

## ***Special Section on Inequality in China***

# **From Labour to Capital: Intra-Village Inequality in Rural China, 1988–2006\***

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**ABSTRACT** Economic inequality has increased greatly in China since the end of state socialist industry and collective agriculture, but the story of inequality is much more complex than just the rural–urban and coastal–inland dichotomies or the relative contributions of inter-regional and intra-regional inequality. Even within inland rural areas, inequality between villages and within villages has also increased greatly. In 2005–06, we were fortunate to be able to work with the Sichuan Nationalities Research Institute to re-survey 90 per cent of 300 families in three villages that we had originally surveyed in 1988. On the basis of these surveys and of ethnographic information, we found that income inequality had increased quite dramatically in all three villages. In structural terms, the primary reason for this increase was the shift from labour power to small-scale capital as the primary source of family income, a shift that occurred differently in each village.

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It is widely acknowledged that as China's economy has grown spectacularly during the Reform period, economic inequality has also increased. Economist Barry Naughton sums up the trends succinctly: "China has lost its status as a relatively equal developing country, inequality has increased rapidly, and China is now a relatively unequal middle-income country. Government policy has been focused on market liberalization, social protections have been ineffective and eroded, and an unfair and unequal market economy has emerged in China."<sup>1</sup> China's national Gini coefficient for per capita income increased from .30 in 1982 to an alarming .45 in 2000 and is probably higher today.<sup>2</sup> It is generally

\* Division of labour for this article was as follows. Han Hua directed the field research and did most of it; Zhou Yingying also participated extensively. Stevan Harrell made two brief visits. The survey was conducted in collaboration with the Sichuan Nationalities Research Institute; special thanks to Institute director Yuan Xiaowen, and to Li Jin, Geng Jing and Luo Liangzhao, who participated actively in the field research. Zhou Yingying did almost all the data analysis. Stevan Harrell did most of the writing, with contributions from Han Hua and Zhou Yingying. Thanks also to Bill Lavelly for comments on earlier drafts. Fieldwork was supported by a grant from the Cultural Anthropology Division, National Science Foundation.

1 Barry Naughton, "Is the growth of inequality in China over?" paper presented at the Conference on Paradigms in Flux, University of California, San Diego, 20–22 April 2007, p. 14. Cited with author's permission.

2 See *ibid.* pp. 3–4; United Nations Development Program, China Development Research Foundation, *China Human Development Report 2005*.

agreed that rural–urban income inequality has continued to increase from 1982 until the present, but there is a slight disagreement over the temporal pattern of inequality within rural areas. Barry Naughton, along with Martin Ravallion and Shaohua Chen, shows inequality within rural areas to have decreased briefly and then increased again between 1995 and 2002<sup>3</sup>; Khan and Riskin state that it decreased by about 10 per cent during that period.<sup>4</sup> Ching Kwan Lee and Mark Selden present the structural argument that rural inequality continued to increase, with a widening divide between industrially developing areas, mostly near the coast and near large cities, and areas still dependent on agriculture, mostly inland and far from major markets for industrial goods.<sup>5</sup> What is not in dispute is the difference between the 1980s and the early 21st century: the overall Gini coefficient for rural China went from an estimated .25 in 1982 to about .37 in 2002, increasing steadily throughout that period with the exception of a few level years in the mid-1990s.<sup>6</sup>

The mere fact that inequality has increased in rural areas, however, reveals little about the patterns of inequality. In particular, two questions need to be considered: what is the spatial pattern of inequality (what proportions of the overall inequality in household income are due to regional, intra-regional or intra-village differences); and what is the occupational pattern of inequality (what proportions of overall inequality are due to changing patterns of the distribution of income sources among households)? This article looks at the extent and nature of a single, heretofore relatively unexamined spatial factor – inequality *within* villages – in terms of the changes in income sources revealed by surveys conducted in 1988 and again in 2006 in three very different villages in the same region.

Beyond the clear fact that agricultural income differentials have very little to do with increasing inequality, but in fact were a strongly *equalizing* factor,<sup>7</sup> scholars have advanced a series of explanations, almost all of them attempting to account for overall rural inequality increases in terms of differentiation between or within broad regions. For example, Khan and Riskin, who believe that rural income inequality increased until 1995 and then decreased between then and 2002, explain the trends in terms of the amounts that various factors contribute to inequality between regions. They show that during this period, the greatest contributor to increases in rural income is wages – accounting for about 50 per cent of the growth – and that wage inequalities between regions, which accounted for the greatest portion of wage inequality in general, decreased during this period. Wage differences within regions, on the other hand, changed little during the period. They also show that “non-farm enterprise” accounted

3 See Naughton, “Is the growth of inequality in China over?” p. 3; Martin Ravallion and Shaohua Chen, “China’s (uneven) progress against poverty,” World Bank Development Research Working Paper No. 3408 (1984), p. 52.

4 Azizur Rahman Khan and Carl Riskin, “China’s household income and its distribution, 1995 and 2002,” *The China Quarterly*, No. 182 (2005), pp. 356–84.

5 Ching Kwan Lee and Mark Selden, “China’s durable inequality: legacies of revolution and pitfalls of reform” (*Japan Focus*, Article 736, 2006), <http://japanfocus.org/products/details/2329>.

6 Ravallion and Chen, “China’s (uneven) progress,” p. 53.

7 *Ibid.* pp. 3, 14; Khan and Riskin, “China’s household income,” pp. 364–65.

for about 16 per cent of the income growth during that time, but that the income from this source was distributed very unequally, being the largest contributor to the increased income inequality during the period as measured by the pseudo-Gini ratio.<sup>8</sup> In addition, they show that for migrant families, “the greater inequality in the distribution of income for the migrants derives principally from the fact that their largest source of income, from individual enterprise, has a strongly disequalizing effect on income distribution.”<sup>9</sup>

These findings are in accord with those reported by Mohapatra, Rozelle and Huang, whose survey of 200 villages in differing regions found a four-stage developmental pattern of occupational succession and differentiation, proceeding from agriculture dominant, to migration dominant, to local enterprise dominant, to industrial employment dominant.<sup>10</sup> The large differences in income between villages at different stages in this process are distributed both across macroregions and between the cores and peripheries of these regions.<sup>11</sup> This pattern is also confirmed by Selden and Lee, though in the context of a very different argument. For Mohapatra, Rozelle and Huang, this is a developmental sequence of the modernization type, in which inequalities between communities are a mere result of the time lag between when they proceed through various steps on the ladder, while for Lee and Selden, they are symptoms of a structural system of inequality, in which some areas get rich at the expense of others. But whether we believe in development or underdevelopment, the combination of Khan and Riskin’s findings with those of Mohapatra, Rozelle and Huang leads directly to a model that can explain the findings from our own surveys. Since the early 1980s, the three villages in our study, located in Panzihua (攀枝花) municipality, southern Sichuan, have indeed moved, at different rates, from almost all agriculture to various combinations of agriculture, wages and non-farm enterprise. And as they have moved through this sequence, inequality within the villages has increased. In this article, we use longitudinal survey data collected in these villages in 1988 and 2006 to show how this increase in income inequality is attributable to the changing proportions of families within each community who rely on different sources of income. Furthermore, in concert with Khan and Riskin’s findings, the main contributor to increasing inequality is not wages but non-farm enterprise, so that the increase in intra-village inequality is mainly attributable to a shift from labour to capital as a source of income. Our findings also confirm on an intra-village scale the regional-scale findings of Wan<sup>12</sup> that access to capital is associated with inequality in incomes.

8 Khan and Riskin, “China’s household income,” pp. 364–65.

9 *Ibid.* p. 376.

10 Sandeep Mohapatra, Scott Rozelle and Jikun Huang, “Climbing the development ladder: economic development and the evolution of occupations in rural China,” *Journal of Development Studies*, Vol. 42, No. 6 (2006), pp. 1023–24.

11 *Ibid.* pp. 1034–37.

12 Guanghua Wan, “Accounting for income inequality in rural China: a regression-based approach,” in Shunfeng Song and Aimin Chen (eds.), *China’s Rural Economy after WTO: Problems and Strategies* (Aldershot and Burlington VT: Ashgate, 2006), pp. 115–33.

### Three Villages, Two Visits

Panzhihua municipality sits at the southern tip of Sichuan province, surrounded on three sides by Yunnan. It encompasses the city of Panzhihua, built in the late 1960s to accommodate the steel mill of the same name, and three predominantly rural areas: Yanbian (盐边) and Miyi (米易) counties and Renhe (仁和) district. The population of the city is mostly descended from immigrants who came to build the steel mill and the Chengdu–Kunming railway (Cheng–Kun tielu 成昆铁路), but the rural inhabitants have been in the area much longer, and are a mix of mostly Han (汉) Chinese farmers in the more populous river valleys, and ethnic minorities, including Yi (彝), Dai (傣), Miao (苗) and Lisu (傈僳), at the higher elevations.<sup>13</sup>

In 1988, Harrell was one of a team of researchers from the University of Washington, Sichuan University and the Panzhihua City Bureau of Artifact Management (Panzhihua shi wenwu guanlichu 攀枝花市文物管理处) who conducted surveys in four villages, with the original purpose of examining the effect of ethnicity on family economy and family development. In each village, we administered a survey on family structure, fertility and family economy to a random sample of households selected from the household registration records. We selected 100 households in Yishala (迤沙拉), 80 in Renhe (仁和) and 60 in Zhuangshang (庄上). We also did some basic ethnographic interviewing, and attended several rituals and ceremonies in Yishala, where we spent the longest time. Although the four villages were ethnically different – Yishala mostly Lipo Yi, Zhuangshang mostly Shuitian (水田) or Laluo Yi, Gaoping (高坪) entirely Nuosu Yi and Renhe mostly Han – ethnicity was less salient for understanding the differences between the villages than was their physical location in the variegated topography of the Panzhihua landscape, and the different kinds of economic activities that the villagers consequently engaged in.<sup>14</sup>

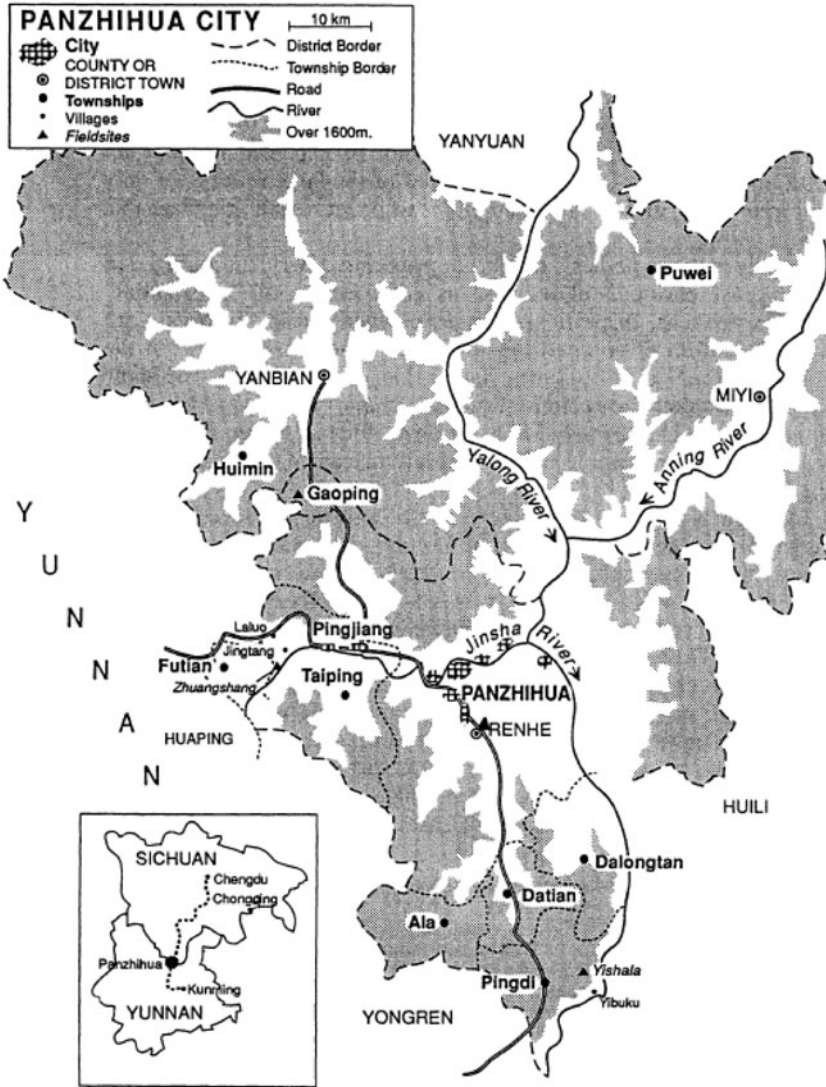
Yishala sits at the southern tip of Panzhihua, in Pingdi township (平地镇), in an alluvial valley between two ranges of hills, at an elevation of about 1,680 metres. It and its satellite villages of Sankeshu (三棵树), Yibuku (依布苦) and Xiachang (下厂) were a production brigade during the collective period, and now comprise an administrative village (*xingzheng cun* 行政村). Yishala has over 500 households and 2,200 people, officially reported in 1988 as 92 per cent Lipo and in 2005–06 as 96 per cent Lipo.<sup>15</sup> Villagers are universally bilingual in Libie

13 For general accounts of the history of Panzhihua, see Judith Shapiro, *Mao's War Against Nature* (Cambridge: Cambridge University Press, 2001), pp. 149–59, and Barry Naughton, “The third front: defence industrialization in the Chinese interior,” *The China Quarterly*, No. 115 (1988), pp. 351–86.

14 Ethnographic research quickly revealed that the only community where ethnicity really made a difference in family structure and economy was the highland township of Gaoping, inhabited exclusively by members of the Nuosu ethnic group of the Yi nationality. But data from the Gaoping surveys proved virtually useless because of the naïveté of the research team, and were not used in subsequent analyses. For previous analyses of our 1988 survey results, see Stevan Harrell, “Aspects of marriage in three southwestern villages,” *The China Quarterly* No. 130 (1992), pp. 323–37; and Stevan Harrell, “Geography, demography, and population in three southwestern villages,” in Deborah Davis and Stevan Harrell (eds.), *Chinese Families in the Post-Mao Era* (Berkeley and Los Angeles: University of California Press, 1993), pp. 77–102.

15 Data from Yishala village household registration records.

Figure 1: Map of Research Area



and the local, Yunnanese dialect of south-western Mandarin, and their family structure, traditionally including patrilineal marriage and a typical Chinese joint-family cycle, differs little from the Han Chinese norm, except in a high percentage of uxorilineal marriage, approaching 15 per cent over the last 50 years.<sup>16</sup> The economy of Yishala in 1988 was primarily agricultural, with

<sup>16</sup> Uxorilineal marriage is also common among Han Chinese in the area, including several cases we documented where Lipo males marry into Han households and vice versa.

families growing winter wheat in the spring season and rice or corn on paddies or upland fields in the summer. A cement factory, built in 1972, employed about 150 village men. And a few families had income from making lime from local limestone, or from very small-scale commercial activities; a few more had income from labour migration. In 1988, Yishala ranked in the middle of our three villages in mean household total annual income, which in cash and kind was 2,119 yuan, insignificantly higher than Zhuangshang, but with somewhat higher cash income of 1,215 yuan and a total income net of living expenses at 424 yuan. Income inequality in Yishala in the late 1980s was fairly low, with a Gini coefficient among our surveyed families of .31. In 1988, we surveyed a random sample of 98 households from Yishala and the satellite settlement of Xiachang, among which 97 household questionnaires were found valid and were used in our analysis.

Zhuangshang is a very different place, even though it is only about 70 kilometres away. Situated in the valley of the Jinsha (金沙) river, its climate is warm all year and extremely hot in the spring and summer months, with temperatures often reaching 40 degrees. Villagers can grow spring crops only with irrigation, and grow mostly rice in the summertime. The hot valley climate is suitable for tropical fruits, and in 1988 bananas and papayas were important subsidiary sources of cash income, along with fishing in the Jinsha river. Electricity, originally connected in the early 1980s, had been cut off because the village could not afford to pay, and irrigation water to Zhuangshang and neighbouring Jingtang (经堂) village had been diverted by a nearby mine for coal-washing purposes, taking away the possibility of a spring crop and leaving parched and withered wheat plants standing in the fields. There was no passable motor road to the village. In 1988, Zhuangshang villagers resented their ethnic designation as Yi, claiming that they belonged to a separate *minzu* (民族) called the Shuitian (rice-field) people.<sup>17</sup> Despite this strong ethnic identity, only a very few elderly people could still speak the Shuitian or Lualo language, and in all ways visible to outsiders, Zhuangshang was an ordinary Chinese village. In 1988 it was the poorest of our three villages, with a mean household total gross income of 2,109 yuan annually, only 747 of which was in cash, and an income net of living expenses of only 245 yuan, not quite poor enough to be classified as an official poverty area, but definitely not doing well. As might be expected from its poverty and from the almost total subsistence basis of its economy, Zhuangshang also had the lowest level of inequality among the three villages, with a Gini coefficient of only .24. Our 1988 sample included 20 households from each of the three production groups making up the village.

Renhe village is different again. In 1988 it was located on the edge of Renhe town, the administrative headquarters of county-level Renhe district (*qu* 区). The 80 households that we surveyed, out of a total of 1,200, all but one Han

17 Stevan Harrell, "Ethnicity, local interests, and the state: three Yi communities in southwest China," *Comparative Studies in Society and History*, Vol. 32, No. 3 (1990), pp. 515–48.

Chinese, had a mean household net income of 1,962 yuan, somewhat above the national rural average at that time. Even in 1988, Renhe was economically diverse; we chose six of the ten production groups making up the village for our surveys, to represent primarily vegetable farming, primarily fish farming and primarily grain farming economies. About 80 per cent of villagers' total income was in cash, with a mean household total cash income of 4,046 yuan; this was reflected in a higher standard of living than in our other two villages, with many households owning such luxuries of the late 1980s as colour televisions, washing machines and refrigerators. Sources of income for Renhe villagers were quite varied at the time, including commercial cultivation of vegetables on the good alluvial land next to the town, destined for the large market in the town itself and for the much larger markets in Panzhihua city, only 20 kilometres to the north. But only 25 of the 80 households surveyed in 1988 gained all their income from farming, including either subsistence farming or vegetable farming for market; about a third of households had at least one member who worked a factory or other job for wages, and the most successful families were those who ran small businesses, such as chicken raising, fish-farming or trucking. Again, reflecting the diversity of income sources, income inequality in Renhe was also the highest of our three villages in 1988, with a Gini coefficient of .41 among our sampled households.

Table 1 shows basic statistics for Yishala, Zhuangshang, and Renhe villages in 1988, including both total and per capita mean household annual income, both gross and net values, mean household annual cash income, and Gini coefficients. All figures include remittance income from non-resident or intermittently resident household members.

In 2005–06, having obtained a grant from the National Science Foundation and enlisted the partnership of the Sichuan Nationalities Research Institute (SNRI, Sichuan sheng minzu yanjiusuo 四川省民族研究所) in Chengdu, we went back to Panzhihua. Han Hua (韩华) and Zhou Yingying (周鹰鹰), together with colleagues from SNRI, conducted several weeks of intensive ethnographic interviewing in each village in the autumn of 2005, as well as collecting material for some ethnographic films in Yishala. In spring 2006, we returned to re-survey the families from the 1988 survey. We were able to find about 90 per cent of them, or in some cases families that had resulted from household division of the original families. Re-survey rates for the three villages are given in Table 2.

Our ethnographic data from 2005–06 revealed that much had changed in the three villages; a lot of this material is the subject of works to be published elsewhere.<sup>18</sup> Our surveys documented the quantitative extent of much of this change; in this particular article we focus on increasing internal inequality. But first we describe the visible changes in the three locations.

18 In particular, a volume of essays by various members of the research team will be published in Chengdu in 2008, edited by Yuan Xiaowen and Stevan Harrell, entitled *Panzhihua shi Yi-Han shequ 20 nian bianqian yanjiu (Research on 20 Years of Change in the Yi and Han Communities of Panzhihua Municipality)*.

Table 1: **Household Economic Statistics in 1988, by Village**

Basic household economy statistics	Yishala	Renhe	Zhuangshang
Mean household total income <sup>a</sup> (yuan)	2,119	5,013	2,109
Mean household net income <sup>b</sup> (yuan)	424	1962	245
Mean household cash income <sup>c</sup> (yuan)	1,215	4,046	747
Mean household per capita income (yuan)	435	1,107	462
Mean household per capita net income (yuan)	78	469	51
Mean household per capita cash income (yuan)	254	903	165
Gini coefficient <sup>d</sup>	.31	.41	.24
N (households with reported statistics)	95	78	59

*Notes:*

a. Calculated based on the reported total annual income for the household, with in-kind income calculated on the basis of current prices.

b. Net income is calculated by subtracting the sum of various categories of living expenses from the reported total annual income for the household.

c. This is calculated based on the reported total annual cash income for the household.

d. Calculated based on the reported total annual income for the household.

Table 2: **Number of Households Surveyed in 1988 and 2006, by Village**

Village	Total no. surveyed in 1988	No. of original households followed in 2006 (%)	No. of divided households followed in 2006	Total no. surveyed in 2006 <sup>a</sup>	No. failed to be followed in 2006 <sup>b</sup>
Yishala	98	93 (94.9)	9	102	5
Renhe	80	73 (91.3)	6	79	7
Zhuangshang	60	48 (80.0)	24	72	3
Total	238	214 (89.9)	39	253	15

*Notes:*

a. Households surveyed in 2006 included both the original households from 1988 and households divided from those original households surveyed in 1988. In cases where original households no longer existed, households divided from them were surveyed instead.

b. Households that failed to be followed means neither the original households nor households divided from the original ones could be located.

Panzhihua has turned from a gritty industrial town exemplifying the best and worst of China's past socialist dreams<sup>19</sup> to a glitzy, if still in some ways gritty, modern industrial city. The most obvious effects in our own study areas have been in Renhe. Renhe village, as an administrative unit and as a series of agricultural settlements, is no more. Eight of the original ten production groups no longer exist; their land has been taken over by the rapid expansion of Renhe town, which had an urban population of 63,800 in 2003 and which boasts a thriving commercial core of shops, restaurants and entertainment venues. Original production groups 9 and 10 (our sampling in 1988 had included group 9 but not group 10), located in the hills well to the east of the town, are still agricultural, but with the abolition of Renhe administrative village in 2004, they were amalgamated into nearby Shagou (沙沟) village. The other eight groups were no longer rural in either the physical or the administrative sense. In 2004

19 Naughton, "The third front"; Shapiro, *Mao's War Against Nature*.



they were formed into two new *shequ* (社区), or neighbourhoods, of Renhe township, groups 1–4 forming Dahe (大河) neighbourhood and groups 5–8 Laojie (老街) neighbourhood. The household registration status of the families has been changed from agricultural to non-agricultural (referred to as *nong zhuang fei* 农转非), with the result that they no longer have any rights to collective land, or to build their own houses. In compensation, each household member was either given 12,000 yuan or offered the opportunity to work in a local factory. Most families used the compensation fee to purchase flats in one of the apartment buildings owned by the neighbourhood committees (*juweihui* 居委会). Families were also allocated ten square metres of street-level space to open small stores; most families rent these out. As for those, mostly the young, who chose to be allocated jobs in local factories, most were laid off within two years. Because few of the former villagers have more than a middle-school education, it has been difficult for many of them to find gainful employment; over 40 per cent of the families re-surveyed in 2006 received part of their income from welfare payments.<sup>20</sup> At the same time, others have continued the entrepreneurial tradition already evident in 1988 and have done quite well; the result is that the mean household total income in 2006 is still the highest among our three villages, at over 21,000 yuan, but at the same time the degree of inequality is also the highest, with the Gini coefficient among our surveyed households reaching a rather alarming .56, much higher than the national level of .45 reported by UNDP.<sup>21</sup>

Zhuangshang has also changed a lot. It is no longer isolated, as a good road was put through in the early 1990s when a large electricity generating plant with immense cooling towers was built just downriver, and its access improved even more when several other factories that attest to the continued grittiness of Panzhihua were built in the late 1990s and around the turn of the century. Villagers still grow spring wheat, with water from a reservoir constructed in the early 1990s, and rice in the summertime. Perhaps because of pollution from nearby industries, almost all the banana and papaya trees died, but mangoes, which seem less susceptible to these toxic effects, do very well and provide a source of supplementary income for many village families. Labour migration and wage jobs have also become an important source of money; most migrants from Zhuangshang, however, do not travel the long distances documented in studies of migration from so many rural localities,<sup>22</sup> but rather live at home and

20 See Li Jin, "Panzhuhua Renhe qu chengzhen hua bianqian" ("Urbanizing change in Renhe district, Panzhuhua municipality"), in Yuan and Harrell, *Research on 20 Years of Change*.

21 If we include the local emperor, the Gini coefficient for Yishala is even higher, but excluding that one dominant household, Yishala is less unequal than Renhe. See our detailed analysis below. See also United Nations Development Programme, *China Human Development Report*.

22 Li Zhang, *Strangers in the City: Reconfigurations of Space, Power, Social Networks within China's Floating Population* (Stanford: Stanford University Press, 2001); "Migration and privatization of space in power in late socialist China," *American Ethnologist*, Vol. 28, No. 1 (2001), pp. 179–205; Kam Wing Chan, "Internal migration and rural migrant labor: trends, geography, and policies," in Mary Gallagher, Ching Kwan Lee and Albert Park (eds.), *The Labor of Reform in China* (London: Routledge, 2007).

commute to nearby coal-washing and coking factories, or return home every week or every few weeks from slightly more distant Geliping (格里坪) township of Panzhihua city. Old-style compounds still predominate among village houses, but there is a sprinkling of newer, multi-storey brick-and-tile residences. People seem to care little about their ethnic identity, whether Yi, Shuitian or whatever. And they are no longer visibly poorer than elsewhere in Panzhihua. The mean household total annual income among our surveyed families in 2006 was over 14,000 yuan, surpassing the mean of Yishala. Inequality, however, had also increased dramatically, with the Gini coefficient rising from .24 to .52.

Yishala, more remotely located in the mountains, has changed the least in its basic family economy, but politically, physically and culturally, the changes there have also been great. The two most important things that have happened, besides a general increase in living standards, are the complete domination of the village economy and polity by a single “local emperor” (*tu huangdi* 土皇帝), the current village Party secretary, and the attempt to position Yishala as a destination for ethnic tourism. Most families in Yishala are still farmers; only 13 per cent reported no income from agriculture. There are few other sources of local income, but migration, in this case both short- and long-distance, has become important, contributing to the coffers of more than two-thirds of the families in our 2006 survey.<sup>23</sup> But the big story is the complete takeover of Yishala by the Party secretary. He has become, as he describes it himself, not a *dizhu* (地主) or landlord, but a *yezhu* (业主), a project-head or contractor. Out of the village total of 1,845 mu (亩) of land, he has contracted about 568 mu, all located in the broad plain to the north of the village, and planted it in table grapes. For a yearly rent of 400 yuan per mu, he has monopolized control over one-third of the village’s arable land for the next 30 years. In addition, the secretary’s father, who was the manager of the cement plant in 1988, purchased the plant in the interim and is now the sole proprietor. These plus other enterprises gave the secretary’s family a reported income of over 2,000,000 yuan in 2006, more than 20 times the total income of the second richest family surveyed, and 100 times the village mean of total household income.<sup>24</sup>

23 A detailed report on our work on migration will appear as Zhou Yingying, “Panzhuhua diqu jiating yu geren waichu dagong guannian de chubu bijiao” (“A preliminary comparison of attitudes toward labour migration in the Panzhuhua area”), in Yuan and Harrell, *Research on 20 Years of Change*.

24 This is actually a considerable underestimate of the secretary’s family income. Our 1988 sample included the secretary’s father; the secretary-to-be was 13 years old at the time. In our re-survey, we included the original household, but not the secretary’s household, which had divided off from it. It is possible that their combined income might approach 4 million yuan. The case of the Party secretary is relevant to the discussion on whether inequality can be explained by the “power conversion” of cadres to entrepreneurs, but since we have only one case of such conversion in our three villages, we choose not to engage with this debate here. For a summary and evaluation of this discussion, see Andrew Walder and Litao Zhao, “Political office and household wealth: rural China in the Deng era,” *The China Quarterly*, No. 186 (2006), pp. 357–76.

The physical aspect of the village has also changed. Many of the houses around the pond at the village centre have been converted into shops, and a new school, built with funds from the Julong (巨龙) Company of Wuxi (无锡),<sup>25</sup> and opened in autumn 2006, looms over the village at the top of its central hill. And the attempt to bring in ethnic tourism has resulted in four *nong jia le* (农家乐), “farm family happiness” or little rural bed-and-breakfast establishments, bilingual English–Chinese road signs proclaiming “Yishala Nationalities Cultural Village,” and the formation, under the direction of a retired township Party secretary, of a village orchestra playing music attributed to the richness of Lipo culture as a historical amalgam of Yi and Han.<sup>26</sup> None of this, however, has made the ordinary families of Yishala particularly rich or led to great inequality. If we take the Party secretary’s household out of the mix as an extreme outlier, we have a mean household total income of 10,800 yuan and a modest Gini coefficient of .41. Including the secretary, the mean household total income rises to 30,300 yuan and the Gini coefficient rises to .79, reflecting nothing other than his extreme wealth and his political and economic dominance of the community.

Table 3 summarizes the mean gross and net household annual income and the Gini coefficients for the three communities in 2006.

### Explaining the Increase in Inequality: Aggregate Measures

It is clear from the material presented above that economic inequality increased within all three research villages during the 18-year interval between our two surveys. It is very difficult to compare household incomes directly from one time

Table 3: Household Economic Statistics in 2006, by Village

Basic household economy statistics	Yishala	Renhe	Zhuangshang
Mean household total income <sup>a</sup> (yuan)	10,796	21,286	14,236
Mean household net income <sup>b</sup> (yuan)	2,598	4,850	3,852
Mean household per capita income (yuan)	2,569	5,031	2,904
Mean household per capita net income (yuan)	643	862	804
Gini coefficient <sup>c</sup>	.41	.56	.52
N (households with reported statistics)	102	76	69

*Notes:*

Statistics for Yishala exclude the household of the Party secretary’s father.

a. Based on the reported total annual income for each household.

b. Based on the reported net annual income for each household.

c. Calculated based on the reported household total annual income.

25 The Julong company had a manufacturing plant in Panzhuhua until recently, and took on the Yishala school as a charity project. For a similar case study, see Christina Y. Chan and Stevan Harrell, “School consolidation in rural Sichuan: quality vs equality,” in Ann Maxwell Hill and Minglang Zhou (eds.), *Affirmative Action in China and the U.S.: A Dialogue on Inequality and Minority Education* (New York: Palgrave, forthcoming 2009).

26 By late 2006, it was apparent that the plans for large-scale tourist development in Yishala were in trouble, and by late 2007 they seemed to have been put on hold, though there were still some tourists visiting. Our thanks to Ben Gertsen and Wang Ruoniu for this latest information.

period to another. Not only is it difficult to find agreement on how the value of the unit of measurement, the renminbi (人民币) or yuan, has changed with price inflation over the past 18 years, but the increased monetization and marketization of the economy have changed the proportions of cash income in villagers' budgets. Since just about every household interviewed in Yishala and Zhuangshang, along with 70 per cent of the households in Renhe, believed that they were better off in 2006 than when they were first interviewed 18 years before, we are not talking about some households experiencing an absolute decline in living standards or household income while others' incomes rose. Instead, we can assume that growing inequality is the result of some households' incomes rising *faster than others*, and can look at the factors that correlate with a faster rise in income.

We presume that, since agriculture in China in the reform era has been based primarily on small-scale plots, collectively owned but allocated semi-permanently to households on a relatively egalitarian basis, there is little reason to think that agricultural income would be a primary contributor to very many households' differential success, in Panzhuhua any more than anywhere else.<sup>27</sup> Instead, we need to look at other sources of income. So the first step in explaining increased income inequality is to look at the relationship between income amounts and income sources. Already in 1988, we can see an association, as indicated in Table 4. Households with a combination of income from agriculture, wages and small business had the highest average total income in both Yishala and Renhe. The combination of agriculture and small business is also associated with higher total income level, in Zhuangshang in particular. Regression analysis also showed that those who have income from diversified

Table 4: **Average Household Total Income for the Three Villages in 1988, by Income Source Category**

	Yishala		Renhe		Zhuangshang	
	No. (%)	Mean	No. (%)	Mean	No. (%)	Mean
Agriculture only	19 (20)	1,860	26 (33)	3,644	32 (54)	1,976
Wage salary only	1 (1)	1,930	2 (3)	1,755	2 (3)	1,547
Small business only	2 (2)	2,229	3 (4)	4,427	0 (0)	0
Agriculture and wages	37 (39)	2,372	15 (19)	4,461	12 (20)	2,328
Agriculture and small business	19 (20)	1,966	21 (27)	6,877	9 (15)	2,503
Wages and small business	0 (0)	0	0 (0)	0	0 (0)	0
Agriculture, wages and small business	11 (12)	2,846	6 (7)	9,333	3 (5)	2,332
Other (none of the above)	6 (6)	522	5 (6)	2,429	1 (2)	677
Total	95	2,119	78	5,013	59	2,109

Note:

The percentages are out of the total number of households that have their income source categorized.

27 Khan and Riskin, "China's household income," pp. 364–65; Ravallion and Chen, "China's uneven progress," pp. 3, 14.

sources have significantly greater incomes than those who depend entirely on agriculture, with those receiving income from a combination of all three types of sources having on average 2,416 yuan more income than those relying solely on agriculture.<sup>28</sup>

The association between diversified income source and household total income continues in the 2006 survey. As can be seen from Table 5, those whose income involves small business have much higher incomes than those who depend entirely on agriculture or entirely on wages. In fact, the highest levels are associated with the combination of small business and agriculture for both Yishala and Renhe; in Zhuangshang, it is the combination of wages and small business that has the highest level of total income. Even those with agricultural and wage labour income have a slightly higher mean than those who depend solely on farming. Regression analysis has also confirmed that sources of income and levels of income are strongly correlated in the 2006 data. Households with small business as the major income source have on average 26,907 yuan more income than those that rely on agriculture only. The gains for those households with small enterprises or more diversified income sources are much more salient now than they were in 1988. Such high income differentials by income sources might explain the growing income inequalities in the three communities.

In line with the argument above, we need to ask what factors have allowed families to diversify their sources of income, particularly to invest in commercial ventures or to gain access to higher paying salaried positions. Do families doing

**Table 5: Average Household Total Income for the Three Villages in 2006, by Income Source Category**

	Yishala		Renhe		Zhuangshang	
	No. (%)	Mean	No. (%)	Mean	No. (%)	Mean
Agriculture only	23 (23)	6,696	2 (3)	8,240	19 (28)	9,987
Wages only	13 (13)	9,080	11 (16)	12,455	7 (10)	12,000
Small business only	0 (0)	0	18 (27)	37,206	1 (1)	33,000
Agriculture and wages	53 (52)	10,440	4 (6)	14,230	38 (55)	14,725
Agriculture and small business	6 (6)	32,833	2 (3)	77,500	1 (1)	13,000
Wages and small business	0 (0)	0	21 (31)	17,507	2 (3)	46,500
Agriculture, wages and small business	3 (3)	21,000	2 (3)	18,450	0 (0)	0
Other (none of the above)	3 (3)	1,700	7 (10)	3,160	1 (1)	10,000
Total	101	10,796	67	21,286	69	14,236

Notes:

"Other" includes governmental subsidies, support from relatives and friends, and other unspecified sources. Those who reported total income but did not specify income composition are treated as missing income sources, and are not included here. Total household income is the self-reported total income value. The case in Yishala that has extremely high income was not included in the statistics shown here.

28 Since agriculture includes either grain or vegetable farming, husbandry and fishing, some households in Renhe who specialized in these agricultural businesses may be categorized as living on agriculture only, rather than running small businesses, if they did not specify any income from the latter. In this sense, the economic diversity in Renhe might be underrepresented.

well economically in 1988 have more capital to diversify their income sources? Or do families with more members gain an advantage for diversifying their income sources and enlarging their household income?

We first consider the head-start factor. Is it possible that families with higher household total income in 1988 are more likely to earn high income in 2006? This would seem a reasonable assumption, especially in a situation where higher incomes are correlated with diversified income sources, since the higher-ranking households would have had more capital to invest in the intervening years. When we look at the data, we do find that household income (natural log of household total annual income was used in the regression analysis) in 1988 has a significant positive effect on income in 2006, controlling for village.<sup>29</sup> When we look at each village individually, the significant positive effect of 1988 income is also found in both Yishala ( $\beta = .30$ ) and Renhe ( $\beta = .39$ ).

When we look at the head-start factor in terms of income rank, however, we find only a weak association. Table 6 shows the numbers of families in each tercile in 1988 that ended up in each tercile in 2006. Examining these data, we can see that for Yishala there seems to be no correlation between household rank in 1988 and 2006, while for Zhuangshang the association is quite weak; only for Renhe, which in 1988 was already more unequal, and whose households' sources of income were more diverse, did the head start in 1988 lead to significant differences in 2006 for families at the top of the rankings. The spearman rank-order correlation test showed that economic position in 1988 was indeed significantly correlated with position in 2006 for Renhe (see Table 6.2), but not for the other two sites.

This inconsistency between the effects of 1988 income and the effects of 1988 income rank might be related to increasing income inequality or the differential income increases in the villages. Those at top income ranks in 1988 might have become much richer in 2006 than those in the middle ranks, who might even have done worse in the 18-year time span. In other words, only those at the top income ranks in 1988 gained the head-start benefit, while those not ranked at the top might not have had the capacity to accumulate enough cash capital to invest in commercial ventures, and thus to gain the benefit from diversifying income sources. Regression analysis did show that households at the top tercile in 1988 have significantly higher income in 2006 than those at the bottom tercile, while those at the middle tercile in 1988 are not doing significantly better in 2006 than those who were at the bottom. Particularly, in places where people were mostly farmers, relatively higher income ranks in 1988 did not necessarily translate into the capital necessary to improve families' economic standing 18 years later.

Another possibility is that it was not head start but labour that made the difference. Anthropologists and demographers have long considered the effects

29 In all our statistical analyses for Yishala in 2006, we have removed the one outlier case of the Party secretary. His family is richer by two orders of magnitude than any other family in the survey, and with a relatively small number of cases such as ours, he simply skews the mean so far as to hide any points we make about the other families.

Table 6.1: Change of Economic Position in Terms of Total Income – Yishala

Economic position in 1988	Economic position in 2006			Total
	Low (%)	Medium (%)	High (%)	
Low	12 (38.71)	11 (35.48)	8 (25.81)	31
Medium	12 (36.36)	9 (27.27)	12 (36.36)	33
High	10 (27.03)	13 (35.14)	14 (37.84)	37
Total	34 (33.66)	33 (32.67)	40 (33.66)	101

Spearman's rank correlation coefficient = .12; Prob > |t| = 0.24

Table 6.2: Change of Economic Position in Terms of Total Income – Renhe

Economic position in 1988	Economic position in 2006			Total
	Low (%)	Medium (%)	High (%)	
Low	11 (40.74)	7 (25.93)	9 (33.33)	27
Medium	6 (27.27)	9 (40.91)	7 (31.82)	22
High	6 (20.00)	7 (23.33)	17 (56.67)	30
Total	23 (29.11)	23 (29.11)	33 (41.77)	79

Spearman's rank correlation coefficient = .23; Prob > |t| = 0.04

Table 6.3: Change of Economic Position in Terms of Total Income – Zhuangshang

Economic position in 1988	Economic position in 2006			Total
	Low (%)	Medium (%)	High (%)	
Low	12 (50.00)	4 (16.67)	8 (33.33)	24
Medium	6 (26.09)	9 (39.13)	8 (34.78)	23
High	5 (20.00)	10 (40.00)	10 (40.00)	25
Total	23 (31.94)	23 (31.94)	26 (36.11)	72

Spearman's rank correlation coefficient = .18; Prob > |t| = 0.13

Note:

Economic positions are divided at the 33 and 66 percentiles of ranks for household total income for each village.

of the developmental cycle on the wealth of Chinese rural families.<sup>30</sup> In some cases, these scholars have explained differences in family incomes or wealth by the changing dependency ratios in families across different phases of the domestic developmental cycle. According to this argument, when families are in phases of the cycle where the ratio of the number of children and elderly dependents to the number of labourers is low, the family is able to accumulate income from these working-aged people and not expend a large proportion of it supporting economically unproductive household members, with the result that they can increase savings. In other phases of the cycle, where there is a high dependency ratio, the opposite effect takes place, and a family has a hard time

30 Susan Greenhalgh, "Is inequality demographically induced? The family cycle and the distribution of income in Taiwan," *American Anthropologist*, Vol. 87, No. 3 (1985), pp. 571–94.

accumulating savings or may actually have to use accumulated savings to support its members.

In our studied villages, there was not much variance in the number of dependents of a household in either 1988 or 2006, and household size was not particularly large (see Table 7). With the implementation of the one-child policy, most couples have only two children (since two of the villages are mostly composed of ethnic minorities, two children are allowed). Given this household demographic situation, we expect that the chance of large numbers of dependents draining the household resources and impeding the household's investment in commercial ventures is quite small; rather, it is the absolute number of labourers in the household, rather than the dependency ratio, that is more likely to influence the household's capacity to diversify its income sources and increase income. Particularly in Yishala and Zhuangshang in 1988, where labour – either agricultural or wage labour – was the primary source of income, and where land worked did not differ much among families because it had only recently been allocated in the decollectivization of the early 1980s, we would expect the number of labourers in a household to be correlated with differences in household income.

Table 8 shows the results of our analysis. We took the natural log of household total income, and found that a larger number of labourers (defined as household members between 15 and 65 years old) in a household was significantly correlated with higher income in 1988, controlling for villages. When looking at each village individually, the positive correlation between household labour force size and income was also found in all three villages in 1988. However, in 2006, we observed a significant correlation between labour force size and income only in Yishala, not in the other two sites, even though for

Table 7: **Household Demographic Statistics 1988–2006, by Village – Mean (s.d.)**

	Yishala		Renhe		Zhuangshang	
	1988	2006	1988	2006	1988	2006
Household size	5.05 (1.8)	4.28 (1.4)	4.75 (1.8)	4.56 (1.9)	4.78 (1.6)	5.37 (2.1)
Number of adults	3.48 (1.5)	3.26 (1.1)	3.50 (1.4)	3.81 (1.6)	3.17 (1.1)	4.18 (1.9)
Number of labourers	3.69 (1.6)	2.98 (1.1)	3.51 (1.7)	3.54 (1.6)	3.32 (1.3)	3.72 (1.8)
Male labourers	1.96 (1.0)	1.60 (0.8)	1.69 (1.0)	1.77 (1.0)	1.73 (1.0)	1.82 (1.0)
Number of children	.97 (0.9)	.80 (0.8)	.83 (0.7)	.46 (0.7)	1.18 (1.1)	.96 (0.8)
Number of elderly	.39 (0.6)	.50 (0.7)	.41 (0.7)	.56 (0.8)	.28 (0.6)	.70 (0.9)
N	98	102	80	79	60	67

Note:

Following the definition for dependency ratio, here children are household members who are under the age of 15, and the elderly are those aged 65 or older.



**Table 8: Correlation Coefficients between Number of Labourers and Household Total Income 1988–2006, by Village**

	1988 coefficient	2006 coefficient
Yishala	.21**	.17**
Renhe	.22**	.15
Zhuangshang	.15**	.07
All three villages	.20**	.12**

Notes:

\* Significant at 0.05 level; \*\* significant at 0.01 level.

the amalgamated data we still saw a significant positive effect of number of labourers on 2006 household income, controlling for villages. In addition, the strength of the effects of number of labourers on household income also decreased from 1988 to 2006, whether looking at the villages separately or together.

The results suggests that in 1988 when more diverse sources of income were becoming available in Yishala and Zhuangshang, and when agriculture as a way of earning a living was disappearing almost entirely in Renhe, families with more labour power were more able to diversify their income sources away from agriculture and increase their income as a result. But as families move away from labour-demanding production, such as farming, to more capital-demanding production, their ability to diversify income sources is no longer so dependent on labour power. In fact, multinomial regression analysis shows that in 2006 the number of labourers affects only the ability of the family to add wage income in addition to agricultural earnings: that is, households with income from both agriculture and wages tend to have more labourers than those relying on agriculture alone; but households with other combinations of income sources are unlikely to have any more labourers than those relying on agriculture alone.

In addition, the 2006 data show that the positive effect of number of labourers further diminishes and is no longer significant, as shown in Table 9. In this regression model, we are looking at all three factors together to see how they affect household total income in 2006. The result shows that higher household income in 2006 is dependent on higher household income in 1988, and on the ability of households to diversify their income sources. In particular, households' current income source composition has a strong effect on households' economic success, and also explains much of the variance in 2006 household incomes. Households that can diversify their income sources away from agriculture, especially to small businesses, usually achieve higher income levels. What this seems to indicate (as discussed below) is that in our three surveyed villages at least, as households have shifted from labour to capital as their primary means of production, the basis of income inequality has also shifted from labour to capital, as would be expected in the change from a collective to a market-based economy.

Table 9: **Regression Coefficients to 2006 Household Total Income (in terms of the natural log of household total annual income)**

<b>Independent variables</b>	<b>Coefficient</b>	<b>Standard error</b>
1988 household total income	.26**	.08
2006 number of labourers in household	.07	.04
2006 income sources (reference: agriculture only)		
Wages only	.34	.19
Small business only	1.12**	.26
Agriculture and wages	.49**	.14
Agriculture and small business	1.44**	.29
Wages and small business	.93**	.25
Agriculture, wages and small business	1.10**	.37
Other (subsidies, friends' support, etc.)	-.83**	.29
Village (reference: Yishala)		
Renhe	-.06	.19
Zhuangshang	.23	.13
Constant	6.45**	.62
Adjusted R-squared	.34	
N	227	

Notes:

\* Significant at 0.05 level; \*\* significant at 0.01 level.

### Summary of Our Findings

In sum, our aggregate data confirm all our original hypotheses about independent variables that affect the relative economic success of households in 2006, but the effects are exerted in more complicated ways. Our first independent variable, the ability of households to diversify their income, was strongly associated with higher incomes in both 1988 and 2006. In particular, involvement in small businesses leads to higher income in all three villages. The second variable, the head-start, or higher income in 1988, was a significant predictor of 2006 income. But looking by village, the head-start income in terms of ranked positions was a significant predictor of 2006 income position only in Renhe, the village where inequality between households, as well as diversity of household income sources, was already the greatest in 1988, and where a greater percentage of 1988 households counted small business among their sources of income. And the third variable, labour power, was an important factor for household economic success in 1988, but its effect seems to have diminished in the ensuing 18 years as rural households have acquired more diversified income sources and agricultural production has played an ever-smaller part in household economy.

These results may seem complex, but we believe they illustrate a logical pattern of the move from labour to capital as the primary determinant of household income differences in the process of China's economic transition. At the beginning of China's transition from collective agriculture to a market economy, labour was the most important factor of production. Families who had more labour than they needed for working on the land could diversify their sources of income by going to work for wages or opening small businesses;

initially these businesses required very little capital to start up. Once the businesses were begun, sometimes funded by family members' wages as well as by their own profits, the capital that they generated became the most important factor in families' success. And then, as these households could accumulate more and more capital to further enlarge their investment in commercial ventures, they could further diversify their income sources, and achieve even higher income levels and faster income growth. Therefore, we see growing income inequalities in the villages as households move further apart in their ability to diversify income sources.

These results accord with the findings on interregional inequality from the studies discussed above. As Khan and Riskin have shown, the greatest disequalizing factor in regional differences in rural incomes was income from rural enterprise; while wages were also a factor, the disequalizing effect of wages declined after 1995, leaving rural enterprise, or what we have called small business, as the greatest contributor to rural inequalities.<sup>31</sup> Our data clearly show that this was as true when we consider differences within single communities: the more small business is a source of income for families within a single village, the more inequality there is likely to be within that village.

Our findings regarding the degree of inequality also accord with those from Mohapatra, Rozelle and Huang's four stages of regional development: agriculture dominant, migration dominant, micro-enterprise dominant and local industrial employment dominant.<sup>32</sup> In 1988 (see Table 4), Yishala and Zhuangshang were still clearly in their first stage, "agriculture dominant," although there were a considerable number of families who had wage income because of the cement factory. Renhe, by contrast, was already some way into the transition from labour to capital in 1988, with slightly more families having income from small businesses than from wages, and thus perhaps belonging in the "micro-enterprise dominant" category. Its better-off families had already accumulated some capital from diversified production and gained a head-start; hence we see a greater inequality in Renhe in 1988, and greater influence of 1988 income on 2006 income. By 2006 (see Table 5), Yishala and Zhuangshang, farther behind on the "ladder," seem to fit somewhere between "agriculture dominant" and "migration dominant," with the combination of agriculture and wages the most common mix of household income sources. For them, the initial ability to shift labour out of agriculture was crucial to their being able to accumulate the capital necessary for income to grow; hence family size still had an effect on income in 2006, at least in Yishala. And in both of these villages, households that can accumulate capital do better than those who merely diversify into migrant labour.

31 Khan and Riskin, "China's household income," p. 376.

32 Mohapatra, Rozelle and Huang, "Climbing," p. 1030.

## Conclusion

Returning to the same communities 18 years later has given us a rare opportunity to observe what has changed, as well as what has not changed, in one corner of rural China during the intervening time, and particularly to see how larger-scale processes – such as the shifts from subsistence to market agriculture, from agriculture to non-agricultural income and from labour to capital as the most important factors of production – have shaped the process of economic reform and economic growth very differently in three neighbouring communities.

All the communities have done reasonably well in the reforms; there are none of the disastrous cases of villages mired in poverty and deserted by armies of migrants that have become a staple of some stories of rural China during this interval.<sup>33</sup> Personal income has increased considerably in all three communities, and although migratory labour has played a part, particularly in Yishala and to a lesser extent in Zhuangshang, it has not played an overwhelming part in the economy of any of the communities.

These case studies from a remote corner of western China have, we believe, considerable significance for the study of changes in rural China as a whole. First, the same patterns found in macro-studies of inter-regional change in income inequality also apply in particular villages over an extended period. Second, we might be seeing the upslope of a kind of Kuznets curve emerging; these communities in the early stages of development away from purely subsistence agriculture have seen huge increases in income inequality in the 18 years between our two surveys. Third, the general observation that inequality has increased in the transition from socialist to capitalist modes of production, as capital becomes an increasing source of income, seem to be confirmed dramatically by our results. Finally, perhaps the most general lesson to be learned here, in addition to the obvious one that inequality has increased at all levels, is that even in a small area like Renhe district of Panzhihua, there is no single pattern of economic change in rural China. Even though diversification and access to capital are the most important factors in determining families' economic success, neither of these guarantees that a family will do well. Local conditions, ranging from the Party secretary's rental of 500 mu of land to the conversion of former peasants in Renhe to non-agricultural status, have determined villagers' access or lack of access to the means of improving their livelihoods.

33 See for example Maureen Fan, "Rural Chinese families feel migration's strains," *Washington Post*, 18 February 2007, p. 20.