

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

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Economic development of a remote, mountainous region poses a challenge anywhere. Based on field research and documentary evidence, this article examines how the development challenge has been addressed in Daocheng county, Ganzi Tibetan Autonomous Prefecture, Sichuan province. What forms of economic development are there and how does this development come about? What is the role of government in economic development? What are the broader socio-economic consequences of economic development? The fact that Daocheng is a predominantly Tibetan county adds a nationality dimension to the issue of economic development.

Journal of Economic Literature classification codes. all People's Republic of China:

- O12 Economic Development; Microeconomic Analyses of Economic Development
- O23 Development Planning and Policy: Fiscal and Monetary Policy in Development
- O25 Development Planning and Policy: Industrial Policy
- O53 Economywide Country Studies: Asia including Middle East
- L83 Industry Studies, Services: Sports, Gambling, Restaurants, Recreation, Tourism
- Z32 Tourism Economics: Tourism and Development

Keywords (all: People's Republic of China): economic development, development policy, underdeveloped regions, Western Development program, tourism development, infrastructure development, poverty alleviation, fiscal transfers, Tibet

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5 July 2022

The work described in this paper was supported by a grant from the Research Grants Council of the Hong Kong Special Administrative Region, China (Project No. HKUST 640413).

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A. Introduction

Around 2010 extensive economic changes occurred on the Tibetan Plateau in West Sichuan. Road access and electrification reached even the remotest villages. Some families sold their livestock, previously their sole source of income. Large Tibetan houses went under construction. These are signs of a thriving economy and suggestive of successful economic development. But economic development of a remote, mountainous region with a predominantly traditional agricultural society does not come easily.

Economic development is commonly understood as the process of improving the standard of living and well-being of a population by raising per capita income, or, equivalently, gross domestic product (GDP) per capita. This is achieved by shifting from low-technology agricultural activities—characterized by low value-added per person—to the production of industrial products and a range of services using modern technology.¹

How has the challenge of economic development been met in West Sichuan? Three sets of questions guide the inquiry: What forms of economic development are there and how does this development come about? What is the role of government in economic development?² What are the broader socio-economic consequences of economic development?

The article focuses on Daocheng county 稻城县,³ located in the (Eastern) Kham 康 (or 康巴) region of Tibet,⁴ in the South of today's Ganzi (or Garzê) Tibetan Autonomous Prefecture (Ganzi TAP) 甘孜藏族自治州.⁵ The county's administrative center Jinzhuzhen (金珠镇), an agglomeration of previous agricultural hamlets, is located 434km (270 miles) Southeast of the prefectural capital Kangding 康定 and 761km (473 miles) Southeast of the provincial capital Chengdu.⁶

This is a sparsely populated, desolate high-altitude region, with much of the Northern part of the county a wind-swept, rocky plateau, the Southern part an inhospitable mountain range cleaved by deep valleys, and the central part a wide valley in which Jinzhuzhen is located. Cultivated land makes up only 0.6 per cent of Daocheng's land area; pastures cover more than half. The average annual temperature in Jinzhuzhen, at an altitude of 3,800m (12,500ft), is 4°C (39°F). Of the county's 32,709 official residents in 2015, 96.5 per cent were Tibetan.⁷

¹ See Pearce (1986) or Rutherford (1995) for the definition of economic development. Henry (1991) documents the adoption of this definition of economic development across the development economics literature. A focus on *economic* development avoids a veritable minefield surrounding the broader term “development.” For example, Sen (1999, p.3) views development “as a process of expanding the real freedoms that people enjoy” (political freedoms, economic facilities, social opportunities, transparency guarantees, and protective security). For Sen, growth in GDP per capita can be important as means to expanding these freedoms, but is not an end in itself.

² This question equally addresses the role of the “Chinese Communist Party.”

³ Also historically Daoba, 稻巴, 稻坝 or 稻壩. Tibetan: འདབ་པ།, Wylie: 'dab pa. The choice of Daocheng was determined by the author's earlier visits to this county in 2006, 2007, and 2011, providing some personal impressions of the changes over time. The reason for these earlier visits to Daocheng was unrelated to economic development; Daocheng was a re-supply station on long-distance hikes on the Tibetan Plateau.

⁴ Tibetan: ཁམས།, Wylie: kham. On historical maps, the label “Lithang” typically covers what is today Litang County 理塘县 (Tibetan: ལི་ཐང་རྫོང་།, Wylie: li thang rdzong) plus much of what is today Daocheng and other counties. The Southeast of today's Daocheng borders Muli Tibetan Autonomous County 木里藏族自治县 (Tibetan: མྱི་ལི་བོད་རིགས་རང་སྐྱོང་རྫོང་།, Wylie: smi li bod rigs rang skyong rdzong) in Liangshan Yi Autonomous Prefecture 凉山彝族自治州, and the Southwest borders Diqing Tibetan Autonomous Prefecture 迪庆藏族自治州 (Tibetan: བདེ་ཆེན་བོད་རིགས་རང་སྐྱོང་ཁུལ་།, Wylie: bde chen bod rigs rang skyong khul) in Yunnan province.

⁵ Tibetan: དཀར་མཛེས་བོད་རིགས་རང་སྐྱོང་ཁུལ་།, Wylie: dkar mdzes bod rigs rang skyong khul.

⁶ Locals typically refer to Jinzhuzhen as ‘Daocheng’ (i.e., the county seat is referred to by the name of the county). Kangding is also called Dartsedo (Tibetan: དར་རྩེ་མངོ།, Wylie: dar rtse mdo).

⁷ The altitude ranges from 1900m to 6032m (6,234ft to 19,790ft). The population density is 4 residents per square kilometre. The population density of the U.S is approximately twenty times higher, and that of the UK and Germany sixty times. (See *Sichuan Yearbook 2016* for the Daocheng population data of 2015.)

Field research was conducted in spring and summer of 2016, spring 2017, and fall 2017, relying on informal interviews, mostly unstructured, and observations.⁸ Given the political sensitivity of the area (obtaining official approval for research in the area is difficult if not impossible), a preference to preserve the researcher's independence, and past experience with officials' reticence on matters that might be considered sensitive, field research was conducted without affiliation with a mainland institution, and contact with local officials was kept to a minimum.⁹

Archival data are available in form of the annually published *Sichuan Yearbook*, which contains a section on each prefecture (municipality) and sub-sections on each county within a prefecture. The annually published *Ganzi [Prefecture] Yearbook* provides further details on prefectural and county-level events, policies, and achievements of the year, while the annually published *Ganzi [Prefecture] Statistical Yearbook* reports numerical data.¹⁰ Governments maintain websites. The problem is not so much a lack of information as a surplus of information, much of it difficult to evaluate, and some of it invalidated in the field. A large English language literature covers all aspects of life on the Tibetan Plateau.¹¹

Much of the economics underlying this article is relegated to appendices available online. This allows the article to focus on key economic features rather than on the numbers and derivations (perhaps an economist's particular expertise) that led to the identification of these features in the first place.

B. The Development Challenge

While classical economists saw a laissez-faire economy with division of labor as the key mechanism for economic growth, by the 1940s it had become apparent that economic development does not materialize miraculously out of thin air. Developmentalist economists began to study country-specific development experiences in an attempt to better understand the process of economic development. This article investigates the process of economic development in Daocheng within the framework established by developmentalist economists.

Developmentalist economists came to regard industrialization as the key to economic development because external economies (firm-external benefits that arise from general growth of an economic sector) are greater in industry than in agriculture. Rosenstein-Rodan (1943, 1984) argued that the investment needed in industry is "lumpy" and tends to require complementary investment. Therefore, a big, coordinated investment push—including infrastructure that is unlikely to be provided through private market initiative—is needed to launch the economy on a growth path.

Lewis (1954) focused on the combination of surplus labor with capitalists who have a significantly above-average propensity to save (and invest). The process of economic growth starts with the first capitalist, is self-promoting with the increase in capital brought about by

⁸ All communication was in Mandarin (or some variation of Sichuanese). Despite a year of Tibetan language studies, the rather distinct local dialect made communication in Tibetan impossible. Kolås and Thowsen (2005) report that they were told "that some Tibetan dialects [in Ganzi prefecture] were so different that they were mutually unintelligible" (p.40). Appendix 1 provides more details on the field research.

⁹ A counter-example would be Hillmann (2008), who appears deeply enmeshed with local authorities in his chosen area of research, Diqing Tibetan Autonomous Prefecture in Yunnan, perhaps also due to his founding of the Eastern Tibet Training Institute in 2003 (of which he was reported to be the Chair in 2010).

¹⁰ The latter two yearbook series are not readily available. In the case of the statistical yearbook series, I was able to obtain the volumes of 2008-2016, as well as the 2003 volume (reporting 2002 data).

¹¹ For example, Kolås and Thowsen's (2005) survey various aspects of culture in the Tibetan regions of the provinces Qinghai, Sichuan, and Gansu. A limited non-academic Chinese language literature specifically on Daocheng provides observations on tourism and poverty alleviation (Lai et al. 2016; Li 2017), "small township planning" (Liu n.d.; Wang 2009), and the relationship between tourism and culture or "ecological civilization" (Ren 2014; Chen 2016).

capitalists' increasing profits in an increasing national income (and therefore increased saving and investment), and ends when the pool of surplus labor is exhausted and real wages rise.

In order for an economy to "take off," certain preconditions need to be met (Rostow 1956): Some group in society needs to take the initiative to invest in new production technologies in at least one sector (the leading sector) and the investment rate needs to reach and sustain a level high enough to maintain and eventually stabilize economic growth. The primary growth sector affects "supplementary growth sectors" through production linkages, while "derived growth sectors" benefit from broad income growth.

IF the state is weak and has limited financial means, an unbalanced growth strategy may be most appropriate (Hirschman 1958, 1984): Concentrate investment in high-linkage sectors that create profit opportunities in upstream industries through supply bottlenecks and in downstream industries due to the availability of its new products. Such profit opportunities incentivize private investment in the linked industries. If the state is strong, as Gerschenkron (1962a) observed for certain European countries and Russia over a century, and as would appear to be the case for the People's Republic of China (PRC), the state can coordinate investment to catch up quickly with the leading economies by directing investment to those sectors that have proven to be high growth sectors in the leading economies.

Six characteristics define Gerschenkron's development model, all applicable to West Sichuan: Tension exists between the current state of the economy and the possibilities of economic development observed elsewhere; a backlog of technological innovations is available for free; industrialization can focus on industries with rapid technological progress; labor is relatively expensive because the labor force is not an industrial one; investment can be big in size and technologically advanced; and institutions for mobilizing capital exist.¹² West Sichuan furthermore has the advantage that it is part of the larger PRC economy and thus can specialize in the industry in which it has the biggest comparative advantage.

Gerschenkron's development model has been elaborated on, criticized, and its hypotheses have been put to the test, with mixed results.¹³ But as Gerschenkron (1962a) writes, while development in one country will never simply be a replication of earlier development in another country, history still holds useful lessons in store even if economic development in a follower country will occur in an environment of different natural endowments, "intellectual climate," and different degree of backwardness:¹⁴ "All decisions in the field of economic policies are essentially decisions with regard to combinations of a number of relevant factors," and it is the task of the economic historian to point at "*potentially* relevant factors and at *potentially* significant combinations among them" (p. 6, emphasis in original).

Gerschenkron and others use the term "economic backwardness" to denote an economy in quasi-equilibrium at comparatively low levels of economic development and with little impulse for change.¹⁵ This use of the term 'backwardness' in an economic context is distinct from its use in other, non-economic contexts. For example, Kolås and Thowsen (2005) in their study of "cultural survival" on the Sino-Tibetan Frontier, write "Chinese media propagate the idea that traditional Tibetan culture is essentially backward and in need of modernization" (p. 11), and, as to formal schooling in Tibetan areas, "Where Tibetan history is taught at all, it is expressed in terms of a backward and barbaric land liberated by China,

¹² See Rosovsky (1979) for this characterization of Gerschenkron's development model.

¹³ See Ashworth (1970), Abramovitz (1986), and Hobday (2003).

¹⁴ Gerschenkron has no attachment to a particular formulation of a development model. To him, "a model is a temporary commitment. It will be abandoned as soon as its usefulness has been exhausted" (1962b, p. 208).

¹⁵ Also see, for example, Lewis (1954) or Leibenstein (1957), the latter with a book titled *Economic Backwardness and Economic Growth*.

and Tibetan students are made to feel ashamed of both their background and identity” (pp. 93f.).¹⁶

C. Daocheng County’s Development Strategy: A Turn to Tourism

In the 1980s, Chinese officials wrote of economic development in Tibetan regions: “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.”¹⁷ By the 1980s, the region had been “liberated” for thirty years and the fact that it was still not developed suggests that something other than “liberation” was needed.¹⁸

What “economic development” there had been was the exploitation of forestry resources, i.e., the state- controlled removal of natural resources from the region for use in the non-Tibetan regions of the PRC. After severe flooding in the lower regions of the Yangzi River in the summer of 1998, the central government imposed a logging ban on the region. This left local governments, which had been financially dependent on their share of logging revenues, strapped for funds. The only remaining economic activity, apart from subsistence agriculture, was the highly seasonal, late summer harvesting of Matsutake and Caterpillar mushrooms.¹⁹ Per capita GDP in 2002, the earliest year for which the data are available, was one-third the national average.²⁰

In 1999, the first year of the logging ban, the Matsutake mushroom market turned out to be particularly weak. Daocheng’ government and Party Committee opted on an all-out strategy of “A flourishing county through tourism.”²¹ This initiative was anchored in long-term prefecture-level policies: A Ganzi Prefecture Tourism Department had been established in 1991 and a team from Sichuan province’s Tourism Department had conducted year-long research in various parts of Ganzi, resulting in an (internal) tourism plan for the prefecture for the years 2000-2015.²²

¹⁶ A term such as “underdeveloped” (or “less developed”) would seem to miss the quasi-equilibrium at a low level of GDP per capita that is associated with “economic backwardness,” and may equally render itself to an interpretation that something is “wrong” with not being as “developed” as the “leading” economy.

¹⁷ “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。” See the section on Ganzi prefecture in the *Sichuan Yearbook 1986* (p. 210), with an omitted side argument in brackets in the original that is not further relevant in the context here.

¹⁸ Historically, Eastern Kham, in which Daocheng is located, is a contested borderland, until 1950 under the control mostly of native chiefs. (See, for example, Gros (2016a) or Kolås and Thowsen (2005) for historical details.) The Kham region produced wool, musk, and medicinal products. It was crossed by ancient tea-horse trading routes linking Sichuan and Yunnan to Tibet, India and Southeast Asia, though what is today Daocheng was likely out of the way, with the mountain and deep valleys to its South.

¹⁹ Households collect the mushrooms in the grasslands and sell them to local intermediaries who link into a wider distribution network. The Matsutake mushroom is typically processed and exported to Japan, while the Caterpillar mushroom enters Chinese medicine distribution channels. The mushroom industry has been the topic of extensive research, from sustainability of mushroom harvesting to effects on household income. See, for example, Arora (2008), for a case study in Northwest Yunnan. Wang, Tang, and Nan (2018) provide data from a survey across all of Tibet.

²⁰ *Ganzi Statistical Yearbook 2003*, pp. 24, 26; *Statistical Yearbook 2003*, pp. 26, 55.

²¹ The sector value-added data, presented in Appendix 2, reveal a relative rise in 1999 of the productive activities of the service sector (which includes tourism), as well as of construction value-added.

²² Kolås and Thowsen (2005). An English language literature on tourism in West Sichuan covers specific topics in typically specific localities, but not Daocheng. For example, Tritto (2018) studies environmental policies in the context of tourism in Jiuzhaigou (九寨沟), a nature reserve in the Northwest Sichuan. For “ethnic tourism” in the PRC see, for example, Oakes (1992), and for a broader coverage of tourism development in the PRC Oakes (1998).

The Daocheng government issued its own internal tourism development plan—a 100-plus page Daocheng Tourism Development *Master Plan* (2001-2015)—centered on the development of Yading nature reserve 亚丁自然保护区 (Nyiden, ཉེན་ལྗོངས་, in English also ‘Aden’) which had been established in 1996 and was presented as “the last Shangri-La.”²³ In 2000, Yading was recognized as a *national* “scenic area” (风景名胜區), subsequently with a rating of AAAA (4A), and finally awarded the highest 5A rating in December 2020.²⁴ (See Box 1 for a brief chronology.)

Box 1. Daocheng/Yading Tourism Chronology

1996 Daocheng County Ninth Five-Year Plan: call for tourism development
 1996 Daocheng 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 business matters, and the county government in charge of administration)
 1999 Daocheng government and Party Committee decide on the 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 nature reserve (亚丁自然保护区)
 2001 Yading becomes a *national* scenic area (风景名胜區)
 2001-2003 Internal Daocheng [Tourism Development] *Master Plan* 2001-2015 issued
 2006 Yading [Tourism Development] *Master Plan* 2006-2020 issued
 2015 Second internal Daocheng [Tourism Development] *Master Plan* 2016-2030 issued
 2020 (December) Yading becomes a 5A national scenic area
 Sources: *Master Plan* and *Yading Master Plan*.

Within Yading, what is accessible to tourists is an approximately 12km long valley lined by three mountains (and a small side valley). Tourists explore the valley on foot or by riding the first 7km on electric carts. Some continue the 5km to Milk Lake (altitude 4,600m) on foot or horseback. The three mountains are reported to have been sanctified by the 5th Dalai Lama as the mountain of compassion Chenresig 北峰仙乃日 (Avalokiteshvara / Guanyin Bodhisattva), at 6,032m (19,790 feet) the tallest of the three mountains; the mountain of wisdom Jambayang 南峰央迈勇 (Manjushri Bodhisattva); and the mountain of power Chanadorje 东峰夏诺多吉 (Vajrapani Bodhisattva), the latter two both at 5,958m.²⁵

The next three sections introduce the development of transport, the hospitality industry, and marketing. This is followed by an evaluation of the accomplishments and limitations of tourism in Daocheng, before moving on to the bigger questions of the role of government and the socio-economic consequences of economic development.

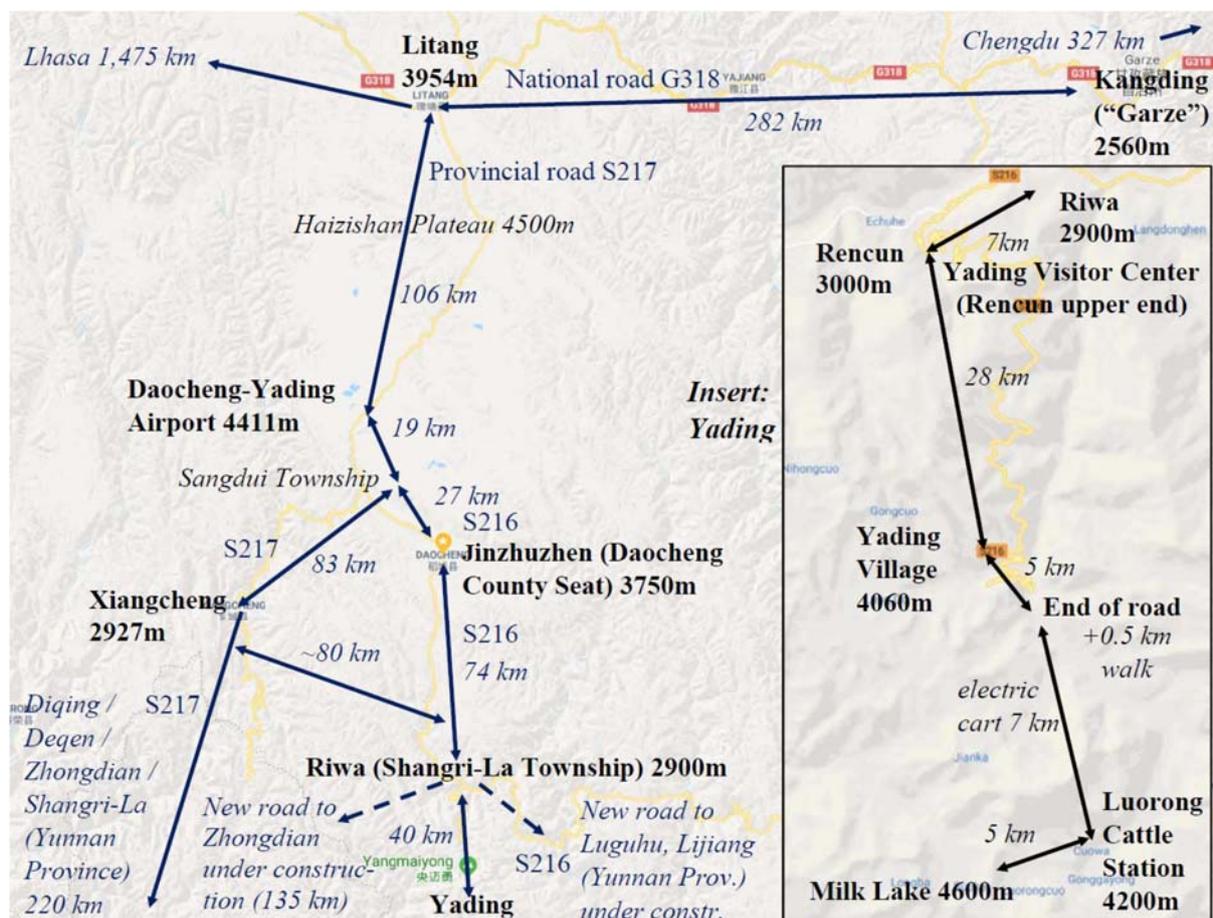
²³ The *Master Plan* does not carry a date; the suggestions of the auditing committee presented at the beginning of the *Master Plan* are dated 18 October 2001. A retired official of the tourism bureau referred to the *Master Plan* as being of 2003. Further details of the *Master Plan* are provided in Appendix 3.

²⁴ The 2017 Thirteenth Tourism Five-Year Plan of Sichuan had called for the elevation of Yading to the highest possible 5A rating (*Sichuan Thirteenth Tourism Five-Year Plan*).

²⁵ Tibetan: (1) ལྷན་རས་གཟིགས་, Wylie: sryan ras gzigs; (2) འཇམ་དཔལ་དབྱངས་, Wylie: 'jam dpal dbyang; (3) ལྷག་ན་རྗེ་རྗེ་, Wylie: phyag na rdo rje.

1. Transport Infrastructure

An immediate bottleneck in the development of Yading was the lack of transport infrastructure.²⁶ Yading is located 114km South of the county seat Jinzhuzhen and reached via Riwa / Shangri-La township 日瓦 / 香格里拉真 (74km), Rencun village 仁村 (a further 7km), and then a road inside the nature reserve (33km) limited to official Yading buses and passing through Yading village (28km into the nature reserve, Figure 1). At the time the *Master Plan* was written none of the roads in Daocheng was tarred, and rudimentary access to Yading by low-quality dirt road had only just been established.²⁷ Consequently, in the early days of Yading tourism, visitors were predominantly young foreigners willing to hike for several days into then undeveloped mountain territory. Mass tourism, however, required reliable transport infrastructure.



Source: Google Maps, accessed 9 February 2019 (author’s additions). A number followed by “m” refers to meters altitude, and a number followed by “km” to kilometers distance. G318 and S216/S217 are the labels of national and provincial roads.

Figure 1. Daocheng – Yading Location Map

²⁶ The *Master Plan* also identified a second, lesser bottleneck in form of missing human capital, calling for cooperation of Daocheng with Sichuan universities/colleges and high schools to attract qualified personnel.

²⁷ For details on road construction, see Appendix 4. The one exception to the absence of tarred roads was a 3km concrete road from Jinzhuzhen to the Rubuchaka 茹布查卡 hot springs. Only 44% of all roads in Daocheng made it to an official grade (4th grade, the lowest grade).

Daocheng's new focus on tourism coincided with the "Western Development Program" 西部大开发 of 2000, a national program of targeted infrastructure development to accelerate economic development in Western regions.²⁸ While the term "Western Development Program" soon faded away, infrastructure investment in West Sichuan continued. The road from Jinzhuzhen to Riwa and continuing into Yading was eventually tarred, albeit only in 2013 and 2014 and not in the early 2000s as envisaged in the *Master Plan*. The Daocheng-Yading Airport—in the *Master Plan* proposed for 2003—opened in September 2013, ten years late, reducing the grueling road trip from Chengdu to Jinzhuzhen (18 hours to 2 days by bus) to a 65-minute flight and a 46km airport shuttle to Jinzhuzhen. The direct road connections to the tourist areas of Yunnan province and the neighboring county seat Muli, originally projected for 2005, are still under construction.²⁹

2. Hotels and Catering

Development of a hotel and catering industry took three distinct forms: a large-scale private sector development, a state-based partner city project, and bottom-up family-based Han-Tibetan collaboration.³⁰

The large-scale private sector development occurred in Riwa (town), located 74km South of Jinzhuzhen and 7km from the entrance to Yading.³¹ The Daocheng government struck a strategic cooperation agreement for the private Holyland Corporation 稻城县亚丁日松贡布旅游投资有限公司 to be the exclusive developer of all tourism and commercial undertakings in Riwa.³² Holyland is a subsidiary of a Shenzhen investment company (深圳市金沙江投资有限公司) owned by a Han from Guangdong who had earlier been involved in the construction of a hydropower station in Riwa.³³ He subsequently bought up land in Riwa—rumors suggest half the land in Riwa—at a time when Yading tourism consisted of a few individual travelers.

Holyland owns three hotels on two sides of a large new road development—now the key traffic artery on the return from Yading—on the outskirts of Riwa: the five-star Holyland Hotel, opened in September 2013; the four-star Yading Yizhan 亚丁驿站 (Yading Inn); and a in 2017 newly renovated annex of the Yading Yizhan that became a four-star Ramada Encore

²⁸ See Naughton (2004) for an early analysis of the program, and Zhao, Bao, and Prime (2013) for an evaluation. Another policy at the time was the conversion of pastures into grasslands (退牧还草) across Tibetan highlands and the relocation of Tibetan herders into settlements, ostensibly for environmental reasons, in 2003. In West Sichuan, this policy ran its course but did not completely eliminate Yak herding. Hook (2013) summarizes and illustrates the rationale for the policy and its various consequences. Yeh (2005, 2009) provides an in-depth examination of the pastures to grasslands policy.

²⁹ Ganzi TAP was opened to tourism only in December 1998, except for Luding (Chaksam) and Kangding (Dartsedo) counties, which were opened in 1988 (Kolås and Thowsen, 2005). Some counties in Ganzi TAP, including Daocheng, are closed around February each year as well as occasionally at other times, at least to foreigners, for political reasons. Across the provincial border, in Diqing Municipality, travel restrictions on foreigners were partially lifted in 1994 and removed completely (and permanently) by 1997 (Hillman 2010).

³⁰ Appendix 5 provides further details on the first two of these three forms.

³¹ Riwa 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 while hotels had been added, for a total of about 60 establishments 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.

³² See the Holyland Corporation website at <http://www.yadinginvest.cn/>. The website includes news items from the press. (As of 9 October 2019, the latest news item was of January 2018, with a dozen postings for 2017. By May 2022, the website had disappeared.)

³³ Following the practice of Kolås and Thowsen (2005), the Chinese majority population that does not identify as an ethnic minority is considered "Han," without intending this choice of term to imply that everyone within the PRC is equally "Chinese" or shares some unifying characteristics, with the "Han" being only one subset of PRC citizens.

hotel as part of Wyndham Worldwide. A Shambala Tianjie 香巴拉天街 shopping and restaurant complex complements the hotels. The Holyland Corporation has a near-monopoly on high-end hotels in Riwa.

The state-based partner city project Yading Tianjie 亚丁天街 is a 80,000m² real estate development occupying 31,420m² (an area the size of five soccer fields) in central Jinzhuzhen. It is a joint project of Daocheng and the intra-provincial partner city (对口援建地, in short: *duikou*) Luzhou Municipality 泸州市 and forms the core of Jinzhuzhen's urban development.³⁴ Daocheng's contribution to the CNY350mio investment project consists of the provision of land. The Luzhou government presumably provides the financing. Construction is undertaken by the Luzhou Number Ten Construction Company 泸州十建司, began in October 2014, and was nearing completion in fall 2017.

Yading Tianjie has 300 shops (or restaurants) on the ground floor and on a partially exposed lower ground floor.³⁵ According to sales staff, by March 2017 more than 100 of the 300 shops had been sold.³⁶ Between March 2017 and October 2017 approximately 20% of the shops opened: Some are simple restaurants, some are telecom shops, and some are basic clothing shops; one is an upmarket shop selling "Tibetan" jewelry. Floor space on the first floor (above ground floor) was reserved for tea houses and restaurants and supposedly for rent only. Higher floors of the mostly 5-story project were intended for hotels.

Apart from Holyland and Yading Tianjie, the hospitality industry is dominated by bottom-up family-based private Han-Tibetan collaboration. Most hotels and inns in Daocheng are operated as Han leases from Tibetan families. This applies to the approximately 70 (mostly) inns in Riwa, 40 (mostly) inns in Rencun, one dozen inns in Yading Village, and most of the 120 hotels and inns in Jinzhuzhen.

In a typical arrangement, the Tibetan family leases their house or land (or both) for twenty years to a Han from the greater Chengdu region. After twenty years, the lease is renegotiated or the property returned to the Tibetan family. The lessee remodels the Tibetan house or builds a new inn / hotel.³⁷ In Jinzhuzhen, the resulting newly constructed hotels tend to be large and some are professionally managed by outside companies.³⁸

A specific example is the following: Three Han signed a 20-year lease with a Tibetan family for a plot of land in the upper part of Rencun at a cost of CNY 200,000 per year. Between 2016 and early 2017, the lessees built an approximately 100-room hotel.³⁹ 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 collects a total of CNY 1mio in rent per

³⁴ Luzhou is located in the Eastern-most part of Sichuan, bordering Chongqing, at a distance of 936km (582 miles) from Daocheng. The project follows a standard *duikou* pattern whereby Party organs, governments, or state-owned enterprises in richer regions support a less developed locality. The assignment comes with financial obligations, sometimes takes the form of material contributions, and often goes hand in hand with the 1-2 year dispatch of government officials from the richer to the poorer locality in order to share their experience in successful development and to oversee the use of the financial and/or material resources contributed by the richer locality.

³⁵ The lower ground floor and further basements otherwise contain a 28,000m² parking garage (which should afford room for approximately 1,000 vehicles).

³⁶ Another sales person corrected the number sold to "almost 200."

³⁷ The Tibetan family may continue to live on the property. 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.

³⁸ The lessees do not necessarily have much experience in the hotel business. For example, a Tibetan inn in Riwa is run by a young Han couple whose main advantage seems to be that they are Han, speak fluently Mandarin, and are technology-savvy (including knowing how to, in real time, adjust their prices on the various hotel apps). Room cleaning is done by a Tibetan.

³⁹ Rooms go for CNY 300 a night during high season. The lessees reportedly spent CNY 30mio on construction, although that value appears too high. One hundred rooms let for 100 days a year at CNY 300 implies annual revenues of CNY 3mio. Construction costs of CNY 3mio rather than CNY 30mio would seem more fitting. The construction cost estimate provided by a local Tibetan, insisting that his numbers was correct, suggests that the amounts of money involved may exceed the comprehension of some locals.

year from all occupants of the building. The landlord has a 20-year lease from the Tibetan land owner at a cost of CNY 250,000 per year.

3. Marketing Yading

Tourism development in Daocheng is supported by extensive marketing. The county government presents Yading as “last Shangri-La,” “ecological tourism” destination and “holy land,”⁴⁰ while the prefecture promotes “Holy Garze” 神圣甘孜.⁴¹ By 2017, the prefecture’s “Holy Garze” dominated across Daocheng, from billboards to music videos and large photos hung in the Yading Visitor Center.⁴²

Foreigners and foreign myths are used to elevate Yading to a magical Tibetan paradise. Joseph Rock, who wrote about Yading in the *National Geographic* in 1931, is immortalized in local street and hotel names and features prominently in Yading marketing publication. Rock (1931, pp.13f.) himself 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.” Rock squarely blamed 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.⁴³

Rock’s article supposedly inspired the mystical “Shangri-La” of James Hilton’s 1933 novel *Lost Horizon* (though James Hilton located his Shangri-La in Western Tibet). Riwa township was renamed Shangri-La township 香格里拉镇 in 2002, after Zhongdian county in neighboring Diqing prefecture in Yunnan beat Daocheng to the title of “Shangri-La” [county]. The video shown on the 60-minute bus ride from the Yading Visitor Center to the end of the road inside Yading has Tibetan and Han singers pronouncing the beauty of, and their love for Shangri-La.⁴⁴

Such videos portray happy Tibetans in Tibetan dresses with adults dancing, joyous children running among Yaks and horses that dot vast green meadows, and young women beaming at snow-covered mountains and the blue sky.⁴⁵ Another theme is Tibetan monks in red robes, burning incense, and colorful temples against a mountain backdrop. A harmonious

⁴⁰ An English language Yading leaflet states “Yading means “Sunny land” in Tibetan language, namely the “Holy Land”, ranking the eleventh among 24 pilgrimage sites of Buddhism. Yading is renowned for the three holy peaks, which were blessed in the 8th century by Buddha Padmasambhava projecting his divine light onto the range and naming the three elevations after three Bodhisattvas.”

⁴¹ A third slogan, the provincial Party Committee’s “The North [Northern Sichuan] has Huanglong and Jiuzhaigou, the South has Daocheng Yading” 北有黄龙九寨、南有稻城亚丁, appears to have lost out over time. Sofield and Li (2011) further mention a “Greater Shangri-La Tourism Investment and Development Project,” reaching from northern Yunnan through Southwest Sichuan into the Tibet Autonomous Region, as the most ambitious tourism project of the PRC; the China National Tourism Administration provides central coordination (beyond its various standard-setting mechanisms and planning requirements for tourism). On the ground in Daocheng, no trace of such a project can be found beyond maps showing tourist routes across the Tibetan Plateau.

⁴² 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. Apart from advertising Yading, it also provides downloadable maps and travel route suggestions.

⁴³ Nor does Rock 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).

⁴⁴ The video was produced by the Garze TAP and promotes “Holy Garze.” While singers dominate, the video also includes two interviews with scientists. Since “Shangri-La” is an only recently adopted name, the songs must all have been created for marketing purposes. For further details on Shangri-La, see Appendix 6.

⁴⁵ A retired official of the local tourism office claimed that it is the clean air, blue sky, and silence of the mountains that are most important to tourists.

Tibetan paradise of Shangri-La beckons Han tourists to escape the sweltering, polluted plains of the PRC's industrial heartlands.⁴⁶

In 2017, some advertisements newly presented Yading as adventure location for ground-breaking, self-driving tourists on a quest to explore. Videos show hikers, equestrians, and motor-cyclists, though all of these are hard to spot on the ground.⁴⁷ The Holyland Corporation organized two marathons in Yading in 2016 and 2017 and expanded to a variety of options for mountain hiking and running in 2017 (organized with the “skyrunning” association).⁴⁸ Holyland advertisements presented Riwa as a future “International Tourism Small Village,” based on Holyland’s yet to be built spa and conference hotels.

Virtually all marketing centers on Yading. Daocheng has not much else to offer.⁴⁹ The *Master Plan* suggested the promotion of local cultural resources: traditional Tibetan Buddhist culture with 14 monasteries in Daocheng, Tibetan dances, and Tibetan paintings and sculptures. Bengpusi monastery 蚌普寺 on the way from Jinzhuzhen to the airport is readily accessible and has basic tourist infrastructure (parking, toilets) but appears little visited.⁵⁰ A small temple located within Yading, Chonggu Temple 冲古寺, is in easy reach from the end of the road, but only a modest number of visitors stops at the temple which furthermore constitutes more of a display object than an operational temple. Gonggalang Jiling Temple 贡嘎郎吉岭寺, 22km before Riwa on the road from Jinzhuzhen, is bypassed by tourists in an early morning or evening rush to get to Yading or back.⁵¹

In Jinzhuzhen, a Yading “museum” consists of one room of poor artifacts and a sales booth of tourist souvenirs. An “activities center” in Jinzhuzhen, built in traditional Tibetan style, stood locked and unused in both 2016 and 2017, except for a cinema in the back that in October 2017 showed a Jackie Chan movie to a handful of customers. Tibetan paintings and sculptures are limited to the occasional display on hotel grounds.

4. Accomplishments

Once the airport was completed in late 2013 and the road from Jinzhuzhen to Riwa and continuing into Yading was tarred in 2014, visitor numbers exploded (Figure 2). The 1,715,448 visitors in 2015 exceeded the *Master Plan*'s projections two- to three-fold. By 2017, the visitor number had likely doubled again.⁵²

⁴⁶ Yeh (2013, p. 322), writing on Tibet, notes that the ‘Open up the West’ campaign coincided with “new representations of Tibetans within China as ‘simple and spiritual,’ and of Tibetan areas as being romantic utopias, paradises where Han Chinese tourists could seek natural beauty and exotic culture.”

⁴⁷ In 2017, two professors at a university in Chengdu who specialize in tourism pointed to a broader trend in Chinese tourism away from a desire to “have been” at some particular (typically famous) location towards gaining particular experiences.

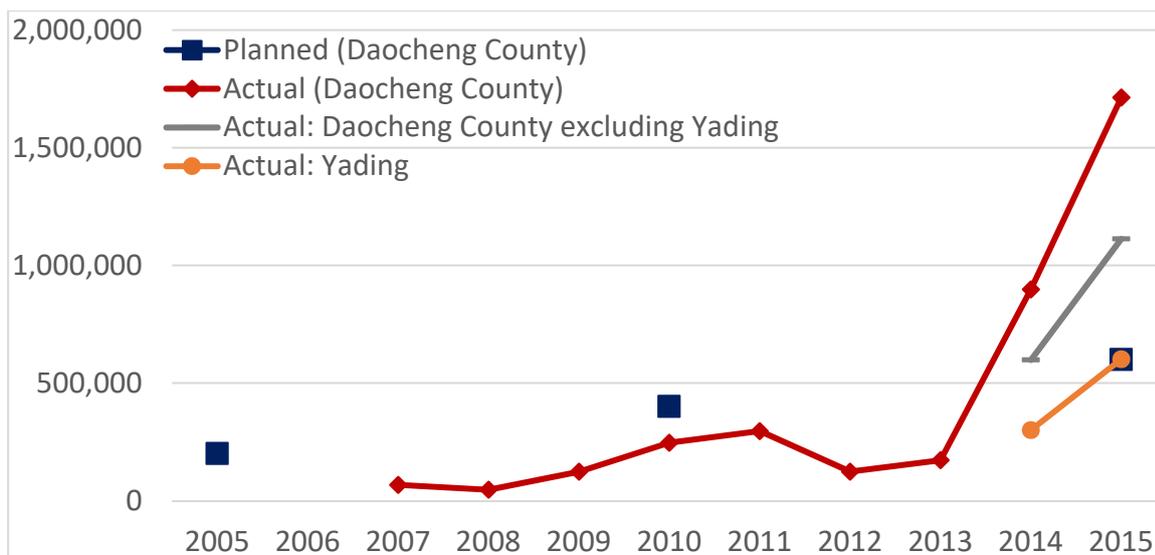
⁴⁸ See <http://www.yadinginvest.cn/index.php?m=content&c=index&a=show&catid=16&id=110>, accessed 14 November 2017. On skyrunning, also see www.skyrunning.com, accessed 14 November 2017.

⁴⁹ Plans to promote *E'chushan* (俄初山) near Yading and the windswept plateau *Haizishan* (俄初山) in the Northern part of Daocheng have so far been unsuccessful: *E'chushan*, at 5,140m altitude, is as yet undeveloped for tourism, while the *Haizishan* plateau, at more than 4,000m altitude, is best experienced by driving through on the road connecting Daocheng to Litang.

⁵⁰ 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 and ended 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 time, perhaps months (also supported by the quality of road access [I was on foot]), and one of the two monasteries was rather dilapidated.

⁵¹ The monasteries along the road are clearly marked by official tourism signs. Such signs also point out particular Tibetan villages and 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).

⁵² For further details on visitor numbers see Appendix 7.



Notes:

Some tourist numbers appear rounded (in the source), such as those of 2014 with Daocheng excluding Yading of 598,000 and Yading of 300,000.

Sources: *Ganzi Statistical Yearbook*, various issues; planned numbers from *Master Plan*. The 2003 issue does not report (what would be 2002) tourist numbers.

Figure 2. Daocheng County Visitor Nights

“Self-driving tourism” (自驾游) was the dominant form of tourism, accounting for 80 per cent of all Yading visitors in the 1 October national holiday week (“Golden Week”) of 2017.⁵³ Such self-driving tourism only became possible with the completion of a reliable road infrastructure—and may itself have created the incentives to (belatedly) complete such infrastructure in the first place.

Tourism development came with numerous linkage effects. Restaurants and shops targeting tourists sprang up. Holyland’s Shambala Tianjie, in 2016 still a largely empty shopping and restaurant complex,⁵⁴ in the evenings in October 2017 was bustling with tourists returning from Yading. A variety of restaurants lined the streets of Jinzhuzhen, and the partial completion of Jinzhuzhen’s Yading Tianjie development in 2017 added yet more capacity.

The hotel and catering industry outsourced numerous business services, from washing and pressing of bed linens for hotels to the sterilization of Chinaware used in restaurants.⁵⁵ There were garages for the repair of motor vehicles, courier services, and telecommunications shops. The private sector took up new transport opportunities.⁵⁶ A company let oxygen-

⁵³ Appendix 4 provides further details on self-driving tourism in the Greater Tibetan region. The *Master Plan* made a point of first developing individual travel (presumably not self-driving) but then to quickly widen the tourist base to 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. As of 2017, tour groups included visitors from Malaysia, Taiwan, and South Korea, though not yet Westerners. A Taiwanese tourist encountered on a Yading bus in 2017 was on a ten-day tour of nature spots in Sichuan. A 200-room hotel in Riwa had been completely booked up by tour groups on 17 and 18 October 2017, to the point where the hotel had problems honouring reservation of individual travellers, according to the manager an unusual event for the hotel. Twelve tour buses crowded into the hotel’s backyard in late evening of 18 October 2017.

⁵⁴ In 2016, perhaps to fill some space, the Holyland Corporation opened a rather unattractive and little visited basement “bargain-price shopping mall” (评价购物商场) in the at that time otherwise largely empty Shambala Tianjie complex.

⁵⁵ In many restaurants, used dishes are picked up by an outsourced service that cleans and returns them sealed in plastic. Customers then are presented with a plate, bowl, teacup, chopsticks and spoon all sealed in plastic film.

⁵⁶ The Holyland Corporation in October 2017, through a newly established transport subsidiary, ran ten new shuttle buses between Riwa and the Yading Visitor Center, as well as three daily buses between Riwa and Jinzhuzhen. See

producing machines to hotel guests and sold portable oxygen bottles. A number of song and dance performances were offered.⁵⁷ The construction industry boomed.

Table 1. Sector Shares in County GDP and National GDP, Private Economy Share (in %)

	PRC GDP		Daocheng GDP	
	2015	2010	2015	Private economy share in 2015 sector value-added
Total	100	100	100	45
Primary sector	9	35	32	66
Secondary sector	41	17	24	27
Industry	34	3	3	36
Construction	7	14	21	25
Tertiary sector	50	48	44	39
Transport, storage, post	4	0	0	100
Wholesale, retail trade	10	4	3	96
Hotels and catering	2	8	7	95
<i>of which: hotels</i>		2	2	
<i>of which: catering</i>		6	6	
Financial intermediation	8	4	7	0
Real estate	6	3	2	100
For-profit services	(8)	3	6	
<i>of which: other for-profit services*</i>		2	5	<i>depends on sub-sector</i>
Not-for-profit services	(9)	26	19	
<i>of which: public administration</i>	4	16	8	
<i>of which: other not-for-profit services</i>		11	10	<i>0 or near-0</i>

Notes:

* All for-profit services except “information transmission, software and information technology.”

National shares in parentheses mean that these figures were aggregated by the author.

For further numerical details and explanations see Appendix 2.

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

Table 1 shows the sector distribution of value-added (local “GDP”) in Daocheng in 2010 and 2015, as well as the national comparison figures for 2015.⁵⁸ The share of construction in Daocheng’s GDP rose from 14 per cent in 2010 to 21 per cent in 2015, three times higher than the share of construction in national GDP. The hotels and catering industry equally exceeded the nationwide average three-fold, with especially catering accounting for a

<http://www.yadinginvest.cn/index.php?m=content&c=index&a=show&catid=16&id=116>, accessed 14 November 2017. The transport subsidiary is the Daocheng County Holyland Public Urban-Rural Transport Company 稻城县日松贡布城乡公客运有限公司.

⁵⁷ During the high season, 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, has a daily evening performance at the new Daocheng Yading Performing Arts Center (稻城亚丁演艺中心) in Riwa. (The Performing Arts Center is operated by the Daocheng Yading Scenic Area Tourism Development Company, which otherwise administers Yading.). Some hotels and restaurants in Riwa offer dinner accompanied by performances. An entrepreneur in a village outside Jinzhuzhen stages rudimentary Tibetan dinner shows for tour groups in a large tent. During the peak season in fall 2017, performers toured Riwa restaurants in the late afternoon in an attempt to attract tourists to their evening performance. Yading visitors, however, are typically exhausted after a day on the mountain, and troubled by the altitude. Interest in shows appeared small in early October 2017. On two evenings in the 2017 peak season, a Riwa hotel’s dining tent with a seating capacity of at least one hundred had only a dozen diners. Two Tibetan women perfunctorily danced around a central gas fire to blaring music.

⁵⁸ For more details, including a further breakdown of value-added by sub-sectors, see Appendix 2. The term “GDP” is usually reserved for the value-added of a country, while the appropriate term for a locality would be “value-added.” (National) GDP equals summed provincial (or summed regional or summed sectoral) value-added.

relatively high 6 per cent of Daocheng's GDP. Overall, between 2010 and 2015 Daocheng's economy experienced a gradual shift away from its almost exclusive reliance on agriculture (the primary sector) and government-provided not-for-profit services (public administration, education, health care, etc.), although these two sectors' shares in local GDP in 2015 were still three times and twice as large as at the national level.

The official Daocheng GDP statistics significantly *underestimate* actual GDP, as becomes quickly apparent if one considers the separate and likely more credible official data on tourism income in Daocheng.⁵⁹ In 2015, tourism income in Daocheng was CNY 1.6968bn, 38 times official value-added in hotels and catering and three times the official value of Daocheng's GDP (CNY 597.52mio), up from 0.3 times in 2013.⁶⁰ Daocheng's official tourism income value itself likely underestimates actual tourism income—which is probably higher by half—ultimately raising actual Daocheng 2015 GDP to up to 5 times officially reported GDP. Tourism likely accounted for about 80 per cent of actual GDP.

5. Limitations

Despite the apparent success in shifting economic activity from low towards higher value-added sectors, further development faces a number of constraints. These include the PRC's holiday arrangements, Yading's remoteness, and Daocheng's altitude and climate.

The official data show visitor numbers highly concentrated in July through October, four months that accounted for 82.5 per cent of all visitors to Daocheng in 2015 (Figure 3). Actual cyclicity may be even more pronounced. In mid-March 2017 barely 200 visitors a day entered Yading, one per cent of the Yading admission limit. In mid-July 2016, the number was around 500 visitors a day. Consequently, in the 1 October week one observes a booming economy and at all other times either modest tourism or a deserted county.⁶¹

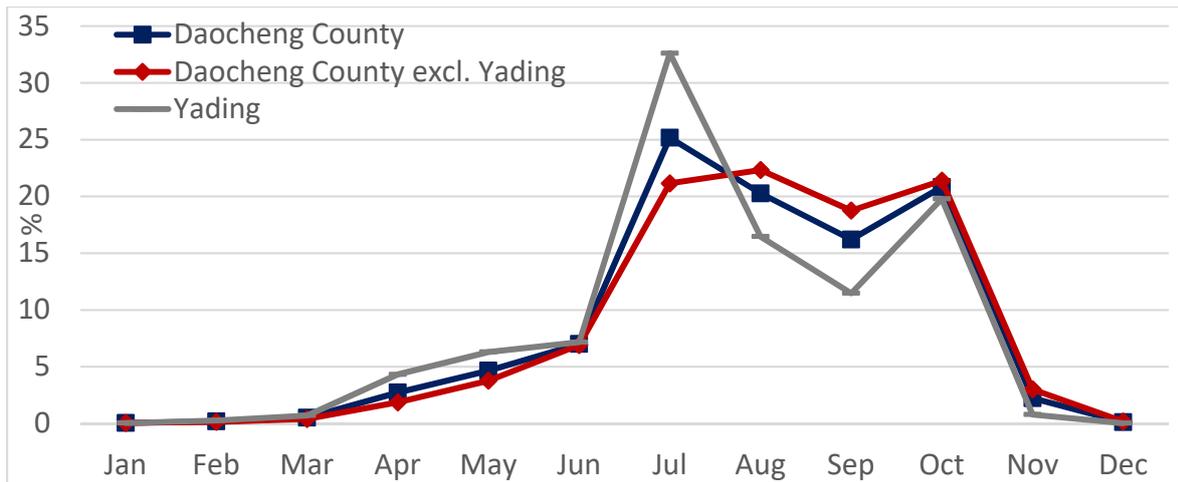
The observed spring and even summer visitor numbers contrast with approximately 22,000 hotel rooms available in Jinzhuzhen, Riwa, Rencun and Yading Village, implying a 100-fold excess supply of hotel rooms even in July. Not astonishingly, in fall 2017 construction of most of the (observed) 64 not yet completed hotels—compared to (an observed) 242 existing hotels—had ground to a halt. Many of the largest hotel shells had seen no further construction between 2016 and 2017; the number of unfinished hotel rooms was equal to one-third of available hotel rooms.⁶²

⁵⁹ For detailed considerations underpinning the following summary statements, see Appendix 8.

⁶⁰ The *Ganzi Statistical Yearbook* reports tourism income of Daocheng (implicitly: excluding Yading) as CNY 1.10149bn, and that of Yading as CNY 595.31mio. Tourism income was also 768 times official value-added in transport, and 100 times value-added in trade.

⁶¹ See Appendix 7 for further details. Attempts that could smooth the extreme cyclicity around the 1 October weekend, such as Holyland's promotion of an "International Tourism Small Village" with spa and conference hotels, seem to have gone nowhere.

⁶² For the hotel and room counts see Appendix 9.



A monthly breakdown of (the few) foreign visitor nights is not available.

Source: *Ganzi Statistical Yearbook*, various issues.

Figure 3. Daocheng County Monthly Distribution of Domestic Visitor Nights (2015, %)

The excess supply of hotel rooms is particularly severe in Jinzhuzhen with its 81km distance to the entrance of Yading,⁶³ and its altitude of 3,800m that guarantees altitude sickness.⁶⁴ In 2016, at least one tourist died from altitude sickness.⁶⁵ Oxygen bottles and Chinese medicine against altitude sickness are widely available and high-end hotels pump oxygen into their rooms. Yet it remains a fact that tourists are severely handicapped, with little motivation to linger beyond the time needed to visit Yading.⁶⁶

Jinzhuzhen accounts for half of all available rooms in Daocheng and the number of unfinished rooms equals an additional almost 50 per cent of Jinzhuzhen's existing capacity. A common perception among Jinzhuzhen residents is that many of the hotel shells may never be completed, or at least not completed any time soon. Even in October 2017, at the height of the tourist season, Jinzhuzhen was a far cry from the tourism frenzy of, for example, Lijiang in Yunnan. Jinzhuzhen's Yading Tianjie looked bleak. The majority of shop fronts carried "For Rent" signs, each with a different phone number, indicating that different individuals had invested in a shop front and were now looking for a tenant. The higher floors remained unfinished (rather than having been developed into hotels as originally planned), except for one restaurant.⁶⁷ One interviewee questioned the wisdom of owning a shop when "there is nothing happening in Daocheng." Once the roads connecting Riwa to Northwest Yunnan are completed, tourists may bypass Jinzhuzhen altogether.

⁶³ Travel from Jinzhuzhen to Yading involves a 90-minute (81km) one-way drive in the morning and again in the evening, after an exhausting day in the nature reserve—which itself involves a 1-hour one-way bus ride within the reserve to access—at times when the road, furthermore, likely is busy, and in the dark particularly unsafe. In other words, overnighing in Jinzhuzhen implies at least five hours on the road on the day of a Yading visit.

⁶⁴ Jinzhuzhen's altitude is significantly higher than the 2,400m around which altitude sickness sets in. See https://en.wikipedia.org/wiki/Altitude_sickness, accessed 15 November 2017.

⁶⁵ This was confirmed by multiple sources, but I had difficulty obtaining a figure for the number of deaths ("just" one?) or any further details. Across interviewees, this was a taboo subject.

⁶⁶ Incapacitated tourists are also not enticed by Jinzhuzhen's dysfunctional water-powered prayer wheels in a litter-filled creek, an architecturally stunning "activities center" without activities, a park at the edge of Jinzhuzhen, or the *Rubuchaka* hot springs 3km outside town (not designed for large numbers of tourists, anyway). Tourist buses may stop at a second park outside town to view the autumn foliage, or at the large stupa at the entrance of town.

⁶⁷ Rents for the higher-level stories are likely too high. The asking price for a 180m² space to be used as 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.

In contrast to Jinzhuzhen, Riwa (Shangri-La township) has the advantage of being located at a lower altitude of 2,900 meters, and only 7 km from the entrance to Yading. But Riwa sits in a deep, narrow, and often gloomy valley with no attraction of its own.

Nor does the weather favor tourism. The monsoon brings rain for most of the summer, from late May to early September, rendering Yading no different from any other mountain area in rain and mist. Winter is bitter cold and early in the year access to the region is restricted due to Tibetan political anniversaries. Snowfall may block roads any time of the year as far away as the first pass after Kangding, at around 4400m, 400km away. The Daocheng-Yading Airport, a 2-hour drive from Yading, is notoriously unreliable. Planes don't land under adverse weather conditions. Flight delays can be measured in days.⁶⁸ It is for good reason that the take-up of holiday homes in the Holyland Hotel appears to have been very limited, while the completed Yading Tianjie development dropped the originally planned holiday homes altogether.

This also does not bode well for Holyland's advertised "International Tourism Small Village" (国际旅游小镇) in Riwa, with 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 conference hotel, increasing Holyland's total built-up space to five times its current size.⁶⁹ Implementation of these plans is on hold, supposedly because of "national policy." Several interviewees pointed out that Holyland has repeatedly missed the development schedule originally agreed on with the Daocheng government, reportedly due to funding difficulties. This has supposedly led to the return of some land to the government with as consequence the arrival of a Holiday Inn Express in Riwa in 2017. In 2017, Holyland was further rumored to be running at a loss and to have reduced staff numbers from 400 in 2016 to 170 in 2017.⁷⁰

Private accommodation has—at least temporarily—peaked. Given the excess supply of hotel rooms, the Daocheng government in 2017 put a stop to new Han-Tibetan collaborations. Along the road from Jinzhuzhen to Riwa, 20km North of Riwa, is a Tibetan village that has for some years been leased to a Han entrepreneur for development; as of 2017, the Tibetan families were still farming the land.

D. The Role of Government in Daocheng County's Economic Development

Tourism development in Daocheng was initiated by the government and remains under government control. According to the *Master Plan*, designed by the provincial Tourism Planning and Design Institute, the county's economy is to move ahead by leaps and bounds "thanks to the government's lead" (主导). Both the original *Master Plan* (2001-2015) and a follow-up *2015 Master Plan* (2015-2030) are internal documents.⁷¹ So are the government's agreements with the Holyland Corporation and Yading Tianjie.

⁶⁸ See Appendix 10 on Daocheng-Yading Airport.

⁶⁹ See Appendix 5 for further details on these plans.

⁷⁰ Yet a rough calculation suggests that by 2017 the Holyland Corporation's hotels likely operated with similar financial results as hotels abroad do. This may still not be a satisfactory result since the PRC tends to have higher depreciation rates and higher expectations for returns on investment. For detailed considerations see Appendix 5. Talking to 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.

⁷¹ This leaves private actors with a high degree of uncertainty, and implies a two-tier system where those privy to government information enjoy advantages.

The government fulfilled two elementary tasks. First, it built the necessary transport infrastructure (albeit with a 10-year delay). This involved major funding from all levels of government, from the central level (airport) to the provincial level (provincial road from Kangding to Daocheng and Riwa) and below. Second, it developed and continues to administer Yading, since 2013 under the county and prefecture Daocheng Yading Scenic Area Tourism Development Company 稻城亚丁景区旅游开发有限责任公司, with a majority stake held by the prefecture.⁷² The company maintains the park infrastructure from the walkways inside Yading to the welcome center at the entrance of Yading (an imposing new welcome center opened in 2017 at the park boundary at the upper end of Rencun),⁷³ runs the buses that shuttle tourists the 33km from the entrance of Yading to the end of the road within Yading, promotes Yading, and built an impressive Performing Arts Center in Riwa.

The government then kick-started a basic hospitality industry by grasping two opportunities. Jinzhuzhen's Yading Tianjie *duikou* project is a windfall of the Chinese developmental state and likely came part and parcel of the higher-level government's approval to develop tourism in Daocheng. Holyland Corporation's engagement appears more of a random fortuitous event, initiated early on by one private Han entrepreneur. The government also continues to develop public goods in line with its tourism objectives, from faux prayer wheels lining railings on a bridge to the design of street lights.⁷⁴

Luck likely played a major role in Daocheng's tourism development. The *Master Plan* did not foresee the self-driving boom of a decade later, nor tourists' increasing fascination with the Greater Tibet region. The arrival of modern telecommunications allowed for decentralized tourism arrangements and unforeseen advertisement opportunities.

The government retains ultimate control over private sector developments. Thus it limits the extent of private inn/hotel construction and regulates their appearance (such as by imposing uniform faux Tibetan style facades across Jinzhuzhen).⁷⁵ In the official Daocheng 2015 GDP statistics, the private sector accounted for 95 per cent of (official) value-added in hotels and catering, 96 per cent of wholesale and retail trade, and 100 per cent of real estate business (Table 1).⁷⁶ The in the official statistics much larger construction industry, however, is dominated by non-private firms.

A key question is the cost of this state-led tourism development. Daocheng is the recipient of large fiscal in-transfers. In 2015, Daocheng's fiscal expenditures of CNY 1.213bn constituted a 9.1-fold multiple of Daocheng's fiscal revenues, and similarly in earlier years.⁷⁷ Daocheng's government thus spends almost ten times more than it collects.⁷⁸ This unusual ratio does not originate with revenues. Revenues in 2015 were equivalent to 22 per

⁷² For details see Appendix 3.

⁷³ The earlier visitor center at the lower end of Rencun was a (dilapidated) administrative building with a ticket outlet and a bus park behind it.

⁷⁴ The *Master Plan* found tourism facilities in Daocheng to be woefully inadequate, ranging from a lack of electricity, telecommunications, and sewage treatment in Riwa, to "chaos" (混乱) at the cattle station (Luorong) in Yading. By the early 2010s, the local government had put in place basic urban infrastructure. For example, rubbish collection improved noticeably between 2016 and 2017, and work on the creation of a large, forested park proceeded swiftly.

⁷⁵ This extends to signboards of shops. A notice of the Daocheng County Housing and Urban Planning and Construction Bureau of 20 March 2017, seen on a wall in Jinzhuzhen on 1 October 2017, stated that the Tongji University Architectural Design Institute and the Tsinghua University Design Institute had been enlisted for the design of uniform signboards on shops.

⁷⁶ An official 100% private share in "transport, storage, and post" is not credible. While public transport may be operated by government-commissioned private companies and courier services may ultimately be in largely private ownership, China Post is not a private company, and neither is the Daocheng Yading Scenic Area Tourism Development Company which runs the tourist buses within Yading.

⁷⁷ For the detailed fiscal data and indicators that underlie this passage see Appendix 11. In 2009-2014, the multiples were 18.0, 13.6, 19.2, 9.0, 14.8, and 10.4, and in 2002, the one early year for which data are available, approximately 16.

⁷⁸ In contrast to the fiscal system, the banking system channels funds out of Daocheng, though the official banking statistics may not give a complete picture of actual lending in the county. For details see Appendix 11.

cent of (official) GDP, the same percentage as nationwide.⁷⁹ Instead, it is fiscal expenditures, equivalent to 203 per cent of Daocheng’s official 2015 GDP, that are out of line. These expenditures do not yet include those of higher-level governments on infrastructure projects in Daocheng.⁸⁰

The large fiscal in-transfers, almost twice the size of all officially acknowledged local economic activity, support a particular pattern of aggregate expenditures. Daocheng’s gross capital formation (“investment”) in 2015 was a highly unusual 120 per cent of official GDP.⁸¹ Investment in Daocheng thus exceeded the value of all economic activity in the county.⁸² The counterpart was imports equal to 84 per cent of GDP and virtually no exports (Table 2). Although the expenditure data are of questionable quality, they indicate that investment in Daocheng is financed predominantly through fiscal and other in-transfers and consists to a good part of imported investment goods and services.

Table 2. Aggregate Expenditures Component Shares (%)

	PRC		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

Sources: *Ganzi Statistical Yearbook 2013* (with values of 2011 and 2012), *2014*, *2015*, *2016*.

Nationwide data are from <http://www.stats.gov.cn>, accessed 2 March 2018. 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.

At first sight, Daocheng is a model case for Gerschenkron’s observation that a strong state can facilitate catching up of a ‘backward’ economy by channeling capital and entrepreneurship to the most promising industry(ies). In the case of Daocheng, thanks to the option of specialization within the larger PRC economy, that is the tourism industry. The government could draw on a number of domestic precedents—from Lijiang in Yunnan to

⁷⁹ With actual GDP likely three to five times larger than official GDP, government revenues (if these values are correct) would be relatively small in comparison to (actual) GDP.

⁸⁰ Two items of considerable costs—born by higher-level governments—are road and airport construction. A rough estimate of the cost of tarring provincial roads S216 and S217 in Daocheng in the early 2010s is CNY 2bn, twenty times Daocheng’s 2015 fiscal revenues and four times its GDP; construction of the Daocheng-Yading Airport, completed in 2013, cost a further CNY 1.58bn (three times the county’s GDP). For the calculations of road construction costs, see Appendix 12, for the costs of Daocheng-Yading Airport, Appendix 10.

⁸¹ The consumption share in GDP is not out of line with the nationwide average (62% of GDP in Daocheng vs. 52% nationwide), though consumption is predominantly “rural” (22% vs. 8%).

⁸² The proportions were even more extreme in 2011-2013 with gross fixed capital formation at 175% of GDP and imports equal to 129-130% of GDP. The data quality of the aggregate expenditure components is severely deficient. Services provided to tourists constitute an export; exports accounting for only 1% of aggregate expenditures is not credible. Neither is the relative constancy of the component percentage shares over time. The value of aggregate expenditures must equal the value of GDP (apart from measurement errors); the fact, noted above, that Daocheng’s official GDP severely underestimates actual GDP implies that the official aggregate expenditures are equally an underestimate.

Jiuzhaigou and Huanglong in Northwestern Sichuan—as well as on higher-level fiscal support. It successfully addressed the typical development challenges: It introduced a—compared to agriculture—high value-added industry (tourism), made the necessary lumpy investments (especially infrastructure investments) as well as complementary investments (arranged through a *duikou* project and the sub-contracting of development tasks to the Holyland Corporation), coordinated developments, and created profit opportunities subsequently taken up by the private sector.

But the large fiscal net inflows suggest that Daocheng's economic development is to a significant extent dependent on continuing subsidization.⁸³ Daocheng's state-led development has not (yet?) created a self-sustaining development process as envisaged by the developmentalist economists.

E. Socio-economic Consequences

While according to the official statistics Tibetans accounted for 96.5 Tibetan of the county's 32,709 residents in 2015, the Tibetan share in the actual population of approximately 58,000 is likely no higher than 55 per cent, and the Tibetan share in the urban population no higher than 20 per cent. Similarly, while official (formal) employment in the county in 2015 was 3,880, actual employment likely was around 33,000, approximately nine times higher.⁸⁴ Almost half of actual employment is in agriculture (15,000), followed by tourism (13,250, of which 7,500 in hotels and catering, 3,250 in transport, and 2,500 in trade), construction (1,500), and a remainder of 3,137 formal, non-agricultural laborers in all other occupations.

Consistent with the derived 80 per cent share of non-Tibetans in the urban population, a tourist visiting Daocheng indeed encounters a great number of Han laborers and very few Tibetans. Hans run on the order of 90 per cent of the restaurants in Jinzhuzhen and in Riwa. The bus drivers from the airport into Jinzhuzhen are Han, as are the bus drivers in Yading. Most shops in Riwa's Shambala Tianjie are run by Han, including a shop producing and selling what is presented as Tibetan barley snacks.⁸⁵ The performers in the daily evening performance at the Daocheng Yading Performing Arts Center in Riwa are non-local and appear majority Han.⁸⁶

Few stable jobs are available for Tibetans. At times, temporary odd jobs with the government become available for purposes ranging from afforestation to basic road construction and repair. Tibetans complain that they are paid only one-third to one-half of what their Han counterparts are being paid. The Han side insists there is no discrimination in remuneration and the Tibetans are simply less productive than Han workers.⁸⁷

⁸³ Fischer (2009, 2015) similarly noted fiscal in-transfers into the Tibet Autonomous Region, albeit on a smaller scale relative to local output. Shih et al. (2007) argue that the "affirmative action empire" program of the PRC government towards minorities is biased in favour of religious minorities.

⁸⁴ See Appendix 13 for the official and derived population and employment values.

⁸⁵ The shop is quite striking a sight with its signs about local Tibetan specialties, and then four Han workers preparing and marketing traditional Tibetan snacks. Not that the solely Han tourists seemed to care, or perhaps even notice.

⁸⁶ Similar to Daocheng, Horlemann (2002) for the case of Guoluo in Qinghai province reports an influx of Han (and, in the case of Guoluo: Hui) migrants that "mainly settle in the county seats where they run the majority of restaurants, shops and workshops" (pp.262f.); employment in the secondary and tertiary sectors is predominantly Han (and Hui).

⁸⁷ Tibetans are considered unable to provide the same quality of work as Han workers, and to lack work discipline. This has also been observed for Tibetan areas more generally by Hillman (2008), who writes that Tibetans, "especially rural Tibetans, simply do not meet employers' needs" (pp. 3f.); he considers the assumption that Tibetans will learn from migrant Han to be false. Hillman (2016) notes the "preferencing of Sincized (*bei hanhua*) Tibetans for promotion in county and prefecture government" (p. 23). This resonates with Gerschenkron's observation that labor in 'backward' economies is relatively expensive because the labor force is not an industrial one; in the case of Daocheng,

During the high season, temporary jobs become available, mostly for women, as housekeepers in low-quality inns and as dishwashers in restaurants.⁸⁸ Some Tibetan men offer (unlicensed) private transport services but only a minority manages to land a trip on any given day.⁸⁹ In an example from Jinzhuzhen, the husband provides informal transport services while 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—as many of his generation do, idling away time with no fixed employment—while the son’s wife runs the family farm 100km away.

Tibetan stone masons have benefited from the construction boom. Tibetans carrying honeycombs and targeting tourists roam the streets in Jinzhuzhen. A supply chain of Matsutake and Caterpillar mushrooms for local restaurants has developed, with exclusively Tibetans as harvesters. In fall, Tibetans from the neighboring county Xiangcheng (乡城, 111km away) sell apples outside the wet market in Jinzhuzhen (whereas the wet market stalls are almost exclusively staffed by Han, with the vegetable trucking business from Yunnan also dominated by Han). Tibetan dress-making and handicraft shops run by Tibetans and serving Tibetans can be found in an unremarkable side street of Jinzhuzhen that tourists rarely enter (while the center of Jinzhuzhen is dominated by Han-run supermarkets, clothing shops, telecom outlets, and restaurants).⁹⁰

Some Tibetans who develop employment initiative are eventually pushed aside. Dozens of Tibetan hawkers of jewelry used to spread their wares on blankets on the ground at the end of the road inside Yading. By October 2017 they had vanished. Signs at the Visitor Center warned against buying from hawkers. The old Visitor Center (Yading ticket office) at the lower end of Rencun, in use through September 2017, was surrounded by Tibetan stalls selling everything from oxygen bottles to raincoats and jewelry. The expansive new Visitor Center at the upper end of Rencun has no such stalls but an integrated shop staffed by Han.

Tibetans may be employed for reasons of political correctness. The Yading Tianjie sales office staff emphasized that they hired one Tibetan girl—with a high school education through 12th grade obtained in a Han area of Sichuan—for explicitly that reason. Some Tibetans are employed for a minimum degree of authenticity in “cultural” displays.⁹¹ A very few Tibetans make it into the otherwise Han ranks of the administration.

One set of jobs is explicitly reserved for Tibetans: the operation of the electric carts within Yading that carry visitors to the Luorong cattle station (today a concrete platform) 7km up the valley from the end of the road (though the ticket sellers are young Han women). This is a compromise resulting from a conflict between Tibetans originally offering horse rides up the valley and the Yading administration wishing to switch to electric vehicles for environmental reasons. Horse rides are still being provided from Luorong towards Milk Lake, exclusively by Tibetans, under Yading administration’s supervision.⁹²

The employment patterns have a counterpart in household income.⁹³ Official, average household income per person in Daocheng in 2015 of CNY 12,735 was just above half the

⁸⁸ Tibetan women cleaning a hotel room can be a jolly affair, with singing, relaxed movements, and openly expressed curiosity about the foreign tourist and his belongings. The outcome differs from cleaning by a well-trained Han.

⁸⁹ Around the Golden Week in October, police strictly enforce a prohibition of all Tibetan informal transport services; the Holyland Corporation and outside bus companies then run transport services from Riwa to Jinzhuzhen and beyond.

⁹⁰ Bowa Street 波瓦街 South of Yading Road 亚丁路. In October 2017, perhaps the only shop in this street that may have appealed to tourists was a shop with Buddhist paintings, where one could observe the painter at work. Daocheng lacks the “local specialty” product industries that can be found in other tourist destinations, such as Lijiang; see Appendix 14.

⁹¹ The three female and three male Tibetans who perfunctorily performed a circle dance around a camp fire imitation in the commercial Yading Tianjie in Jinzhuzhen during some evenings of the peak season in 2017 gathered wary smiles from the few onlookers for their lackadaisical performance.

⁹² Rubbish removal and path maintenance within Yading also appear to be exclusively delegated to Tibetans, under the direction of a Han administrator. The construction of new, elevated steel walkways is done by Han.

⁹³ See Appendix 15.

nationwide figure (CNY 21,966) and came with a more than three-fold discrepancy between urban and rural household incomes.⁹⁴ Once informal income is considered, however, Daocheng's average household income may come close to the nationwide average.⁹⁵

An obvious beneficiary of economic development in Daocheng are the Han working in the tourism industry (and some in the public sector). Han manage all the larger hotels.⁹⁶ Income levels in the tourism industry are likely on the order of ten times official household income per person in Daocheng.⁹⁷

Tibetans who have aligned themselves with the Han system benefit. The former commune leader of Riwa owns several buildings in the center of Riwa that are now rented out to Han to operate as inns; the former Riwa commune accountant in October 2017 had just put up a large concrete shell for a hotel development in Riwa; the Tibetan head of a township near Jinzhuzhen, formerly employed in the forestry department in Jinzhuzhen (where his Han superior ran a successful multi-inn business) owns a hotel shell in Jinzhuzhen.

Despite the occasional grumble about differences in pay and job opportunities, the Han concept of modernity and the concomitant development model are widely accepted. Tibetans in Jinzhuzhen appear glad to have left agriculture behind and appreciate living in modern, non-descript apartment blocks (with mixed, Han-Tibetan occupancy). They look favorably upon the Han schooling system (which in Jinzhuzhen is conducted exclusively in Mandarin).⁹⁸ They seek medical treatment as far away as Chengdu while speaking disparagingly of the quality of healthcare in Jinzhuzhen.⁹⁹

Among urban Tibetans in Daocheng, religion plays little role. The apartment of a Tibetan family in Jinzhuzhen lacks all religious paraphernalia. On the wall is a poster of Mao Zedong, including, in its four corners, portraits of Deng Xiaoping, Jiang Zemin, Hu Jintao, and Xi Jinping.¹⁰⁰ The place in the living room that one would expect to be occupied by an altar is taken up by empty Coca Cola bottles and full Maotai bottles.¹⁰¹

⁹⁴ Rural household income presumably reflects official imputations of the value of self-produced self-consumed agricultural products since agriculture is predominantly subsistence agriculture. Almost all urban household income is wage income (88%, Appendix 15). The small share of transfer income, 2 per cent, suggests that few residents venture outside their county for work and send remittances home.

⁹⁵ Details on informal income are provided in Appendix 15. The enormous fiscal in-transfers additionally provide an implicit subsidy for every Daocheng resident equivalent to two and a half times official average household income.

⁹⁶ Well-paid positions are advertised in Chengdu and other cities around the country. It is typically financial incentives that entice Han to come to Daocheng, but it is supposedly the open space, clean air, and the bright sky that keep them there. Many of the first Han immigrants came as woodworkers, typically from the Ya'an (雅安) region halfway between Chengdu and Kangding, providing carpentry services for Tibetans building or renovating houses. They stayed, diversified, and brought relatives and friends. Local Han, in conversation, quickly recall the sultry summers in the lower regions of Sichuan and point to the fresh air and openness of the Tibetan Plateau. However, they are also glad to escape the coldest winter months in Daocheng by returning to their region of origin for several months.

⁹⁷ Yang, Wall, and Smith (2006) observe for the case of ethnic tourism in Xishuangbanna that the increased presence of Han and the use of Mandarin have profoundly changed tourism in Xishuangbanna from local minority-run small-scale tourism businesses to businesses run by experienced Han entrepreneurs with local villagers now only holding low-paying jobs as guides, dancers, and hospitality workers. They also note preferential policies for Han tourism developers (including exemptions and low land use fees).

⁹⁸ But with a junior middle school education (through grade 9) being the highest schooling available in Daocheng, and no institution that teaches practical or professional skills, it is hard for locals to compete with Han immigrants. Some Tibetan families in Jinzhuzhen send their children to relatives in other parts of the PRC for schooling, and the school system itself includes a transfer mechanism for local children to attend school in other parts of the PRC. (There is a small Party cadre school, which, however, seemed abandoned in summer and fall 2017.) On the nexus between education and employment in Tibetan areas also see Fischer (2014).

⁹⁹ The younger generation of Tibetans communicates in Mandarin. None of the available TV channels is in Tibetan. Music blaring out of restaurants is Han music. In Jinzhuzhen and Riwa, the only Tibetan men who dress in traditional Tibetan fashion tend to do so as employees of the tourism industry.

¹⁰⁰ Chinese Communist Party flags adorn numerous Tibetan farm houses in the countryside along the road from Jinzhuzhen to Riwa.

¹⁰¹ Tibetan integration into Han society is perhaps facilitated by a particular historical twist. Daocheng follows the Kagyu Buddhist tradition. Differences between the Kagyu tradition and the Dalai Lama's Gelugpa tradition go back centuries and included armed conflict. Tibetans across Daocheng tend to view the Dalai Lama as an enemy. At the same time, Daocheng

What is underway in Daocheng is similar to the experiences described in the literature for other localities,¹⁰² namely a process whereby Han, in the absence of any agent for cultural preservation beyond family- and village-based traditions, interpret and control the representation of an “authentic” local ethnicity, as well as a process of “self-gentrification” of some members of the local ethnicity who adopt the successful, model Han ways.¹⁰³

The dominance of the Han order does not mean that all Tibetan identity has been lost. A Tibetan driver of an informal collective taxi on every trip between Riwa and Jinzhuzhen stops at Gonggalang Jiling Temple and disappears through a backdoor to where a limited monastic world operates with sounds and smells. (Tourists, in the rare instance that they stop, enter through the front gate to view a glamorous, empty congregation hall.) Tibetans also 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 one of the mountains. Those reluctant or unable to do the pilgrimage on foot may drive around the Yading massif once a year, a journey of approximately 200km (125 miles). Some Tibetan marriages still do not involve a Han legal marriage. Whatever traditional practices there are, tend to operate in a world separate from that of the Han administration and the tourists.

F. Conclusions

The key “relevant factors” identified by the developmentalist economists as explaining economic development are easily found in Daocheng: An active state provided the physical infrastructure, administers Yading, and coordinates all aspects of tourism development; both the state and the private sector exhibit entrepreneurialism; the focus is on a potentially high-growth, high value-added sector (tourism) with significant linkages. Specific to the case of Daocheng, however, saving and investment may not be fed by capitalists’ increasing surplus as much as by fiscal net inflows, and the absence of a qualified labor force is not overcome by integrating the local labor force but by importing the necessary labor.

Gerschenkron (1962a, p. 26) noted the “significance of the native elements” in the industrialization of the countries he examined. Daocheng’s economic development process, in contrast, had no native elements; it was not a unique, *sui generis*, catching-up process, but a centrally determined and implemented “lifting-up” process of a region through the development of tourism centered on a nature reserve, irrespective of local socio-economic conditions and consequences.¹⁰⁴

The experience of Daocheng offers itself to differing interpretations. One interpretation is that of a state-guided, benevolent economic development process that raises living standards in an under-developed region to the nationwide level. The state successfully organized the creation of a tourist industry. The state created job opportunities specifically for Tibetans, while linkage effects created further, new non-agricultural employment opportunities. The

appears singularly devoid of any monastic authority, in contrast to other counties in West Sichuan. There is no temple or monastery in the Han-created administrative center of Jinzhuzhen. The monasteries in the vicinity (the closest being approximately 10km away) are small and reportedly in conflict with each other. There is also no such rule as the second son of each family joining the monastic order.

¹⁰² See, for example, Chan et al. (2016) for the case of the Honghe Hani Rice Terraces World Heritage Site, or Yang, Wall, and Smith (2006) for the case of tourism in Xishuangbanna. Fischer (2009) and Robin (2009) find the effects of economic aid and urbanization measures on the Tibet Autonomous Region (西藏) to be inefficiencies and external dependence; the measures constitute an attempt to lure Tibetans into the “‘healthy and civilised’ life of the pursuit of profit.”

¹⁰³ Ren (2014) argues that local consciousness of the traditional Kham culture in Daocheng is virtually non-existent.

¹⁰⁴ Similarly, Hillman (2016) observes that “the performance-assessment criterion [with GDP at its core] as it is presently evaluated creates few incentives for local officials to pay attention to the quality of economic growth or its inclusiveness” (p. 27) and ultimately leads to prioritization of hardware over software; construction typically benefits outside companies hiring non-local workers. Much of the fiscal transfers is in form of special-purpose transfers determined not by the needs of the locality but by the availability of funding for purposes determined at higher levels of the state hierarchy.

state allowed rural land—protected in Tibetan ownership—to be turned to profitable non-agricultural use.¹⁰⁵ The state provides free education and dispatches some Tibetan children for further education to schools around the country.¹⁰⁶

The benevolent view has its flaws.¹⁰⁷ Tourism development is government-driven, government-dependent, and independent of and unaccountable to the local population.¹⁰⁸ Whether the reliance on one, highly seasonal industry can support a sustainable economy remains to be seen;¹⁰⁹ empty hotel shells and the very substantial fiscal net inflows are not a good omen. The often proffered models of Jiuzhaigou-Huanglong in Northwest Sichuan and of Lijiang and Diqing in Yunnan ignore the lower altitudes of these locations, their significantly more appealing climate, their diversity of attractions and industries, and a local population that is substantially more integrated into the development process.¹¹⁰

An alternative interpretation of Daocheng's development process is the construction of a Tibetan Disneyland based on a foreign fairy tale (Shangri-La)—that Han tourists will hardly be familiar with—and foreign projections of mystic Tibet.¹¹¹ It is created, for Han consumption, by an efficient Han machinery of government and private entrepreneurs.¹¹² In this Tibetan Disneyland interpretation, the locals—uncivilized peasants rather than the utopian, beautifully clad emblems of health, beauty, harmony and holiness presented in advertisement videos—are quite irrelevant, even irritating with their shabby looks and lax work habits. The next Tibetan generation is subjected to nine years of mandatory Han adaptation for future Han-icized Tibetan authenticity.¹¹³

An element of colonialism can be added. Cypher and Dietz (2009, 77) write of colonialism: “The good of the native peoples of the colonies was of little concern to the

¹⁰⁵ Tibetans letting their land to a Han entrepreneur for development may, at first sight, appear to be a good deal for Tibetans (allowing them to become rentiers), but it comes with the loss of agriculture that occurred on the plot, typically no alternative job, and rental income that is fixed in nominal terms. At a 5% inflation rate, after twenty years the purchasing power of the annual nominal rental income is little more than one-third of what it was in the first year.

¹⁰⁶ Austin (2015) notes that perhaps the single most important achievement of state interventions in Africa was the expansion of formal education, viewed as a prerequisite for any form of industrialization. Kolás and Thowsen (2005, Chapter 1) describe how “minority ethnic groups” in Chinese Marxist ideology are typically assigned a lower status in an evolutionary system in which the Han ethnic groups represents modernity. The “more advanced” Han thus have a “mission to civilize the natives” and help the “primitive” Tibetans move up the evolutionary ladder.

¹⁰⁷ For the case of Amdo, Yeh (2003) suggests that just about everything the PRC administration has done, from logging to various attempts to “liberate herder’s thoughts” by smashing the traditional pastoral ideas and forcing herders to learn to turn their assets into market goods (p.499) or attempts to force pastoral communities into becoming self-sufficient in grain production ultimately came to naught.

¹⁰⁸ Jiang (2017) presents a scathing criticism of tourism development in Daocheng as poverty alleviation measure.

¹⁰⁹ The dangers of reliance on one industry have been noted in other before, such as in the case of Jingdezhen’s porcelain industry (Gillette, 2016).

¹¹⁰ See Appendix 16.

¹¹¹ Ironically, Hilton’s Shangri-La refers to a monastic place (a lamasery) rather than a Tibetan Disneyland of mass tourism and mass consumption, and the key feature of the fictional Shangri-La is longevity rather than a shortness of breath that for some tourists indeed leads to Daocheng being their *last* Shangri-La. 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 attraction within the PRC to Han tourists. It is not that Tibetans have not lived in and around (and thus discovered) Yading centuries before Joseph Rock did, or that Han have not seen Yading well before Joseph Rock did.

¹¹² As Kolás and Thowsen (2005, p. 170) note, “The difficulty with such a search for the premodern in Tibetan and other ethnic minority areas is that when tourism becomes the mainstay of local economies, the needs of tourists, rather than the needs of the local people, may dictate cultural preservation.”

¹¹³ The *Master Plan* explicitly warned against the loss of local culture. See Appendix 3. The imposition of the Han interpretation of another ethnicity’s culture threatens to become the norm for that ethnicity itself, an outcome that the largely uneducated, scattered, and increasingly minority Tibetan community may not even be conscious of. This contrasts with Diqing’s experience, where, according to Hillman (2010, p. 274) “The direct involvement of religious authorities in tourism development has helped to ensure that representations of Tibetan culture are not perverted by commercial incentives and the fantasies of visitors.” And: The “region’s tourism development strategy has been rooted in the celebration of Tibetan culture.” For Hillman, the tourism-led development strategy has delivered inclusive growth; within the private sector, many small businesses and sole traders are Tibetans.

colonizers, except in so far as they might best serve to the advantage of the colonizer.”¹¹⁴ In this narrative, the Han machinery is not about creating a sound local economy run by the local population, but about the exploitation of natural resources (first forestry resources, then tourism resources),¹¹⁵ and about a “peaceful annexation” or “subjugation” of an occupied borderland—what Mao Zedong called “occupied territory”¹¹⁶—into an inalienable part of the Han empire. While Daocheng’s tourism model may not pass a cost-benefit analysis based on economic factors, it may well pass one based on military and political factors.¹¹⁷ Fiscal in-transfers may be cheaper than a full-scale military occupation, and the Tibetan Disneyland experience has greater propaganda value than pictures of an oppressive military occupation force.¹¹⁸

What would an alternative development path for West Sichuan have looked like? Following Fei and Ranis (1969), economic development would probably have had to proceed from simple agrarianism towards mercantile agrarianism with a larger focus on agricultural cash crops, perhaps extending beyond the current Matsutake and Caterpillar harvesting to specialty foods such as dried Yak meat, Yak butter, Yak cheese, and barley products. The scope for productivity improvements would have been limited to gradual improvements in agricultural technology and, in particular, the development of a processing industry for agricultural products. Increasing local wealth could have advanced Tibetan handicrafts and arts. The existing, modest Tibetan household-based tourism industry could have expanded organically (though some transport infrastructure would still have had to be provided by the state). The alternative development path would have required locally grounded development, with a degree of local initiative and decision-making that is probably anathema to the PRC’s rulers. It would certainly have taken longer for the county to look “developed,” but development would also have been more sustainable, more inclusive, and more culturally sensitive.

¹¹⁴ Slightly less extreme, British colonial theory built on the concept of a “dual mandate:” the development (or exploitation) of natural resources of the colony and the development of the social well-being of the populace (Henry, 1991, 70). Sautman (2006) contests any association of the PRC’s treatment of (broader) Tibet as colonialism. Arguments against the view of colonialism include that there can be no subjugation unless two peoples are ‘alien’ (which he presents as not being the case), there are no plantations and few industrial enterprises in Tibet, little extraction takes place, and very few Tibetans work for non-Tibetans.

¹¹⁵ Hillman (2003), for the case of Diqing prefecture in Northwest Yunnan, suggests that prior to the logging ban, logging accounted for up to 80% of both GDP and government revenues; the same now applies to tourism.

¹¹⁶ For Mao Zedong’s terminology, see the beginning of the third line of continuous text (by Mao Zedong) at <http://www.people.com.cn/GB/shizheng/8198/30446/30452/2196467.html>, accessed 8 June 2017.

¹¹⁷ Cooke (2003) views the Western development initiative as primarily an attempt to solve the “nationalities problem;” for her, the nation-building aspect underpins all levels of the Western development initiative plans. Key to achieving Western economic development is the transplantation of human resources that the Western region itself cannot provide, i.e., massive in-migration of Han. “Many provisions relating to economic development make sense only in the context of a significant influx of migrants: increased urbanisation, industrialisation, social security measures, trade along communications routes, expanded consumerism, resource exploitation, entrepreneurial links with interior provinces.” (p.8) Cooke (2003) also repeatedly cites a 2000 article by Li Dezhu, Minister of the State Ethnic Affairs Commission, which explicitly instrumentalizes the Western economic development initiative for resolving the “nationalities problem.”

¹¹⁸ Nevertheless, the Han security apparatus is omnipresent. Police cars cruise the streets of Jinzhuzhen, purportedly to keep the wide, empty roads clear of parked vehicles, but police officers bellowing into loudspeakers several times an hour in every corner of town also send timely reminders of state domination. A large police van is permanently stationed next to the Jinzhuzhen town square and staffed around the clock. Public security cameras are mounted at every street corner, at regular intervals along the roads outside town, and at the entrances of (and inside) monasteries.

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Appendix 1. Field Research in Daocheng County

Field research was conducted independently without affiliation to any institution on the mainland of the People’s Republic of China (PRC) nor any other formal introduction, and with only minimal contact with local officials. This is due to

- West Sichuan supposedly not being accessible to researchers (let alone to foreigners),¹¹⁹ presumably due to the sensitive nationality nature of the region,¹²⁰
- a preference to preserve the researcher’s independence;
- past experience with officials’ reticence on any matter that might be considered sensitive, suggesting that formal researcher status would not yield much advantage; and
- I am a professor *in the PRC* (at the Hong Kong University of Science & Technology).

An affiliation with an institution in the PRC and/or formal introductions would have influenced the research. I would have considered, consciously or unconsciously, the possible consequences for those who supported me.¹²¹ 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.

Other researchers may view affiliation differently and have used a variety of approaches to field research in Tibetan areas. For example, Kolås and Thowsen (2005) initiated contact with the Ethnic Affairs Research Center of the State Ethnic Affairs Commission and conducted their research with the help (and the accompaniment of staff) of the Institute of Nationalities Studies of the Chinese Academy of Social Sciences. Such extensive research across 25 Tibetan counties in Sichuan, Gansu and Qinghai may no longer be possible today. Hillman (2003, 2008) established deep contacts within the administration of Diqing prefecture in Yunnan province (a much more accessible locality than West Sichuan), perhaps in connection with him co-founding in 2003 and then chairing (at least as of 2010) the Eastern Tibetan [Vocational) Training Institute.¹²² This would also suggest a certain degree of conflict of interest between independent research and running a training institute whose operation is dependent on the local government’s approval. (The institute website was not accessible as of 18 January 2022 and its facebook page ends with an entry dated 16 January 2013.)

The majority of interviews were informal—or at least appeared informal to the interviewee—but were typically driven by a set of questions (semi-structured), and typically with notes taken (often via voice recording) immediately afterwards. In most instances, it was a seemingly random conversation for the interviewee; it would last from anywhere between five minutes and an hour (then likely over tea). 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.

¹¹⁹ Following the PRC’s race-based distinction I am a “foreigner,” even though I am a citizen of Hong Kong, SAR, PRC.

¹²⁰ As I explored my options and contacted academics in Sichuan, I was told that the area is closed to researchers and that in 2015 a research team from a university in Sichuan had been turned back from Ganzi prefecture.

¹²¹ See Holz (2007) on the extent to which the China research community has been “bought.”

¹²² Hillman (2003) describes how he sat among officials at the opening ceremony of the Shangri-La Festival and reports that he knew many of them (to be from diverse ethnic backgrounds), or how he was “privileged to attend the state-sponsored rehearsals).

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.¹²³

Many interviews themselves were random events, typically following my intentional choice of setting and then chatting with anyone around and willing to talk. For some interviews I pursued a particular person or agency.

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

All communication was in Mandarin (at least on my part). My limited knowledge of Tibetan turned out to be of no use due the rather distinct local dialect. Even well-rehearsed Tibetan sentences proved unsuccessful, despite a year of Tibetan language studies (which came with a good dose of culture and religion). Kolås and Thowsen (2005) report that they were told “that some Tibetan dialects [in Ganzi prefecture] were so different that they were mutually unintelligible” (p.40). 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. This is not to say there was no language barrier, there was; just as there was a cultural barrier, an intellectual barrier, or 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.

A large element of the field research was observation. Observation covers a broad spectrum ranging from some form of counting (from hotel rooms to the frequency of police car sirens) to observing people at work, on the streets or in tourist spots. Much photographing took place, from announcements posted on walls to the prices of Caterpillar mushrooms on sale in a shop. Whatever print advertisement material or other information was available, was collected.

I did not see myself as investigative journalist. For example, we know that a newly transferred-in leader tends to use their 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). These are common practices across ‘backward’ regions (if not the PRC as a whole), which we are broadly aware of. I did not attempt to uncover such arrangements or to evaluate what might be corruption. The picture of economic development in Daocheng that I was able to compile abstracts from the various shades of legality that may engulf the very great number of individual transactions involved in economic development.

I come to the topic as economist, not as Tibetologist, historian, geographer, anthropologist, ethnographer, sociologist, or political scientist, etc. As economist studying the PRC over three decades, I am well versed with issues of economic development, and in particular national income accounting. Although the intricacies of national income accounting and other

¹²³ Around this time, according to a fellow academic, a foreigner was removed from Jiuzhaigou on suspicion of being a spy.

economic concepts may not be apparent in the article text, they form the framework for all qualitative evaluation of economic activities in this article, and are in good part provided in appendices. My one earlier exposure to things Tibetan is extensive travels over several decades in Tibetan areas as tourist with a focus on mountains (not culture or religion).

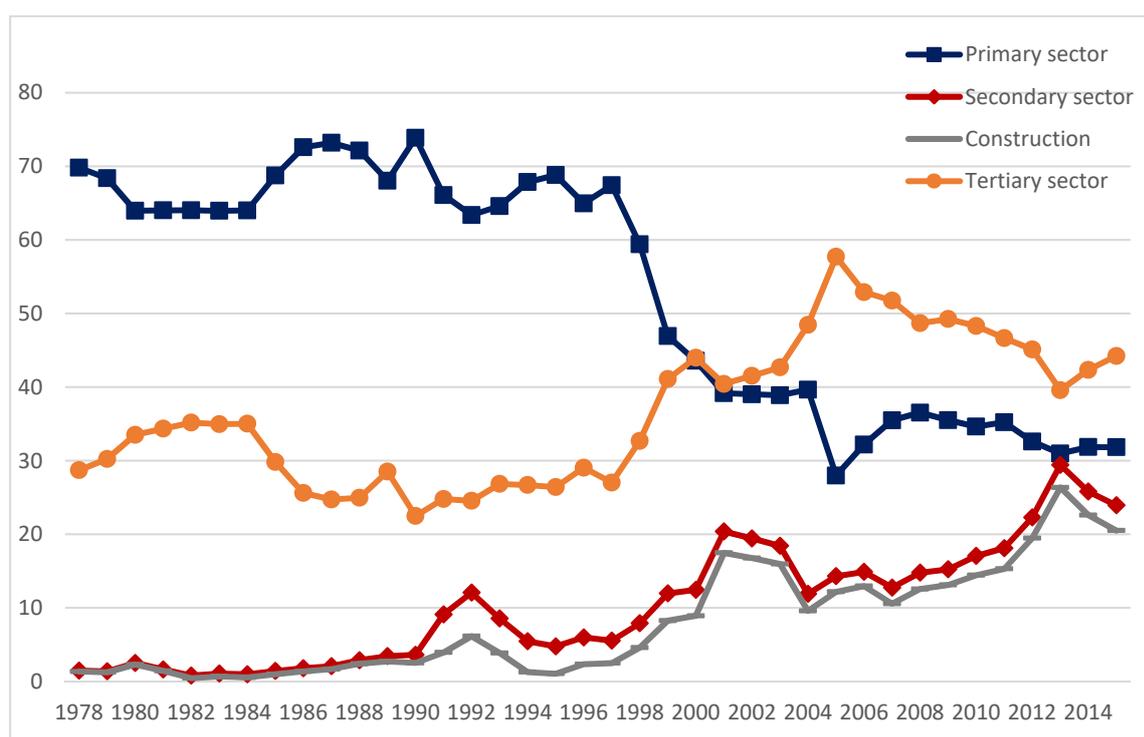
References specific to this appendix:

Holz, Carsten A. "Have China Scholars All Been Bought?" *Far Eastern Economic Review* 170, no. 3 (April 2007): 36-40.

Appendix 2. GDP Growth and Private Economy over Time

Official time series data on value-added are available by (broad) economic sector for the years since 1978. Throughout the 1980s and most of the 1990s, agriculture accounted for two-thirds of GDP (Figure 4). A major structural change occurred between 1997 and 2001 with an increase in service sector and construction activity relative to agriculture. The share of agricultural value-added in GDP declined from 67% (in 1997) to 40% (in 2001). This was matched by an increase in the share of services from 27% to 40%, and in the secondary sector (mostly construction) from 6% to 20%. The structural change coincides with the turn towards tourism development, and slightly precedes the formal introduction of the Western Development program. (See Table 3 for 2010 and 2015 data.)

According to the official national income accounts data, since 2001 agriculture's share of GDP has stayed roughly between 30% and 40%. The share of the tertiary sector peaked at 57% of GDP in 2005 and then declined continuously to 40% in 2013 before picking up again slightly. The share of the secondary sector (predominantly construction) first declined to 12% in 2004, and then began a steady rise to 26% in 2013 before falling back to 20% in 2015. The reversal in 2014 could be related to Xi Jinping's assumption of the position of Party Secretary in late 2012 and the effects of the ensuing "anti-corruption" campaign.

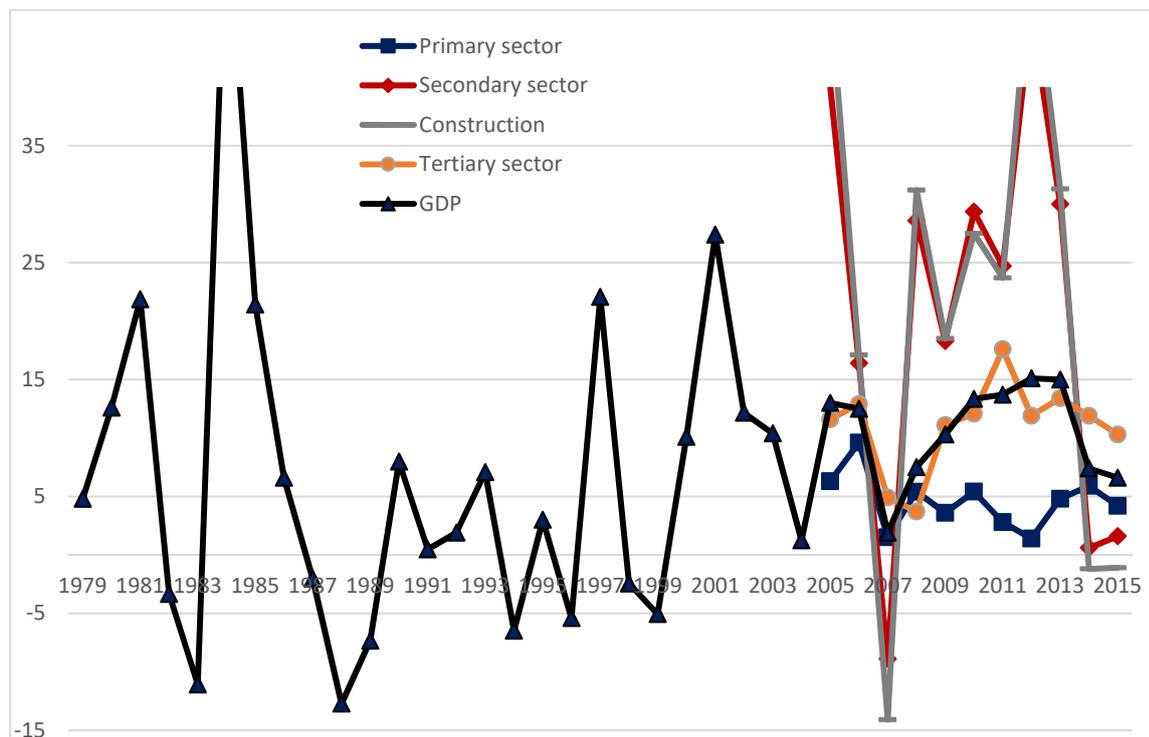


Construction is a sub-sector of the secondary sector, industry being the other exhaustive sub-sector. Sources: *Ganzi Statistical Yearbook 2016* (for 2014, 2015), *2015* (for 2013), *2014* (for 2012), *2013* (for 2011), *2012* (for 2010), *2010* (for 2005-2009), and *2008* (for 1978-2004).

Figure 4. Daocheng County Sector Shares in GDP (%)

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% (Figure 5). Real GDP growth entered a steady upward trend in 2007, when it was at 2%, to 15% in 2013, before dropping back to around 5% in 2014 and 2015.

Growth rates in sector value-added are available for the years since 2004. Growth rates in agricultural value-added are relatively stable around 5% while those of the tertiary sector experienced variations between approximately 5% and 15%. The secondary sector, in contrast, driven by its sub-sector construction, experienced wild swings in growth rates from negative 14% in 2007 to positive 50% in 2012. Construction, thereby, is also responsible for the relatively low GDP growth rates in 2014 and 2015.

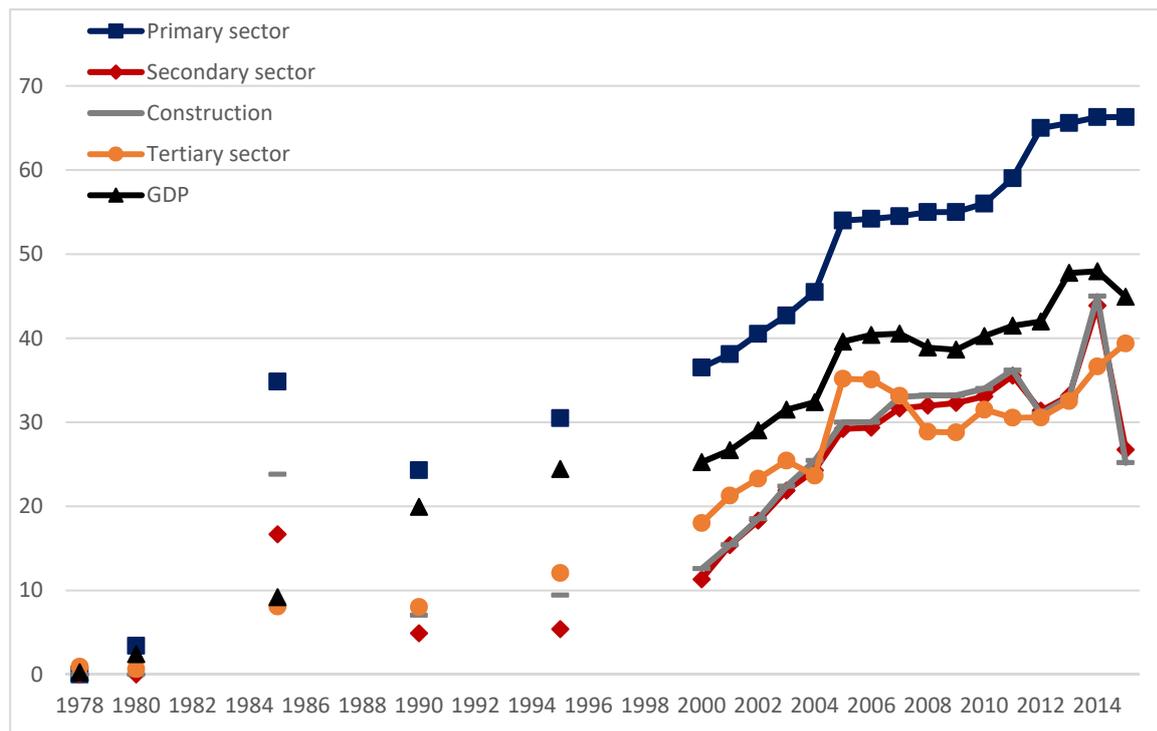


Construction is a sub-sector of the secondary sector, industry being the other exhaustive sub-sector. For sources, see Figure 4. Earlier sectoral real growth rates are available but vary drastically (with apparent underlying data problems, such as a sector growth index rising from 100 to 200 to 300).

Figure 5. Daocheng County GDP and Sector Value-added Real Growth Rates (%)

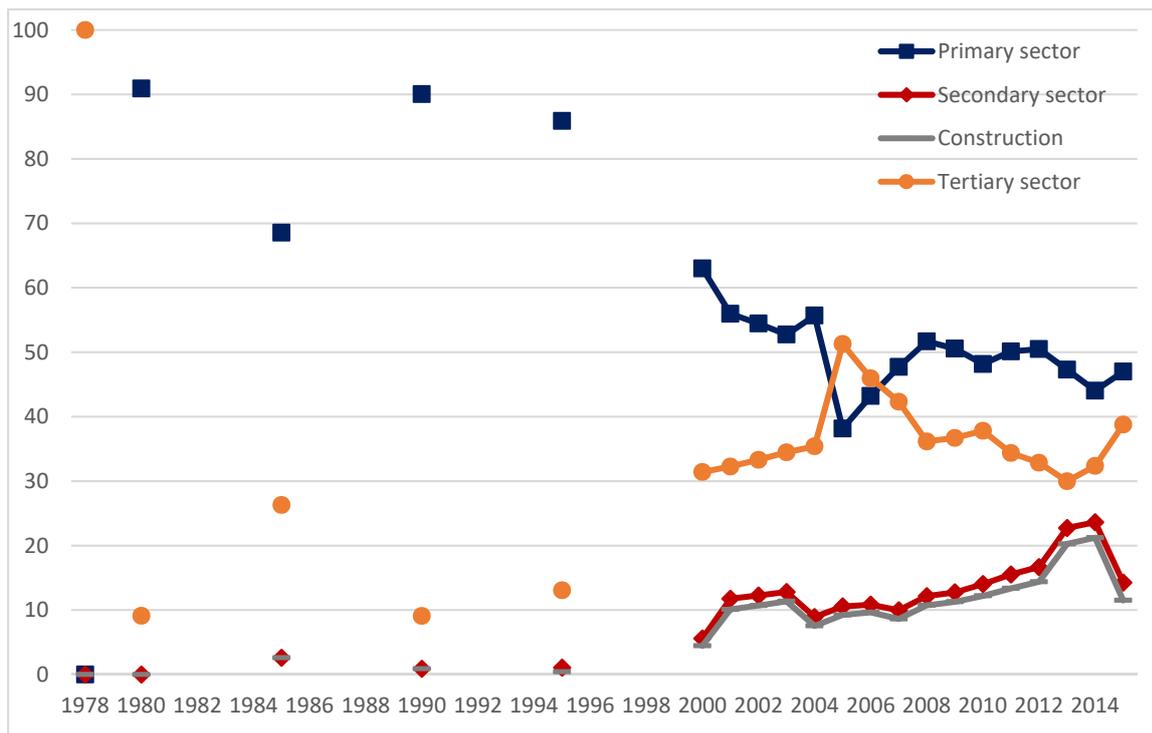
The “private economy” (民营经济) accounted for 45% of Daocheng’s GDP in 2015 (Table 3, or shortened table in the article text). It produced two-thirds of agricultural value-added, one-third of the (miniscule) industrial value-added, and one-quarter of construction value-added. The patterns in the tertiary sector (overall 39% private) are as one would expect: 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, except for a noticeable decline in the private economy’s share in construction from 45% in 2014 to 25% in 2015 (Figure 6).

Within the private economy, agriculture accounts for the biggest share of privately produced value-added in the 1980s and the 1990s with 90%, and around 50% in the 2000s and 2010s (Figure 7). Services' share in the private economy's output varied around 10% in the 1980s and 1990s before rising to 30% in the 2000s, then rising even further before dropping off and oscillating between 30% and 40%. The smallest share of the private economy consists of construction, at around 10% since 2001, with a brief increase to 20% in 2013 and 2014. (The final year in the chart is 2015.) This suggests that GDP growth especially in 2014 received a boost from extraordinarily high private construction, and that a collapse in private construction in 2015 (consistent with stalled hotel construction in 2016 and 2017) then contributed to the lowest GDP growth rate since 2007, of 6.6%.



Construction is a sub-sector of the secondary sector, industry being the other exhaustive sub-sector. For sources, see Figure 4.

Figure 6. Daocheng County Private Share in Sector's Value-added (and GDP) (%)



For sources, see Figure 4.

Figure 7. Daocheng County Sector Shares in Private Aggregate Value-added (%)

Table 3. Sector Shares in GDP and Private Sector Shares (%)

	PRC		Daocheng County				
	Shares in GDP			Private economy only			
	2015	2010	2015	2010	2015	2010	2015
Total	100	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 classification.

Beginning in 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.

The standard sectoral classification system used in some of the underlying statistical tables (with variations), and also used for employment and other variables, is as follows: Agriculture (possibly including agricultural services, which in recent years are included in the tertiary sector) 农林牧渔业, Mining 采矿业, Manufacturing 制造业, Utilities 电力、煤气及水的生产和供应, Construction 建筑业, Transportation, storage and post, 交通运输、仓储和邮政业, Information transmission, computer services, and software industry, 信息传输、计算机服务和软件业, Wholesale and retail trade 批发和零售业, Accommodation and catering 住宿和餐饮业, Finance 金融业, Real estate 房地产业, Leasing and business services 租赁和商务服务业, Scientific research, technical services, and geological prospecting 科学研究、技术服务和地质勘查业, Water conservancy, environment, and public facilities management 水利、环境和公共设施管理业, Household and other services 居民服务和其他服务业, Education 教育, Health, social security, and social welfare 卫生、社会保障和社会福利业, Culture, sports, and entertainment 文化、体育和娱乐业, Public administration and social organizations 公共管理和社会组织.

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

Appendix 3. Tourism Development *Master Plan*

The Daocheng government commissioned the Sichuan Province Tourism Planning and Design Institute to prepare the *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 government. At the county level, only a deputy county head and the head of the Daocheng tourism bureau were involved.

The *Master Plan* provides a number of rationales for why the development of tourism in Daocheng can succeed. Per capita GDP of the PRC at the time, of USD 800, is generally considered the level at which tourism increases rapidly. Tourism development in Daocheng complements the national policy of [Large-scale] Western [Economic] Development. Tourism development in Daocheng is consistent with a 1998 *provincial* master plan for tourism development. The provincial plan denoted tourism a provincial emerging pillar industry and identified Ganzi prefecture as a nature destination, suitable for eco-tourism. The *Master Plan* is also consistent with 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, as well as at Luguhu (泸沽湖) at the border of Yunnan and Sichuan. Then there was the successful tourism development model of Jiuzhaigou-Huanglongsi (九寨沟—黄龙寺) in Aba prefecture (阿坝藏族羌族自治州) of West Sichuan, 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 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.¹²⁴

The *Master Plan* envisages Jinzhuzhen as central city, Riwa (日瓦) as entry and exit point for Yading, and a road connection to Yunnan as access route (with a third-grade mountain road to be in place by 2005 and to be upgraded later). It goes on to list roads connecting Riwa to

¹²⁴ Along the road across the Haizishan plateau are a handful of small parking areas, typically marked by some explanatory sign and equipped with rudimentary toilets. A rock field at the edge of Haizishan, off the road between the Daocheng-Yading Airport and Jinzhuzhen, 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 got mired in mud and had to be pulled out.

Muli county (木里, in neighboring Liangshan prefecture, 凉山彝族自治州) 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.¹²⁵

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 assumed interest payments with assumed income.¹²⁶ In the first 5-Year Plan period, the ratio of costs to income is estimated to be 1:0.74, in the second period 1:4.5, and in the third period 1:10. In other words, by 2010-2015 the benefits in form of income (though not profit) exceed the costs ten-fold. Total costs across the 15 years are projected to be CNY 1.1612bn (or CNY 1.33545bn including interest costs) and total income is CNY 6.34887bn. The derivation of these costs and income is not explained.

The *Master Plan* projects marketing expenditures for the years 2000, 2005, 2010, and 2015 to be CNY 50,000, 1mio, 2mio, and 3mio, values that are likely much exceeded in reality. I have a 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 expenses.

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 (also completed in 2013/14 only) while trying to connect to roads in Yunnan. (A table lists ongoing and upcoming road projects, referring to a separate Daocheng transportation infrastructure plan for 1999-2010.)

The projects comprise: 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, 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.

The *Master Plan* (p. 129) explicitly warns of potential “Hanization” (汉化) at the expense of the local Kangba 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 (康巴) culture, must ensure that the masses are proud of their culture.”

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

¹²⁵ Muli has been closed to foreigners for many years but currently appears to be open.

¹²⁶ Costs are broken down not only by 5-Year Plan period, but also by type of undertaking: infrastructure (a total investment of CNY 127.5mio, 80% of which is to be financed by the government), public facilities (CNY 40.85mio, 100% of which to be financed by the government), marketing (CNY 31.4mio, 40%), tourism service facilities (773.2mio, 5%), other non-profit investment (CNY 162mio, 95%), and sustainable development projects (CNY 26.25mio, 90%). All else is to be undertaken by the private sector and “other socio-economic entities.”

the local religion will face a severe test, and that a “rubbish” (糟粕) culture will invade the area (listing pornography, gangs, and drugs). The *Master Plan* also lists trash, sewage, noise pollution, the introduction of outside modes of thinking, consumerism, and new cultural and living habits as threats.

The *Master Plan* was followed by a *Yading* [Nature Reserve] *Master Plan* (2006-2020) with specifics on the management of the nature reserve, and a second (Daocheng County) *Master Plan* (2015-2030). I could not obtain a copy of this more recent (Daocheng) *Master Plan* (2015-2030), which, as the earlier *Master Plan*, is not publicly available. The Sichuan government 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 never heard back.¹²⁷

Daocheng County Tourism Development Companies

The *Master Plan* mentions the establishment of a (government) Daocheng Tourism Bureau (稻城旅游局), a Tourism Environmental Protection Department (旅游环境保护处), and a Daocheng County Tourism Development Company (稻城县旅游开发总公司) that later turned into the Daocheng Tourism Development Limited Liability Company (稻城旅游发展有限责任公司). As of 28 November 2017, no details can be found online on either of these two companies.

Today, Yading is administered 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), established on 7 April 2013 by (i) the (above) Daocheng Tourism Development Limited Liability Company (originating with the county government), 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).¹²⁸

These companies are all state-owned.

¹²⁷ 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.

¹²⁸ The Ganzi Prefecture Culture and Tourism Investment Development Limited Liability Company by 3 September 2017 had been renamed a conglomerate (集团). It was originally established on 27 December 2012. Its assets amounted to CNY 780mio. For details see <http://ganzi04782.11467.com/>, <https://xin.baidu.com/detail/compinfo?pid=ovT7Qchxe3l0XzGTvwjaKmYkt53QzIe0hgHa&from=ps>, and <http://www.gzz.gov.cn/10000/10120/13598/2016/10/13/10548305.shtml>, all accessed 28 November 2017.

Appendix 4. Road Access

While the *Master Plan* claims that Yading had been made accessible via a new, 34km “third grade” 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 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.¹²⁹

Provincial road S217 connects Litang (理塘)—a way station between the prefectural capital of Kangding (康定) and Daocheng—to Yunnan via Sangdui township (27km North of Jinzhuzhen) in Daocheng and then Xiangcheng county (乡城). (Also see Figure 1.) As of late 2017, provincial road S217 between Sangdui township and Xiangcheng county was under extensive repair and expansion (and not accessible). Provincial road S216 runs from Sangdui township South via Jinzhuzhen to Riwa, from where it continues into two directions, (i) Yading and (ii) Southeast towards Panzhihua municipality (攀枝花) via Mengzi township (蒙自乡) and then Muli county (木里县) in Liangshan prefecture (凉山彝族自治州), the latter road currently as dirt road though in the process of upgrading. 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).

As of 2017, the only feasible road from Daocheng to Yunnan 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 the newer road leading off from between Jinzhuzhen and Riwa. The nearly 400km distance includes an approximately 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-grade road connecting Riwa to Diqing/Zhongdian (迪庆/中甸) in Yunnan is to be completed by October 2018.¹³⁰ This yet to be completed new road from Riwa to Yunnan 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.¹³¹ The precise routing thus remains unclear. Of this 135km third-grade 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-grade road is made of asphalt or cement and is intended for daily traffic of 2000-6000 vehicles between counties or lower-level administrative localities.¹³²

¹²⁹ See, for example, <http://www.josephrock.net/2011/06/chapter-10-yading-holy-mountains-of.html>, accessed 15 November 2017.

¹³⁰ 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.

¹³¹ 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.

¹³² 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>.

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.

Road construction in this area is 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 these valleys higher up and then deal with steep and unstable slopes, climbing up to passes well in excess of 4000m altitude. (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 altitude climb over a perhaps 30km distance. An interviewee in October 2017 thought this was still a difficult road.)

The current road from Riwa to Yunnan 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.

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 Luguhu (泸沽湖) and into Yunnan was underway as of 2017. Completion is not expected for 5-6 years.

Zhongdian in Yunnan and Luguhu at the border to Yunnan 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. Zhongdian is also one of the final stops in Yunnan before heading Northwest into the Tibet Autonomous Region.

In recent years, touring the Greater Tibetan region (Northern Yunnan, West Sichuan, the Tibet Autonomous Region (西藏), Qinghai (青海), and parts of Gansu (甘肃)) has become highly fashionable. On Yading shuttle buses and in restaurants, Han tourists can be overheard discussing the pros and cons of driving to Lhasa. The "thing to do" is to drive from Yunnan or Sichuan into the Tibet Autonomous Region, then turn around in Lhasa and head back East along a Northern route. Restaurant in Daocheng display a map of the route options within a triangle formed by Xi'an (西安), Kunming (昆明), and Lhasa (拉萨). Daocheng and Yading are not on a main route.

Appendix 5. The Holyland Corporation and Yading Tianjie

Holyland Corporation in Riwa

Riwa is located at the confluence of two rivers. One flows from E'chushan (俄初山) in the West past Rencun to Riwa, while the second river flows from the North, the direction of Jinzhuzhen, before continuing its journey East. A sliver of relatively flat land runs from Riwa upstream towards Rencun, while the valleys in the other two directions (upstream towards Jinzhuzhen, and downstream towards Mengzi Township) are exceedingly narrow. The mountain slopes around Riwa are steep and can only be accessed with difficulty.

The Holyland Corporation is reported to have bought up land—beyond the currently fenced Holyland property—along the approximately 3-4km stretch between Riwa and the beginning of Rencun, the narrow valley shared by the 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, demarcated extensive Holyland area in Riwa (and not all Holyland land may currently be marked as such, recognizable to a visitor).¹³³

Holyland was founded in April 2006 with registered capital of CNY 200mio as a subsidiary of a Shenzhen investment company (深圳市金沙江投资有限公司), owned by a Han from Guangdong who had earlier been involved in the construction of a hydropower station in Riwa.

In September 2013 the Holyland Corporation opened the only five-star hotel in Riwa, the Holyland Hotel (23,000m²), with 213 rooms. Underneath the Holyland Hotel front area is a 400-seat performance venue (亚丁境界演艺中心), completed in 2017 only.¹³⁴ Across the road are the four-star Yading Yizhan (亚丁驿站, Yading Inn) with just below 100 rooms, and a in 2017 newly renovated annex of the Yading Yizhan that became a four-star Ramada Encore hotel as part of Wyndham Worldwide, with approximately 200 rooms. Diagonally across the road from the Holyland Hotel (and adjacent to Holyland's other two hotels) is (Holyland Corporation's) Shambala Tianjie (香巴拉天街), a 12,000m² shopping and restaurant complex with approximately 100 outlets. In spring 2016, the Shambala Tianjie was entirely unoccupied but by October 2017 two dozen shops, convenience stores and restaurants had opened.¹³⁵ In the evenings, tourists, after returning from Yading and driving along 'Holyland's road' due to the officially directed flow of traffic, flocked to this new commercial center of Riwa.

¹³³ The Holyland website contains various numerical 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). The existence of such basic numerical errors advises caution in accepting the Holyland Corporation's stated land area.

¹³⁴ The 2,100m² performance venue was completed in the same year (2017) as the larger and architecturally more modern Daocheng Yading Performing Arts Center, located halfway between Riwa and Rencun and owned by the Daocheng Yading Scenic Area Tourism Development Company.

¹³⁵ 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.

The Holyland Corporation has a quasi-monopoly on high-end hotels in Riwa. An ageing three-star Wizard Aden Hotel (稻城绿野亚丁酒店) at the Northern entrance to Riwa and a Daocheng Riwa Airport Hotel (稻城日瓦翔云酒店) at the Western edge of Riwa have offered limited competition for some years, while a Holiday Inn Express (稻城亚丁智选假日酒店) opened in 2017 halfway between Riwa and Rencun. Neither of the latter two is within easy walking distance of Riwa's restaurants and shops.

In 2016, a side wing of the Holyland Hotel housed 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 had 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 (of the type that suggests a hotel room), is 300—vs. the number of 213 given on the Holyland website (at <http://www.yadinginvest.cn/>, accessed 13 November 2017)—implying that up to one-third of the Holyland Hotel accommodation space may originally have been designed as vacation homes.

For the Yading Yizhan hotel, 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, part of Wyndham Worldwide, in 2017. Opening dates of the original Yading Yizhan are given as 2009 and 2011. (This 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 the PRC, listed 17 hotels including the Ramada Encore.¹³⁶

The Holyland Corporation has also branched out into other services. In October 2017, through a newly established transport subsidiary, it ran ten new shuttle buses between Riwa and the Yading Visitor Center, as well as three daily buses between Riwa and Jinzhuzhen.¹³⁷

According to the Holyland website, the Holyland Corporation plans to build an “International Tourism Small Village” (国际旅游小镇) consisting of:

- a spa hotel (天谷莲轩温泉 SPA 酒店): size 55,000m²—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;
- a “courtyard-style boutique hotel ‘Kangba First Village’” (院落式精品酒店 ‘康巴第一寨’): size 33,267m²; a mix of commercial and (upstairs) hotel areas; and

¹³⁶ Perhaps as a consequence of having joined Wyndham Worldwide, the music at breakfast is not Chinese opera music, Communist propaganda songs, or Tibetan-sounding Shangri-La advertisement, but the likes of Loreena McKennitt and New Orleans blues.

¹³⁷ The Holyland Corporation in October 2017, through a newly established transport subsidiary, ran ten new shuttle buses between Riwa and the Yading Visitor Center, as well as three daily buses between Riwa and Jinzhuzhen. See <http://www.yadinginvest.cn/index.php?m=content&c=index&a=show&catid=16&id=116>, accessed 14 November 2017. The transport subsidiary is the Daocheng County Holyland Public Urban-Rural Transport Company (稻城县日松贡布城乡公客运有限公司).

- a conference hotel: size 36,000m², with 330 rooms and an investment of CNY 450mio.

The total built-up area of all Holyland projects is projected to reach 210,000m²—approximately five times the current built-up space and equivalent to approximately one thousand single family homes—at a total cost of CNY 3bn (no date given).

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) just past Yading Village 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.

A simple estimation of the financial viability of the Holyland Corporation is the following: Assuming average staff salaries to be CNY5,000 per month (in addition to 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 let 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 3 months of high season accounting for approximately 90% of total revenue). This means that staff costs consumed approximately 44% of revenue.

After accounting for staff costs, the Holyland Corporation then had remaining revenues of CNY 30mio per year to cover all other expenses, from capital costs to taxes. If one-half of the remaining revenues were profit (CNY 15mio), it would take 17 years of such profit to finance construction of (just) the future spa hotel. This means that the Holyland Corporation cannot “bootstrap” further construction projects in Riwa would have to rely on outside financing for new projects.

The estimate of revenues comes with a large margin of error as the precise number of Holyland visitor nights and the average price per room are unknown.¹³⁸ The estimate ignores whatever cut travel agencies impose for arranging room reservations. The Holyland Corporation also likely reduced staff numbers in 2017 (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 here for the Holyland Corporation.

¹³⁸ I obtained a good idea of the room prices of each of the three hotels on ctrip.com in the course of the year, but not about the distribution of visitors across the three hotels.

My estimate could err on the lower side of profitability given the experience in the high season in 2017. Thus, on 3 October 2017, the Yading Inn and the Ramada Encore were booked out on ctrip.com, while the Holyland Hotel offered a few remaining rooms for just short of CNY 3,000 per room. This situation prevailed through much of October 2017 and could markedly increase revenues.

Yading Tianjie in Jinzhuzhen

Yading Tianjie is a joint project of Daocheng and the intra-provincial partner city Luzhou Municipality (泸州市). The project follows a standard *duikou* pattern whereby Party organs, governments, or state-owned enterprises in richer regions support a less developed locality. The assignment comes with financial obligations, sometimes takes the form of material contributions, and often goes hand in hand with the 1-2 year dispatch of government officials from the richer to the poorer locality in order to share their experience in successful development and to oversee the use of the financial and/or material resources contributed by the richer locality.

Construction of Yading Tianjie is undertaken by a Luzhou construction company. This company 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.¹³⁹ 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 CNY 10mio. The company appears to have no purpose other than to administer the Yading Tianjie project.¹⁴⁰

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. With the project implicitly underwritten by governments and further protected by the *duikou* distinction, financing seems to never have been a difficulty; construction occurred uninterruptedly.

As to financing for a potential buyer of a property in Yading Tianjie: In 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 interested buyers.

Individual investors in Yading Tianjie are lured with similar advertisements as tourists. In spring 2016, the luxurious sales office of Yading Tianjie (then still under construction) showed a 7-minute video presenting Jinzhuzhen as an alpine village in pristine nature, the Yading mountains rising behind Yading Tianjie (they are 114km away by road and not visible from Jinzhuzhen), the landscape dotted with happy Tibetans in Tibetan dresses, and the Yading Tianjie development crowded with Westerners. The video showed flights on an airline “transvia.com” to Daocheng-Yading Airport from across the country, including from

¹³⁹ 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://scslzsdsgak.cn.biz72.com/> (accessed 11 November 2017) for the limit of five employees.

¹⁴⁰ See <https://www.liepin.com/company/gsl4756218/#business-info>, accessed 11 November 2017.

Luzhou, Beijing (北京), Guangzhou (广州), and Shanghai (上海), flight connections that as of 2019 and 2020 have still not been established. The website transvia.com exists and is the website of a Spanish travel agency (11 November 2017). Many of the scenes of local products, street stalls, restaurants, and high-quality hotels in the video appear to have been shot in Lijiang in neighboring Yunnan. On sale were shop fronts (with a suggested 8% return on investment) and hotel-type vacation apartments (from CNY163,000 upwards).

In 2017, with the near-completion of Yading Tianjie, the posh sales office of early 2016 relocated (from what became one of the entrances to Yading 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 exceedingly 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.

Appendix 6. Shangri-La

The *Master Plan* designates Yading “the last Shangri-La.” Riwa township was officially christened “Shangri-La Township” on 25 January 2002.¹⁴¹

The location of “Shangri-La” is contested. Since 2001, Zhongdian, the (county) seat of Diqing (迪庆) (sometimes also Deqen, 迪庆) Tibetan Autonomous Prefecture in neighboring Yunnan (that borders Daocheng) also goes by the name of Shangri-La.¹⁴²

The Daocheng *Master Plan* was completed around the end of 2001 (with final touches perhaps applied through 2003). This 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 Yunnan’s Shangri-La. It only refers to “Riwa” once, in the image of a map, likely an oversight. (A word processor’s search function cannot identify a word in an image.) The *Master Plan* consistently refers to Yunnan’s Shangri-La as Zhongdian, even though at the time the *Master Plan* was drafted, Zhongdian likely had already acquired the name Shangri-La.

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*.

According to the Wikipedia entry on Shangri-La, the Tibet Autonomous Region in 2001 proposed that Yunnan, Sichuan and the Tibet Autonomous Region 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 tenuous. 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 Himalayan adventure by the *National Geographic* articles of Joseph Rock, an Austrian-American botanist and geographer who described his exploits in exotic Tibet” (p. 5 of the “P.S.” section). 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 mountains (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, p. 97) speaks of Shangri-La as a world of “incomparable refinements” 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.

Hillman (2003) in great detail documents the name change of Zhongdian county in Diqing prefecture to Shangri-La county and the various linguistic inventions (requiring “the greatest

¹⁴¹ See <http://www.xzqh.org/html/show/sc/21802.html>, accessed 9 May 2022.

¹⁴² State Council decision of 17 December 2001 (Hillman 2003). Also see Wikipedia entry on Shangri-La (accessed 9 October 2017) According to <https://eu.usatoday.com/story/news/world/2013/09/18/china-airport-tibet-highest/2832921/>, accessed 31 January 2020, Riwa became Shangri-La township in 2001, while the seat of the municipality in neighbouring Yunnan became Shangri-La Municipality four years earlier.

leap of faith,” p. 177) to justify the name change to the State Council of the PRC (without ever referring to the origin of the name, James Hilton’s novel *Lost Horizon*). An additional, political argument was made that in the interest of social stability the principle of ‘naming by the people’ should apply (though the people in Zhongdian had previously never heard of Shangri-La). All along, Daocheng in Sichuan was competing with Zhongdian in Yunnan to be re-named Shangri-La, and had also engaged expert advice to prove that it was the true Shangri-La. Zhongdian’s application to the State Council hinted at the fairy tale mysticism intended to attract tourists with arguments such as “the name represents what people of all races are searching for—a desire that among people and between people and nature there be no conflict, no chaos (*qingluan*), only economic prosperity, national unity (*minzu tuanjie*) and social stability” (Hillman, 2003, p. 179). Another argument was that the name change would make Diqing prefecture a ‘leading’ Tibetan area in China.

According to Liu and Li (1997), reporting in the *China Daily*, “Shangri-La” means “a perfect world with snowy mountains and rich forests.” “On this peaceful and fertile land, unadorned people worship their gods in splendid lamaseries. There is complete harmony between man and nature, and man and man.” Shangri-La shall “continue to symbolize the longing of human beings for a perfect and peaceful world.” Locating Shangri-La in Diqing prefecture identifies this Tibetan area and society as a place where “ethnic groups have lived together peacefully for thousands of years.”

Kolås (2004, p.274) points out the striking contrast between a public, government-endorsed and propagated depiction, since the 1950s, of traditional Tibetan society as a ‘feudal’ and ‘slave society’ with Marxist notions of an early evolutionary stage of ‘backwardness’ and ‘primitivity’ added on, versus this new view of Diqing as the location of Shangri-La.

References specific to this appendix:

- Hillman, Ben. “Paradise Under Construction: Minorities, Myths and Modernity in Northwest Yunnan.” *Asian Ethnicity* 4, no. 2 (June 2003): 175-88.
- Kolås, Ashild. “Tourism and the Making of Place in Shangri-La.” *Tourism Geographies* 6, no. 3 (August 2004): 262-78.

Appendix 7. Tourist Numbers

Yading tourist capacity

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 space availability in each part of Yading. Adding up these numbers—presented in a table in a *Master Plan*—suggests a maximum sustainable number of daily visitors of 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, and in 2014 at 5,050.¹⁴³

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 (previously at the lower end of Rencun) 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 visitors continue on a trail). This implies that 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. 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 would not allow the smooth operation of such a large number of buses.

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 (which no longer sees any cattle but is a parking lot for electric carts). 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, or 24,000 in five hours, similar to the maximum bus capacity for the transfer from the Yading Visitor Center at the upper end of Rencun to the end of the road inside Yading.

Monthly distribution of visitors to Daocheng

Visitor numbers are highly concentrated in July through October, four months that accounted for 82.5% of all visitors to Daocheng in 2015 (see figure in text). The strong cyclicity is also apparent in the number of hotels in Jinzhuzhen offering rooms on the online travel site

¹⁴³ For the 2014 figure see Liu and Liu (2015).

Ctrip, and in hotel prices that peak at three to four times annual averages around the 1 October week (see separate section in this appendix, below).

The experience on the ground suggests that visitor numbers may be even more concentrated in October than the official statistics indicate. On 3 and 4 October 2017, visitors to Yading reached the admission limit of 16,054 set by the Yading administration by 11 am and ticket sales were suspended. In the morning of 3 October, traffic moved at less than walking speed along the 7km road from Riwa to the entrance of Yading. (This was a sensation for local Tibetans who stood at the side of the road and watched while some began to hawk everything related to Yading, from show tickets to maps and parking spaces.) By 5 October, visitor numbers fell back to 13,795.¹⁴⁴

The July 2015 percentage of total annual visitors, of 25.2% appears too high. 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 every day and suspect that the Yading mountains did not have a single day of good weather (definitely not the day I went up into Yading). 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 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—most nights I seemed to be only customer, or only one of a handful of customers, in 30-100 room hotels—and Jinzhuzhen and Riwa appeared thinly populated with only a sprinkling of tourists.

Visitor numbers in other months, such as March, however, appear plausible.¹⁴⁵ The October 2015 visitor number, of 357,000 to Daocheng (11,516 average daily visitor nights) is also plausible, if not an underestimate, given various reports as well as my observations in October 2017.

October 2015 visitor numbers

According to a news item from *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. Yading tourism thus accounted for only a tiny fraction of all tourism in Ganzi prefecture in this period of 2015.¹⁴⁶

According to the Ganzi Prefecture Tourism Net with a news item of 20 October 2015, Daocheng 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.¹⁴⁷ These tourist numbers would seem to confirm the official October 2015 Daocheng visitor number of 357,000.

¹⁴⁴ For the visitor numbers see Xinhua (5 October 2017). The closure of Jiuzhaigou in Northwest Sichuan on 8 August 2017 following an earthquake may have contributed to the peak visitor numbers experienced in Yading in October 2017.

¹⁴⁵ 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).

¹⁴⁶ See <http://www.yadinginvest.cn/index.php?m=content&c=index&a=show&catid=16&id=101>, accessed 14 November 2017.

¹⁴⁷ See the report at <http://www.yadinginvest.cn/index.php?m=content&c=index&a=show&catid=16&id=102>, accessed 14 November 2017.

2017 visitor number

In the Golden Week of 2017, daily visitor numbers (nights) in Daocheng likely reached into the 30,000s, given that visitors inevitably spend at least two nights in Daocheng and daily Yading visitor numbers were in the mid-10,000s.¹⁴⁸

This exceeds the accommodation capacity. In October 2017, a personal count of establishments of accommodation in Jinzhuzhen, Riwa, and Rencun yielded 242 establishments (Table 6 further below) with 9,331 rooms (8,583 plus 748, Table 7).¹⁴⁹ With an assumed average 2.35 beds per room (*Master Plan*), Jinzhuzhen, Riwa, and Rencun by October 2017 were able to accommodate 21,928 visitors. Additional inns in Yading Village and along the road between Riwa and Jinzhuzhen brought the total number of beds to around 23-25,000,¹⁵⁰ with the remainder then accounted for by home stays, tent camps set up by Tibetans, and some self-driving tourists arriving in camper vans or bringing their own tents to camp in a Tibetan's courtyard or along the road between Jinzhuzhen and Riwa (a cold and typically moist affair). Hotel rooms remained available during the Golden Week of 2017, albeit at prices up to ten times regular summer prices.¹⁵¹

The estimate of the 2017 visitor number in the text is based on the observed October 2017 visitor numbers: 30 days times 10,000 visitors per day to Yading times 2.5 nights per visitor yields 750,000 visitor nights in October 2017, more than double the October 2015 figure. Visitor numbers in 2017 could be exceptionally high due to the temporary closure of Jiuzhaigou (九寨沟) and Huanglong (黄龙), alternative tourist destinations in Northwest Sichuan, following an earthquake. In the 2018 Golden Week, visitor numbers may have fallen, purportedly due to snowfall in the approach to Ganzi prefecture with media reports of daylong traffic jams (http://sc.ifeng.com/a/20181011/6937698_0.shtml, accessed 12 February 2019).

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* lists Yading visitor numbers separately from Daocheng 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).¹⁵²

¹⁴⁸ Visitors stay in Daocheng the nights before and after their Yading visit (and an additional night if they return to Yading for a second day, or spend another day in the area).

¹⁴⁹ A further 72 establishments with approximately 4,267 rooms were under construction in July 2016, and 54 establishments with approximately 2,908 rooms in October 2017.

¹⁵⁰ The *Sichuan Yearbook 2016* in its entry on Daocheng mentions for *all of* Daocheng a total number of 21,000 beds in 2015, suggesting that the here documented 2017 numbers of beds for Jinzhuzhen, Riwa and Rencun are an underestimate of the available tourist beds in all of Daocheng.

¹⁵¹ The tents set up in the lobbies of some hotels/inns as emergency accommodation remained empty.

¹⁵² 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. The official total Daocheng (including Yading) visitor numbers and tourism income figures would then be over-estimates.

Looking back, the *Master Plan* was consistently too optimistic regarding 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).¹⁵³ The total number of domestic visitor nights in 2015, however, at 1,713,798, exceeded the projection three-fold.

In more detail: Planned visitor numbers are 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 p. 71) further lists different totals, in 2005, 2010, and 2015 of 250,000, 450,000, and 600,000 visitors. (Actual visitor numbers in 1998 and 1999 were 500 and 3,000, after construction of an elementary road from Riwa to Yading in 1999.)

The lack of official foreign visitor numbers for Yading (but not for Daocheng) possibly reflects a data compilation problem. My own experience suggests that on most days some foreign visitors enter Yading. In the old visitor center, their passport information was being entered into a booklet. Perhaps a foreign visitor number of a few hundred persons per year was 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.

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's benefit.

Travel arrangements

Most visitors arrive by car, many by airplane, and a few by bus. As of 5 October 2015, more than 8,000 vehicles had arrived at Daocheng Yading, up from the previous year, and at this point into the Golden Week accounting for more than 80% of all tourists to Yading.¹⁵⁴ Of the 37,680 visitors to Daocheng Yading in the Golden Week in 2015, 7,072 arrived by plane (and then presumably relied on buses to travel from the Daocheng-Yading Airport to Yading).¹⁵⁵ In the Golden Week in 2017, approximately five daily buses ran from Jinzhuzhen to Kangding or Chengdu, two to three buses from Riwa, and an additional 1-3 daily buses plied the road to Yunnan. This implies a maximum of approximately 500 daily visitors by bus—10 buses with 50 seats each—at the very height of the high season.

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

¹⁵³ A breakdown of actual visitor numbers into domestic vs. foreign is available only for 2015.

¹⁵⁴ 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.

¹⁵⁵ 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.

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 (also stuck in traffic) to the Yading Visitor Center at the upper end of Rencun.

Master Plan projection of hotel rooms/beds and hotel quality

The *Master Plan* found tourism facilities in Daocheng 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 a ratio of 2.35 beds per room) to 3,590 beds by 2005, 5,880 by 2010, and 9,200 by 2015. By 2015, the actual number of 21,000 beds (*Sichuan Yearbook 2016*, entry on Daocheng) was more than double the originally projected number.

For 2005/2010/2015, the projected number of beds in three-star hotels was 0/600/900. At least by 2017, this latter figure was likely exceeded by far. 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,¹⁵⁶ none with a 4-star rating, and two dozen hotels with a 3-star or 3.5-star rating. If each hotel had 100 rooms, this implies a total of approximately 3000 rooms or 7,050 beds (3000 rooms times 2.35 beds per room at 3-star level), compared to the *Master Plan's* projected 900 beds at 3-star level (and none above this level). 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 Porsche SUVs would either head for one of these better hotels or for an upmarket Tibetan homestay (inn).

Seasonal fluctuation in hotel room availability and price

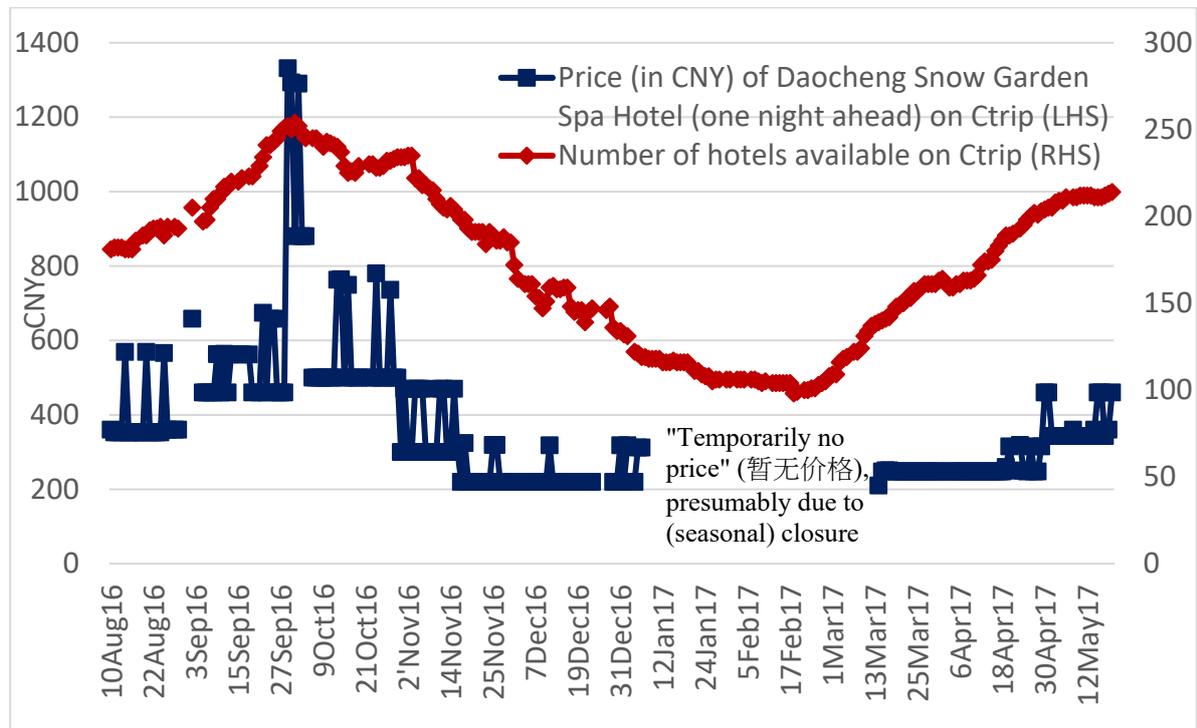
Figure 8 presents a daily record of the number of hotels offering rooms on Ctrip from 10 August 2016 through 19 May 2017, as well as the lowest room price in the Daocheng Snow Garden Spa Hotel (稻城雪域花园温泉酒店)—the best hotel in Jinzhuzhen with a Ctrip rating of 4.5 points/stars—for the next day.

The chart shows the extreme cyclicity throughout the year in the number of hotels offering rooms on Ctrip, with the number falling off in early November and not recovering until early April. The chart likely exaggerates the number of hotels offering rooms: At one point I booked a hotel on Ctrip for early spring but upon arrival found the hotel deserted, locked, and without any instructions on what to do in this case. (My reservation was eventually honoured by another hotel belonging to the same company.) Conversations with hotel employees suggest that most hotels close sometime in late November and do not reopen until March or April the following year.

Room prices (in the Daocheng Snow Garden Spa Hotel) exhibit a similar cyclical behaviour with an extreme peak around the 1 October week, when they reach 3-4 times the

¹⁵⁶ The Holyland Hotel in Riwa 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

standard price of much of the remainder of the year. The pattern of room prices suggests that the 1 May week, unlike the 1 October week, is not a particularly popular time for travel to Daocheng.



Notes: Data were obtained by daily checking (i) hotel availability and (ii) 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>. (An implausible outlier of 18 December 2016 was removed.)

Figure 8. Daocheng County Hotel Prices and Availability 2016-2017 (Ctrip)

References specific to this appendix:

LIU Yuwen, and LIU Shoujiang (刘皓雯, 刘守江). "The Tourism Trash Problem along the Section of National Highway 318 and Provincial Highway 317 from Ya'an to Daocheng, and Solutions" (318 国道及 217 省道雅安至稻城段旅游垃圾问题与治理). *Sichuan Environment* (四川环境) 34, no. 3 (June 2015): 91-95.

Appendix 8. Tourism Income

The *Compendium of Tourism Statistics*, issued by the World Tourism Organization, in its “index of indicators and basic data” (provided online),¹⁵⁷ 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 (ignored here and probably not a major industry in Daocheng beyond small-scale undertakings, such as family offerings of horse riding tours), and
- “Other tourism industries” (not covered here, except for a fraction of trade).

The focus in this appendix is on the first two, hotels and catering, with some consideration of transport and (more limited) of trade.

*Tourism income = visitor nights * CNY 990 (in 2015, across Ganzi prefecture)*

The *Ganzi Statistical Yearbook* provides tourist numbers and tourism income by month.¹⁵⁸ Dividing tourism income by the tourist numbers for the 20 localities of Ganzi prefecture—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 except 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 in earlier years (with an occasional deviation).¹⁵⁹

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 see Table 5.) Consequently, either the tourist numbers or tourism income (or both) are derived values.

Tourism income is likely to be the derived value. The statistics office will not be sending a survey form to every legal person unit and every sole proprietorship in Daocheng asking them the value of their business with tourists, who, at least in the case of transport or trade, could not even be identified, and then end up with a value that is invariant across localities and, to some extent, time.

¹⁵⁷ See <http://statistics.unwto.org/content/compendium-tourism-statistics>, accessed early February 2018.

¹⁵⁸ 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.

¹⁵⁹ 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, 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 also see Appendix 7.

Tourist numbers (visitor nights) likely are at least in part actually compiled values, with perhaps some guesstimates. First, tourist numbers are probably easier to collect—such as via records of establishments of accommodation and Yading tickets sold—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 but possible for a compiled value that is rounded (perhaps due to data compilation difficulties). Third, various separate (news) reports with individual tourist numbers suggest that the official tourist numbers for Daocheng published in the *Ganzi Statistical Yearbook* are at least approximately correct. The likeliest procedure then is one where tourism income per visitor is given (assumed), the tourist numbers are compiled and/or estimated, and tourism income is derived as their product.

The official tourism income figure raises questions about the quality of Daocheng's official GDP and sectoral value-added data. While the 2013 ratio of tourism income to GDP (of 0.3) is credible, by 2015 Daocheng's official GDP value appears to miss out on the effects of the sudden tourist boom. This may be intentional, such as to project the image of a poor county in need of outside help. There could also be practical reasons: Economic activities organized by non-locals may not be reported to the local statistics office, and the statistics office may then not have the capacity to compile accurate GDP data.¹⁶⁰ (This also implies that much of Daocheng's economy is controlled by non-locals.)

Double-check on tourism income per visitor

Daocheng's implicit (official) value of tourism income per visitor (night), CNY 990, can be double-checked against national data.

Nationwide *business revenue* in legal person hotels and catering *above-designated size* in 2015 was CNY 851.22bn, while the number of *all* domestic visitors (“person-times,” 人次)—not limited to hotels of “above-designated size”—was 4.000bn (with the number of ‘zeroes’ suggesting this official number is an approximation). This means that if the PRC 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 revenues in hotels and catering.

More data are available in the 2013 economic census. To the extent that ratios and relationships are likely quite stable over time, the conclusions derived for 2013 also hold for 2015.

In 2013, based on additional data from the 2013 economic census, nationwide employment in below-designated size (legal person) hotels and catering was equivalent to 52% of employment in above-designated size legal person hotels and catering establishments, and employment in sole proprietorships (not legal persons) with their 10.694mio employees

¹⁶⁰ In the case of Tianjin (天津), its GDP estimate was revised downwards in January 2018 in order to “remove the activity of thousands of companies that registered locally to enjoy tax breaks but whose business activities took place elsewhere” (*Financial Times*, 11 April 2018, “China Red-Tape Cuts Prompt Surge in Business Registrations.”) The local statistics office likely is under-staffed, and staff may not be particularly qualified. While non-locals (supposedly) pay local business taxes, the tax authority and the statistics office may not communicate.

equivalent to an additional 234% (Table 4).¹⁶¹ Raising the tourism income value of CNY 213 per visitor—obtained when relating the business revenue of above-designated size establishments to the number of all visitors—by 286% (52% plus 234%) yields tourism income per visitor of CNY 822. This is an upper bound estimate.

Table 4. 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
Legal persons (2013 economic census)					
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 (Statistical Yearbook)					
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
Below-designated size residual legal person units (obtained as difference)					
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
Legal persons / 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
Sole proprietorships (2013 economic census)					
	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			
Per legal persons	12.06	1.55			

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; *Statistical Yearbook 2016*, Table 17-1 (for data on the above-designated size units).

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. Business revenue per employee in sole proprietorships is likely even lower, perhaps half the level in below-designated size legal person units (or 30% of business revenue per employee in above-designated size legal person units). 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 in sole proprietorships to 70% and 40%,

¹⁶¹ Legal person data and sole proprietorship data are provided in the 2013 economic census. The *Statistical Yearbook* has the (legal person) above-designated size data, which allows the derivation of the (legal person) below-designated size data from the (total) legal person data in the 2013 economic census.

respectively, yields a value of CNY 400-450 tourism income per visitor, about twice the value based on above-designated size legal persons only.¹⁶²

This is only one-half of the implicit (official) value of tourism income per visitor of Daocheng in 2013 of CNY 990. (The implicit official value for 2012 is much closer, at CNY 682.) But the estimated value of CNY 400-450 comes with two caveats. First, Daocheng, given its remoteness and exclusivity, may well be a destination with above-average daily tourist income. Second, the estimated value of CNY 400-450 covers only hotels and catering but tourism income is not limited to hotels and catering. As a note below Table 5 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 estimated value of CNY 400-450 should perhaps be doubled to account for transport (assuming about two-thirds of transport is due to tourism) and trade (assuming half of trade is due to tourism), yielding a value of CNY 800-900 that comes reasonably close to Daocheng's implicit (official) value of tourism income per visitor (night) of CNY 990.

Tourism income vs. value-added

In 2013, the national value of business revenue in hotels and catering *legal persons* was near-identical to (3% larger than) *economy-wide* value-added in the sector hotels and catering (reported underneath Table 4). This somewhat fortuitous nationwide relationship allows a rough estimate of tourism value-added in Daocheng.

If one assumes that Daocheng's official tourism income value is correct, and if one assumes that Daocheng is no different from the national economy in that business revenue in hotels and catering by legal persons—a subset of business revenue in all hotels and catering—is approximately equal to economy-wide value-added in hotels and catering (*Economic Census 2013*), then the following additional conclusions regarding Daocheng's GDP follow.

If all of Daocheng's tourism income in 2015 accrued to hotels and catering, and if 'tourism income' is another term for 'business revenue,' then an adjusted value of business revenue that covers only legal person hotels and catering—approximated using the nationwide share of '1/1.43' of all business revenue (Table 5)—is CNY 1.18657bn (CNY 1.6968bn / 1.43). This value, an approximation of value-added in hotels and catering, is equal to twice Daocheng's official GDP in 2015.

If the relationship between business revenue (of legal persons) and (economy-wide) value-added is the same for transport and trade as it is for hotels and catering (in the 2013 economic census), then the approximation via adjusted business revenue is one of value-added in hotels and catering, transport, and trade, and this value is still twice Daocheng's official GDP.

If one were to calculate a corrected GDP figure for 2015 that includes a corrected value for value-added in hotels and catering while retaining the value-added of all other sectors, or a corrected value for value-added in hotels and catering together with transport and trade, the resulting corrected GDP value is 2.91 or 2.88 times Daocheng's official GDP value.

¹⁶² The calculation is $CNY\ 213 * [1 + (0.6 * 52\% + 0.3 * 234\%)] = CNY\ 428$.

To put Daocheng's tourism income yet further into perspective: The share of "travel receipts" in GDP was 18% in Croatia and 13% in Malta and in Cyprus, the European countries with the highest shares of travel receipts in GDP.¹⁶³ If tourism income in Daocheng, with its extreme reliance on tourism, were 50% of GDP, the resulting "true" GDP value for Daocheng in 2015 is six times the official GDP value.

More on business revenue and tourism income vs. value-added

The fact that in 2013 the national value of business revenue in hotels and catering *legal persons* is near-identical to (3% larger than) *economy-wide* value-added in the sector hotels and catering warrants further considerations.

While the value-added data cover economy-wide hotels and catering (including sole proprietorships), the value for business revenue only covers legal persons (excluding sole proprietorships that in 2013 accounted for an additional 155% of employment in hotels and catering, with no data available on their business revenue or value-added). This means that some of the business revenue in legal persons and in sole proprietorships does not constitute value-added but intermediate inputs (which is plausible).

Assuming, as above, that business revenue per employee in sole proprietorships is approximately one-third of that in all legal persons hotel and catering units,¹⁶⁴ an employment figure for sole proprietorships in 2013 that is equal to 155% of employment in legal person hotel and catering units 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 ($1/3 * 155\%$). National hotel and catering value-added then is equivalent to two-thirds of national business revenue across all hotel and catering units. That is plausible.

The Daocheng '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, and if tourist numbers include those in sole proprietorships (likely), then the Daocheng tourism income value also covers the sole proprietorships and Daocheng value-added in hotels and catering then is likely equal to approximately two-thirds of Daocheng tourism income in hotels and catering. (Some of Daocheng's 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.' In that case, no one-third discount

¹⁶³ See http://ec.europa.eu/eurostat/statistics-explained/index.php/Tourism_statistics (accessed 2 March 2018).

¹⁶⁴ Business revenue per employee in sole proprietorships is assumed to be about half that in below-designated size legal person hotels and catering, and thereby business revenue per employee in sole proprietorships is approximately one-third of that in all legal person hotel and catering units. The data, in 2013, are (CNY 104,329 / 2) / CNY 152,068 = 34.30%.

need be applied to tourism income when deriving tourism value-added.¹⁶⁵ The Chinese term 收入, however, is not unambiguously ‘income’ as it can also be translated as ‘revenue.’

In the case of Yading, it is unclear what the tourism income refers to. The Yading entrance fee is CNY 150, and the bus transfer from the Yading Visitor Center to the end of the road CNY 120; these do not add up to the implicit CNY 990 tourism income per visitor (dividing the official Yading tourism income value by the official Yading visitor numbers). With Yading tourism income approximately equal to half of Daocheng’s tourism income, even inclusion of overnight visitors to Yading Village in Yading tourism income is insufficient to reach a value close to CNY 990 per visitor. Thus, either Yading’s tourism income is unrealistic (assuming the visitor numbers are correct) or the use of CNY 990 is justified by some arbitrary split of tourism income and visitor numbers to ‘Daocheng including Yading’ into ‘Daocheng (excluding Yading)’ and Yading.

If ‘tourism income’ were a revenue measure (rather than an income or value-added measure), then some of the Yading tourism income could reflect Yading entrance fees. Entrance fees constitute value-added if they exactly cover the employment and capital costs of running the nature reserve. 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, Yading’s tourism income likely deserves no special treatment. (If anything, it should be higher, given the Yading fees.)

Further findings regarding tourism income

The data presented in Table 4 allow the following additional conclusions for 2013:

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

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

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%.

References specific to this appendix:

Economic Census 2013. 中国经济普查年鉴 2013 (China Economic Census Yearbook 2013). Available online at <http://www.stats.gov.cn>, accessed 14 March 2018.

¹⁶⁵ 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. (Also see Appendix 5, which suggests that close to half of revenue in the hotel business is labor compensation.) The compensation of labor and capital constitutes income, or GDP (value-added).

Table 5. Daocheng County Tourism Income and Value-added

	2007	2008	2009	2010	2011	2012	2013	2014	2015
Daocheng tourism including Yading (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
Tourism income / visitor (CNY)	650	650	650	650	675	682	990	1,048	990
Daocheng GDP (CNY mio) (official data)									
Tertiary sector value-added (VA)	204	237	261	312	390	457	526	554	598
Transport VA	0.6	0.7	0.8	0.9	1.0	1.1	1.3	1.7	2.2
Hotels and catering VA	19.5	14.2	16.3	23.4	26.0	31.2	33.6	36.5	44.6
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 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 / transport VA	74.0	44.6	105.4	180.0	195.9	75.9	135.4	543.9	767.7
Tourism income / hotels and catering VA	2.2	2.1	4.9	6.8	7.7	2.7	5.1	25.8	38.1
Tourism income / hotels VA				26.7	31.2	10.8	21.3	105.6	150.1
Tourism income / catering 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
Nationwide tourism data: legal person units above-designated size, VA is economy-wide									
(1) 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) Hotels: number of rooms per engaged person		1.08	1.01	1.07	1.18	1.59	1.27	1.62	1.76
(3) 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) 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) '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
Implied Daocheng County values									
(6) Engaged persons obtained as Daocheng tourism income / (1)	402	249	648	1,153	1,254	481	965	4,992	8,238
(7) 'Tourism' VA (CNY mio) proxied by: Daocheng tourism income * (5)	65	41	113	206	242	101	216	1,288	2,422
(8) This Daocheng 'tourism' VA / Daocheng official GDP	0.3	0.2	0.4	0.7	0.8	0.2	0.4	2.3	4.1

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

Notes:

Above-designated size: Annual income of main business of CNY 2mio and above (*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” (年营业额) 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 11 and Table 12, 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 1,101mio and CNY 595mio; 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).

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

Appendix 9. Hotel and Room Count

A visual survey of places of accommodation in Jinzhuzhen, Riwa, Rencun and Yading Village conducted in July 2016 and in October 2017 yielded a set of data on the number of places of accommodation and the number of rooms. Buildings under construction were identified as hotels either due to their size and layout, or because, as was frequently the case, of signs explicitly stating that this particular building was available for sale or lease to be turned into a hotel. The count of hotel rooms typically relied on a count of windows (or window holes in the wall) of the type that suggested hotel rooms (or future hotel rooms); in a few instances, actual data was available, which then also suggested that the window count method is quite reliable (with perhaps at most a 10% margin of error).

In July 2016, Jinzhuzhen, Riwa, Rencun and Yading Village had a combined total of 201 hotels (including inns and hostels), with a further 82 (an additional 41%) under construction (Table 6). By October 2017, 242 hotels were in operation, 41 more than in the previous year, and a further 64 (an additional 26%) were under construction, with, however, construction in most cases apparently having stopped. The largest construction projects seemed to be without activity at both points in time, in July 2016 and in October 2017, and without sign of progress between these two dates.

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	20	31	42	15
D: Yading Village	10	10	10	10
A + B + C	191	72	232	54
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 (which typically confirmed my estimate).

Unfinished hotels under construction tend to be large. In the case of a room count (Table 7), in July 2016 the four locations had a combined total of (approximately) 7,334 rooms in operation but (approximately) 4,467 rooms under construction, equal to 61% of the existing

stock of rooms (while the number of hotels under construction was equivalent to only 26% of the existing stock of hotels).

Table 7. Daocheng County Room Count

	July 2016			October 2017		
	Existing		Under	Existing		Under
	Hotel	Inn/Hostel	construction	Hotel	Inn/Hostel	construction
A: Jinzhuzhen	3432	578	2435	4199	538	1978
B: Riwa	2344	110	358	2616	210	192
C: Rencun	670		1474	1768		738
D: Yading Village		200	200		200	200
A + B + C	6446	688	4267	8583	748	2908
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.

The total count of available rooms increased significantly between 2016 and 2017, from 7,334 in 2016 (6,446 plus 888 in Table 7) to 9,531 in 2017, a 30% increase in available rooms compared to the 20% increase in completed hotels. Another 3,108 rooms were under construction in 2017, down by one-third from the 4,467 rooms under construction in 2016. With construction having largely stopped across all unfinished hotel building sites in 2017, this implies that a number of hotel rooms equal to one-third of finished capacity was perhaps not to be completed any time soon.

The *Master Plan* assumes an average 2.35 beds per room. The room count implies that Jinzhuzhen, Riwa, Rencun and Yading Village were able to accommodate 22,398 visitors in October 2017.¹⁶⁶

With visitors inevitably spending at least two nights in Daocheng (to visit Yading for the full day needed for access and sightseeing), visitor numbers in the Golden Week of 2017 likely reached into the 30,000s. This exceeds the accommodation capacity in Jinzhuzhen, Riwa, Rencun and Yading Village. Excess demand is then met by accommodation further away, home stays, and tent camps set up by Tibetans. Some self-driving tourists arrive in camper vans or bring their own tents to camp in a Tibetan’s courtyard or along the road between Jinzhuzhen and Riwa (a cold and typically moist affair). Hotel rooms remained available during the Golden Week of 2017, albeit at prices up to ten times regular summer prices.¹⁶⁷

¹⁶⁶ The *Sichuan Yearbook 2016* in its entry on Daocheng mentions for *all of* Daocheng a total number of 21,000 beds in 2015, suggesting that the here documented 2017 numbers of beds for Jinzhuzhen, Riwa, Rencun and Yading Village are an underestimate of the available tourist beds in all of Daocheng.

¹⁶⁷ The tents set up in the lobbies of some hotels/inns as emergency accommodation remained empty in 2017, suggesting somewhat of an improvement over the accommodation situation in earlier years in that the influx of tourists did not meet potential hosts’ expectations.

Appendix 10. 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 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 (the prefecture seat) Kangding twice a week).

In 2017 and 2018, 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. In mid-February 2019, low season, the flight frequency was still one or two flights per day; all flights originated in and returned to Chengdu.

Only one type of plane flies to Daocheng-Yading Airport, namely the A319. 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.¹⁶⁸ Assuming 150 seats and multiplying by 2.5 flights per day yields a maximum 375 inbound and 375 outbound passengers per day, or 273,750 passengers per year.

Daocheng-Yading Airport's official handling capacity of 280,000 passengers per year perfectly matches the estimated number of passenger seats per year. But the official handling capacity appears an underestimate.¹⁶⁹ With five flights per day during high-season, the handling capacity is at least double. Given the half dozen check-in counters and two security lanes, the airport would seem to be able to process at least 250 outgoing passengers an hour, or 1250 in the course of a morning. Adding to this an equal number of incoming passengers, who require no particular processing beyond luggage handling, and the total easily exceeds 2500 passengers a day (1250 outgoing, 1250 incoming, in the course of a morning).¹⁷⁰ The actual capacity then exceeds the official number of 280,000 passengers per year three- to four-fold. Perhaps the official figure for the "handling capacity" is simply a realistic estimate of the annual number for passenger turnover.

Construction of the airport can probably not be justified on economic grounds. The airport cost CNY 1.58bn to build (officially declared costs). Assuming an airport lifetime of 20 years

¹⁶⁸ See <http://www.airbus.com/aircraftfamilies/passengeraircraft/a320family/a319/>, accessed 30 June 2016.

¹⁶⁹ 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.

¹⁷⁰ Probably due to weather patterns, all Daocheng-Yading Airport flights tend to land and depart in the morning.

(too short) and zero interest costs (too low), the construction cost, spread linearly over twenty years, averages CNY 79mio per year. Add maintenance and running costs of on the order of CNY 20mio per year.¹⁷¹ 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 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 into Sichuan) 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 mis-calculation.

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.¹⁷²) 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-Yading Airport 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 (when the plane does not depart, or does not land and returns to Chengdu for another attempt to land later in the day), in unpredictable fashion, and delayed passengers on flights out need to be moved back to Jinzhuzhen and accommodated for at least one night. One has to wonder if the airlines actually want to fly to Daocheng, or are being pressured by government or regulatory agencies into flying to Daocheng.

¹⁷¹ 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.

¹⁷² The author's two flights in 2016 were both marred by problems: the first flight was eventually delayed by 28 hours, the second flight consisted of a round-trip Chengdu-Daocheng without touching down in Daocheng, followed by an immediate second, successful attempt from Chengdu to Daocheng after refueling. A third flight, out of Daocheng in July 2017, was significantly delayed and airport staff allowed me to switch to another flight, with another airline, in order to be able to catch my connection in Chengdu. A fourth flight from Chengdu to Daocheng in late September 2017 was on time.

Appendix 11. Fiscal Data (and Banking Data)

For a brief summary discussion of the fiscal data, see the text of the article. A few additional observations follow below.

While Daocheng's fiscal expenditure pattern contains no surprises—the government provides typical public goods from public safety to health and education (Table 8)¹⁷³—the revenue side exhibits anomalies: Daocheng's revenues are not production- but sales-based. In 2015, the value-added tax (VAT) and the corporate income tax accounted for only 4% and 6% of local fiscal revenue, compared to 20% and 18% nationwide.¹⁷⁴ Sales taxes accounted for 35% of local fiscal revenue (compared to nationwide 13%) and “fund income”—predominantly state-owned land use rights transfer income—for 19%.¹⁷⁵

The low share of VAT in Daocheng's revenues also implies that the central government's tax extraction (on which no data are available) from Daocheng is likely minimal. The central government's share of VAT receipts is 75%, which means that the central government collects VAT in Daocheng equivalent to 12% of Daocheng's fiscal revenues. Daocheng's large fiscal expenditures, thus, cannot be financed just through refunds of the central government's VAT receipts to the locality.

Revenue streams have been highly variable over time, with the contributions to local fiscal revenue of the three exhaustive components tax revenue, non-tax revenue (with a significant item “other income”), and “fund income” fluctuating from year to year. 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.

The banking system channels funds out of Daocheng, in line with the practice in other rural localities in the PRC. In 2015, deposits were equivalent to 315% of GDP but loans equivalent to only 87% of GDP. Loans tended to be long-term or medium-term (90.2% of loans) and highly focused on agriculture (98.6% of loans).

These data may not reflect the true picture in Daocheng. Lending for larger investment projects, such as for construction of a large hotel, could well be organized locally, but, given the size of lending involved (requiring higher-level bank branch approval), be ultimately booked by higher-level branches of the financial institution. Lending may also occur through off-balance sheet transactions of local financial institutions, or by other financial institutions outside Daocheng, perhaps particularly relevant if the investor is an outside investor.

One type of local lending is mortgage lending. In 2017 the director of the Jinzhuzhen branch of the Agricultural Bank of China was a frequent presence in the sales office of the Yading Tianjie development, supposedly on the look-out for potential customers (private individuals) whose purchase of space in the Yading Tianjie development he could finance with a loan.

¹⁷³ Transportation's share of fiscal expenditures in 2015 is relatively high at 22.4% (4.6% in 2014). According to Daocheng's official GDP statistics, the county had virtually no value-added in the transportation sector. This implies that the government purchased transportation services from *non-local companies* to the tune of half the value of the county's GDP.

¹⁷⁴ National values (for 2015) are from the NBS database (accessed in February and March 2018).

¹⁷⁵ Highly variable “fund income” over time implies corresponding fluctuations in local revenues. For a complete set of fund data see Appendix 11.

Table 8. Daocheng County Fiscal Revenue and Expenditure Shares (%), complete table

	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		73.8	0.9	1.5	1.4	1.5	1.0	1.8	1.1	4.6
Administrative fees and charges		0.6	0.2	1.5	1.3	1.5	1.1	3.6	7.3	10.9
Penalty revenue		0.1	0.5	1.2	0.9	1.0	0.6	1.5	1.7	0.8
State-owned capital operating income		0.7	0.6	0.8	0.7	0.6	0.0	1.3	0.0	0.0
State-owned resource/asset usage rev.		0.5	0.2	2.1	2.7	1.7	1.4	2.9	1.0	0.6
Other income		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		18.4	17.8	10.9	11.8	10.2	10.3	11.4	9.0	10.0
National defense		0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1
Public safety		7.5	7.1	6.9	7.9	4.3	5.1	4.7	6.0	4.4
Education		11.4	9.1	9.2	9.7	9.7	13.1	10.9	5.7	8.6
Science and technology		0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1
Culture, sports, and media		1.8	1.0	0.9	1.6	1.4	1.0	2.5	1.4	1.0
Social security and employment		14.0	16.4	12.9	10.1	7.6	8.2	8.3	7.0	8.2
Health		5.8	6.9	9.8	7.6	5.5	6.2	7.7	5.1	6.2
Energy saving, environmental protection		8.5	8.6	8.9	9.4	4.6	2.3	7.1	2.8	2.5
Urban and rural community affairs		1.9	1.9	0.1	0.7	0.5	8.4	6.1	16.2	0.7
Agriculture, forestry, and water affairs		6.1	10.6	6.5	13.8	9.1	9.4	13.0	13.8	15.1
Transportation		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	0.3	0.6	0.5	0.2	0.2	0.2	0.2
Business services etc.		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	0.3	0.3	0.0	0.0	0.0
Earthquake recovery, reconstruction exp.		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	0.3	0.8	0.3	1.6	1.9	2.6
Housing protection exp.		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	0.9	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	0.1
Other expenditure		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.

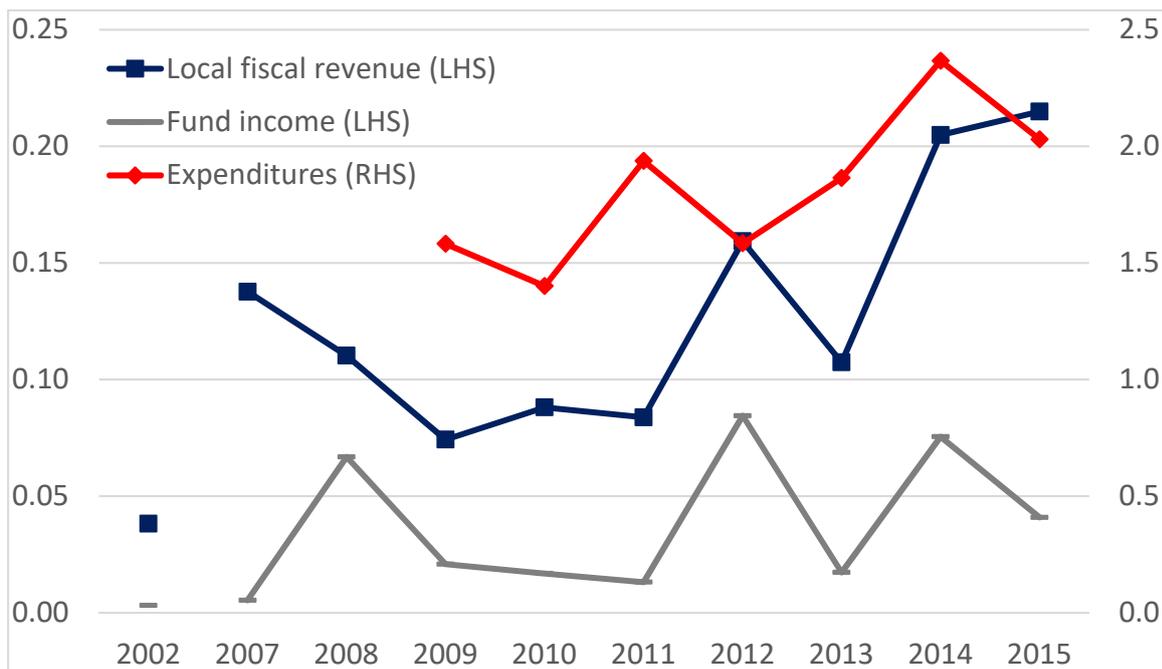
Source: *Ganzi Statistical Yearbook 2003, 2008, ..., 2016.*

Table 9. 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

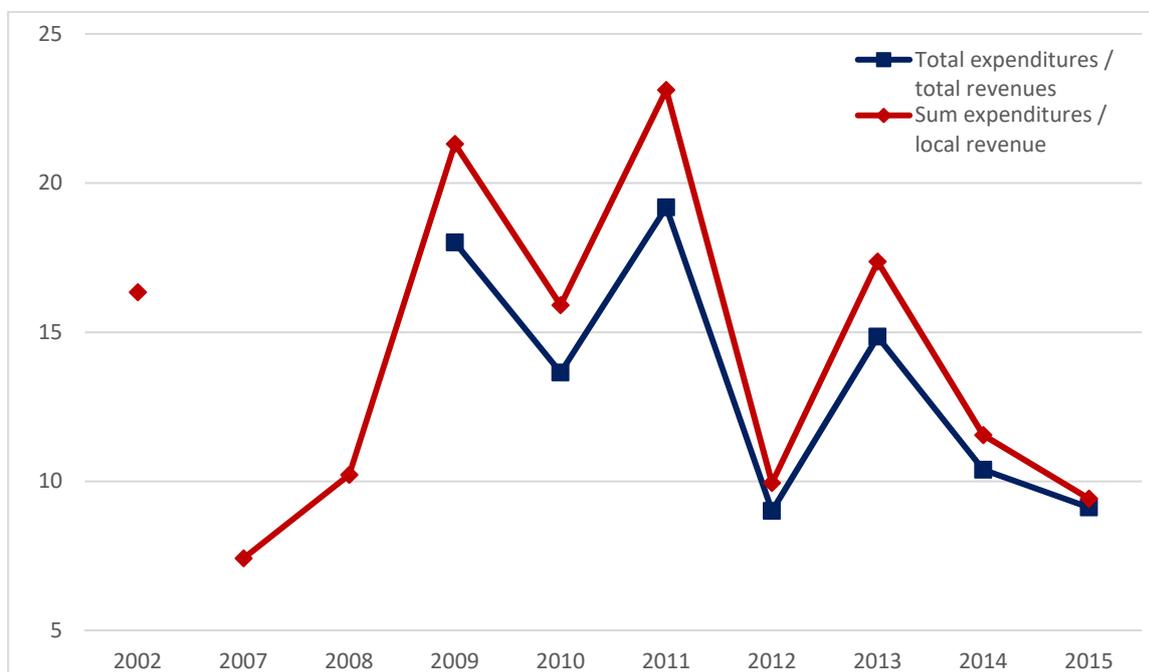
Note: entries with value 0.0 were removed for ease of reading the table.

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



Source: Table 8.

Figure 9. Daocheng County Ratios of Budget Measures to GDP



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 8.

Figure 10. Daocheng County Ratios of Fiscal Expenditure to Revenues

Appendix 12. Costs of Road Construction

According to a construction 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 amount appears so large that one cannot help but wonder if the notice is off by a factor of 10. (CNY 1.25bn is more than the *Master Plan* budgeted for Daocheng infrastructure measures, such as road construction, for all 15 years from 2001-2015.)

Data for the U.S. suggest that construction of a rural 2-lane undivided road costs approximately USD 2-3mio, while resurfacing a major highway costs USD 157,000 per mile.¹⁷⁶

The provincial road from Daocheng-Yading Airport to Riwa is 120km long. In addition, the original road to Yunnan that branches off in Sangdui Township runs for another perhaps 40km within Daocheng, and the new road from just North of Riwa towards Xiangcheng may equally run for perhaps 40km within Daocheng. This makes for a total of 200km (124 miles) of roads that still excludes road construction within the urban areas of Jinzhuzhen and Riwa.

Road construction in Daocheng typically implies fortifying an existing dirt road and surfacing it for the first time. If one assumes that such a process would cost USD 2mio per mile in the U.S. and that the exchange rate is CNY 6.5 per USD, then the domestic cost of 124 miles (200km) of road construction in Daocheng is approximately CNY 1bn. One could argue that road construction should be cheaper in the PRC because of cheaper labor, but, on the other hand, the road construction machinery could well be imported from the U.S. and therefore be more expensive, and road construction in such a remote location at such high altitude with difficult road building conditions may well increase construction costs.

The cost of bridge construction per mile likely is a multitude of the cost of road construction per mile; the cited Riwa construction costs may be an indicator of just how expensive bridge building can be. The 124 miles of road construction, while not comprising a bridge the size of the one in Riwa, still includes many smaller bridges. One may thus want to double or triple the road construction costs derived in the previous paragraph.

¹⁷⁶ See <https://medium.com/@TimSylvester/i-agree-it-sounds-astronomical-but-i-actually-understated-the-costs-according-to-artba-2e8baeac2a46>, accessed 11 February 2019.

Appendix 13. Employment and Population Data

Daocheng's employment data are incomplete. The population data allow a first estimate of total employment before moving on to the available formal sector employment statistics and then alternative estimates of employment.

Population and employment

Daocheng's permanent resident population in 2015 was 32,709 persons (Table 10). Applying the 2015 nationwide ratio of employment to population (of 56.3%) to the Daocheng permanent resident population yields 18,415 employees.¹⁷⁷ Alternatively, Daocheng's registered household population was 31,643 (public security bureau record), 3% lower. The latter figure comes with a breakdown into four age categories. Applying nationwide age-specific labor force participation rates to the Daocheng population by age yields 16,457 employees (52.0%).¹⁷⁸

Table 10. Daocheng County Population (2015)

Public security bureau record			
	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		
Resident population			
	Total	Urban (城镇)	Rural (乡村)
Persons	32,709	7,739	24,970
In %		23.7	76.3

Sources: *Ganzi Statistical Yearbook 2016*.

Formal sector employment (and labor remuneration)

Daocheng's official employment statistics report only 3,880 employees (in 100 work units, 单位); 219 of these employees are employees of private units (Table 11). Since these statistics report only 8 employees in agriculture, they must exclude the rural (agricultural) population that accounts for 87% of Daocheng's registered household population (Table 10).

¹⁷⁷ For the national ratio see the employment and population data in the NBS database, accessed 2 March 2018.

¹⁷⁸ Employment was calculated by applying the national age-specific employment shares—obtained from the data of the long-form questionnaire in the *Population Census 2010*, after aggregation across age cohorts to match the age groups for which Daocheng population data are available—to the Daocheng population data. (Daocheng's age group 18-35 was assumed to cover ages 18-34 as the subsequent Daocheng age group is 35-60. With the youngest age group in the Daocheng population statistics being the age group "younger than 18," Daocheng's population age 16 and 17 was assumed to be in the same proportion to the age group 18-34 as nationwide.)

Table 11. Daocheng County Official Employment (2015)

	Non-private units				Private units			
	Number of units (1)	Average employment (2)	Labor remuneration (yuan) per employee (3)	Sector share in total employment (%) (4)	(1)	(2)	(3)	(4)
Total	84	3,661	66,275	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	51,971	2	3	40	33,075	18.3
Construction								
Transportation	2	431	82,889	12				
Information technology								
Trade	2	17	49,824	0	3	8	36,125	3.7
Hotels and catering	4	187	43,043	5	4	100	33,520	45.7
Finance	2	55	78,018	2				
Real estate								
Leasing								
Science	3	181	16,359	5				
Water conservancy	2	199	37,337	5	1	27	30,333	12.3
Household services								
Education	6	539	71,866	15				
Health	5	254	74,476	7				
Culture	3	31	85,032	1				
Public administration	53	1,697	70,361	46				

Note: "Average employment" denotes average annual employment.

Sources: *Ganzi Statistical Yearbook 2016*.

Of the 3,880 employees, 94% (3,661) work in "non-private" units. Almost half of the 3,661 official employees in non-private units work in public administration (46%), followed by education (15%), transportation (12%) and health (5%). In other words, more than three-quarters of non-private formal employment is in public goods sectors.

The fact that the rural/agricultural population is excluded from the employment data leaves as source for the 3,880 formal employees either the "non-agricultural" population of 4,265 persons (implying an employment rate of 91%), or the urban permanent resident population of 7,739 persons (implying an employment rate of 50%, more likely to be applicable).

The formal sector 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 and are then ignored in the employment statistics. In a second instance, transportation accounts for 12% of formal sector (non-private) employment and science for 5%, but each of these two sectors accounts for less than 0.5% of value-added, which is not credible.

The formal sector employment data appear heavily biased towards the public (non-private) sector. In a breakdown according to the type of unit, 42% of employment is in government

departments and 37% in (state) administrative units; only 21% is in enterprises, the ownership of four-fifths of which is undefined (Table 11).

The prevalence of the state is also 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-regular employment in state units. The 16.9% value is close to the share of not-on post employees, at 16.4% (Table 11). 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.

The official employment data come with values for labor remuneration. Aggregate labor remuneration in administrative units and government departments in Daocheng in 2015 amounted to 32% of official GDP, three times the share of the public sector wage bill in OECD countries (10%, 2000-2013 average) and much higher than the typically below 10% share in developing economies.¹⁷⁹

Labor remuneration of formal employees is twice as high in non-private units (CNY 66,725) than in private units at (CNY 31,164, Table 11). Average labor remuneration across all formal employees of CNY 64,293 is more than twice as high as the official *urban household* per capita disposable income of CNY 26,030. The difference can presumably be accounted for by income taxes and the fact that some labor remuneration may not constitute disposable income, as well as by potentially differing coverage of the two variables (the compilation of household income statistics may not be limited to formal employees).

Summary estimates of actual employment / supporting documentation for numbers presented in the text

Assuming the nationwide share of laborers in the population (56.3%) equally applies to Daocheng, its permanent resident population of 32,709 translates into 18,415 laborers. In other words, on the order of 14,500 laborers are missing from the official employment statistics (18,415 less 3,880 formal employees). With an official “agricultural population” of 27,378, many of the missing laborers will likely be found in subsistence agriculture, and possibly in informal employment.

A rough estimate of total Daocheng employment in 2015 is 33,000:

- agriculture: 15,000 (as an approximation of the rural population times the nationwide employment share of the population);
- tourism (hotels and catering, transport, one-third of trade): approximately 13,250 (7,500, 3,250, and 2,500, based on related variables, such as in the case of hotels the number of hotel rooms and typical ratios of hotel staff per hotel room [more details below]);
- construction: approximately 1,500 [more details below]; and
- all other, formal non-agricultural employment: more than 3,137 (the official figure of 3,880 less 287 formal employment in hotels and catering, 431 in transportation, 17 in trade, and 8 in agriculture), likely an underestimate of employment in the remaining

¹⁷⁹ For the international comparison, see the *Financial Times* of 6 March 2018 (p. 9) “FT Big Read. Middle East.”

sectors.

Employment in hotels and catering

Of the total of 3,880 employees (Table 11), only 287 work in hotels and catering, 441 in transport, and 25 in trade. That does not match reality. Dividing a room estimate for Daocheng in 2015 of 8,936 rooms by the nationwide number of rooms per engaged person in above-designated size legal unit hotels (1.76, Table 5) suggests 5,077 employees in the *hotel* industry in Daocheng.¹⁸⁰ The nationwide share of *hotel* employees in the number of engaged persons in ‘hotels and catering’ (0.46, Table 5) then implies 5,960 employees in *catering* in Daocheng. Employment in hotels and catering sums to 11,037.¹⁸¹ Since not all establishments of accommodation in Daocheng are “above-designated size legal unit hotels”—some are below-designated size establishments or sole proprietorships, which employ fewer staff per room—one may want to lower this employment estimate from 11,037 by perhaps one-third, to 7,500. (Also see alternative, detailed calculations below.)

Employment in transport and trade

Across Ganzi prefecture, transport value-added is equivalent to three-quarters of hotels and catering value-added (see note below Table 5). If value-added per employee in transport is assumed to be twice that in hotels and catering (and all transport is assumed to be related to tourism), then 3,250 tourism-related persons are employed in the sector transport ($0.75 * 0.5 * 7,500$, with the figure of 7,500 employees in hotels and catering derived above).

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 5). If value-added per employee in trade in Daocheng were similar to that in hotels and catering, then trade would account for another 2,500 tourism-related employees ($1/3 * 7500$) in Daocheng.

A rough estimate of tourism-related employment in hotels and catering, transport, and trade then is 13,250 (7,500 plus 3,250 plus 2,500).¹⁸²

Employment in construction

In the official statistics, employment in the construction sector in Daocheng is zero, as it is in several other sectors, suggesting data compilation or definitional issues (such as construction workers not being considered formal employees). In contrast, official construction value-added is non-zero. An estimate of construction employment is 1,500.

¹⁸⁰ The room number is obtained by dividing the reported number of 21,000 hotel beds (*Sichuan Yearbook 2016*, entry on Daocheng) by the *Master Plan*’s estimated number of beds per room of 2.35.

¹⁸¹ An international standard of employment per hotel room yields a similar number for hotel employment; see Appendix 8.

¹⁸² Alternative approaches to calculating employment in tourism include an approach based on tourism income (Appendix 8), which suggests tourism-related employment across Daocheng of 10,000-16,000 persons.

More on tourism employment

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

Tourism-related employment in Daocheng then 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 in 2013 approximately equivalent to 60% of that in above-designated size legal person hotel and catering units in 2013 (*Economic Census 2013*, Table 4), and that in sole proprietorships an assumed 30%, weighting by the employment figures (Table 4) implies average business revenue per employee across hotels and catering in 2013 of CNY 91,401, approximately half (51.73%) that of the above-designated size legal person hotel and catering units in 2013.¹⁸³ For 2013, dividing Daocheng's 2013 tourism income of CNY 170.56mio (Table 5) by this estimated nationwide business revenue per employee yields an employment number of 1,866.

For 2015, dividing Daocheng's 2015 tourism income of CNY 1,696.66mio by 51.73% of 2015 nationwide above-designated size legal person unit business revenue per engaged person of CNY 206,007 yields an employment number of 15,921. Given personal observations on the ground, this estimate appears on the high side. One may question the estimate because much of employment in sole proprietorships in Daocheng likely is part-time, and in many instances probably limited to the high season of July through October. Additionally, 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 (by dividing tourism income by an estimated value of business revenue per employee that is too small).

A perhaps lower bound estimate of tourism employment is obtained by ignoring sole proprietorships altogether. Dividing Daocheng 2013 tourism income of CNY 170.56mio by the 2013 economic census (legal person) nationwide value of business revenue per employee in hotels and catering of CNY 152,068 implies 1,122 employees. The 2013 economic census nationwide value of business revenue per employee equals 86.06% of nationwide business revenue per employee in above-designated size legal person units (*Statistical Yearbook*). Taking such an adjustment to the 2015 nationwide value of business revenue per employee in above-designated size legal person units of CNY 206,607, implies—given Daocheng's tourism income of CNY 1,696.66mio—9,570 employees in 2015.

¹⁸³ 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).

An alternative employment figure, for hotels only, can be derived from employment-per-room data. The Chinese national statistics (Table 5, with 1.76 rooms per engaged person) imply an average of 5.7 persons per 10 rooms, resulting in 5,077 hotel employees.

The World Tourism Organization publishes alternative employment-per-room data. 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.¹⁸⁴ The average establishment of accommodation in Daocheng is probably a 3-star hotel (or lower), suggesting an average 8 staff (or fewer) per 10 rooms. At the *international standard* of 8 persons per 10 hotel rooms in 3-star hotels and an approximate 7,000 hotel rooms in 2015, hotels (alone) in Daocheng employed 5,600 persons; this is 10% more than 5,077 persons based on the Chinese nationwide average.¹⁸⁵

Given the 2013 economic census nationwide employment data, catering could employ the same number of laborers as do hotels. For transport, a rough estimate of employment in Daocheng based on personal observations (as alternative to the calculations above) 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 serving the tourism business as bus, SUV, or jeep drivers.

A good part of wholesale and retail trade also serve tourism, adding perhaps another 1,000-2,000 laborers. This brings total tourism-related employment again to a level of around 15,000.

Tibetan population

An employment figure of 33,000 (32,887 in the employment breakdown above) also has implications for the population value. On the order of 14,000 employees (33,000 less 15,000 agricultural laborers, less 3,872 non-agricultural, formal employees)—plus their non-working family members—appear not to be considered residents in the official statistics.¹⁸⁶ At the nationwide share of employees in the population of 56.3%, this translates into 25,000 additional residents in Daocheng, bringing the grand total to approximately 58,000 residents (25,000 + the official 32,709).

With an official Tibetan population of 31,564 (96.5% of 32,709 official residents), the actual Tibetan population share (in the 58,000 population) becomes 55%. The non-Tibetans then number 26,145, as the sum of 1,144 officially recognized non-Tibetans and 25,000 additional residents. If all 26,145 non-Tibetans were located in urban areas of Daocheng and only

¹⁸⁴ See <http://www.city-of-hotels.com/165/hotel-staff-en.html>, accessed 2 March 2018.

¹⁸⁵ Employment in Daocheng's hotels could deviate from the international as well as the national standard for a number of reasons. Thus, capacity utilization in Daocheng could be particularly low given the strong seasonality of tourism in Daocheng. Using the national number of rooms per engaged person in above-designated size legal person hotels as reference point 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 in Daocheng. On the other hand, given the relatively low labor costs in Daocheng and perhaps low average efficiency of labor in Daocheng, staffing could also be higher than elsewhere.

¹⁸⁶ Many Han workers return to their place of origin when tourism winds down in November / December until mid-March. Any survey-based population count, as the permanent resident count likely is, could occur late in the year. The 2010 population census date was 1 November, though the actual survey may have been conducted later.

Tibetans lived in rural areas (with an official rural population of 24,970), the 26,145 non-Tibetans would outnumber the 6,594 Tibetans in urban areas approximately 4 to 1.

Separately, the *Master Plan* allows an estimate of the non-Tibetan population of Jinzhuzhen in 1999. 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. Of the Jinzhuzhen population, 70% were Han. For these official numbers to match, and under the assumption that everyone outside Jinzhuzhen is Tibetan, the population of Jinzhuzhen (a figure not published) must have been 1561. 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 official Tibetan share of the Daocheng population would be 92% (not “more than 96%”). The 70% Han share of the Jinzhuzhen population in 1999 makes sense given that Jinzhuzhen was established as an administrative center of the Chinese government, located between several Tibetan hamlets (agglomeration of houses amidst fields), which by now are no longer distinct from the Chinese town. (These 1999 figures ignore those Han who are not considered residents in the official population statistics.)

Employment issues

Gerschenkron (1962a) raised the concern that in a ‘backward’ economy labor is relatively expensive because the labor force is not an industrial one. Another employment aspect is the commodification of labor. The issue of industrial labor—with labor selling their time in exchange for compensation rather than work done to achieve a particular task—is well-known in the literature (for example, Ayres, 1952, Thompson, 1967) and has recently been raised by Tang and Eom (2019) for the case of labor in Chinese firms in Africa. All the elements of industrial labor, from rigid clock-time to discipline, division of labor and supervision, would seem to run counter to the traditional Tibetan subsistence lifestyle.

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Table 12. Daocheng County Formal Employment (2015), complete table

	Non-private units					Private units				
	Num-ber of units	Ave-rage em-ploy-ment	# on-post empl.	Labor remuneration (yuan) per em- ployee	on-post empl.	Sector share in total employ-ment (%)	Column titles as on left			
	(1)	(2)	(3)	(4)	(5)	(6)	(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				

“Average employment” denotes average annual employment. “On-post” denotes 在岗职工.

Note: The “average employment” numbers used here contrast with the Daocheng number of “engaged persons” reported in Table 5, which are end-year numbers. The differences in 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.)

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 100 (work) units and a total number of average annual employment of 3,880 (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*.

Appendix 14. 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 Daocheng *Master Plan*'s objective for Daocheng, which around 2000 had practically no income from retail sales to tourists, was 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 (2001-2015) 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 mushrooms.¹⁸⁷ 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 at best account for a lower single-digit percentage share of tourism income. Local dried fruit were not on sale in Jinzhuzhen and Riwa in 2016 and 2017.¹⁸⁸

The Matsutake mushroom prominently features in restaurants. The *Master Plan* suggests a harvest of 200 tons, presumably annually, valued at CNY 1.1mio (*Master Plan*, Table 3.4.1, p. 103), without, however, providing a time frame or expanding on current output at the time of writing of the *Master Plan*.¹⁸⁹ 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 exporting to Japan by plane.¹⁹⁰

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 transactions and the returns appear minuscule. The necklaces sold by Tibetan hawkers at rock-bottom prices (CNY 15-20) are likely produced in a Chinese factory elsewhere (or imported from Nepal), meaning the local Tibetans are traders, not producers, which limits local income and value-added.

¹⁸⁷ The dried fruit production supposedly requires an investment on the order of CNY 10m, while the cultivation of Yaks requires an investment of CNY 778,000 to fence off 19,000 mu of land on which to raise 1,900 Yaks,

¹⁸⁸ 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 selling apples and walnuts had set up temporary stalls at the entrance to the wet market. These are very small-scale, localized undertakings; the (excellent) Xiangcheng apples were not available in Riwa, let alone in Diqing in neighboring Yunnan, or at the fruit stalls (formal and informal) in the Tibetan area of Chengdu.

¹⁸⁹ By 2016, the Matsutake price was around CNY 70 per Chinese pound (500g), compared to the price of CNY 5.5 implicit in the *Master Plan*'s values.

¹⁹⁰ 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.

Appendix 15. Household Income

Official per capita GDP in Daocheng in 2015 of CNY 18,442 per person was one-third the nationwide average of CNY 50,251. The official household income statistics paint an almost equally bleak picture (Table 13). Average household income per person in 2015 of CNY 12,735 was just above half the nationwide figure and came with a more than three-fold discrepancy between urban and rural household incomes.¹⁹¹

But the official household income statistics provide only a partial picture.¹⁹² These income statistics ignore several sources of income:

- Matsutake and Caterpillar mushroom harvests. For individual households, income from mushroom harvesting can run into several tens of thousands of *renminbi*.
- Bartered labor. Building a home is a household activity and typically involves two dozen neighbors and relatives on a work exchange basis.
- Informal labor.
- Rural land leases.

Altogether, these unreported household income sources are likely to raise official household income by about 70%, to the nationwide average (second-to-last row, Table 13).¹⁹³

One could further consider the fiscal in-transfers, reflecting the extraordinary public goods provision relative to local income levels, from education to health care and various government services. These transfers imply a subsidy for every Daocheng resident equivalent to two and a half times official average household income.¹⁹⁴ Summing official per capita household income, estimated informal income, and fiscal in-transfers yields a per capita income value of CNY 54,502, two and a half times the nationwide average.

Per capita income data are averages and convey no information about income inequality. Average labor remuneration for formal employees in non-private units in 2015 was CNY 66,275,¹⁹⁵ eight times rural disposable income per person. In the largely unrecorded tourism economy, with employment four times larger than in the formal economy, average labor remuneration may be up to twice that of formal employees in non-private units.¹⁹⁶ To the extent that such tourism income is earned by non-locals, these numbers suggest a significant, perhaps six-fold income gap between non-locals and locals (including all sources of income).

¹⁹¹ Rural household income presumably reflects official imputations of the value of self-produced self-consumed agricultural products since agriculture is predominantly subsistence agriculture. Almost all urban household income is wage income (88%, Table 13). The small share of transfer income, 2%, suggests that few residents venture outside their county to work and send remittances home.

¹⁹² While Daocheng's official GDP statistics vastly underestimate actual GDP, the household income statistics could yet be somewhat accurate in their coverage of the largely Tibetan, local (official resident) population. Data are presumably collected directly from resident households.

¹⁹³ The production and informal sale of local "special products" may yield yet additional income; see Appendix 14.

¹⁹⁴ This doesn't yet consider the significant implicit financial in-transfers for road and airport construction and maintenance.

¹⁹⁵ See Appendix 13.

¹⁹⁶ Attributing all tourism income to the approximately 13,250 tourism-related employees implies CNY 128,075 per employee.

Table 13. Daocheng County Household Income (2015)

	CNY
Reference: nationwide household (disposable) income per person (可支配收入)	21,966
I. Household income per person (A, B, weighted by permanent resident numbers)	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	1,000
III. Caterpillar mushroom harvest^b per person	2,500
IV. Bartered labor^c (for example, housing construction)	1,250
V. Informal labor^d	2,000
VI. Rural land leases^e	2,000
Sum: II + III + IV + V + VI	8,750
Sum: I + II + III + IV + V + VI	21,485
VII. (Total fiscal 'expenditures - revenues') per person	33,017

Notes:

GDP per permanent resident in Daocheng is CNY 18,442 (nationwide: CNY 50,251).

The total number of residents is 32,709 with 7,739 urban and 24,970 rural residents; also see Table 10.

Source of official data: *Ganzi Statistical Yearbook 2016*; nationwide values from the NBS database (<http://www.stats.gov.cn>, accessed 5 April 2018 and 23 February 2019). For the assumptions underlying items II-VI, see Appendix 15.

The following assumptions underlie the derivation of the values of various household income categories reported in Table 13.

*Matsutake harvest*¹⁹⁷

Matsutake, 松茸, Beshing Shamo, བེ་ཤིང་ཤ་མོ་ Tricholoma matsutake

(1) Assume an annual Matsutake harvest of 200 tons, as projected in the *Master Plan*, with prices of CNY 70 per Chinese pound (500g), then divide by the official county population.

(2) Alternatively, Woodhouse, McGowan and Milner-Gulland (2013) report for Sangdui township in Daocheng from a survey of 50 households that the typical household collected 32kg of Matsutake mushrooms. The Matsutake price in 2017 was approximately CNY 120 per kg. Average household size in Daocheng is 4.4 persons (Appendix 13).

¹⁹⁷ Arora (2008) reports for Zhongdian in Yunnan, just across the provincial border from Daocheng, that the sale of Matsutake contributes more to the income of the Diqing Autonomous Tibetan Prefecture than any other crop. In the “two villages or townships” that he investigated, the mean household income from Matsutake (in likely 1995) was CNY 22,166 and CNY 19,583, respectively, while the village chiefs put average income for the two-month Matsutake season at CNY 5,000-6,000 per person and CNY 5,000-7,000 per adult. Yeh (1998) states that “it is ‘not uncommon’ for families in unspecified villages to make CNY 50,000-60,000 during the harvesting season.” At the time, average income from Matsutake harvesting per person per day was equal to seven to eight times the average daily wage in Shanghai. Matsutake income accounted for anywhere between 40% and 90% of household income in the two villages.

Caterpillar mushroom harvest

Caterpillar, 虫草, Yartsa Gunbu, དབྱུང་རྩ་དགུན་འབྲུ, *Ophiocordyceps sinensis*

(1) Assume 10% of the (official) population engages in Caterpillar mushroom harvesting, and each person harvests 10 Caterpillar mushrooms per day over 50 days (an estimate based on interviews). Caterpillar mushrooms sell for CNY 50 each.

(2) Alternatively, Woodhouse, McGowan and Milner-Gulland (2013) report for Sangdui township in Daocheng from a survey of 50 households that the typical household collected 404 Caterpillar mushrooms in 2009 (sold at an average price of USD 2.6 at the time). At 2017 prices, this implies CNY 4,600 per person, almost twice the amount under the first set of assumptions.

Bartered labor

Assume 25% of the population engages in bartered labor for 25 days each year at a wage of CNY 200 per day.

Informal labor

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, for example, be actual engagement one one-third of these days with daily income of CNY 300 when actual engagement occurs, or it could be 200 continuous days of informal daily labor in a restaurant.

Rural land leases

Assume 300 land leases (typically to Han investors / hoteliers), each with an annual rental value of CNY 200,000.

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Appendix 16. Tibet Tourism Development Models and Cultural Commodification

Jiuzhaigou-Huangong in Northwest Sichuan and Lijiang and Zhongdian/Diqing in Yunnan are often cited as models for Daocheng's economic development. That ignores the lower altitudes of these locations, their significantly more reliable climate, their diversity of attractions (rather than a focus on just one, relatively small nature reserve) and industries, and a local population that is substantially more integrated into the development process.

Tourism in Lijiang is centered on a sprawling 'old town' consisting of pedestrian-only cobble-stone streets and wooden houses (rebuilt in 'old style,' after an earthquake in 1996) that turns into a carnival at night. A second major attraction is the Jade-Dragon-Snow Mountain, a scenic area that tourists are driven through on tour buses to be released at certain spots for a few minutes, before being whisked up by cableway to the Glacier Park at an altitude of 4,506m, with no further to go and nothing to do except to take snapshots of oneself at this altitude, sucking on oxygen bottles.

Lijiang is situated on a *national* highway to the Tibet Autonomous Region (important for self-driving tourists on a grand Tibet tour), rather than a couple of days' side trip from tourists' major routes. Lijiang has a railway line and a busy airport that encounters none of the altitude and almost none of the weather issues of the Daocheng-Yading Airport. Lijiang has a first-comer advantage with a long-established and much larger tourist infrastructure around its main tourist attraction, the old town. Lijiang also has none of the political nationality issues of Daocheng on the Tibetan Plateau.

Lijiang's altitude is only 2400m / 7,874 feet (the typical borderline altitude for altitude sickness), which implies a very significant difference in tourists' well-being. Lijiang is a tourist destination where one can relax and live, in comparison to which Yading is at best a must-have-seen destination.

Tourism in Zhongdian (Shangri-La County) also takes recourse to the 'old town' model (also rebuilt in 'old style,' after a fire in 2014), an old town that is perhaps a quarter the size of that of Lijiang and much less frequented. The other major attraction is the Songtsamling Monastery, the largest Buddhist monastery in Yunnan. As Hillman (2005) writes—referencing an “ethnically Tibetan prefecture” in southwest China that can only be Diqing—the monastery is crucial to the area's Tibetanness. Tourism earns the prefecture and county governments more in revenue than all other sectors combined, and the work of religious institutions and leaders is viewed as complementary to local government objectives. The government, by promoting tourism, thus kills three birds with one stone: it achieves key government objectives including economic development, it enters a symbiosis with the local religious order (rather than having to subordinate a potentially conflicting authority), and it maintains social stability via the teachings of the monastic order and its relationships with the population.

Both Lijiang and Zhongdian thus boast attractive old towns, at manageable altitudes, combined with easily accessible local attractions (scenic area in the case of Lijiang, and monastery in the case of Zhongdian). In the case of Daocheng, neither Jinzhuzhen nor Riwa have an attractive old town, and at least Jinzhuzhen is at too high an altitude for comfort. Yading is not easily accessible and disappoints much of the year due to inclement weather.

The benefits of tourism in Lijiang and Zhongdian appear much more widely spread than in Daocheng. For example, according to Hillman (2009), in Diqing the local maker of traditional knives became one of the richest men locally and traditional pottery was revived. Tourism in Daocheng, being focused on Yading, has not led to any such success story for local handicrafts. If anything, with tourists traveling far and wide, handicrafts sold in Daocheng will likely appear too crude to be of interest. The cheap necklaces sold by Tibetan hawkers at tourist stands at the little woods outside Daocheng are not produced locally and carry all the signs of mass manufacturing, perhaps in a factory in East China.

Hillman (2009) also raises the issue of ethnic identity, wondering if tourism consolidates national unity while commodifying ethnic minorities for tourist consumption. For Diqing, he notes that “Tibetan culture is celebrated as the keystone of local development strategies” (p. 6) and Tibetans participating in tourism reflects a “renewed pride in their cultural heritage” (p. 5).¹⁹⁸ He notes that while displays of ethnicity have in the past been discouraged if not persecuted, “ethnic tourism has the power to raise ethnic consciousness” and “contributes to a process of ethnic identity formation and reformulation” (p.6).¹⁹⁹ The opposite appears to be the case in Daocheng.

Nor has there been any revival of Tibetan Buddhism in Daocheng, in contrast to what Hillman notes for the case of Diqing. Hillman (2003) describes how a key occupation of the Zhongdian government is its relationship to the local Buddhist tradition, in particular the Songtsamlin Monastery; already in 1999, Diqing prefecture gave over RMB 7 million yuan to the monastery and the relationship was carefully managed and balanced in subsequent years. The fact that the predominant form of Tibetan Buddhism in Diqing follows the Gelugpa tradition (i.e., the Dalai Lama’s tradition) has significant political implications: The Chinese government, by presenting itself as patron and supporter of Tibetan Buddhism thus provides an alternative to the Dalai Lama and creates a Tibetan-Chinese identity distinct from the Tibetan national identity preserved abroad.

Yading is not a singular case of nature tourism. Jiuzhaigou and nearby Huangling in Northwest Sichuan are almost exclusively focused on nature tourism, at much lower altitudes than Yading with most attractions at between 1,400 and 2,000 meters. Tourism in Jiuzhaigou originated with the resumption of pilgrimages and the reconstruction of monasteries in the 1980s (Hayes 2016). Local Tibetans supplemented their agricultural incomes with subsidiary tourist industries ranging from handicraft and souvenir trade, inn-keeping, and then an expansion into horse trekking and folklore entertainment.

Similarly, tourism at Huanglong also began in the 1980s. “In 1983 the peak and high slopes of Eastern Conch Mountain, Golden Lakes Valley, and various adjacent areas were designated as the 640 square-kilometer Yellow Dragon [Huanglong] Valley Scenic District and Protection Zone, sometimes now referred to as a “National Park” (Huber, 2006).²⁰⁰ Huber writes that Tibetan associations with the mountain were appropriated and manipulated

¹⁹⁸ For further details on the integration of the local population into the development process, see, for example, Hillman (2010).

¹⁹⁹ The issue of culture, its preservation and presentation has been widely discussed in the literature. For example, Dombroski (2006) pointed out that empowerment is not the same as cultural preservation. To illustrate, under the traditional Tibetan serf system culture may have been preserved but most Tibetans were not empowered. A “romanticisation” (Dombroski, 2006) of “traditional cultures” should not distract from a broader discussion of whether and how economic change should occur.

²⁰⁰ Huanglong was designated a national scenic area in 1982 national scenic zone and in 1992 became a UNESCO-designated World Natural Heritage park (Kang, 2009).

by Han as they saw fit, “without any reference to the Tibetans themselves” (p.23). This included renaming landscapes and places in ethnic Tibetan areas with Chinese names, using Han settlements as reference points, and the Han creation of new (Tibetan) “myths.” Thus a “temple fair” was newly invented,²⁰¹ and the Long March was ex-post relocated to have led through the area (now enshrined in a monument). Huber’s observations for the case of Huanglong would seem to equally apply to Daocheng, including the use of myths where, in the case of Yading, “Shangri-La” (and Joseph Rock) facilitated the process of myth creation and added the attractiveness of a foreign obsession with the locality.

The treatment of the Tibetan areas of West Sichuan as a Tibetan film set or Tibetan theme park, against the backdrop of the natural environment, thus did not start with Yading, but may have reached a new climax in the marketing of Yading.

Dombroski (2006) notes for the case of Jiuzhaigou that tourism has contributed toward community development and cultural revitalisation in that Tibetan villages within the nature reserve first supplemented their agricultural income with various forms of tourism-related income and then became solely reliant on tourism income. But the choice to submit children to the Han education system has also ultimately led to what locals perceived as all-out Hanization of their children through their own choice of identity. Such a development must not have gone unnoticed at the higher echelons of the Han administration in Sichuan, if not the central government, and the Ganzi prefectural tourism plan for 2000-2015 may well have been adopted with such an experience in mind.

Tibetan’s understanding of well-being (in a particular village in Jiuzhaigou), following Dombroski (2006), comprises the ability to earn a livelihood (ranging from running water in each village to electricity, housing improvements, higher income, job options within the tourism industry, and investment shares in a joint village-state restaurant facility), choice over one’s future with access through education to jobs locally and beyond, and cultural and family identity which, it turns out, was severely eroded for the next generation that underwent the Han education system.²⁰²

As Sofielda and Li (2011) report, when Jiuzhaigou was first opened for tourism in 1984, there was no economic activity other than pastoralism by Tibetans concentrated in six impoverished villages in the park. By 2009, with 3.8 million visitors to the park, the local Tibetans were among the richest rural people in China thanks to income from ownership (or part ownership) of the monopoly bus company in the park and the only restaurant located in the park, and from 180 Tibetan arts and crafts souvenir outlets, cultural performances, and the provision of tourist accommodation in the park.²⁰³

According to Schrempf and Hayes (2009), in the Jiuzhaigou/Huanglong region Tibetans played an important early role in the development of tourism, for example, accounting for

²⁰¹ Also see Schrempf and Hayes (2009) on the invention of a trade fair and even the construction of a temple solely for tourism purposes.

²⁰² Harrell et al. (2016) argue that families in Jiuzhaigou would hardly want to return to farming today, enjoying, as they do, spacious, beautifully decorated houses, cars, fast internet access, a reliable income from tourism, and access to good education for their children; only the older generation may bemoan the loss of landscape heterogeneity and the loss of tending to animals.

²⁰³ Sofielda and Li (2011) identify basic principles for the creation of a nature tourism destination in the PRC. Thus, tourism development strives to identify the essence of a landscape and, given that nature is perceived as imperfect, “improve” upon nature through human intervention (pavilions, temples, trails, rock cliff engravings, ponds, etc.). This also holds for Yading, with wooden walkways harmoniously fit into the landscape, pavilions, a temple, rock cliff paintings, and ponds.

more than half of local businesses in Songpan (the regional city) in 2000.²⁰⁴ But by 2005, the Tibetan share was down to 14%. Han have a comparative advantage in tourism development due to their language skills and cultural affinity to the tourists. Tibetans are increasingly relegated to the limited number of undertakings where they enjoy a comparative advantage over the Han, such as horse trekking. The land—except the nature reserves and other areas claimed by the government—remains under Tibetan control.

Similarly in Daocheng, the local Tibetan population has generally bought into the development idea and Han “modernity,” even though in Daocheng the local population appears much less integrated into the development process than in Jiuzhaigou and Huanglong. In Daocheng, Tibetans were never at the forefront of tourism development. It was the state that came in with its *Master Plan* and systematically developed the tourism industry.

Cultural commodification may have reached a new pinnacle in Daocheng. Yading Tianjie embellishes its faux Tibetan buildings with Tibetan paintings and large prayer wheels.²⁰⁵ A Han private entrepreneur builds his version of a Tibetan stone palace (hotel) in Rencun, complete with a massive stuffed Yak head over the imperial entrance gate to the bar. Jinzhuzhen boasts an architecturally impressive modern-Tibetan (though not in use) “people’s fitness and activities center” (稻城全民健身活动中心).²⁰⁶ A Han industry sells Tibetan snacks and Tibetan jewelry (the prices suggesting the jewelry was made in a Chinese factory).

During the high season, 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, has a daily evening performance at the new Daocheng Yading Performing Arts Center (稻城亚丁演艺中心) in Riwa.²⁰⁷ Some hotels and restaurants in Riwa offer dinner accompanied by performances.²⁰⁸ An entrepreneur in a village outside Jinzhuzhen stages rudimentary Tibetan dinner shows for tour groups in a large tent.

Ren (2014) argues that local consciousness of the traditional Kham culture in Daocheng is virtually non-existent. She attributes this deficit to the high rate of illiteracy (51.4% for people age 15 and above in 2000) and suggests to increase awareness and protection of traditional local language, food, art, and etiquette, and to integrate these into daily life. She emphasizes the need for more extensive education of the youth, without, however, providing a link between the formal education system and protection of local culture. A counter

²⁰⁴ The export of local products has been successfully implemented in the Jiuzhaigou/Huangong area with the creation of local brand names under the auspices of a “Sichuan Songpan County Huanglong Tourism Market Development Company” (Schrempf and Hayes, 2009).

²⁰⁵ As of October 2017, at least the prayer wheel at the Western entrance had been adopted by some locals, with older Tibetans idling in the vicinity occasionally spinning it.

²⁰⁶ It was completed in late 2016 or early 2017, but as of October 2017 was locked and not in use. It resembles a concert hall or performing arts venue that could hold a thousand people. A smaller, second building behind it houses a movie theater with two venues. The movie theater is operational, showing on 1 October 2017 one domestic and one foreign (Jackie Chan) film, but appeared deserted.

²⁰⁷ 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 otherwise administers Yading. During the peak season in fall 2017, performers toured Riwa restaurants in the late afternoon in an attempt to attract tourists to their evening performance.

²⁰⁸ Yading visitors, however, are typically exhausted after a day on the mountain, and troubled by the altitude. Interest in shows appeared small in early October 2017. On two evenings in the 2017 peak season, a Riwa hotel’s dining tent with a seating capacity of at least one hundred had only a dozen diners. Two Tibetan women perfunctorily danced around a central gas fire to blaring music.

argument would be that the formal education destroys rather than preserves any awareness of local culture. Nor does she address the fact that the local schooling system serves all children irrespective of nationality, including the children of the Han population that might not look favorably on their children studying Tibetan folklore. Given the prevalence of the Han influence in the county, any classes on Tibetan folklore provided by a Han schooling system might serve little other purpose than to prepare children to present a Han version of Tibetan culture if they later work in the tourism industry.

Jiang (2017), examining the effect of tourism on poverty alleviation in Daocheng—with 983 households or 4,174 people living in poverty—reports that the impact is relatively small. From the author’s point of view, the government’s poverty alleviation measures do not accurately target poverty (but operate as “flood irrigation” (漫灌), it is confused with agricultural support measures, it tends to be short-term oriented, and the cheap local minority labor is not being effectively used. The ones who benefit from local tourism development are outside developers while the locals may end up bearing the negative effects of this tourism development. The author is also critical of the capacity of the local population to engage in tourism: the locals are described as being of mental poverty (精神贫困) with all too often an expectation that the gov. “should help” and an attitude of “wait, rely, want” (等、靠、要). They tend to lack the skills to engage in tourism and cannot even act as guides since they are not sufficiently fluent in Mandarin. Many are comfortable with the status quo, do not want to engage in tourism, and lack a “getting rich” consciousness (缺乏致富意识). Those who are just above the poverty line are in danger of falling back below the poverty line.

Beyond Lijiang, Zhongdian, Jiuzhaigou/Huangling, and Daocheng, many other localities in the PRC are pursuing tourism development as economic development strategy. Cheng and Tang (2016) report on Shizhu County in Chongqing Municipality. There, tourism is centered on a 4A national scenic area county with its own ethnic nationality, the ‘Tu’ (or Tujia 土家). The history of Shizhu’s tourism development resembles that of Daocheng, with the establishment of a tourism bureau and a tourism development company in 1999, followed by various strategies and eventually elevation of the scenic (county) area to national 4A level. Massive investment in infrastructure and in tourism development followed, including what appears a phenomenally expensive performance venue in 2013 at a cost of CNY 120mio. But as the authors note, the outlook is far from optimistic: Locals are being assimilated to the point where there is little ethnic culture left, the quality of the tourism industry is low (supposedly largely based on low-quality performances and the catering business), and Shizhu’s national-level forest park (国家森林公园) competes with another 11 national-level forest parks nearby, all offering more of the same. Poverty alleviation via tourism is an issue here, too, though poverty today seems largely eradicated (and whether that is due to tourism remains questionable).

It is hard not to see a pattern of herd behavior, with national-level general policies leading to identical developments of the tourism industry nationwide, whether that is in Shizhu County in Chongqing Municipality, Xishuangbanna in Southern Yunnan (Yang, Wall, and Smith, 2006) where locals who benefited from tourism nowadays rather build concrete houses than the rickety bamboo houses that attracted the tourists in the first place, or Daocheng. The policy proposals sound vaguely similar: protect and develop the local ethnic cultural resource (or folklore), develop “boutique tourism” (旅游精品), whatever that may mean, make best use of the linkage effects of tourism development on other industries, and improve the quality of local staff through education. Academic reports on a locality, the propaganda literature,

developers' advertisements and statements by Party and government officials all begin to sound alike, repeating over and over again what appear to be the latest fashionable slogans, presumably following some central decision on using tourism to develop 'backward' economies in potentially attractive nature settings.

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