From Farm to Rural Hostel: New Opportunities and Challenges Associated with Tourism Expansion in Daxi, a Village in Anji County, Zhejiang, China

Lucas Gutierrez Rodriguez 1, Manuel Ruiz Perez 1,*, Xiaosheng Yang 2 and Geriletu 2

1 Department of Ecology, Autonomous University of Madrid, Calle Darwin 2, 28049-Madrid, Spain; E-Mail: lucas.gutierrez@uam.es
2 Research Institute of Subtropical Forestry, Chinese Academy of Forestry, Da Qiao Road, Fuyang, 311400-Zhejiang, China; E-Mails: yxiaosheng@263.net (X.Y.); grlt_2005@126.com (G.)

* Author to whom correspondence should be addressed; E-Mail: manuel.ruiz@uam.es; Tel.: +34-91-4978000; Fax: +34-91-4978001.

Received: 25 October 2010; in revised form: 13 December 2010 / Accepted: 19 January 2011 / Published: 24 January 2011

Abstract: China has become one of the leading international tourism destinations, ranking third at a world level. A fast expanding domestic tourism offers new development opportunities to rural areas. Our results from Daxi Village of Anji County, a popular tourist destination in East China, show that farmers are seizing this opportunity that currently represents 27% of total household income. The better educated young generation is benefitting most, being particularly relevant for women that can develop off-farm activities around the family hostels (nongjiale) and tourist shops. Visitor’s general satisfaction is high, although there is some concern for environmental quality and overcrowding due to the very high number of tourists that come to the village. Our model suggests that tourism will keep growing at least for another decade, which will strain the area, posing potentially severe environmental problems and challenging the long term sustainability of the tourism development model.

Keywords: tourism; nongjiale; rural development; off-farm income; China
1. Introduction

China has become one of the world’s leading international tourism destinations [1], having increased from 20 million tourists in 1995 to 57 million in 2010, ranking third after France, and USA [2]. In parallel to opening the door to foreign tourism [3], domestic tourism has experienced an even more spectacular increase, from 629 million person-day in 1995 to 1712 million in 2008 [4], underscoring the transformation of the country in the last two decades. Total tourism revenues in 2008 amounted to US$ 166.7 billion, representing 3.9% of China’s GDP. Although revenues per tourist are higher for international tourists (US$ 314) when compared with domestic tourists (US$ 73), given the much larger size of the later, domestic tourism represents three quarters of the total tourism revenues (see Figure 1).

**Figure 1.** Evolution of international and domestic tourism revenues in China 1995–2008 in current US$ (Adapted from [4]).

![Figure 1](image)

It is therefore not surprising that domestic tourism has been used as part of a strategy of poverty reduction and development in rural China. This has allowed for an increase in per capita income, absorbing excess farm labor and diversifying the sources of income [5]. The shift from a farm-based to an off-farm rural economy has been common to many developing countries [6,7], with a particular relevance of the tertiary sector in the Chinese case. The opening up of rural family hostels known as *nongjiale* under a somewhat idealized ‘visit the happy farmer’s family’ campaigns has allowed many Chinese rural people a reduction in hard farm work and improved living conditions [8].

Green tourism aimed at visiting outstanding natural areas has increased in popularity, especially after 1999, which was declared a ‘Year of Ecotourism’ by the Chinese Tourism State Administration [9,10]. The importance of planning and scientific research in the development of ecotourism in China has been stressed by different authors [11,12], having detected some shortcomings in the recent
establishment of natural parks throughout the country. It is in this context that a set of management indicators has been proposed [13] in order to control the impacts associated to ecotourism within natural reserves. At the same time, the increase in protected areas from 926 (7.6% of the national territory) to 2,531 (15.2% of the national territory) since 2000 [4] has propelled the development of an ecotourism (shengtai lüyou) with its own characteristics [14].

Rooted in Chinese cultural traditions, the definition of shengtai lüyou differs from the Western concept of ecotourism [15], and includes human health in relation to nature being transformed by people [10]. This ‘ecotourism’ has brought many urban residents to rural areas, offering new development opportunities [16].

Advocates of ecotourism have presented it as a solution that brings a symbiotic relationship between conservation and development, proposing a non-consumptive use of the natural capital, and also as the least worst option for the environment, though there is room for criticism given that their vision has sometimes overlooked the interests and rights of the poor [17]. Social capital has been analyzed in several case studies in which it was found to play a determinant role both in the positive and negative outcomes of ecotourism development, in a context of expanding opportunities in remote rural areas of Africa and Latin America [18-20].

In the case of China, scholars have focused their attention on the effects of tourism on local rural populations from two complementary perspectives: participating in the policy and decision-making process, and sharing of economic benefits. Thus, Xu et al. [21] emphasize the importance of local participation in order to facilitate conflict resolution in protected areas. He et al. [22] stress the need to combine local participation in decision making with sharing of economic benefits derived from tourism; farmers should obtain tourism-based revenues since they are the ones who have to put up with the costs of environmental conservation. Ying and Zhou [23] show how a collective perspective may bring benefits to the whole rural community provided that local authorities maintain and defend collective competencies and interests against the intervention of powerful external investors from rich urban areas.

The early off-farm activities were basically led by men as part of the household nonagricultural small business (geti hu) within a general trend where women would keep working on agriculture while men would specialize on off-farm opportunities [24]. Further rural economic development in the late 1990s allowed for a gradual incorporation of women in off-farm activities through out-migration and involvement in family-based enterprises [25]. As women gain access to education, they can participate in better paid off-farm activities [26]. In the Chinese rural context, this has allowed many women to take an active role in the establishment and management of small hostels, restaurants, shops and other tourist-oriented opportunities. Nevertheless, women have frequently taken inferior jobs while still being responsible for their usual housewife activities, thereby increasing their work burden [27].

A similar situation occurs in relation to the opportunities offered by tourism to minority groups. In a study on ethnic areas in southern China, Howard [28] found that in the early stages of tourism development local minorities can benefit from small business in the informal sector and that most economic gains were kept within the community, whereas important economic leakages to outside investors appear as the formal sector gains importance.

The increasing presence of tourism in rural areas has altered both the social and the ecological systems. Recent research on visitors’ perception of the roles, functions, policies and uses of forest
parks in China, show that they ascribe a high priority to protecting the ecological integrity of the area, supporting a limit on the number of tourists [29]. Simultaneously, in the context of China, cultural values such as Human-Nature interactions and collectivism have been found to have an influence on consumers’ attitudes towards green purchases [30]. These trends present in the Chinese society suggest a potential demand for better planning of tourism activities in order to protect natural resources and environmental values, what could lead to the development of a more encompassing ‘ecotourism’.

The paper analyses the evolution and effects of tourism in Daxi village of Anji County (Zhejiang Province), an area much visited by tourists coming from the urban triangle of Shanghai, Hangzhou and Nanjing (changsanjiaojiaqu). The aim is to study the trend of rural tourism, its role as a new driver of peasants’ economy, the gender differences that it involves, and the attitudes of visitors. Building on the anthropological view of tourism developed by Burns [31] and Stronza [32], it takes an integrated perspective that combines the views of local residents and visiting tourists. It also analyses the limits and potential problems of this huge tourism expansion.

2. Rural Tourism in Anji County

Anji County lies in the northwest of Zhejiang Province, Eastern China (see Figure 2). Forest resources—in particular bamboo—and associated industries have traditionally played a significant role in Anji’s economy [33]. At the turn of the century, the county embarked upon a ‘green policy’ [34] aimed at developing the ‘three ecologies’: Economy (shengtai jingji qiangxian), culture (shengtai wenhua daxian), and human habitat (shengtai renju mingxian). Consequently, it has obtained the label of ‘National Ecological Model County’ (guojia shengtai shifanqu) given by the State Environment Administration.

**Figure 2.** Map of Anji County in Zhejiang Province, East China.

The following has contributed to reinforce a rural tourism offer that rests upon four main pillars [35]: (i) The scenic beauty of bamboo forests in a county considered one of the 10 bamboo cradles (zhongguo zhuxiang) of China; (ii) the Longwang Mountain, one source of the HuangPu river the mouth of which is situated in Shanghai; (iii) the Tianhuangping pumped-storage reversible
Hydropower station (jiangnan tianchi), one of the largest of its kind in Asia; (iv) and the existence of a prosperous rural culture (changshuo wenhua) rooted around these natural values.

The ‘ecological county’ (shengtai li xian) label is bringing an increasing number of tourists attracted by the county’s environmental quality, mild summer temperatures and local products. The area of Tianhuangping township offers a variety of tourist attractions, including the above mentioned hydropower station, extensive views of rolling bamboo forests known as ‘Bamboo Sea’ (zhongguo dazhuhai), the Chinese Museum of Bamboo (zhongguo zhuboyuan), a so-called ‘red tourism’ (hongse liyou) around monuments associated with the Chinese Communist Party, the natural area of tianxia yinkeng (literally ‘world silver pit’) where popular films are made, and many farmers-based hostels (nongjiale) that facilitate a specific rural tourism (xiangcun liyou).

Our fieldwork took place in Daxi, a provincial level ecological village with comparatively good living standards (shengji shengtai cun, xiaokang shifan cun) to the south of the Tianhuangping township. Daxi is a rough landscape ranging from 250 to 1,169 m.a.s.l. with a total area of 23.35 km² and a population of 2069 people (2006 census) distributed in 11 hamlets (zu) that correspond to the old communes. Eighty-two percent of Daxi is covered by a subtropical evergreen broadleaf forest that has been greatly transformed since old times to incorporate large areas of moso bamboo (Phyllostachys edulis, ((Carriere) J. Houz) plantations. The climate is a low mountain monsoon with an average yearly temperature of 15 °C and 1,567 mm annual rainfall.

The pre-tourist experience in Daxi started in the early 1990s with the construction of the Tianhuangping dam as individual farmers opened canteens to cater for immigrant workers. In 1998 a county initiative to develop tourism in Daxi and Wuhe led to the opening of the first 10 nongjiale. Although farmers were originally skeptical, the initiative was successful, and two years later it was being exported to other neighboring villages [36].

Early tourism in Daxi was attracted by the anthropic landscape of the hydropower plant and the view of the bamboo plantations. In 2000 the first natural reserve was opened, known as ‘The Hidden Dragon’s one hundred waterfalls’ (canglongbaipu), followed two years later by the ‘The Nine Dragons’ Gorge’ (jiulongxia), both of them having mature and secondary high growth natural forests. Bamboo plantations and natural forests combine in a landscape that constitutes the base of a number of tourism activities that have promoted development and diversification of tertiary sector opportunities. The physical activities offered to visitors are guided tours to each of the two natural reserves, and a recently introduced rafting experience.

Tourism is a seasonal activity that is concentrated in spring and summer, during the weekends, and on the major national public holidays of Labor’s Day (1–7 May) and National Day (1–7 October). The recent opening of a ski resort near the upper part of the Tianhuangping hydropower complex aims at maintaining a tourist presence in winter.

3. Methods

The work is based on four main data sources. Meetings with tourism administration officers at county, township and village levels were held in order to identify policies, trends, constraints and opportunities through semi-structured, key informant interviews. During this phase, we also had access to bibliographical sources and local level statistics that were made fully available to our team.
A questionnaire requesting information about family structure, education, tourism-related investment and activities with recall information for 1990 and the current year (2007) was administered to 68 randomly selected families taken from Daxi village census. The sample represents 10% of the total population of Daxi village and was distributed proportionally among the 11 settlements according to the number of families with a minimum of five and a maximum of eight per settlement.

Finally, another questionnaire, aimed at recording tourist-related information, was administered to a stratified sample of 243 visitors distributed among the four main tourist facilities of Daxi. The questionnaire included socio-economic information (provenance, age, gender, education, profession, income level), mode of transportation, time spent, number of visits, and general information about their knowledge of the area, degree of satisfaction, problems encountered and opinion about the ecological sustainability of Daxi.

The information from both questionnaires was codified in Excel and data were analyzed using SPSS 17.0.

4. Results and Discussion

4.1. General Trends of Tourism in Anji

Anji County in general, and Daxi village in particular, have experienced an explosive growth of tourist visits in the last 15 years. At a county level, the number of tourists grew from 150,000 in 1996 to 5,440,000 in 2009; tourism-based income increased from 15 million constant 1996 CNY (US$ 1.80 million) in 1996 to 1,942 million constant CNY (US$ 233.7 million) in 2009 [33,34]. The expenditure per tourist in constant 1996 CNY increased 3.6 times, underscoring the growing importance of affluent urban visitors from the main metropolis of the region [35,36].

A fast increase in number of tourists coupled with higher per capita expenditures has meant a growing role of tourism in the county’s economy. In 1996, tourism-based income contributed 0.4% of the total county GDP; this figure had increased to 4.4% in 2001, and it represented 13.8% of Anji’s GDP in 2009 [37]. In fact, tourism has been one of the drivers to expand the tertiary sector at a county level and to allow farmers a significant increase in off-farm income at a local level as we will see later, thus confirming the generalized trend to non-farm based income development in rural areas exposed by Haggblade et al. [7].

Based on 14 years data series, we have used non-linear regression models to explore future tourism trends in Anji. The assumptions are that after an initial fast increase in number of tourists, their growth will slow down and eventually level-off. We used a parsimonious logistic regression with upper bound (K) change intervals of half a million tourists. The best fit ($R^2 = 0.988; P < 0.0001$), represented in Figure 3, corresponds to a logistic model such as

$$Y = 1/(1/K + (b_0 + (b_1 \times t)))$$

where $Y = \text{number of tourists}; K = 6.5E^6; b_0 = 6.9E^6; b_1 = 0.68$. 


The upper amount (K) of 6.5 million tourists would be reached by the early 2020s. Therefore, if the model projections hold, the yearly number of tourists visiting Anji will likely increase by over a million above the current levels. These estimates would significantly increase if the proposed winter tourism facilities are developed and attract a new kind of visitors. Tianhuangping Tourism Plan considers a number of nature conservation measures (forest protection, waste management and water pollution control) to limit the environmental pressure generated by tourism [35]. However, local authorities acknowledge that the massive arrival of visitors has already damaged the environment, with an unsustainable increase of waste and water pollution associated to a huge increase in urban development [38]. The estimated increase of at least another million tourists will aggravate these problems. This should move Anji tourism authorities to start thinking on a shift from quantity to quality, trying to increase the expenditure per tourist and to control the already detected environmental impact of a massive arrival of tourists.

In Daxi, our case-study village, local authorities are aware of the environmental problems derived from the expansion of tourism and have developed a number of planning proposals to control its negative effects [39]. They include limitations to the intensification of plantations (like the use of pesticides in bamboo and tea plantations, prohibition of planting bamboo in slopes greater than 30°) to keep an attractive landscape, and treatment of domestic waste and used waters badly polluted by the increasing number of visitors. Nevertheless, the construction of infrastructure, second homes for urban residents and other facilities to accommodate tourism, has meant a substantial expansion in urbanized land that, according to our own satellite image-based estimates, has increased 4.8 times between 1988
and 2005. This reveals the dilemmas faced by technological solutions to a massive increase in tourism that may prove to be insufficient if current tourism expansion is not curtailed.

4.2. From Farm Towards Tourism Based Economy in Daxi Village

Daxi village’s economy has experienced a fundamental change in the past 25 years, characterized by a substantial increase in per capita income (in common with other rural areas of China) and a growing importance of non-farm activities. Per capita income increased from 273 CNY (US$ 182) in 1979 to 8,820 CNY (US$ 1,102) in 2006 [40].

Two main interrelated factors have contributed to this change: Improved accessibility due to the construction of a paved road, and the development of tourism. While forests still play a major role in the village’s economy, representing 50% of total income generated, off-farm activities cover most of the remaining 50%. Off-farm activities were already present in 1990, before the construction of the dam (see Figure 4a), representing 13% of total income [40]; however, this was based solely on construction and forest enterprises work in the county, without any tourism activities present at the time. This situation had changed by 2007 (year of our survey), when off-farm represented 44% of total income, most of it derived from tourism, that amounted to 27%; the difference between both periods are statistically significant (Wilcoxon Z, p < 0.001). Since contribution of non-tourism off-farm income has not changed during this period (Wilcoxon Z, p = 0.292; see Figure 4b), the observed difference in off-farm income can be entirely attributed to tourism.

**Figure 4.** Percent of off-farm (A) and non-tourism off-farm (B) of total household income in Daxi village in 1990 and 2007 (Source: sample data).

Access to off-farm income has become more widespread, as can be seen in Figure 4a. The coefficient of variation of the contribution of off-farm income in 1990 was 1.14, while this coefficient decreased to 0.61 in 2007. This indicates that new off-farm income opportunities are being seized by many families in the village. The coefficient of variation of off-farm, tourism-based income (0.97) is lower than that of off-farm-non tourism income (1.21), indicating that tourism is a more attractive and generalized option to generate off-farm income than other activities like construction or industry work.
Consequently, labor allocation has also changed significantly during the period, with tourism accounting for 24% of total family labor in 2007 (see Figure 5). This is composed of 18% labor dedicated to rural hostels and catering (nongjiale) and 6% working on tourist shops. Age and gender have an influence on tourism-related labor opportunities. Being a relatively recent activity, the young generation (under 40 years old) has a significantly higher percent of labor on tourism and other off-farm activities than the older generation ($\chi^2 = 22.817; p < 0.001$). Women also devote more time to tourism-based activities than men ($\chi^2 = 9.767; p = 0.008$). However, this gender difference is only significant within the young generation, where women have specialized in the more home-centered tourism activities (nongjiale and shops) whereas men have searched for off-farm opportunities in trade, construction and forest industry sectors ($\chi^2 = 9.807; p = 0.007$). Higher education and the small-scale, family-based enterprise represented by most tourism activities have facilitated this process, as has happened in other areas of China [26]. For the generation over 40 years old, the gender differences in the three main types of activities are not statistically significant (see Figure 6).

The farmers’ survey included questions concerning changes in quality of life since 1990. The answers were recorded as a four rank ordinal variable from 1 (worse off) to 4 (significant improvement). The vast majority (88%) of those interviewed thought that their lives had improved somewhat or significantly; 9% of respondents felt that their lives had not changed; and only 3% thought that it had become worse. Farmers from the three hamlets that house the tourist activities tended to have a more positive view of changes (Kruskal-Wallis $\chi^2 = 4.972; p = 0.026$), suggesting a positive influence of tourism in general quality of life (Figure 7).

These findings are consistent with Gao et al. [5], who analyze the link between tourism and rural development in other areas of China, underscoring the potential contribution of tourism to rural development.

**Figure 5.** Farm, tourism and non-farm, other than tourism, labor distribution in Daxi village, in 1990 and 2007. Source: sample data.
**Figure 6.** Current distribution of labor among the three main activities by gender and age. (Source: sample data).

**Figure 7.** Farmers’ opinion on changes in quality of life since 1990. (A) Hamlets with high incidence of tourism; (B) Hamlets with minimal or no tourism (Source: sample data).
4.3. Perceptions and Degree of Satisfaction of Tourists Visiting Daxi

Most tourists visiting Daxi come from the eastern provinces of Zhejiang (43%) where Anji County is situated, Shanghai (33%) and Jiangsu (19%). Only one tourist in our sample was foreign (US national), underscoring the importance of domestic tourism in Chinese rural areas. Distances travelled by domestic tourists ranged from 25 to over 1,500 km, with the typical distance being between 250 and 300 km.

Over 50% of respondents are middle aged (31 to 50 years old), and almost two thirds are male. Monthly income of visitors follows a bi-modal distribution, with two maxima corresponding to 1,500–2,500 CNY (low-middle income) and >7,500 CNY (high income) due to the majority coming from the high income segment of Shanghai. Employees is the largest group (37%) followed by students (14%), businessmen (13%) and civil servants (10%).

A majority of tourists have some previous knowledge of Anji, bamboo being the most known element (93% knew of it), followed by Tianhuangping hydropower station (79%) and the sources of the Huangpu river (61%). This shows the importance of bamboo and other forest landscapes in attracting tourists to the area, reinforcing the need to conserve them to offer attractive scenery and a high quality environment. However, most people (78%) are passive users interested in scenic views but had no plan to conduct outdoor activities. Again, this reflects on the special nature of current Chinese rural tourism, more linked to contemplation and experiencing traditional lifestyles than to nature-related physical activities.

Private car (54%) is the main form of transportation, followed by tour operator buses (29%). This is indicative of the relatively prosperous type of tourism, in accordance with the level of development of Eastern China. Fifty-six percent are first-time visitors, who tend to spend one night in a nongjiale; 53% of all visitors come exclusively to Daxi, the remaining having also visited other nearby places.

Eighty percent of respondents were satisfied, and 89% were willing to recommend it to relatives and friends. However, 40% acknowledged a mediocre to poor level of environmental protection, 62%
recommended better cleaning and general environmental maintenance, and 63% identified the need for improved services. Likewise, 11% were in favor of reducing the number of hostels, and 27% that of local tourist shops, a situation found in other areas of outstanding natural values in China [29]. This suggests that the massive increase in tourism in Daxi is reaching an unsustainable level, having created a number of environmental and other types of problems that could compromise the long-term viability of the economic development strategy.

**Figure 8.** Categorical Principal Components Analysis of key variables characterizing tourists and their attitudes, perceptions and degree of satisfaction with the visit.

We have used the Categorical Principal Components Analysis to characterize different types of tourists depending on their attitudes, opinions, provenance and other personal features (see Figure 8). The first dimension associates income with age and education on the positive side, and the perception of environmental quality with the degree of satisfaction and outdoor activities on the negative side. The
second dimension looks at information and outdoor activities versus age. The combination of these factors indicates that a high degree of satisfaction correlates with good information, a high appreciation of environmental conditions and a positive attitude towards outdoor, nature-related activities; this is classically associated with visitors from Zhejiang province. Tourists from Shanghai tend to be older, more educated and to enjoy a higher income; they are not particularly interested in outdoor activities, and have a variety of opinions about the environmental quality of the area. Finally, a poor level of satisfaction with the visit is associated with a low level of information, being relatively more common in tourists from Jiangsu and other provinces. Similar results related to preferences and behavior of visitors has been found in European protected areas [41].

5. Conclusions

The huge expansion of tourism experienced by China in the past two decades has brought opportunities to rural economies, contributing to the shift from farm to off-farm based economies that characterize many rural areas in developing countries [6]. Tourism-related activities in our study area have benefited the more educated younger generations, having been taken up particularly by women, whereas men have opted for other non-farm income opportunities. This has contributed to a growing gender specialization as observed in other rural-based industries [42].

Tourists visiting Daxi tend to stay for a short period, attracted by the scenic and cultural values (especially the beauty of its forests and bamboo plantations) but generally show little interest in outdoor, nature-related physical activities. Currently the degree of satisfaction is high, but there are differences depending on age, education, income and provenance. A small but significant number of visitors have already detected problems of saturation with tourist services and environmental degradation that make the area less attractive.

It is expected that tourist numbers will continue to increase for at least a decade, and this growth could continue if the planned new investments associated with winter tourism finally take place. Although local authorities seem to be aware of the risks encompassed by mass tourism, the steps taken so far correspond to limited environmental damage control, rather than a thorough plan that anticipates and limits the number of visitors and the infrastructure available.

Anji County, and in particular, Daxi village, could be considered a success story until now. However, the long term sustainability of the model will depend on the ability to optimize its potential through a clear choice based on minimizing the environmental and social costs and a shift in emphasis from quantity to quality.

Acknowledgements

We would like to thank Daxi, Tianhuangping and Anji authorities for the support given to our work and their openness allowing us to consult all published and unpublished statistical data available. We would also like to thank Daxi village farmers and the numerous tourists who willingly accepted being interviewed. We appreciate the comments of two anonymous reviewers who helped improve an earlier version.
References and Notes

1. According to the China Statistical Yearbook, over half of the international tourists come from Hong Kong, Macao and Taiwan. However, World Tourism Organization statistics do not include them.


14. Only part of what we refer as Ecotourism with Chinese characteristics would correspond with the internationally accepted concept of Ecotourism, the rest being probably more similar to rural tourism. Hereunto we use rural tourism or simply tourism to refer to all kind of tourism visiting our study area in Anji County.


© 2011 by the authors; licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution license (http://creativecommons.org/licenses/by/3.0/).