The Great Transformations of Tibet and Xinjiang: a comparative analysis of rapid labour transitions in times of rapid growth in two contested minority regions of China

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Abstract

Rapid growth since the mid-1990s in the Tibetan and Uyghur areas in Western China has been associated with the rapid transition of the local (mostly Tibetan and Uyghur) labour forces out of the primary sector (mostly farming and herding) and into the tertiary sector (services). The TAR, for instance, went from being one of the most agrarian populations in China in the late 1990s, with 76 percent of its labour force employed in farming and herding in 1999 (almost entirely Tibetan), to 56 percent by 2008. These changes reflect the rapid disembedding of these minority populations from their traditional socio-economic foundations, the speed of which, for better or worse, often astounds even regular researchers in these areas, even those accustomed to equivalent changes elsewhere in China. These changes are analysed through a longitudinal and comparative trend analysis of aggregate employment, wage and national accounting data, comparing the TAR and Xinjiang to several other provincial cases in Western China and the national average. The comparison sheds light on the exceptional speed and characteristics of the transitions that have been induced in these areas within a very short period of time - especially in the Tibetan areas - even after taking into account their very different starting points, as a means to reflect on the profound changes that are occurring to people's lives and livelihoods in very real and rapid ways, which are in many respects irreversible and are quickly transforming the landscape faced by the next generation. The fact that these changes have been happening within a state of political disempowerment for these minorities, which impedes their ability to mediate the speed and course of these transitions, in addition to the disadvantages these minorities face within these transitions vis a vis the Han Chinese (and largely migrant) dominant culture, offers particular insight into the recent outbursts of discontent in these regions.

Introduction

The economies of the Tibetan areas[1] in Western China have been growing very rapidly since the mid-1990s – significantly more rapidly than China as a whole, which has had one of the fastest sustained growth experiences the world has ever seen. Unlike the rest of China, economic growth in the Tibetan areas – as best represented by the Tibet Autonomous Region (TAR), which accounts for about one half of Tibetan areas and population in China – has been disconnected from local processes of productive accumulation. Rather, rapid growth has been the result of a massive degree of subsidisation, mostly from the Central Government and heavily concentrated in urban services and construction. In combination with political disempowerment and outside control of most sectors of the economy besides agriculture, the TAR has essentially been turned into a quintessential aid economy *par excellence*, resulting in numerous polarisations, inefficiencies and other perversions (see Fischer 2009b).

However, while this growth experience is evidently an artificially-sustained subsidy bubble, its socio-economic consequences are not. Rather, rapid subsidy-sustained growth has been associated with very real and rapid changes in the socio-economic structure of Tibetan society. Again, these changes have been more rapid than changes occurring elsewhere in China albeit without the relative autonomy that local people and governments in other regions of China can rely on to mediate the consequences. Most fundamental has been the rapid transition of the local (mostly Tibetan) labour force out of the primary sector (mostly farming and herding).[2] In the Tibet Autonomous Region (TAR), for instance, the share of the local labour force considered as employed in the primary sector dropped from 76 percent in 1999 (the most agrarian labour force in China at the time) to 56 percent by 2008 – a reduction of twenty percentage points in ten years. This shift out of agriculture was mostly absorbed by rapid increases in the shares of local labour employed in services and, to a lesser extent, construction. Compared to other parts of western China, the speed and character of transition as represented by official data has been exceptional, to the extent that within one decade the TAR has, to a considerable extent, caught up with the (also rapidly changing) norm in China, albeit without the productive and sustainable economic

[1] In this article, use of the terms 'Tibet' and/or 'Tibetan areas' refers to all of the Tibetan areas in China, including the Tibet Autonomous Region (TAR) and the Tibetan areas that are incorporated into the provinces of Qinghai, Gansu, Sichuan and Yunnan. 'China' refers to the Peoples' Republic of China (PRC).

[2] The primary sector is the national accounting term for economic activities related to the production of primary inputs, as opposed to the transformation of these inputs by secondary activities – construction and manufacturing – or else non-physical services in the tertiary sector. The primary sector is composed of farming, animal husbandry, forestry and fishing (mining and quarrying are part of the secondary sector). In Tibetan areas, the primary sector is about half and half farming and animal husbandry (pastoralism).

foundations to support these changes as elsewhere in China. Moreover, the speed of such transitions in Tibetan areas outside the TAR might well be even faster given the implementation of large scale resettlement schemes in pastoral areas (which have largely bypassed the TAR to date) and the closer integration of these areas into neighbouring Han Chinese urban centres. For better or for worse, the consequences of these transitions in Tibet deserve urgent attention, particularly if they prove to be irreversible.

Indeed, the question of irreversibility deserves some attention for the framing of this article. Some of the decline in the Tibetan primary labour share probably reflects migratory workers who are still fairly well embedded in the rural economies from which they seasonally emigrate for part of the year in search of off-farm employment. These local migrants might not be registered as primary sector workers even though they continue to work in the primary sector for at least part of the year or, conversely, they might be registered as working in the primary sector even though they also engage in informally-organised off-farm work. In either case, the official data probably exaggerate the degree to which the local labour force has become disembedded from the rural economy. This in turn might be taken to imply that these labour transitions could be reversible if urban employment opportunities were to become more austere, in the sense that these migrants could easily return to farming or herding. Nonetheless, such migratory employment patterns do not necessarily lessen the sense of rapidity that the official data reflect regardless of their precise accuracy given that similar migratory considerations also apply in other parts of western China.

On the other hand, from a global demographic perspective, we can expect that, once started, these transitions will probably continue, in the broad structural sense that populations rarely move back into farming or herding once they have moved out of these activities (short of some massive traumatic event).[3] Indeed, the migratory employment patterns discussed above are fairly typical in early stages of urbanisation. Moreover, one of the most powerful mechanisms of transition in this regard is education rather than employment. For instance, my own qualitative observations among secondary students in the Tibetan areas of Qinghai, Gansu and Sichuan suggest that once young people leave their rural areas for a few years to boarding schools in towns, especially at the secondary

[3] In the modern period – that is – since the onset of demographic transitions and urbanisation alongside related economic transformations – we have almost never observed situations where a labour force has re-agrarianised, in a broad structural sense, except under short-lived episodes of trauma, crisis or extreme social engineering, such as under Pol Pot in Cambodia, certain periods under Maoism in China, or the collapse of the Soviet Union in the 1990s (on the last case, see Spoor 2011). However, even in all of these cases, once the proximate factor is removed, the structural trend in the population to move out of agriculture reasserts itself, often with a vengeance. For further discussion on demographic perspectives of urbanization, see Dyson (2011).

level, they rarely return to farming or herding and their families usually consider them lost causes with respect to these occupations. Such students might return temporarily to their rural households to help out, particularly during summer holidays or spells of postgraduate unemployment, but I have rarely come across secondary students who express the desire or intention to move back into farming or herding as an occupation.[4] The article by Iselin in this issue makes this same point (Iselin 2011). Hence, the structural shifts observed in the employment data plausibly represent the unleashing of profound social transformations that, once started, are unlikely to reverse – even considering the rural embeddedness of migratory labour or else the potential prospect of dire economic conditions in the urban areas.[5] These transformations will obviously not spell the death of farming and herding in Tibet, but they will undoubtedly change the nature of farming and herding within the broader socio-economic system.

To the extent that many of these socio-economic changes might be irreversible, they highlight a variety of concerns particular to the disempowered circumstances of Tibetan areas and to the role of government policies in mediating the pace and character of change. A major concern regards the dependence on massive levels of subsidization (relative to the local economy) that have been driving economic growth and structural change in Tibetan areas and on which many Tibetans have increasingly come to rely through the course of these labour transitions. To the extent that urbanization becomes increasingly central to these changing employment patterns, the continuing if not strengthening dominance of Han Chinese in the urban economies of Tibet and the associated urban exclusionary pressures faced by Tibetans also become increasingly contentious, as arguably evidenced by the outburst of large-scale protests in March 2008. Similarly, the heightened state of disempowerment faced by Tibetans in the governance of their regions leaves them with little capability (relative to populations in other regions in China) to mediate these changes politically vis à vis the dominant sources of power determining subsidies and related regional development policies.

This article analyses these structural socio-economic transformations through a longitudinal trend analysis of aggregate employment, wage and national accounting data, comparing the TAR to several other provinces in western China and the national average. The TAR is chosen as the basis of comparison because it represents an entirely Tibetan experience (in the rural areas), as opposed to the other Chinese provinces containing Tibetan areas, where rural data is dominated

[4] These observations are based on detailed interviews with 25 Tibetan secondary school students and focus group discussions with six classes, each with about 20-30 Tibetan high school students, conducted in Qinghai in 2004. See Fischer (2009a).

[5] Again, see Dyson (2011) for an excellent discussion of these aspects of urbanization from a global demographic (rather than economic) perspective.

by the Han Chinese majority.[6] Nonetheless, similar transitions can be observed in other Tibetan areas as well, albeit with less intensive subsidisation and more intensive integration with neighbouring Han urban centres than in the TAR.

The method used in this study derives from a structuralist development economics approach, focusing inductively on the evolution of aggregates, averages and compositions, rather than on the statistical variations and associations of individual and/or household characteristics within a sample. This approach is not used to suggest a structurally-deterministic understanding of the transitions studied, nor a homogeneous experience among the social groups represented. Rather, in combination with an institutionalist understanding of context, it is used as a means to reflect on the factors and forces shaping the rapidly changing socio-economic norms within which people experience and act in a wide variety of ways. The primary data used are taken from official sources provided by the National Bureau of Statistics in various yearbooks. While many criticise these official statistics of China, their accuracy is arguably sufficient for teasing out broad structural trends, while obviously keeping in mind that all social statistical work must be approached interpretatively.[7] Indeed, the official statistics are all that we have to understand the broad nature of socio-economic change in Tibet and thus it is urgent to exploit them as best we can.

These transformations of Tibet are analysed in three sections. The first briefly outlines some of the outstanding features of recent rapid growth in the TAR since the mid-1990s. The second section analyses in more detail the changing characteristics of employment structure in the TAR that have accompanied such rapid growth, in comparison to several other provinces in western China. In the third section, these employment trends are combined with national accounting data as a means to measure sectoral imbalances across the economy, demonstrating the exceptionally heavy urban bias guiding development strategies since the mid-1990s in the TAR, particularly in the early 2000s. Despite some attempts to compensate these imbalances (see Childs et al 2011, this issue), sectoral polarisation has continued unabated since the early 2000s even despite the huge transition of labour out agriculture, while new forms of inequalities

[6] The TAR is entirely composed of Tibetan areas and thus the aggregate data of the TAR – much of which is only available at a provincial level of disaggregation – represents the experience of an entirely Tibetan area in China. In contrast, the data (including rural data) for the other provinces containing Tibetan areas (Qinghai, Sichuan, Gansu and Yunnan, accounting for over half the Tibetan population in China) is overwhelmed by the population weight of non-Tibetans in the non-Tibetan areas of these provinces. However, the data from the TAR arguably approximate broad trends in Tibetan rural areas outside the TAR given strong similarities across these Tibetan areas and stark differences between these areas and everywhere else in China in terms of topography, population density, patterns of land-use and livelihood, levels and composition of rural household incomes, education levels, and health indices.

[7] For more discussion, see Fischer (2005: 6-12).

appear to have rapidly emerged within urban areas. The conclusion reflects on some concerns regarding sustainability and the importance of prioritizing Tibetan urban employment in this context.

1. Background on rapid economic growth in the TAR

Following a period of sustained economic stagnation (in real terms) in the early part of the reform period in the TAR, Beijing started to implement a variety of policy initiatives from 1994 onwards in order to propel the TAR economy back towards the per capita national average from which it had been lagging. These initiatives culminated in the 'Open the West' campaign (OWC; *xibu da kaifa*),[8] announced in 1999, which was complemented by the Tenth Five-Year Plan in 2000 and supported in the TAR by the Fourth Tibet Work Forum in 2001. Since then, the speed of recent economic growth in the TAR has been phenomenal, even by recent Chinese standards. The Gross Domestic Product (GDP) of the TAR more than quadrupled from 1997 to 2007. In comparison, the Chinese economy tripled over the same period. As a result that GDP per capita of the TAR caught up with the average in China, rising from just under half of the national average GDP per capita in 1997 to just over 61 percent by 2008, reaching 13,862 yuan in 2008 (versus 22,701 yuan nationally).[9]

However, this rapid growth in the TAR was dislocated from productive sectors, particularly the primary sector (agriculture), which was the largest sector in GDP terms up to 1996 and employed about three quarters of the workforce in 2000 (mostly Tibetan). While aggregate GDP in the TAR increased by 3.4 times from 2000 to 2008, the GDP contribution of agriculture only grew by about two thirds, falling in share from 42 percent of GDP in 1995 to 15 percent in 2008. Industry and mining almost doubled in value-added from 2000 to 2008, albeit from a very small base, with much of the increase occurring in 2006 and 2007, and this sectoral sub-category remained at 7.5 percent of GDP in 2008. In contrast, the GDP value-added of construction more than quintupled from 2000 to 2008, increasing from a previous peak of 17 percent of GDP in 1995 (or 11 percent in 1996) to 22 percent in 2008, becoming larger than agriculture and almost three times larger than industry and mining (construction is only a fraction of industry and mining in every other province of China). While the increase in construction was disassociated from productive activities, it was closely associated with the tertiary sector (a combination of government and party

[8] This campaign is usually translated by most scholars – including myself up until recently – as the 'Western Development Strategy'. However, I have opted for 'Open the West Campaign' after discussions with Lara Marconi, given that this offers a more accurate translation of the Chinese words *xibu da kaifa*, which convey a sense of opening and (resource) exploitation rather than development *per se*.

[9] Data are from CSY (2009: Table 2-15) and equivalent in previous yearbooks.

administration; social services such as education and health; trade and commerce; transport; and other services). The value-added of the tertiary sector more than quadrupled from 2000 to 2008, rising from 34 percent of total GDP in 1995 to 56 percent by 2008, becoming by far the largest sector of the TAR.[10] Indeed, the tertiary sector contributed almost the entirety of GDP increase in certain years, such as 80 percent of GDP increase in 1996, 87 percent in 2002, or 73 percent in 2005 (despite the ongoing railway construction in that year).

The experience of the TAR was starkly dissimilar to all other provinces of western China, including Qinghai, the next most similar province to the TAR in terms of topography and demography. Subsidisation strategies in all other western provinces were focused on intensively restructuring the antiquated industrial base left over from Maoist interior industrialisation strategies of the 1960s and 1970s. In all these cases, intensive subsidisation and construction activity bolstered the leading role of industry within a few years. In China as a whole, secondary industry (including mining, but only as a very minor share) was generally the largest sector driving growth throughout the 1990s and 2000s, amounting to over 40 percent of GDP. Construction actually shrank from 6.1 of GDP in 1995 to 5.7 percent in 2008 despite the evident construction boom in China. The share of the tertiary sector increased considerably in the late 1990s, settling at just over 40 percent by 2008.[11] These patterns were broadly similar in most western provinces, albeit with a stronger role of the tertiary sector and construction since 2000, reflecting the larger role of subsidies and investment under the OWC.[12]

In contrast, rapid growth in the TAR has been based on rapid tertiarisation and a construction boom alongside a small and constant GDP share of secondary industry. Moreover, the composition of the tertiary sector in the TAR again contrasts with the rest of China. While the share of government and party agencies in the tertiary sector of the TAR has always been the highest in China, at around 20 percent in the mid-1990s, it surged in 2000 and 2001 to over 26 percent, becoming the largest component of the tertiary sector in those two years and accounting for over 13 percent of total GDP in 2001, or almost twice the entire mining and industrial activity and close to the total construction activity. Government administration had effectively become the engine of growth in the opening years of the OWC. By 2003 it stabilised at 11 percent of GDP, after which the disaggregated tertiary GDP data at the provincial level ceased to be reported in the yearbooks. Indirect indicators suggest that government administration continued to play a leading role throughout the 2000s, probably more than even tourism, which was nonetheless skyrocketing in the 2000s (see

[10] Calculated from CSY (2009: Table 2-15) and equivalent in each previous yearbook back to CSY (1997). Data for 1995 is from TSY (2003: Table 1-12). For more details, see Fischer (2009b).
[11] All data calculated from CSY (2009: Table 2-1).
[12] See Fischer (2007) for more detail on Sichuan, Gansu, Qinghai and all China.

Fischer 2009b: 41-42).[13] In comparison, government administration in China accounted for only 2.3 percent of total GDP in 2003, while it accounted for 7.5 percent in Qinghai. The high share in the TAR (as well as in Qinghai and Xinjiang) probably indirectly reflects – in part – the relatively large military and/or security presence in these provinces and possibly a strengthening of this presence in the opening years of the OWC as well.[14]

In sum, most of the growth generated in the TAR over these years derived from an alternating sequencing between tertiary activities (dominated by government administration, commerce and tourism) and construction (dominated by large construction projects such as the various components of the Qinghai-Tibet railway). Both of these drivers were mostly determined by policies of subsidised spending and investment decided in Beijing and, to a much lesser extent, supported by various rich coastal provinces in China. Given the weight of these instituted sources of growth in the local economy, changes in provincial economic structure have been much more radical and volatile than elsewhere in China, including the next most resembling province of Qinghai.

The magnitude of these drivers relative to the local economy in the TAR is worth emphasising. The extremely high and increasing magnitude of both direct and indirect subsidies in the TAR almost defies logic, given that they started to exceed total GDP from 2001 onwards. Even in comparison to Qinghai, the next most subsidized province of China, the TAR is exceptional in the degree to which it has exhibited an extreme level of subsidy dependence that has not abated over time despite the intensity of investment activity. Local government expenditure throughout this period remained over 90 percent funded by direct budgetary subsidies (i.e. from Beijing to the TAR local government), and these direct budgetary subsidies reached an astonishing level equivalent to 81 percent of GDP in 2002 and 90 percent in 2008. Similarly, the value of total investment (mostly subsidised) reached levels unparalleled anywhere in China in recent history, at almost 80 percent of GDP in 2006 and remaining close to that level in 2008.[15] Within this context of extremely intense subsidisation, the fact that there was rapid growth comes as no surprise. Rather, it is the sheer inefficiency of such subsidisation that is striking, albeit this inefficiency has been existent since the government started to intensively subsidise the region in the late 1960s. I have referred to this as 'boomerang aid' in Fischer (2009b), in that most subsidies

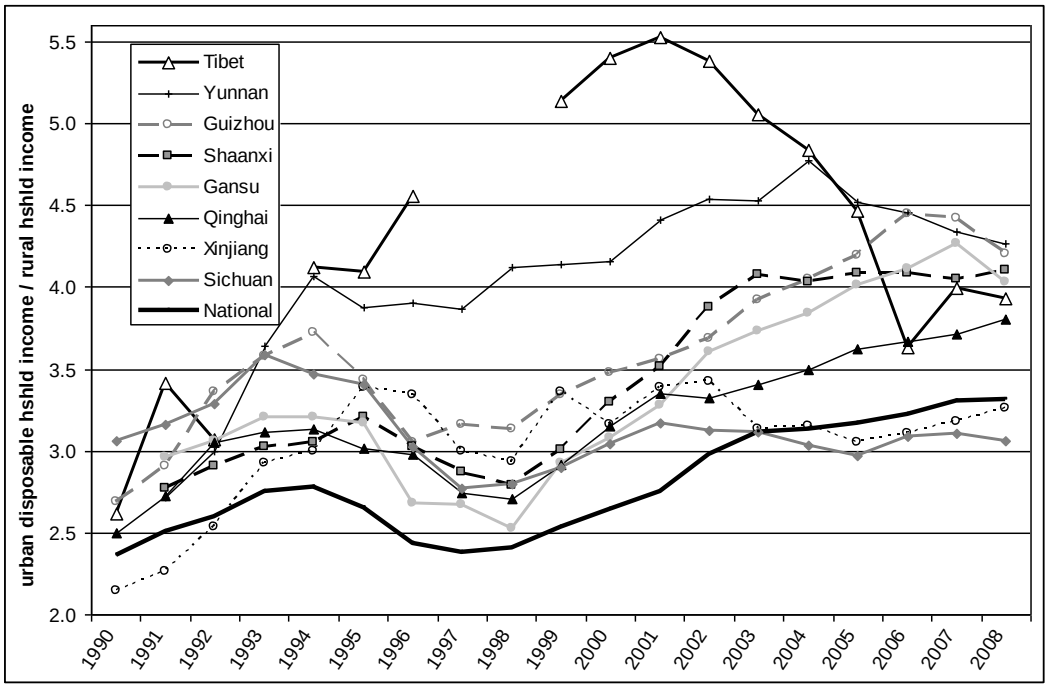
[13] According to data presented by TAR governor Padma Choling, tourist numbers in the TAR (mostly domestic Chinese) rose from 1.9 million in 2006 to 6.82 million in 2010. Tourist numbers would have exceeded the total population of the TAR of about 2.8 million in 2007 (see Tibetinfonet 2011).

[14] This is a matter of informed speculation, as military activity is a closely guarded secret in China. See Fischer (2005: 44-45).

[15] See Fischer (2009b: 44-48) for further details on data, although the calculations here have been updated with more recent data from equivalent tables in CSY (2009).

entering the TAR leave almost immediately via the trade account or through various other forms of monetary outflow from the region, accentuating the delinking of such flows from locally-oriented forms of accumulation and producing a highly polarised form of growth as a result.

Figure 1: Urban-rural inequality, selected provinces, constant 2008 rmb



Sources: calculated from CSY (2009: Tables 8-5, 10-15 and 10-21) and equivalent in previous yearbooks.

In this sense, while the various western development strategies since the mid-1990s were quite successful in reversing the trend of worsening provincial inequalities in the first two decades of the reform period, this outcome was achieved through a sharpening of economic polarisation within western China. In the TAR especially, heavy dependence on subsidies led to an excessively urban-centric strategy up to the early 2000s, relative to other Chinese provinces where urban-rural inequality was already considered to be high by international standards. These trends in urban-rural inequality are shown in Figure One above, measured in terms of the ratio of per capita urban disposable household income (of households registered as permanently residing) over per capita rural household income, both deflated by their respective urban and rural provincial consumer price indices. These measures reflect that the take-off of the TAR in the mid-1990s was primarily urban and excessively de-linked from the local rural economy; urban-rural inequality reached the dizzying height of 5.5 in 2001, i.e.

the average urban per capita household income was 5.5 times higher than the average rural per capita income – a level never before observed at a provincial level in the PRC.

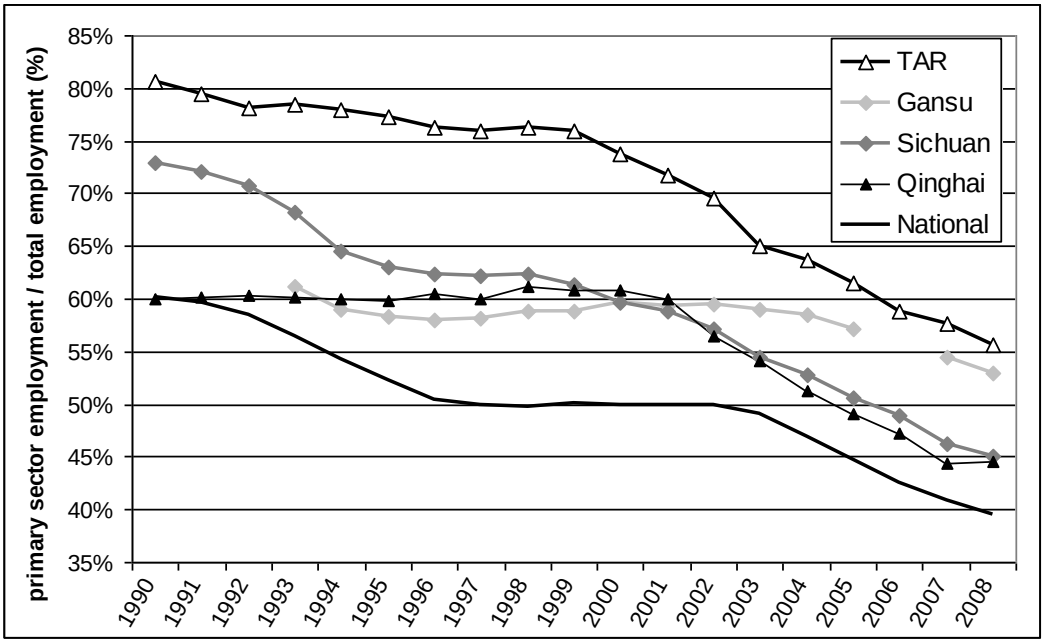
Urban-rural polarisation in the TAR was just as sharply rectified from 2001 to 2006, at least back down to the level of urban-rural inequality observed in the TAR in the mid-1990s and converging with the upper range of generally-increasing urban-rural inequality across the rest of western China up to 2008. This sharp correction in part reflects strong growth in per capita rural incomes after 2002, most likely due to a variety of rural development initiatives to increase rural incomes from 2003 onwards, such as those discussed by Childs et al (2011) in this issue and Goldstein et al (2008; 2010). It also partly reflects the fact that per capita urban incomes stagnated in 2005 and 2006, possibly due to an apparent respite in the otherwise rapidly increasing money wages of urban state-sector staff and workers in the TAR in these two years, which in turn account for a large part of the dynamics observed in average urban incomes of the TAR (see further discussion of this in the third section). The sharp correction in urban-rural inequality also likely reflects the urbanisation of the local labour force and the probable metamorphosis of previous urban-rural inequality into intra-urban inequality as the newly emerging schism driving polarisation and stratification in this province, as discussed in the next sections.

2. Labour transitions in the context of rapid subsidised growth

According to the official aggregate employment data[16] and relative to the rest of China, the TAR labour force (mostly Tibetan) experienced one of the latest and, once started, fastest transitions out of agriculture from the late 1990s onwards. This transition is shown in Figure Two below, with reference to shares of the labour force employed the primary sector (mostly farming and herding) from 1990 to 2008. The primary labour share of the TAR stood at 81 percent in 1990, then the most agrarian labour force in China. The share remained at 76 percent in 1999 (still the most agrarian of China), but then started to fall sharply with the beginning of the OWC in 2000, to 65 percent in 2003 and 56 percent in 2008.

[16] See the Appendix for a detailed explanation of the data sources used.

Figure 2: Share of Labour in Primary Sector, selected provinces, 1990-2008



Sources: CSY (2009: Table 4-4) and equivalent tables in previous yearbooks.

The proportional shift of labour out of the primary sector was more gradual in China and Sichuan, albeit still rapid from a comparative international perspective. In China, the primary share fell from 60 percent in 1990 to a plateau of about 50 percent in the late 1990s and early 2000s, and then fell sharply from 2003 onwards, to just below 40 percent by 2008. The share in Sichuan dropped from 73 percent in 1990 to 61 percent in 1999 and then to 45 percent by 2008. In contrast, the shift started later and more suddenly in the TAR as well as in Qinghai, the province with the next highest proportion of Tibetans in its population (see Fischer 2008). An equivalent drop in share of about ten percentage points occurred in all of the provinces shown from 2003 onwards (besides Gansu). However, the overall pace of change in the TAR since 1999 has been exceptional. About 20 percent of the local (mostly Tibetan) TAR labour force moved out of agriculture in as little as nine years, more or less converging with the norm of other poor (but much more densely populated) provinces such as Gansu and even falling below the share in Yunnan (not shown here).

Moreover, the declining share in the TAR appears to represent a stabilising of the absolute numbers of Tibetans working in farming and herding despite ongoing population growth. The absolute number working in the primary sector in the TAR reached its peak in 1999 at 922,000 people, after which the number fell to 850,000 in 2003, although it then gradually increased to 893,000 in 2008. Some of these changes probably reflect adjustments to estimates after the

2000 census or else reclassifications and even actual resettlements in the beginning of the OWC. Nonetheless, the slow increase in this number since 2003 – around half a percent per year – is significantly less than the rate of rural population increase, which was well over one percent over these years, or an even faster rate of growth in the working age population.[17] Indeed, this demonstrates that even in the context of falling fertility and substantial shifts to off-farm employment, population momentum can nonetheless result in declining per capita landholdings, thereby exacerbating other problems, such as stagnant grain prices (see Goldstein et al 2003 and 2008; Fischer 2005: 94). These absolute numbers are significant because they reflect that the remarkably rapid transition in the local labour structure out of agriculture has been happening regardless of the effect that non-Tibetan (i.e. Han Chinese) out-of-province migrants might have had on the overall employment shares of the TAR given that very few of these migrants come to the TAR to work in agriculture in rural areas (besides temporary migrants working as vegetable farmers in cities such as Lhasa or Shigatse, albeit most of them are probably not reflected in these statistics).

Notably, these data probably both under and overestimate actual trends.[18] For instance, on one hand some of these trends might reflect administered changes in registration status that exaggerate actual socio-economic changes, i.e. people are reclassified as urban residents even though they might continue to farm or herd. Similarly, as noted in the introduction, some rural migrants might be registered as employed in secondary or tertiary activities even though they still spend part of a year working in farming or herding. On the other hand, much labour migration might be also hidden from these data, such as when farmers migrate to urban areas for six months a year in search of temporary work but otherwise remain registered as rural residents working in the primary sector. On balance, these data are probably accurate in a rough sense, in terms of reflecting real changes in socio-economic structure, as corroborated by the field insights of myself and other scholars (as noted above).

To a large extent, the shift of the labour force out of agriculture in Tibetan areas implies urbanisation, much more so than other regions of China, given the scarcity of off-farm rural employment opportunities in the Tibetan areas relative to more central and coastal areas of China, where much off-farm employment remains in rural areas. The recent (and heavily-subsidised) surge in rural entrepreneurship and employment (as discussed by Childs et al, 2011, in this

[17] The TAR has the highest rate of population increase in China, although fertility started to fall sharply in the 1990s (see Childs 2008; Fischer 2008), meaning that the base of the population structure started to invert in the 1990s (successive age cohorts became smaller in number). Hence, the 'youth bulge' in the population structure (see Childs 2008: 266) started reaching the working age in the 2000s (considered as age 16 years and older in the employment statistics).

[18] Again, see Appendix.

issue) has attenuated this trend in the TAR to a certain degree. Nonetheless, despite the prevalence of entrepreneurial activities in the three villages surveyed by Childs et al, labour migration still remained the most prevalent emerging livelihood strategy for households even in the most 'entrepreneurial' of these villages. Moreover, in their similar research reported in Goldstein et al (2008: 522), urban labour migration to Lhasa, Shigatse or the local county seat accounting for about half of the overall labour migration in these three villages. Rural-rural labour migration, such as on infrastructure projects or housing construction, accounted for the other half of labour migration, albeit these three villages are located relatively close to a major city (Shigatse) and hence would have been relatively privileged in terms of off-farm rural employment generation. In this light, the predominant trend in the TAR overall has likely been towards a relatively rapid urbanisation of the local TAR labour force

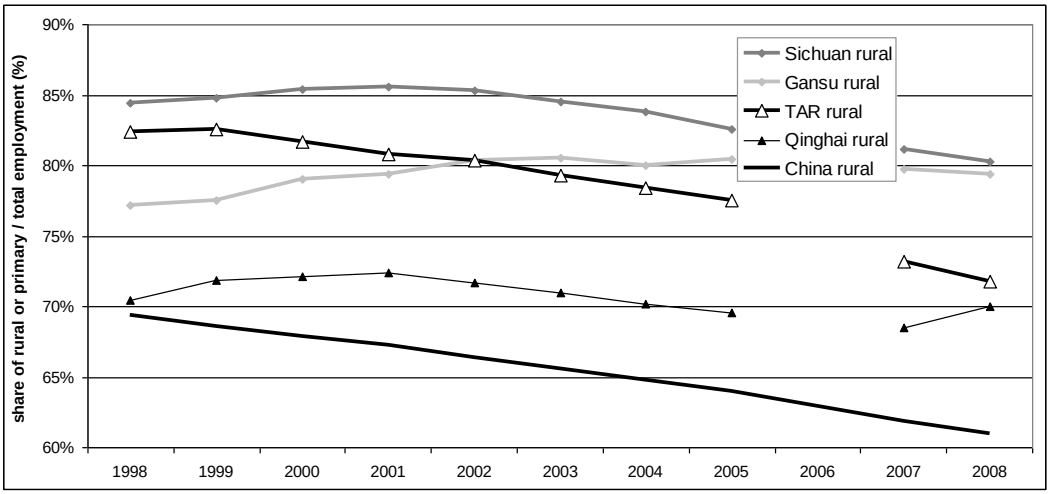
Two measures can be used to reflect these off-farm rural trends, as compared in the figures below. One is the rural share of employment (versus the primary share of total employment), and the other is the combination of three categories of rural employment, also as a share of total employment: township and village enterprises (TVEs), rural private enterprises, and rural self-employed individuals.[19] In the first case, there is a difference – often even in trend – between the shares of total rural employment and primary sector employment. This difference could be taken as a very rough proxy for rural off-farm employment although, as discussed above and in the appendix, some of this difference might represent misclassifications of people who have migrated to urban areas but have maintained their registration status in the rural areas and hence are counted as part of the rural employed (or vice versa, as noted above). The second measure (the three subcategories of rural employment) offers a more restrictive proxy measure of off-farm rural employment although, in this case, these three categories might not capture informally-organised off-farm rural employment in units not formally registered in administrative records, which might be well developed in richer coastal areas but much less so in remote and poor western areas, particularly in Tibetan areas. Moreover, some of the TVEs, private enterprises and self-employed individuals might be involved in agricultural activities, such as a TVE engaged in raising chickens for urban markets, as discussed in Goldstein et al (2010), in which case, they would actually be part of the primary sector. Indeed, in the TAR, these three categories are only a fraction of the first measure (the difference between rural and primary employment), perhaps reflecting the fact that much of off-farm employment in the TAR is fairly informal and not formally

[19] Both categories of data are reported for each year in Table 4-2 of CSY (2009) and equivalent tables in previous yearbooks.

registered.[20] In contrast, elsewhere in China (e.g. nationally or in Sichuan), the combination of these three categories is greater than the difference between rural and primary sector employment, perhaps indicating that some of the people employed in these categories were working in the primary sector. Regardless, the broad observation holds that there is relatively much less off-farm rural employment in the TAR than elsewhere in China and that shifts out of agriculture tend to lead to urbanisation much more so than elsewhere in China – as would be expected of a sparsely populated region with 'primate' towns and cities.

These various measures are shown in the next three figures for the period from 1998-2008, starting just before the onset of rapid labour transition in the TAR. The share of rural employment to total employment for each province is shown in Figure Three. The difference between rural and primary sector employment shares (r-p diff) is shown in Figure Four. The share of TVE, rural private enterprise and rural self-employed individuals (tve+pe+se) to total provincial employment (tN) is show in Figure Five.

Figure 3: Share of labour classified as rural, selected provinces, 1990-2008



Sources: calculated from CSY (2009: Tables 4-2 and 4-4) and equivalent in previous yearbooks.

Comparing Figure Three with the previous Figure Two on primary labour shares, it is apparent that a much stronger shift out of rural employment took place in the TAR than in other western provinces, implying that the transition out of agriculture has involved much faster urbanisation of local labour force than elsewhere in western China. For instance, the share of rural employment in the TAR fell almost 11 percent between 1998 and 2008, or about half of the almost

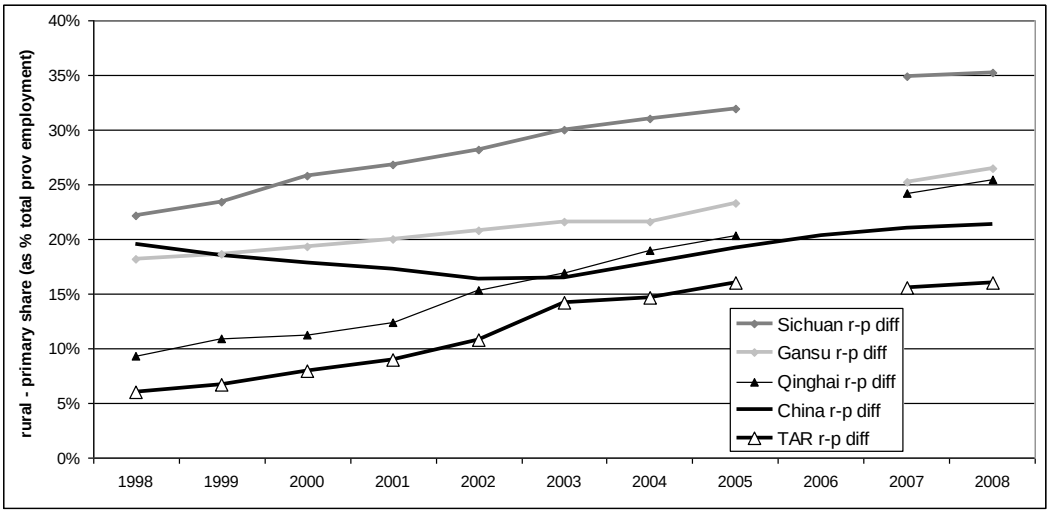
[20] Previously, I used these three categories as proxy for off-farm rural employment in the TAR (e.g. Fischer 2005; 2009), which seems to have underestimated the amount off-farm rural employment in the TAR and exaggerated the difference between the TAR and other regions.

21 percent drop in the primary employment share over these same years. Notably, this corroborates with the above-mentioned survey results of Goldstein et al (2008: 522), in which about half of the respondents who were 'going for income' were doing so by migrating to urban areas, whereas about half migrated to other rural areas. As a result, the TAR ended this period with a much less rural labour force than in Sichuan or Gansu, converging with Qinghai and approaching the national average. In contrast, in Qinghai, the next most similar province to the TAR in terms of population and topography, the rural employment share only fell 0.5 percent over this period – albeit it started this period with a much lower rural employment share than most other western provinces, almost on par with the national average – whereas the primary sector share fell almost 17 percent. If these data are accurate, almost the entire proportional shift of labour out of the primary sector in Qinghai was absorbed by other types of rural employment. Similarly, there was only a four percent drop in the rural share of Sichuan despite the 17 percent drop in the primary share, resulting in a surprisingly rural province (at 80 percent of total employment in 2008) despite the sharp reduction in primary share to 45 percent, which was close to the national average and probably reflects strong rural off-farm employment generation over these years. Thus, while the Sichuan labour force was less urbanised than that of the TAR, it was also much less agrarian. In Gansu, the rural share actually increased by 2 percent, alongside a slight decline in the primary share of 6 percent. Nationally, trends between these two shares were broadly correspondent over this period, with the rural share falling 8 percent while the primary share fell 10 percent. In sum, among the western cases shown here, the TAR shows the strongest shedding of primary sector employment outside of the rural areas altogether.

If the rural employment share can be taken as a rough proxy of urbanisation,[21] it also suggests that the TAR has been experiencing some of the most rapid urbanisation over this period, albeit starting from a low urbanization rate of almost 20 percent according to the 2000 census (including temporary migrants), or 15 percent for Tibetans only. In other words, the relative scarcity of off-farm rural employment in the TAR (and other Tibetan areas) implies that movements out of agriculture imply relatively greater movements to towns and cities, and that urban labour markets are relatively much more central to labour transitions in the Tibetan areas than in other parts of western China. This is reflected further in Figures Four and Five, which are shown together for comparison of these two proxy measures of off-farm rural employment.

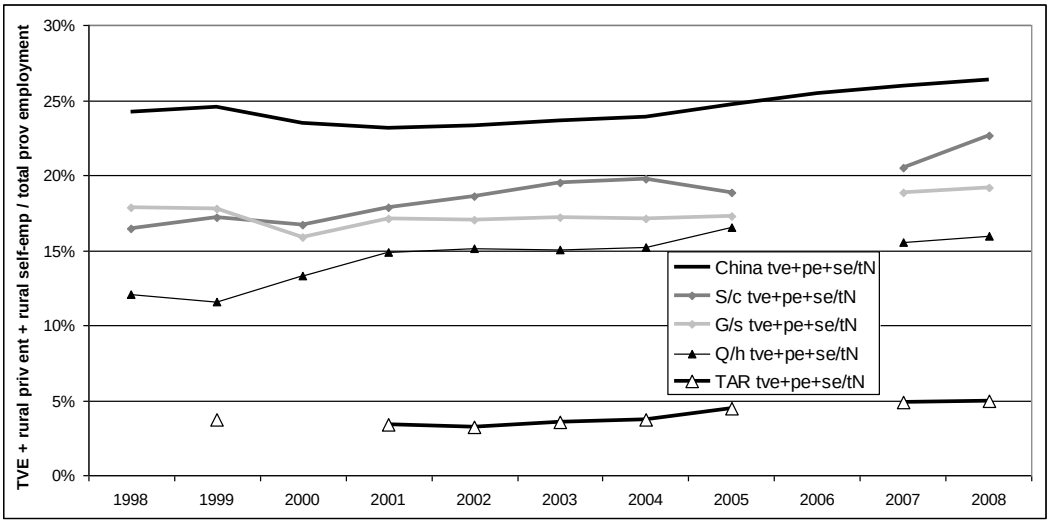
[21] The measurement of urbanisation is very problematic in China given that urban definitions are quite different in each of the five censuses (see Yixing and Ma 2003). Also, annual surveys on population change are only based on people registered as permanently-residing and thus provide no basis for evaluating changes due to migration.

Figure 4: Difference between rural and primary labour shares, 1998-2008



Sources: calculated from same as above.

Figure 5: TVE, rural private enterprise and self-employed individuals share of total employment, 1998-2008



Sources: calculated from CSY (2009: Tables 4-2); and equivalent in previous yearbooks.

As discussed above, the difference between rural and primary sector employment shares (Figure Four) can be considered as a generous measure for off-farm rural employment given that it might include significant amounts of urbanising migrants who have maintained their rural registration status (and possibly even agricultural employment status) and an informal status in urban areas. According to this measure, a substantial increase in the share of such labour was registered in the TAR in the early years of the OWC, rising from 6 percent of

total TAR employment in 1998 to 14 percent in 2003, and thereafter stabilising at around 16 percent. The OWC thereby appears to have generated a substantial share of non-agricultural employment in the rural areas, particularly after 2002, similar to other western provinces and converging with the national trend, but at a consistently lower level as would be expected of a sparsely-populated remote area. This would be the result of intensive efforts to raise rural incomes through the provision of rural employment opportunities in the TAR through intensive subsidisation, particularly since 2003, as discussed by Childs et al (in this issue) and Goldstein et al (2008; 2010).[22]

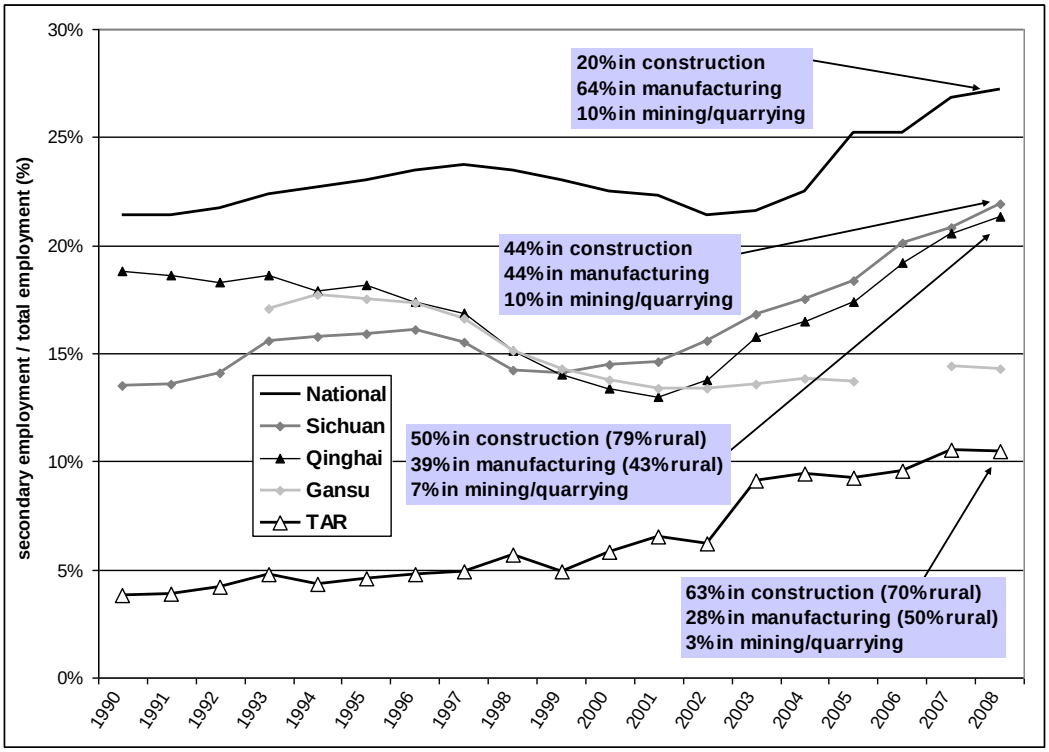
Figure Five provides a more restrictive proxy measure of off-farm rural employment. According to this measure, off-farm rural employment generation in the TAR has been much sparser than in the other provinces presented, at least in terms of employment reported in the administrative records in officially registered TVEs, rural private enterprises or as rural self-employed individuals. The contribution of these three categories accounted for 5 percent of total TAR employment in 2008, up from 3.7 percent in 1999, versus 16 percent in Qinghai (up from 12 percent), 19 percent in Gansu (up from 18 percent), 23 percent in Sichuan (up from 17 percent), and 26 percent nationally (up from 25 percent). According to this measure, there is a much sharper difference between the TAR and the rest, revealing a much greater scarcity of (formally registered) employment opportunities in the rural areas of the TAR.

Considering the upward and downward biases of these two proxy measures for off-farm rural employment, as discussed above, it is likely that actual experience in the TAR lies somewhere between the two. A fairly substantial increase probably occurred in largely informally-organised off-farm employment generation, albeit this increase was significantly scarcer than elsewhere in China (as would be expected given the population and geographic characteristics of this region). This resulted in stronger urbanisation.

Transition out of agriculture and, for the large part, into urban areas has resulted in an equally rapid transition towards tertiary employment in the TAR, largely bypassing employment in the secondary sector (especially manufacturing). Figure Six below presents the changing trends of the share of secondary sector employment in total employment of the five cases discussed, along with some highlighted data on the resulting composition of secondary employment in 2008 (in the text boxes embedded in the figure). Figure Seven presents the same for tertiary sector employment.

[22] In an interview with a senior scholar/official from the Tibetan Academy of Agriculture and Animal Husbandry (TAAAS) in the TAR in November 2004, he indicated to me that a policy shift was taken in the TAR in 2003 to emphasise rural incomes alongside national policy trends.

Figure 6: Secondary sector employment shares, 1990-2008



Sources: calculated from CSY (2009: Tables 4-4 and 4-6) and equivalent in previous yearbooks; TSY (2009: Table 4-2), SSY (2009: Table 4-4); QSY (2009: Table 4-3).

The share of secondary employment in the TAR is significantly lower than in all other cases, as was historically the case (see Fischer 2005) and would be expected of a sparsely populated and remote region. Nonetheless, there was a notable increase in share following the beginning of the OWC, particularly between 2002 and 2003 when the share rose from 6.2 percent to 9.1 percent. This corresponds with the beginning of major railway construction in the TAR and related OWC projects. The increase was sustained and rose further to more than ten percent in 2007 and 2008, even after the completion of the railway construction in 2006. This corresponds with the boom in rural construction activity generated by the Comfortable Housing Project (CHP) under the Eleventh Five-Year Plan, which started in 2006 (see Goldstein et al 2010).

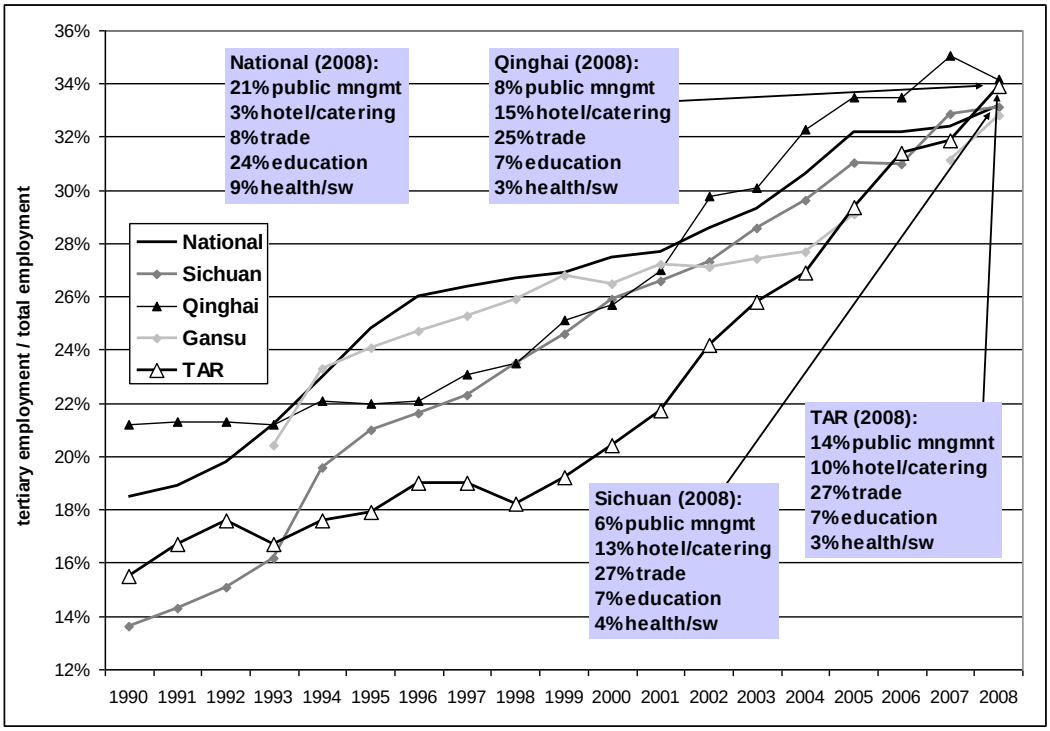
Notably, about two-thirds of this secondary employment in the TAR in 2008 was in construction and one-third was in manufacturing. Despite the recent hype regarding mining in Tibet, mining and quarrying accounted for a very small share of three percent of secondary employment (although employment in this sector might be dominated by migrant workers, many of whom might not be included in these data). In contrast, most other provinces typically show the

inverse, i.e. nationally, two-thirds of secondary employment was in manufacturing, 20 percent in construction and 10 percent in mining/quarrying, or else 44 percent, 44 percent and 10 percent in Sichuan. Qinghai was closer to the TAR in this respect, with construction surpassing manufacturing.

Moreover, 70 percent of the construction employment and 50 percent of the manufacturing employment in the TAR was in rural areas in 2008. Again, this could represent the relatively large amount of activity that was generated by the CHP, from construction to a related range of relatively small-scale processing activities such as brick making for the CHP (again, see Childs et al in this issue). Indeed, these data reflect efforts by the government to stimulate off-farm employment in rural areas, although we do not know the degree to which out-of-province (Han Chinese) migrants are included in these data – particularly in urban construction and even in some rural construction activities (such as the railway versus the CHP). Also, once rural employment is deducted from overall secondary employment, the sheer paucity of urban secondary employment is striking, despite the construction boom over these years. Again, this might be reflective of the fact that much of the urban construction activity employed out-of-province temporary migrants, who might not be recorded by these data sources.

Despite these signs of increasing secondary employment in the rural areas of the TAR, such employment nonetheless remained much more limited than elsewhere in China and the increase in the secondary employment share by 5.5 percent from 1999 to 2008 only accounted for a minor fraction of the decline in the primary share over the same period by 20.2 percent. The bulk of the declining primary share (about three quarters) was absorbed by the tertiary sector, which rose from a share of around 18 percent of total employment in 1998 to 34 percent in 2008. Indeed, the tertiary share rose so rapidly in the TAR over this period that it surpassed the national average share in 2008, on par with Qinghai. Despite quite divergent patterns in the 1990s, all western provinces and the national average had more or less converged at a very similar tertiary share by 2008.

Figure 7: Tertiary sector employment shares, 1990-2008



Sources: same as above.

However, the composition of such tertiary employment was very different across the various provinces, revealing a very distinct labour structure in the artificially-subsidised urban economy of the TAR versus the much more productivity-driven urban economies of China proper. Nationally, the two largest categories of tertiary employment were in the salaried public sector (roughly defined, acknowledging that the boundaries between public and private are often quite blurred in China); education accounted for 24 percent of tertiary employment in 2008 and 'public management' (previously 'government and party administration') accounted for 21 percent. With health and social welfare (nine percent), the combined share was above fifty percent. This might be seen as a sensible approach to employment generation in China, particularly in circumstances where manufacturing absorbs relatively less and less labour per value of output and where education systems produce a surplus of increasingly well-educated people. Despite China's status as a rising mercantile nation, the tertiary category of trade only accounted for eight percent of tertiary employment, which was less than even health and social welfare.

In contrast, all three western provinces detailed here (Sichuan, Qinghai and TAR) displayed much larger shares of tertiary employment in trade and hotel and catering, and much smaller shares in public management, education and

health. However, the TAR was exceptional in its combination of a fairly large share for public management at 14 percent of tertiary employment (albeit this was less than the national average and was probably much more oriented towards the security apparatus than would be the case nationally), together with a very large share in trade (27 percent). Only seven percent of tertiary employment was in education and three percent in health and social welfare. Hotel and catering in the TAR accounted for less than public management, at ten percent of tertiary employment in 2008, which was also less than the employment shares of hotel and catering in both Sichuan and Qinghai despite the enormous boom of tourism in the TAR in the 2000s. Some of these patterns might reflect the employment effects of the protests in Lhasa and beyond in spring 2008, although these protests and an earthquake also effected Qinghai and Sichuan. Notably, these categories of employment in the TAR – public management, trade and hotel/catering – tend to be dominated by migrant (particularly Han Chinese) workers, who are probably recorded in public sector employment data but much less so in the private sector data (such as in catering).

3. Economic polarisation

The rapid increase in the tertiary employment share over the 2000s is a predictable outcome of the rapid growth of the tertiary sector in the TAR economy, which came to account for almost 56 percent of GDP in 2008, up from 45 percent in 1999, as discussed in the first section. Thus, the rapid labour transition has, to some extent, balanced the imbalance in the late 1990s and early 2000s between a very large tertiary GDP share and a much smaller tertiary employment share. Nonetheless, this balancing within the tertiary sector has been accompanied – remarkably – by continuing sectoral polarisation (i.e. a divergence in the value-added 'productivities' across sectors)[23] between the primary and secondary/tertiary sectors of the TAR given the very imbalanced nature of growth focused on construction and tertiary services. Notably, sectoral polarisation need not occur if labour transfers proportionately into more rapidly growing sectors, thereby equalising out value-added productivities across the economy, as has happened with labour transfers out of agriculture in Europe. However, this has not (yet) happened in the TAR. It also has not (yet) happened in China, although sectoral polarisation in China has been led by manufacturing while the tertiary sector has played a compensating role. Polarisation in the TAR has been predominantly led by construction and tertiary services.

[23] Productivity is, in effect, almost impossible to measure across heterogeneous goods and, in particular, across non-tangible tertiary services. Mainstream (neoclassical) economists almost always use GDP value-added as a proxy for measuring productivity, although this approach is severely flawed given that value-added represents a combination of output and prices/wages.

Tertiary-led sectoral polarization can be represented by relative GDP/labour ratios.[24] At the beginning of the rapid labour transition in the TAR in 1999, 19 percent of the TAR labour force was employed in the tertiary sector, accounting for 45 percent of the GDP of the TAR, and resulting in a relative GDP/labour ratio of 2.3. By 2008, 34 percent of the labour force was employed in the tertiary sector, accounting for 56 percent of GDP and resulting in a ratio of 1.6. The reduction in this ratio indicates balancing between the GDP and labour shares of the tertiary sector and equalization between this sector and the average of the economy over these years. Out-of-province non-Tibetan migrants probably accounted for a much larger share of tertiary employment and of tertiary value-added in 2008 than in 1999 due to rapid net in-migration to urban areas over this period and the fact that Han Chinese migrants have tended to increasingly dominate the most lucrative sectors of the urban tertiary sector, in partnership with a small strata of Tibetan elites (see Fischer 2008). However, we do not have access to data that would allow for a proper evaluation of this likely scenario. In contrast, the relative GDP/labour ratio of the primary sector was 0.43 in 1999 (75.9 percent of labour accounting for 32.4 percent of economic activity), which then fell to 0.27 by 2008 (55.7 percent of labour accounting for 15.3 percent of economic activity). The fall in this ratio indicates marginalization of this sector from the value-added norm of the economy even despite the rapid transfer of labour out of the primary sector. In other words, more transfer of labour out of the primary sector would have been required to match the speed of growth in the rest of the TAR economy.

The ratio of these ratios – that is, the tertiary GDP/labour ratio over the primary GDP/labour ratio – can be taken as a measure of the relative productivity of the tertiary sector vis a vis the primary sector (as opposed to the previous ratio, which measures the productivity of each sector relative to the average in the economy as a whole). This tertiary/primary ratio rose from 5.3 in 1999 to 5.9 in 2008, meaning that the average employed person in the tertiary sector in 2008 accounted for 5.9 times more value-added than the average employed person in the primary sector. The increasing ratio gives an indication of the degree of imbalance and on-going sectoral polarisation in the local economy – despite growth in all sectors – and the degree to which such polarisation has served as an underlying economic driver of rapid labour transitions and urbanisation. This is

[24] I use the term 'relative GDP/labour ratio' to indicate the value-added productivity of labour in each sector relative to the average in the economy as a whole (i.e. GDP/total employment). A ratio of one implies that a unit-share of labour in that sector contributes a unit-share of value-added to GDP; more than one means that a unit of labour contributes more than its share of value-added; and less than one means the opposite. This measure shows the relative profit and/or remunerative potentials offered by each sector in the local economy, thereby offering insight into key underlying structural economic factors that drive local labour transitions.

reflective of the nature of unbalanced rapid growth in the TAR, driven by extremely intense subsidisation concentrated in construction[25] and urban services, which has resulted in unabated sectoral polarisation despite the very rapid shift of local labour out of farming and herding.

Whether or not sectoral polarization results in increasing inequality across households is more difficult to judge without more detailed data given that a household might include a farmer, a construction worker and a trader or even public employee among its members. The equalization in urban-rural inequality since 2001, as discussed in the first section, has occurred in large part because of the increasing integration of rural households into secondary and tertiary sector work. However, the distribution of value-added within each of these sectors might also be quite polarized. For instance, rural people employed in the rural tertiary sector (e.g. in a rural clinic or school) would account for a much smaller share of tertiary value-added than their counterparts in urban areas because of the relatively low salaries earned in such rural tertiary work, compared to equivalent salaries in the urban tertiary sector, which match those of Beijing or Shanghai. Similarly, it would be interesting to disaggregate these data to measure imbalances across the sub-sectors of the tertiary sector into which urbanising rural Tibetan migrants tend to enter, versus those sectors dominated by Han Chinese migrants, versus those sectors dominated by privileged Tibetan and Han Chinese cadres, although data are not available for this exercise.

These speculative extrapolations for the TAR are nonetheless particularly salient because the size of the tertiary sector in the TAR combined with its high value-added per employed person relative to other sectors and even other provinces, not only influences local labour transitions and urbanisation, it also drives out-of-province migration into the relatively lucrative sectors of the TAR such as trade, commerce, tourism and catering. Indeed, the high value-added GDP contribution of government administration – perhaps the largest GDP category of the tertiary sector in the TAR, as discussed in the first section – is directly due to the instituted wages of state-sector staff and workers, and such public employment in the TAR appears to have become increasingly dominated by non-Tibetan non-locals (see below). Thus, increasing polarization within the urban areas of the TAR in the confluence of these local and out-of-province migration flows could underlie the balancing of the overall tertiary sector.

Intra-urban polarisation can be represented by a round-about proxy method that I innovated in Fischer (2007). A proxy measure is necessary because intra-urban inequality is difficult to evaluate on the basis of conventional data. Annual household income surveys only sample households registered as permanently-residing, thereby excluding most migrants. Moreover, tabulated

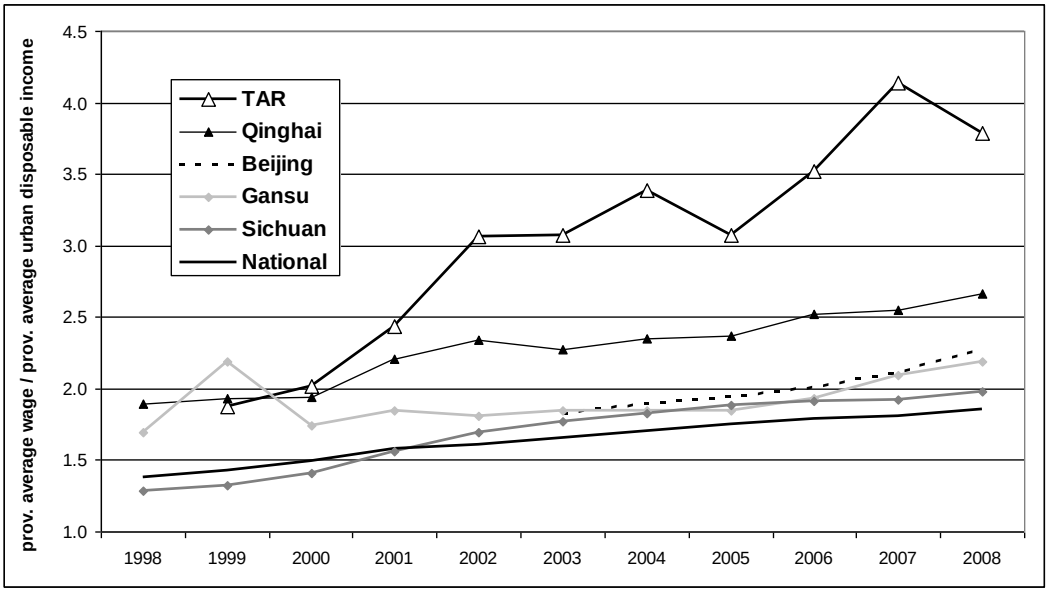
[25] The relative GDP/labour ratio of construction is even higher than the tertiary sector, albeit for much smaller GDP and labour shares (see Fischer 2007: 176-181).

income distribution data from urban household surveys are irregularly provided for the TAR and other western provinces, making trend analysis difficult. However, two sources of data that are available in most years can be used to circumvent these limitations; average money wages of staff and workers, and per capita urban disposable incomes. 'Staff and workers' are a relatively privileged sub-category of urban employment in China, referring to persons working (permanently or on contract) in units of state ownership, collective ownership, joint ownership, share holding ownership, and foreign ownership (including Hong Kong, Macao, and Taiwan).[26] Up until recently, there has been no publicly available data for wage rates other than for staff and workers, i.e. none has been available for those in the lower strata of the urban labour hierarchy, such as construction workers not working under contract. The money wages of staff and workers would cover many of the privileged temporary migrants working in the state-sector of the TAR and other Tibetan areas, typically for terms of two to three years. In contrast, urban household disposable incomes are derived primarily (almost entirely in the TAR) from salaries and wages earned by all households registered as permanently or long-term residing (i.e. not including temporary migrants) from all forms of employment, not only staff and workers. In others words, urban household incomes reflect an average of all forms of remuneration earned by all urban residents registered as permanently-residing (about three-quarters Tibetan in the TAR according to the 2000 census).

The comparison of average wages of staff and workers to average per capita urban household incomes can give an indirect indication of wage inequality between the privileged upper strata of urban employees (including some migrants and about half of the registered urban workforce in the TAR) and the average of all (permanently-registered) urban residents. Average money wages would be marginally higher than per capita urban household incomes even in a relatively egalitarian setting given that per capita household calculations include both working and dependent household members. Rising inequality, however, can be inferred by a rising ratio. Figure Eight below shows this proxy measure of urban wage inequality for a selection of western provinces from 1998 to 2008.

[26] Staff and workers do not include persons employed in township or private enterprises, urban self-employed persons, retirees, re-employed retirees, teachers in the schools run by local people, foreigners, persons from Hong Kong, Macao and Taiwan, and other persons not included by 'relevant regulations' (CSY 2005, Explanatory notes for Chapter Five).

Figure 8: Proxy measure of urban wage inequality, 1998-2008 (current rmb)



Sources: calculated from CSY (2009, Tables 4-23 and 9-15) and equivalent in previous yearbooks.

Figure Eight reveals a sharp polarisation of urban wage inequality in the TAR since 2000, to a level far above the next most unequal province of Qinghai (according to this measure). The ratio of staff and worker wages to urban disposable incomes in the TAR rose from 1.9 in 1999 to a high of 4.1 in 2007, and then fell slightly to 3.8 in 2008, in contrast to 2.6 in Qinghai, 2.2 in Gansu, 2.0 in Sichuan and 1.9 for China as a whole. In light of the dynamics in urban-rural inequality discussed at the end of Section One and urbanisation discussed in Section Two, these findings suggest that intra-urban inequality has taken over from urban-rural inequality as the main schism of stratification in the TAR under the conditions of rapid urbanisation since the early 2000s.

Two main trends explain this sharp rise in urban inequality. A rising wage/income ratio could represent rising wages of staff and workers relative to the average of all urban wages. Or, it could represent a falling share of staff and worker employment in total urban employment (among households registered as permanently-residing), thereby reducing the weight of staff and worker wages in average urban incomes. Both cases appear to apply to the TAR.

First, the money wages of staff and workers in the TAR, which were always above the national average due to 'hardship' considerations,[27] suddenly rose even further, from 1.5 times the national average money wages of staff and workers in 1999, when the TAR average money wage was 12,962 yuan, to two

[27] The TAR ranks at the highest of 11 levels in a ranking of so-called 'hardship' posts in public sector employment in China ('hardship' defined according to a lowland Han Chinese perspective).

times the national average in 2002, after almost doubling to 24,766 yuan. Notably, they were the highest in China in 2002 and again in 2004. They then stagnated in 2005 and 2006, rose very sharply in 2007, and stagnated again in 2008 at 47,280 yuan (versus over 56,000 yuan for both Beijing and Shanghai and 25,038 yuan for Sichuan).[28] Indeed, much of the decline in the proxy measure of Figure Eight for the TAR in 2005 and 2008 is probably due to the freezing of these rapid wage increases in those years. In other words, this form of inequality has been almost entirely administered in the TAR, representing an implicit upward revaluation of hardship compensations that has been exclusive to the TAR over this period, regardless of general considerations in the rest of the country.

While Beijing has generally taken an approach of rapidly raising money wages as a means to stimulate consumption in China, there are varied opinions as to why the already-privileged wages in the TAR would have been raised so much faster at the beginning of the OWC. Some argue that this was meant to garner the loyalty of local Tibetan cadres and the so-called 'emerging Tibetan middle class'. Others argue that it was to make the TAR more attractive for Chinese staff and workers considering a working sojourn in the region, particularly given the increased demand for skilled labour in various OWC projects. Both considerations have probably motivated these wage policies.

Second, these sharp wage increases took place simultaneously with a reduction in the number and share of Tibetan staff and workers in state-owned units between 2001 and 2003, while the number of non-Tibetans rose. Calculating from TSY (2004: Table 4-5), the share of Tibetans in total staff and worker employment in state-owned units fell from 71.3 to 64.6 percent, while that of non-Tibetans rose from 28.7 to 35.4 percent. At the cadre level, which accounted for two-thirds of permanent state-sector employment in 2003, the change was even sharper; overall cadre employment increased from 69,927 cadres in 2000 to 88,734 in 2003, while the number of Tibetan cadres fell from 50,039 to 44,069, or from 72 percent of total cadre employment to just below 50 percent. Unfortunately, we have no idea of these trends since 2003 because this particular disaggregation of the staff and worker data was discontinued after TSY (2004). However, we can ascertain that the fall in staff and worker employment in state-owned units was not compensated by a rise in staff and worker employment in non-state-owned units, as was the case elsewhere in China where reductions in the state-sector were matched by increased corporate and private-sector employment. To the contrary, the state-owned share of total staff and worker employment in the TAR actually rose from 92.2 percent in 2000 to 94.5 percent in 2008.[29] In any case, the shift in 2003 revealed a sudden move away from Tibetan representation in urban public employment, i.e. from the most privileged and formalised forms

[28] Calculated from CSY (2009: Table 4-23) and equivalent in previous yearbooks.
[29] Calculated from CSY (2009: Table 4-8) and equivalent in previous yearbooks.

of employment in the TAR, and non-Tibetan cadres outnumbered Tibetan cadres for the first time since 1980. Government assertions that Tibetans were the dominant beneficiaries of increasing state-sector wages, thereby contributing to an emerging 'middle class' of Tibetans,[30] became much more tenuous at this time, after which the government stopped publishing this particular disaggregation of employment data for the TAR.[31] Rather, Tibetan employment was shrinking during these early years of the OWC in precisely the parts of the economy that were growing fastest, i.e. the urban state-sector.

Conversely, many of the non-Tibetans employed in the state-sector were probably temporary residents on short terms of official duty in the TAR. Therefore, many were probably not included in any of the household income data, although they would have been reflected in the wage data (and possibly in some of the employment data – see the Appendix). Nonetheless, it is implicit within these data that local, permanently-registered Tibetan urban residents bore most of the brunt of rising inequality in these early years of the 2000s, primarily by being squeezed out of state-sector employment. As a result, the sharp wage increases were increasingly and disproportionately captured by non-Tibetans and by a shrinking share of permanently-registered urban households, which also helps to explain the growing divergence between average wages of staff and workers and urban per capita household incomes up to 2003.

We cannot state whether this has continued to be the case after 2003 given the lack of data, although these dynamics definitely provide much insight into the outburst of protests that took place in Lhasa and elsewhere in March 2008. Notably, per capita urban disposable household incomes in the TAR – which had been consistently above the national average throughout the reform period – fell below the national average for the first time in 2004 and even stagnated in current value in 2005 and 2006 (i.e. declining in real value, after accounting for inflation), thereafter joining the ranks of other poor western urban economies such as Gansu and Sichuan.[32] This lagging was in stark divergence from the jump in wages of staff and workers. The divergence implies either a compositional effect that continued after 2003 (i.e. a shrinking share of permanently-registered urban households were employed in state-sector employment, as discussed above), or else that the incomes of the permanently-registered urban households without state-sector employment (about half of the workforce in 2004 and mostly Tibetan) were increasingly lagging behind, if not falling in real terms, thereby downwardly compensating for the sharp rises in average money wages of staff and workers. This could have been the case if, for instance, lay offs from the state sector led to

[30] See PRC (2001). For an academic version this argument, see Sautman and Eng (2001).
[31] Coincidentally, I published a report on these data in early 2005 (see TIN 2005) on the basis on data provided in TSY (2004). The subsequent TSY (2005) no longer reported this data.
[32] Calculated from CSY (2009: Table 9-15) and equivalent in previous yearbooks.

long bouts of unemployment. Obviously, those Tibetans who did manage to retain state-sector employment have done very well.

Outside of the state-sector, the whole array of so-called 'spontaneous' migrants (i.e. migration not organised by the state, as it is referred to in the scholarship on China) are not included in either the household surveys or the staff and worker data. They might be at least partially included in the general aggregate employment data, although this needs to be verified. Based on qualitative field insights, informed speculation and some secondary sources such as the work by Ma and Lhundup (2008) on temporary migrants in Lhasa, these migrants include Han Chinese, Chinese Muslim, or even Tibetans from other parts of Tibet, who largely come on their own initiative to ply their trades independently in the urban areas, such as businessmen, construction workers, shoe menders, restaurant owners, cooks, tailors, rickshaw or taxi drivers, sex workers, or even beggars. Such migrants are not necessarily competing for state-sector employment, besides in the cases of state-owned construction companies hiring out-of-province migrants (albeit in these cases hiring is often arranged outside the province altogether). Besides in such state-sector construction work where wages (and entire project funding) are subsidised, direct monetary incentives are not necessarily being offered by the state to these migrants.[33] Nonetheless, high state-sector wages do offer some indication of the subsidy-instituted affluence in the urban areas of the TAR relative to the conditions found in most other areas of western, central or even coastal China, which in turn attract these migrants.

While it is difficult to deduce the impact of these migrants on inequality, perhaps more importantly, it is precisely the confluence of these different streams of migrants in the Tibetan urban areas, together with local urbanising rural Tibetans and permanently-registered urban Tibetans, that sets the playing field for intense competition over urban employment opportunities. Given that these opportunities are overwhelmingly determined by the centrally-directed subsidisation policies that have driven almost the entirety of rapid urban-centred economic growth in the TAR, they are characterised by strong linguistic, cultural and political modes of bias deriving from the dominant Han Chinese group in control of most power and most financial flows from outside the province. These biases include Chinese fluency, Chinese work cultures, and connections to government or business networks in China Proper. In turn, local Tibetans severely lag behind Han Chinese migrants in terms of education, particularly at secondary levels of education where Chinese fluency and literacy are mostly obtained by Tibetans. This results in strong disadvantages for Tibetans competing in these

[33] The idea that 'spontaneous' migrants are directly subsidised by the state is a common Tibetan belief (exile and local). However, during fieldwork in the TAR in 2004, I could find no indications of this except in state-sector construction projects such as the railway where wages on offer are higher than normal.

urban labour markets of the TAR, even despite the rapid increase in primary school enrolments since the mid-1990s.[34]

Conclusion

This article focused on rapid labour transitions in the context of rapid growth and economic polarisation. Section One outlined some of the main structural features of rapid economic growth in the TAR since the 1990s up to 2008 in comparison to other selected western Chinese provinces. Section Two analysed in more detail the rapid labour transitions that occurred alongside such growth, namely, a rapid structural shift out of agriculture. Part of this shift was absorbed by off-farm employment within rural areas, particularly in construction activities. However, about three quarters of the shift was absorbed by the tertiary sector and a substantial share – perhaps more than half – transferred to urban areas. The speed of these transitions was so fast that, by 2008, the share of tertiary sector employment in the TAR was equivalent to the average national share in China, reaching 34 percent of total employment (versus 56 percent in the primary sector). The third section then examined aspects of sectoral polarisation in the TAR. Despite the rapid transfer of labour from the primary to the tertiary sectors, the value-added per employed person has continued to diverge between these two sectors, reflecting the intensity of the tertiary and construction focus in recent subsidisation strategies since the late 1990s, which respectively came to account for 56 percent and 22 percent of GDP by 2008. These trends arguably constitute a crucial pull factor for both local urbanisation and inter-provincial migration. The invigoration of a rural focus in development policy since the beginning of the OWC in the TAR and especially since 2006 under the Eleventh Five Year Plan has partly attenuated the trend of rising urban-rural household income inequality by providing a significant boost to rural off-farm employment in construction and small-scale production (as analysed by Childs et al in this issue). However, a sharp increase in intra-urban inequality also appears to have paralleled the attenuation of urban-rural inequality over this period, suggesting that intra-urban inequality has taken over from urban-rural inequality as the dominant locus of polarization and stratification in the TAR over these years.

In other words, underlying some heavily-subsidised silver linings in the rural areas (if the rapidity of the changes in these areas is to be taken as positive), there has been a broader overarching trend of heightened polarisation in the overall economy. In essence, such polarization has been instituted by the government itself through intentional policies. The third section discusses this further with respect to urban wage and household income dynamics in the TAR. The rapid increase in subsidised urban wealth driving sectoral polarisation has

[34] For detailed discussion on these last two points, see Fischer (2009a; 2009b).

been very unequally distributed between, on one hand, state-sector staff and workers and others well connected to state-subsidised networks of wealth circulation in the TAR – including a shrinking number (up to 2003) of a privileged cohort of Tibetan cadres – and, on the other hand, the less-privileged majority of urban residents, including urbanising migrants.

These structural trends – and the related educational, linguistic and cultural modes of bias that severely disadvantage the majority of Tibetans within their urban labour markets – provide important insights into the outburst of protests in March 2008 in the TAR and other Tibetan areas.[35] It is in this sense that the government strategy of attempting to mollify Tibetans through various development strategies – as discussed in Goldstein et al (2010) – is probably backfiring. The short-sighted exclusion of key cohorts of local Tibetans (especially young graduates) from key growth sectors in the economy (especially from privileged state sectors of public employment) stands in contrast to the norm in China where public employment appears to have played an important role in creating employment opportunities for an increasingly educated population, thereby helping to mediate at least some of the potential dislocations wrought by the rapidity of change in this country.

This is not to say that all Tibetans are excluded, or that none benefit. From a poverty perspective, most elites might survive quite well through the various dislocations wrought by these rapid transitions, particularly if they have prepared their children well and with foresight as to the needs and demands of the 'new society'. Tibetans in the middle of the social hierarchy, including some illiterates, might also adapt relatively well in small businesses or petty trade, and some might even establish successful large businesses or engage in profitable investments. Lesser-skilled Tibetans who find some construction work are able to contribute significant new sources of monetised income to their households. The majority of Tibetans who remain in agriculture also appear to have performed more positively since the early 2000s, as discussed extensively by Goldstein et al (2008; 2010).

However, the polarisation that underlies these marginal improvements in wealth or poverty reduction also simultaneously exacerbates dislocation and insecurity across the social hierarchy. Indeed, exclusions experienced at the middle or upper end of the labour hierarchy (such as among staff and workers) is

[35] See Fischer (2009a). In my analysis of the protests of 2008 I emphasis various forms of exclusion that had been occurring at middle and upper strata of local labour hierarchies in urban areas among urban residents and urbanizing rural migrants. My analysis differs somewhat from Barnett (2009), who argues that the 2008 unrest was unique, in comparison to earlier protests, in that they were not primarily urban but involved new cross-sections of the population, including substantial participation from rural areas, which he claims had not been involved in previous protests in the reform period. While the social basis of these protests was definitely wider than in the protests of the 1980s, they were not in comparison to widespread resistance in the 1950s – the memory of which is still quite alive among the older generation of Tibetans today.

important from the perspective of conflict given that such exclusions are very politically sensitive, even if they are not necessarily reflected as increasing poverty. Moreover, the fact that these exclusionary experiences operate along educational, linguistic or cultural modes of disadvantage provides the basis for strong cross-class perceptions and expressions of grievance. Hence, while the average Tibetan standard of living has probably improved throughout all of these rapid transitions, a focus on marginal improvements misses the point because it distracts attention away from larger dynamics in the regional economy, within which those who are marginally improving are being progressively marginalised from the more lucrative parts of the economy and levers of decision making, even while becoming more dependent on the employment generated by the subsidies producing such affluence.

The dilemma is that the rapid labour transitions that are being induced by such growth strategies are very real, in terms of the radical transformation of people's lives and sources of livelihoods. Indeed, the speed of transition itself calls into the question the subsidisation strategy; slower change might render people more capable of self-determined adaptation, whereas the dependence of the emerging employment structure on subsidies is so great that the prospect of such subsidies one day drying up is very worrisome. In light of such predicaments and to the extent that many of these structural socio-economic changes prove to be irreversible, as discussed in the introduction, the prioritizing of preferential employment generation in the Tibetan areas for local Tibetan people is urgently needed as a means to avoid rapidly emerging pockets of urban marginalisation within these rapid labour transitions.

Appendix: interpreting official employment data for Tibetan areas in China

The official aggregate employment data discussed in the second and third sections are collected and compiled by the National Bureau of Statistics from a variety of sources. These are detailed in the explanatory notes of Chapter Five in CSY (2001). The 'Comprehensive Labour Statistics Reporting System', comprises a complete enumeration and reporting from lower levels of government to higher levels of all 'independent accounting units'. The resulting data is then adjusted based on the 1990 and 2000 population censuses and by the annual sample surveys on population changes. The 'Sample Survey on the Population Changes' covers the population of the whole country through a multi-stage stratified cluster sampling scheme. The 'Rural Social and Economic Survey' covers all rural areas below the township level. Data on the number of persons employed in urban and rural private enterprises and self-employed persons in industry and commerce are also collected through 'Statistical Reports on Basic Conditions of Urban and Rural Private Enterprises' and 'Statistical Reports on Basic Conditions of Urban and Rural Individual Industrial and Commercial Business', both provided by the

State Administration for Industry and Commerce, covering the whole country and collected on the basis of administrative records.

It is not clear in these sources to what extent the various employment definitions are equivalent to the definitions used for measuring populations, i.e. with respect to residency and registration status. The sectoral definitions of employment (primary, secondary and tertiary) are probably recorded according to dominant socio-economic characteristics (where these can be easily identified) rather than by agricultural versus non-agricultural registration status – a designation which has become quite meaningless in China for determining actual employment status in the context of rapid socio-economic changes over the last thirty years. Nonetheless, agricultural registration status might, to a certain degree, influence the reporting of employment in the more administrative Labour Statistics Reporting System, in lieu of the more social-scientifically rigorous probing of the population surveys or censuses, for instance. Hence, we can speculate that some of the trends recorded in terms of the share of the workforce in primary sector employment might reflect administered changes in registration status over this period.

Similarly, an urban/rural classification of employment is used in similar tables tabulated in the statistical yearbooks. For instance, these tables provide data on employment in township and village enterprises, rural private enterprises and rural self-employed individuals (provided by the State Administration for Industry and Commerce and collected on the basis of administrative records). The urban/rural classification probably reflects socio-economic characteristics (i.e. actually working in urban or rural areas) rather than registration status (i.e. urban or rural *hukou*), particularly as of the 2000 census adjustment, given that the 2000 census went to a great extent to improve on the enumeration of urban residency according to socio-economic rather than registration characteristics. See Yixing and Ma (2003) for an excellent discussion of this point. Nonetheless, there is likely to be some influence of urban/rural registration status in the reporting of the urban/rural employment data in the Labour Statistics Reporting System or in local administrative records (especially in poor western areas where the quality of administrative records might be quite poor). Accordingly, changes in urban/rural registration status might be influencing some of the trends observed in these employment data. The annual population surveys after 2000 cannot necessarily be used to correct for such contamination of the data because they do not provide aggregate data (since they are samples), but can only provide inferences of various aspects of population change within the sample. We will only be able to verify the estimates of aggregate change once the results of the 2010 census are released.

Finally, because the Labour Statistics Reporting System, population surveys, and administrative records are generally based on households registered

as permanently and/or formally residing in a location, these data would only reflect a portion of migrant contributions to local employment, i.e. those migrants who register themselves or their businesses in their places of immigration (which might be considerable in places like Lhasa). As discussed in Fischer (2008), considerable improvements were made with the 2000 census to measure migrant populations. Hence, the adjusted data as of 2000 probably reflects this improved appraisal of migrant contributions to local employment. Subsequent years would have been adjusted on the basis of this baseline according to insights derived from population surveys. However, again, these annual surveys cannot offer indications of the changing prevalence of migrant labour relative to local labour in an aggregate sense over these subsequent years and we would expect that there was a substantial increase in such migrant labour in the TAR and other Tibetan areas following the start of the OWC in 2000. As a result, the employment data in the TAR probably underestimate actual employment once temporary migrants are included, although this would almost entirely pertain to urban employment, not rural employment, given that almost the totality of rural/agricultural labour in the TAR is Tibetan – the TAR rural areas were 98 percent Tibetan in the 2000 population census. See Fischer (2008) for a detailed analysis of these population data. If this were the case, and assuming that the other possible biases mentioned above are neutral, then the share of the primary sector in total provincial employment (including all migrants) would be progressively overestimated through the 2000s (when there was a surge of in-migration to the urban areas) relative to the trends represented by the aggregate data analysed in this article.

Further research is required to determine exactly how these employment data are collected, particularly in Tibetan areas. Suffice to say that the trends observed in these data strongly corroborate with the field insights of myself and other scholars, as discussed in this article, and they can be taken as roughly accurate reflections of real trends.

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