

The Process of Economic Development in West Sichuan: The Case of Daocheng County

Carsten A. Holz

Economic development of a remote, mountainous region is a challenge for any country. This paper examines if and how economic development in a high-altitude backward region of China comes about. Is this region increasingly being left behind or does it manage to get on a development trajectory? The focus is on Daocheng County, Ganzi Tibetan Autonomous Region, West Sichuan. The key questions are: What forms of economic development are there, and how does this development come about? What is the role of government economic development policies, and how effective are they? What are the broader (social, cultural) consequences of economic development, and how are they being perceived by the population? The fact that West Sichuan is a predominantly Tibetan region adds a nationality dimension to the issue of economic development.

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Highlights:

- Explanation of how economic development comes about in one backward county of China
- Potential role of tourism in economic development
- Importance of fiscal transfers for initiating economic development

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A. Introduction

Economic development in the People's Republic of China (in the following: "China," or "PRC") is often viewed as economic transition from a socialist economic system to a more market-oriented system. For many underdeveloped regions of China, however, the challenges of economic development are the traditional development issues of how to raise the living standards of a predominantly traditional, agricultural society. That may be nowhere more apparent than on the Tibetan Plateau in the Western region of Sichuan Province (四川省).

In the late 2000s, big changes occurred in West Sichuan. By 2011, even the remotest village had newly undergone electrification and every village enjoyed at least rudimentary road access. A large number of families, often the whole village, had sold their livestock (mostly in 2010), previously their sole source of income. They claimed that they had done so voluntarily rather than as part of the government program of returning pastures to grassland (退牧还草). A corollary seemed to be unemployment: In 2011, in a village of many beautiful, newly built houses with carpentry work done by hired Han Chinese, the men stood around the center of the village smoking cigarettes.¹

Clearly, economic changes were underway by 2011, and to a development economist such changes are of interest. The three key questions are: (i) What forms of economic development are there, and how does this development come about? (ii) What is the role of government economic development policies, and how effective are they?² (iii) What are the broader (social, cultural) consequences of economic development, and how are they being perceived by the population? The fact that West Sichuan is a predominantly Tibetan region adds a nationality/ethnic minority dimension to the issue of economic development.³

Economic development is commonly understood to mean the process of improving the standard of living and well-being of a population by raising per capita income, or, equivalent, gross domestic product (GDP) per capita. This is typically achieved by means of shifting from agricultural activities using simple technology to the production of industrial products and a range of services using modern technology (Pearce, 1986; Rutherford, 1995). I.e., a

¹ Associations with American Indians come to mind: The land available to the natives shrinks and the population is relocated to fixed settlements.

² While I use the term "government," in the context of the PRC this equally refers to the Chinese "Communist" "Party."

³ In original PRC parlance (see, for example, the official English translation of the 1982 constitution), Tibetans are a nationality (民族) in China. The current official label is 少数民族 with a translation of "ethnic minority." (See https://en.wikipedia.org/wiki/Ethnic_minorities_in_China, accessed 13 November 2017.) An equally valid translation would be "minority nationality."

shift in the sector distribution of economic activities (and their technology levels) leads to a rise in per capita income, and that in turn increases the standard of living and well-being.

Views of how economic development comes about differ. Traditional development economists, such as Hirschman (1958), took a bootstrap view of economic development, wondering how to pull oneself out of poverty when few, if any, outside resources are available. But Daocheng County does not stand alone. It is a county within a developmentalist state that has, with respect to one county, virtually unlimited financial, physical, and human resources.

In contrast, Gerschenkron (1960) emphasized the advantages of backwardness: State intervention could help a follower country to modernize quickly by channeling capital and entrepreneurship to the—given the historical precedents of other countries—most promising industries. In the case of Daocheng County, the local state could also imitate a nationwide economic development model, or a higher-level government could intervene in the economic development of Daocheng County.

For Chinese officialdom, the problem of economic (under-)development in Tibetan regions is easily identified: “Under the evil feudal serfdom system prior to liberation ([...]), the economy of the feudal serf owners and of the monasteries shackled the development of the productive forces, and all along the rich natural resources could not be reasonably developed and used.”⁴ The path to economic development is obvious: to topple the feudal serfdom system and thereby free the productive forces.

Since the early 2000s, the Chinese state has proceeded with a number of policies targeting, or affecting, West Sichuan. This includes the “Western Development Program” (西部大开发), initiated in 2000, to accelerate economic development in backward Western regions of China. The Western Development Program focused largely on infrastructure development (see, for example, Naughton 2004). While the national policy eventually lost propaganda momentum, infrastructure investment did not.⁵

A policy to convert pastures to grasslands and moving Tibetan herders into settlements, ostentatiously for environmental reasons, was introduced in 2003. Hook (2013) summarizes and illustrates the rationale for the policy and its various consequences. Yeh (2005, 2009)

⁴ “解放前在万恶的封建农奴制度下 ([...]), 封建农奴主经济和寺庙经济桎梏生产力的发展, 丰富的自然资源一直未能得到合理的开发利用。” The source of the citation (with an omitted aside argument in brackets in the original that is not further relevant in the context here), is the section on Ganzi Prefecture in the *Sichuan Yearbook 1986* (p. 210).

⁵ ZHAO, BAO, and Prime (2013) provide an evaluation of the Western Development Program.

provides an in-depth examination of the pastures to grasslands policy. Daocheng County has seen some settlement, but the use of pastures today is still abundant.

A large literature covers (Tibetan) nationality issues in the process of economic development. For example, Fischer (2009) and Robin (2009) examine the effects of economic aid and urbanization measures on the Tibet Autonomous Region. Shih et al. (2007) show that what they call the “affirmative action empire” program of the Chinese government towards all minorities in China is biased in favor of religious minorities (which includes the Tibetan regions).

Another strand of literature focuses on narrowly defined topics of economic development in a locality. A frequent topic is the Matsutake (松茸) and Caterpillar (虫草) mushroom industry in Northwest Yunnan (including limited references to West Sichuan) with a view to the sustainability of mushroom harvesting and the effects on household income.⁶

This paper covers broader ground, going beyond one policy, or one set of policies (or the politics of policy-making and implementation), or one singular industry. The interest is in what the current state of economic development in one locality in the Western region looks like and how it has come about, what the role of government is, and how economic development is being received.⁷ The focus is on economic development over the past twenty years in Daocheng County (稻城县), located in the South of Ganzi (or Garze) Tibetan Autonomous Region (甘孜藏族自治州), in West Sichuan. The choice of Daocheng County was determined by the author’s earlier exposure to West Sichuan in 2006, 2007, and 2011.⁸

The paper is based on field research in spring and summer 2016, spring 2017, and fall 2017. I chose not to have a formal affiliation with a mainland Chinese institution or formal introductions. First, I am, after all, a professor *in China* (at the Hong Kong University of Science & Technology). Second, the area is supposedly not accessible to researchers (let alone to foreigners),⁹ presumably due to the sensitive nationality nature of the region.¹⁰ Third, in my experience Chinese officials in interviews tend to offer little more than what I can gather from published sources. Fourth, I wanted to preserve my independence as researcher. An affiliation with an institution in mainland China and/or formal introductions would have

⁶ See, for example, Arora (2008), a case study of Northwest Yunnan, just across the provincial border from Daocheng.

Wang, Tang, and Nan (2017) provide data from a survey across all of Tibet.

⁷ Some parallels exist to Gillette (2016), who examines the development over time of the porcelain industry in Jingdezhen.

⁸ Daocheng County was one of the counties that I spent some time in, and thus am familiar with what it looked like at an earlier stage of development. I spent time in Daocheng County for reasons unrelated to issues of economic development: It was along the path of three long-distance hikes in the region.

⁹ Following the PRC’s race-based distinction I am a “foreigner,” even though I am a citizen of Hong Kong, China.

¹⁰ As I explored my options and contacted academics in Sichuan Province, I was told that the area is closed to researchers and that in 2015 a research team from a university in Sichuan Province had been turned back from Ganzi Prefecture.

influenced my research as I would have considered, consciously or unconsciously, the possible consequences for those who supported me.¹¹ Nor did I want to try to establish trust with officials in order to obtain ‘confidential’ information, all the while betraying them in thoughts and later in writings if I happened to disagree with them.

Common practices across backward regions that we are already well aware of are not further explored in this paper. For example, we know that a newly transferred-in leader likely uses his/her earlier personal connections to attract individuals and companies from outside the county to the new locality, helped along by financial favors (such as permits for mining or access to land in favorable locations and/or at subsidized prices).

The majority of interviews were informal—or at least appeared informal to the interviewee, and diverged to whatever topic the interviewee was interested in—but were typically driven by a set of questions in my mind.¹² Many interviews were random events, with I exploring a particular setting and chatting with everyone willing to talk; for some interviews I pursued a particular agency.¹³ Some interviewees were reticent and gave evasive answers,¹⁴ while others were more than happy to share. In the later part of the field research, I did make contact with government officials and inevitably felt that I was coercing the host and therefore did not pursue this venue much further.¹⁵

All communication was in Mandarin (at least on my part). My limited knowledge of Tibetan turned out to be of no use as each locality has its own, rather distinct dialect and even well-rehearsed Tibetan sentences of mine proved unsuccessful. Everyone I met, or approached, and that included Tibetan peasants and herders, spoke some form of Chinese, often Sichuanese, that was at least semi-comprehensible to me, and my Mandarin seemed comprehensible to every person I talked to.¹⁶

¹¹ See Holz (2007) on the extent to which the China research community has been “bought.”

¹² I didn’t volunteer up front that I was an economics professor engaged in a research project about local economic development, but neither did I hide it; I offered this information, partially or fully, if and as it became relevant. The term *kaocha* (inspection, 考察) turned out to be regarded as a positive term, in particular with no apparent connotation of “foreign spy;” while I was in the field in 2016, a national campaign on awareness of foreign spies unfolded.

¹³ Much of the best information came from random interviews, such as when a bored-looking young man, waiting for his car to be washed at a Tibetan carwash, turns out to work for the prefectural electricity provider, is educated, open-minded, and happy to share what he knows from working for years in the area. When I challenge, an enthusiastic discussion ensues.

¹⁴ This is a remote area that has been inaccessible for centuries, and then—since the founding of the PRC—had largely been closed to foreigners. Especially among local Han Chinese, I encountered a strong attitude of not sharing information.

¹⁵ When talking to any kind of official I typically sensed hesitation and reflection on what he (and it was always a ‘he’) could share. Thus, the official might say something like “the big construction development is still in process” while very little seemed to be happening at the construction site. The rare construction worker on the site, after chatting with me for ten minutes about topics that interested him, easily volunteers that the developer is in jail because he was caught up in Xi Jinping’s anti-corruption campaign and that the project is on hold, with a few workers wrapping up minor work.

¹⁶ This is not to say there was no language barrier, there was; just as there was a cultural barrier, an intellectual barrier, and a religious barrier. It means that in almost all instances, if I wanted to obtain some information, I was able to find a way to express myself, and a way was found for me to understand the response.

My research was greatly helped along by the fact that official government policies as well as comprehensive statistics nowadays are widely available in print. The annually published *Sichuan Yearbook* contains a section on each prefecture (municipality), and sub-sections on each county within the prefecture. The annually published *Ganzi [Prefecture] Yearbook* provides further details on prefectural and county-level events, policies, and achievements of the year. The annually published *Ganzi [Prefecture] Statistical Yearbook* includes data at the county level (and I have the volume of 2003, with 2002 data, and those of 2008-2016, with the most recent data of 2015).¹⁷ There are historical county almanacs as well as historical prefectural almanacs by topic. County governments maintain websites that can be quite informative. The problem is not so much a lack of information as a surplus of information, some of it difficult to evaluate; as it turned out during field research, some of the great achievements claimed in writing hardly exist in reality.

B. Daocheng County Fundamentals

Daocheng County with its administrative center Jinzhuzhen (金珠镇, “Golden Pearl Township”) is located in the Southern part of Ganzi Prefecture, 434km (270 miles) from the prefectural capital of Kangding (康定) and 761km from the Sichuan provincial capital of Chengdu (成都) (Figure 1). It has a resident population of 32,709 (in 2015) and a population density of 4 people per square kilometer.

Jinzhuzhen is at an altitude of 3800m (12,500ft). The average annual temperature is 4C (39F). Average annual rainfall is 637mm (25 inches), comparable to Continental Western Europe (or half that of New York City), and concentrated in the summer months. Much of the high-altitude land is barren, at best suitable for husbandry. Cultivated land accounts for only 0.6% of the Daocheng land area while pastures cover 56.7%, and an additional 36.1% is woodland (where some of these woods may be little more than scrubs).¹⁸

1. Gross domestic product and aggregate expenditures

Agriculture accounted for one-third (32%) of gross domestic product (GDP) in 2015, compared to a nationwide average of 9% (Table 1). The only 0.6% cultivated land of

¹⁷ The latter two yearbook series are not readily available. Obtaining these volumes requires some initiative and luck.

¹⁸ For the data see, for example, *Master Plan*. (Comparison rainfall data are from the internet.) The altitude range within Daocheng County is from 1900m to 6032m, and the temperature variation comprises recorded extremes of -28C and +27C. Land use data are from *Ganzi Statistical Yearbook 2016* (unused land accounts for 4.4%, water for 2.0%, transport for 0.1%, and residential and mining land for 0.1%).

Daocheng County produced half of agricultural value-added and one-sixth of GDP, with husbandry accounting for most of the remaining agricultural value-added.

In the secondary sector, industry's contribution to GDP is 3% and construction's contribution is 21% (up from 14% in 2010). This compares to nationwide 34% for industry and 7% for construction. I.e., industry in Daocheng County is vastly underdeveloped but the level of construction is unusually high.

The tertiary sector (services) accounts for 44% of Daocheng County's GDP (50% nationwide), with a further breakdown revealing a number of peculiarities. Thus, Daocheng County has almost no productive activities in transportation (less than 0.5% of GDP), which is not credible; passenger transport in Daocheng County is undertaken by a company situated in Kangding and may thus be attributed to Kanding. Daocheng County has a low share of trade in GDP (3% vs. nationwide 10%), a relatively high share of hotels and catering (7% vs. nationwide 2%), and a share of "not-for-profit services," at 19% of GDP, that is twice the nationwide average. Within not-for-profit services, Daocheng County has higher shares than nationwide in public administration (8% vs. 4%) and in education (also 8% vs. 4%).

These data show Daocheng County to be a traditional agricultural economy with virtually no industry (presumably due to its remote location and altitude) but a construction boom. The strong performance of hotels and catering indicates a burgeoning tourist industry. The other tertiary sub-sectors suggest an under-developed economy where the normal provision of government services carries an over-proportional weight, while activities characteristic of more developed economies (such as scientific research and technical services) are missing. Per capita GDP in Daocheng in 2015 was CNY 18,442, one-third the nationwide average value of CNY 50,251.¹⁹

Times series data for the broadest sector classification, available for the years since 1978, show a rise in service sector and construction activity, relative to agriculture, starting in the late 1990s (Figure 2). While agriculture exhibits an annual real growth rate of just below 5%, the tertiary sector grows faster over time, while construction (and thereby the secondary sector) exhibits wild swings with in some years exceptionally high growth rates (Figure 3). In the 1980s and 1990s, real GDP growth varied drastically from year to year with annual real growth rates in the 20 and 30 percent range but also at negative 10%, before stabilizing in a 5-10% band in the 2000s and 2010s.

¹⁹ The per capita GDP values are from *Ganzi Statistical Yearbook 2016* and the NBS database (<http://www.stats.gov.cn>, accessed 2 March 2018).

The “private economy” (民营经济) accounts for 45% of Daocheng County’s GDP in 2015 (Table 1). It produces two-thirds of agricultural value-added,²⁰ one-third of the (miniscule) industrial value-added and one-quarter of construction value-added. The patterns in the tertiary sector (overall 39% private) are as would be expected: The private economy dominates trade, hotels and catering, real estate development, and services to households, and is absent from those sectors that reflect government services. The time series data show an inexorable rise in the private share of each sector’s economic activities over time (Figure 4). Agriculture accounts for the biggest share of the private economy (90% in 1980 and in the 1990s, and around 50% in the 2000s and 2010s), since the mid-2000s closely followed by services (Figure 5).

In terms of aggregate expenditures (Table 2), Daocheng County’s consumption share exceeds the nationwide average (62% vs. 52%), as does the consumption sub-component “rural” (22% of GDP vs. 8% nationwide). Gross capital formation is 120% of GDP (down from 175% in 2011-2013), balanced by net exports of negative 82%, almost solely accounted for by imports. I.e., investment expenditures in Daocheng County exceed GDP, and the value of imports almost equals GDP (exceeds GDP in 2011-2014). This suggests an extreme investment boom, supported by the inflow of goods and services into Daocheng County.²¹

2. Employment

Daocheng County’s employment data are incomplete. The population data allow a first rough estimate of total employment before moving on to the available detailed but limited formal sector employment statistics.

Daocheng County’s permanent resident population in 2015 was 32,709 persons, a figure that has been remarkably stable over the years. The registered household (public security bureau record) value of 31,643 persons in 2015 comes with a breakdown into four age categories (Table 3). Assuming the working age population to be reflected by the two age categories 18-35 and 35-60 and applying age-category specific U.S. labor force participation rates—with an overall labor force participation rate of 75.5% (for those aged 18-60)—yields 15,533 employees (47.5%) among the permanent resident population of Daocheng County.²²

²⁰ In a number of interviews I raised the question of what constitutes non-private agriculture, but faced a blank response. Presumably, reforestation is done by the state. Some of the high-altitude “farms” (农场) come with the attribute “state” on Chinese maps—these are Tibetan Yak herding summer camps high up in the mountains that could be collective in nature.

²¹ The data quality of the aggregate expenditure components appears poor given, for example, the relatively constant (if not identical) component percentage shares over time, but the overall picture is likely an acceptable approximation.

²² It is assumed that all age cohorts within the working population are of equal size. The U.S. labor force participation rates, available for 2016, by age category, are age category 16-19: 35.2% (and 2 years of this age category are relevant for the

This likely is an underestimate as some members of the working age population may be younger than 18 or older than 60. Alternatively, applying the 2015 China nationwide ratio of employment to population (of 56.3%) to the Daocheng County permanent resident population yields 18,415 employees.²³

The official employment statistics cover 3,880 employees in 100 work units (单位), including 219 employees in 16 private units (Table 4).²⁴ Since these statistics only report 8 employees in agriculture, they presumably exclude the rural/"agricultural" population (Table 3). The employment figures derived in the previous paragraph based on labor force participation rates then suggest 11,653 or 14,535 agricultural laborers, accounting for 75 or 79% of employment. This leaves as source for the 3,880 formal employees the urban permanent resident population of 7,739 persons (implying an employment rate of 50%) or the "non-agricultural" population of 4,265 persons (implying an employment rate of 91%).

For 8-9 months of the year, the permanent urban resident population figure may well underestimate the actual population and thereby labor force by on the order of 15,000 (working) persons. More on this further below.²⁵

In the formal sector, almost half of the 219 employees in private units work in hotels and catering. Almost half of the 3,661 employees in non-private units work in public administration (46%), followed by education (15%), transportation (12%) and health (5%).²⁶ I.e., more than three-quarters of non-private formal employment is in typically state-dominated sectors.²⁷

The prevalence of the state is confirmed in an ownership breakdown, with 82% of employment in non-private units being in state units and 16.9% in an implicit residual category that likely captures non-formal employment in state units.²⁸ In a breakdown according to the type of unit, 42% of employment is in government departments and 37% in

Daocheng County data, age cohorts 18 and 19); 20-24: 70.5% (5 years); 25-54: 81.3% (30 years); 55-64: 64.1% (6 years, ages 55-60). For the data, see https://www.bls.gov/emp/ep_table_303.htm, accessed 2 March 2018.

²³ For the national ratio see the employment and population data at <http://www.stats.gov.cn>, accessed 2 March 2018.

²⁴ What such a value likely neglects is every laborer who is not considered part of a "unit," such as those employed in sole proprietorships, for example small neighborhood stores or restaurants (of both of which there are plenty).

²⁵ Any survey-based population count, as the permanent resident count likely is, may well be based on data collected late in the year when a seasonal downturn in employment occurs. For example, the 2010 population census used 1 November 2010 as the data collection date.

²⁶ The fact that transportation accounts for 12% of formal sector (non-private) employment and science for 5% but each of these for less than 0.5% of GDP stretches credulity.

²⁷ The formal employment data come with some peculiarities. Thus, formal employment in the construction sector is zero (even while construction value-added is substantial); presumably, these workers come with construction companies from outside Daocheng County and are then ignored in the statistics.

²⁸ The 16.9% value is close to the share of not-on post employees, at 16.4%. It is thus plausible that the undefined category obtained as implicit residual simply covers state employees whose positions are not part of the authorized employment numbers (编制); two-thirds of the not-on post employees work in government departments and almost all of the remainder in administrative units.

(state) administrative units; only 21% is in enterprises, the ownership of four-fifths of which is undefined.

Labor remuneration across all non-private units, at an average CNY 66,275 (and in total amounting to 41% of GDP), is double labor remuneration in private units (Table 4). It is also almost four times GDP per capita of Daocheng County (at CNY 18,442). Even if a significant share of the population were not engaged in any productive activities—unlikely, except for children and perhaps the very old—this suggests that labor remuneration in state units is a multiple of average income outside the state sector.

Aggregate labor remuneration in administrative units and government departments in Daocheng County in 2015 amounts to 32% of GDP (with no national comparison data available). That is three times higher than the public sector wage bill in OECD countries (10%, 2000-2013 average) and higher than the typically below 10% share in developing economies.²⁹

3. Government budget

The sources of Daocheng County's fiscal revenues are highly concentrated. In 2015, sales taxes accounted for 35% of local fiscal revenue (compared to the national average of 13%), "fund income" for 19% (with state-owned land use right transfer income accounting for more than four-fifths of fund income), and administrative fees and charges for 11%.³⁰ The remaining revenue sources are manifold, with an unspecified item "other income" contributing a further 11% (Table 5).

Over the years (2002, 2007-2015), the contributions to local fiscal revenue of the three exhaustive components tax revenue, non-tax revenue, and "fund income" have exhibited great variation.³¹ One common element is that VAT as a source of tax revenue has never exceeded 4%, and corporate income tax has never exceeded 6% (though both rising over time); at the national level, these shares in 2015 were 20% and 18%. I.e., Daocheng County's fiscal revenues are not derived from production (and profit), but from sales.³²

In 2015, Daocheng County's fiscal expenditures of CNY 1.213bn constituted a 9.1 multiple of Daocheng County's fiscal revenues (down from a 19-fold multiple in 2011,

²⁹ For the international comparison, see the Financial Times of 6 March 2018 (p. 9) "FT Big Read. Middle East."

³⁰ For national values (for 2015) in this and the following paragraphs, see the NBS database <http://www.stats.gov.cn>, accessed in February and March 2018.

³¹ In 2008, for example, fund income accounted for 60.6% of local fiscal revenue, and 98.2% of these 60.6% consisted of state-owned land use right transfer income. I.e., land sales provided approximately 60% of local fiscal revenue.

³² Fund income is derived mostly from land sales ("state-owned land use right transfer income") and expended in some years on issues related to such land transfers and in others on "urban and rural community affairs" (which may serve the same purpose). For a complete set of fund data see Appendix 1.

Figure 6, or bottom Table 5). This unusual ratio does not originate with revenues; total revenues in 2015 were equivalent to 22% of GDP, exactly as at the national level. Instead, it is fiscal expenditures that are out of line, in 2015 being equivalent to 203% of GDP, a ratio that has been rising over time (Figure 7). I.e., Daocheng County's government spends twice as much money as the value of all local productive activities.

These fiscal in-transfers imply a subsidy for every Daocheng County resident equivalent to almost twice that person's income from productive activities, i.e., a de facto tripling of per capita income, raising it to the national average. The subsidy was distributed by the local government in form of common goods, such as general public service (10% of fiscal expenditure in 2015, Table 5), education (9%), social security and employment (8%), health (6%), agriculture, forestry and water affairs (15%), transportation (exceptionally high in 2015 at 22%), and business services (7%).

The Daocheng County government budget data do not include expenditures of higher-level governments on infrastructure projects in Daocheng County. Two items of considerable one-time fixed costs—born by higher-level governments—are road and airport construction. Provincial roads 316 and 317 connect Jinzhuzhen and Riwa to the rest of Sichuan Province. A very rough estimate of the scale of the cost of sealing these two roads in the early 2010s is CNY 10bn.³³ That is approximately ten times Daocheng County's 2015 fiscal expenditures, one hundred times its fiscal revenues, or twenty times its GDP. Construction of the Daocheng-Yading Airport, completed in 2013, cost a further CNY 1.25bn.³⁴

In contrast to the fiscal system, the banking system channels funds away from Daocheng County (as is generally the case across China's countryside): In 2015, deposits were equivalent to 315% of GDP but loans equivalent to only 87% of GDP. Loans tended to be long-term (90.2% of loans are medium- and long-term loans) and highly focused on agriculture (98.6% of all loans). The larger investment projects discussed below then are likely financed by financial institutions outside Daocheng County.

³³ According to a notice at a road construction site in Riwa in 2017, the cost of building an approximately 30 meter long bridge in Riwa together with 3.2km of road was CNY 1.25bn. (This is more than the *Master Plan*, introduced in the next section, budgeted for Daocheng County infrastructure measures, such as road construction, for all 15 years from 2000-2015.) The provincial road from Daocheng-Yading Airport to Riwa alone is of 120km length. As it does not involve major bridges every 3km, the construction cost per km is likely lower than suggested by the Riwa data (which would have implied a cost of CNY 46.875bn obtained as 120km / 3.2km * CNY 1.25bn).

³⁴ For further details on Daocheng-Yading Airport see Appendix 2.

C. Tourism Development in Daocheng County

The macro data suggest that Daocheng County's economy has a traditional agricultural base, accounting, today, for one-third of GDP and three-quarters of employment. It also has a strong government presence, accounting for one-fifth of GDP and approximately three-quarters of formal employment, with wages that exceed average per capita income four-fold. Two peculiarities stand out. One is the enormous inflow of fiscal transfers, with Daocheng County's fiscal expenditures equivalent to twice its GDP. The other, warranting further examination, is a construction boom accompanied by a strong performance of hotels and catering in GDP and employment.

Tourism development in Daocheng County started with a call in the Daocheng County Ninth Five-Year Plan (of early 1996) for the promotion of tourism, followed by the establishment of the Yading Nature Reserve (亚丁自然保护区), first recognized as nature reserve at the county level and then subsequently all the way up to the national level (Box 1).³⁵ When a national prohibition to cut natural forests came into effect in 1999 and the Matsutake mushroom market in that year was weak, the Daocheng County government and Party Committee decided on a strategy of "A flourishing county through tourism." Key to the development of tourism became the (Daocheng Tourism Development) *Master Plan* (2000-2015).³⁶ The *Master Plan* is an undated and unpublished formal (internal) document in excess of 100 A4-sized pages that in highly professional fashion lays out all aspects of tourism development in Daocheng County, focusing in particular on Yading as "the last Shangri-La."³⁷ The *Master Plan* was followed by a *Yading [Nature Reserve] Master Plan* (2006-2020) and a second (Daocheng County) *Master Plan* (2015-2030).³⁸

Daocheng County's key attraction, Yading Nature Reserve, currently has a national "scenic area" (景区) rating of AAAA ("4A"), with the 2017 Thirteenth Tourism Five-Year

³⁵ The official English translation of the Chinese term Yading is Aden. English language travel guides and websites, however, have not adopted the name Aden.

³⁶ The Daocheng government commissioned the Sichuan Province Tourism Planning and Design Institute to prepare this *Master Plan*. The *Master Plan* was audited and approved by a committee headed by an official from the provincial Tourism Bureau together with members from various provincial and prefectural bureaus, universities, and the Daocheng County government (a deputy county head and the head of the Daocheng tourism bureau). The *Master Plan* does not carry a date, except that the suggestions of the auditing committee presented at the beginning of the *Master Plan* are dated 18 October 2001. A retired official of the tourism bureau referred to the *Master Plan* as being of 2003.

³⁷ Further details from the *Master Plan* beyond what is presented in the text can be found in Appendix 3. The concept of Shangri-La is discussed in Appendix 4.

³⁸ This more recent (Daocheng County) *Master Plan* (2015-2030) is not publicly available and I could not obtain a copy. The government of Sichuan Province has an online form to request access to information (<http://ysqgk.sc.gov.cn/hudong/email/ysqgk.jsp>, accessed 17 November 2017). I successfully submitted the online form and as of April 2018 have not heard back. (I am grateful to Shirley Leung of the HKUST library's Document Supply Service for her help in trying to locate the document, and her referral to the government's online form.)

Box 1. Daocheng/Yading Tourism Development Events

- 1996 Daocheng County Ninth Five-Year Plan: call for tourism development
- 1996 Daocheng County government formally establishes the Yading Nature Reserve (亚丁自然保护区); delineation of its land area, choice of name, and scope of protection
- 1997 Yading becomes first a prefectural nature reserve, then a provincial one (with the provincial environmental protection office in charge of all business matters, and the county government in charge of administration)
- 1999 Daocheng government and Party Committee decide on strategy of “A flourishing county through tourism” (旅游兴县战略); establishment of a tourism bureau (within the government) and of the Daocheng County Tourism Development Company (稻城县旅游开发总公司)
- 2000 Yading becomes a provincial “scenic area” (风景名胜区)
- 2001 Yading becomes a national nature reserve
- 2001-2003 Daocheng [Tourism Development] Master Plan 2000-2015 issued
- 2006 Yading [Tourism Development] Master Plan 2006-2020 issued
- 2015 Second Daocheng [Tourism Development] Master Plan 2016-2030 issued

Sources: *Master Plan* and *Yading Master Plan*.

Plan of Sichuan Province calling for the elevation of Yading to the highest possible 5A rating (*Sichuan Thirteenth Tourism Five-Year Plan*). Yading is located 114km South of Jinzhuzhen, Daocheng County’s administrative center, and reached via Riwa / Shangri-La Township (日瓦, 香格里拉真, 74km), Rencun village (仁村, 7km), and then a road inside the nature reserve (33km) passing through Yading village (Figure 1).

When the *Master Plan* was developed, transportation was considered the most important bottleneck.³⁹ Except for a 3km road to the Rubuchaka (茹布查卡) hot springs outside Jinzhuzhen, none of the roads in Daocheng County were asphalt or cement roads, and only 44% of all roads in Daocheng County made it to an official grade (4th grade). While access to Yading by road had been made possible by the time the *Master Plan* was issued, the *Master Plan* saw improved roads as necessary for a breakthrough in the development of tourism, in particular between Jinzhuzhen and Riwa, and then Riwa into Yading. These roads were finally sealed in 2013 and 2014. The in the *Master Plan* for 2005 envisaged upgrading of roads connecting to a neighboring prefecture (Muli 木里) and to the tourist areas of Yunnan Province (云南省) has not yet happened.

As of 2017, the only feasible road from Daocheng County to Yunnan Province is still, as twenty years ago, through Xiangcheng County (乡城县), reached either via Sangdui Township (桑堆镇) just North of Jinzhuzhen or via a newer road leading off from between Jinzhuzhen and Riwa (Figure 1). The nearly 400km distance includes an approximately

³⁹ Besides transportation, the *Master Plan* identified a second, lesser bottleneck in form of missing human capital, calling for cooperation of Daocheng County with Sichuan universities/colleges and high schools to attract qualified personnel.

100km stretch of low-quality dirt road around the provincial border that is barely manageable by sedan car. According to a news item of 6 November 2015, a new 135km third-degree road connecting Riwa to Diqing/Zhongdian (迪庆/中甸) in Yunnan Province is to be completed by October 2018.⁴⁰ A new road to connect to Yunnan Province via Lugu (泸沽湖) is also under construction but not expected to be completed for another 5-6 years.⁴¹

1. Tourist numbers

The *Master Plan* envisaged a gradual increase in visitor [night] numbers to Daocheng County over time with an increase from barely 500 in 1999 to 200,000 visitors in 2005, 400,000 in 2010, and 600,000 in 2015. For the longest time, through 2013, these planned visitor numbers were far too optimistic. For example, in 2010 the planned visitor number of 400,000 contrasted with an actual visitor number of 246,777 (Figure 8). But by 2015 the pattern had turned, with the actual visitor number of 1,715,448 exceeding the planned visitor number of 600,000 three-fold.

Visitor numbers are highly concentrated in July through October, four months that in 2015 saw 82.5% of all visitors to Daocheng County (Figure 9). In contrast, visitor numbers in the winter months of November through March were only 3.1% of the annual total (1.9% for Yading alone), while the percentage for April through June was 14.4%.⁴²

The strong pattern of seasonality is also apparent in the number of hotels available at the Chinese online travel agent Ctrip for Jinzhuzhen (Figure 10). Variation in hotel prices over the year provides a yet more differentiated picture, with September and October exhibiting the highest prices by far, peaking in the first October week.

During the “Golden Week” in 2017 (the 1 October national holiday week), visitors to Yading by 11am on 3rd and 4th October reached the maximum limit for admission of 16,054 set by the Yading administration, and ticket sales were suspended. Visitor numbers then fell to 13,795 on 5th October.⁴³ These October 2017 visitor numbers suggest that the number of Daocheng County visitors in all of 2017 is likely around twice the number of visitors in 2015.⁴⁴ (A rough estimate of October 2017 visitors is 30 days times 10,000 visitors per day to

⁴⁰ See “Kunming Information Port” (昆明信息港, 6 November 2015) as reported at <http://www.yadinginvest.cn/index.php?m=content&c=index&a=show&catid=16&id=103>, accessed 14 November 2017.

⁴¹ For more details on road access see Appendix 5.

⁴² This official monthly distribution appears too flat; for a discussion, see Appendix 6.

⁴³ For the visitor numbers see Xinhua (5 October 2017).

⁴⁴ Visitor numbers in 2017 could be exceptionally high due to the temporary closure of Jiuzhaigou (九寨沟) and Huanglong (黄龙), alternative tourist attractions in Northwest Sichuan, following an earthquake.

Yading times 2.5 nights per visitor, i.e., 750,000 visitor nights, more than double the October 2015 figure.)

Tourism development in Daocheng County thus remained below expectations for more than a decade, and then suddenly exploded beyond all expectations. Throughout interviews, time and again completion of road building in 2013/2014 was mentioned as the reason for the drastic increase in visitors. Without a sealed road, visitors had no ready access to Yading.

Another likely factor is the completion of the Daocheng-Yading Airport in 2013. Access to Yading no longer required the grueling trip from Chengdu to Jinzhuzhen (18 hours if not 2 days by bus), or the almost equally grueling (and dusty) trip from Zhongdian in Yunnan Province. Instead, Jinzhuzhen now became accessible from Chengdu via a 65-minute flight followed by a 46km ride in an airport bus or taxi to Jinzhuzhen.

A third reason could be the only recent fashionableness of extensive car travel, to “explore” Tibet. In the early days of Yading tourism, visitors were predominantly young foreigners willing to hike for several days into then undeveloped mountain territory. More recently, maps and advertisements tout car touring (自驾游) in Northern Yunnan, West Sichuan, the Tibet Autonomous Region (西藏), Qinghai (青海), and Gansu (甘肃). Han Chinese on Yading shuttle buses and in restaurants discuss the pros and cons of driving to Lhasa (拉萨), the capital of the Tibet Autonomous Region, or share their experiences in doing so. The “thing to do” is to drive from Yunnan Province or Sichuan Province into the Tibet Autonomous Region, then turn around in Lhasa and head back East along a Northern route. Restaurants in Western Ganzi Prefecture display maps of the route options within a triangle formed by Xi’an (西安), Kunming (昆明), and Lhasa (拉萨).

Striking to local hoteliers in October 2017 was the arrival of tour groups. This included not just Han Chinese, but also Malaysian, Taiwanese, and South Korean tour groups.⁴⁵ Tourism in the Golden Week was dominated by private cars, with, at 10am on 3 October, a 7km traffic jam from Riwa to the entrance of Yading.⁴⁶ Tourism after the Golden Week appeared dominated by tour groups.

The pattern of tourism development thus was a rather systematic one from selective individual travel to mass individual travel and finally tour groups. This was already envisaged

⁴⁵ A Taiwanese tourist that I sat next to on the Yading bus was on a ten-day tour of nature spots in Sichuan Province; dirt roads to Yunnan Province were not on their schedule. The 200-room hotel in Riwa that I stayed in on 17 and 18 October 2017 initially had problems honouring my online reservation because, as I was told, the hotel had been booked up by tour groups. I counted 12 tour buses in the backyard in the late evening of 18 October 2017.

⁴⁶ This was a sensation for local Tibetans, some of whom stood at the side of the road and gawked at the traffic while the more enterprising ones began to hawk everything related to Yading, from show tickets to maps and parking spaces.

in the *Master Plan*, which made a point of first developing individual travel but then to quickly follow up with tour groups, focusing first on domestic tour groups, then tour groups from adjacent Asian countries, and finally tour groups from Europe and the U.S.⁴⁷

2. Hotel construction

The construction sector accounts for approximately one-quarter of Daocheng County GDP. Much of this construction is hotel construction. Table 6 presents the number of hotels in Jinzhuzhen, Riwa, Rencun Village, and Yading Village (a rough estimate for the latter) in July 2016 and October 2017. Table 7 does the same for hotel rooms.

In July 2016, Jinzhuzhen, Riwa, and Rencun together had a total of 191 establishments of accommodation identifiable by name and in physical existence observable to the outsider. Yading Village had about 10 further establishments (not identified by name and only observed in passing through). An additional 82 building shells in these four locations looked like they were designed to become hotels/inns. They were either under construction or had been completed as concrete shells without any further activity; some of the concrete shells carried ‘for sale’ signs.

By October 2017, the list of establishments had grown to 242 establishments. An additional 64 buildings were still under construction, with little new construction activity since July 2016.

In terms of rooms, 7,334 rooms were available in July 2016 (6446+888 in Table 7), and 4,467 additional rooms were under construction. By October 2017, 9,531 rooms were available, i.e., almost 50% more, and 3,108 additional rooms were under construction. With an assumed average 2.35 beds per room (*Master Plan*), the four locations in Daocheng County by October 2017 were able to accommodate 22,398 visitors (vs. 17,235 in 2016).

This compares to the maximum capacity of Yading of 16,054 people, who are likely to spend at least two nights in Daocheng County.⁴⁸ Since there was no shortage of rooms even during the peak days of the Golden Week in 2017,⁴⁹ my hotel and room estimates are possibly under-estimates.⁵⁰ Approximately two to three dozen inns located along the 20km

⁴⁷ As of 2017, on visits to the area in March and in October, I have still not seen tour groups from Europe or the U.S.

⁴⁸ Visitors inevitably stay in Daocheng County the nights before and after their Yading visit (and an additional night if they return to Yading for a second day, or spend a day in Jinzhuzhen).

⁴⁹ Hotel/inn rooms were available across Riwa (at exorbitant prices, reaching ten times the prices during summer), and the tents set up in the lobbies of some hotels/inns as emergency accommodation remained empty.

⁵⁰ The *Sichuan Yearbook 2016* in its entry on Daocheng County mentions for *all of* Daocheng County a total number of (in 2015) 21,000 beds, suggesting that my 2016 and 2017 estimates of the number of beds may be an underestimate of all available tourist beds in (all of) Daocheng County. Besides in Jinzhuzhen, Riwa, Rencun, and Yading Village, Daocheng County has no other geographic concentration of hotels.

approach to Riwa from Daocheng are not included in these estimates, some rooms with large beds may have accommodated more than one person per bed, and some tourists brought tents and camped along the road between Jinzhuzhen and Riwa as well as on for-pay tent sites provided by Tibetans in Rencun Village.

At all times of the year other than the Golden Week, Daocheng has a large surplus of hotel rooms. For example, in mid-March 2017 barely 200 visitors entered Yading. In mid-July 2016, the number was around 500 visitors per day. Such visitor numbers imply a 100-fold and 50-fold over-supply of hotel rooms.

Half of all available rooms are located in Jinzhuzhen. Jinzhuzhen also has the highest absolute and relative number of unfinished rooms, an additional almost 50% of Jinzhuzhen's existing capacity. Jinzhuzhen is facing the two issues of distance and altitude. Jinzhuzhen is located 80km from the entrance to Yading and one may prefer not to bracket a long and exhaustive day in Yading with a 90-minute one-way drive in the morning and in the evening (at times when the road, furthermore, likely is busy, and in the dark particularly unsafe).

Altitude sickness commonly sets in at around 2,400m.⁵¹ At Jinzhuzhen's altitude of 3,800m, the altitude has a noticeable effect on everyone. Across Jinzhuzhen, oxygen bottles and Chinese medicine against altitude sickness are widely available. Most hotels offer oxygen-dispensing machines for rent, with special arrangements next to the bed for direct oxygen supply at night. Some hotels overnight pump oxygen into rooms via pipes installed in the ceiling.

The altitude issue is non-trivial and appears vastly underestimated by tourists and the local administration alike. In 2016, at least one person died in Jinzhuzhen from altitude sickness.⁵²

The ready solution is to pass through Jinzhuzhen and head straight to Riwa. Once the roads connecting Riwa to Diqing and Luguahu in Yunnan Province are complete, allowing easy access from Northwest Yunnan to Yading along the Yunnan-Lhasa-Qinghai route, Jinzhuzhen can be bypassed altogether.

While in 2016 much construction in Jinzhuzhen was still ongoing, by 2017 construction activity had almost completely ground to a halt, leaving behind dozens of large hotel shells, many of which looked as if they were designed to become upmarket hotels. By 2017, the feeling among Jinzhuzhen residents was that many of these shells may never be completed,

⁵¹ See https://en.wikipedia.org/wiki/Altitude_sickness, accessed 15 November 2017.

⁵² This was confirmed by multiple sources, but I had difficulty obtaining a figure for the number of deaths ("just" one?) and any further details. Across interviews, this turned out to be a taboo subject.

or at least not in the near future, leaving behind a semi-finished town with a commercial center that counted on tourist numbers for Jinzhuzhen that are currently unachievable.

Fifteen years earlier, the *Master Plan* found tourism facilities in Daocheng County to be woefully inadequate, ranging from the absence of any hotel with a star rating to a lack of electricity, telecommunications, and sewage treatment in Riwa, and “chaos” (混乱) at the cattle station in Yading. It projected an increase in hotel rooms and beds from end-2000 with 166 rooms and 390 beds (this implies the ratio of 2.35 beds per room) to 3,590 beds by 2005, 5,880 by 2010, and 9,200 by 2015. By the mid-2010s, the infrastructure problems had been resolved and the actual number of beds was twice the earlier projected number.⁵³

3. Marketing and Tibetan culture

Daocheng County currently is at an intersection of several tourism strategies. First, a Ganzi Prefecture initiative markets all of Ganzi as “Holy Garze” (神圣甘孜); then there is the original Daocheng slogan for Yading as “last Shangri-La,” and a phrase introduced by the provincial Party Committee in 2011 of “the North [Northern part of Sichuan] has Huanglong and Jiuzhaigou, the South has Daocheng Yading (北有黄龙九寨、南有稻城亚丁). By 2017, the “Holy Garze” slogan appears to have become dominant, present on everything from billboards to music videos and large photos decorating the Yading Visitor Center.

Locally, references to Joseph Rock and “Shangri-La” abound. Joseph Rock wrote about Yading in the *National Geographic* in 1931. He is immortalized in local street names, hotel names, and every write-up on Yading.⁵⁴ The mystical “Shangri-La” in James Hilton’s 1933 novel *Lost Horizon* is supposedly based on Rock’s article about Yading, although James Hilton located his Shangri-La in West Tibet, about 2,000km to the West of Yading. “Shangri-La” is omnipresent, from the newly adopted name of Shangri-La Township (香格里拉镇) for Riwa Township to the video shown on the 60-minute bus ride from the Yading Visitor Center to the end of the road; in the video, Tibetan and Han singers pronounce the beauty of, and their love for Shangri-La in songs.⁵⁵

⁵³ Similarly, the *Master Plan*’s projections for hotel quality were far exceeded (Appendix 6).

⁵⁴ Rock (1931, pp.13f.), among others, writes of Yading: “Konka Risumgongba is the mountain god of the outlaws who dwell around the high plateau from which the majestic peaks pierce the sky,” and “should any outsider now venture into Konka land he would be robbed and then slain, after which the Konka outlaws would resume their own pious pilgrimage.” None of that appears in the Holy Garze propaganda, nor that Rock squarely blamed the Chinese “imperialistic designs” for the state of lawlessness, with the Chinese destroying the local royal families and establishing Chinese magistracies, most of which then fell to Tibetan outlaws. (Nor does he paint a favourable picture of his Tibetan host’s kingdom from where he staged his travels to Yading, describing the Muli king’s domain as an “unfenced penitentiary” (p. 18).)

⁵⁵ The video is produced by the Garze Autonomous Region [Prefecture] and promotes “Holy Garze.” While singers dominate, it also includes two interviews with scientists. Given that “Shangri-La” is an only recently adopted name, all

When it is not Joseph Rock or Shangri-La that serve marketing purposes, then it is happy Tibetans in Tibetan dresses, adults dancing, children running, and young women beaming at snow-covered mountains and a blue sky. Yaks and horses on vast green meadows are a frequently repeated theme, as are burning incense, Tibetan monks in red robes, and stunning, colorful temple and monastery buildings against a mountain backdrop. A retired official of the local tourism office claimed that the clean air, blue sky, and silence of the mountains are the three items that are most important to tourists.

Marketing campaigns and marketing materials issue forth mostly from the County and Prefecture governments and Party committees. The website yading.gov.cn is maintained by the Daocheng Party Committee, government, and tourism office.⁵⁶ The private Holyland Corporation (a hotel operation, more on which below) is also involved in marketing Yading. Thus, the Holyland Corporation has so far organized two marathon events in Yading in 2016 and 2017, expanding to a variety of options for mountain hiking and running in 2017, possibly in its entirety organized with the “skyrunning” association.⁵⁷ This is in line with increasingly presenting Yading not only as sightseeing location but also as adventure location for ground-breaking, car-driving tourists on a quest to explore. Videos show, among others, hikers, horse riders, and motor-cyclists.⁵⁸

Going back to the *Master Plan* of the early 2000s, with its objective of sustainable tourism and environmental protection as priority, the focus was on the scenery and nature *and* the Kangba (康巴) culture:

“If the tourism industry is not supported by cultural content, then there is no firm support (后劲) for development. Therefore the Daocheng government, in tapping into the rich local Kangba culture, must ensure that the masses are proud of their culture. (p. 129)” The *Master Plan* presents tourism as an opportunity for employment and for strengthening local cultural identity, while expressing concern that the local culture could also be lost, that the local religion will face a severe test, and that a “rubbish” (糟粕) culture will invade the area (listing pornography, gangs, and drugs).⁵⁹ There is an explicit perception of potential “Hanization” (汉化).

songs in the video must be non-traditional songs solely created for marketing purposes. For further details on Shangri-La, see Appendix 4.

⁵⁶ The website is an advertisement website for Yading that also provides downloadable maps and travel route suggestions.

⁵⁷ See <http://www.yadinginvest.cn/index.php?m=content&c=index&a=show&catid=16&id=110>, accessed 14 November 2017. On skyrunning, also see www.skyrunning.com, accessed 14 November 2017.

⁵⁸ Two professors in Chengdu working on tourism pointed out a broader trend in Chinese tourism, away from a desire to “have been” at some particular (typically famous) location towards gaining particular experiences.

⁵⁹ The *Master Plan* also lists trash, sewage, noise pollution, the introduction of outside modes of thinking, consumerism, and new cultural and living habits.

The *Master Plan* contains no concrete proposals to address these issues beyond eco-tourism and sustainable development slogans and the promotion of local cultural resources. These latter include traditional Tibetan Buddhist culture with 14 monasteries in Daocheng County, Tibetan dances, and Tibetan paintings and sculptures.

Of the various monasteries and temples, Bengpusi (蚌普寺), on the way from Jinzhuzhen to the airport, with basic tourist infrastructure nearby (parking, toilet), is readily accessible but appears little visited.⁶⁰ One small temple, Chonggu Temple (冲古寺) is located within Yading, a thirty minute walk from the end of the road along a path leading up to a lake; a modest number of tourists stop at the temple. Gonggalang Jiling Temple (贡嘎郎吉岭寺), 22km before Riwa on the way from Jinzhuzhen towards Yading is an easy stop, except that most visitors to Yading are in an early morning rush to get there, and return too late at night to stop. The monasteries along the road are clearly marked by brown-background tourist signs. Such signs also point out particular Tibetan villages or anything else deemed tourist-worthy, though the success rate in enticing tourists to stop appears exceedingly low (matching the questionable attractiveness of the purported attraction).

As to Tibetan dances, the daily evening performance at the new Daocheng Yading Performing Arts Center (稻城亚丁演艺中心) in Riwa during the Golden Week is held by the “Sichuan Province Ganzi Tibetan Autonomous Prefecture Nationality Song and Dance Troupe” (四川省甘孜藏族自治州民族歌舞团) based in Kangding and visiting Riwa for the high season, with many performers being Han Chinese.⁶¹ The evening dance in the central square of Jinzhuzhen, held mostly by Tibetans, is dominated by Han Chinese music, though still loosely following the traditional Tibetan circle dance pattern.⁶²

Tibetan dress-making and handicraft shops (run by Tibetans) are concentrated in one side street of Jinzhuzhen (Bowa Street 波瓦街 South of Yading Road 亚丁路); this includes one shop with Buddhist paintings, where one can observe the painter at work. The customers are

⁶⁰ On half a dozen trips past this monastery, I have never seen a parked tourist bus or car. On my own visit to the monastery one afternoon, I found myself a lone visitor, ending up chatting with the monk in charge of the main temple for a lengthy period of time, which suggests that the monastery is not yet saturated with visitors. On visits to two other monasteries near Jinzhuzhen I had the impression that I was the only tourist visitor in a long period of time, months or more (also supported by the quality of road access [I was on foot]), and one of the two monasteries appeared a rather decrepit affair.

⁶¹ The Performing Arts Center is operated by the Daocheng Yading Scenic Area Tourism Development Company (稻城亚丁景区旅游开发有限责任公司), which also runs the buses within Yading.

⁶² In neighbouring Xiangcheng County, two largely equally sized groups of dancers competed on the same central square with Tibetan vs. Han Chinese music in March 2017; by October 2017, the Han Chinese group, practicing contemporary pop music moves, occupied the central square, while the Tibetan group, practicing traditional Tibetan circle dances, was in front of the former in-town temple, now a “Chinese Communist Party Long March Martyr’s Museum.” In Zhongdian, Yunnan Province, another Tibetan Autonomous County/Prefecture, the dance music and style on the central square were Tibetan. A smaller group of dancers (approximately 20 vs. 200) on an adjacent square danced to Han Chinese music (October 2017).

Tibetans; tourists rarely make it into this side street. In contrast, the center of Jinzhuzhen is dominated by Han-style supermarkets, clothing shops and telecom outlets (and restaurants), predominantly run by Han Chinese.⁶³

Overall, by 2017, the tourism industry in Daocheng County is greatly dominated by Han Chinese, mostly immigrants from the larger Chengdu area, especially Ya'an (雅安). Han Chinese manage all the larger hotels. Most of the personnel in hotels is Han Chinese. On the order of 90% of the restaurants in Jinzhuzhen and in Riwa are run by Han Chinese. The bus drivers from the airport into Jinzhuzhen are Han Chinese, and the bus drivers at Yading are Han Chinese.

While Daocheng County is a Tibetan county with a 96% Tibetan population in 2000, Han Chinese already in 2000 accounted for 70% of the population of Jinzhuzhen.⁶⁴ Tibetan dress has mostly disappeared from Jinzhuzhen and Riwa. Music blaring out of restaurants is Han Chinese music. Local schooling is in Han Chinese, and the younger generation of Tibetans communicates in Mandarin with each other. Tibetan appears to not be taught at school. None of the available TV channels is in Tibetan.

Among the limited shopping opportunities in Riwa, virtually all shops in Riwa's Shambala Tianjie "shopping street" (香巴拉天街) are run by Han Chinese. Even a shop producing and selling what is presented as Tibetan barley snacks is exclusively run by Han Chinese.⁶⁵

Government guidelines mandate uniform faux Tibetan style building facades across Jinzhuzhen (hiding concrete structures). Non-local design studios are entrusted to create uniform signboards for shops and other businesses.⁶⁶ A central block of town, Yading Tianjie (天街), is contracted to an outside developer that embellishes its faux Tibetan buildings with Tibetan paintings and large prayer wheels.⁶⁷ An impressive "people's fitness and activities center" (稻城全民健身活动中心)—from the outside resembling a concert hall or performing arts venue that could hold a thousand people—was completed in typical Daocheng faux Tibetan style in late 2016 or early 2017, but as of October 2017 was locked and not in use.⁶⁸

⁶³ Rencun and Yading Village, the other two locations with tourist accommodations, have only a few shops and restaurants.

⁶⁴ See Appendix 3 for supporting calculations.

⁶⁵ The shop is quite a striking sight with its signs about local Tibetan specialties, and then four Han Chinese working away at traditional Tibetan food production. Not that the solely Han tourists seemed to care, or perhaps even notice.

⁶⁶ As announced in a notice of the Daocheng County Housing and Urban Planning and Construction Bureau on 20 March 2017, seen on a wall in Jinzhuzhen on 1 October 2017, two design studios have been enlisted: Tongji University Architectural Design Institute and Tsinghua University Design Institute.

⁶⁷ As of October 2017, at least the prayer wheel at the entrance facing the wet market had been adopted by some locals, with elder Tibetans lounging around it and occasionally spinning it.

⁶⁸ A smaller, second building behind it houses a movie theater with two venues. The movie theater is in operation; on 1 October 2017 it showed one domestic and one foreign (Jackie Chan) film but appeared deserted.

In contrast to the *Master Plan*'s emphasis on Kangba culture as “firm support for development,” tourism in Daocheng County developed with mostly Han Chinese providing Han (and occasionally “Tibetan”) products and services, with faux Tibetan architecture, faux Tibetan (professionally staged) shows, Han portrayals in video and print of a Tibetan paradise, and a Han-initiated if not Han-implemented liberal smattering of Tibetan dress and “specialties.” The in the *Master Plan* mentioned possibility of “Hanization” (with no connotation as to desirability or undesirability), has become the reality.

4. Three models of tourism development

Tourism development in Daocheng County followed three distinct models: a state-based partner city support model, a large-scale private developer model, and a broad-based private Han-Tibetan collaboration model.⁶⁹

a. *Duikou* model: Yading Tianjie

Key to the urban development of Jinzhuzhen is Yading Tianjie (亚丁天街), a street block of Jinzhuzhen. Yading Tianjie is a 80,000m² real estate development on 31,420m² of land—i.e., an area the size of 5 soccer or football fields—opposite the central square and next to the county government.⁷⁰ Construction began in October 2014 and was largely completed by spring 2017. The project is undertaken by the Luzhou Number Ten Construction Company (泸州十建司), following efforts by the Daocheng County Party Committee and government in collaboration with the intra-provincial partner city (对口援建地, in short: *duikou*), Luzhou Municipality (泸州市) Party Committee and government.

I.e., the project follows a standard *duikou* (partner city) pattern whereby Party organs, governments, and/or state-owned enterprises in richer regions of the province and country are to support a less developed locality. Such assignments typically come with financial obligations, sometimes take the form of material contributions, and often go hand in hand with the 1-2 year dispatch of government officials from the richer to the poorer locality (in part to oversee the use of the financial and/or material contributions by the richer locality, and in part to share their experience in successful economic development).

⁶⁹ Some details on the first two of these three models are relegated to Appendix 7.

⁷⁰ There are a number of other, lesser initiatives in Jinzhuzhen. They include the development of the Rubuchaka hot springs, establishment of a park at the edge of Jinzhuzhen and a second one a few kilometres outside Jinzhuzhen on the way to Riwa, afforestation measures around Jinzhuzhen, a large stupa at the entrance to Jinzhuzhen, numerous city improvement measures (from street lights to trash bins, dysfunctional water-powered prayer wheels in the creek that runs through Daocheng, and fake (immobile) prayer wheels along railings), and the already mentioned restrictions on shop signs, regulations regarding the outside appearance of new buildings, and the “people’s fitness and activities center.”

The contribution of the Daocheng administration to the Yading Tianjie project is limited to the provision of land. The immediate contribution of the Luzhou Municipality Party Committee and government is unclear; presumably they initiated if not helped finance the project (via budgetary resources or bank loans in Luzhou).

The project is a CNY350mio investment that consists of approximately 300 shops (or restaurants) on the ground floor and on a partially exposed lower ground floor (which otherwise, and across further basements, contains a 28,000m² parking garage). Floor space on the first story (above ground floor) is reserved for tea houses and restaurants and supposedly for rent only. Higher floors of the mostly 5-story project are intended for hotels.

In spring 2016, with construction still ongoing, a posh sales office in Jinzhuzhen presented the initial sales successes and advertised shops (with an 8% return on investment) and hotel-type vacation apartments from CNY163,000 upwards. (By 2017, the latter option had disappeared.) A professional 7-minute video presented Daocheng as an alpine village in pure nature, with the mountains populated by happy Tibetans in Tibetan dresses and the Yading Tianjie development crowded with Westerners. It prominently featured the Yading mountains overlooking the Yading Tianjie development (when, in fact, the mountains are 114km away by road and not visible from Daocheng). The video showed flights to Daocheng-Yading Airport from across the country, including from Luzhou, Beijing (北京), Guangzhou (广州), and Shanghai (上海), flight connections that have so far (early 2018) not been established.⁷¹ Many of the scenes in the video of local products, street stalls, restaurants, and highest-quality hotels appear to have been shot in Lijiang in adjacent Yunnan province.

By spring 2017, construction was near-complete. Between March 2017 and October 2017 approximately 20% of the shops began to open: some are simple restaurants, some are telecom shops, and some are typical Han clothing shops; one is an upmarket shop selling “Tibetan” jewelry of the type that might appeal to Han Chinese.

According to sales staff, by March 2017 more than 100 of the 300 shops had been sold; another sales person corrected the number sold to “almost 200.”⁷² In October 2017, the majority of shop fronts carried “For Rent” signs with differing phone numbers, suggesting that individuals had purchased a shop as an investment and now had trouble finding a tenant.

⁷¹ The video showed an airline “transvia.com;” The website transvia.com exists and is the website of a Spanish travel agency (11 November 2017).

⁷² With the near-completion of Yading Tianjie, the posh sales office of early 2016 was relocated (from what became one of the entrances to Tianjie) to a rather shabby administrative office in a side building. The customer was no longer greeted by sleek sales personnel and glamorous videos, but by bored chain-smoking construction operators cutting crude jokes (mostly at the expense of a young Tibetan sales girl, who served them right back), waiting out their four years in Jinzhuzhen and looking forward to their next assignment, expected for 2018.

One interviewee questioned the wisdom of owning a shop when “there is nothing happening in Daocheng.” Even during the peak season in October 2017, Jinzhuzhen was a very far cry from the tourism frenzy of, for example, Lijiang in Yunnan Province.

In October 2017, above ground level, except for one restaurant, everything was empty (and one corner of the project was still under construction). Rents for the higher-level stories are likely too high. The asking price for a 180m² teahouse on the first floor in March 2017 was CNY40/m², which a potential purchaser claimed was twice the going rate. Not a single hotel had opened (or appeared under preparation) within Yading Tianjie.

b. Private investor model: Riwa’s Holyland Corporation

Riwa (Shangri-La Township) used to be a sleepy township with Tibetan stone buildings along a main street and a few side alleys. By 2017, most buildings had been converted into guest houses and hotels had been added, for a total of about 60 places of accommodation. Restaurants and tourist shops lined the streets. A third supermarket had just opened and numerous convenience stores had sprung up. The restaurant business had become big enough to support a newly built wet market with regular supplies trucked in from Yunnan Province.

Key to the development of Riwa is the Holyland Corporation (稻城县亚丁日松贡布旅游投资有限公司), named in Chinese after one of the three mountains of Yading. It was founded in April 2006 with registered capital of 200mio yuan as a subsidiary of a Shenzhen investment company (深圳市金沙江投资有限公司). Following a strategic cooperation agreement with the Daocheng County government, Holyland became the exclusive developer of all tourism and commercial undertakings in Riwa.⁷³ The initiator of Holyland is a Han Chinese from Guangdong Province (广东省) who was earlier involved in the construction of a hydropower station in Riwa. Subsequently, he started to buy up land in Riwa, piece by piece, at a time when tourism to Yading consisted of a few individual travelers. He is rumored to have purchased on the order of half the land in Riwa.

The Holyland Corporation runs three hotels: the five-star Holyland Hotel (23,000m²) with 213 rooms, opened in September 2013; the smaller four-star Yading Yizhan (亚丁驿站, Yading Inn) with just below 100 rooms; and a newly renovated third hotel that in 2017 (after separation from the Yading Inn and renovation) became a four-star Ramada Encore hotel with approximately 200 rooms. As part of Wyndham Worldwide, the Ramada Encore hotel

⁷³ See the Holyland Corporation website at <http://www.yadinginvest.cn/> (accessed 13 November 2017). Much of the information in this section is based on interviews, own observations, and the Holyland Corporation website. This website is unusually extensive for a West Sichuan website, including news items from the press.

allows Holyland to gain greater exposure overseas. All three hotels are grouped together on the two sides of a new road development in Riwa associated with the Holyland Corporation.

A 2,100m² 400-seat performance venue (亚丁境界演艺中心) is located under the extensive front area of the Holyland Hotel. Next to the three hotels is (Holyland Corporation's) Shambala Tianjie, a 12,000m² shopping and restaurant complex with approximately 100 outlets. In spring 2016, the Shambala Tianjie was completely empty, but by October 2017 several dozen shops, convenience stores and restaurants had opened.⁷⁴ In the evenings tourists, after returning from Yading, flocked to this new commercial center of Riwa. The Holyland Corporation itself ran a rather unattractive and little visited "bargain-price shopping mall" (平价购物商场) in the basement of the Tianjie complex.

The status of the three high-end hotels of the Holyland Corporation is almost uncontested. A Daocheng Riwa Airport Hotel (稻城日瓦翔云酒店) at the edge of Riwa has offered limited competition for some years. More significant competition arrived in 2017 with the opening of a Holiday Inn Express (稻城亚丁智选假日酒店) halfway between Riwa and Rencun. In contrast to the Holyland hotels, neither of the two is within easy walking distance of Riwa's restaurants, shops, and (limited) nightlife.

The Holyland Corporation has further plans to build a spa hotel (天谷莲轩温泉 SPA 酒店), a "courtyard-style boutique hotel 'Kangba First Village'" (院落式精品酒店 '康巴第一寨'), and a 36,000m² conference hotel. The total built-up area of all Holyland projects is estimated to be 210,000m² and the total cost (with no date given) is estimated to be CNY 3bn. The final outcome is described as an "International Tourism Small Village" (国际旅游小镇). A reliable source suggested in October 2017 that the latter three projects had not yet been started because of "national policy" (国家政策), and the current plan was to start construction of the spa hotel and the conference hotel in 2018.

One source in early 2017 suggested that the Holyland Corporation had delayed development in violation of the time schedule originally agreed upon with the Daocheng government, due to funding difficulties (perhaps due to a lack of tourists given the late road completion?). This led to differences with the government and possibly the return of some land to the government, and as a consequence the arrival of the Holiday Inn Express.

⁷⁴ In 2016, the Holyland Corporation was trying to sell space in the Shambala Tianjie for CNY 40,000 per square meter. By 2017, the price had come down to between CNY 15,000 and CNY 25,000.

Holyland was said to be running at a loss, and to have reduced staff numbers from 400 in 2016 to 170 in 2017. Yet a rough calculation suggests that by 2017 the Holyland Corporation's hotels likely operated with similar financial results as U.S. hotels do.⁷⁵ This may still not be good enough in the long run, as China tends to have higher depreciation rates (due to poor construction quality and maintenance) and higher expectations for returns on investment.⁷⁶

In the short run, the Holyland Corporation appears to be diversifying away from accommodation. As of October 2017, a newly established Daocheng County Holyland Public Urban-Rural Public Transport Company (稻城县日松贡布城乡公客运有限公司) ran ten new shuttle buses between Riwa and the Yading Visitor Center, and three daily buses between Riwa and Jinzhuzhen during high season.⁷⁷ A separate company was established to manage the bargain-price shopping mall.

c. Tibetan-Han collaboration

Apart from the three hotels of the Holyland Corporation, the Daocheng Riwa Airport Hotel, the Holiday Inn Express, and an old hotel at the entrance of Riwa (Wizard Aden Hotel, 稻城绿野亚丁酒店), most of the remaining approximately 60 inns and hotels in Riwa are run as leases from Tibetan families. The same holds for virtually all of the approximately 40 inns and hotels in Rencun (4-7km from Riwa, just before the entrance and Visitor Center to Yading), and the approximately one dozen inns located in Yading Village (28km inside Yading Nature Reserve).

The Tibetan family leases either their house or their land for (typically) twenty years to an outsider, invariably a Han Chinese from the greater Chengdu region. After twenty years, the property returns to the Tibetan family or the lease is renegotiated. The lessee renovates the Tibetan house (which can be either an old building or a concrete shell of a new building), or builds a new hotel from scratch.⁷⁸ The Tibetans, especially the older members of the family, frequently continue to live on the property, such as in a side building.

⁷⁵ For detailed considerations, see Appendix 7.

⁷⁶ Talking to numerous hotel managers in West Sichuan, including discussing back-of-the-envelope estimates, I came away with the impression that investors in the hotel business in Ganzi Prefecture expect to recoup their full investment in between one and three, at most five years. Stories abound of hotel investors working their way up from a small inn to a larger or renovated inn, a first hotel at perhaps 3-star level, then an expansion of hotels or an upgrading to 4-star level—as does evidence of bankruptcies, especially in the case of large-scale hotel investments undertaken by outsiders.

⁷⁷ For the buses between Riwa and Jinzhuzhen also see <http://www.yadinginvest.cn/index.php?m=content&c=index&a=show&catid=16&id=116>, accessed 14 November 2017.

⁷⁸ If a hotel/inn is newly built, it can be virtually any size or type, a large Tibetan-style stone house (though likely with an underlying concrete structure), or a 100-room concrete block.

For example, three non-locals rented a plot of land in the upper part of Rencun, next to the Visitor Center, from a Tibetan family for CNY 200,000 a year for 20 years. Between 2016 and early 2017, the lessees built a hotel with approximately 100 rooms, supposedly spending (what appears too high) CNY 30mio on construction.

The land of a village of several Tibetan families, located approximately 20km North of Riwa, along the road from Jinzhuzhen to Riwa, has been leased to a Han entrepreneur for development. So far, the entrepreneur has not started development and the locals continue their agricultural use of the land while collecting the rent payments from the entrepreneur.

The leasing practice extends to many hotels in Jinzhuzhen. For what is likely a majority of inns and hotels in Daocheng County, the construction and ownership of the building is divorced from the actual hotel business. The building is leased out to a Han Chinese who renovates/decorates/finishes and then manages the hotel.⁷⁹

The practice also extends to restaurants. For example, an approximately 120m² restaurant on a section of the ground floor of a large four-story building on the main street of Riwa pays CNY 160,000 annual rent to a Chengdu landlord, who supposedly collects a total of CNY 1mio rent per year from all occupants of the building.⁸⁰ The landlord pays the Tibetan land owner CNY 250,000 per year for a period of 20 years, after which the building becomes the property of the Tibetan land owner.

The vast majority of inns and hotels, many restaurants, and possibly half of the shops (especially those oriented towards tourists) shut down over the winter. The Han Chinese lessees board up their leased property and return to the greater Chengdu region. During this period, Jinzhuzhen becomes deserted and Riwa and Rencun resemble ghost towns.

The *Master Plan* did not foresee such Tibetan-Han collaboration. The government at first was rather permissive of, if not encouraging, this bottom-up form of development. But by 2017 the government had become highly restrictive and prohibited new hotel/inn construction, presumably due to the overcapacity.

⁷⁹ The lessees do not necessarily have much experience in the hotel industry. For example, a Tibetan inn at the center of Riwa is run by a young Han couple whose main advantage seems to be that they speak fluently Mandarin, are technology-savvy (know how to adjust their prices on the various hotel apps), and know how to interact with Han tourists.

⁸⁰ The total rent of CNY 1mio cited by the interviewee appears too low given the size of the building and the number of restaurants and shops with direct street access.

D. Income generation

A key measure of the level of economic development is per capita income. An aggregate value of tourism income yields a number of broad insights. The official household income data can be augmented to achieve a broader estimate of per capita income.

1. Aggregate tourism income

The *Ganzi Statistical Yearbook* provides tourist numbers and tourism income by month.⁸¹ Dividing tourism income by the tourist numbers for the 20 localities—18 counties, with Yading and Hailuogou (海螺沟) listed separately—yields tourism income per visitor-night (“per visitor”). In each month of 2015, tourism income per visitor in all but one locality of Ganzi Prefecture equals CNY 990 (with CNY 1,314 for Derong County, each month). The same uniform pattern prevails across counties and months (with an occasional deviation) in earlier years.⁸²

Tourism income per visitor is likely an assumed value given the uniformity of this value across localities and months, as well as its pattern over time with a value of CNY 650 from 2007 through 2010, then variations on CNY 675 in 2011 and 2012, and finally CNY 990 in 2013-2015. (For the average annual value of Daocheng County see Table 8.) Consequently, either the tourist numbers or tourism income (or both) are derived values.

Tourism income likely is the derived value, while tourist numbers likely are compiled values. First, tourist numbers are probably easier to collect (such as via records of establishments of accommodation) than tourism income values. Second, in an unusual large number of months, tourist numbers come with one to three zeroes at the end (while tourism income values do not), unlikely for a derived value. Third, various reports with individual tourist numbers suggest that the official tourist numbers for Daocheng County are at least approximately correct. I.e., the likeliest procedure is one where tourism income per tourist is given, the tourist numbers are estimated, and tourism income is derived as their product.

⁸¹ The list of definitions provided in a separate explanatory section of the *Ganzi Statistical Yearbook* does not define tourist numbers (旅游人次) or tourism income (旅游接待收入) and does not explain how these values are compiled; the explanatory section appears copied from some provincial or national compendium and bears little relationship to the data provided for Ganzi Prefecture.

⁸² One significant exception is December 2014, when the values vary drastically across localities and appear by far too high in some counties, such as Daocheng County, with CNY 3,785 (Daocheng excluding Yading CNY 989, close to the CNY 990 value of all other months, and Yading CNY 7,290). On the separate listing of Yading and Hailuogou see Appendix 6.

Tourism income of Daocheng County (excluding Yading) in 2015 was CNY 1.10149bn, and that of Yading CNY 595.31mio. The value of tourism income has implications for value-added (including economy-wide GDP) and for employment.

Making use of the fact that, nationwide, value-added is approximately equal to tourism income in legal person units, the following comparisons can be drawn.⁸³ Tourism income of all of Daocheng County (including Yading) in 2015 was three times the official value of Daocheng County GDP at CNY 597.52mio (Table 8), up from 0.3 times in 2013. Daocheng County tourism income in 2015 was also 38 times value-added in hotels and catering, 768 times value-added in transport, and 100 times value-added in trade.⁸⁴ That is impossible.

Viewed the other way round and attributing all of Daocheng County's official value-added in hotels and catering, transport, and trade to tourism—an exaggeration, since at least in the case of trade not all activity is tourism-related—and dividing by the number of tourists implies an utterly implausible upper-bound value for value-added per tourist (per day) of CNY 37. This contrasts with the official tourism income per visitor value of CNY 990.

Internationally, “travel receipts” account for 18% of GDP in Croatia and 13% in Malta and in Cyprus, the European countries with the highest shares of travel receipts in GDP.⁸⁵ Even if one were to assume that in Daocheng County tourism income accounts for as much as half of GDP, that would still leave Daocheng's resulting “true” GDP value to be six times the value of official GDP—or the “true” value of tourism income to be one-sixth the official one.

I.e., either tourism income or GDP and sectoral value-added of Daocheng County (or both sets of data) are wrong. The Daocheng County (likely assumed) tourism income value per visitor appears approximately correct, as do the Daocheng County tourist numbers.⁸⁶ That then implies that Daocheng County tourism income is approximately correct, and leads one to question Daocheng County's GDP and sectoral value-added.

The case of employment values is not much different. Using a room estimate for Daocheng County in 2015 of 7,000—based on the July 2016 room count of 7,334, likely an underestimate—and dividing by the national number of rooms per engaged person in above-designated size legal unit hotels (item (2) in Table 8) implies 3,977 engaged persons in the hotel industry in Daocheng County. Considering the national share of hotels in the number of engaged persons in ‘hotels and catering’ (item (3) in Table 8), the implied number of engaged

⁸³ The precise relationship between tourism income and value-added depends on the (unknown) coverage of Daocheng County ‘tourism income,’ on which more in Appendix 8.

⁸⁴ Tourism income typically refers to income in hotels and catering, transport, and, to a limited extent, in trade. Also see Appendix 8.

⁸⁵ See http://ec.europa.eu/eurostat/statistics-explained/index.php/Tourism_statistics, accessed 2 March 2018.

⁸⁶ For detailed considerations, see Appendix 8.

persons in catering in Daocheng County in 2015 is 4,669. Employment in hotels and catering together then is 8,646.⁸⁷

The employment calculations so far covered only hotels and catering. Across Ganzi Prefecture, transport value-added is equivalent to three-quarters of hotels and catering value-added (see note below Table 8). If value-added per employee in transport were twice that in hotels and catering (and all transport is assumed to be related to tourism), then another approximately 3,000 tourism-related persons are employed in the sector transport ($0.75 * 0.5 * 8,646$), bringing total tourism-related employment in ‘hotels and catering’ and transport to approximately 11,000-12,000.

A similar calculation can be made for the sector ‘trade,’ with perhaps one-third of all (wholesale and retail) trade directly and indirectly related to tourism. In Ganzi Prefecture, value-added in trade is of similar size as value-added in hotels and catering (see note below Table 8). If value-added per employee in trade in Daocheng County were similar to that in hotels and catering, then trade would account for another approximately 3,000 employees ($1/3 * 8,646$) directly and indirectly related to tourism, bringing total tourism-related employment to 13,000-15,000 persons.⁸⁸

Overall, the implications of Daocheng County’s tourism income value are far-reaching. In terms of GDP, assuming the equivalence of tourism income and value-added, a corrected GDP value that takes into full account tourism income as value-added of ‘hotels and catering’ and transport is four times official GDP in 2015, but only 1.3 times in 2013 (Table 8).⁸⁹ I.e., it appears that Daocheng County statistics officials with their official GDP data refuse to acknowledge the effect of the sudden boom in tourism on Daocheng County’s GDP.

There could also be a practical reason for the discrepancy. Possibly, all accommodation, catering, and transport organized by non-locals is not being reported to a local statistics office (that could be severely under-staffed, with perhaps no more than a couple of staff, who, furthermore, may not be particularly qualified); these values may be reported to the locality in which the non-locals are registered, or may not be reported anywhere at all.⁹⁰ Another reason could be a political one, the desire to project a poor county in need of outside help.

⁸⁷ An international standard of employment per hotel room yields similar numbers for hotel employment; see Appendix 8.

⁸⁸ An alternative approach to calculating tourism-related employment is based on tourism income. Detailed considerations presented in Appendix 8 suggest tourism-related employment across the economy in Daocheng County of approximately 12,000-16,000 persons.

⁸⁹ The corrected GDP value is based on the corrected ‘hotels and catering’ plus transport value-added (together assumed to be equivalent to tourism income) and for all other sectors on their official value-added. Tourism income is consistently much larger than the official value-added in ‘hotels and catering’ and transport (2 times in 2007, 36 times in 2015).

⁹⁰ This would be a common issue. Thus, Tianjin (天津) is reported to have revised its GDP estimate downwards in January 2018 in order to “remove the activity of thousands of companies that registered locally to enjoy tax breaks but whose

The derived employment values can be contrasted with the official employment values. Formal employment in non-agriculture in 2015 was 3,654 persons (Table 4);⁹¹ in hotels and catering alone it was 287 and in transport 431. The derived values for employment related to tourism at 13,000-15,000 persons are 18-21 times larger. Combining the official non-agricultural formal employment values for all sectors except in ‘hotels and catering’ and in transport with the estimated tourism-related employment values yields 16,000-18,000 employees, numbers that exceed the official non-agricultural formal employment value of 3,654 four- to five-fold.⁹²

The problem then further extends to the population figures, with 4,265 persons (of all ages) in non-agricultural households (Table 3). If one were to subtract approximately one-third as not being of working age or being retired (or too old to work), then the resulting number would already be below the formal employment figure for non-agriculture in 2015 of 3,654 persons (most of which in some form of state-related employment). The extra four- to five-fold numbers of actual employees then are simply not covered by the local statistics. Presumably, these are the Han migrants that run much of the tourism business in Daocheng County; they may be resident in Daocheng County for 8-9 months of the year, but have their household registration as well as their ‘residence’ elsewhere.

If only half of the 3,654 formal employees in non-agriculture were also Han Chinese (likely an under-estimate), then on the order of 90% of non-agricultural employment in Daocheng County is Han Chinese. With Han Chinese thereby accounting for perhaps 15,000-17,000 employees compared to a total registered population of 31,643 or permanent resident population of 32,709, more than one-third of the actual local population is non-Tibetan. This is in stark contrast to the official rhetoric, such as in the *Sichuan Yearbook 2016*, that the year-end 2013 population was 32,700 people, of which Tibetans constituted 96.5%.

2. Household income

The household income statistics paint a bleak picture (Table 9). Per capita GDP in Daocheng County at CNY 18,442 per person is one-third the national average. Average income per person in 2015, at approximately two-thirds of GDP per capita, is only CNY 12,735 with a

business activities took place elsewhere” (*Financial Times*, 11 April 2018, “China Red-Tape Cuts Prompt Surge in Business Registrations”).

⁹¹ The official Daocheng employment values reported in Table 4 are average annual employment values, while the tourism statistics work with end-year employment. The difference between average annual and end-year employment values are of negligible size and therefore ignored here. (Also see note to Table 8.)

⁹² Formal official employment in the construction sector in Daocheng County is zero, but construction is happening everywhere in Daocheng County and the GDP statistics of Daocheng County do not deny its existence. Presumably, most construction workers come with the outside construction companies; these workers may number another 1,000-2,000.

more than three-fold discrepancy between urban and rural household income (CNY 26,030 vs. CNY 8,615). Almost all urban household income is wage income (88%). Operating income (of entrepreneurs, including sole proprietorships) and property income each account for a further 5%. Transfer income accounts for the remaining (only) 2%, indicating that there is no large Tibetan contingent working outside Daocheng County and remitting income back home. A breakdown of rural household income is not available, and given that practically all agricultural activity is subsistence agriculture, rural household income presumably includes imputations of the value of self-produced self-consumed agricultural products.

But the official statistics provide only a partial picture. (i) In all likelihood, these income statistics do not incorporate estimates of the value of the Matsutake and Caterpillar mushroom harvests. For individual households, these are major events. Family income from mushroom harvesting can run into several tens of thousands of renminbi. (ii) The income statistics are unlikely to cover bartered labor. For example, building a home is a household activity and typically involves two dozen people; neighbors and relatives keep tab of such uncompensated labor and provide return services. (iii) And finally there is income from unreported, informal labor. Altogether, these unreported household income sources are likely to raise official household income by at least 50%.⁹³ (For the estimates see Table 9, with the underlying assumptions listed beneath the table.)

One may want to further consider the fiscal transfers into the region, reflecting the extraordinary extent of the provision of public goods relative to local income levels: The fiscal transfers received amount to almost twice the estimated actual household income and almost three times official household income.⁹⁴ Per capita, estimated actual household income plus fiscal transfers received together match national GDP per capita.

What the data do not allow is a distinction by income groups (let alone a distinction between Tibetan and Han Chinese households). There likely is vast income inequality among Tibetan households, with successful mushroom-hunting families pulling far ahead in terms of income, as do Tibetan households with leasable buildings or land in the right location.⁹⁵

⁹³ The production and informal sale of local “special products” may yield additional income; see Appendix 9.

⁹⁴ In national comparison, Daocheng County fares better in terms of income per laborer than in terms of income per capita. A good number of working age persons—monks and nuns—choose not to pursue income. Daocheng County may also have a relatively large proportion of children and old people. Living costs could be lower in Daocheng County than in other parts of the country because of the lower wage level and direct access to agricultural products. (Apples at the wet market in Jinzhuzhen in October 2017 sold for CNY 3 per kg, whereas in Chengdu apples sold for CNY 8 per kg.) Prices of imported industrial goods could be higher due to transportation costs, but all industrial goods undergo some form of transportation before reaching a sales outlet and distance makes little difference to overall transportation costs.

⁹⁵ While explicit income as well as quality of housing and personal appearances can differ widely, abject poverty is not a visible feature in Daocheng County.

The official household income data match the official employment and labor remuneration data after considering that only approximately half of the urban residents are being regarded as formally employed and that some labor remuneration reflects income taxes and other non-disposable income. Average labor remuneration of the 3,880 formal employees in 2015 of CNY 64,293 (average of private and non-private units in Table 4) compares to urban disposable income of CNY 26,030 *per person* (Table 9) for the 7,739 urban residents.

What the household income data and the employment and labor remuneration data completely miss out on are the additional employees identified in the previous section. Assuming all tourism income accrues to these additional employees and assuming a number of 15,000 additional employees implies tourism income of CNY 113,000 per additional employee. Not all tourism income may translate into disposable income of employees; a rough estimate would then be CNY 100,000 per additional employee, indicating a drastic, almost ten-fold discrepancy in income levels between the local population and the unrecorded, typically Han immigrant worker.⁹⁶ Tourism income in itself exceeds all official household income four-fold (CNY 1.697bn vs. CNY 12,735 * 32,709 persons, Table 9).

E. Evaluation

The three key questions of the paper are now explicitly answered: (i) What forms of economic development are there, and how this does development come about? (ii) What is the role of government economic development policies, and how effective are they? (iii) What are the broader (social, cultural) consequences of economic development, and how are they being perceived by the population?

1. Daocheng County economic development characteristics

Economic development has happened in Daocheng County. A shift in the sector distribution of economic activity over time away from subsistence agriculture towards the higher-productivity service sectors has occurred, raising per capita income levels.

Economic development in Daocheng County is the result of a focus on the development of tourism. Agriculture has remained subsistence agriculture using traditional technology. Industry is virtually non-existent. Tourism development has meant rapid expansion of

⁹⁶ Ignoring additional employees and simply dividing the tourism income in 2015 of CNY 1.697bn by the number of permanent residents (32,709) would imply an additional CNY 53,623 per person (though not all of it will constitute disposable income), on top of the official CNY 12,735 average household disposable income per person (Table 9).

economic activity and employment in hotels and catering, and in transport. A corollary is a temporary construction boom.

The expansion of tourism had positive linkage effects on other sectors including retail trade, wholesale trade, and entertainment. Numerous business services, less apparently, are also affected, such as washing and pressing of bed linens for hotels, servicing of motor vehicles, and washing and wrapping of plates for restaurants.⁹⁷ I.e., possibilities for employment and productive activities across a number of sectors have increased. The formal output and employment statistics miss out on much of the tourism industry as well its linkage effects.

Tourism development came about by government design. The local government seized an opportunity—or was told by the prefectural government to seize the opportunity—and was provided by higher-level governments with the necessary resources to enable tourism development, to an extent that far exceeds the developmental capacity of the locality itself. In Jinzhuzhen, the Daocheng County government then sub-contracted major development tasks (hotels, catering, entertainment, trade) to a *duikou* project, and in Riwa Township to the outside (private) Holyland Corporation. Small-scale private Tibetan-Han collaborations followed in the wake of tourism development.

2. Role of government

The government's role evolved from that of initiator and enabler to administrator of tourism development. The Daocheng County government delineated Yading nature reserve and then opened it to tourism. This was done through various forms of organizations over time, most recently via the (state-owned) Daocheng County Tourism Development Company and the prefectural (state-owned) equivalent.⁹⁸ Higher-level governments—with some delay—put in place road and airport infrastructure, while Daocheng County improved the local urban infrastructure.

The private Holyland Corporation facilitated planning and control. The government handed over a wide swathe of development functions in one stroke (covering half a township) by imposing (unpublished) tourism development obligations with the land lease. The corporation's commitment to expansion floundered when the tourist numbers at first did not increase rapidly enough. Tourist numbers depend on government-provided infrastructure,

⁹⁷ In many restaurants, the customer is presented with a plate, bowl, teacup, chopsticks and spoon sealed in plastic wrapping. Used dishes are picked up by a washing service, that then returns them in sealed plastic packages.

⁹⁸ On the formal (state-owned) company arrangements see Appendix 3.

creating a dependency relationship for the private corporation and handing leverage to the government.

Smaller private investors entered the hospitality industry once tourism began to take off: Private small-scale operations “crowded-in,” following profit opportunities created by the government-initiated tourism take-off. Private initiatives range from restaurants, shops, wholesale trade (including the wet markets and the supply chain from Yunnan Province) and various business services to private inns and hotels (in comfortable collaboration with Tibetan landowners). Small private investors ultimately remain dependent on a government whose plans are secret and which, at any moment, may issue new policies that affect private investment and its profitability. By necessity, thus, much, small-scale private investment focuses on a quick return on investment.

The government maintains a tight grip on the trajectory of economic activities. Thus, the first *Master Plan* is not a public document, nor is the new 2015 *Master Plan* (which cannot be obtained at all). I.e., tourism development is a near-secret undertaking of a government not accountable to the public (to which it releases propaganda statements on tourism). Only those selected or approved by the government may participate in this undertaking. As the first *Master Plan* explicitly stated, the county economy is to move ahead by leaps and bounds “thanks to the government’s lead” (主导).

Beyond the promotion of tourism, the Daocheng County government adopted a broad program of expansion of government services. These include water and electricity supply, broadband access and cellular communications, education, medical care/hospitals, sewage and rubbish management, and transportation. As of 2016, all of these were in place and functioning reasonably well.⁹⁹

The government is not a uniform organization. Tourism development, infrastructure investment and the provision of the broad range of supporting services required coordination across these undertakings as well as across different government tiers, from county to prefecture and province, if not the national administration. The Chinese government bureaucracy has exhibited the capacity to initiate and coordinate, as well as to achieve the needed very significant fiscal transfers into the county. In that respect, tourism development in Daocheng County is ultimately, despite delays, a success story.

Not-for-profit services, almost exclusively provided by the government, accounted for 19% of GDP in 2015, approximately twice the national share, presumably thanks to fiscal in-

⁹⁹ There would still be an occasional electricity blackout and stores still maintained their own electricity generators.

transfers. Such a degree of redistribution is unusual in developing economies. Without outside help, government services in Daocheng County would be more limited because an economy at a low level of economic development would have little funding available to provide public goods. The outcome appears to be a systematic reproduction of the complete Chinese government bureaucracy in even the remotest, economically backward locality. Whether every Tibetan township needs its own courthouse or some other aspect of the Chinese bureaucracy, however, is questionable.

If the benefits of economic development in Daocheng County exceed the large initial infrastructure costs and the ongoing fiscal transfers is an obvious question, but one that can probably never be answered. The benefits are too varied to be fully grasped, and a counterfactual—a county in West Sichuan whose fate is up to a Tibetan self-administration—does not exist. Economic development in Daocheng County appears a top-down decision to open up (at a manageable cost) the Yading nature reserve to Chinese tourism, accompanied by the imposition of the standard Chinese government bureaucracy.

3. Consequences of economic development

In Daocheng County, many people benefitted from economic development. An obvious beneficiary is the numerous Han Chinese, who would otherwise not be there. Many of the first Han Chinese immigrants came as woodworkers, typically from the Ya'an region, providing carpenter services for Tibetans building or renovating houses. They stayed, diversified, and brought relatives and friends, by 2015 accounting for on the order of four to five times local non-agricultural formal employment (and many more times local private sector employment).

Nowadays, the better hotels in Daocheng County advertise their positions in Chengdu, the provincial capital, and Han Chinese come from all over the country to fill well-paid positions. For Han Chinese, in interviews, it was the money that drew them to Daocheng County; once arrived, the open space, the clean air and the bright sky may have helped keep them there except for the winter months.

For the local Tibetans, the outcome is more heterogeneous. Some have left subsistence agriculture behind but there are few stable jobs for Tibetans in Jinzhuzhen. Tibetans are often not qualified for the jobs available. Receptionists at hotels tend to be Han Chinese, and in the better hotels virtually all staff, including the cleaning staff, are Han Chinese.¹⁰⁰ The Yading

¹⁰⁰ Tibetan women cleaning a hotel room can be a jolly affair, with singing and openly expressed curiosity about the foreigner and his belongings.

Tianjie sales office staff explicitly made the point that they hired one Tibetan girl (with a high school education through 12th grade obtained in a Han area of Sichuan) in order to be able to say that they hired a Tibetan, apparently the local form of political correctness.

In another (quite typical) example, the husband provides passenger services with his jeep, outside the formal economy; the wife washes dishes in a restaurant at night; their grandchildren live with them to attend school in Jinzhuzhen; their son (the father of the grandchildren) has no stable employment and roams Jinzhuzhen while his wife runs the family farm 100km away.

At times, temporary odd jobs with the government are available for purposes ranging from afforestation to basic road construction and repair. A few Tibetans do pull ahead by, for example, moving into the otherwise Han Chinese ranks of the administration or opening their own shops, but these tend to be exceptions. Many Tibetans remain on the cusp of divorcing from subsistence agriculture, with no reliable alternative source of income.

Dozens of Tibetan hawkers of jewelery used to spread their wares on blankets at the end of the road into Yading. By October 2017 they had all vanished. Signs at the Visitor Center warned against buying from hawkers. Similarly, the old Visitor Center, at the lower end of Rencun and in use through September 2017, was surrounded by Tibetan stalls selling everything from oxygen bottles to raincoats and jewelry; the expansive new Visitor Center has no such stalls, but an integrated shop staffed by Han Chinese.

One set of jobs appears explicitly reserved for Tibetans. That is the operation of the electric carts within Yading that optionally take visitors from approximately 0.5km up from the Yading bus terminus (end of road) to the Luorong cattle station (today a concrete platform), approximately 7km further up the valley. These electric carts are exclusively operated by Tibetans, a compromise following a conflict between Tibetans offering horse rides up the valley and the Chinese administration wishing to switch to electric vehicles (for stated environmental protection reasons). At the time, approximately the mid-2000s, Yading was temporarily closed to tourism by the authorities until this compromise was reached. Horse rides from the Luorong cattle station onwards towards Milk Lake, a rather limited undertaking, are also exclusively provided by Tibetans.¹⁰¹

While on the one hand Tibetans are (rather disadvantaged) employees, on the other hand they can also be rentiers. As landlords, Tibetans rent out houses or land and receive a fixed income (such as CNY 200,000 per year). But while these leases may at first sight look

¹⁰¹ Rubbish removal and path maintenance within Yading also appear to be exclusively delegated to Tibetans, albeit under the direction of a Han administrator. The construction of new elevated steel walkways is done by Han Chinese.

advantageous to Tibetans, in the longer run they could well disappoint. The rent is fixed in nominal terms. At a 5% inflation rate, by the twentieth year the purchasing power of that nominal amount is little more than one-third of what it was in the first year. The outside investor will have planned on recouping the investment within a few years, probably no more than five years, and may care ever less about the quality of the property, perhaps returning more of a liability than an asset to the Tibetan family. Whether the outside investor has a continuing interest and negotiates a continuation of the lease depends much on the future success of tourism.

In many ways, Tibetan elites persist. The former commune leader of Riwa owns several buildings in the center of Riwa that are now rented out to Han Chinese to operate as inns. The former commune accountant as of October 2017 had just put up a large concrete shell for a hotel development in Riwa. The Tibetan head of a township in Daocheng County, previously in the forestry bureau of the county government, as of 2016 had constructed a hotel shell in Jinzhuzhen (with no change in status by October 2017).¹⁰² Those local Tibetans with links to the government are likely to learn of opportunities first, may have better abilities to benefit of government policies thanks to their previous experience with the government, and may be the ones the government turns to for profitable government contracts.

For many Tibetans, the education of their children is an important step forward. But with a junior middle school education (through grade 9) being the highest schooling available in Daocheng County, those who grow up locally still have few chances to compete with those who come from Chengdu and easily have a senior middle school or even college degree. Some Tibetan families in Jinzhuzhen send their children to relatives in other parts of China for more or better schooling, and the school system itself includes a transfer mechanism for local children to spend years in schools in other parts of China.

The local 9-year school system appears to exist more because of a general Chinese government requirement and perhaps because of an assimilation objective than as a means of improving the economic livelihood of the local Tibetans. Supposedly, not even Tibetan language is being taught. There is no institution in Daocheng County that teaches practical or professional skills.¹⁰³

There is no perceivable Tibetan opposition to the Han Chinese arrangements for Daocheng County. The Han Chinese take-over is simply accepted. Tibetans watch Chinese TV, speak some Mandarin, and grasp whatever money-making opportunities arise from the

¹⁰² The Han Chinese leader of the forestry bureau apparently managed to acquire several properties for development.

¹⁰³ There is a small Party cadre school, which, however, seems a rather abandoned affair.

tourism boom. They want their children to fit into the Han Chinese society. Chinese “Communist” “Party” flags adorn numerous Tibetan farm houses in the countryside along the road from Jinzhuzhen to Riwa.¹⁰⁴ To many, typical non-descript Chinese apartment blocks in Jinzhuzhen are viewed as modern (and coveted). The occupancy of these residential blocks is a mixed Tibetan-Han one, with ethnicity being no apparent issue.

Daocheng County is part of the Kham Tibetan region, which traditionally follows the Kagyu Buddhist tradition. Differences between the Kagyu tradition and the Dalai Lama’s Gelugpa tradition go back centuries and included armed conflict. Today, Tibetans across Daocheng County say they have nothing to do with the Dalai Lama, who may even be viewed as an enemy. At the same time, Daocheng County appears singularly devoid of any monastic authority, compared to other counties in West Sichuan. There is no temple or monastery in Jinzhuzhen itself and those in the vicinity (the closest one being approximately 10km away) are small affairs and were reported to be in conflict with each other. There is no such rule as the second son of each family joining the monastic order.

For many Tibetans in Daocheng County, perhaps a majority, formal religion plays no important role. For example, one particular (typical) Tibetan family’s apartment in Jinzhuzhen lacked all religious paraphernalia. On the wall was a poster of Mao Zedong (including, in its four corners, portraits of Deng Xiaoping, Jiang Zemin, Hu Jintao, and Xi Jinping). The place in the living room that one would expect to be occupied by an altar was taken up by empty Coke bottles and (full) Maotai bottles.

F. Conclusions

The *Master Plan* envisaged the promotion of the Yading nature reserve within the context of the local (Tibetan) Kangba culture. Today, Yading provides a nature experience embedded in the projection of a Tibetan Disneyland. Jinzhuzhen and Riwa produce a Tibet show for tourists, from the faux Tibetan hotel facades to the Tibetan jewelry on sale (probably made in a Chinese factory), the food prepared by Han cooks and catering to Han tastes, and the Tibetan show (mostly by Han performers) at the Performing Arts Center in Riwa.

Han Chinese bake “Tibetan” snacks for sale to Han Chinese. Han Chinese located in the centers of Han Chinese power (Beijing, Shanghai) provide “Tibetan” designs for faux Tibetan buildings in Jinzhuzhen. Han Chinese manage the development of tourism. I.e., it is

¹⁰⁴ Whether these flags were put up voluntarily or involuntarily is unclear. What they likely indicate is local Party membership.

Han Chinese who create (or innovate) a “Tibet” experience for Han Chinese tourists. The odd Tibetan who dresses in traditional Tibetan fashion tends to do so as employee of the tourism industry. The three female and three male Tibetans, who nonchalantly and perfunctorily perform their (paid-for) circle dance around a camp fire imitation in the Yading Tianjie in Jinzhuzhen during some evenings of the peak season, gather smiles from the few onlookers, perhaps for the authenticity of their tired-looking performance.

Ironically, the marketing of Yading as the “last Shangri-La” itself refers to a fairy tale, a fictional place located well to the West of Daocheng County. As if not enough, it is a *foreign* fairy tale that few, if any, Han Chinese will be familiar with. Least of all that Shangri-La refers to a monastic place (a lamasery) rather than a Tibetan Disneyland of mass tourism and mass consumption, and that the key feature of the fictional Shangri-La is longevity rather than a shortness of breath that for some tourists indeed leads to Daocheng County being their last Shangri-La (though the death count due to altitude sickness is a heavily guarded secret).¹⁰⁵

Han Chinese defining Tibetan-ness for Han tourists, with a fairy tale thrown in for good measure, seems to be met with largely astonishment and bemusement by local Tibetans, but also acceptance. This twist on cultural hegemony—in that Han Chinese not just impose their version of culture, but rather impose their interpretation of another ethnicity’s culture on that ethnicity—largely bypasses the local Tibetan community.

Tibetans continue traditional practices. Thus, the Tibetan driver of an informal collective taxi stops at Gonggalang Jiling Temple (22km before Riwa on the way from Jinzhuzhen towards Yading) and enters it through a backdoor, to where the monastic world operates with sounds, smells, and actions, while tourists may enter through the front gate to view a glamorous, empty congregation hall. Tibetans circumambulate one of the three holy Yading mountains away from the tourist crowds in a long day hike (or even prostrate themselves in a month-long journey around the mountain). Those who cannot do the pilgrimage on foot do so by car, around the complete Yading massif. Some Tibetan marriages still do not involve a Han Chinese legal marriage.

For Han tourists, the Yading mountains inevitably are an extraordinary experience in their beauty and serenity, but the Tibet-show then tends to fall flat all the more. The fabled Tibetans may mostly come across as dirty, and perhaps as uncivilized peasants. A patch of

¹⁰⁵ Similarly, the frequent references to the (non-fictional) Joseph Rock for his ‘discovery’ of Yading is ironic in its reliance on foreigners to market a tourist spot within China to Han Chinese tourists. It is not that Tibetans have not lived in and around (and thus discovered) Yading centuries before Joseph Rock did, or that Han Chinese have not seen Yading well before Joseph Rock did.

colorful October trees next to the road elicits excitement (photo-ops). Jinzhuzhen and Riwa do not. Only during the October Golden Week do these urban aggregations come alive with a carnival atmosphere created by mass tourism.

That suggests limitations to tourism development in Daocheng County. The one attraction, Yading, reaches capacity during the October Golden Week. For up to four months every year, Yading is reasonably busy. At all other times of the year, Yading is a little visited remote nature reserve. This may not be much different from the seasonal winter ski resorts in the European Alps, but the extreme seasonality of Yading, due to weather—summer is the rainy season and winter is bitter cold—as well as Chinese holiday patterns may pose even more severe limitations. Yading could benefit from the replacement of national holiday weeks by more European-style individualized and lengthy vacation arrangements, but that is currently not in the cards.

The Holyland vision of a major conference hotel (and a spa hotel, and a ‘Kangba First Village’ boutique hotel) in Riwa appears far-fetched. The projected total capital costs of CNY 3bn likely exceed current (estimated) revenues 50-fold (and revenues less labor costs 100-fold).¹⁰⁶ Riwa as a faux-Tibetan style, nevertheless still grimy township at the bottom of a narrow valley provides no particular attraction, no matter that it has been renamed Shangri-La. And Riwa is still a nearly two-hour bus ride from an unreliable airport where flights arrive in the early morning, if they arrive at all, requiring an overnight stay in, for example, Chengdu. The Holyland Corporation may hope for a package that includes their 5-star hotels located in a propaganda machinery’s Tibetan Disneyland, supported by direct flights from Beijing, Shanghai, and Guangzhou, and the bonus of Yading. But if something goes wrong, a flight doesn’t arrive and tourists therefore can’t leave, or Yading is shrouded in rain and clouds, at that altitude things become miserable rather quickly. Weather (clouds and wind) constrain the airport, and weather (temperature, clouds and rain) limit the season in Yading to short periods in spring and in fall.

Coming back to the overall theme of economic development and Gerschenkron’s (1960) advantages of initial backwardness, two issues stand out. First, as Gerschenkron (p. 9)—and earlier, Ayres (1952)—note, cheap labor is not necessarily helpful to economic development: “But the overriding fact to consider is that industrial [Daocheng County: service sector] labor, in the sense of a stable, reliable, and disciplined group that has cut the umbilical cord connecting it with the land and has become suitable for utilization in factories [the tourism

¹⁰⁶ Also see Appendix 7.

industry], is not abundant but extremely scarce in a backward country. Creation of an industrial [service sector] labor force that really deserves its name is a most difficult and protracted process.” The vast majority of Tibetans has not cut the umbilical cord connecting it with the land. Consequently, tourism development in Daocheng County does not equate with local economic development, but with the import of qualified Han Chinese labor that enlarges the local population by 50% for 8-9 months of the year.

Tourism development also does not equate with Amartya Sen’s (1999) view of development “as a process of expanding the real freedoms that people enjoy” (p.3). There is little expansion of local capabilities beyond what the Chinese state imposes as standard fare: education, health care, and transport infrastructure.

Second, where Gerschenkron describes the varieties of economic development that follow backwardness, given historical differences between countries, the development experience of Daocheng County shares more characteristics with colonialism than with the economic development of a backward region. Cypher and Dietz (2009, p. 77) write of colonialism: “The good of the native peoples of the colonies was of little concern to the colonizers, except in so far as they might best serve to the advantage of the colonizer.”

Economic development in Daocheng County is the result of tourism development mandated and organized by an externally imposed Han Chinese government. Fiscal transfers and outside investment may at first not look like the exploitation often associated with colonialism. But they indeed lead to financial gains primarily for the colonizers. And they serve a political purpose of subordination and integration that in traditional colonies had to be achieved via military action (and thus military expenses).

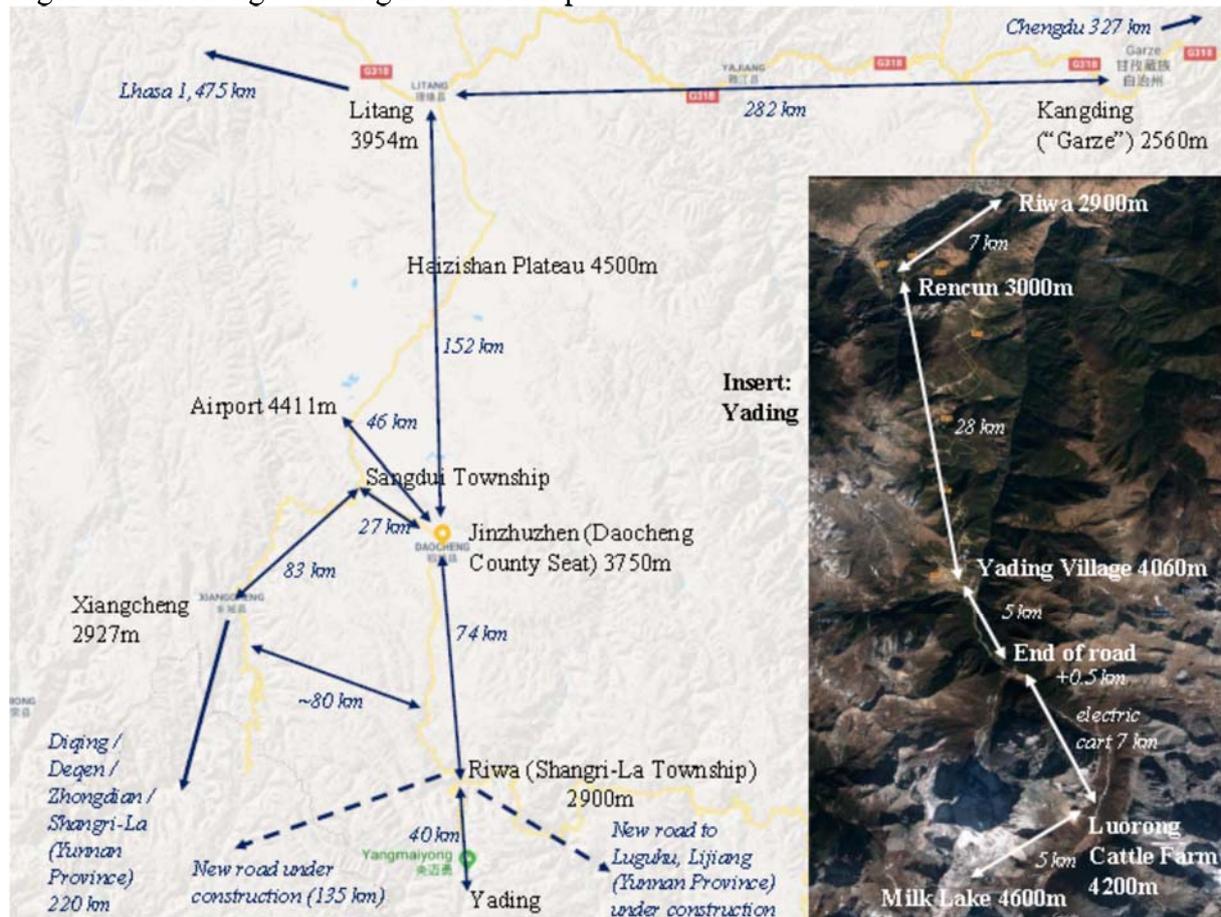
The position of the local Tibetans is multi-faceted. On the one hand, local Tibetans are a separate class of citizens, including as farmers, herdswo/men, and landlords. It is their land. But they are also second-class citizens, whether due to education, lack of professional training, lack of familiarity with the Han Chinese system, or implicit ethnic discrimination by the Han Chinese administration. And in some respects they are free citizens who do not hesitate to derive benefits from what the Han Chinese offer, renting out land, driving Chinese-made jeeps (rather than riding horses), and seeking medical treatment as far away as Chengdu, the provincial capital (while speaking disparagingly of the quality of local Jinzhuzhen healthcare). There is often an underlying certain ‘swagger,’ an attitude that this is the Tibetan’s land where the Chinese are tolerated and their contributions are amicably accepted.

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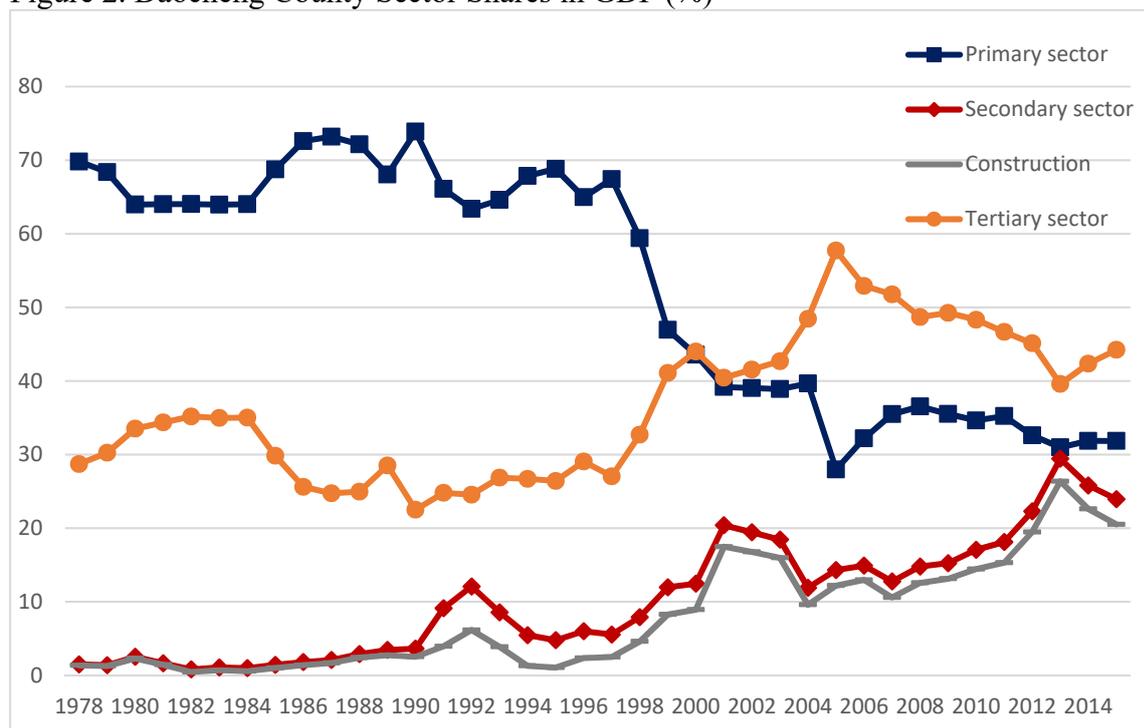
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Figure 1. Daocheng – Yading Location Map



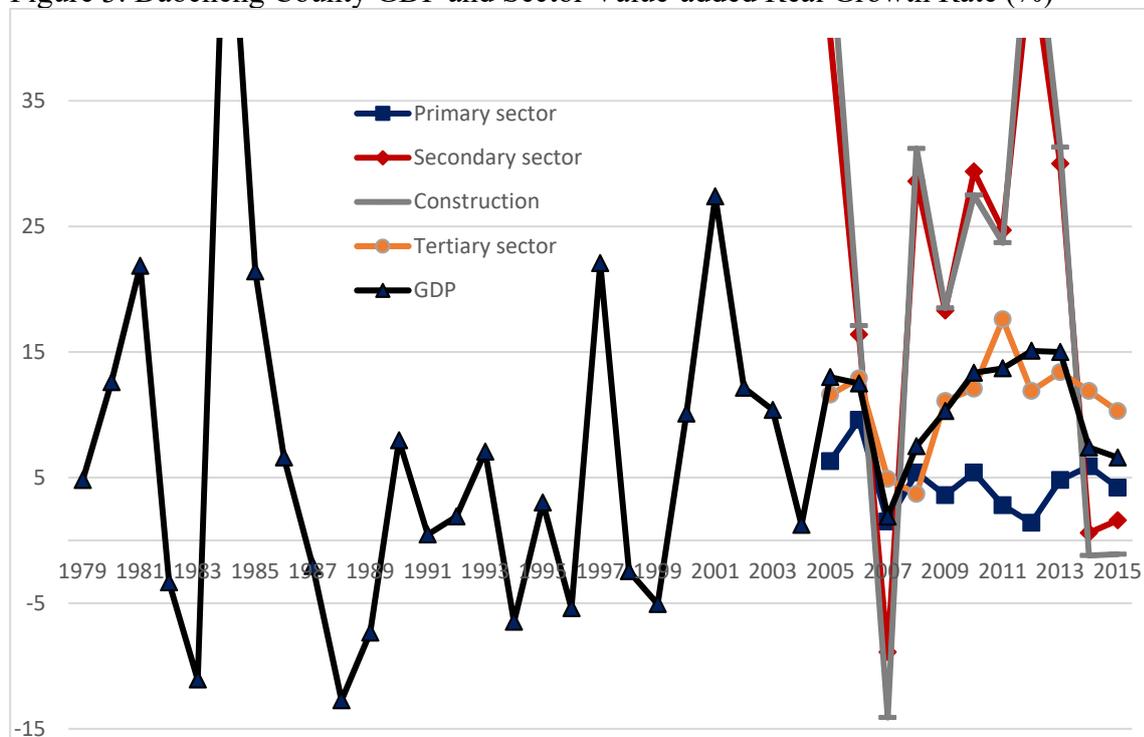
Source: Google Maps, accessed 7 January 2018 (author's additions).

Figure 2. Daocheng County Sector Shares in GDP (%)



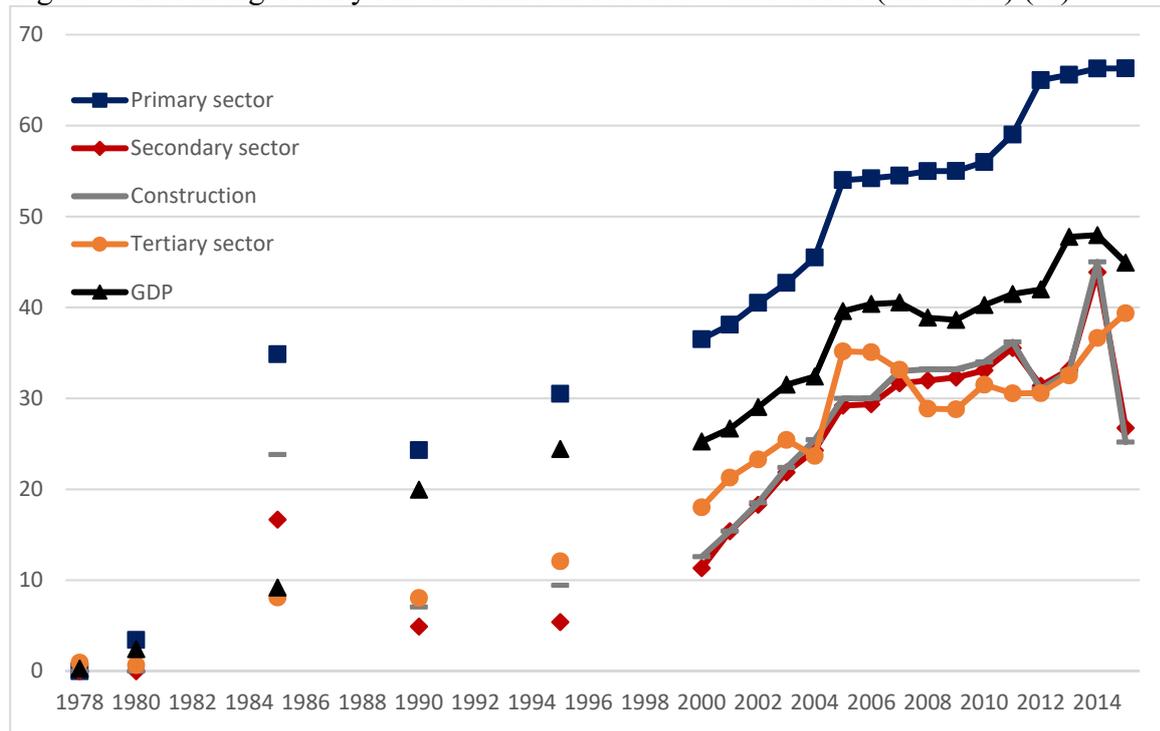
Sources: *Ganzi Statistical Yearbook 2016* (for 2014, 2015), *2015* (for 2013), *2014* (for 2012), *2013* (for 2011), *2012* (for 2010), *2010* (for 2005-2009), and *2008* (for 1978-2004).

Figure 3. Daocheng County GDP and Sector Value-added Real Growth Rate (%)



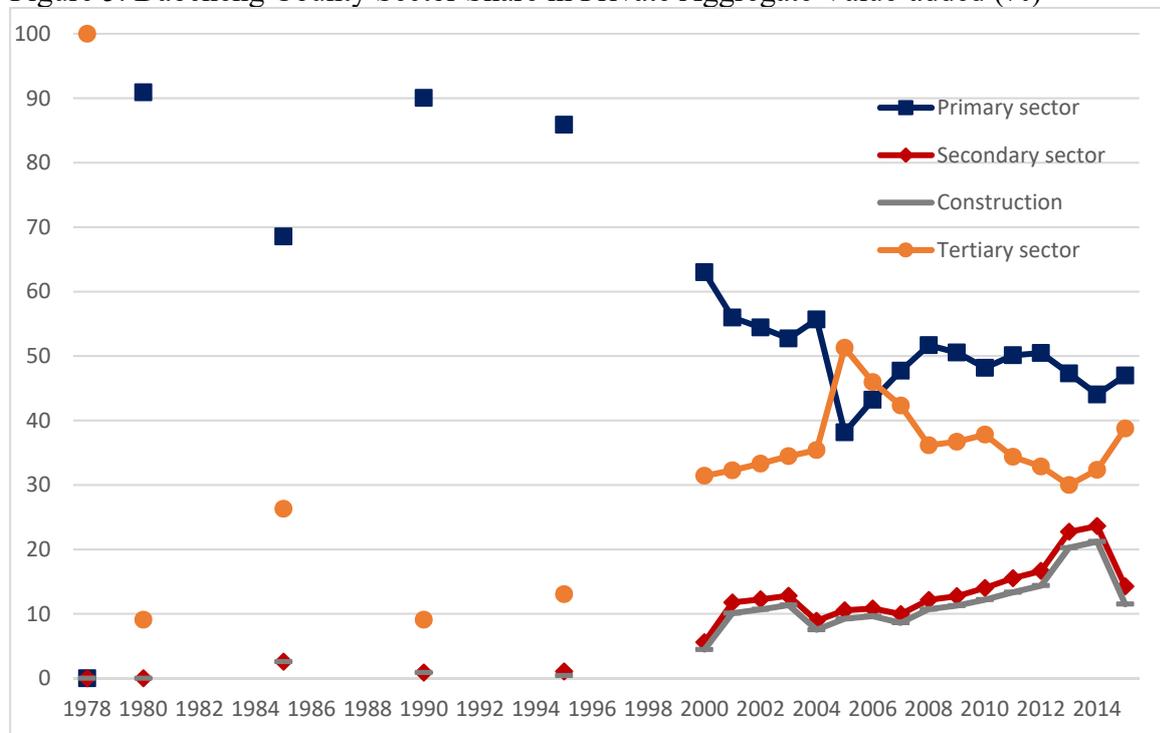
For sources, see Figure 2. Earlier sectoral real growth rates are available but vary drastically (with apparent underlying data problems, such as a sector growth index rising from 100 to 200 to 300).

Figure 4. Daocheng County Private Share in Sector's Value-added (and GDP) (%)



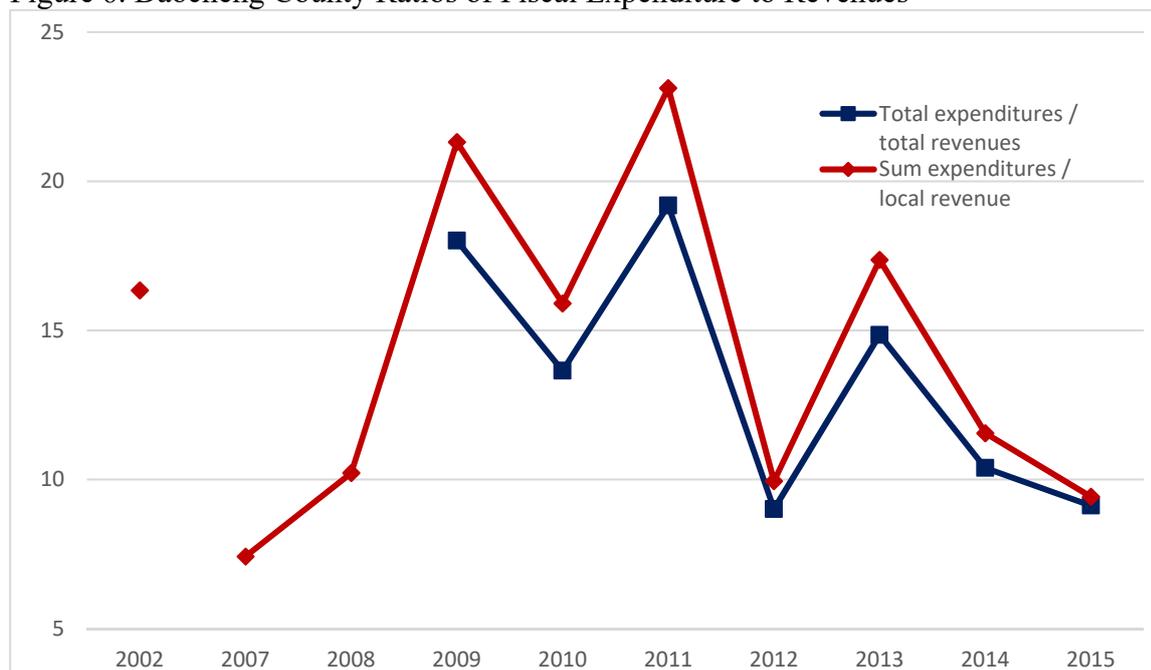
For sources, see Figure 2.

Figure 5. Daocheng County Sector Share in Private Aggregate Value-added (%)



For sources, see Figure 2.

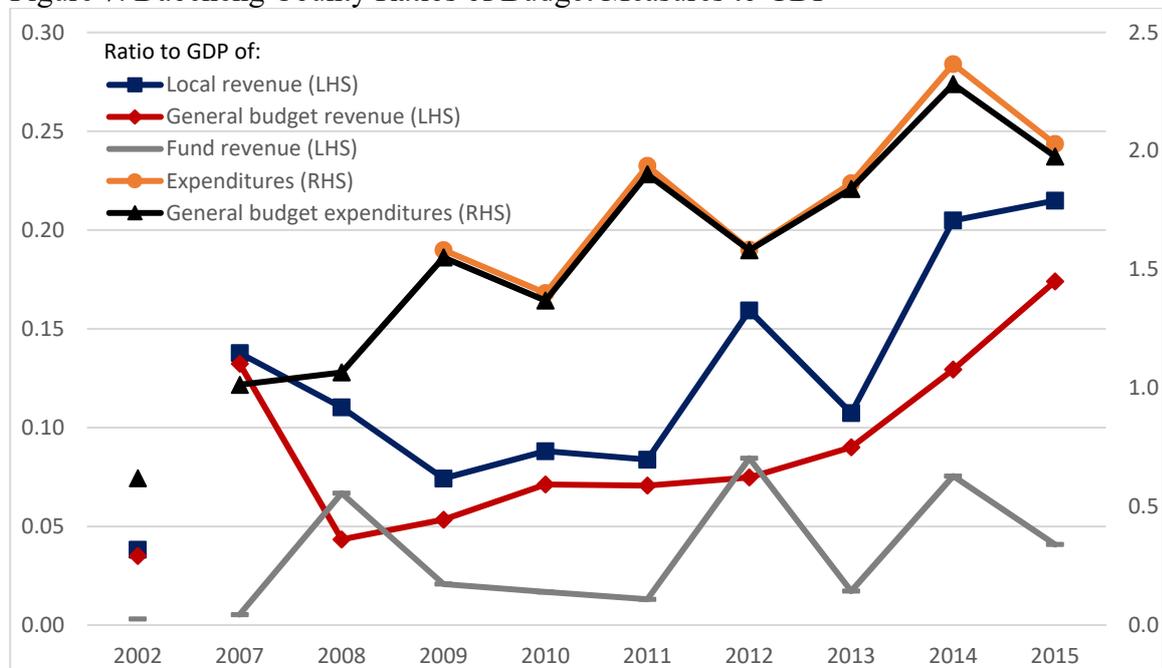
Figure 6. Daocheng County Ratios of Fiscal Expenditure to Revenues



Note: the sum of the values of all expenditure categories equals "total expenditures" in those years (since 2009) that "total expenditure" values are provided separately in the statistics (with a trivial difference in 2015).

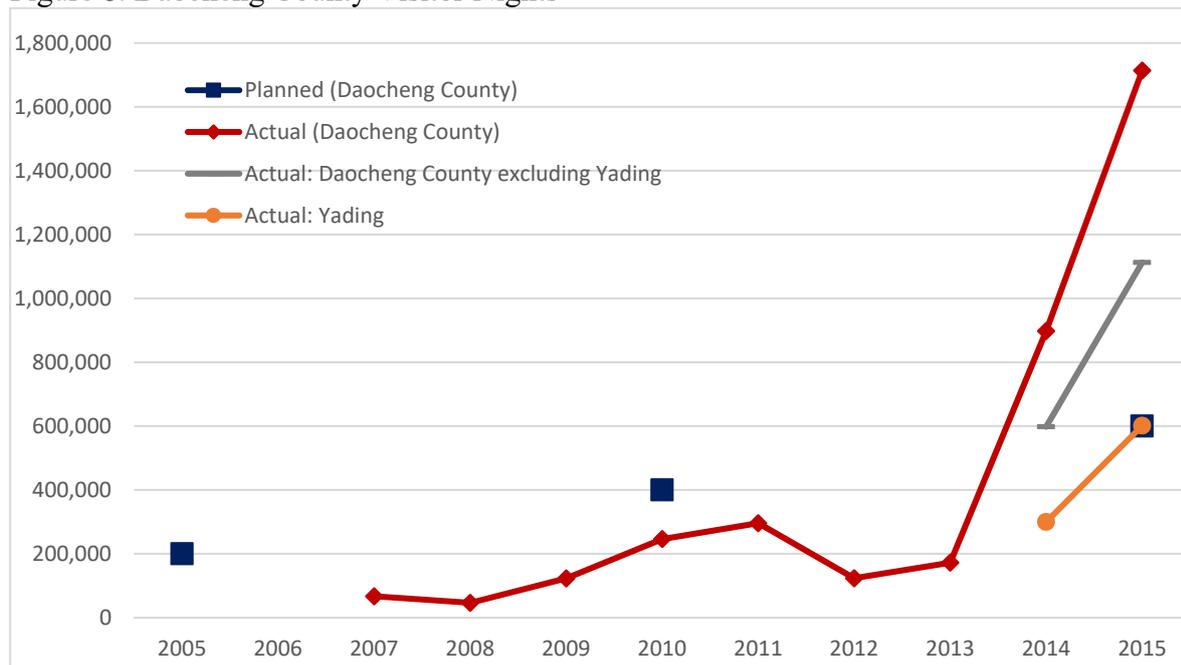
Source: Table 5.

Figure 7. Daocheng County Ratios of Budget Measures to GDP



Source: Table 5.

Figure 8. Daocheng County Visitor Nights



Notes:

Some tourist numbers appear heavily rounded, such as those of 2014 with Daocheng County excluding Yading of 598,000 and Yading of 300,000.

Planned visitor numbers are totals, i.e., the sum of domestic and foreign visitors. For 2000, these are a planned 10,000 domestic and 200 foreign tourists; for 2005, 180,000 and 20,000; for 2010, 360,000 and 40,000; and for 2015: 520,000 and 80,000 (*Master Plan*, p. 41). The *Master Plan* (p. 41 and 71) equally lists different totals, in 2005, 2010, and 2015 of 250,000, 450,000, and 600,000 visitors.

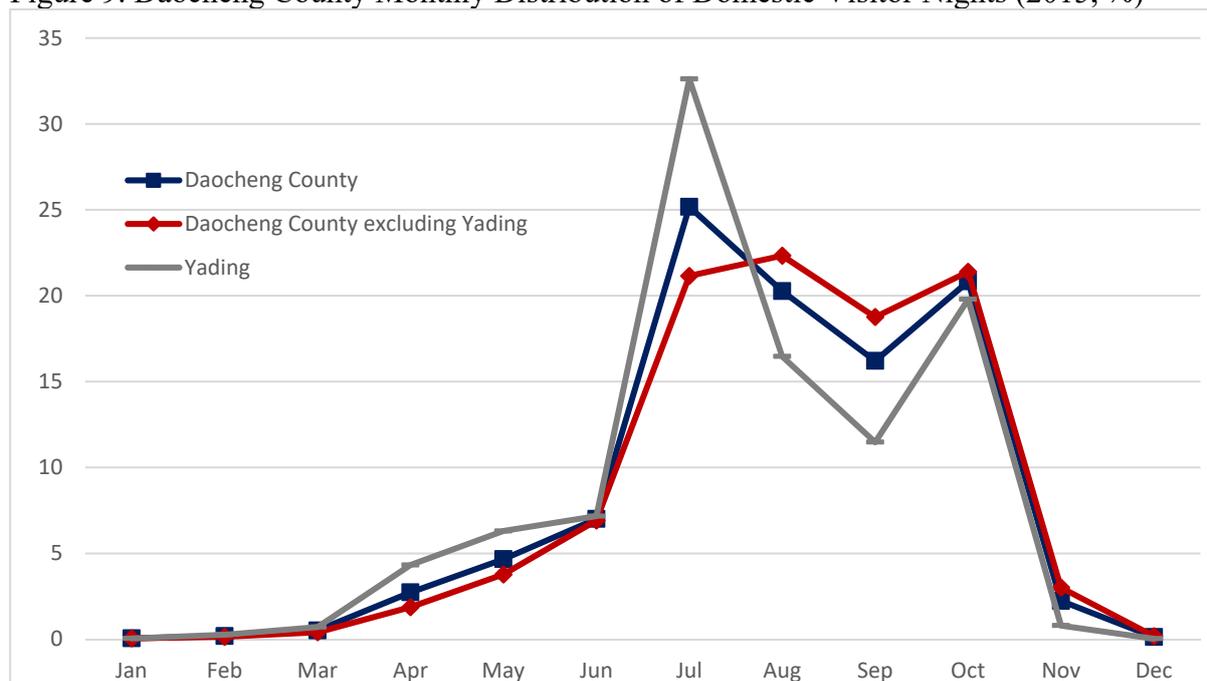
In the chart, the marker of the planned visitor number for 2015, of 600,000, is partially covered by the actual Yading visitor number marker.

A breakdown of actual visitor numbers into domestic vs. foreign is available only for 2015.

The *Ganzi Statistical Yearbook 2003* does not contain (what would be 2002) tourist numbers.

Source: *Ganzi Statistical Yearbook*, various issues; planned numbers from *Master Plan*.

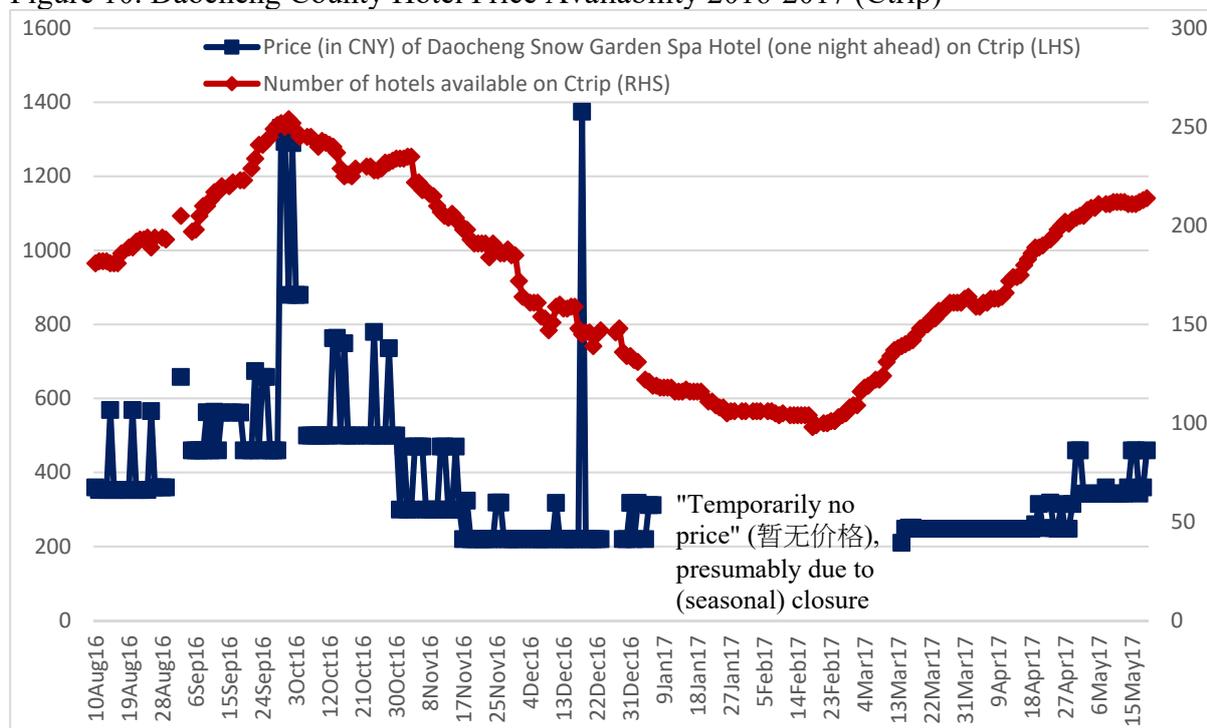
Figure 9. Daocheng County Monthly Distribution of Domestic Visitor Nights (2015, %)



Also see notes to previous figure. A monthly breakdown of (the few) foreign visitor nights is not available.

Source: *Ganzi Statistical Yearbook*, various issues.

Figure 10. Daocheng County Hotel Price Availability 2016-2017 (Ctrip)



Notes: Data were obtained by daily checking hotel availability and the lowest room price for the Daocheng Snow Garden Spa Hotel (稻城雪域花园温泉酒店) for the next day, from 10 August 2016 through 19 May 2017. (On a few random occasions/days, no check was conducted.) The Daocheng Snow Garden Spa Hotel in 2016/2017 was the best hotel in Jinzhuzhen, with a Ctrip rating of 4.5 points/stars.

Source: Ctrip, at <http://www.ctrip.com>.

Table 1. Sector Shares in GDP and Sector Value-added (%)

	China		Daocheng County				
	Shares in GDP		Private economy only				
	2015	2010	2015	2010	2015	2010	2015
Total		100	100	40	45	40	45
Primary sector	9	35	32	19	21	56	66
<i>of which: agriculture (farming)</i>		<i>15</i>	<i>16</i>				
<i>of which: forestry</i>		<i>4</i>	<i>3</i>				
<i>of which: husbandry</i>		<i>16</i>	<i>13</i>				
<i>of which: fishery</i>		<i>0</i>	<i>0</i>				
<i>of which: agricultural services</i>		<i>0</i>	<i>0</i>				
Secondary sector	41	17	24	6	6	33	27
Industry	34	3	3	1	1	28	36
<i>of which: above-norm</i>			<i>0</i>				
<i>of which: below-norm</i>			<i>3</i>				
Construction	7	14	21	5	5	34	25
Tertiary sector	50	48	44	15	17	32	39
Transport, storage, post	4	0	0	0	0	70	100
Wholesale, retail trade	10	4	3	3	3	75	96
<i>of which: wholesale trade</i>		<i>1</i>	<i>2</i>				
<i>of which: retail trade</i>		<i>3</i>	<i>1</i>				
Hotels and catering	2	8	7	7	7	91	95
<i>of which: hotels</i>		<i>2</i>	<i>2</i>				
<i>of which: catering</i>		<i>6</i>	<i>6</i>				
Financial intermediation	8	4	7		0		0
Real estate	6	3	2	3	2	100	100
For-profit services	(8)	3	6				
<i>of which: information transmission, software and information technology</i>	<i>3</i>	<i>1</i>	<i>1</i>				
<i>of which: other for-profit services</i>		<i>2</i>	<i>5</i>				
Leasing and business services	2		0		0		100
Services to households; repair; other services	2		5		5		100
Culture, sports and entertainment	1		0		0		39
Not-for-profit services	(9)	26	19				
<i>of which: public administration</i>	<i>4</i>	<i>16</i>	<i>8</i>				
<i>of which: other not-for-profit services</i>		<i>11</i>	<i>10</i>				
Management of water conservancy, environment and public facilities	1		0		0		0
Scientific research and technical services	2		1		0		0
Education	4		8		0		5
Health and social services	2		1		0		8

Notes:

For-profit and not-for-profit values at national level are obtained as summed sub-category values (to match the Daocheng County classification).

Starting 2013, agricultural services no longer count as part of the primary sector (even though they are listed with the primary sector), but as part of the tertiary sector.

The private economy value-added classification's "transport" does not mention storage and post.

Sources: *Ganzi Statistical Yearbook 2011, 2016. China Statistical Yearbook 2017* (Table 3.6).

Table 2. Aggregate Expenditure Component Shares (%)

	China	Daocheng County				
	2015	2011	2012	2013	2014	2015
Aggregate expenditures	100	100	100	100	100	100
Consumption	52	53	53	53	57	62
Household consumption	38	38	38	38	40	47
#Rural	8	18	18	18	20	22
#Urban	30	20	20	20	20	25
Government consumption	14	15	15	15	18	15
Gross capital formation	45	175	175	175	150	120
Gross fixed capital formation	43	173	173	173	148	118
Inventory investment	2	2	2	2	2	2
Net exports	3	-128	-128	-128	-107	-82
Exports		1	1	2	1	1
Imports		129	129	130	109	84

Notes:

The *Ganzi Statistical Yearbook 2012* reports data for 2010 and 2011 that do not match GDP values and do not link up with the aggregate expenditure values of the later years. Earlier *Ganzi Statistical Yearbook* issues do not report county level aggregate expenditures.

Sources: *Ganzi Statistical Yearbook 2013, 2014, 2015, 2016*. Nationwide data from <http://www.stats.gov.cn>, accessed 2 March 2018.

Table 3. Daocheng County Population (2015)

	<i>Public security bureau record</i>		
	Total	Non-agricultural (非农业人口)	Agricultural (农业人口)
Households	7,134		
Persons	31,643	4,265	27,378
In %:		13.5	86.5
Age <18	25.6		
Age 18-35	26.7		
Age 35-60	36.2		
Age >60	11.5		
<i>Resident population</i>			
	Total	Urban (城镇)	Rural (乡村)
Persons	32,709	7,739	24,970
In %		23.7	76.3

Sources: *Ganzi Statistical Yearbook 2016*.

Table 4. Daocheng County Formal Employment (2015)

	Non-private units					Sector share in total employment (%)	Private units			
	Num-ber of units	Ave-rage em-ployment	# on-post empl.	Labor remuneration (yuan) per em-mployee	on-post empl.		Column titles as on left			
	(1)	(2)	(3)	(4)	(5)		(1)	(2)	(4)	(6)
Total	84	3,661	3,032	66,275	75,286	100	16	219	31,164	100.0
Agriculture							2	8	36,500	3.7
Mining							1	9	29,889	4.1
Manufacturing							2	27	17,815	12.3
Utilities	2	70	46	51,971	66,174	2	3	40	33,075	18.3
Construction										
Transportation	2	431	431	82,889	82,889	12				
Information technology										
Trade	2	17	17	49,824	49,824	0	3	8	36,125	3.7
Hotels and catering	4	187	171	43,043	42,684	5	4	100	33,520	45.7
Finance	2	55	53	78,018	80,132	2				
Real estate										
Leasing										
Science	3	181	181	16,359	16,359	5				
Water conservancy	2	199	86	37,337	64,698	5	1	27	30,333	12.3
Household services										
Education	6	539	465	71,866	79,671	15				
Health	5	254	238	74,476	78,042	7				
Culture	3	31	31	85,032	85,032	1				
Public administration	53	1,697	1,313	70,361	84,024	46				
By ownership										
Total	84	3,661	3,032	66,275	75,286	100.0				
State	77	3,016	2,403	65,241	76,218	82.4				
Collective	1	27	27	77,519	77,519	0.7				
Other										
Implicit residual	6	618	602	70,832	71,468	16.9				
By administration type										
Total (all units)	84	3,661	3,032	66,275	75,286	100.0				
Enterprises	12	760	718	69,145	71,256	20.8				
State	5	115	89	58,113	67,921	3.1				
Collective	1	27	27	77,519	77,519	0.7				
Other										
Implicit residual	6	618	602	70,832	71,468	16.9				
Administrative units	23	1,352	1,115	59,774	68,033	36.9				
State	23	1,352	1,115	59,774	68,033	36.9				
Collective										
Government departments	49	1,549	1,199	70,542	84,445	42.3				

Notes: "Average employment" denotes average annual employment. "On-post" denotes 在岗职工.

Some aggregate values (with a breakdown into "non-private" and "private") are also reported in a separate table in the source, listing a total number of units of 100 and a total number of average annual employment of 3,880 (i.e., the sums of the values of non-private and private units in this table here). The separate table in the source under-reports labor remuneration in private units by a factor of ten (an obvious error), and then replicates the same error in the values it reports for totals.

Sources: *Ganzi Statistical Yearbook 2016*.

Table 5. Daocheng County Fiscal Revenue and Expenditure Shares (%)

	2002	2007	2008	2009	2010	2011	2012	2013	2014	2015
Percentage of local fiscal revenue										
A. Total fiscal revenue				118.3	116.5	120.5	110.4	116.9	111.2	103.5
B. Local fiscal revenue	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
B.1 General budget revenue: Total	91.7	96.1	39.4	72.0	80.9	84.3	47.0	83.9	63.2	81.0
B.1.a. Tax revenue	81.8	20.3	36.7	60.7	56.5	47.7	30.4	68.1	46.8	53.0
VAT		1.2	1.5	2.2	2.1	2.7	1.3	2.9	2.5	4.0
Sales tax		13.8	24.7	38.9	36.7	33.1	21.0	51.1	30.8	34.5
Corporate income tax		0.0	1.0	0.2	1.5	3.5	3.5	4.4	3.6	5.7
Personal income tax		2.0	4.2	7.7	5.3	2.8	0.8	1.4	1.9	2.8
Resource tax		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5
Urban maintenance & construction tax		0.6	1.2	1.5	1.8	1.4	0.8	2.6	1.7	1.7
Property tax		0.0	0.3	1.3	0.9	1.3	0.8	2.2	1.5	0.7
Stamp duty		0.0	0.1	0.6	0.8	0.3	0.2	0.4	0.3	0.3
Urban land use tax		0.0	0.1	0.4	0.1	1.2	0.4	0.4	0.5	0.2
Land VAT		0.0	0.0	0.2	0.0	0.0	0.0	0.6	0.1	0.7
Vehicle and boat tax		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
Farmland use tax		0.0	0.0	1.4	3.6	0.0	1.2	0.0	1.4	0.0
Deed tax		2.3	0.0	6.1	3.6	1.3	0.4	2.1	2.2	1.6
Other tax revenue		0.4	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
B.1.b. Non-tax revenue	9.9	75.8	2.7	11.3	24.4	36.6	16.5	15.8	16.3	28.0
Special income	0.0	73.8	0.9	1.5	1.4	1.5	1.0	1.8	1.1	4.6
Administrative fees and charges	0.0	0.6	0.2	1.5	1.3	1.5	1.1	3.6	7.3	10.9
Penalty revenue	0.0	0.1	0.5	1.2	0.9	1.0	0.6	1.5	1.7	0.8
State-owned capital operating income	0.0	0.7	0.6	0.8	0.7	0.6	0.0	1.3	0.0	0.0
State-owned resource/asset usage rev.	0.0	0.5	0.2	2.1	2.7	1.7	1.4	2.9	1.0	0.6
Other income	0.0	0.0	0.2	4.2	17.3	30.2	12.5	4.7	5.2	11.1
B.2 Fund income	8.3	3.9	60.6	28.0	19.1	15.7	53.0	16.1	36.8	19.0
Percentage of sum 'general budget expenditure plus fund expenditure'										
C. Total fiscal expenditure				100.0	100.0	100.0	100.0	100.0	100.0	100.3
D. Sum general budget & fund expenditure	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
D.1. General budget expenditure	99.3	99.2	94.6	98.0	97.8	98.2	99.8	98.7	96.4	97.7
General public service	0.0	18.4	17.8	10.9	11.8	10.2	10.3	11.4	9.0	10.0
National defense	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1
Public safety	0.0	7.5	7.1	6.9	7.9	4.3	5.1	4.7	6.0	4.4
Education	0.0	11.4	9.1	9.2	9.7	9.7	13.1	10.9	5.7	8.6
Science and technology	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1
Culture, sports, and media	0.0	1.8	1.0	0.9	1.6	1.4	1.0	2.5	1.4	1.0
Social security and employment	0.0	14.0	16.4	12.9	10.1	7.6	8.2	8.3	7.0	8.2
Health	0.0	5.8	6.9	9.8	7.6	5.5	6.2	7.7	5.1	6.2
Energy saving, environmental protection	0.0	8.5	8.6	8.9	9.4	4.6	2.3	7.1	2.8	2.5
Urban and rural community affairs	0.0	1.9	1.9	0.1	0.7	0.5	8.4	6.1	16.2	0.7
Agriculture, forestry, and water affairs	0.0	6.1	10.6	6.5	13.8	9.1	9.4	13.0	13.8	15.1
Transportation	0.0	3.0	2.2	19.5	8.6	23.4	20.5	4.6	7.5	22.4
Resource exploration, power, info. etc.	0.0	0.0	0.0	0.3	0.6	0.5	0.2	0.2	0.2	0.2
Business services etc.	0.0	1.1	1.5	0.0	0.5	7.1	4.3	5.1	14.6	7.4
Financial expenditure	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.0
Earthquake recovery, reconstruction exp.	0.0	0.0	0.0	0.5	0.4	0.0	0.0	0.0	0.0	0.0
Land, marine, and meteorology exp.	0.0	0.0	0.0	0.0	0.3	0.8	0.3	1.6	1.9	2.6
Housing protection exp.	0.0	0.0	0.0	0.0	6.9	5.9	4.7	4.4	3.5	2.9
Grain and oil material reserve managem.	0.0	0.0	0.0	0.9	0.2	0.0	0.0	0.0	0.1	0.1
Debt service payments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Other expenditure	0.0	19.5	11.2	10.5	7.5	6.9	5.2	10.9	1.5	5.0
D.2. Fund expenditure	0.7	0.8	5.4	2.0	2.2	1.8	0.2	1.3	3.6	2.3
Total expenditure / total revenue (C/A)				18.0	13.6	19.2	9.0	14.8	10.4	9.1
Sum expenditure / local revenue (D/B)	16.3	7.4	10.2	21.3	15.9	23.1	9.9	17.4	11.6	9.4
Total revenue (A) / GDP				0.09	0.10	0.10	0.18	0.13	0.23	0.22
Local revenue (B) / GDP	0.04	0.14	0.11	0.07	0.09	0.08	0.16	0.11	0.20	0.21
Expenditure (C) / GDP				1.6	1.4	1.9	1.6	1.9	2.4	2.0
Sum expenditure (D) / GDP	0.6	1.0	1.1	1.6	1.4	1.9	1.6	1.9	2.4	2.0

Note: Item D is obtained as sum of D.1. and D.2.

Source: *Ganzi Statistical Yearbook 2003, 2008, ..., 2016.*

Table 6. Daocheng County Hotel Count

	July 2016		October 2017	
	Existing	Under construction	Existing	Under construction
A: Jinzhuzhen	114	36	123	34
B: Riwa	57	5	67	5
C: Rencun Village	20	31	42	15
D: Yading Village	10	10	10	10
B + C + D	87	46	119	30
A + B + C + D	201	82	242	64

Notes:

“Under construction” denotes under construction, or building shell without continuing construction, or building/shell with “for rent” sign.

The various Chinese terms for establishments are, as a rule, translated as follows: hotel = 宾馆, 酒店; inn = 客栈 (with hostels = 旅社 included with inns). When in doubt, I applied the English term that best matched what I saw in front of me.

The values for Yading Village are estimates, with those of October 2017 likely being underestimates. On both occasions, July 2016 and October 2017, I walked every street, path, and dirt road in Jinzhuzhen, Riwa, and Rencun and entered in a spreadsheet street name (if available), hotel name, number of stories, and an estimate of the number of rooms as judged by the number of windows that appeared to reflect hotel rooms. For some hotels, I was also able to obtain a room count from a website or local information, only confirming the relative accuracy of my window count method.

Table 7. Daocheng County Room Count

	July 2016			October 2017		
	Existing		Under construction	Existing		Under construction
	Hotel	Inn/Hostel		Hotel	Inn/Hostel	
A: Jinzhuzhen	3432	578	2435	4199	538	1978
B: Riwa	2344	110	358	2616	210	192
C: Rencun Village	670		1474	1768		738
D: Yading Village		200	200		200	200
B + C + D	3014	310	2032	4384	410	1130
A + B + C + D	6446	888	4467	8583	948	3108

Notes: See previous table. The classification of establishments of accommodation into hotels vs. inns and hostels is not being maintained for Rencun because of the fluid transition between the two categories. An establishment may be called an “inn” but have 50 or more rooms and in every respect resemble a hotel. In July 2016, the majority of establishments would probably qualify as inns. By October 2017 several large (formal) hotels had newly opened. The inns in Yading Village appear slightly further towards the inns’ side of the hotel-inn spectrum.

Table 8. Daocheng County Tourism Income and Value-added

	2007	2008	2009	2010	2011	2012	2013	2014	2015
Daocheng County tourism (official data)									
Visitor numbers	67,212	46,607	123,192	246,477	296,000	123,600	172,280	898,000	1,713,798
Tourism income (CNY mio)	44	30	80	160	200	84	171	941	1,697
Revenue / visitor (CNY)	650	650	650	650	675	682	990	1,048	990
Daocheng County GDP (CNY mio) (official data)									
Tertiary sector value-added (VA)	204	237	261	312	390	457	526	554	598
Transport VA	106	115	128	151	182	206	208	235	264
Hotels and catering VA	0.6	0.7	0.8	0.9	1.0	1.1	1.3	1.7	2.2
Hotels VA				6.0	6.4	7.8	8.0	8.9	11.3
Catering VA				17.5	19.6	23.4	25.6	27.6	33.3
Trade	8.5	10.9	12.3	13.7	15.3	16.2	17.4	13.5	17.0
Daocheng County tourism income / GDP									
Tourism income / tertiary sector VA	0.2	0.1	0.3	0.5	0.5	0.2	0.3	1.7	2.8
Tourism income / transport VA	0.4	0.3	0.6	1.1	1.1	0.4	0.8	4.0	6.4
Tourism income / hotels and catering VA	74.0	44.6	105.4	180.0	195.9	75.9	135.4	543.9	767.7
Tourism income / hotels VA	2.2	2.1	4.9	6.8	7.7	2.7	5.1	25.8	38.1
Tourism income / catering VA				26.7	31.2	10.8	21.3	105.6	150.1
Tourism income / trade VA				9.2	10.2	3.6	6.7	34.1	51.0
Tourism income / trade VA	5.2	2.8	6.5	11.7	13.1	5.2	9.8	69.5	99.6
National tourism data cover legal person units above-designated size only									
(1) (National) Business revenue / engaged persons in hotels and catering (CNY)	108,587	120,600	123,475	139,011	159,434	175,012	176,705	188,497	206,007
(2) (National) Hotels: number of rooms per engaged person		1.08	1.01	1.07	1.18	1.59	1.27	1.62	1.76
(3) (National) Share of hotels in number of engaged persons in 'hotels and catering'	0.51	0.50	0.50	0.49	0.49	0.46	0.46	0.46	0.46
(4) (National) Share of hotels in business revenue of 'hotels and catering'	0.49	0.46	0.46	0.47	0.46	0.44	0.44	0.43	0.43
(5) (National) 'Hotels and catering' VA / business revenue in 'hotels and catering'	1.49	1.37	1.41	1.29	1.21	1.20	1.27	1.37	1.43
(6) (National) Transport VA / 'hotels and catering' VA	2.63	2.47	2.37	2.44	2.55	2.49	2.55	2.55	2.51
(7) Daocheng engaged persons = Daocheng tourism income / (1)	402	251	649	1,153	1,253	481	965	4,992	8,236
(8) Daocheng 'tourism' VA (CNY mio) = Daocheng tourism income * (5)	65	42	113	206	242	101	216	1,288	2,422
(8a) This Daocheng 'tourism' VA / Daocheng official GDP	0.3	0.2	0.4	0.7	0.6	0.2	0.4	2.3	4.1
Assume Daocheng 'tourism' VA (CNY mio) = (official) Daocheng tourism income									
This Daocheng 'tourism' VA / Daocheng official GDP	0.2	0.1	0.3	0.5	0.5	0.2	0.3	1.7	2.8
This Daocheng 'tourism' VA / Daocheng official VA in 'hotels and catering'	2.2	2.1	4.9	6.8	7.7	2.7	5.1	25.8	38.1
This Daocheng 'tourism' VA / Daocheng official VA in 'hotels/catering' and transport	2.2	2.0	4.7	6.6	7.4	2.6	4.9	24.6	36.3
This Daocheng 'tourism' VA / Daocheng off. VA in 'hotels/catering,' transport, trade	1.5	1.2	2.7	4.2	4.7	1.7	3.3	18.2	26.6
Daocheng GDP with above 'tourism' VA for 'hotels and catering' and transport (CNY mio)	228	252	324	448	563	509	661	1457	2247
This derived Daocheng GDP / official GDP	1.1	1.1	1.2	1.4	1.4	1.1	1.3	2.6	3.8

Notes:

‘VA:’ value-added. ‘Transport:’ transport, storage, and post.

Above-designated size: Annual income of main business of CNY 2mio and above (*China Statistical Yearbook 2016*, p. 574). In 2007, the data cover above-designated size legal person enterprises and productive units, since 2008 only above-designated size legal person enterprises. (This definitional change may have had little practical impact; the number of “legal person units” [in 2007, according to the note underneath the statistical table, including other productive units] increased from 25,041 in 2007 to 37,151 in 2008; business revenue increased from CNY 371.15bn to CNY 482.443bn.) The coverage of business revenues switches at the same time from (in the official translation) “annual turnover” (营业额) to “annual main business income” (年主营业务收入). (Data from the economic census 2013 presented in Appendix 8 suggest a 1% difference between business revenue and *main* business revenue.)

The national data in the table here relate values of (only) the above-designated size units to (total) economy-wide value-added,

‘Engaged persons’ are year-end values. This contrasts with the Daocheng employment numbers presented in Table 4, which (at that point by choice) are mid-year numbers. The differences in Daocheng mid-year vs. end-year values are of negligible size. (For example, Daocheng total formal employment mid-year 2015 was 3,880 and end-year 2015 4,015, i.e., 3.5% higher.)

For 2015, a breakdown of Daocheng visitor numbers and tourism income into ‘Daocheng excluding Yading’ and ‘Yading’ is available. Visitor numbers in ‘Daocheng excluding Yading’ and in ‘Yading’ in 2015 were 1,112,476 and 601,322; tourism income was CNY 1,101m and CNY 595m; and revenue per visitor was CNY 990 in both.

Across Ganzi Prefecture in 2015, transport value-added and (wholesale and retail) trade value-added were equivalent to 76.36% and 95.74%, respectively, of value-added in hotels and catering. Transport value-added accounted for 3.00% of Ganzi Prefecture GDP. Transport value-added in Kangding (county-level town) alone accounted for 58.19% of all transport value-added of Ganzi Prefecture. For Ganzi Prefecture, tourism income in 2015 of CNY 10.75038bn amounted to 50.46% of GDP of 21.30439bn and was equivalent to 13 times value-added in hotels and catering (CNY 837.27mio), 17 times value-added in transport (CNY 639.35mio), and 13 times value-added in trade (CNY 801.62mio).

For further discussion of the data presented in the table and for some comparison values see Appendix 8.

Sources: *Ganzi Statistical Yearbook 2008 through 2016*, *China Statistical Yearbook 2012 and 2016* (tourism-related data), and the NBS database (www.stats.gov.cn, for GDP-related data).

Table 9. Daocheng County Household Income (2015)

	CNY
Reference: GDP per person [permanent resident] (national value: CNY 50,251)	18,442
I. Household income per person (A, B, weighted by resident numbers (ii))	12,735
A. Urban household (城镇住户): disposable income (可支配收入) per person	26,030
Wage income (工资性收入)	88%
Operating income (经营性收入)	5%
Property income (财产性收入)	5%
Transfer income (转移性收入)	2%
B. Rural population (农村居民): disposable income per person	8,615
II. Matsutake harvest^a per person [permanent resident]	860
III. Caterpillar mushroom harvest^b per person	2,500
IV. Bartered labor^c (for example, for housing construction)	1,250
V. Informal labor^d	2,000
Sum: I + II + III + IV + V	19,345
VI. (Total fiscal 'expenditures - revenue') per person	33,017

Source of official data: *Ganzi Statistical Yearbook 2016*; national GDP per person from the NBS database (<http://www.stats.gov.cn>, accessed 5 April 2018). For resident numbers also see Table 3.

- a: Assume an annual Matsutake harvest of 200tons, as projected in the *Master Plan*, with prices of CNY 70 per Chinese pound (500g).
- b: Assume 10% of the population (permanent residents) engages in caterpillar mushroom harvesting; each person harvests 10 caterpillar mushrooms per day, over 50 days; caterpillar mushrooms sell for CNY 50 each.
- c: Assume 25% of the population engages in bartered labor for 25 days each year at an imputed wage of CNY 200 per day.
- d: Assume 10% of the population engages in activities such as long-distance collective taxi services for 200 days of the year with an income of CNY 100 per day. (This could be actual engagement one-third of these days with daily income of CNY 300 when actual engagement occurs, such as in the case of informal collective taxi services, or it could also be 200 days of informal daily labor in a restaurant.)

Appendix 1. Daocheng County Government Funds Income and Expenditure

Table 10. Daocheng County Government Funds Income and Expenditures

	2002	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total government fund income	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Government housing fund income									0.1	
State-owned land use right transfer income		77.3	98.2	73.5	72.0	85.2	84.1	71.4	80.7	85.4
State-owned land earnings fund income				2.6	2.7	2.5	3.1	2.6	3.0	3.2
Agricultural land dev. fund income				13.1	13.1	0.0	10.9	9.4	10.5	11.1
Urban infrastructure support fee income									0.2	0.1
Sewage treatment fee income										0.2
Other fund income		22.7	1.8							
Forest fund income				3.7	3.4			4.7	0.8	
Local education surcharge income				1.7	2.3	5.3	1.0	7.5	1.9	
Disabled persons employment security fund income				5.5	6.5	7.0	1.0	4.4	2.6	
Total government fund expenditure	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Expenditure related to the national film industry development special fund										2.8
Expenditure related to assignment of state-owned land use rights		87.3	91.5							71.3
Expenditure related to the new construction land use fees										0.7
Expenditure related to the bulk cement special fund										1.2
Expenditure related to the new all materials special fund										3.5
Expenditure related to the lottery public welfare fund										9.6
Expenditure related to other gov. funds										10.7
Other fund expenditure		12.7	8.5							
General public service				25.0						
Education				2.2	1.2	1.6	7.4	5.7	1.7	
Culture, sports, and media					0.6		0.3	0.9	0.3	
Social security and employment				3.5	3.0	1.2	0.9	5.3	2.9	
Urban and rural community affairs				61.3	20.0	63.8	86.2	67.9	79.7	
Agriculture, forestry, and water affairs				7.9	9.2	9.5	1.7	3.1	9.1	
Other expenditures					55.8	23.8	3.6	17.0	3.5	
Business services, etc.					10.2				2.4	
Resource exploration, power, info., etc.									0.3	
Fund income / fund expenditure	0.77	0.67	1.11	0.66	0.54	0.37	1.00	0.72	0.89	0.86

Note: entries with value 0.00 were removed for ease of reading the table.

Source: *Ganzi Statistical Yearbook 2003, 2008, ..., 2016*.

Appendix 2. Daocheng-Yading Airport

Daocheng-Yading Airport (DCY) is located at an altitude of 4,411 meters (14,472 feet), 46km North of Jinzhuzhen. It was completed in 2013, with the first official flight on 16 September 2013 to Chengdu. The airport reduces the travel time from the provincial capital of Chengdu from 18 hours or two days by bus to 65 minutes by plane (a 430km flight distance).

When the airport opened in September 2013 with regular flights to the provincial capital of Chengdu, further regular flights were planned to Ma'erkang County and Chongqing Municipality starting October. Flights to Guangzhou, Shanghai and Xi'an were to follow in 2014. As of early 2018, there are still no flights to Ma'erkang, Guangzhou, and Shanghai. Flights to Chongqing eventually started on 28 June 2014 (five days a week). In May 2017, three weekly flight to Xi'an were added (and one of the Chengdu flights stops over in Kangding twice a week).

By 2017, Daocheng-Yading Airport had approximately 2.5 flights per day; one or two flights during the low season, and up to 5 flights during the high season. Only A319 planes fly to Daocheng. The Airbus website states that the standard configuration on the A319 is a 124-seat configuration, but there is also an option with a 156 passenger seating capacity.¹⁰⁷ Assuming 150 seats and multiplying by 2.5 yields 375 inbound and 375 outbound passengers per day, i.e., numbers that add up to the official capacity of 280,000 passengers per year.

Daocheng-Yading Airport's official handling capacity of 280,000 passengers a year appears an underestimate.¹⁰⁸ It translates into 767 passengers a day, i.e., 383 inbound as well as outbound passengers. Given the half dozen check-in counters and two security lanes, the airport would seem to be able to process at least 200 outgoing passengers an hour, or 1000 in the course of a morning. Add to this an equal number of incoming passengers, who require no particular processing beyond luggage handling, and the total easily exceeds 2000 passengers a day (1000 outgoing, 1000 incoming, in the course of a morning). The actual capacity then exceeds the official number of 280,000 passengers a year approximately three times.

Construction of the airport can probably not be justified on immediate economic grounds. The airport cost CNY 1.58bn to build. Assuming an airport lifetime of 20 years (too short) and zero interest costs (too low), the construction cost averages CNY 79mio per year. Add maintenance and running costs of on the order of CNY 20mio per year.¹⁰⁹ Continuing with a cost of CNY 100mio per year and 280,000 passengers per year, this translates into CNY 357 per passenger per flight. Since it is unlikely that one-half of the typical ticket price goes for Daocheng-Yading Airport fees (and some fees will also have to be paid at the other airport

¹⁰⁷ See <http://www.airbus.com/aircraftfamilies/passengeraircraft/a320family/a319/>, accessed 30 June 2016.

¹⁰⁸ For the handling capacity, see <http://www.usatoday.com/story/news/world/2013/09/18/china-airport-tibet-highest/2832921/>, accessed 29 June 2016. For more airport-related factual information see, for example, <http://www.ibtimes.com/worlds-highest-airport-part-chinas-multibillion-dollar-push-tibetan-plateau-1406780>, <http://www.usatoday.com/story/news/world/2013/09/18/china-airport-tibet-highest/2832921/>, and <http://en.yibada.com/articles/29236/20150425/china-airports-in-extremely-high-locations-new-standards.htm>, all accessed 29 June 2016.

¹⁰⁹ Assume maintenance and equipment operating costs equivalent to 1% of construction costs, i.e., CNY 15.8mio per year, and 50 employees (from check-in personnel to security personnel, luggage handlers, and aircraft maintenance/servicing personnel) with an average salary of CNY 7,000 per month and 50% additional employment costs, i.e., CNY 6.3mio per year. Together, this is approximately CNY 20mio per year.

connected by the flight), the outcome is a substantial, continuous government subsidy for each passenger on each flight. The perpetual government subsidy would suggest that the building of the airport was not an economic decision, but either a political one (further integrating Daocheng County into Sichuan Province) or a military one (facilitate the quick transfer of military personnel and equipment), or one that considers linkage effects in that subsidized flight prices lead to significant profit elsewhere in the local economy (or any combination of such reasons). Or perhaps the airport represents a massive financial miscalculation.

The airport is not a reliable entry or exit point for Daocheng, to the extent that the lack of reliability may constrain tourism. (Three of the author's four flights in 2016 and 2017 were delayed or cancelled.) In 2016, Air China in particular had a reputation among Daocheng-Yading Airport staff for not landing even when other airlines land. The issue appears to be one of safety in the case of high-altitude airports. Li Jian, deputy head of the Civil Aviation Administration of China, on 23 April 2015 announced that super-high altitude airports require stricter safety measures than those located at low altitude. Consequently, pending the development of Chinese standards for such airports within the next two to three years, plans for super-high altitude airports would no longer be approved. (International technology standards for super-high altitude airports appear to not exist.)

While nobody has provided a rationale for what the security issues are, the one fact that is known is that aircraft engines produce less thrust at high altitude than near sea level (and the Daocheng runway at 13,800 feet length is therefore exceptionally long). For the airlines, the airport reliability issue implies significant additional costs. The airplane is tied up for extended periods of time, in unpredictable fashion, and delayed passengers need to be moved back to Jinzhuzhen and accommodated for a night. At some point, one begins to wonder if the airlines actually want to fly to Daocheng, or are being pressured by government or regulatory agencies into flying to Daocheng.

Appendix 3. Daocheng County Tourism Development *Master Plan*

The *Master Plan* provides a number of rationales for why the development of tourism in Daocheng County can succeed. Per capita GDP of China at the time, of USD 800, is generally considered the level at which tourism increases rapidly. Tourism development in Daocheng County complements the national policy of [Large-scale] Western [Economic] Development. Tourism development in Daocheng matched a 1998 *provincial* master plan for tourism development—the provincial plan denoted tourism a provincial emerging pillar industry and identified Ganzi Prefecture as nature destination, suitable for eco-tourism—and a 2000 *prefectural* master plan of Ganzi Prefecture for tourism development. Tourism had already become the biggest economic force in the neighboring areas of Zhongdian (中甸) and Lijiang (丽江) in Yunnan Province, as well as at Luguhu (泸沽湖) at the border of Yunnan and Sichuan Provinces. Then there was the successful tourism development model of Jiuzhaigou-Huanglongsi (九寨沟—黄龙寺) in Aba County (阿坝) of Sichuan Province, 1172km North-East of Jinzhuzhen.

The *Master Plan* envisions the use of the available natural and cultural resources in order to develop sustainable tourism. It promotes step-by-step development within the grand overall plan. The stated principle for development is to use the market as guiding force, focus on effectiveness, and build on a premise of sustainable development. The county economy is to move ahead by leaps and bounds thanks to the government's lead (主导) and its exercise of macroeconomic control, the reliance on Daocheng's unique tourism resources, and multi-channel development efforts.

The *Master Plan* lists four further scenic areas: Haizishan (海子山), E'chushan (俄初山), Kasigou (卡斯沟), and Mengzi Gorge (孟子峡谷), of which, however, only Haizishan has been semi-developed by 2017. Haizishan is a highland plateau between Daocheng and Litang (the road connection to the rest of Sichuan), a moonscape dotted with ponds and puddles often shrouded in clouds or mist; there is little to do except to drive through, though there are opportunities to stop as well as to undertake short side trips.¹¹⁰

The *Master Plan* envisages Jinzhuzhen as central city, Riwa (日瓦) as entry and exit point for Yading, and a road connection to Yunnan Province as access route (with a third-grade mountain road in place by 2005, to be upgraded later). It goes on to list roads connecting Riwa to Muli County (木里, in neighboring Liangshan Prefecture, 凉山) to the Southeast, and Geka Township (各卡) to the Southwest, at the time, and until today, largely dirt roads, with continuing connections to the tourist attractions of Luguhu, Lijiang, and Zhongdian.¹¹¹

The *Master Plan* includes a cost benefit analysis, listing total costs for each of the subsequent 5-Year Plan periods (2000-2005, 2005-2010, 2010-2015) and contrasting these costs and

¹¹⁰ Along the road across the Haizishan plateau are a handful of small parking spaces, typically marked by some explanatory sign and rudimentary public toilets. A small rock area at the edge of Haizishan, right off the road between the Daocheng-Yading Airport and Daocheng, has cemented walkways through the rocks (affording, perhaps, a 10-minute stroll). The opportunities for side trips are not obvious and a guide may be necessary. As of 2016, the side road to what one Han hotelier in Daocheng described as a beautiful scenic spot was in such bad shape that his jeep had to be pulled out.

¹¹¹ Muli has been closed to foreigners for many years but currently appears to be open. Daocheng County has been (mostly) open to foreigners since 1998.

assumed interest payments with assumed income.¹¹² In the first 5-Year Plan period, the ratio of costs to income are estimated to be 1:0.74, in the second period 1:4.5, and in the third period 1:10, i.e., by 2010-2015 the benefits in form of income (though not profit) exceed the costs ten-fold. Total costs across the 15 years are 1.1612b yuan (or 1.33545b yuan including interest costs) and total income is 6.34887b yuan. The derivation of none of these costs or income data is explained.

The *Master Plan* projected marketing expenditures for the years 2000, 2005, 2010, and 2015 of CNY 50,000, 1mio, 2mio, and 3mio, values that are likely much exceeded in reality. I have a fragmented collection of marketing materials printed over time, and a fragmented record of various marketing campaigns, all of which suggest much (on the order of 10 to 100 times) higher marketing expenditures.

The *Master Plan* then lists in great detail the projects that need to be undertaken. It suggests to make good use of the national policy of Western Development for infrastructure projects, ideally have an airport in place by 2003 (it was finally completed in 2013), and in terms of road construction focus on completing reliable infrastructure within Daocheng County (also completed only in 2013/14) while trying to connect to roads in Yunnan province. (A table lists ongoing and upcoming road projects, referring to a separate Daocheng transportation infrastructure plan for 1999-2010.)

The projects range from 12 scenic spots (comprising viewing locations/buildings, reception and recreation facilities [accounting for the bulk of expenditures], infrastructure, toilets, and environmental protection and other projects) with an investment volume of CNY 857.70mio to 6 tourism highway projects (CNY 97.60mio), 9 main highway projects (CNY 441.85mio), 5 energy and communications projects (CNY 162.00mio), one market promotion project (CNY 31.40mio) and one employment training program (CNY 12.50mio); the total value is CNY 1.60305bn.

Daocheng County Tibetan population

According to the *Master Plan*, the population of Daocheng in 1999 was 27,324, of which more than 96% were Tibetans; the agricultural population was 24,275, and 70% of the population of Jinzhuzhen were Han. For these numbers to match up, the population of Jinzhuzhen (a figure not published) must have been 1561, under the assumption that everyone outside Jinzhuzhen is Tibetan. If all the non-agricultural population were located in Jinzhuzhen (or in urban townships with a similar 70% Han share of the population), then the Tibetan share of the Daocheng County population would be 92% (not “more than 96%”). The 70% Han share of the Jinzhuzhen population around 2000 makes sense given that Jinzhuzhen was established as an administrative center of the Chinese government, located between several small Tibetan villages (agglomeration of houses amidst fields), which by now are no longer distinct from the Chinese town. A 70% (if not higher) Han share of the population of Jinzhuzhen would also seem an accurate estimate for 2017, given my observations; similar percentages apply to Riwa.

¹¹² Costs are broken down not only by 5-Year Plan period, but also by type of undertaking: infrastructure (a total investment of 127.5m yuan, 80% of which is to be financed by the government), public facilities (40.85m yuan, 100%), marketing (31.4m yuan, 40%), tourism service facilities (773.2m, 5%), other non-profit investment (162m yuan, 95%), sustainable development projects (26.25m yuan, 90%); all else is to be undertaken by the private sector and “other social economic entities.”

Daocheng County Tourism Development Companies

The *Master Plan* mentions the establishment of—as part of the government—a Daocheng Tourism Bureau (稻城旅游局) and a Tourism Environmental Protection department (旅游环境保护处), as well as of a Daocheng County Tourism Development Company (稻城县旅游开发总公司). This company likely later evolved into the Daocheng Tourism Development Limited Liability Company (稻城旅游发展有限责任公司).¹¹³

On 7 April 2013, the Daocheng Yading Scenic Area Tourism Development Company (稻城亚丁景区旅游开发有限责任公司) was established by (i) this Daocheng Tourism Development Limited Liability Company and (ii), as majority shareholder, the prefectural tourism development company Ganzi Prefecture Culture and Tourism Investment Development Limited Liability Company (甘孜州文旅投资发展有限责任公司, by 3 September 2017 renamed a conglomerate, 集团), established on 27 December 2012.

All of these companies are state-owned. The latter, prefectural one is a large company with CNY 780mio in assets.¹¹⁴

¹¹³ As of 28 November 2017, no details can be found online on either of these two companies.

¹¹⁴ For details see <http://ganzi04782.11467.com/>, <https://xin.baidu.com/detail/compinfo?pid=ovT7Qchxe310XzGTvwjaKmYkt53QzIe0hgHa&from=ps>, and <http://www.gzz.gov.cn/10000/10120/13598/2016/10/13/10548305.shtml>, all accessed 28 November 2017.

Appendix 4. Shangri-La

While the *Master Plan* considers Yading to be “the last Shangri-La,” and Daocheng County re-christened Riwa Township Shangri-La Township, the term “Shangri-La” is heavily contested. The seat of the municipality in neighbouring Yunnan Province that borders Daocheng County also goes by the name of Shangri-La, already since 2001 according to the Wikipedia entry on Shangri-La (accessed 9 October 2017). Alternative names for this county and municipality are Diqing (迪庆), Deqen (迪庆), and Zhongdian (中甸), The Daocheng *Master Plan* having been completed towards the end of 2001 (with final touches perhaps applied through 2003) opens up the possibility that the *Master Plan* systematically uses the name *Xianggelila zhen* (Shangri-La Township) for what is until today referred to as Riwa by the locals in order to stake its claim vis-à-vis Shangri-La of Yunnan Province. (It only refers to Riwa once, in a map image, likely an oversight with a word processor’s ‘find and replace’ function not applicable to an image.)

Daocheng officials could argue that Yading justifies the Shangri-La connotation introduced in James Hilton’s 1933 novel *Lost Horizon* because James Hilton may have based his Shangri-La on the 1931 report of Joseph Rock, an Austrian-American explorer who wrote extensively about Yading in the *National Geographic*. The *Master Plan* consistently refers to Yunnan’s Shangri-La as Zhongdian.

According to the Wikipedia entry on Shangri-La, the Tibet Autonomous Region (TAR) in 2001 proposed that Yunnan, Sichuan and the TAR jointly promote Shangri-La tourism. Attempts to establish a China Shangri-la Ecological Tourism Zone in 2002 and 2003 failed, but a declaration of cooperation was signed in 2004.

The link of Yading (or Zhongdian) to James Hilton’s Shangri-La is rather tenuous. Geographically, James Hilton’s Shangri-La is located in West Tibet, more than 2,000km away as the crow flies. It is centered on one mountain (“Blue Moon”), rather than on three (Yading). Shangri-La is a lamasery above the valley, whereas Yading is a nature reserves encompassing three mountains, with no lamasery above the valley (but a small temple, Chonggu temple, at the foot of one of the three mountains). Hilton (1933) speaks of Shangri-La as a world of “incomparable refinements” (p. 97) and describes it as a place of intellectual and spiritual study with an extensive library and music, whereas Yading is a place of Yak herding that has turned to mass tourism.

Nevertheless, Kenneth C. Davis at the end of a 2012 print of *Lost Horizon* writes that “By his own accounts, Hilton was inspired to write this Himalyan adventure by *National Geographic* articles written by Joseph Rock, and Austrian American botanist and geographer who described his exploits in exotic Tibet” (p. 5 of the “P.S.” section). Whether drawing ‘inspiration’ from articles justifies applying the name of the inspired mythical place to the location covered in the articles—with which there is no resemblance—is questionable.

Appendix 5. Daocheng County Road Access

While the *Master Plan* claims that Yading Nature Reserve had been made accessible via a new, 34km “third degree” mountain road (in, implicitly, 1999), long-term Han residents in interviews had no recollection of such a road at that time and reported that until the 2010s, access to Yading Nature Reserve was expedition-style on foot or horse, starting from Riwa, and requiring several days. An internet search yields tourist reports covering the early 2000s that confirm the existence of a rudimentary road into Yading.¹¹⁵

Provincial road 217 connects Litang (理塘)—a way station between the prefectural capital of Kangding (康定) and Daocheng County—to Yunnan Province via Sangdui Township (27km North of Jinzhuzhen) and then Southwest via Xiangcheng County (乡城). Provincial road 217 between Sangdui Township and Xiangcheng County is currently (fall 2017) under extensive repair and expansion. Provincial road 216 runs from Sangdui Township South via Jinzhuzhen to Riwa, from where it continues Southeast, currently as dirt road though in the process of upgrading, to Mengzi Township (蒙自乡) and then Muli County (木里县) and finally Panzhihua Municipality (攀枝花). A recently completed East-West road cuts across from approximately 45km South of Jinzhuzhen (on the way to Riwa) to approximately 10km South of Xiangcheng County (on the way to Yunnan Province).

A new road from Riwa to Yunnan Province is to pass through Geza Township (格咱乡) in Diqing Municipality (with the township located just North of Diqing), Pushang (普上) and Langdu (浪都); only the first location can be found at map.baidu.com or on a google map.¹¹⁶ The precise routing thus remains unclear. Of this 135km third-degree road, 77km remain to be completed (supposedly by October 2018). The road will have a 30km/hr speed limit. Chinese Wikipedia suggests that a third-degree road is made of asphalt or cement and is intended for daily traffic of 2000-6000 vehicles between counties or lower-level administrative localities.¹¹⁷

This seems to be a different routing than the one originally envisaged in the *Master Plan*, via Geka Township (各卡乡), following the river West of Yading downstream, and then up a side valley to Zhongdian, in that it may run further to the North.¹¹⁸ (When I travelled the Geka route on a truck in 2007, we repeatedly had to get off the truck and find ways to help it along. It took half a day to cover what may have been a 3000m climb over perhaps 30km. An interviewee in October 2017 thought this was still a difficult road.)

The current road from Riwa to Yunnan Province connects the Southernmost Ranwu (然乌) township of Xiangcheng County (Sichuan) to the Northernmost township of Zhongdian Municipality (中甸, Yunnan). The journey takes between 7 and 10 hours by car or bus.

¹¹⁵ See, for example, <http://www.josephrock.net/2011/06/chapter-10-yading-holy-mountains-of.html>, accessed 15 November 2017.

¹¹⁶ See “Kunming Information Port” (昆明信息港, 6 November 2015) as reported at <http://www.yadinginvest.cn/index.php?m=content&c=index&a=show&catid=16&id=103>, accessed 14 November 2017.

¹¹⁷ See <https://zh.wikipedia.org/wiki/中华人民共和国公路等级>, accessed 14 November 2017; also see <https://baike.baidu.com/item/三级公/1870993?fr=aladdin>.

¹¹⁸ Road construction in this area is presumably difficult as roads either have to follow deep rivers in narrow, sometimes gorge-like valleys (with temperatures and humidity in summer approaching sub-tropical climates, and with raging rivers after rainfall), or cross such valleys higher up and then deal with steep and frequently unstable slopes, climbing up to passes well in excess of 4000m height.

Apart from this Western route, large-scale road construction on the Eastern side of Yading towards Mengzi Township (蒙自乡, stopping short of Muli) and then South to Lugu Lake (泸沽湖) and into Yunnan Province is underway as of 2017. Completion is not expected for 5-6 years.

Zhongdian in Yunnan Province and Lugu Lake at the border to Yunnan Province are major tourist attractions on the Yunnan side. Both connect in approximately half a day's travel to Lijiang (丽江), a major tourist location of China. Zhongdian is also one of the final stops in Yunnan Province before heading Northwest into the Tibet Autonomous Region (西藏).

Appendix 6. Details on Tourist Numbers

Tourist numbers

The *Master Plan* perceives two limits to the development of tourism: environmental capacity and a space rationale. It relies on United Nations World Tourism Organization figures to estimate the space requirements and availability in each part of Yading. Adding up these numbers—presented in a table in a *Master Plan*—suggests that the maximum sustainable number of daily visitors is 9,276. (The *Master Plan* does not present an explicit maximum number.)

In 2017, the maximum number for admission was set at 16,054 visitors per day, a limit that was reached at least on the 3rd and 4th of October 2017. In the previous year, 2016, the limit had been set at 12,000 visitors.

In the meantime, the number of buses carrying visitors from the in fall 2017 newly completed Yading Visitor Center (游客中心) at the upper end of Rencun Village (previously at the lower end of Rencun Village) into Yading increased from 83 to 163 in 2017 through new purchases and leases (Xinhua, 5 October 2017). Each bus can carry 39 passengers and takes approximately 60 minutes for the one-way trip from the Yading Visitor Center to the end of the road within Yading (from where tourists proceed on trails). I.e., if all 163 buses were in operation, could depart and arrive simultaneously and accommodate and discharge their passengers instantaneously, and were to leave the Yading Visitor Center in four waves at 7am, 9am, 11am, and 1pm (with return waves at 2pm, 4pm, 6pm, and 8pm [probably too late in the evening]), the maximum carrying capacity is 163 buses times 39 seats times 4 trips, or 25,428 visitors.¹¹⁹ The quality (in particular, the limited width) of the road and the infrastructure at the Yading Visitor Center as well as at the end of the road do not allow the smooth operation of such a large number of buses.

Monthly distribution of visitors

The July 2015 percentage of total annual visitors, of 25.2% is questionable. Late May through August is the rainy season. It is cold and wet, and Yading may be shrouded in clouds for weeks on end. In July 2016, I encountered rain in Daocheng County every day and suspect that the Yading mountains did not have a single day of good weather (definitely not the day I went up). Observed daily visitor numbers at Yading in mid-July were about 500, in stark contrast to the 13,916 average daily visitor nights in Daocheng County and the 6,326 to Yading alone that are implied by the official statistics; the hotels that I stayed in had very low occupancy rates and Jinzhuzhen and Riwa appeared thinly populated with only a sprinkling of tourists.

¹¹⁹ Approximately 0.5km beyond the end of the road in Yading, electric carts run for a further approximately 7km along the valley floor to the Luorong cattle station. The number of electric carts increased from 60 (at an unknown date in the past) to 100 by October 2017 (Xinhua, 5 October 2017). Each cart can carry 12 passengers and takes approximately 15 minutes for the one-way journey. Assuming full capacity (not likely given the quality of the track), the maximum carrying capacity is 4,800 persons per hour.

Visitor numbers in other months, such as March, however, appear plausible.¹²⁰ The October 2015 visitor number, of 357,000 to Daocheng County (11,516 average daily visitor nights) is also plausible given various reports as well as the author's observations in October 2017.¹²¹

October 2015 visitor numbers

According to Ganzi ribao of 9 October 2015, visitor numbers to Daocheng Yading (presumably limited to Yading) in all of the 2015 Golden Week were 37,680 with total revenues of CNY 38mio (increases of 43.4% and 45.6%, respectively, over the previous year). These Yading visitor and revenue figures amounted to 3.3% of the corresponding Ganzi Prefecture figures, i.e., Yading tourism accounted for only a tiny fraction of all tourism in Ganzi Prefecture in this period.¹²²

According to the Ganzi Prefecture Tourism Net, 20 October 2015, Daocheng County visitor numbers by 5 October 2015 had reached 51,084, and tourism income was CNY 54.075mio, up 107.9% and 109.7%, respectively, over the same period in the previous year.¹²³ These tourist numbers would seem to confirm the official October 2015 Daocheng County visitor number of 357,000.

Visitor statistics and foreign visitors

The table of domestic tourist numbers (国内旅游人次) by county provided in the *Ganzi Statistical Yearbook*, exceptionally for the statistical yearbook, lists Yading visitor numbers separately from Daocheng County visitor numbers (as it does for Hailuogou (海螺沟) in Luding County (泸定)). The total tourist number in the table equals the sum of tourists in all localities only if the Yading tourist number is counted separately from the Daocheng tourist number (rather than being treated as a sub-category of Daocheng), and similarly for Hailuogou and Luding (where the tourist number in the first, the scenic area, exceeds that in the second, the county).¹²⁴

The lack of (actual) foreign visitor numbers for Yading reflects a data compilation problem; my own experience suggests that on most days some foreign visitors enter Yading, and their passport information is being entered in a booklet. Perhaps a foreign visitor number of a couple hundred per year seemed too embarrassing (too low) to be reported. If the Daocheng foreign visitor number were correct, a similar number, likely applies to Yading. If tourist numbers for Yading were based on ticket sales, the foreigners may well be included with the domestic tourists. The reported monthly domestic visitor numbers tend to end in two or three zeroes (except in January and February), suggesting that all visitor numbers are approximate values.

¹²⁰ In March 2017, Yading had approximately 200 observed visitors, which would seem to confirm the official March 2015 statistic (4,283 monthly visitors to Yading, or an average 138 daily visitors).

¹²¹ For details, see Appendix 6.

¹²² See <http://www.yadinginvest.cn/index.php?m=content&c=index&a=show&catid=16&id=101>, accessed 14 November 2017.

¹²³ See the report at <http://www.yadinginvest.cn/index.php?m=content&c=index&a=show&catid=16&id=102>, accessed 14 November 2017.

¹²⁴ If the Hailuogou figure were an error and Hailuogou were a subset of Luding County, and if the Ganzi Prefecture total reflected a *mistaken* summing up of all county data *plus* Hailuogou and Yading, then Yading would presumably be a subset of Daocheng County, too. Then the official total Daocheng County (including Yading) visitor numbers and tourism income figures used here would be over-estimates.

Looking back, the *Master Plan* consistently underestimated the number of overseas tourists. Thus, for 2015 the *Master Plan* envisaged 520,000 domestic and 80,000 overseas visitors. In fact, the number of foreign visitors lagged far behind with 1,650 in Daocheng excluding Yading (and none given for Yading).¹²⁵ The total number of domestic visitor nights in 2015, however, at 1,713,798, exceeded the projection three-fold.

The *Master Plan* (p. 41) envisages domestic visitors to spend more money per night than foreign visitors (CNY 350 vs. CNY 200, in 2015). The actual visitor imbalance in favor of domestic vs. foreign visitors thus works to Daocheng County's benefit.

Travel arrangements

Most visitors arrive by car or bus. In 2015, visitor numbers for Daocheng Yading (presumably limited to Yading) in all of the Golden Week were 37,680, of which 7,072 arrived by plane (and then presumably relied on buses to travel from the Daocheng-Yading Airport to Yading).¹²⁶ A separate piece of information is that the share of self-driving tourists in 2015 was up compared to the previous year, with, as of 5 October 2015, more than 8,000 vehicles having arrived at Daocheng Yading, at this point into the Golden Week accounting for more than 80% of all tourists to Yading.¹²⁷

In 2017, in the morning of 3 October, cars were in many places lined up parallel in two lines along a single lane up to 7km in the approach to the Yading Visitor Center. None of these tourists, unless they had prior reservations, would make it into Yading that day as ticket sales were suspended at 11am when the maximum number of tourists to be admitted to Yading in one day had been reached. They would also not have been able to find parking anywhere near the entrance to Yading. Local Tibetans were offering parking spaces for CNY 50 on their properties along the highway, from where tourists could then take one of the Riwa shuttle buses to the Yading Visitor Center.

Master Plan projection of hotel quality

For 2005/2010/2015, the projected number of beds in three-star hotels was 0/600/900. The approximately 250 places of accommodation listed for Daocheng on ctrip.com in October 2017 comprised five hotels with a Chinese rating of 4.5 stars—the Holyland Hotel is listed as a 4.5 star hotel, despite its self-description as a 5-star hotel and despite its superior quality in comparison to the other 4.5 star hotels—and two dozen hotels with a 3-star or 3.5-star rating (none with a 4-star rating). The highest-rated hotels seemed in most demand at all times in 2016 and 2017. Chinese tourists from Chengdu or Chongqing arriving in their BMW or

¹²⁵ For expected foreign visitors in 2000, 2005, and 2010 see notes to Figure 8.

¹²⁶ See Ganzi ribao of 9 October 2015, as reported at <http://www.yadinginvest.cn/index.php?m=content&c=index&a=show&catid=16&id=101>, accessed 14 November 2017.

¹²⁷ See Ganzi Prefecture Tourism Net, 20 October 2015, as reported at <http://www.yadinginvest.cn/index.php?m=content&c=index&a=show&catid=16&id=102>, accessed 14 November 2017. The bulk of self-driving tourists, 38%, came from Chengdu and Chongqing, 12% from Beijing, Shanghai, and Guangdong, 30% from Guizhou and Yunnan, and 20% from all other places together. Daocheng County visitor numbers were reported to have reached 51,084 by 5 October, and tourism income CNY 54.075mio, up 107.9% and 109.7%, respectively, over the same period in the previous year.

Porsche SUVs would either head for one of these better hotels or for an upmarket Tibetan homestay (inn).

Appendix 7. Two Models of Tourism Development

Daocheng's duikou development model: Yading Tianjie in Jinzhuzhen

The Luzhou construction company in charge of Yading Tianjie has CNY120mio registered capital, was first established on 16 November 1986, may have no more than five employees, and is registered with a natural person as investor or controlling shareholder.¹²⁸ Locally, the project is represented by the Daocheng Yading Real Estate Development Limited Liability Company (稻城亚丁房地产开发有限公司). This real estate company was established on 25 December 2013 as a private company with a natural person (Shu Anyun 舒安云) as owner or controlling owner and registered capital of 10mio yuan. The company appears to have no further purpose than to administer the Yading Tianjie project.¹²⁹

Nothing is known about the financing of the project; it may involve some budgetary funding in the *duikou* municipality (or some compensatory deal between the *duikou* government and the development company), and otherwise should rely on bank loans, presumably obtained in Luzhou Municipality. Since the project is implicitly underwritten by governments and further protected by the *duikou* distinction, it is unlikely to be in any immediate danger and may linger until eventually demand for the various properties and their supply find a market-clearing price. As of March 2017, the director of the local branch of the Agricultural Bank of China was a regular feature of the Yading Tianjie sales office, standing ready to provide a mortgage to any interested buyer.

Private investor model: Riwa's Holyland Corporation

The Holyland Corporation is reported to have bought up land—beyond the currently clearly demarcated Holyland property—along the approximately 3-4km stretch between Riwa and the beginning of Rencun, a narrow valley shared by a river, the road, and originally empty land approximately the width of one street block. All land purchases were done through the government (rather than being long-term leases from Tibetan households). The Holyland Corporation website gives 406mu as Holyland's total land area, corresponding to 271,000m² or 0.271 km², which would seem to err on the low side given the observed, clearly demarcated extensive Holyland area in Riwa (and not all Holyland land may currently be marked as such, recognizable to a visitor).¹³⁰

Riwa is located at the confluence of a river coming down from E'chushan, and another one coming down from the direction of Daocheng. A sliver of relatively flat land runs upstream towards Rencun (and E'chushan), while the valleys in the other two directions (upstream towards Daocheng, and downstream towards Mengzi Township) are exceedingly narrow. The mountain slopes are so steep that one would have difficulty walking straight up.

¹²⁸ See a website whose url consists of an exceedingly long string of letters and % symbols; probably easiest to find by searching for 四川省泸州市第十建筑工程有限公司 on baidu.com (accessed 11 November 2017). Also see <http://scslzdsdqak.cn.biz72.com/> (accessed 11 November 2017) for the limit of five employees.

¹²⁹ See <https://www.liepin.com/company/gs14756218/#business-info>, accessed 11 November 2017.

¹³⁰ The Holyland website contains umerical errors, such as the distance to the Daocheng-Yading Airport, given as 88km (instead of approximately 120km), and the distance to Yading, given as 20km (instead of the approximately 7km to the entrance of Yading and approximately 40km to the end of the road, where visitors exit the bus and begin their outdoor experience of Yading).

In 2016, a side wing of the Holyland Hotel had an office—easily accessible from the main road and with big advertisements and flags out front—promoting the sale of vacation homes within the Holyland Hotel. I have never seen a customer and by 2017 the office appeared to have been closed. The vacation homes do not appear on the otherwise extensive Holyland website. My own estimate of the number of hotel rooms, based on the number of windows, is 300—vs. the number of 213 given on the Holyland website (at <http://www.yadinginvest.cn/>, accessed 13 November 2017)—suggesting that up to one-third of the Holyland Hotel accommodation space may originally have been designed as vacation homes.

For the Yading Yizhan, the Holyland website gives a size of 17,000m² with 278 rooms, which previously (and, implicitly, in the paragraph on the website) included what became the Ramada Encore in 2017. Opening dates of the original Yading Yizhan are given as 2009 and 2011. (This also implies that the complete renovation, in late 2016 and early 2017, of what became the Ramada Encore, occurred 5 or 7 years after the original construction of the hotel, giving an indication of the longevity of hotel buildings in the region.)

As of 14 November 2017, hotels.com listed the Ramada Encore in Riwa as the only available hotel in all of “Daocheng” (for various dates). Booking.com, with generally a greater presence in China, listed 17 hotels (including the Ramada Encore). One “benefit” of having joined Wyndham Worldwide is that the music at breakfast is not Chinese opera music, Communist propaganda songs, or Tibetan-sounding Shangri-la advertisement songs, but the likes of Loreena McKennitt and New Orleans blues.

The Holyland website provides the following detailed information on future developments:

- spa hotel (天谷莲轩温泉 SPA 酒店): size of 55,000m² (i.e., twice the size of the Holyland Hotel), with 500 rooms; the spa has a size of 18,000m² and involves an investment of CNY 250mio;
- “courtyard-style boutique hotel ‘Kangba First Village’” (院落式精品酒店 ‘康巴第一寨’): size of 33,267m²; a mix of commercial and (upstairs) hotel areas;
- conference hotel: size of 36,000m², with 330 rooms and an investment of CNY 450mio.

The Holyland website also mentions that Holyland has established a joint venture (with a 70% controlling stake by Holyland) to build a cable car within Yading, from Longtongba (龙同坝) to the Chonggu temple (冲古寺), a project that as of 2017 had not yet been started, was not in common awareness, and may have been made superfluous by the continuation of the road and the bus service beyond Longtongba to within 1km of the Chonggu temple.

To estimate the financial viability of the Holyland Corporation, the following calculations are done. Assuming average staff salaries to be CNY5,000 per day (apart from the separate room and board for staff), a value that can be backed up by a range of information, the monthly staff costs of Holyland alone, with 400 staff, is CNY 2mio. Assuming average room prices across the three hotels of CNY 400 during the low season (assume 9 months) and CNY 1,200 in the high season (assume 3 months), and assuming the number of rooms rented to be 50 rooms each day during low season (ignoring that the Holyland Hotel was actually closed from mid-December 2016 to end-February 2017, and similarly for the other Holyland hotels, and with even longer-lasting shutdowns in previous years) and 500 rooms each day during the high season, implies monthly average revenue of CNY 4.5mio (with the high season

accounting for approximately 90% of total revenue). I.e., staff costs consumed approximately 44% of revenue.

The estimate of revenues comes with a large margin of error as the precise number of visitor nights is not known, the assumed average price may not match the actual average price (I have a good idea of the room prices of each of the three hotels on Ctrip (online travel agency) in the course of the year, but not about the distribution of visitors across the three hotels), the estimate ignores whatever cut travel agencies impose for arranging room reservations, and the Holyland Corporation likely indeed slashed staff numbers (with a number of temporary interns from colleges helping out in fall 2017).

After having concluded the above calculations, an internet search revealed that according to the 2016 edition of “Trends in the Hotel Industry,” labor compensation averaged 42.8% of total operating expenses at U.S. hotels in 2015 (<http://www.hotelmanagement.net/operate/examination-hotel-labor-costs>, accessed 14 November 2017), a percentage near-identical to the one calculated for the Holyland Corporation here.

My estimate could err slightly on the lower side of profitability, if one were to focus on the high season in 2017. Thus, on 3 October 2017, the Yading Inn and the Ramada Encore were booked out on Ctrip, the major online travel agency in China, while the Holyland Hotel offered a few remaining rooms for just short of CNY 3,000 per room. This situation prevailed through much if not all of October 2017.

Appendix 8. Daocheng County Tourism Income

The *Compendium of Tourism Statistics*, issued by the World Tourism Organization, in its “index of indicators and basic data” provided online,¹³¹ lists under the heading “tourism industries” the following sectors: accommodation for visitors (here: hotels), food and beverage serving activities (here: catering), passenger transportation (here: transport), travel agencies and other reservation services activities (not covered here, and not to be found in Daocheng County beyond a couple of family offerings of horse riding tours), and “other tourism industries” (not covered here).

Double-check on tourism income per visitor

A double-check on the official Daocheng County value of tourism income per visitor of CNY 990 is possible based on national data. National business revenue in legal person hotels and catering *above-designated size* in 2015 was CNY 851.22bn, while the number of domestic visitor (“person-times,” 人次)—not limited to hotels of “above-designated size”—was 4.000bn (with the extent of ‘zeroes’ suggesting this official number is an approximation). I.e., if China in 2015 had had only establishments of accommodation and catering “above-designated size,” the revenue per visitor was CNY 213. The official statistics provide no indication of the extent of “below-designated size” legal person hotels and catering and non-legal person hotels and catering, and thus no value of total business revenue in hotels and catering.

In 2013, based on additional data from the economic census 2013, employment in below-designated size hotels and catering was equivalent to 52% of employment in legal person hotels and catering establishments, and employment in sole proprietorships (not legal persons) with their 10.694mio employees equivalent to an additional 234% (Table 11). Tourism income per visitor in below-designated size legal person establishments and in sole proprietorships is unlikely to be as high as in above-designated size establishments. In 2013, business revenue per employee in below-designated size legal person hotels and catering was CNY 104,329, approximately 60% of the CNY 176,705 in the case of above-designated size legal person units (with the below-designated size values obtained as difference of the 2013 economic census data and the 2013 above-designated size data). Business revenue per employee in sole proprietorships is likely even lower, perhaps half the level in below-designated size legal person units (i.e., 30% of business revenue per employee in above-designated size legal person units).

Raising the tourism income value of CNY 213 per visitor—obtained when considering only above-designated size establishments—by 286% (52% plus 234%) yields tourism income per visitor of CNY 822 as an upper bound estimate. A value of tourism income per visitor in hotels and catering that discounts business revenue per employee in below-designated size legal person units and sole proprietorships by 40% and 70% yields a value of around twice the value based on above-designated size legal persons only, of CNY 400-450.¹³²

¹³¹ See <http://statistics.unwto.org/content/compendium-tourism-statistics>, accessed early February 2018.

¹³² The calculation is $CNY\ 213 * [1 + (0.6 * 52\% + 0.3 * 234\%)] = CNY\ 213 * [1 + 1.01] = CNY\ 428$.

This is still only one-half of the official (likely assumed) value for 2013 of CNY 990 (with the 2012 official value being CNY 682). But the estimated value of CNY 400-450 covers only hotels and catering. As a note below Table 8 reports for Ganzi Prefecture, value-added in transport is equal to three-quarters of value-added in hotels and catering, while value-added in trade (of which some constitutes sales to tourists) is approximately equal to value-added in hotels and catering. The official value of CNY 990 is not limited to hotels and catering and could thus well be an acceptable estimate of total tourism income per visitor.

Table 11. Tourism-related Data, Economic Census 2013

	Legal person units 法人单位数	Year-end employment 年末从业人数	Business revenue (mio) 营业收入	Main business revenue (mio) 主营业务收入	Business revenue per employee
2013 economic census (legal persons)					
Hotels 住宿业	73,464	2,943,241	436,268	429,467	148,227
Catering 餐饮业	126,127	3,973,084	615,487	609,947	154,914
Sum (or average)	199,591	6,916,325	1,051,755	1,039,414	152,068
Above-designated size legal person units					
Hotels	18,437	2,094,000	352,800		168,481
Catering	26,743	2,468,000	453,330		183,683
Sum (or average)	45,180	4,562,000	806,130		176,705
2013 economic census / above-designated size legal person units					
Hotels	3.98	1.41	1.24		0.88
Catering	4.72	1.61	1.36		0.84
Sum (or average)	4.42	1.52	1.30		0.86
Below-designated size residual legal person units					
Hotels	55,027	849,241	83,468		98,285
Catering	99,384	1,505,084	162,157		107,740
Sum (or average)	154,411	2,354,325	245,625		104,329
2013 economic census sole proprietorships					
	Registered unit 有证照个体经营户	Employment 从业人员数			
Hotels and catering	2,408,000	10,694,000			

Note: Economy-wide hotels and catering value-added in 2013 was CNY 1,022,830mio (database on NBS website, <http://www.stats.gov.cn>).

Sources: *Economic Census 2013*, Tables 2-A-1 through 2-A-4, and Table 1-14 for sole proprietorships; *China Statistical Yearbook 2016*, Table 17-1 (for data on the above-designated size units).

Double-check on employment in hotels and catering

Employment in hotels and catering can be derived via tourism income if one assumes all tourism income in Daocheng County to be earned in hotels and catering only, and that Daocheng County hotels and catering share the same characteristics as the nationwide average. (It may also be plausible that business revenue per employee in other relevant sectors, such as transport and, partially, trade, is similar to that in hotels and catering.)

In that case, tourism-related employment in Daocheng County follows from dividing Daocheng tourism income by (national) business revenue per employee in hotels and catering. Business revenue per employee in hotels and catering in 2015 can be derived from the 2015 (national) value of business revenue per employee in above-designated size legal person units, properly adjusted (based on 2013 data) to take into account below-designated size legal person units and sole proprietorships.

With business revenue per employee in below-designated size legal person hotel and catering units approximately 60% of that in above-designated size legal person hotel and catering units in 2013, and that in sole proprietorships an assumed 30%, weighting by the employment figures (Table 11) implies average business revenue per employee across hotels and catering at a value (CNY 91,401) approximately half that of the above-designated size legal person hotel and catering units (51.73%).¹³³ For 2013, dividing Daocheng County tourism income of CNY 170.56mio (Table 8) by this estimated average business revenue per employee yields an employment number of 1866. For 2015, dividing Daocheng County 2015 tourism income of CNY 1,696.66mio by 51.73% of 2015 above-designated size legal person unit business revenue per engaged person of CNY 206,007 yields an employment number of 15,921.

Much of employment in sole proprietorships is likely part-time, and in many instances probably limited to the high season of July through October (and perhaps even part-time throughout the high season). Separately, business revenue per employee in transport could be higher than in hotels and catering, and the use of the hotels and catering values then over-estimates employment. Given the personal observations on the ground, an employment figure of 15,921 appears on the high side. On the order of 10,000 full-time employees and another 2,000-4,000 highly seasonal staff may be more likely.

If one ignored sole proprietorships altogether, dividing Daocheng County 2013 tourism income of CNY 170.56mio by the 2013 economic census (legal person) value of business revenue per employee in hotels and catering of CNY 152,068 implies 1,122 employees. The 2013 value of business revenue per employee equals 86.06% of business revenue per employee in above-designated size legal person units. Taking such an adjustment to the 2015 value of business revenue per employee in above-designated size legal person units of CNY 206,607, with Daocheng County tourism income of 1,696.66mio, implies 9,570 employees in 2015.

An alternative employment-per-room based calculation to the one presented in the text is the following. The World Tourism Organization recommends the following optimum number of staff per 10 rooms: 3-star hotel: 8 persons; 4-star hotel: 12 persons; 5-star hotel: 20 persons.¹³⁴ The average establishment of accommodation in Daocheng County is probably a 3-star hotel (or lower), suggesting an average 8 staff (or less) per 10 rooms. The Chinese national statistics (Table 8, with 1.76 rooms per engaged person) imply an average of 5.7 persons per 10 rooms (resulting in the 3.977 engaged persons derived in the text). At the international standard of 8 persons per 10 hotel rooms in 3-star hotels and an assumed 7,000 hotel rooms in 2015, hotels (alone) in Daocheng County employed 5,600 persons; this is 41% more than the 3,977 persons calculated in the text.

¹³³ The calculation is $[(4,562,000 \text{ persons} * \text{CNY } 176,705 \text{ per person}) + (2,354,325 * 104,329) + (10,694,000 * 104,329/2)] / (4,562,000 + 2,354,325 + 10,694,000) = \text{CNY } 91,401$, which is 51.73% of the business revenue per employee in above-designated size legal person units (CNY 176,705).

¹³⁴ See <http://www.city-of-hotels.com/165/hotel-staff-en.html>, accessed 2 March 2018.

The “true” number of employees in hotels and catering is difficult to ascertain given the number of factors that could let Daocheng County deviate from the reference standards. Thus, capacity utilization in Daocheng County could be particularly low given the strong seasonality of tourism in Daocheng County. Using the national number of rooms per engaged person in above-designated size legal person hotels as reference ignores that many hotels may be below-designated size—or not even legal persons, but sole proprietorships—with potentially lower levels of staffing. This would suggest lowering the employment estimate for hotels (and hotels and catering) in Daocheng County derived above. On the other hand, given the relatively low labor costs in Daocheng County and perhaps low average efficiency of labor in Daocheng County, staffing could also be higher than elsewhere.

For transport, a rough estimate of employment in Daocheng County based on personal observations (as alternative to the calculations presented in the text) is 1,000-2,000. This assumes 326 bus drivers for the 163 buses running within Yading, on the order of 100 formal taxi drivers in Jinzhuzhen and another 100 drivers of informal taxis, 50-100 staff at the airport, and perhaps another 500 drivers of tourist buses of all sizes, including private tours by SUV or jeep.

Business revenue vs. value-added

In 2013, the national value of business revenue in hotels and catering legal persons is near-identical to economy-wide value-added in the sector hotels and catering (reported underneath Table 11). (Business revenue is 3% larger.) This suggests that tourism income provides a good estimate of value-added (and vice-versa).

But while the value-added data cover economy-wide hotels and catering, the value for business revenue only covers legal persons. The National Bureau of Statistics in its national GDP statistics, thus, either does not include sole proprietorships in hotels and catering (unlikely)—equivalent to an additional 155% of employment in 2013 (with no data available on their business revenue)—or some of the business revenue in legal persons and in sole proprietorships does not constitute value-added but intermediate inputs (plausible). In the latter case, with tourism income per visitor presumably significantly lower in sole proprietorships than in legal person units, economy-wide business revenue should be higher.

Using the same assumptions as in the previous section, of business revenue per employee in sole proprietorships being about half that in below-designated size legal person hotels and catering, implies that business revenue per employee in sole proprietorships is approximately one-third of that in all legal person hotel and catering units.¹³⁵ With employment in sole proprietorships in 2013 being equal to 155% of employment in legal person hotel and catering units, this implies that business revenue across all hotel and catering units (legal persons and sole proprietorships) is approximately 50% higher than that in legal person hotel and catering units only ($1/3 * 155\%$). I.e., national hotel and catering value-added is equivalent to two-thirds of national business revenue across all hotel and catering units. That is plausible.

The Daocheng County tourism income is not defined in the source. If tourism income is derived as product of the (likely assumed) tourism income per visitor and tourist numbers,

¹³⁵ The data, in 2013, are $(\text{CNY } 104,329 / 2) / \text{CNY } 152,068 = 34.30\%$

and if tourist numbers include those in sole proprietorships, then the Daocheng County tourism income value also covers the sole proprietorships and Daocheng County value-added in hotels and catering then is likely equal to approximately two-thirds of Daocheng County tourism income in hotels and catering. (Some of the Daocheng County tourism income is derived from transport, and possibly trade; as long as the transformation rate from business revenue to value-added is the same across sectors, this does not affect the conclusions.)

Alternatively, an argument could also be made that ‘tourism income’ (旅游接待收入)—the term used in the *Ganzi Statistical Yearbook*—per se denotes value-added, given that it is titled ‘income’ rather than some term such as ‘revenue,’ with income across the economy by definition equal to GDP (national value-added). It may be for good reason that business revenue (营业额) is called ‘revenue’ and not ‘income.’

Focusing on the income side, tourism income in largest part reflects compensation of labor and capital, with at best a small amount expended on intermediate inputs.¹³⁶ The compensation of labor and capital constitutes income, or GDP (value-added).

In the case of Yading, some of the Yading tourism income could reflect Yading entrance fees (which do not constitute value-added).¹³⁷ But given the uniform tourism income values per visitor across localities, and other localities not necessarily being in possession of tourist attractions that can demand fees on the scale of Yading, that is unlikely.

Further findings regarding tourism income

The data presented in Table 11 allow the following additional conclusions for 2013:

Business revenue and *main* business revenue in hotels and catering legal persons differ by a negligible amount (or percentage).

Business revenue per employee in hotels (legal persons) is almost identical to business revenue per employee in the catering industry (legal persons).

The number of below-designated size legal person units in the hotel business is three times larger than the number of above-designated size legal person units; for catering, the multiple is four. But in terms of year-end employment, above-designated size hotels account for 71% of employment in the hotel business (legal persons), while in catering the share is 62%. In terms of business revenue, the percentages are 81% and 74%.

To the extent that ratios and relationships are likely quite stable over time, the conclusions derived for 2013 also hold for 2015.

¹³⁶ Also see Appendix 7, which suggests that close to half of revenue in the hotel business is labor compensation.

¹³⁷ The Yading entrance fee is CNY 150, plus CNY 120 for the bus into and out of Yading. This compares to the daily (officially assumed) tourism income of CNY 990, and thereby tourism income for two days/nights of CNY 1980.

Appendix 9. Revenue Diversification: Local Special Products

A key aspect of economic development based on tourism, according to the *Master Plan*, is the development of tourist commodities (旅游商品), i.e., of products to be purchased by tourists. Income from retail sales is reported to account for 25% of Sichuan's tourism income and 70% of Hong Kong's, with developed foreign tourist markets typically at 50%. The objective for Daocheng, which around 2000 had practically no income from retail sales to tourists, is for retail sales to reach 10% of tourism income in 2005 and 15% by 2015.

The *Master Plan* suggests the development of local specialties with what seem arbitrary output projections for the upcoming three 5-year periods (2000-2015) for dried fruit (干果, including walnuts) to be produced in five lower-altitude townships in Daocheng. Other products listed in the *Master Plan* are Chinese medicine herbs, Yak meat, and forest by-products such as Matsutake mushroom.¹³⁸ Institutions are to be established that further research the various possibilities and then promote implementation and facilitate sales.

As of 2017, such projections remain elusive. While dried Yak meat is available and various shops sell Chinese medicine (in particular, the Caterpillar mushroom), these sales appear not to amount to much, at best accounting for a lower single-digit percentage share of tourism income. Local dried fruit were not on sale in Jinzhuzhen and Riwa in 2016 and 2017.¹³⁹

The Matsutake mushroom prominently features in restaurants. The *Master Plan* suggests a harvest of 200 tons, presumably annually, valued at 1.1m yuan (Table 3.4.1, p. 103), without, however, providing a time frame or expanding on current output at the time of the writing of the *Master Plan*.¹⁴⁰ The bulk of this harvest is unlikely to find its way onto tourists' plates or into their shopping bags as the market is focused on quick, minor processing and then exports to Japan by plane.¹⁴¹

Tibetan jewelry is widely available, whether in shops or offered by Tibetan hawkers, such as in a small wooded park South of Jinzhuzhen where Chinese tourist buses stop for photo shoots of the fall scenery. But, again, the volume of transaction and the returns appear minuscule. The necklaces sold by Tibetan hawkers at rock-bottom prices (CNY 15-20) are likely produced by a Chinese factory elsewhere (or imported from Nepal), making the local Tibetans traders, not producers, and thereby limiting local income and value-added.

¹³⁸ The dried fruit production supposedly requires an investment on the order of 10m yuan, while the cultivation of Yaks requires an investment of 778,000 yuan to fence off 19,000 mu of land on which to raise 1,900 Yaks,

¹³⁹ In October 2017, locals made the rounds of Jinzhuzhen and Riwa trying to sell honeycombs to unenthusiastic tourists. In Jinzhuzhen, half a dozen women from neighboring Xiangcheng County had set up temporary stalls at the entrance to the wet market, selling apples and walnuts. These are very small-scale, localized undertakings; the (excellent) Xiangcheng apples were not available in Riwa, let alone in Diqing in neighboring Yunnan Province, or at the fruit stalls (formal and informal) in the Tibetan area of Chengdu.

¹⁴⁰ By 2016, the Matsutake price was around 70 yuan per Chinese pound (500g), compared to the price of 5.5 yuan implicit in the *Master Plan*'s values.

¹⁴¹ Fresh Matsutake mushroom is a seasonal product, available in July and August, sometimes extending into September. Even if every second tourist were to have one Matsutake dish during their two-day stay in Daocheng, it would still only account for a small fraction of total tourist expenditures (perhaps 2-3%, CNY100 / CNY 4,000), and only during a couple of months of the year.