theatre, the interior cultural and artistic functions are rather deficient in XIGB. Reasons for the popularity of the semi-outdoor commercial pedestrian street nearby Building No. 5 is mainly because of the better openness. Besides, the items for sale there are non-heritage, cultural and creative products for tourists, which also play the functions of exhibition and appreciation for visitors. The ground floors of Building No. 1, Building No. 3 and Building No. 4 are noticeably less popular than the outdoor spaces, customers in the basement, first and second floors are even fewer. (Figure 7) This is because the commodities for sale on the basement, first and second floors are mainly non-popular products, such as carpets, Hetian Jade, ethnic textiles, etc., can't attract most of the tourists. At the same time, without cultural and artistic functions as the motivation, tourists can hardly enter these places with poor accessibility, therefore it is difficult to improve the popularity of the interior space. When asked "how much is the open degree of cultural and arts events do you like to be held in Grand Bazaar?" 40.25% of respondents chose the outdoor open space (outdoor plaza, etc.), 29.53% chose the interior open space (the atrium, etc.), 20.9% chose the sheltered outdoor space, and only 9.32% chose the independent interior space. Through the cross-over analysis, it can be seen that Kazak and Uyghur people prefer the outdoor open space. (Fig 8) The above statistics confirm why Happy Square of Grand Bazaar is the most popular place. If the public space with cultural and artistic functions is open, it will have greater atmosphere and attract more consumers.

4.4.3 Environmental value of space

The integration type realizes its indirect synergy effect mainly by creating urban public space, which connects the functional subsystems and integrates them into the urban public space, in order to accommodate urban pedestrian traffic and diversified public life in the city [10]. The integration type can realize the composite of public space inside XIGB. In addition to the performances of folk songs and instruments, the Happy Square of XIGB also exhibits various ethnic sculptures and offers a large number of leisure bench for visitors. This moment, the Happy Square of XIGB becomes an integral part of the urban public space.

4.5 Site Synergy Effect of “Integration”: to Reflect the Social Value

4.5.1 Place making

A successful urban complex can attract a large number of people through the place making, and become the ID card of the city. During a survey, 87% of the respondents thought that XIGB could be called the ID card of Urumqi (Fig 5). When asked “what attracts you the most about the Grand Bazaar?” as a multiple-choice question, 81.36% of the respondents chose the “public space cultural service function” as the first, much higher than the second option of “unique architectural style” chosen by 70.91% of the respondents. It also reflects the importance of public space cultural service functions.

4.5.2 Irradiation effect on surroundings

According to the survey on the transportation mode of consumers, 41.2% of them come by bus, 21.1% drive private cars, 18.4% by taxi, and only 19.3% come on foot, which indicates that the surrounding residents are not the main customers of XIGB. Then, according to the survey on the local consumers, only 9.8% of them come from the surrounding communities, 25.5% from Tianshan District, 34.5% from other regions of Urumqi, and 30.2% from other cities of Xinjiang Region and other provinces (Fig 5). It shows that the influence of XIGB has covered the whole Urumqi City and attracts the tourists from other cities both inside and outside Xinjiang Region.

4.5.3 Social value

In the Grand Bazaar, the Banquet Art Grand Theatre located in Building No. 4 is a cultural and artistic place with mainly commercial performances. However, the cultural and artistic

activities often held in the outdoor Happy Square are completely free and open to the public, therefore are more influential and attractive than the indoor commercial theatre. In this way, the communication and interaction between tourists and artists can be better realized. The site synergy effect of XIGB is not only to attract more people, but also to radiate its influence to the surrounding areas. Since the density of buildings around Erdaoqiao business district is relatively high, the Grand Bazaar exactly provides a square and pedestrian street with relatively spacious place, thus lays a foundation for the improvement of vitality in Erdaoqiao business district. In the past, many citizens were reluctant to visit XIGB, regarding it as a tourist attraction tailored for tourists from outside Xinjiang Region, despite the fact that bazaars are built fundamentally to serve the local residents. From the survey, it is found that tourists recently account for only 30.2% of the total number of visitors with the improvement of the situation, indicating that more citizens are willing to visit XIGB. In the questionnaire, when asked “what do you think the main functions of XIGB are?”, the most popular choice was to serve citizens (average score 2.82), followed in sequence by the choices such as to build a city image (average score 2.40), to attract tourists (average score 1.91) and to serve surrounding residents (average score 1.77). It suggests that XIGB has become the ID card of Urumqi City, and people hope that it can serve local citizens more and give better play to its urban attributes, rather than just serving tourists or a small part of neighboring residents.

V. CONCLUSION AND OUTLOOK

According to the above analysis results, it can be seen that the objective data such as the visitor flow and average sojourn time are directly related to the economic value of XIGB. Because the objective data like the evenness of visitor flow distribution, and the subjective data like the user evaluation and selection preference, can effectively reflect the environmental and social values. The value analysis on the above three aspects of XIGB by focusing on the combination of visitors’ objective and subjective evaluations on the one hand, and abandoning the targets that the developers pay much attention to (such as the turnover, rent, profit, vacancy rate, etc.) on the other hand, can better reflect the value of public space cultural service functions on environmental and social levels, hence a more reasonable analysis result.

The following preliminary conclusions can be obtained from the study:

(1) According to the research results in this article, the renovation of XIGB is very successful, and the focus of which is put on public space cultural service functions, giving full play to the economic value, spatial value and social value brought by the synergy effect.

(2) The public space cultural service functions can not only effectively attract different

groups of people, increase the flow of visitors, but also extend their sojourn time and stimulate the potential consumption, so as to generate a higher value. People have a strong preference for the cultural and artistic performances of the bazaar, and the minority ethnic people in Xinjiang prefer the outdoor open places much more to the indoor open places (contrary to the team's research results in the inland urban complexes). Therefore, the outdoor performance in bazaar plays an important role in promoting the vitality of the bazaar complex.

(3) The combination of public space cultural service functions and commercial functions of XIGB is mainly the integration type. Compared with the types of juxtaposition and connection, it can integrate with the urban public space in time and space, with a more powerful openness, inclusiveness and sustainability. In terms of the economic value, the direct synergy effect of the integration type is reflected as: attracting different groups of people, triggering the visits with multi-purpose, and stimulating the economic growth. In terms of environmental value, the indirect synergy effect of the integration type is reflected as: effectively organizing various commercial functions to meet the needs of people in different periods, and improving the overall efficiency and vitality in different periods. In terms of the social value, the site synergy effect of the integration type is reflected as: helping to create the place atmosphere, effectively enhancing the vitality of surroundings, and even expanding its influence to the whole city.

Shortcomings at current research stage:

(1) As for the combination types of public space culture service and commercial functions of XIGB, the article only explores the integration type, the types of juxtaposition and connection are not involved.

(2) The total number of samples selected in the questionnaire is only 743, resulting in a relatively small number of individual samples types, the reliability of data analysis is slightly reduced.

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