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Rurality and rural tourism development in China

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1. Introduction

With rapid development of economy and urbanization, a growing number of urban residents in China desire to leave the city and get close to the nature; and many of them like to spend weekends and holidays in rural areas. Under such a background, rural areas have become main destinations to meet urban residents' growing demand for leisure and tourism. According to the Big Data Report of Rural Tourism (China Tourism Academy, 2017), around 216 million of visitors experienced rural tourism activities, of different varieties, during the National Day and Mid-Autumn Holiday in 2017. Over 40% of the surveyed visitors claimed that they visited rural areas once a month (China Tourism Academy, 2017). As an important part of the tourism industry in China, rural tourism is regarded as an engine to revive rural economy (He, 2011), because it can narrow the gap between urban and rural areas, promote rural employment, stimulate the development of related industries and revitalize the rural culture (Guo & Han, 2010). China's No.1 Central Document of 2017 also stressed that great effort must be made to promote the rural tourism and leisure industry (The State Council of PRC, 2017). In order to meet the diversified demands of tourists from cities, a typical form of rural tourism "*Nongjiale*" has been upgraded constantly. *Nongjiale* is a popular rural tourism product, which allows urban tourists to enjoy rustic meals and home-stay accommodation services and amusements at the villagers' families (Su, 2011). As a result of the upgrading of *Nongjiale*, European-styled manors and resorts, and homestay buildings with exquisite decoration, which are totally different from the local traditional rural landscape and operated and managed by exterior companies, can be found easily in rural areas nowadays. The original landscape and environment, as well as the social and economic structure of rural areas are being changed by tourism development in China. Rural tourism development has become one of the major forces to promote rural reconstruction (Long & Tu, 2017). Meanwhile, rural tourism is interrelated with rurality, which is a term used to encapsulate rural features perceived by people. Rural tourism, to some extent, is to reproduce the rural features for tourist consumption (Lane, 1994; Zhou, 2014). Rural features are the fundamental element of rural tourism (Feng & Sha, 2007), and rurality is evolving with the rural tourism development (Wu, 2014). Therefore, it seems necessary to gain an in-depth understanding of both the role of rurality in rural tourism and the role of rural tourism for representing rurality (Pritchard & Morgan, 2001; Zhou, 2014). At present, little attention has been paid to rural tourism from the perspective of rurality, so this paper aims to investigate the rural tourism development in China within the framework of rurality. As a big nation, how does the rurality vary from region to region with rural tourism development in China? To answer this question, the main objectives of this paper focus on the following two aspects: (1) to identify the features of rurality and rural tourism development in China; and (2) to provide practical implications for developing and managing rural tourism destinations from the perspective of rurality.

This paper is structured as follows. Firstly, the literature on rural tourism and rurality as well as on the relationship between these two concepts is reviewed, followed by a detailed description of the research methodology. Then, the research findings are discussed, and finally, the conclusions and implications of this study are summarized.

2. Rurality and rural tourism

2.1. Rurality

Rurality is an important concept for describing rural space, reflecting rural development status, and identifying the difference between rural and urban areas (Li & Zhang, 2015). Research of rurality has been carried out for long within a variety of disciplines, such as geography, sociology, urban planning, economics, and so on. The related studies usually focus on how to understand the concept of rurality from various perspectives, how to measure rurality, how rurality changes and how to practice it. For example, Wood (1997) examined the evolution of the local power structure in rural areas from the perspective of the discourses of power and rurality. Furthermore, Woods (1998) argued that the restructure of rural areas was reflected in different aspects and could lead to an intensified contest of rurality. Cruickshank (2009) interpreted rurality in a different way as an alternative to the modernist discourse, emphasizing local and regional autonomy. Askins (2009) suggested understanding and constructing rurality by using multicultural, multiethnic, and transnational imaginaries

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from a 'transrural' view. However, Carter and Hollinsworth (2009) obtained different findings after interviewing the indigenous people; they found that Aboriginal people seek engagement and exclude alternative and multiple indigenous voices in natural resource management. Rurality has been also studied and explained by analyzing rural residents' perceptions, such as the works conducted by Halfacree (1995) and López-i-Gelats, Tàbara, and Bartolomé (2009). López-i-Gelats et al. (2009) identified four discourses of rurality, namely: the agriculturalist, entrepreneurial, conservationist and endogenous development. Rurality is also conveyed by mass media. Phillips, Fish, and Agg (2001) examined rurality based on textual analysis of British rural drama programs, and concluded that these drama series could be interpreted as conveying the senses of middle-class. Horton (2008) investigated the popular cultural representation of English rurality, which is a kind of idyllic form of rurality that can be constructed. Although rurality is conventionally understood from the population, location and landscape perspectives, it can be also explained in a reconceptualised (Sherval, 2009) or reconstructed way, such as baroque rurality (Phillips, 2014) and greentrified rurality (Smith & Phillips, 2001).

It is widely accepted that rurality is a fuzzy concept, and its meaning depends on many aspects. Therefore, a lot of researches focus on the measurements of rurality. In view of the unbalanced development in rural areas of China, many Chinese scholars attempted to understand the regional rural development using the tool of rurality, because it can facilitate the formation of rural development policies and strategic planning. For example, Li, Long, and Liu (2015) established an index system to evaluate the degree of rurality in China at the county level. Similarly, Peng, Liu, and Sun (2016) established a Relative Rurality Index to represent the rural unbalanced development in the Three Gorges Reservoir Area of China, along with the process of urbanization and industrialization. Zhu and Zhang (2015), and Shao, Chen, Su, and Wu (2015) analyzed the rurality changes in Jiangsu Province of China using their self-constructed rurality index system. In addition to such macro-scale studies, some other researchers focus on case studies of rurality (e.g. Lin, Xie, & Lv, 2016; Mármol & Vaccaro, 2015; Meijering, Hoven, & Huigen, 2007). These studies can help us understand rurality in different scales and settings.

2.2. Rural tourism

With the process of globalization and urbanization, rural areas have been undergoing transformation in social and economic aspects. Tourism industry is increasingly used as one of the most important tools to promote rural revitalization and reconstruction (Lenao & Saarinen, 2015). As a result, rural tourism has been developing rapidly all over the world. With the acceleration of rural tourism practices, the relevant academic studies grow as well, which mainly concentrate on rural tourists and marketing, rural tourism development planning and policy, and rural tourism operations and prediction. Almeida, Correia, and Pimpao (2014) investigated the segmentation of rural tourists by surveying the benefits they sought in Madeira Island. Oh and Schuett (2010) segmented rural tourists by multiple regression analysis to understand their consumption patterns. Huang, Beeco, Hallo, and Norman (2016) found that rural tourism could be regarded as an alternative choice for heritage tourists, and tourists who enjoy both nature-based and sport-related activities. Focusing on the behaviors, experience and perceived value of rural tourism, many researchers investigated the nature of rural tourism experience. For example, Jepson and Sharpley (2015) explored the extent to which a relationship exists between the sense of place and emotional experience, within rural tourists' individual understanding of spirituality. Sustainability is one of the main research fields of rural tourism. Andrei, Gogonea, Zaharia, and Andrei (2014) studied the sustainability of rural tourism in Romanian at the country level, and found out that sustainable rural tourism development was determined by multiple cultural features, the biological diversity and the ecological capital as a whole. Marzo-Navarro, Pedraja-Iglesia, and Vinzon (2015) developed a sustainability model of rural tourism from the residents' perspective to test the measurements. The integrated rural tourism, as a relatively new concept, has been used to analyze rural tourism. It reflects the concept of the intertwined relationship between the spatial and organizational aspects, and is regarded by respondents as an opportunity to foster a cross-border working mode (Ilbery & Saxena, 2011). Saarinen and Lenao (2014) developed a framework of integrated rural tourism for developing countries, and explored the community-based cultural and heritage tourism with this framework by collecting data from in-depth interviews conducted in the village of Kalakamati in the North-East District of Botswana. Their findings indicate that some special issues must be addressed properly while using the integrated rural tourism model to assess the development of rural tourism in developing countries (Lenao & Saarinen, 2015).

Rural tourism firms are the bridges between rural communities and tourists. They can directly affect the sustainable development of rural tourism to some extent. Many studies have investigated the management and operation of rural tourism firms, with particular emphasis on collaboration and networking. For example, Tolstad (2014) found that networking was beneficial for rural tourism firms. Mottiar (2016) investigated the motivations of rural tourism firms in terms of the engagement in cooperation. It is concluded that rural tourism firms are motivated not only by profit and individual gain but also by the local area itself. There are other researches about the potential of management network on the innovation and competitiveness of rural tourism (Romeiro & Costa, 2010). The rural tourism operation is affected by a number of factors, including the development of Internet-based accommodation booking platforms (Gössling & Lane, 2015), the network structures in rural destinations, and the relationship between external tourism operators and local residents (including both the village who are engaged in rural tourism operations and who are not) (Ying, Jiang, & Zhou, 2015).

Rural tourism has developed for more than 40 years, and the research on the development and evolution of rural tourism has been growing in recent years. Idziak, Majewski, and Zmyślony (2015) examined how local communities were involved in creating thematic villages and how sustainable rural tourism experience was created by a long-term appraisal. Kim and Jamal (2015) examined the evolution of rural tourism in Hongdong Town of Korea. Their results present a complex and dynamic terrain where new strategies are emerging within the agricultural sector, struggling to revive global free trade policies and neoliberalism. Nicholls and Amelung (2015) explored the range of potential conditions for outdoor tourism activities for three future time periods under two scenarios of climate change. Hu and Bao (2016) carried out social network analysis and interpreted rural tourism evolution by actor-net analysis with a case study of Jiangxiang Village in China. Generally speaking, recent studies in the related field mainly focus on case studies of rural tourism development with descriptive analysis.

2.3. The relationship between rurality and rural tourism

Rurality is generally deemed as the essence of rural tourism development (Sharpley & Roberts, 2004), and related works have explored rurality in the context of rural tourism recently. Among them, some works investigated the role of farm women in representing rurality along with rural tourism development. It is widely accepted for decades that farm women were supposed to stay home and deal with household works only under the male-defined farming society (Saugeres, 2002; Wright & Annes, 2014), but rural tourism provides an opportunity to change their role from household workers to dominators of the farm. Some scholars have noticed such a transition and analyzed this phenomenon. For example, Wright and Annes (2014) explored the symbolization of farm women as to rurality and agriculture from the perspective of farm tourism. Another study conducted by Cassel and

Pettersson (2015) analyzed the role of farm women in rural tourism, and explained how they perform rural and gender identities by providing experiences and services, and how they may redefine or challenge the traditional rural and gender identities. Other studies investigated the rurality perceived by rural tourists and indigenous farmers along with rural tourism development. For example, Zhou (2014) investigated the online rural tourism destination image of China's Wuyuan Village and suggested that the image of a rural destination is linked to rurality and rural imaginaries in tourism. Peng, Liu, Zhang, and Chen (2018) stated that the concept of rurality is referred to as "the good old days" for indigenous farmers and rural tourism development has become a nightmare for them as the cultural colonization embodied in rurality commercialization, coupled with the process of industrialization and urbanization, is changing the landscape of rural communities. It is generally believed that the core attraction of rural tourism is constituted by rurality and the rural image decided by rurality, but there are limited studies focusing on the measurement of rurality of rural tourism destinations and the analysis of the relationship between rurality and rural tourism development based on the comparative view of different cases and different regions. This study attempts to measure rurality of rural tourism destinations, on such basis, to investigate the relationship between rurality and rural tourism within the context of rural tourism in China.

3. Methodology

3.1. Measurement of rurality

A number of earlier studies have constructed and developed rurality indicators to investigate rural areas and their development. For example, Smith and Parvin (1973) proposed the Rural Urban Index. Cloke and Edwards (1986) constructed a rurality index for local districts in England and Wales in early times, and then, Harrington and O'Donoghue (1998) extended this index to understand the rurality development in England and Wales in later times. Madu (2010) identified 14 indicators to examine the rurality of Nigeria. Caschili, De Montis, and Trogu (2015) constructed the Composite Indicator of Rurality to study the region of Sardinia in Italy. Many different rurality index systems were proposed due to the difference in socioeconomic backgrounds of different countries and regions (Peng et al., 2016). With the implementation of the integrated urban-rural strategy for over fifteen years in China, a growing number of Chinese researchers have paid attention to issues of urbanization and integrated urban-rural development from the perspective of rurality (e.g. Li, Long, & Liu, 2015; Peng et al., 2016; Zhang, Zhang, & Li, 2013; Zhu & Zhang, 2015). The selection of variables in this study for the measurement of rurality in rural tourism destinations is based on formerly-proposed index systems as well as the current socioeconomic situations in China. Firstly, the economic development differs significantly between urban and rural area of China. Due to the economic reform since 1980s, China has made great achievements in economic development especially in urban areas. Comparatively, rural areas have been developing much slower. The central government of China has recognized rural development as a major challenge to be addressed. In order to narrow the gap between urban and rural areas, rural revitalization has been launched as one of the most important strategies in China, which emphasized that rural economic development is a basic national policy (CPC Central Committee, 2018). In view of the economic development characteristics of China, the economic aspect was selected as the first factor in this study for measuring rurality. More specifically, according to the relevant literature, Primary industry as a proportion of the total GDP (Peng et al., 2016; Shao et al., 2015), Gross output by industry per capita (Zhang et al., 2013; Zhu & Zhang, 2015), and GDP per capita (Shao et al., 2015; Zhu & Zhang, 2015) were chosen as the indicators of the economic factor. In China, the primary sector of the rural areas is comparatively strong, while the gross output by industry and GDP per capita are relatively low.

Secondly, the process of urbanization and industrialization in China coincides with the changes in population structure in rural areas. "Low density" is a typical feature associated with the population structure of rural areas (e.g. Caschili et al., 2015; Higgs, 1999; Kassioumis et al., 2004; Madu, 2010). The population proportion of secondary and tertiary industry in rural areas can reflect the impacts imposed by urbanization and industrialization, which implies the characteristics of rurality (Zhang et al., 2013; Zhu & Zhang, 2015). Therefore, the population density and the population proportion of secondary and tertiary industry are included as two important indicators to measure the factor of population.

Thirdly, it has been widely accepted that rurality should be understood along with the situation of social life and infrastructure (e.g. Caschili et al., 2015; Meijering et al., 2007). Infrastructure refers to the various fundamental facilities, systems and services, such as roads, water supply and power supply that are implemented to serve a certain area. The condition of roads can be reflected by the accessibility of a destination, which was chosen as the fourth factor in this study. In consideration of the representativeness of indicators and the feasibility of data acquisition, *Young Children Index* (Li, Long, & Li, 2015; Ocana-Riola & Sanchez-Cantalejo, 2005) and *Health Facilities* (Caschili et al., 2015; Madu, 2010; Zhu & Zhang, 2015) were included as two indicators to measure the factor of social and life. The former one, the *Young Children Index* (Ocana-Riola & Sanchez-Cantalejo, 2005) refers to children aged from 0 to 14, but relevant data is not available in the China Statistical Yearbook. Thus, *the Students Index* (referring to primary and middle school students) is used instead in this study.

Last but not least, rurality is widely connected to remoteness and spatial disadvantage (Higgs & White, 2000). It is necessary to include the information of location regardless of remoteness (Cloke, 1978), peripherality (Higgs, 1999) or distance from cities (Halfacree, 1995; Harrington & O'Donoghue, 1998), which is certainly a crucial issue in the definition of rurality (Caschili et al., 2015). Harrington and O'Donoghue (1998) defined the measurement of *Distance* as the distance from the nearest urban node with a population over 50,000. In view of the relatively high population density in China, cities with a population over 1 million are regarded as large cities. Moreover, residents living in large cities constitute the main market of rural tourism in China (Su & Wang, 2007). Therefore, the index *Distance* in this study is defined as the distance from the nearest urban node with a population over 1 million. Another index to measure the geographical situation of rural tourism sites is called *Large City Index*, which refers to the number of large cities within a radius of 200 km around the rural tourism sites. In addition, the Big Data Report of Rural Tourism (China Tourism Academy, 2017) shows that more than 68% of visitors drive to rural destinations in private cars. The index of *Driving Time* refers to the average driving time from the nearest large city to the rural tourism site, which indicates the ease of traffic. In all, the four factors of rurality are classified as Economics (*E*), Population (*P*), Social and Life (*S*), and Location (*L*), which are shown in Table 1. Some measurements have been improved according to the actual situation of China.

3.2. Data collection

The data required in this study were collected from the China Statistical Yearbook (County-Level), which publishes the data of previous year in the first half year of the current year. This study was initiated in the end of 2017, when the latest available version of China Statistical Yearbook (County-Level) was that of year 2016. Therefore, the data used in the present study were collected from China Statistical Yearbook (County-Level) 2016. According to the *Joint Opinions of the Ministry of Agriculture and the National Tourism Administration on Making Efforts to Establish Demonstration Counties for Agro-tourism and Rural Tourism and Demonstration Sites for Agro-tourism Nationwide* (Ministry of Agriculture of the People's Republic of China, 2010), a total of 295

Table 1
Measurements used in analyzing the rurality with tourism development.

Factors	Variable codes	Variables explanation	Sources
Economics (*E*)	E_1	Primary industry as a proportion of the total GDP	Peng et al. (2016); Shao et al. (2015)
	E_2	Gross output by industry per capita	Zhang et al. (2013); Zhu and Zhang (2015)
	E_3	GDP per capita	Shao et al. (2015); Zhu and Zhang (2015)
Population (*P*)	P_1	The population proportion of secondary and tertiary industry	Zhang et al. (2013); Zhu and Zhang (2015)
	P_2	Population density	Caschili et al. (2015); Higgs (1999); Madu (2010); Li, Long, and Li (2015); Feng and Sha (2007)
Social and life (*S*)	S_1	Students index	Ocana-Riola and Sanchez-Cantalejo (2005); Li, Long, and Li (2015)
	S_2	Health facilities	Caschili et al. (2015); Madu (2010); Zhu and Zhang (2015)
Location (*L*)	L_1	Distance	Cloke (1978); Harrington and O'Donoghue (1998)
	L_2	Driving time	
	L_3	Large city index	Su and Wang (2007)

counties are listed as the Demonstration Counties for Agro-tourism and Rural Tourism from 2011 to 2016. Among these counties, 50 are lack of recorded statistical data related to the rurality index above. Some of them are semi-military state-owned farms, such as the first division of 10th group of Xinjiang Production and Construction Corps and the eighth division of 150th group of Xinjiang Production and Construction Corps, and some of them are special economic-technological development areas (e.g. *Wansheng* Economic-technological Development Area in Chongqing), which do not publish formal statistical data to the public. Therefore, the database set up in this study, as shown in Table 1, covers 245 Demonstration Counties for Agro-tourism and Rural Tourism all around China.

3.3. Data analysis method

The proposed index system decomposes the issue of rurality with rural tourism development into a series of sub-indicators which can be comprehended more easily. Each of the sub-indicators may be analyzed independently. According to the research framework, the key step of investigating the rurality of these Demonstration Counties is to determine the priority of each indicator. The commonly used methods to do so are consisted of two categories, subjective and objective. The subjective weighting methods, such as the analytic hierarchy process (AHP) method, are largely dependent on decision makers' knowledge, experience and perception of the problem (Hafezparast, Araghinejad, & Filatova, 2015). However, as different decision makers often hold different ideas, it is difficult to reach an agreement on the relative importance of criteria (Yilmaz & Harmancioglu, 2010). That is to say, subjective weighting methods are easily interfered by subjective factors. On the other hand, the objective weighting methods, such as the commonly used entropy method, weigh the indicators according to the observation value (Zhao, Ji, Tian, Chen, & Wang, 2018), which depends on the difference among the evaluating objects on the same indicator, rather than the decision makers' personal experience. Moreover, when there are many indicators and cases, it could be difficult to determine the weights using subjective methods (e.g. Fang, Yin, & Zhang, 2013; Whitaker, 2007). Therefore, many tourism researches adopted the entropy method, such as D'Urso, De Giovanni, Disegna, and Massari (2013), Rosselló and Sansó (2017), Tang (2015), and Zhang, Gu, Gu, and Zhang (2011). For the present study, given the number of measurements of rurality and evaluated cases, the entropy method was chosen to determine the priority of measurements.

. In details, there are four steps to calculate the weights of all indexes using the entropy method. Firstly, the initial matrix of the evaluation system is formed as below, based on 10 variables and 245 cases in this study. The symbol m in Eq. (1) denotes the number of cases; the symbol n denotes the number of indexes; x_{ij} represents the data of index j of the sample.

$$X = \begin{bmatrix} x_{11} & \cdots & x_{1n} \\ \vdots & \ddots & \vdots \\ x_{m1} & \ldots & x_{mn} \end{bmatrix} X = \{x_{ij}\}_{m\times n} (0 \le i \le m, 0 \le j \le n) \quad (1)$$

Secondly, all variables are standardized, and then divided into two groups, positive variables and negative variables. For positive variables, a higher value indicates a higher standard of overall rurality; contrarily, for negative variables, a lower value indicates a higher standard of rurality. Given that rurality is a concept for identifying the difference between rural and urban areas, the indicators that can reflect rural features are positive ones. For example, rural areas are widely recognized as regions majoring in agricultural production. The primary industry of rural areas occupies a more significant part of the total GDP compared to that of urban areas. Caschili et al. (2015) have summarized the influences (negative or positive) of variables of the composite indicators of rurality in an earlier study. According to their research and other related literature (e.g. Higgs, 1999; Li, Long, & Li, 2015; Madu, 2010; Zhu & Zhang, 2015), it is clear that E_1, L_1 and L_2 are positive variables, and others are negative ones in this study. The positive index and negative index are standardized using the formula $x'_{ij} = \frac{x_{ij} - \min\limits_{1\le i\le m}(x_{ij})}{\max\limits_{1\le i\le m}(x_{ij}) - \min\limits_{1\le i\le m}(x_{ij})}$ and $x'_{ij} = \frac{\min\limits_{1\le i\le m}(x_{ij}) - x_{ij}}{\max\limits_{1\le i\le m}(x_{ij}) - \min\limits_{1\le i\le m}(x_{ij})}$ respectively.

The third step is to calculate the information entropy value of the variables using the formula $e_i = -K\sum_{i=1}^{m} x'_{ij} \ln x'_{ij}$, in which K is a constant ($K = \frac{1}{\ln m}$). In this study, m is equal to 245, corresponding to the 245 Demonstration Counties for Agro-tourism and Rural Tourism in China. The value of the information utility of each variable depends on the difference between the value of information entropy e_i and 1, i.e. $d_i = 1 - e_i$. This value produces a direct impact on the weight. The larger the value of information utility, the higher the weight of the variable is. Naturally, variables with a larger value of information utility are more significant to the evaluation.

Lastly, the weight of each variable for investigating the rurality of these counties can be calculated using the formula $w_i = d_i / \sum_{i=1}^{m} d_i$, as shown in Table 2. Then, rurality can be calculated by the weight summation method.

Table 2
The weights of all measurements.

Variable code	Weight
E_1	0.1802
E_2	0.0412
E_3	0.0559
P_1	0.1142
P_2	0.1156
S_1	0.0775
S_2	0.0743
L_1	0.0936
L_2	0.1025
L_3	0.1450

4. Findings and discussions

4.1. Economy and location as the most important factors for measuring rurality

The weights of all measurements of rurality can be reasonably estimated by the entropy method. Referring to the results shown in Table 2, E_1, a positive indicator referring to the development of the primary sector in the county, has the highest value. It means that the rurality improves with the increase of the proportion of the primary sector output. Meanwhile, it also suggests that agriculture is still the most important factor to differentiate rural and urban areas. Traditionally, the rural area is comparatively stronger in the primary sector (Caschili et al., 2015). As far as the sample data concerned, it indicates that if rural tourism destinations aim to maintain a high level of rurality, they should stay agriculturally oriented. Urban residents regard rural destinations as a paradise because of the unique agricultural landscape (Su & Wang, 2007). In order to attract more tourists, rural destinations had better maintain their agricultural function and ensure that the primary industry takes up a relatively high proportion of the total GDP. However, in many rural areas of China, the outflow of young farmers is increasing due to the low returns on agriculture (Peng et al., 2018), which leads to the decrease of the proportion of primary industry. Meanwhile, the central government of China attaches great importance to carrying out relevant policies to secure agriculture production in view of the country's large population base and the complicated international political situation. China's No.1 Central Document has been focusing on agricultural production for 15 years. With the supportive policies from government, rural areas need to diversify their primary sector (Woods, 1998) and increase the agricultural added value, so that the economic return of agriculture can be improved to attract young farmers to return home. Rural tourism is one of the ways to add value to agriculture and has become a major means to revitalize rural areas. With the rapid development of rural tourism in China, many rural destinations turned into tourist resorts. The Minister of Agriculture, Han (2017), emphasized that the development of leisure agriculture and rural tourism should stand on the basis of agriculture. With respect to this study, the proportion of the primary sector output is the foundation of rural tourism development and the most important factor for influencing the overall rurality. Agriculture and rural tourism interrelate to and promote each other.

L_3 ranks the second most important aspect to measure rurality in the context of rural tourism development, which confirms that remoteness is always a crucial issue in defining rurality (Caschili et al., 2015; Cloke, 1978; Higgs, 1999). L_3 is a negative indicator, and therefore, the smaller its value is, the higher the rurality is. The large city index refers to the number of cities with a population of more than 1 million within the radius of 200 km around the rural tourism destination. This variable can reflect the spatial disadvantage of a certain rural area. However, rural tourism mainly attracts tourists who live in the urban areas nearby the tourism destination and can drive there by themselves during the weekends and holidays. Therefore, in the context of rural tourism development, the large city index can potentially reflect the current conditions of rural tourism market, which confirms a numbers of findings of rural tourism market research in China (Su & Wang, 2007). It indicates that the rural destinations with a lower value of rurality based on the large city index would have a greater potential of developing rural tourism. The rural destinations near big cities can fully utilize this advantage to carry out marketing activities and attract more tourists.

4.2. The unique spatial feature of rurality

The value of rurality of each Demonstration County for Agro-tourism and Rural Tourism was calculated by the weighted summation method. Then, the results were sorted in an ascending order. The top ten demonstration counties with the lowest and highest value of rurality are listed in Tables 3 and 4 respectively.

Table 3
Top ten counties with a low value of rurality.

County	Province/region	Location area	Rurality
Jiangning	Jiangsu Province	East China	0.279
Tongxiang	Zhejiang Province	East China	0.294
Pukou	Jiangsu Province	East China	0.331
Gaochun	Jiangsu Province	East China	0.337
Yixing	Jiangsu Province	East China	0.338
Fengxian	Shanghai Province	East China	0.355
Jintan	Jiangsu Province	East China	0.356
Lishui	Jiangsu Province	East China	0.358
Haimen	Jiangsu Province	East China	0.375
Jiangyan	Jiangsu Province	East China	0.376

As shown in Table 3, all the demonstration counties for agro-tourism and rural tourism with a low value of rurality are located in the eastern areas of China, which is consistent with the findings of Li (2002), and Li, Long, and Li (2015). East China is advantageous in physical, geographic, economic, social and cultural conditions, and has been the driven force of China's economic development since the implementation of the reform and open-up policy in 1980s. Social and economic development is mainly dominated by the industrialization and urbanization processes. On the other hand, China's agriculture production, rural landscape and rural culture are undergoing rapid decline (Li, Long, & Liu, 2015). In order to promote rural tourism, many rural areas in East China have improved their local infrastructure and rural landscape to satisfy tourists' demand. A number of new homestay Inns and restaurants have been built or rebuilt (see Fig.1). Consequently, such tourism areas reflect more urbanity but less rural features.

Table 4 shows the top ten counties with a high value of rurality. It indicates that the demonstration counties for agro-tourism and rural tourism with a high value of rurality are mostly located in the northwestern and northeastern of China. On one hand, many of these areas are dwelling places for ethnic minority groups, featured with remote geographical location, poor accessibility, backward socioeconomic development, and struggling transformation of traditional subsistence agriculture (Li, Long, & Liu, 2015). On the other hand, the level of modernized agricultural production and agricultural output in Northeastern China has been considerably high and contributed a lot to the value of rurality. In addition, the rurality of Sog County of Tibet in Southwestern China ranks No. 7 among all the demonstration counties for agro-tourism and rural tourism. Due to poor physical, locational and economic conditions, Southwestern China has been experiencing a relatively slow process of industrialization and urbanization compared with Eastern China.

4.3. The paradox of rurality and rural tourism

The attractiveness of rural tourism is largely based on the localized features of rurality (Woods, 2011). It is widely accepted that rural features are the foundation of rural tourism (e.g. Cassel & Pettersson, 2015; Feng & Sha, 2007; Liu & Yu, 2012). It means that rural tourism development depends on its rurality. As such, the rurality of popular rural tourism destinations should be high. Interestingly, the results of calculation of this study contradict with such a speculation. According to the Big Data Report of Rural Tourism (China Tourism Academy, 2017), East China, Southwest China and South China are ranked top three regions in terms of rural tourist sources. In addition, the average distance from tourist sources to rural tourism destinations is 147 km, and 83% of rural tourists choose rural destinations within their provinces of residence (China Tourism Academy, 2017). It indicates that East China, Southwest China and South China are the regions with relatively good development of rural tourism. Jiangsu, Zhejiang provinces

Table 4
Top ten counties with a high value of rurality.

County	Province/region	Location	Rurality
Zepu	Xinjiang Uyghur Autonomous Region	Northwest China	0.845
Qapqal Xibe	Xinjiang Uyghur Autonomous Region	Northwest China	0.821
Zhaosu	Xinjiang Uyghur Autonomous Region	Northwest China	0.814
Yining	Xinjiang Uyghur Autonomous Region	Northwest China	0.769
Bohu	Xinjiang Uyghur Autonomous Region	Northwest China	0.769
Hulin	Heilongjiang Province	Northeast China	0.766
Sog	Tibet Autonomous Region	Southwest China	0.766
Tieli	Heilongjiang Province	Northeast China	0.757
Weichang	Hebei Province	North China	0.733
Manas	Xinjiang Uyghur Autonomous Region	Northwest China	0.713

Fig. 1. Coffee House Shijian in Pukou, Jiangsu Province.

and Shanghai, which are all belong to the East China region, are the most popular rural tourism destinations in China. For example, 287 million of tourists visited rural tourism sites in Jiangsu Province in 2017 (Lao & Lv, 2018). However, Table 3 shows that the demonstration counties for agro-tourism and rural tourism in Jiangsu province have the lowest rurality value. This paradox has epitomized the relationship between rurality and rural tourism in modern China. On one hand, geographical location and economic foundation are the key factors for the development of rural tourism in China. Better geographical location with higher accessibility tends to be an advantage for the expansion of the rural tourism market, because urban residents are still the major target market for rural tourism. Many rural tourism destinations in Northwest China are located in poorly-accessible areas, meaning that their potential rural tourism market is small. As a result, a lot of well-preserved villages do not have many tourists.

On the other hand, urban residents with a relatively high living standard demand for high-quality rural tourism and leisure products. In fact, a large number of rural visitors cannot endure the bad hygiene conditions of many rural regions. Fig. 2 shows the terrible environment of a rural toilet in Yunnan Province. With the progress of rural tourism in developed regions in China (e.g. Jiangsu and Zhejiang Provinces), an increasing number of new ruralists began to get involved in rural tourism development (Zheng, 2014). They understand that the rural aesthetic quality is an important element of the rural tourism experience, even if it involves a staged environment. Thus, they tend to create the ideal rural landscape for those urban tourists, with the purpose to provoke their strong surges of nostalgia for the old times. Buildings in the rural areas are renovated and refurbished to produce an old-fashioned sense and a rustic environment. Every detail is well-designed and appears exquisite (see Fig. 3), in order to meet the visitors' expectation for rural tourism. Cassel and Pettersson (2015) regarded such

Fig. 2. The dirty toilet in rural areas of Yunnan Province.

Fig. 3. Well-designed and exquisite landscape taken in Pukou, Jiangsu Province.

phenomena as the staged rural idyll. This concept can be related to the staged authenticity in the research of heritage tourism. The staged rural idyll here is very similar to the constructive authenticity in heritage tourism study, which means that authenticity or inauthenticity is the result of how people perceive things (Shen, Guo, & Wu, 2014). In the context of rural tourism, this is called the constructive rurality, which has improved China's rural tourism development to a certain extent. This explains why the areas under rapid rural tourism development have a relative low value of rurality. In addition, new accommodation facilities are built to cater for an increasing number of tourists. They are no longer real home-stay inns, but exquisite hotels or hostels in rural areas, and many villages are becoming holiday resorts, rather than traditional rural areas with the main function of agriculture production. As a result, the rurality of these areas declines further and further. Are rural tourists really attracted by rurality? Perhaps, they may be attracted by their perceived constructive rurality only.

5. Conclusions

This study investigated the rural tourism development in China from the perspective of rurality. An indicator system of rurality was proposed, in which the rurality was measured by four factors, i.e. economy, population, social and life, and location. 245 Demonstration Counties for Agro-tourism and Rural Tourism all over China were evaluated using this rurality indicator system. The data were extracted from China Statistical Yearbook 2016 of the county-level. The entropy method and the weighted summation were employed to calculate the weight of each indicator and the value of rurality. Despite the useful insights into China's rural tourism development provided by this study, some limitations should be highlighted when interpreting the results. First, the conclusions of this study are merely based on the statistical data of 2016. Future research may expand the research timeframe to improve the reliability of the findings on the change of rurality with rural tourism development. Second, this study is performed at the county-level and the superstructure is not included in the rurality indicator system. This is because the data and indicators reflecting superstructure (such as culture, institutions, political power structures, rituals and states) are not available in a more detailed context when considering the 245 cases in this study. It is therefore necessary to further examine the rurality and tourism development change mechanism with improvement of the indicator system and to investigate rurality more comprehensively. For example, several small rural regions can be targeted as samples to investigate their cultural, institutional and political situations using the ethnographic method, and then interviews and questionnaire surveys to local residents and rural tourists can be conducted to collect data reflecting their perceived superstructure states in the context of rurality and rural tourism development. Notwithstanding these limitations, this study provides a research framework for estimating the rurality in the context of rural tourism and useful insights into China's rural tourism development.

As far as the data concerned, the demonstration counties for agro-tourism and rural tourism with a lower value of rurality are all located in the eastern coastal areas of China, while those with a higher value of rurality are mostly located in the northwestern areas of China. This reveals the difference in economic development and stage of urbanization between East and West of China. The rural areas of eastern China are in the process of rapid urbanization and industrialization since 1980s. The population property, settlement mode and industry pattern in these areas have changed greatly from the traditional agricultural times. On the other hand, due to poor traffic conditions, territorial culture and economic foundations, the rural areas of northwestern China are experiencing urban-rural transformation at a much lower rate. Their rural features are retained much more complete than those areas with rapid economic development. The value of rurality can reflect the spatial pattern of China's rural development. The findings of this study have supported some earlier studies (Li, Long, & Liu, 2015) and are in line with the current development situation of rural areas in China. It indicates that the rurality indicator system and the data analysis method employed in this study are reasonable and useful, and can contribute to the theoretical modeling of rurality. Meanwhile, rural tourism development in China has been showing an unbalanced spatial development mode from the perspective of rurality. Although it is widely accepted that rural features are the foundation of rural tourism (Feng & Sha, 2007), this study seems to reveal a different result. The eastern coastal areas of China with low rurality are experiencing prosperous rural tourism development. There seems to be a paradox between rurality and rural tourism. Why does it show such a contradiction? Rural tourism is a kind of market driven industry in China. The prosperity of rural tourism mainly depends on the availability of rural tourism market. In order to meet the market demand, rural areas in eastern China are constructing the rural landscapes in tourists' imagination, which is called the constructive rurality in this study. This kind of rurality is constructed by the tourists and developers together, but not the local farmers. The latest research conducted by Peng et al. (2018) investigated a typical Chinese village which was undergoing commercialization, and suggests that rurality is a nightmare for local farmers. The rurality referred to here is different from the traditional rurality in previous studies, but similar to the constructive rurality mentioned in the present study. That is to say, in order to develop rural tourism, the eastern coastal areas of China, where the level of traditional rurality is low, may have a high constructive rurality; this phenomenon needs to be further elaborated. Although rurality can be constructed by developers within a short time through reshaping rural landscapes, tourists cannot be satisfied simply by sightseeing (Zhou & Huang, 2004) in the long term, as they will gradually pursue the spiritual return to rural life, which is reflected by the traditional rurality. This implies that the eastern coastal areas of China should pay great attention to the maintenance of traditional rurality in the near future. In addition, local farmers of rural destinations should be directly involved into the development of rural tourism, because they are the main force of primary industry and carriers of rural culture and spirit (Gu, 2012). This can be helpful for the increase of rurality. Policy makers from different levels of government should carry out active policies, such as establishing foundations and building public and professional service system, to encourage local farmers to return home and involved in diversified agricultural production, including developing rural tourism. At the same time, the rural tourism investors or new ruralists from urban areas should consider involving local farmers into the development process of rural tourism, to make sure that rural destinations are home of farmers', rather than resorts merely for tourists.

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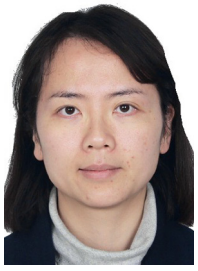

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