



# Study on the Evaluation Index System of Youth-Friendly Cities

Xiaolin Feng<sup>(✉)</sup>, Xutong Wan, and Erwei Wang

Beijing Institute of Technology, Zhuhai Campus, Zhuhai 519088, Guangdong, China  
2740068201@qq.com, 08119@bitzh.edu.cn

**Abstract.** According to the research results of youth-friendly city construction at home and abroad and the characteristics of youth work in the new era, this paper summarizes the connotation of the youth-friendly city, and proposes an evaluation index system of youth-friendly city to provide decision-making for youth-friendly city construction from five dimensions i.e. youth social security, youth economic efficiency, youth culture construction, youth ecological civilization, youth political participation and rights protection. The evaluation index system of youth-friendly cities is constructed in five dimensions to provide decision-making for the construction of youth-friendly cities.

**Keywords:** youth-friendly city · evaluation index system · youth work

## 1 Introduction

Youth is the foundation and energy source of urban development. Building youth-friendly cities is a source of motivation for urban development and a major strategic task to train city builders.

## 2 Overview of the Index System of Youth-Friendly Cities

Scholars from China and abroad have studied the construction of youth-friendly cities from various perspectives.

Zhen Yan studied the theoretical connotation of youth-friendly cities from the perspective of structured theory, and concluded that the interaction between the city and the actors would jointly promote city construction and youth development. According to this study, youth-friendly cities are characterized by five major features, namely, inclusiveness, participation, mobility and sustainability. And these five characteristics build an index system covering 5 primary indexes, 14 secondary indexes and 48 tertiary indexes [1]. Lichun Zou took Guiyang city as an example and studied the necessity of youth-friendly city construction, summarized the construction basis and advantages, and proposed three aspects to work on the construction, including improving the level of government services, promoting the transformation and upgrading of economic structure, and improving the carrying capacity of the cultural domain [2]. Mingyuan Liu

et al. took Zhuhai city as an example, combined with the national requirements for youth development, to build an evaluation index system of a youth-friendly city with six dimensions, including employment and entrepreneurship, leisure and entertainment, public services, living environment, transportation and travel, and population vitality, etc. They evaluated and analyzed each district of Zhuhai city and put forward corresponding countermeasures and suggestions [3]. Feng Zhu et al. studied the origins of youth-friendly city construction in developed countries, studied their features from the perspective of the evaluation system, and proposed three suggestions. First, they suggested building a youth development policy system, a working mechanism, a guarantee mechanism, and a collaborative platform that are compatible with the long-term development of the city by preparing and implementing a holistic, systematic, and special urban youth policy. Furthermore, it is necessary to focus on the whole process of youth participation, and on the monitoring and evaluation of youth friendliness [4].

The Job Search Destination Ranking Indicator System [5], developed by the American Institute for Economic Research in 2016, is the most influential youth-friendly city evaluation system in the United States. The index system contains three dimensions, including demographic characteristics, quality of life, and economic development. The demographic characteristics include two indexes of higher education and diversity, the quality of life includes three indexes of urban accessibility, arts and entertainment, and bars and restaurants, and the economic development includes four indexes of youth unemployment, labor force participation, innovation, and rents. This index system analyzes the youth-friendliness of cities from different perspectives. Cities provide convenient, comfortable, and accessible infrastructure and public services for youth groups to live, work, and reside in; whereas youth groups contribute creativity, wisdom, and power to urban development through appropriate channels, opportunities, and platforms. Robert Barnard and Sonja Miokovic et al. identified six characteristics of youthful cities, such as connectivity, vitality, development, novelty, and creativity, and developed the Canadian Youthful Cities Ranking Index System on this basis [6]. The index system contains three primary indexes of life, work, and entertainment, seven secondary indexes of digital access, health, accessibility, civic engagement, social safety, natural environment, and diversity under the life dimension, five secondary indexes of employment, financial services, educational resources, entrepreneurial environment, and affordability of prices and house prices under the work dimension, as well as eight secondary indexes of music, movies, creative arts, fashion, sports, food and nightlife, tourism, and public space under the entertainment dimension.

Different systems have their own focus on the selection of dimensions and indexes, which have common features as well as characteristic differences. (1) The common dimensions include economic development, education, health care, employment and entrepreneurship. There is an important consensus that the key elements of a city's friendliness to youth are the comprehensive guarantee of basic public services and the city's development opportunities. (2) In the U.S. and Canada, recreation and crime prevention are the most important dimensions, and the violation of youth rights is also a social issue for cities. (3) Different index systems vary greatly in the number of dimensions. The evaluation index system of youth-friendly cities still lacks a common standard. (4) Due to the regional differences, the national dimensions emphasize universality, while

the regional dimensions of the index system should consider both universality and local characteristics.

### 3 Connotation of Youth-Friendly Cities

The construction of youth-friendly cities involves various fields, particularly psychology, sociology and so on. Before constructing an index system for youth-friendly cities, the first issue to be solved is the definition of the age of youth, which is the primary basis for studying such a system. Due to the differences in the nature of national societies and cultures, there is no consistent world-wide definition of the youth's age range.

For example, the National Bureau of Statistics defines the youth population in the census as 15–34 years old, the Central Committee of the Communist Youth League defines the youth group as 14–30 years old, the psychological community defines the youth group as 15–35 years old, and the sociology has great flexibility in defining the age of youth, which covers even up to 18–40 years old. In this paper, with reference to the National Medium- and Long-term Youth Development Plan (2016–2025), the youth in China's new era is defined as those aged 14–35 years old.

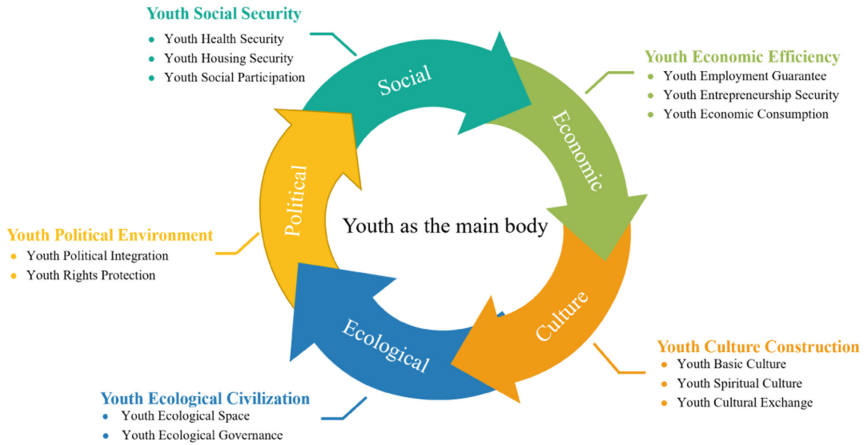
This paper argues that youth-friendly cities can broaden youth expression, participation, and communication by identifying with and respecting the power of youth development. Such cities can, from the perspective of youth, integrate youth demands and interests into various fields such as urban economic development, social construction, cultural construction, ecological civilization construction, and policy design and implementation. In this way, they can improve and coordinate the social service guarantee in all aspects of the healthy development cycle of youth, thus enhancing their functionality and quality to fit with the youth development process. Therefore, cities can be more attractive to youths and youths can contribute to the development of cities.

### 4 Design of the Evaluation Index System of Youth-Friendly Cities

On the basis of the connotation of youth-friendly cities, the overall framework of the index system of such cities takes youth as the main body and forms the “five-in-one” development pattern of material civilization, spiritual civilization, social civilization, ecological civilization and political civilization from five dimensions, i.e., youth economic efficiency, youth cultural construction, youth social security, youth ecological civilization and youth political participation and rights protection. This index system focuses on the core rights protection that is urgently required by youth growth and development, and deeply considers the youth's needs in every detail. All five dimensions form an interconnected and cooperative organic system to achieve a dynamic and regular evaluation of the relationship between the city and the youth.

#### 4.1 Design of Youth Social Security Index

Youth social security is the foundation for constructing a youth-friendly city. It mainly contains three secondary indexes, which are youth health security, youth housing security and youth social participation (Fig. 1).



**Fig. 1.** Overall framework of the index system of youth-friendly cities (self-drawn)

Youth health covers the whole growth and development of youth, and it is of primary importance to measure the social construction of youth-friendly cities. In this regard, youth health security should be quantified into three aspects: frequency of mental health education activities, the density of medical infrastructure coverage, and density of sports facilities coverage.

Youth housing security affects the subsequent life stages of youth, such as employment, entrepreneurship, marriage, and childbirth. In this paper, youth housing security is classified into three quantitative indexes: quantity, quality, and affordability. Among the newly employed college graduates, new blue-collar workers and other key youth groups, most of them adopt renting instead of buying. Therefore, this paper selects the area of guaranteed rental housing per youth as an important index to measure whether they have “housing”, the 15-min walking access to public transportation stations as a key index to measure whether they have “good housing”, and the average rent-to-income ratio as an index of “affordable housing”. The ratio of the average income divided by the average rent price shows the living cost of urban youth, and the higher the ratio, the better the life quality can be achieved with the same income.

The indexes of the coverage and frequency of youth dating activities are selected to measure the coverage and frequency of the cities’ youth dating activities. In addition, the annual average schedule of youth participation in social welfare activities is used to evaluate the enthusiasm for youth participation in social services.

## 4.2 Design of Youth Economic Efficiency Index

Youth economic efficiency is the core of building a youth-friendly city. Youth are the main force in creating the economy, and the youth economic efficiency index mainly contains three aspects, namely youth employment security, youth entrepreneurship security, and youth economic consumption.

Employment is a key step for youth to complete their socialization role and is a key approach for youth to settle in the city, participate and contribute to the economic

and social development of the city, and interact with the city organically. In this paper, the number and type of job openings as well as the proportion of production value of strategic emerging industries to GDP are selected as specific indexes to measure youth employment security.

Youth need support in professional training, financial support, and space in incubator carriers. Therefore, this paper selects the number of training sessions on entrepreneurial skills, the number of business incubator carriers, and the proportion of total government investment in entrepreneurship/GDP as specific indexes to measure the guarantee of youth entrepreneurship.

Youth's daily economic consumption mainly reflects on food and shopping. This paper selects take-out delivery time, shopping store density and logistics delivery logistics time satisfaction within 10 km to measure the convenience of youth economic consumption in a region.

### **4.3 Design of Youth Culture Construction Index**

Youth culture construction is the soul of a youth-friendly city. For youth culture construction, this paper selects youth basic culture, youth spiritual culture and youth cultural exchange as key indexes.

The ratio of financial education expenditure to GDP, which is common internationally, is chosen as the index to measure the guarantee of basic cultural education in cities, and the number of thematic quality and political education activities or lectures is chosen as the index to guarantee the quality of cultural education in cities.

As for the measure of youth spiritual culture, this paper mainly focuses on the number as well as types of popular restaurants, bars, cafes, and apartments to evaluate the scale and diversification level of urban cultural spaces that youth can explore.

Greater cultural exchange for youth can lead to a virtuous cycle in the development of youth-friendly cities. In this paper, the coverage of large competitions for Hong Kong and Macao youths is selected to reflect the frequency and intensity of Hong Kong-Zhuhai-Macao interactions, and the number of cultural performances to reflect the vitality level of Hong Kong-Zhuhai-Macao urban cultural activities.

### **4.4 Design of Youth Ecological Civilization Index**

A livable and workable ecological environment is one of the key factors to attract youth to stay in the city. Youth ecological civilization includes youth spatial ecology and youth ecological governance.

For youth, the first space is the living space, the second one is the work unit, and the third one is the ecological construction of the public space other than the unit and family. The greening coverage rate of the built-up area of the guaranteed rental housing is selected to measure the ecological greening quality of the surrounding environment of youth living. Since youth are working in a variety of spaces, this paper selects the ecological environment satisfaction of youth work space to evaluate the ecological civilization construction of youth workspace. In addition, the number of kilometers covered by green paths and slow cycling is selected to measure the quality of the green travel environment in the third space of youth.

Youth ecological governance includes indexes such as the proportion of youth with waste sorting habits and youth participation in ecological governance practitioners, which are used to assess the level of urban youth ecological conservation action power and their participation.

#### 4.5 Design of Youth Political Participation and Rights Protection Index

The construction of a youth-friendly city must emphasize youth participation in political and social fields, and strengthen political leadership for youth as well as their legal rights and interests, so that youth can adapt to society and integrate into society more actively and confidently.

Youth political integration mainly refers to the youth's role of participation, expression and communication in the city. Youth political participation and growth can be assessed by the number of youth involved in political governance and the growth rate of the personnel.

Youth rights protection mainly includes the prevention of infringement and the strength of rights protection services. The publicity of youth safety and rights is selected to measure the prevention level of youth safety infringement, and the youth service disposal and rights protection cases are selected to measure the protection level of youth rights.

## 5 Conclusions

From the perspective of youth, this paper proposes a “five in one” evaluation index system for youth friendly cities by considering both the evaluation indicators of taking youth demands as a guide to consolidate inclusive services for youth and the evaluation indicators of building a stage for the urban development of youth with their driving role in urban development.

**Fund Project.** This paper is the outcome of the key project of Zhuhai Philosophy and Social Science Planning, “Research on the Path of Building a Talent-Friendly, Youth-Friendly, Environment-Friendly and Culturally Inclusive City in Zhuhai” (2021ZD007).

## References

1. Yan Z. Theoretical connotation, functional characteristics of youth-friendly city and its index system construction[J]. *China Youth Studies*, 2022(5):5–12.
2. Zou L. C. Research on the construction path of youth-friendly cities: Guiyang as an example[J]. *New Generation*, 2022(4):60–66.
3. Liu M. Y., Tian X. Y., Huang Q. D. Construction and application of youth-friendly city development evaluation index system--Zhuhai city as an example[C]. *Spatial Governance for High-Quality Development - Proceedings of the 2021 China Urban Planning Annual Conference (05 Urban Planning New Technology Applications)*, 2021: 971–980.
4. Zhu F., Zhang J. Q., Yi Y. N. The causes of the emergence of youth-friendly cities in developed countries, evaluation strategies and empirical insights[J]. *Journal of Youth*, 2019(2):71–80.

5. AIER. The AIER 2017 College Destinations Index--75 best metro areas and college towns for students [R]. AIER,2017.
6. The Decode & The City Hive. VanCouver 30 Network on Housing & Affordability: Final Report for Partners [R]. Toronto, 2017.

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

