Rongxing Guo

China's Regional Development and Tibet

China's Regional Development and Tibet

Rongxing Guo

China's Regional Development and Tibet

Rongxing Guo
Regional Science Association
Peking University
Beijing
China

Printed on acid-free paper

To commemorate my mother, whose smile has never disappeared from my mind in the past 10 years

Preface

Throughout history race, ethnicity, language, and religion have divided states into separate political entities as much as physical terrain, political fiat, or conquest. In China most provinces (or autonomous regions and municipalities directly under the central government) are on a size and scale equivalent to a European country in population and land area. They are considerably political and economical systems in their own right. The differences between these provinces have long been a defining characteristic of China's politics. In China, culture is not homogeneous across provinces; and many ethnic groups also have their own languages and religions. All of these imply that it is unlikely to enhance the chances of the adoption of a common standard among different groups of peoples.

In February 2013, when I conducted a quantitative analysis of the driving forces behind China's interprovincial (dis)integration, I found two strange results. The first one relates to the negative effect of distance-related transactions costs on interprovincial trade which tends to rise over time from 2000 to 2010, while the second one concerns the different roles that some non-Han ethnic groups have played in China's interprovincial relations. As for the latter, the Tibetan and 11 other ethnic groups, unlike the Uyghur and six other ethnic groups (each of which tends to contribute to China's interprovincial integration), are found to have contributed to China's spatial integration (Guo 2016). The first finding is unusual, as it doesn't reflect China's considerable improvement in transport infrastructures during the past decades; neither does it conform to the general dynamic pattern of international trade. More unusual is the second finding. Why have China's ethnic groups played different roles in its interprovincial trade?

This book is intended to provide the narratives and analytics of China's spatial (dis)integration. Indeed, the Chinese nation is far too huge and spatially complicated and diversified to be misinterpreted. The only feasible approach to analyzing it is, therefore, to divide it into smaller geographical elements through which one can have a better insight into the spatial mechanisms and regional characteristics.

To this end, I will choose Tibet—China's far western autonomous region—as an in-depth case study, focusing on its special geo-political and socioeconomic

features and external and boundary conditions. The rationale for this kind of case selection is threefold:

- First, Tibet and its surroundings, Tibetan-based areas, which have roughly one-fourth of China's total territory. In terms of land area, they are much larger in territorial size than any other Chinese provincial administrations (except for Xinjiang).
- Second, the Tibetans—who are the ethnic majorities of Tibet—are much more culturally different from the Han Chinese (the ethnic majority of China as a whole) than most other non-Han ethnic groups in China.
- Lastly, the Tibetan-based regions (including Tibet autonomous region and the surrounding areas that are under the administrations of Gansu, Qinghai, Sichuan, and Yunnan provinces), which had been independent states in history, have been treated by the Chinese central government as the most "sensitive" and, to some extent, "problematic" regions in China.

China's great diversity in physical geography, resource endowment, political economy as well as ethnicity and religion has posed challenges to the studies of spatial and interprovincial issues. Historical record provides an ample source of narrative. And narrative matters because it is inherently concerned with causality recognizing that from the historical perspective some specific events can yield a multiplicity of equilibria. But narrative alone is insufficient since many questions are related to events that did not take place (or have not yet taken place) or are concerned with the motivations behind why certain behavior or events have not occurred. This is arguably especially true when the accuracy or adequacy of the data and information on which the narratives are based is in question. Addressing these issues requires an appropriate model for linking what is observed (or observable) with what is not observed.

In this book, in order to produce more rigorous, convincing research results, I will use both analytic and narrative approaches. More often than not, analytics (focusing on theory and analytical models) and narrative (focusing on data and historical events) each have both advantages and disadvantages in presenting a research project. However, the combination of "analytics" and "narrative" can capture the conviction that data linked to theory is more powerful than either data or theory alone. A priori, the most relevant advantage of the analytic narrative method is that it allows us to model historical "one-off" processes and events that have unique characteristics. Likewise, the method renders some problems of empirical testing of hypotheses manageable. Some political and cultural events pose insurmountable difficulties to traditional panel data or time series methods.

The basic structure of this book was fixed during my trip to Qufu, Shanghai, and Hong Kong in October 2013. On my way back from Hong Kong, I was thinking about the historical evolutions of and the interchangeability between centers and peripheries in China. One and a half hundred years ago, Shanghai and Hong Kong had been China's most peripheral areas. They are now two major international economic centers. And both of them have been playing important roles

in China's institutional reform and economic development. On the other hand, Tibet—China's frontier in the far west—continues to be China's peripheral area. Of course, Tibet is quite different from Shanghai and Hong Kong; thus, the comparisons between them may not be appropriate. But I believe that if measures proposed in this book are taken into practice, they could yield positive effects for Tibet and for China as a whole. Maybe sometime in the future, there will be another Shanghai or Hong Kong in China's far west!

Tips for Readers

- Chapters 1–3, and 5 and Epilogue are either narratives or analytical narratives. They may be most interesting to general readers.
- Chapters 4–6 are either qualitative (narrative) or quantitative analyses. They may (also) be interesting to professional readers.
- Annexes of Chaps. 2, 4 and 5 include provincial- and interprovincial-panel data and information that are collected and complied by the author. They may be useful for those who want to conduct their own research on China's interprovincial relations.
- Annexes of Chaps. 4 and 6 include some specialized mathematics and statistical techniques. They may not fit in with general audience.

Beijing, China   Rongxing Guo
Summer 2015

Acknowledgments

Contents

Abbreviations

BBC   British Broadcasting Corporation
CBTA   Council of Buddhist and Tibetan Affairs
CCP   Chinese Communist Party
CCPCC   Chinese Communist Party Central Committee
CCTV   China Central Television
CNN   Cable News Net
CRI   China Radio International
CTA   Central Tibetan Administration
ETIM   East Turkestan Islamic Movement
FDI   Foreign Direct Investment
GDP   Gross Domestic Product
GNP   Gross National Product
GRP   Gross Regional Product
GTR   Greater Tibet Region
ICT   International Campaign for Tibet
ITIM   International Tibetan Independent Movement
KMT   Kuomintang
LAC   Line of Actual Control
NPC   National People's Congress
PLA   People's Liberation Army
PRC   People's Republic of China
ROC   Republic of China
SAR   Special Administrative Region
SEAC   State Ethnic Affairs Commission
TAC   Tibetan Autonomous County
TAP   Tibetan Autonomous Prefecture
TAR   Tibet Autonomous Region
TBS   Tibet Bureau of Statistics
TGIE   Tibetan Government in Exile
TYC   Tibetan Youth Congress
UN   United Nations

UNDP	United Nations Development Program
UNHCR	United Nations High Commissioner for Refugees
WHO	World Health Organization
WTO	World Trade Organization
XBS	Xinjiang Bureau of Statistics
XPCC	Xinjiang Production and Construction Corps

List of Figures

List of Tables

Chapter 1
A Brief History of Tibet

Abstract Tibet is a large, sparsely populated area which accounts for near one-eighth (if only Tibet autonomous region is included) or more than one-fifth (if all Tibetan areas are included) of China's total territory. With a history of about 2500 years, and located at the southwest edge of China, Tibet used to be an independent empire. Thanks to their similar cultural (racial and religious) connections, on one hand, and appeasement policies that the Chinese rulers had adopted toward all Tibetans, on the other hand, Tibet and the rest of China have been formed as a single country for a long period of time. However, throughout the PRC era, the Tibet question has never been resolved easily.

Keywords Tibet · Tibetan history · China · Tibet–China relation · Tibet autonomous region · Lamaism (Tibetan Buddhism) · Dalai lama

1.1 Tibet: Treasure in the West

Located in the southwestern part of China, Tibet (or Xizang, meaning "treasure in the west") adjoins Xinjiang Uyghur autonomous region and Qinghai Province to the north, Sichuan Province to the east and Yunnan Province to the southeast, and it shares international borders with Myanmar, India, Bhutan, and Nepal to the south and west. The modern Chinese pinyin for "Tibet" is "Xizang," which derives from two Chinese characters, "xi" (west) and "zang." Zang refers to Tibetan people, language and culture, regardless of where they are from.

Tibet has had different names in different historical periods. For example, during the Tang (AD 619–907) and Song (AD 907–1279) dynasties, it was called "Tubo." During the Yuan (AD 1279–1368) and Ming (AD 1368–1644) dynasties, it was called "Us-Tsang," and since the middle of the Qing dynasty (AD 1644–1911), "Xizang" has been used. While historical linguists have generally agreed

that "Tibet" names in European languages are loanwords from the Arabic word "Tibbat," the latter itself derives from Turkic word Tobad (meaning "the heights").[1]

Tibet's cultural influences have extended to the neighboring states of Bhutan and Nepal, as well as to the regions of India (such as Sikkim, Ladakh, Lahaul, and Spiti), in addition to the Tibetan autonomous prefectures and counties that are under the administrations of adjacent Chinese Provinces of Qinghai, Sichuan, Gansu, and Yunnan. Lhasa is the traditional center of Tibetan culture and the capital of Tibet autonomous region. It contains two World Heritage sites—the Potala Palace and Norbulingka, which were the residences of the Dalai Lama. In addition, there are a number of significant temples and monasteries in Lhasa, including Jokhang and Ramoche Temple.

1.1.1 Early Encounters

A plateau on the northeast side of the Himalayas, Tibet is the traditional homeland of the Tibetan people as well as of other ethnic groups, such as the Monba, the Qiang, and the Lhoba. Ancient Tibet was described in the *Shanhaijing* ("The Classic of Mountains and Seas", vol. 2, ch. 11)—an ancient Chinese book written during the Eastern Zhou dynasty (771–221 BC) and compiled by Liu Xin (c. 53–23 BC) during the Western Han dynasty—as a place with special natural and human features. For example, one can read the following descriptions about ancient Tibet:

> On the southern edge of the far West, alongside a vast area of quicksand, and between the red river and the black water, there is a mountain. It is called the Kunlun Mountain. A man, with a long face, tiger's body, and a tail on which there is full of white spots, lives in the mountain. The Kunlun mountain is surrounded by a small stream which ends at an abyss. Outside the abyss there is an inflammation volcano—whenever someone drops something into it, it will make a red flame immediately. A woman who wears jade jewelries in her head and has a mouthful of tiger teeth and a leopard-like tail lives in cave. She is the Mother of King West (xiwang mu). The mountain has a variety of valuable things on earth…[2]

In a myth, the Tibetan people are the progeny of the union of the monkey Pha Trelgen Changchup Sempa and rock ogress Ma Drag Sinmo. But the monkey was a manifestation of the bodhisattva Chenresig, while the ogress in turn incarnated Chenresig's consort Dolma (Norbu and Turnbull 1972, p. 30; Khar 1991, pp. 52–62). Some archeological data suggest that archaic humans may have passed through Tibet at the time India was first inhabited, half a million years ago (Laird

---

[1]Cited from Behr (1994, pp. 558–559). In addition, there was another report that Marco Polo, who traveled extensively in China in the thirteenth century, used the word "Tibet" in his travel notes published in French. The translator explained that the word "Tibet" came from the pronunciation of "Tubo" (CTIC 2007).

[2]See *Shanhaijing* (2001, 2:11)—translated by author based on the Chinese text.

2007, pp. 114–117). The history of Tibet may date back to more than 2,000 years ago, when the Yarlung tribe who lived in the Yarlung Zangbo river valley in southern Tibet dominated this area.

The earliest Tibetan historical texts identify the Zhang Zhung culture as a people who migrated from the Amdo region (i.e., part of the Tibetan areas under the administrations of Qinghai, Gansu, and Sichuan Provinces) into what is now the region of Guge in western Tibet (Norbu 1989, pp. 127–128). By the first century BC, a neighboring kingdom arose in the Yarlung valley, and the Yarlung king attempted to remove the influence of the Zhang Zhung by expelling the Zhang's Bon priests from Yarlung. He was assassinated and Zhang Zhung continued its dominance of the region until it was annexed by Songtsen Gampo in the seventh century.[3]

1.2   Rise and Fall of Tibet

1.2.1   Tibet as a Unified Kingdom

The history of a unified Tibet did not begin until parts of the Yarlung River valley were united by Songtsan Gampo (AD 604–650). During the following decades, Tibet's political and cultural influences spread rapidly, leading to the creation of a large and powerful Tibetan empire. In AD 640, Songtsan Gampo married Princess Wencheng, the niece of Emperor Taizong of the powerful Chinese Tang dynasty (AD 618–907). And, his first wife was the Nepali Princess Bhrikuti Devi, also known to Tibetans as Bal-mo-bza' Khri-btsun, Bhelsa Tritsun ('Nepali consort') or, simply, Khri bTsun ("Royal Lady") (Fig. 1.1). As a result, the Tibetan relations with China as well South Asia were enhanced in the following years.

Buddhism was first introduced to Tibet during the seventh century. Under the Tibetan kings of Songtsan Gampo and his successors, Buddhism became a state religion and Tibetan power increased even further over large areas of Central Asia, while major inroads were made into Chinese territory. Religion is extremely important to the Tibetans and has a strong influence over all aspects of their lives. Tibetan Buddhism, a distinctive form of Mahayana and Vajrayana, was introduced into Tibet from the Sanskrit Buddhist tradition of northern India. Tibetan Buddhism is practiced not only in Tibet but also in Mongolia, parts of northern India, the Buryat Republic, the Tuva Republic, and in the Republic of Kalmykia and some other parts of China.

In AD 747, the hold of Tibet was loosened by the campaign of Chinese troops. The Kingdom of Nanzhao (in Yunnan and neighboring regions) remained under Tibetan control from AD 750 to 794, when they turned upon their Tibetan

---

[3]Cited from http://www.ethichimalaya.com/tibet/tibet-inforamtion/history-of-tibet.php. Accessed on 2014-4-22.

Fig. 1.1 Tibetan King Songsten Gampo and his wives, *Note* From *left* to *right* are Princess Bhrikuti Devi of Nepal, King Songsten Gampo and Princess Wencheng of China. *Source* Wikipedia Commons

overlords and helped the Chinese inflict the Tibetans heavy casualties (Marks 1978). However, after Tang's defeat by the Arabs and the Qarluqs at the Battle of Talas (AD 751) and the subsequent Civil War (AD 755–763), Tibetan influence resumed. In AD 822, Tibet and China signed a peace treaty. In the following centuries, even though Tibet experienced both the rise and the fall, it had been established as an independent state in parallel with China's various dynasties.

1.2.2 Decline of the Kingdom

During the Yuan dynasty (AD 1279–1368), the Council of Buddhist and Tibetan Affairs (CBTA, or called "xuanzheng yuan" in Chinese) was established to rule Tibet through a top-level administrative department. One of the CBTA's purposes was to select a dpon-chen, usually appointed by the lama and confirmed by the Mongol emperor in Beijing. The lama retained a certain degree of autonomy, acting as the political authority of the region, while the dpon-chen held administrative and military power (Norbu 1989, p. 139). During this period, Tibet only retained nominal power over religious and regional political affairs.

Yuan control over the Tibetan region ended with the appearance of the Ming dynasty (AD 1368–1644). As a result, Tibet virtually had been an independent state, governed by various local dynasties and religious leaders from the mid-fourteenth century onward, for nearly 400 years.

Je Tsongkhapa (AD 1357–1419) was a famous teacher of Tibetan Buddhism whose activities led to the formation of the Gelug (or Gelugpa or dGe Lugs Pa, dge-lugs-pa, or Dgelugspa) school. In Mongolian language, the school is called "Sharyn shashin," meaning the Yellow religion. The Dalai Lama belongs to this school, and is regarded as the embodiment of the Bodhisattva of Compassion. In AD 1578, Altan Khan of the Tumed Mongols gave Sonam Gyatso, a high lama of the Gelugpa school, the name Dalai Lama.[4] In Tibetan Buddhism, Ganden Tripa is the spiritual head whose temporal head is the Dalai Lama. Successive Dalai Lamas ruled Tibet from the mid-seventeenth to mid-twentieth centuries.

The Qing dynasty (AD 1644–1911) put Amdo under its control in AD 1724, and incorporated eastern Kham (i.e., today's Ganzi (or Garzê) Tibetan autonomous prefecture in Sichuan Province as well as part of eastern Tibet and the Tibetan areas under the administrations of Qinghai and Yunnan) into neighboring Chinese provinces in later years. Like the Yuan dynasty, the Qing dynasty exerted military and administrative control of the region, while granting it a certain degree of political and cultural autonomy. The Dalai Lama was granted as the ruler leading the Tibetan government but the Qing court was elevated to include more direct involvement in Tibet's internal affairs. At the same time, the Qing court took steps to counterbalance the power of the aristocracy by adding officials recruited from the clergy to key posts. Tibet was dominated by the Manchus in various stages in the eighteenth century, and the years immediately following the AD 1792 regulations were the peak of the Qing imperial commissioners' authority; but there was no attempt to make Tibet a Chinese province (Goldstein 1997, pp. 18–20).

In AD 1834, the Sikh empire invaded and annexed Ladakh—a culturally Tibetan region that was an independent kingdom at the time. Seven years later, a Sikh army invaded western Tibet from Ladakh, starting the Sino-Sikh War. A Qing-Tibetan army repelled the invaders but was in turn defeated when it chased the Sikhs into Ladakh. The war ended with the signing of the Treaty of Chushul between the Chinese and Sikh empires (Rubin 1960). As the Qing dynasty declined, its influence on Tibet weakened gradually. By the late nineteenth century, Qing's authority over Tibet had become more symbolic.

After the mid-eighteenth century, Tibet saw some contacts with Jesuits and Capuchins from Europe. In AD 1774, a Scottish nobleman, George Bogle, came to Shigatse (or Rikaze in Chinese), for the first time, to explore trade opportunities for the British East India Company (Teltscher 2006, p. 57). However, by the nineteenth century the situation of foreigners in Tibet grew more tenuous. While the Britain encroached from northern India into the Himalayas, Afghanistan, and Russia expanded into Central Asia and each power became suspicious of the others' intentions in Tibet. In 1904, a British expedition to Tibet, spurred in part by a fear that Russia was extending its power into Tibet, invaded Tibet, hoping that negotiations with the 13th Dalai Lama would be more effective than with Chinese representatives (Smith 1996, pp. 154–156).

---

[4]Dalai is the Mongolian translation of the Tibetan name Gyatso, or "Ocean" (Laird 2007, pp. 142–143).

1.2.3 Getting Rid of China

After the collapse of the Qing court and the founding of Republic of China (ROC) in 1911, the Dalai Lama XIII refused any Chinese title, and declared himself ruler of an independent Tibet (Shakya 1999, p. 5). In the unilateral Proclamation of Independence in 1913 that is not recognized by Beijing or a portion of the Tibetans, Tibet was distinctively clarified as an independent state with legal authority in subject to its sovereignty (Berkin 2000, p. 93). However, the international community led by United Kingdom continued to recognize China's suzerainty over the Tibetan region and allowed the Chinese to withstand their claims of political authority on Tibet. Yet, the Chinese government only exerted a very limited control over Tibet, resulting in the fact that Tibet had gradually turned itself into a situation of quasi de facto independence during the inter-war period (Smith 2008, pp. 10–11).

For the next three decades or longer, the 13th Dalai Lama and the regents who succeeded him governed Tibet. During this time, Tibet fought Chinese warlords for control of the ethnically Tibetan areas in Xikang and Qinghai (parts of Kham and Amdo) along the upper reaches of the Yangtze River (Wang 2001, pp. 162–166). In 1914, the Tibetan government signed the Simla Accord with Britain, ceding the South Tibet region to British India. The Chinese government denounced the agreement as illegal (Calvin 1984).

1.3 Tibet in the PRC Era

1.3.1 Territorial Changes in Tibet

Emerging with control over most of mainland China after the Chinese Civil War, the People's Republic of China (PRC) incorporated Tibet in 1950. While Tibet has been formally a part of China since the early eighteenth century as part of the Qing dynasty, it was dissolved from China proper from 1912 to 1950, as a result of the 1911 Revolution and Japanese occupation during the Second World War. Other parts of ethno-cultural Tibet (eastern Kham and Amdo) have also been under the Chinese administration since the mid-eighteenth century (Beckwith 1987, p. 7). Today, they are under the administrations of four provinces (Qinghai, Gansu, Sichuan, and Yunnan), respectively.

In 1962, China and India fought a battle in southern Tibet, with a Chinese victory. After the war, the Chinese army withdrew from the disputed area, resulting in India's full control of this area. This disputed area acquired an independent political status on January 20, 1972, when it was declared as Union Territory, an administrative division of India ruled directly by the national government, under the name of Arunachal Pradesh. The state of Arunachal Pradesh bill was passed by the Indian Parliament in 1986 and, with effect from February 20, 1987, Arunachal Pradesh became the 24th state of Indian Union (Guo 2012, pp. 57–59).

Fig. 1.2 The shifted boundary between China (Tibet) and Nepal. *Source* © 2014 by Buddhi N Shrestha (Bhumichitra Mapping, Kathmandu, Nepal)

Changes in the Nepal–China boundary line in Tibet can be distinguished by the overlying borderline on the maps before and after the border treaty of 1962. The joint boundary agreement between China and Nepal was signed on October 5, 1961. Under this agreement, some border areas have been adjusted according to their traditional uses, possessions, and principle of convenience, and the territorial re-adjustment was made on the basis of 'give and take.' While comparing and computing the area of alterations in the borderline on those maps through graphical method, the exchanged areas between Nepal and China can be found in Fig. 1.2. In sum, Nepal acquired 2,139.00 sq. km of land from China, and Nepal conceded 1,836.25 sq. km of its existing territory to China, resulting in the net gain of 302.75 sq. km for Nepal (see Table 1.1). These exchanges of areas on the frontiers resulted from the change of shape of Nepal's northern borderline before and after 1962.

1.3.2 Tibet Without Dalai Lama

In 1951, representatives of the newly enthroned 14th Dalai Lama's government signed a Seventeen-Point Agreement with the Chinese government, affirming China's sovereignty over Tibet but granting the area's autonomy. The Preamble of this Agreement opened with the statement that "the Tibetan nationality is one of the nationalities with a long history within the boundaries of China." The Agreement included that "the Tibet people shall return to the big family of the Motherland—the People's Republic of China" and that the Tibet government would actively assist the PLA to enter Tibet and consolidate national defense. It also promised the people of Tibet "the right of exercising national regional

Table 1.1 Territorial exchanges between China (Tibet) and Nepal

District	Area gained by Nepal (sq. km)	Area gained by China (sq. km)	Net loss (−) or gain (+) of China (sq. km)
Bajhang	–	140.00	−140.00
Darchula	–	48.50	−48.50
Dhading	–	36.25	−36.25
Dolakha	104.25	28.25	76.00
Dolpa	192.50	199.75	−7.25
Gorkha	56.25	280.50	−224.25
Humla	860.00	287.50	572.50
Manang	164.00	–	164.00
Mugu	–	356.00	−356.00
Mustang	352.50	108.00	244.50
Rasuwa	76.00	143.50	−67.50
Sankhuwasabha	68.00	67.50	0.50
Sindhupalchowk	–	32.00	−32.00
Solukhumbu	44.75	92.25	−47.50
Taplejung	220.75	16.25	204.50
Total	2,139.00	1,836.25	302.75

Source Shrestha (2003, pp. 71–72)

autonomy under the leadership of the Central People's Government." Under Point 4 of this Agreement, the central government promised that it would not alter the existing political system in Tibet or the established status, functions, and powers of the Dalai Lama.[5]

According to the agreement, socialist reforms such as redistribution of land were delayed in Tibet proper. However, eastern Kham and Amdo (western Sichuan and Qinghai Provinces in the Chinese administrative hierarchy) were outside the administration of the Tibetan government in Lhasa, and were thus treated more like other Chinese provinces, with land redistribution implemented in full. The Khampas and nomads of Amdo traditionally owned their own land. Armed resistance first broke out in Amdo and eastern Kham in June 1956 and involved Tibet's core areas (including Lhasa) in later years.

The Dalai Lama fled to India in 1959 and renounced the 17-Point Agreement. After the Dalai Lama government fled to Dharamsala, India during the 1959 Tibetan Rebellion, it established a rival government-in-exile. Afterward, the Chinese government in Beijing renounced the Agreement and began implementation of the halted social and political reforms (Goldstein, 2005, p. 197). In 1962, China and India fought a brief war over the disputed South Tibet and Aksai Chin regions. Although China won the war, Chinese troops withdrew north of the McMahon Line, effectively letting South Tibet be under India's control.

---

[5]Cited from Goldstein and Rimpoche (1989, pp. 763, and 765–766).

1.3.3 Tibet Autonomous Region

In September 1965, Tibet (including Ü-Tsang and western Kham) that had been under the control of the Dalai Lama's government from 1951 to 1959 was renamed Tibet autonomous region (TAR), thus making itself an administrative division that is similar to a Chinese province (see Fig. 1.3).

Fig. 1.3 The administrative divisions of Tibet autonomous region

Before the TAR was established, there had already been several Tibetan autonomous administrations established by other provinces in the 1950s. They are Yushu, Hainan, Huangnan, Haibei, and Golog Tibetan autonomous prefectures (in Qinghai), Gannan Tibetan autonomous prefecture (in Gansu Province), Ganzi Tibetan autonomous prefecture (in Sichuan Province), Diqing Tibetan autonomous prefecture (in Yunnan Province), Muli Tibetan autonomous county of Liangshan Yi autonomous prefecture (in Sichuan Province), and Tianzhu Tibetan autonomous county of Wuwei city (in Gansu province). In addition, there are two autonomous prefectures that are jointly established for the Tibetans with two non-Han ethnic groups. They are Aba Tibetan-Qiang autonomous prefecture (in Sichuan Province) and Haixi Mongol-Tibetan autonomous prefecture (Qinghai Province).

Annex

Chronology of key events related to Tibet:

416 BC	Nyatri Tsenpo founds a dynasty in Yarlung valley, according to legend
602 AD	Tibet is unified under King Namri Songtsen of the Yarlung dynasty
634	King Songtsen Gampo and the Tang dynasty dispatches emissary to each other; The King asks to marry a Han princess, which is denied by Taizhong of the Tang
638	Songtsen Gampo attacks Songzhou, a Tang state in the west
641	Taizong of the Tang sends Princess Wencheng to marry Songtsen Gampo
663	Tibet annexes the western part of Qinghai
670	Tibet conquers Amdo, Tarim Basin; prolonged warfare with China begins
675	Amdo returns to the Tang. Tibet sends its minister to the Tang for peace treaty, which is rejected by the Tang dynasty
680	Tibetan army attacks Heyuan (today's east part of Qinghai Province), but is defeated
696	A war between Tibet and Tang, with the Tang army being defeated
703	A Tibetan envoy offers 1000 horses and 2000 gold for a marriage with a Han princess
707	Princess Jincheng of King You of the Tang marries a Tibetan king, Zamprogna
710	Princess Jingcheng arrives in Tibet; Zamprogna constructs a new home for her
714	10,000 Tibetan soldiers invade Tang, and are defeated; Tibetan king asks for an equal peace treaty with the Tang, which is rejected by Emperor Xuanzong of the Tang
716	Tibet attacks Tang's state of Song in the west

722	Tibet invades minor Baltistan in the west, while the latter is a dependent state of the Tang
737	Tang soldiers are sent from Liangzhou south into the more than 1000 km, to the west of Qinghai; and the war results in the loss of 2000 Tibetans
746	General Wang Zhongsi beats Tibetan army in Qinghai
747	General Ge Suhan defeats Tibetan army; in a single battle, a 5000-Tibetan cavalry is killed
750	The Kingdom of Nanzhao (in Yunnan and neighboring regions) remains under Tibetan control in the following decades, when they turn on their Tibetan overlords and help the Chinese inflict a serious defeat on the Tibetans. The Tibetans lose almost all of their central Asian possessions to the Chinese. However, after Gao Xianzhi's defeat by the Arabs and Qarluqs at the Battle of Talas (751) and the subsequent civil war (755), Chinese influence decreases rapidly and Tibetan influence resumes
753	General Ge Suhan defeats a Tibetan army and occupies several Tibetan areas including Jiuqu (now the southeast of Qinghai Province)
756	Tibetan army occupies the fortress near Lake Qinghai
757	Tibetan army occupies Shanzhou prefecture (near present-day Ledu county of Qinghai)
760	Tibetan army occupies Huozhou (in the west of present-day Longhua of Qinghai)
762	Tibetan army occupies Lintao (central Gansu), and the Qin, Wei, and other states in Gansu Province
763	Tibetan occupies Chang'an—capital of the Tang dynasty—for 15 days
779	Samye, Tibet's first monastery, is built by Trisong Detsen and Padmasambhava
792	Exponents of Indian Buddhism prevail in debate with Chinese at Samye
821	Tibet and China signed a peace treaty. A bilingual account of this treaty, including details of the borders between the two countries, is inscribed on a stone pillar which stands outside the Jokhang temple in Lhasa
822	Peace treaty with China delineates borders
842	King Langdarma is murdered by a monk; Tibet splits into several states
1040	Birth of Milarepa, second hierarch of Kagyupa order and a renowned poet
1073	Founding of Sakya, the first monastery of the Sakyapa monastic order
1206	An assembly names Genghis Khan first ruler of a unified Mongol nation

1227	Mongols destroy Xixia, a Tibetan-speaking kingdom of northwest China
1244	Mongols conquer Tibet. Tibet enjoys considerable autonomy under Yuan Dynasty
1247	Sakya Pandita submits to Godan Khan; beginning of the first priest/patron relationship between a Tibetan lama and a Mongol khan
1261	Tibet is reunited with Sakya Pandita, Grand Lama of Sakya, as king
1279	Final defeat of Song by Mongols; Mongol conquest of China complete
1346	Tai Situ Changchub Gyaltsen topples the Sakya and founds the Phagmodrupa dynasty. The following 80 years, see the founding of the Gelug school (also known as Yellow Hats) by the disciples of Je Tsongkhapa, and the founding of the important Ganden, Drepung, and Sera monasteries near Lhasa
1350	Changchub Gyaltsen defeats Sakya and founds the secular Sitya dynasty
1368	China regains its independence from the Mongols under Ming dynasty
1409	Ganden, first Gelugpa monastery, built by monastic reformer Tsongkhapa
1435	In prolonged warfare, Karmapa supporters gain control of Sitya court
1578	Altan Khan of the Tümed Mongols gives Sonam Gyatso, a high lama of the Gelugpa school, the name Dalai Lama; Dalai being the Mongolian translation of the Tibetan name Gyatso, or "Ocean"
1578	Gelugpa leader gets the title of Dalai ("Ocean") from Altan Khan
1598	Mongol Altan Khan makes high lama Sonam Gyatso first Dalai Lama
1624	Portuguese missionaries António de Andrade and Manuel Marques—first Europeans—arrive in Tibet. They are welcomed by the King and Queen of Guge, and are allowed to build a church and to introduce Christian belief. The king of Guge eagerly accepts Christianity as an offsetting religious influence to dilute the thriving Gelugpa and to counterbalance his potential rivals and consolidate his position
1635	Sitya dynasty is overthrown by the ruler of Tibet's Tsang Province
1640	Gushri Khan, leader of Khoshut Mongols, invades and conquers Tibet
1642	Gushri Khan enthrones the fifth Dalai Lama as temporal ruler of Tibet
1644	Manchu conquers China and establishes the Qing dynasty
1653	"Great Fifth" Dalai Lama meets Qing Emperor Shunzhi near Beijing
1682	Fifth Dalai Lama dies; regent conceals death for the next 14 years
1716	Italian Jesuit priest Ippolito Desideri studies and teaches in Lhasa

1717	Dzungar (Oirot) Mongols conquer Tibet and sack Lhasa. Chinese Emperor Kangxi eventually ousts them in 1720, and re-establishes rule of Dalai Lama
1720	Dzungars driven out; Qing forces install Kesang Gyatso as the seventh Dalai Lama
1721	The position of Amban is created by a 13-point Qing decree on Tibet
1723	The Qing commander publicly executed a number of supporters of the rebels, and, in the following years, made changes in the political structure and drew up a formal organization plan
1724	Chinese Manchu (Qing) dynasty appoints resident commissioner to run Tibet, and annexes parts of Kham and Amdo Provinces
1728	The Qing Dynasty incorporates eastern Kham into neighboring Chinese provinces
1745	All Christian missionaries are expelled
1750	The Ambans and majority of the Han Chinese and Manchus living in Lhasa were killed in a riot, and Qing troops arrived quickly and suppressed the rebels in the next year. Like the preceding Yuan dynasty, the Manchus of the Qing dynasty exerted military and administrative control of the region, while granting it a degree of political autonomy. Rebellion against Chinese commissioners quelled by Chinese army, which keeps 2,000-strong garrison in Lhasa. Dalai Lama government is appointed to run daily administration under supervision of commissioner
1774	A Scottish nobleman, George Bogle, comes to Shigatse to investigate trade for the British East India Company
1788	Nepalese invades Tibet
1792	Qing troops enter Tibet to drive out Gorkha (Nepalese) invaders. 29-point Qing decree prescribes "golden urn" lottery for picking Dalai Lama and Panchen Lama, bans visits by non-Chinese, and increases Ambans' powers
1793	China decrees its commissioners in Lhasa to supervise selection of Dalai and other senior lamas
1834	The Sikh Empire invaded and annexed Ladakh, a culturally Tibetan region that was an independent kingdom at the time. Seven years later, a Sikh army led by General Zorawar Singh invaded western Tibet from Ladakh, starting the Sino-Sikh War
1854–1856	Nepal defeats Tibet. A peace treaty requires that Tibet pay tribute
1865	Britain starts discreetly mapping Tibet
1876	Birth of the 13th Dalai Lama, Thupten Gyatso. Diplomatic conflict between Britain and Russia over privileges in Tibet. China agrees to provide passports for a British mission to Tibet
1885	Tibet turns back British mission and rejects Chinese-granted passports

1893	China and Britain agree to regulations on trade between India and Tibet
1894	Tibetans build a wall north of Dromo to prevent trade with India. The 13th Dalai Lama takes control of the Tibetan government at age of 18
1904	A British expedition to Tibet, spurred in part by a fear that Russia was extending its power into Tibet, invades Tibet, hoping that negotiations with the 13th Dalai Lama would be more effective than with Chinese representatives. Dalai Lama flees British military expedition under Colonel Francis Younghusband. Britain forces Tibet to sign trading agreement in order to forestall any Russian overtures
1906	British-Chinese Convention of 1906 confirms 1904 agreement, and pledges Britain not to annex or interfere in Tibet in return for indemnity from Chinese government
1907	Britain and Russia acknowledge Chinese suzerainty over Tibet
1908	China restores Dalai Lama, who flees to India as China sends in army to control his government
1910	The Qing government sends a military expedition of its own under Zhao Erfeng to establish direct Manchu-Chinese rule and deposes the Dalai Lama in an imperial edict, who flees to British India. The Qing troops occupy Tibet, and shoot at unarmed crowds on entering Lhasa. In April, Chinese garrison surrenders to Tibetan authorities after Chinese Republic declares. 13th Dalai Lama returns from India, Chinese troops leave
1912	Last Qing emperor abdicates; Republic of China claims Mongolia and Tibet
1913	13th Dalai Lama proclaims Tibet a "religious and independent nation." Mongolia and Tibet recognize each other in a treaty signed in Urga. Tibet reasserts independence after decades of rebuffing attempts by Britain and China to establish control
1914	The Tibetan government signs the Simla Accord with Britain, ceding the South Tibet region to British India. The Chinese government denounces the agreement as illegal
1917	Tibet defeats Chinese forces in Kham, and recovers Chamdo (lost in 1910)
1921	Britain recognizes Tibet's "autonomy under Chinese suzerainty"
1923	Panchen Lama flees to China
1924	At a KMT congress, Sun Yat-sen calls for "self-determination of all national minorities in China" within a "united Chinese republic"
1925	Pressure from monks causes the Dalai Lama to dismiss his British-trained officers
1928	Chiang Kai-shek defeats northern warlords and reunites China under KMT
1930	China captures Derge in Kham in first Sino-Tibetan clash since 1918

1933	Truce ends the China–Tibet fighting; the 13th Dalai Lama dies at age 58
1934	Reting Rimpoche names regent; China permits to open Lhasa mission
1935	The man who will later become the 14th Dalai Lama is born to a peasant family in a small Tibetan village in Qinghai on north-east of Tibet. Two years later, Buddhist officials declare him to be the reincarnation of the 13 previous Dalai Lamas
1940	The five-year-old Tenzin Gyatso is enthroned as the 14th Dalai Lama
1941	Unable to keep celibacy vow, Reting is replaced as regent by Taktra
1942	U.S. Army officer goes to Lhasa to present a letter for the Dalai Lama
1944	U.S. Military aircraft crash lands near Samye; crew escorts to India
1945	Newly opened English-language school in Tibet is closed after monks protest
1947	Indian independence and end of the British Tibet Policy. Tibetan Trade Mission begins travels to India, China, U.S., and Britain
1949	People's Republic of China (PRC) is proclaimed by Chinese Communist Party. The PRC announces its intention to "liberate" Tibet
1950	China enforces a long-held claim to Tibet. The Dalai Lama, now at the age of 15, officially becomes head of Tibet. PLA enters Tibet; Tibetan army is destroyed in battle at Chamdo
1951	Chinese occupy Lhasa. Tibetan leaders sign a treaty dictated by China. The treaty, known as the "Seventeen Point Agreement," professes to guarantee Tibetan autonomy and to respect the Buddhist religion, but also allows the establishment of Chinese civil and military headquarters at Lhasa
1954	The Dalai Lama visits Beijing for talks with the Chinese government
1955	Tibetans in Kham and Amdo (Qinghai) begin revolt against Chinese rule
1956	The Dalai Lama visits India for 2,500th anniversary of the Buddha's birth. The United States begins to arm the Tibetan resistance via CIA
1959	Full-scale uprising breaks out in Lhasa in March. Thousands are said to have died during the suppression of the revolt. The Dalai Lama and most of his ministers flee to northern India, to be followed by some 80,000 other Tibetans. The Preparatory Committee for the Tibet autonomous region passes the "Resolution Concerning the Democratic Reforms"
1960	The first famine begins in Tibet
1961	By the end of this year, the armed rebellion in Tibet, which lasts for nearly three years, is completely suppressed. The joint boundary

	agreement between Tibet and Nepal was signed on October 5. Under this agreement, some border areas have been adjusted according to their traditional uses, possessions, and principle of convenience
1962	A short China–India war; China advances beyond McMahon Line, and then withdraws
1963	Foreign visitors are banned from Tibet
1964	The Panchen Lama is arrested after calling for Tibetan independence
1965	Chinese government establishes Tibetan autonomous region (TAR) in U-Tsang and western Kham
1966	The Cultural Revolution reaches Tibet and results in the destruction of a large number of monasteries and cultural artifacts in Tibet. The United States America recognizes China's sovereignty over Tibet
1969	Tibet is put under PLA military rule in order to suppress Red Guards
1971	Foreign visitors are again allowed to enter the country. The United States cuts off military aid to the Tibetan resistance
1972	Arunachal Pradesh (the disputed area in southern Tibet) acquires an independent political status on January 20, entitled Union Territory, an administrative division of India ruled directly by the national government
1974	Nepal forces the Tibetan resistance to abandon its base in Mustang Sikkim votes overwhelmingly to join India; Ladakh opened to tourists
1976	The first permanent ethnic Chinese settlers arrive in Tibet
1977	Resistance burns 100 PLA vehicles in last major military operation
1979	Tibet is opened to non-Chinese tourism for the first time since 1963. China allows, for the first time, delegations of the Dalai Lama to visit Tibet
1980	Chinese leader Hu Yaobang visits Lhasa; he promises to relax controls and restore the Tibetan economy. Under household responsibility system, collectivized land is distributed to individuals in Tibet. China introduces "Open Door" reforms and boosts investment while resisting any move toward greater autonomy for Tibet
1982	Writer Alexander Solzhenitsyn calls CCP regime in Tibet "more brutal and inhuman than any other communist regime in the world"
1985	Bomb defuses in Lhasa during the 20th anniversary celebration of Tibet autonomous region
1986	The state of Arunachal Pradesh bill was passed by the Indian Parliament and, with effect from February 20, 1987, Arunachal Pradesh became the 24th state of Indian Union
1987	Police fire on a massive pro-independence demonstration in Lhasa. The Dalai Lama calls for the establishment of Tibet as a zone of peace and continues to seek dialog with China, with the aim of achieving genuine self-rule for Tibet within China

1988	China imposes martial law after riots break out. Qiao Shi, politburo member and internal security chief, visits Tibet and vows to "adopt a policy of merciless repression." Speaking in Strasbourg, France, the Dalai Lama elaborates on his 1987 "five point" proposal for Tibetan self-government within China
1989	The bloodiest riots occur in Lhasa. Martial law is imposed in Lhasa. The Dalai Lama is awarded the Nobel Prize for Peace
1990	China lifts martial law in Lhasa 13 months after imposing it. The Voice of America initiates a Tibetan-language broadcast service
1991	1,000 Tibetan refugees, chosen by lottery, are admitted to the U.S.
1992	Chen Kuiyuan is named CCP leader for Tibet, who calls for a purge of those who "act as internal agents of the Dalai Lama clique." Over 30,000 visitors arrive in Tibet's "Golden Year of Tibetan Tourism"
1993	Residents of Lhasa protest for independence, against inflation and the charging of fees for formally free medical services. Talks between China and the Dalai Lama break down
1994	Potala Palace, former residence of the Dalai Lama, is restored at a cost of US$9 million
1995	Dalai Lama recognizes six-year-old Gedhun Choekyi Nyima as 11th Panchen Lama. China denounces the Dalai Lama's choice of Panchen Lama as a "fraud" and selects rival candidate Gyaincain Norbu by golden urn process. Tibet's worst snowstorm in a century leaves more than 50 dead
1996	An earthquake in Lijang rates 7.0 on the Richter scale and kills 200. The U.S.-funded Radio Free Asia begins broadcasting on shortwave. Bomb explodes near government offices in Lhasa on Christmas day; a 1 million yuan (US$120,000) reward is offered to solve crime. The Dalai Lama takes steps to limit Shugden worship in Tibetan exile community
1997	Three monks close to the Dalai Lama are murdered; Shugden supporters suspected. The Dalai Lama visits Taiwan and meets with ROC President Lee Teng-hui
2002	Contacts between the Dalai Lama and Beijing are resumed
2006	In July, a new railway linking Lhasa and the city of Golmud is completed
2007	The number of tourists traveling to Tibet hits a record high in December, up 64 % year-on-year at just over four million
2008	Anti-China protests escalate into the worst violence in March, five months before Beijing hosts the Olympic Games. In November, the British government recognizes China's direct rule over Tibet for the first time. China suspends high-level ties with France after President Nicolas Sarkozy meets the Dalai Lama
2009	In January, Chinese authorities detain 81 people and question nearly 6,000 alleged criminals. In March, China marks flight of Dalai Lama with new "Serfs' Liberation Day" public holiday.

	Government reopens Tibet to tourists after a two-month closure ahead of the anniversary. In October, China confirms that at least two Tibetans have been executed for their involvement in anti-China riots in Lhasa in March 2008
2010	Envoys of Dalai Lama visit Beijing in April to resume talks with Chinese officials after a break of more than one year
2011	In March, a Tibetan Buddhist monk burns himself to death in a Tibetan-populated part of Sichuan Province in China. In April, Dalai Lama announces his retirement from politics. Exiled Tibetans elect Lobsang Sangay to lead the government-in-exile
2012	Two men set themselves on fire in Lhasa in May, one of whom dies. They are the first self-immolations reported in the Tibetan capital. In August, two Tibetan teenagers are reported to have burned themselves to death in Sichuan Province. In October, several Tibetan men burn themselves to death in north-western Chinese province of Gansu. In November, UN human rights chief Navi Pillay calls on China to address abuses that have prompted the rise in self-immolations
2013	The London-based Free Tibet group says further self-immolations bring to over 100 in February. In June, China denies allegations by rights activists that it has resettled two million Tibetans in "socialist villages"
2014	On March 13, the "sword 2014" anti-terrorist drill is held in Nagqu area. On August 9, a tour bus colludes with a truck within the territory of Nimu county (on the No. 318 State Road), in which 44 people are killed and 11 are injured. On August 16, the Lhasa-Rikaze Railway is completed. On August 25, the Chinese central government celebrates the 20th anniversary of the "National Aid-Tibet Programs" in Beijing

References

Beckwith CI (1987) The Tibetan empire in Central Asia: A history of the struggle for great power among Tibetans, Turks, Arabs, and Chinese during the early middle ages. Princeton University Press, Princeton

Behr W, Beyer SV (1994) The Classical Tibetan Language (book review). Oriens 34:558–559

Berkin M (2000) The great Tibetan stonewall of China. B. Rose Law Publishers, Chichester

Calvin JB (1984) The China-India border war. Marine Corps Command and Staff College.April. Available at: http://www.globalsecurity.org/military/library/report/1984/CJB.html. Accessed 31 Mar 2013

CTIC, 2007, Origin of the name of Tibet. China Tibet Information Center (CTIC), Beijing. Available at http://www.tibet.cn/en/history/his/t20070214_209294.html. Accessed on 18 Mar 2013

Goldstein MC (1997) The Snow Lion and the Dragon: China, Tibet, and the Dalai Lama. University of California Press, Los Angeles

Goldstein MC (2005) Tibet and China in the twentieth century. In: Rossabi M (ed) Governing China's multiethnic frontiers. University of Washington Press, Seattle

Goldstein MC, Rimpoche G (1989) A history of modern Tibet, 1913–1951: the demise of the Lamaist state. University of California Press, Berkeley

Guo R (2012) Territorial disputes and conflict management: The art of avoiding war. Routledge, London

Khar RD (1991) A brief discussion on Tibetan history prior to Nyatri Tsenpo. Translated by Richard Guard and Sangye Tandar. Tibet J XVI(3):52–62

Laird T (2007) The story of Tibet: conversations with the Dalai Lama. Grove Press, New York

Marks TA (1978) Nanchao and Tibet in South-western China and Central Asia. Tibet J 3(4):13–16

Norbu D (1989) China's Tibet policy. Psychology Press, London

Norbu TJ, Turnbull C (1972) Tibet: its history, religion and people. Penguin, New York

Rubin AP (1960) The Sino-Indian border disputes. Int Comp Law Q 9(1):96–125

Shakya T (1999) The Dragon in the land of snows. Columbia University Press, New York

Shanhaijing (2001) The classic of mountains and seas. An ancient Chinese book written in the Eastern Zhou dynasty (771–221 BC) and compiled by Liu Xin (c. 53–23 BC). Beijing Yanshan Press, Beijing

Shrestha BN (2003) Border management of Nepal. Bhumichitra Co, Kathmandu

Smith WW (1996) A history of Tibet: nationalism and self-determination. Westview Press, Boulder

Smith WW (2008) China's Tibet? Autonomy or assimilation. Rowman & Littlefield Publishers, Lanham

Teltscher K (2006) The high road to China: George Bogle, the Panchen Lama and the first British expedition to Tibet. Bloomsbury Publishing, London

Wang J, Gyaincain N (2001) The historical status of China's Tibet. China Intercontinental Press, Beijing

Chapter 2
Chinese-Style Development in Tibet: Narrative

Abstract Since the People's Republic of China (PRC) was founded in 1949, the Chinese central government has made various efforts in order to stabilize Tibet and to fully assimilate it into China. Have what the Chinese have done in Tibet yielded what they expected? In this chapter, four unique development approaches (including the "pairing-aid program," the "aid-Tibet cadres program," the "inland middle schools and classes," and the "large construction project") that the Chinese government has applied, which have resulted in both positive and negative effects on the social and economic developments of Tibet, will be analyzed. At the end of this chapter, there is an annex of the major interprovincial events relating to China's pairing-aid-to-Tibet programs.

Keywords Tibet · Development approach · Pairing-aid ("duikou zhiyuan") program · Qinghai–Tibet railway · Aid-Tibet cadre · Inland middle school

2.1 Pairing-Aid Program

2.1.1 Historical Evolution

The pairing-aid (or "duikou zhiyuan" in Chinese) program stems from the idea that economic leading provinces and cities help economically backward areas. It starts from as early as the 1950s. From the 1950s to the early 1960s, Shanghai dispatched tens of thousands of cadres, workers, and intellectuals in finance, construction, textile, electrics, mechanics, and higher education to Shaanxi, which have played an important role in Shaanxi's economic development and social progress (Huang, 9 February 2011).

In 1979, the pairing-aid program was officially established by the Chinese central government as a national policy in its No. 52 Central Document. In the "National Frontier Defence Work Meeting" held in April 1979, Ulanhu, then Chief of the Central United Front Work Department presented in the General Assembly a report entitled "National People Unite and Struggle to Build a Thriving Frontier and Consolidate Border Defense." In the report, China pledged to increase the input of capital and materials to, and organize the inland provinces and municipalities to support border areas and ethnic minority areas.[1] Later on, this policy expanded to three patterns corresponding to different objectives: for economic development of the minority-inhabited border areas, for grand infrastructure construction projects, and for disaster relief and recovery.

After decades of practical operations, China's central government has accumulated rich experience for applying the pairing-aid idea by mobilizing the whole country. The representative example of pairing aid for grand infrastructure construction is the huge emigration of the areas affected by the Three Gorges Dam from the early 1990s till the 2000s, in which 22 provinces have involved. The pairing-aid program for disaster relief and recovery of the Sichuan Earthquake in 2008 was another trial of this idea and showed the advantage in post-disaster reconstruction work.

2.1.2 Progress and Achievements

Pairing the more developed provinces and municipalities in the east with the impoverished regions in the west in poverty reduction is a policy adopted by the Chinese government in its efforts to achieve common prosperity. Since 1996, the government has made arrangement for over a dozen economically more developed provinces and municipalities in the east to help the remaining, less-developed provinces (autonomous regions and municipalities directly under the central government) in the west to get rid of poverty. The basic framework of this east-help-west cooperation mainly comprised government assistance, enterprise cooperation, social aid, and human resource support. According to a report released by the Chinese government,

> From 2003 to 2010, some 2,592 cadres were sent from the east to the west to hold temporary leading posts there, and 3,610 were sent from the west to the east for the same purpose. About 4.44 billion yuan-worth of assistance funds was provided and 5,684 enterprises were recommended by governments of the eastern regions for cooperation in this regard, resulting in 249.76 billion yuan actually ploughed in and 1.42 billion yuan in social donations, in addition to 226,000 technical personnel trained and 4.672 million people from the poverty-stricken areas providing labor services elsewhere.[2]

---

[1]Source: State Ethnic Affairs Commission (2008).

[2]Cited form Xinhua (16 November 2011).

Table 2.1 China's East–West pairing-aid programs, 2001–2010

East province (municipality)	West province (municipality, autonomous region)
Beijing M	Inner Mongolia AR
Dalian SPM of Liaoning P	Guizhou P
Fujian P	Ningxia Hui AR
Guangdong P	Guangxi Zhuang AR
Jiangsu P	Shaanxi P
Liaoning P	Qinghai P
Ningbo PM of Zhejiang P	Guizhou P
Qingdao PM of Shandong P	Guizhou P
Shandong P	Xinjiang Uyghur AR; Chongqing M (after June 2010)
Shanghai M	Yunnan P
Shenzhen SPM of Guangdong P	Guizhou P
Tianjin M	Gansu P
Xiamen SPM of Fujian P	Chongqing M (before June 2010); Linxia Hui AP of Gansu P (after June 2010)
Zhejiang P	Sichuan
Zhuhai PM of Guangdong P	Chongqing M (before June 2010); Liangshan Yi AP of Sichuan P (after June 2010)

Note Tibet and Xinjiang, which are entitled to receive multilateral pairing-aid programs, are not shown here
Abbreviations AR autonomous region, *AP* autonomous prefecture, *M* municipality directly under the central government, *P* province, *PM* prefectural level municipality, and *SPM* sub-provincial level municipality
Source Xinhua (16 November 2011), and miscellaneous news clippings

From 2001 to 2010, except for Tibet and Xinjiang (which are entitled to receive pairing aid from all the eastern, richer provinces and municipalities), China's East–West pairing-aid programs are shown in Table 2.1.

2.1.3 Pairing Aid to Tibet

Tibet, averaging more than 4,000 m above sea level, is well known as the "Roof of the World." Mount Everest (about 8,848 m above sea level), which is located on the border with Nepal, is the highest mountain on earth. The atmosphere is severely dry for nine months each year. The Indian monsoon exerts some influence on eastern Tibet. Northern Tibet is subject to high temperatures in summer and intense cold in winter. Western passes receive a small amount of fresh snow each year but remain traversable all year round. Low temperatures are prevalent throughout these western regions, where bleak desolation is unrelieved by any

vegetation bigger than a low bush, and where wind sweeps unchecked across vast expanses of arid plain.

At the westernmost end of China, Tibet is the least urbanized area, with an economy that depends on agriculture, finance from central government, and a thriving tourism industry. Due to limited arable land, the primary occupation on the Tibetan Plateau is raising livestock, such as sheep, cattle, goats, camels, yaks, dzo, and horses. During the past decade, and stunted by its low population density, high transportation costs, and high exploration costs, Tibet's socioeconomic development has been rather backward compared with China's as a whole (see Table 2.2). While it could be a large producer of natural resources and raw materials, there have been few advances in these areas. The focus is on expanding secondary industries, in particular energy, mining, and new building materials. However, the exploitation of these resources could harm Tibet's fragile ecosystem and also undermine its culture.

At present, the Chinese central government exempts Tibet from all taxation and provides most of its government expenditures. In addition, different provinces, central government departments, and state-owned enterprises have brought capital, skills, and talent to their partner areas in the region. In addition, provinces, cities,

Table 2.2 Demographic and socioeconomic profile: Tibet

Indicator		2000		2010	
		Tibet	% of China	Tibet	% of China
Population (million persons)		2.62	0.21	3.01	0.22
Illiterate rate of population aged 15 or over (%)		32.5	483.63	24.42	598.53
Gross regional product (GRP) (billion yuan)		11.75	0.12	50.75	0.12
Composition of GRP (%)	Primary sector	30.9	202.36	13.5	145.63
	Secondary sector	23.2	49.26	32.3	64.15
	Tertiary sector	45.9	121.98	54.2	134.26
Fixed asset investment (billion yuan)		6.41	0.19	46.27	0.17
Foreign trade (million US dollar)	Export	109	0.04	538	0.03
	Import	40	0.02	52	0.00
Per capita income of urban residents (yuan)		7,426	118.25	14,980	78.39
Engle's coefficient (%)		46.27	129.72	50.05	127.74
Per capita net income of rural residents (yuan)		1,330	59.06	4,138	69.92
Engle's coefficient (%)		53.83	128.17	49.71	125.21
Number of patent per million persons	Inventions	1.53	31.35	5.32	8.94
	Utility models	1.53	3.56	16.30	6.39
	Designs	3.44	12.57	19.62	8.26

Source TBS (2001 and 2011) and NBS (2001 and 2011)
Note All monetary values are measured at current prices

and units in other regions of China that gave assistance to Tibet are encouraged to improve the production and living conditions of agricultural and pastoral areas of Tibet and to construct projects that can support economic development, improve production conditions in agricultural and pastoral areas, as well as benefit farmers and herdsmen.

Following the central government's lead, provinces all across China are investing in Tibet's development. China's central government has held five conferences from 1980 to 2010, with an exclusive focus on social and economic development in Tibet. In February 1984, the CCP Central Committee (CCPCC) convened the "Second Work Conference on Tibet," marking the formal start of the aid-Tibet work. At the meeting, the CCPCC and the State Council made a decision that nine provinces and municipalities of Beijing, Shanghai, Tianjin, Jiangsu, Zhejiang, Sichuan, Guangdong, Shandong, and Fujian and the Ministry of Electricity and Water, the Ministry of Agriculture, Livestock and Fisheries, the National Building Materials Bureau, and other relevant departments would help to construct 43 small- and medium-sized projects for Tibet. Construction projects cover energy, transportation, building materials, grain and oil processing, business, education, healthcare, municipal construction, and tourism facilities in more than 10 sectors, with a total investment of 480 million yuan (of which 178 million yuan is subsided by the central government, 62 million yuan by relevant state ministries, and 240 million yuan by the Tibetan government).[3]

In July 1994, the CCPCC convened the "Third Work Conference on Tibet," marking the formal start of the pairing-aid to Tibet. In this conference, 13 ministries and commissions, 29 provinces (municipalities and autonomous regions), and six sub-provincial municipalities scheduled to provide 62 projects as a support to Tibet's economic construction and social development. These projects cover energy, transportation, communication, industry, agriculture, animal husbandry, forestry, water conservancy, culture, education, health, radio and television, and municipal building. All these projects, with the actual investment of 4.86 billion yuan, had been completed by the end of 2000.

In late June 2001, the CCPCC convened the "Fourth Work Conference on Tibet," in which 70 pairing-aid projects (with a total investment of 1.1 billion yuan) were scheduled for Tibet. These projects, covering urban infrastructure, education, science and technology, culture, medicine, health, energy, industry, and other fields, would be funded and undertaken by 27 provinces (municipalities and autonomous regions) and five cities sub-provincial municipalities. By the end of 2004, all these pairing-aid projects have all been completed.

Over the course of the past decades, the number of pairing-aid programs has increased sharply along with the number and scale of major projects in Tibet. The scope of the central authorities' focus has also grown to include not only economic growth and infrastructure upgrades but also strategic goals for Tibet's long-term

---

[3]All data in this and the following two paragraphs are cited from People's Daily (23 August 2005).

stability and progress, such as maintaining ecological sustainability, advocating the region's tourism resources, and promoting ethnic traditions. Some incomplete statistics of the interprovincial pairing-aid programs to Tibet are shown in Table 2.3.

Table 2.3 Statistics of China's pairing-aid-to-Tibet programs, by province

Province	Number of projects	Total investment (million yuan)	Aid in kind (million yuan)	Aid in fund (million yuan)
Anhui	17	86.13	2.25	6.64
Beijing	50	300.57	42.58	26.73
Chongqing	20	53.83	8.48	6.19
Fujian	170	580.10	15.17	44.18
Gansu	1	7.40		
Guangdong	167	735.09	94.53	640.01
Guangxi	2	21.00		
Guizhou	2	11.31		
Hainan	2	35.00		
Hebei	45	120.80		
Heilongjiang	20	110.97	10.48	9.02
Henan	2	42.29		
Hubei	98	367.43	13.05	30.01
Hunan	96	234.16	12.39	34.53
Inner Mongolia	2	14.60		
Jiangsu	108	5062.65	32.70	114.75
Jiangxi	2	42.29		
Jilin	16	119.71	1.50	1.25
Liaoning	53	203.74	20.79	10.55
Qinghai	1	4.00		
Shaanxi	22	96.19	15.21	0.01
Shandong	258	493.96	6911.39	73.01
Shanghai	315	502.78	58.06	31.34
Shanxi	2	15.08		
Sichuan	23	39.76	6.97	19.10
Tianjin	18	81.92	12.79	12.23
Xinjiang	2	11.24		
Yunnan	1	12.00		
Zhejiang	101	331.06	20.10	32.00
Total	1616	9683.23	7278.44	1091.55

Notes (1) All data are as of June 2004. (2) More details about China's interprovincial pairing-aid-to-Tibet programs can be found in Annex. (3) The pairing-aid programs undertaken by China's central ministries and departments and the large state-owned enterprises are not included in this table
Source Calculated by the author based on People's Daily (23 August 2005)

From 2006 to 2011, China's financial assistance to Tibet totaled 7.55 billion yuan. For the period from 2011 to 2015, the central government has planned to invest 138.4 billion yuan (about 21.38 billion U.S. dollars) in Tibet to support the region's development and improve local people's lives. The investment will primarily support 226 major construction projects in Tibet that will involve a total investment of 330.5 billion yuan. The projects will cover construction of facilities for the region's public services, as well as infrastructure such as railways, highways, airports, and hydropower plants. The investment will also be used to promote the region's local industries and protect the environment.[4]

The major events relating to China's interprovincial pairing-aid-to-Tibet programs can be found in Annex.

2.2 Aid-Tibet Cadres Program

2.2.1 Motivation

Throughout the mid- to late 1990s, China's official media was widely publicizing stories about a Chinese cadre—Kong Fansen (1944–1994)—who had spent two periods working in Tibet: from 1979 to 1981 and from 1988 to 1994. During his time there, Kong made major contributions to the reconstruction and development of Tibet and formed close ties with the Tibetan people. In November 1994, he was killed in a traffic accident. The following was part of the news reported by the official media:

> Conditions on the Tibetan Plateau are harsh but Kong Fansen never thought about himself. He lived a simple life, was renowned for his honesty and never using his official position for personal gain. On the contrary, he often spent his own meager salary to help Tibetan orphans or buy medicine for the sick.

> In 1988, Kong was appointed deputy mayor of Lhasa. While in Lhasa, he systematically visited all the public schools in the area. After being appointed Communist Party Secretary of the Ngari prefecture in 1992, he became even busier with Party and government work, carrying out investigations and visiting local people across Tibet. Kong's exemplary efforts to promote development won him the affection and respect of the Tibetan people, and he was singled out as a model for leaders and government functionaries across China.[5]

For a period of time, China has used the aid-Tibet mission (yuan zang ganbu) program as a measure to improve Han-Tibetan ethnic relations, which were seriously damaged in the past (especially during the Chinese put down of the 1959 Tibetan Rebellion (to be discussed in Sect. 3.1 of Chap. 3) and the Cultural Revolution from 1966 to 1976).

---

[4]Cited from People's Daily (19 May 2011, 21 July 2011).

[5]Cited from China Daily (27 April 2011).

Cadres sent to support Tibet have often contacted experts and scholars of other regions in fields such as education, hygiene, science, and technology to give lectures in Tibet, and select experts in agricultural production technology to teach production skills to farmers and herdsmen in Tibet. For example, at its Third Conference on Tibet in 1994, the Central Committee of the Communist Party inaugurated the ambitious aid-Tibet program. Besides, a first batch of 62 infrastructure projects, worth 4.86 billion yuan (US$600 million) in total, competent officials, and professionals were sent to serve on three-year terms as a part of the scheme (China Daily, 23 September 2005).

At present, all the total 73 counties (including county-level cities and districts) of seven prefectures (including prefectural level cities) and the Shuanghu Special Zone of Tibet as well as major departments directly under the Tibet autonomous region are included in the pairing-aid program. In addition to providing financial support, a total of 18 provinces and cities, more than 60 state organs and ministries, and 17 state-owned enterprises in China have also taken on the aid-Tibet mission, and a total of 4,742 professionals have been dispatched to Tibet in six batches from 1979 to 2011.[6]

2.2.2 Performance

The mode of aid-Tibet program has also developed from the just cadre support in the beginning to the current combination of cadre support, economic support, talent support, and science and technology support. By the time the fifth group of Tibet aid cadres was withdrawn, the provinces, municipalities, central government departments, and state-owned enterprises paired with needy regions in Tibet had donated more than 13 billion yuan in funds and materials and carried out 4,393 projects in Tibet (People's Daily, 21 July 2011).

Each pairing assistance unit and aid-Tibet cadre have helped Tibet's related areas and departments formulate and improve industry and local development plans, actively raised funds for the implementation of assistance projects in Tibet, introduced investments from China's other regions, and accelerated the economic exchanges and cooperation between Tibet and other regions since the initiation of the Tibet aid work.

The aid-Tibet work has also given priority to supporting the development of Tibet's educational (to be discussed in more details in the following section), scientific, cultural, and environmental sectors. All of these programs have effectively advanced Tibet's economic development and social progress, improved rural and urban image, and further enhanced the living and production conditions of the

---

[6]Data source: People's Daily (21 July 2011).

residents in Tibet. A story that features this kind of technical-assistance program is reported in detail below:

> A long time ago, the local government of Nagqu prefecture, Tibet autonomous region offered a prize to anyone who could make trees survive. Decades passed with the seemingly unattainable reward remaining little more than a dream, until Yan Yihua arrived in 1998. The curious young forestry technician from Lishui, East China's Zhejiang province, dispatched to Nagqu under the national Aid Tibet program, heard about the challenge and made up his mind to plant trees despite the harsh conditions.
>
> Zhejiang and Liaoning provinces were paired up with Nagqu. Yan Yihua was a member of the second batch from Zhejiang. "They had tried but failed," Yan said. "I made it because I found out the true reason.
>
> "I thought it was not the low temperature. Otherwise there would not have been trees in the north of Heilongjiang where it could be a lot colder in winter. It was actually because of dehydration in the dry winds. So as long as the trees can get proper protection from the winds and develop a stronger root system, they would survive," Yan declared.
>
> Yan decided to select and try saplings growing at the highest possible altitudes, seeing that previous attempts were brought from Lhasa which is 1,000 meters lower. With local colleagues he tried to transplant various trees from Ngari and Lhoka. To protect the saplings from the freezing wind they erected metal supports, wrapped the saplings in hay and thickened the surface layer of soil in the winter.
>
> "I even brought root enhancement chemicals from my hometown," he recalled. Among the more than 10,000 trees transplanted by the time Yan finished his three-year service in Nagqu, more than 200 survived, thanks to their meticulous care.
>
> Yan and his successors, sent by Zhejiang and Liaoning provinces, as well as five major State firms under the same Aid Tibet program, which has entered its 11th year and fourth stage, have created plenty of miracles like the trees in Nagqu.[7]

2.3 Inland Middle Schools and Classes

2.3.1 Motivation

Before the 1950s, educational practice was based on monastic, official, and private education, with the monastic education being the dominant form. Lamas were teachers, Buddhist scriptures were textbooks, and students were trained to be monks. Official education was based on two schools run by the then Gaxag government, one (Zelhazha) for training monk officials and the other (Zekanglhazha) for training lay officials. During the 1950s, school enrolment in Tibet was no more than 3,000 at its highest and the attendance rate of school-age children was less than 2 % (CIIC, 2002). As a result, the Tibet's illiterate rate was among the highest in China.

The story of establishing Tibetan middle schools and Tibetan classes in inland China begins with Hu Yaobang's visit to Tibet in 1980. Urgent discussions took

---

[7]Cited from China Daily (23 September 2005).

place about how to improve the living standards of Tibetans and to take measures to improve their education, including the training of specialized talent. In 1984, the Chinese central government held the Second National Conference Work on Tibet, with a special focus on educational matters in the region. It was decided during the conference that teaching in schools in the region should be based on the Tibetan language and teaching content should be adapted to Tibetan economic and cultural developments. It also called for inland cities to develop talent by establishing schools and classes for Tibetan graduates of primary schools.

For the past 20 years or longer, the Chinese inland cities have brought more education opportunities to the Tibetan people. This preferential education policy specifically targeted at Tibetan autonomous region. Tibetan schools and Tibetan classes have been widely considered to be a great success (Postiglione et al. 2004). For example, in 2011, a CCTV reporter took a look at a Tibetan Middle School in Beijing:

> Students at the Beijing Tibet Middle School are busy preparing two weeks before the national university entrance exam. But they have one more subject to prepare for than other students: The Tibetan language.

> Tenzin Paldon, student of Beijing Tibet middle school, said, "Every time I take this class, I feel differently, I feel so close to my family." The Tibetan language course not only provides students with knowledge of grammar, but also Tibetan history and literature. The course offers students the latest teaching equipment which is welcomed by students.

> "If it's about their own culture, they are very interested. Sometimes they are not even satisfied with one course per week," said Nyima Ngodup, a Tibetan language teacher.

> Other than the Tibetan Language, students here take the same lessons as Han students. Everyone here has just submitted their application to their dream university. Tenzin Paldon is a student from Lhasa. The Tibetan language course is her favorite. Tenzin Paldon said, "I applied to the Central University of Finance and Economics in Beijing, I want to study Human Resources and then recruit more talented people for Tibet."[8]

2.3.2 Organization

In 1985, only 12 middle schools in Beijing, Chongqing, Hebei, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Liaoning, Shaanxi, Shanxi, and Tianjin established Tibet classes. By 2014, there were more than 20 provinces and cities providing schools and classes for Tibetans (see Table 2.4). Though the inland middle schools and classes are run by inland provinces and cities, the financial responsibility is shared by the Tibetan government and host city (Postiglione et al. 2009, p. 127). The Tibetan middle schools and Tibetan classes created in certain rich provinces and municipalities directly under the Central Government all offer Tibetan language classes for junior-middle-school curriculum, taught by Tibetan teachers designated

---

[8]Cited from CCTV (25 May 2011).

Table 2.4 A list of the inland middle schools with classes for Tibetan students, 1985–2010

Inland school name	Location	Year	School/class type
Beijing City Tibetan Middle School	Beijing	1985	HT/J (-2003), S
Beijing Normal University Tianjin Affiliated Middle School	Tianjin	2010	HT/S
Changzhou City Tibetan Ethnic Middle School	Jiangsu	1985	T/J
Chengdu City Tibetan Middle School	Sichuan	1989	T/S
Chongqing City Tibetan Middle School	Chongqing	1985	HT/J, S
Foshan City Nanhai District Senior Arts Middle School	Guangdong	2002	HT/J, S (2011-)
Foshan City No. 1 Senior Middle School	Guangdong	1995	HT/J, S (2002-)
Fujian Province Shanming City Liedong Middle School	Fujian	1995	HT
Hebei Normal University Affiliated Ethnic College	Hebei	1985	HT/S (2008-)
Hefei City No. 35 Middle School	Anhui	2001	HT/J
Hubei Wuhan Tibetan Middle School	Hubei	1985	HT/S
Huizhou City No. 8 Middle School	Guangdong	1995	HT/J, S (2002- for all)
Hunan Ethnic Occupational College	Hunan	1993	HT/V
Hunan Yueyang City No. 1 Middle School	Hunan	1985	HT/J (-2000), S (2000-)
Ji'nan Tibetan Middle School	Shandong	1991	T/J
Kunming Army Seminary Affiliated Tibetan Middle School	Yunnan	1994	T
Liaoyang City No. 1 Middle School	Liaoning	1985	HT/J
Nanchang City No. 17 Middle School	Jiangxi	1985	HT/J
Nantong City Tibetan Ethnic Middle School	Jiangsu	1997	HT/S
Shaanxi Tibetan Middle School	Shaanxi	1985	HT/S
Shanghai Gongkang Middle School	Shanghai	1998	HT/J
Shanghai Public Administration School	Shanghai	2002	HT/J
Shanxi University Affiliated Middle School	Shanxi	1985	HT/J (-1995), S (1995-)
Tianjin City Hongguang Middle School	Tianjin	1985	HT/J, S
Tianjin City No. 2 Nankai Middle School	Tianjin	2010	HT/S
Yingkou City No. 4 Senior Middle School	Liaoning	1989	HT/S
Zhejiang Shaoxing Tibetan Middle School	Zhejiang	2004	T
Zhengzhou City No. 4 Middle School	Henan	1985	HT/J (-2008), S
Zhongshan City Experimental Senior Middle School	Guangdong	1995	HT/J, S

Notes (1) Data are as of 2010. From 2010 to 2014, eight new inland middle and vocational schools, which are not included in this table, are designed to recruit students from Tibet. (2) "Year" included in this table denotes the one in which either an inland Tibetan middle school or an inland middle school's Tibetan class(es) was(were) established
Abbreviations HT school or class recruiting students from both local (Han) area and Tibet; *T* school or class recruiting students only from Tibet; *J* junior middle school or class; *S* senior middle school or class; and *V* vocational school
Source Wu (2013) and author
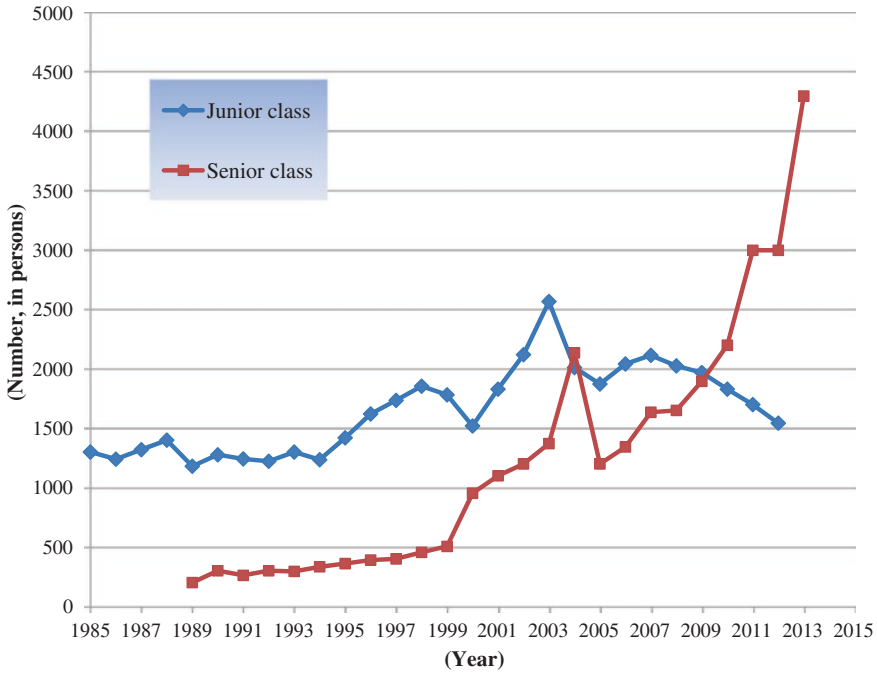
Fig. 2.1 Number of Tibetan students enrolled in inland provinces' middle-school classes, 1985–2014. *Source* Author based on SEAC (various years)

by the autonomous region. They independently plan their courses according to the national teaching program for regular middle schools and allowing for the actual conditions of Tibetan students. This policy established what has come to be known as the inland Tibetan schools and Tibetan classes (neidi xizang ban).

From 1985 to 1988, only junior-middle-school students from Tibet were enrolled in the inland provinces and cities. From 1989 onward, the inland middle schools and classes for Tibetans began recruiting not only junior- but also senior-middle-school students.[9] The data in Fig. 2.1 show that, before 2000, the numbers of students enrolled in the inland middle schools and classes, though not stable, had have a gradual growth trend. In addition, from 2002 onward, Tibet's junior-middle-school graduates have an opportunity to enroll in the ordinary (or nonethnic minority) middle schools of inland provinces. Thanks to this flexible policy, the total number of Tibetan students studying in the inland provinces' senior middle schools has increased significantly since the mid-2000s (see Fig. 2.1).

Before 1999, Tibetan students studying in inland junior middle schools could directly participate in the graduation exams that were hosted by the inland middle

---

[9]In addition, since 1989, some vocational and secondary specialized schools in inland provinces and cities have been recruiting students from Tibet.

schools; since then all of them have to return to Tibet for their final-stage exams (Tibet Daily, 14 January 1999). Starting in September 2010, as a major reform measure which was jointly decided by the Department of Ethnic Education of the Ministry of Education and the Department of Education of Tibet autonomous region, the length of schooling of the inland junior middle schools and classes for Tibetans has been shorten from four to three years. As a result, the courses and other teaching activities are also revised accordingly.

Another major time-series change is that the number of the Tibetan students enrolled in the inland junior middle schools and classes began to decline in recent years (see Fig. 2.1). Thanks to the continuing improvements—in both hard- and softwares—of the junior middle schools within Tibet autonomous region, more and more Tibetan students can finish their studies in their hometowns. Of course, Tibet's improvements of junior-middle-school facilities have also benefited to some extent from the pairing-aid program (as discussed in Sect. 2.1).

2.3.3 Performance

Since the 1980s, tens of thousands of Tibetan students have received various levels of education in inland provinces and cities. In 1993, the Tibetan students enrolled in the inland junior middle schools accounted for 29.17 % of Tibet's total junior-middle-school students, and that the students enrolled in the inland secondary vocational schools had 43.00 % of Tibet's total. As of 2007, Tibet's gross primary-school enrollment rate reached to 99 % up from 93.3 % in 2003, and that the high-school enrollment rate rose from 19.6 % in 2003 to 49.1 % in 2007. According to the "China Regional Education Development Report," the educational development index (EDI) of Tibet autonomous region increased from 0.461 in 2003 up to 0.617 in 2007, and its national rankings rose from 26 up to 22 during the above period. In particular, Tibet's educational investment index in 2007 was ranked the seventh and its educational equity index was ranked the second among all of China's 31 provinces (Wu 2013).

After graduated from the "inland middle schools and classes" program, the majority of the Tibetan students have eventually become school teachers in Tibet, while others have been working in various government departments and business circles in and outside Tibet. In a real sense, as Postiglione et al. (2009, p. 139) point out,

> [Graduates of the Tibetan schools and Tibetan classes] become cultural middle- men and women, mediating between Tibet and the rest of China. School teachers interpret Tibetan culture within the national context and others play a bridge role. The Tibetan schools and Tibetan classes also play a large role in transferring technical skills to Tibet that aid in its economic development.

There are many stories about the long-term influences of the "inland middle schools and classes" on Tibet's economic development and on the harmonious

Table 2.5 A comparison of college entrance criteria between inland China and Tibet

Type	Scores (liberal arts)		Score (sciences)	
	Inland China	Tibet	Inland China	Tibet
Specially planned colleges	557 (H), 537 (M)	490 (H), 320 (M)	540 (H), 520 (M)	460 (H), 280 (M)
Regular colleges I	557 (H), 537 (M)		540 (H), 520 (M)	
Regular colleges II	509 (H), 489 (M)	345 (H), 278 (M)	481 (H), 461 (M)	325 (H), 242 (M)
Regular colleges III	447 (H), 427 (M)		391 (H), 371 (M)	
Junior/technical/voca-tional colleges	360 (H), 340 (M)	320 (H), 240 (M)	300 (H), 280 (M)	300 (H), 210 (M)

Notes (1) The full mark is 750 (for both liberal arts and sciences)–all data are as of 2012. (2) College entrance criteria vary from province to province in inland China and this table uses Henan Province as reference

Abbreviations H Han students, and *M* minority students

Sources (1) Department of Education of Henan province and (2) the College Entrance Leading Group for the Tibet and Xinjiang Students in Inland Provinces, the Ministry of Education, Beijing, China

relations between the Hans and the Tibetans (see Sect. 5.4.4). Of course, this has also benefited from China's preferential policy toward Tibet. For example, the minimum scores for Tibet's students at the inland middle schools to enter Chinese universities are much lower than those for students from the inland provinces (see Table 2.5), which provides, ceteris paribus, more educational opportunities for the Tibetans.

With a financial support by the Research Grants Council of Hong Kong, some Hong Kong scholars have pieced together a preliminary picture of life during, and after a Tibetan student finishing his or her schooling by making field visits to Tibet and several Tibetan schools located outside Tibet (hereafter, they are referred as to *neidi* schools). By conducting interviews with *neidi* school graduates, they found that the majority of those interviewed would express that, upon returning to Tibet, they did not reject any Tibetan cultural practices. This question was designed in several different ways because the interviewees had differing understandings of "culture." However, a large group talked about their resistance, after returning to Tibet, to what they saw as superstitious aspects of Tibetan religious. This can be witnessed by what a Tibetan graduate responded in the interview:

> In terms of traditional customs, I feel that some Buddhist traditions have definite influence, like visiting a monastery. In *neidi*, sometimes I did visit some monasteries or temples in Kaifeng (a city in the *neidi*). I went there with our teachers as a tourist, but not to worship Buddha. This is a big change for us. In Tibet, it is now the same for us. When our parents or relatives visit a monastery to worship, we do not go with them. We can take some Chinese friends to a visit monastery as tourists. I feel this is fine. However, I did engage in the superstitious practice of worshipping Buddha when I was a child. Once I understood this issue historically, I felt there were no such things existing in the world, that they were superstitions. Now I do not believe in these Buddhas, deities or ghosts. I believe some of them existed in history as persons. King Songtsen Ganpo and Princess Wencheng were placed in the monasteries and worshiped as deities, but I felt they were just historical figures and not deities. Therefore, there is a definite change for me in terms of how I see Tibetan Buddhism. Regarding customs, I also have my own thoughts... Some

people are begging for food, and some people are throwing tsampa (barley flour) every-where because it is a ritual offering custom. From the scientific and humanistic point of view, this is not right.[10]

2.4 Connecting Tibet with Railways

2.4.1 Qinghai–Tibet Railway

Known as the hallmarking project of China's Western Region Development Plan, the Qinghai–Tibet (or Qingzang in Chinese for short) Railway is a high-elevation railway that connects Xining, Qinghai Province, to Lhasa, Tibet auton-omous region, in People's Republic of China. It is also the largest construction project that China has invested in Tibet. The length of the railway is 1,956 km. Construction of the 814 km section from Xining to Golmud—both of Qinghai Province—was already completed by 1984. The construction of the 1,142 km sec-tion from Golmud to Lhasa started on June 29, 2001 and was completed on July 1, 2006. This railway is the first to connect the Tibet autonomous region to inland Chinese provinces. Tibet, due to its elevation and terrain, was the last province-level entity in mainland China that does not have a railway.

The line includes the Tanggula Pass, which, at 5,070 m above sea level, is the world's highest railway. Tanggula railway station at 5,070 m is the world's highest railway station. 1,338 m Fenghuoshan tunnel is the highest rail tunnel in the world at 4,900 m above sea level. The 4,010 m Guanjiao tunnel is the longest tunnel between Xining and Golmod and 3,345 m Yangbajing tunnel is the longest tunnel between Golmod and Lhasa. More than 960 km, over 80 % of the Golmod–Lhasa section, is at an elevation of more than 4,000 m. There are 675 bridges, totaling 159.88 km, and about 550 km is laid on permafrost.[11]

2.4.2 Technical Difficulties and Progress

As a matter of fact, in as early as the mid-1950s, the Chinese central govern-ment had decided to construct a rail line in order to connect Lhasa with inland provinces. In 1956, Chinese Ministry of Railways began to conduct overall sur-veys of the 3,000 km line from Lanzhou to Lhasa. On November 26, 1973, for-mer National Commission of Construction held a conference in Beijing, aiming to speed up the construction of the Qinghai–Tibet Railway. In 1984, the Xining–Golmud section of the Qinghai–Tibet Railway was completed. However, in the

---

[10]Cited from Postiglione et al. (2009, p. 136).

[11]Source: Qingzang Railway (Baidu Encyclopedia) (in Chinese). Available at http://baike.baidu.com/view/2580.htm. Accessed 12 April 2013.

following decade or longer, due to various reasons including the technical one, the construction of the Golmod–Lhasa section was delayed.

Technically, there are many difficulties in the construction of the Qinghai–Tibet Railway. For example, the air in Tibet is much thinner than that at sea level. Special passenger carriages are used, and several oxygen factories were built along the railway. Each seat in the train is equipped with an oxygen supply outlet for any possible emergency. The other engineering challenge, aside from oxygen short-ages, is the weakness of the permafrost. About half of the second section was built on barely permanent permafrost. In the summer, the uppermost layer thaws, and the ground becomes muddy. The heat from the trains passing above is able to melt the permafrost even with a small change in temperature. In the most fragile areas, the rail bed must be elevated like a bridge. Chinese engineers dealt with this prob-lem in the areas of weakest permafrost by building elevated tracks with pile-driven foundations sunk deep into the ground (Wolman 2006).

The major events relating to the construction and operation of the Qinghai–Tibet Railway are as follows:[12]

- July 1994: In the National Tibet Work Conference, the construction of the Qinghai–Tibet Railway is decided.
- 1995: Chinese Ministry of Railways begins to conduct evaluation of the Qinghai–Tibet Railway.
- 1996: In the Fourth Session of the Eighth National People's Congress (NPC), the construction of the Qinghai–Tibet Railway is scheduled to start within the first decade of the 21st century.
- November 2000: Then Chinese President Jiang Zemin signs notes on the con-struction plan (draft) of the Qinghai–Tibet Railway.
- February 8, 2001: the State Council finally approves the construction plan of the Qinghai–Tibet Railway.
- June 29, 2001: Chinese central government decides to invest 26.21 billion yuan for the railway from Golmud to Lhasa. The construction ceremonies are held in Golmud city of Qinghai and Lhasa city of Tibet simultaneously.
- August 24, 2005: Track is laid at the railway's highest point—the Tanggula Pass—5,072 m above sea level.
- July 1, 2006: the Qinghai–Tibet Railway opens, with direct passenger trains running from Lhasa to Beijing, Chengdu, Chongqing, Guangzhou, Shanghai, Xining, and Lanzhou (see Table 2.6).

On September 26, 2010, the Chinese government began to construct a 253-km long railway between Lhasa and Rikaze. The Lhasa–Rikaze Railway was completed in August 2014. In addition, the construction of a 506-km Golmud–Dunhuang railway was also announced on October 20, 2012. This single-track electrified rail line will run from Dunhuang (in Gansu Province) to the Yinmaxia station on the Qinghai–Tibet Railway north of Golmud. The ongoing project is

---

[12]Based on miscellaneous news clippings.

Table 2.6 Direct passenger trains from Lhasa to inland cities

Inland city	Distance (km)	Time (h)	Other major capital cities to be connected
Beijing	4,064	48.00/*T*	Shijiazhuang, Taiyuan, Xi'an, Lanzhou, Xining
Chengdu	3,360	44.75/*T*	Xi'an, Lanzhou, Xining
Chongqing	3,654	47.30/*T*	Chengdu, Xi'an, Lanzhou, Xining
Guangzhou	4,980	58.00/*T*	Changsha, Wuhan, Zhengzhou, Xi'an, Lanzhou, Xining
Lanzhou	2,188	47.30/*K*	Qinghai
Shanghai	4,373	48.60/*T*	Nanjing, Zhengzhou, Xi'an, Lanzhou, Xining
Xining	1,972	25.22/*N*	

Notes (1) *K* Express train; *N* Internal express train; and *T* Especial express train. (2) Data are as of 2013
Sources Annex 2 of Chap. 4 for distance and Author for others

expected to take five years and, after completion, will allow a fairly direct connection between Tibet and Xinjiang.

2.4.3 Positive and Negative Effects

There is limited industrial capacity in Tibet. As a result, the Tibetan economy heavily relies on industrial products from more developed parts of China. Transport of goods in and out of Tibet was mostly through the Qinghai–Tibet Highway connecting Tibet to the adjacent Qinghai Province, which was built during the early 1950s. The length and terrain have limited the capacity of the highway, with less than 1 million tons of goods transported each year. Before 2006, the purchasing power of 100 yuan in Lhasa was only commensurate with 54 yuan in coastal regions of China, mainly due to high transport costs. The railway could elevate the living standards along the railway (Xinhuanet, 3 March 2005). With the operation of the Qinghai–Tibet railway, the cost of transportation of both passengers and goods should be greatly reduced, allowing for an increase in volume—the cost per ton-kilometer will be reduced from 0.38 yuan to 0.12 yuan. And, it was expected that, by 2010, 2.8 million tons will be carried to and from Tibet, with over 75 % carried by the railway (Cnradio, 10 November 2006).

The environmental impact of the new railway is an ongoing concern. The increase in passenger traffic will result in greater tourism and economic activity on the Tibetan Plateau. The increase in fuel combustion due to increased human activity in an already-thin atmosphere may affect the long-term health of the local population. However, this has both negative and positive effects on the local environment. For example, wood is the main fuel source for rural inhabitants in certain regions of Tibet. The damage to the ecosystem caused by cutting trees for fuel takes years to recover due to slow growth caused by Tibet's harsh environmental conditions. The railway would make coal, which is not produced in Tibet, an affordable replacement (Xinhuanet, 25 June 2003).

Another major criticism of the railway line from Golmud to Lhasa is that it aims merely to strengthen China's political control over Tibet. Critics say that it will significantly increase Han Chinese traffic to Tibet and accelerate the undermining of traditional Tibetan culture. In particular, groups such as the International Campaign for Tibet (ICT) have alleged that the railway will marginalize Tibetans in Tibet autonomous region by encouraging further Han migration from the rest of China (ICT 2003).

Without doubt, the Qinghai–Tibet Railway will integrate the Tibetan economy more into the Chinese economy through better transportation of goods from the inland Chinese provinces to Tibet. In the meantime, it will enable the Chinese military to send troops and equipment more easily into Tibet. In general, the Railway will benefit the Tibetan economy in various ways. First, it will mean that tourists, both Chinese and foreign, will be able to visit Tibet in greater numbers in a context where tourism is a major factor in the Chinese (and Tibetan) economy. Second, as Mackerras (2005, p. 14) notes, while the Tibetan economy is integrated into the Chinese economy, interprovincial economic exchanges will no doubt profit business and commerce and the people of Tibet as a whole, even though the rural people may still have to take a longer time to benefit than the urban people.

2.5 Further Implications

This chapter gives a critical analysis of China's past policies toward Tibet.

Although China's current minority policy has reinforced a Uyghur ethnic identity that is distinct from the Han population, some scholars argue that Beijing unofficially favors a monolingual, monocultural model that is based on the majority also crack down on any activity that appears to constitute separatism. These policies, in addition to the long-standing cultural differences, have sometimes resulted in "resentments" between Tibetan and Han citizens. On the one hand, as a result of Han immigration and government policies, Tibetans' freedoms of religion and of movement are curtailed, while most Tibetans argue that the government deliberately downplays their history and traditional culture. On the other hand, some Han citizens view Tibetans as benefiting from special treatment, such as preferential admission to universities and exemption from the one-child policy, and as harboring separatist aspirations.

China has invented various approaches in order to promote Tibet's economic development and social stability. But Tibet, after more than 60 years of socialist construction with Chinese characteristics, is still a politically fragile region. However, as will be discussed in greater detail in Sect. 5.4.3 of Chap. 5, China's development programs in Tibet are quite successful, at least compared to those in Xinjiang. For example, China's development programs in Tibet during the past decades have not yielded any significant economic disparities. By the way of contrast, Xinjiang's interethnic and interregional economic disparities have been very high.

Nevertheless, whether or not the Tibet–Xinjiang differences in economic disparities are responsible to their different paths toward social unrest is still not clear. Let us open our eyes to watch what will happen in the years to come.

Annex

Major interprovincial events relating to the pairing-aid-to-Tibet programs.[13]

Anhui	August 19, 2005, the "Anhui-Tibet Forum for Trade and Economic Cooperation" is held in Lhasa, Tibet autonomous region. The delegations of the two provincial governments sign an agreement which is aimed at the strengthening economic and technological cooperation between Anhui and Tibet. May 11, 2011, the "Shannan (southern Tibet) Tourist Investment Promotion" is held in Hefei city, Anhui Province. September 15, 2011, the Anhui Forestry Vocational and Technical College receives the Tibetan teachers from the Vocational and Technical School of the Shannan prefecture of Tibet autonomous region. May 27, 2012, the project promotion of the "Tibetan Culture Festival" is held in Hefei city, Anhui Province, aiming to expand the visibility and influence of Tibetan culture in Anhui Province, to promote the exchange and cooperation between Anhui and Tibet, and to strengthen the Han–Tibetan unity
Beijing	April 24, 2009, the meeting of the "Beijing-Lhasa Pairing Aid" is held; and the "Framework Agreement of Beijing municipality and Lhasa city Concerning Pairing Aid, 2009–2012" is signed. According to the agreement, Beijing municipality will arrange a pairing aid for 4 years with a total amount of 240 million yuan mainly in the fields of the social and economic development, personnel training, and industrial cooperation. June 28, 2009, the leaderships of Beijing municipality and Tibet autonomous region hold a discussion meeting, aiming to understand the economic and social development of Lhasa city, and the pairing aid of Beijing to Tibet. So far, Beijing has completed more than 20 pairing-aid projects in Tibet. September 3, 2009, Tibet autonomous region signs a cooperative agreement with Beijing Normal University. August 31, 2011, the Women and Child Development Fund of, and the Women's Federation of Beijing municipality and the Women's Federation of Tibet autonomous region hold the forum of cooperation and development in Lhasa city, Tibet autonomous region. In the Forum, the Beijing side donates a

---

[13]Source: Collected and compiled by author with assistance by Luc Guo (data are as of 2012).

	300,000 yuan fund to Tibet, to be used in the Tibet's poor women and children
Chongqing	November 15, 2006, the Tibetan delegation and Chongqing University sign an agreement concerning the bilateral cooperation in technical exchange, personnel training, and economic development. September 23, 2008, the Tibetan Medical College and Chongqing University discuss about their bilateral cooperation. August 7, 2008, the Chongqing Association of Building Materials, the Kaixin Home Company, and the Tibet Nanya International Trade Center sign a strategic cooperation agreement. December 29, 2008, Chongqing University and the University of Tibet sign an interschool cooperation agreement. August 16–20, 2009, Chongqing University signs a Letter of Intention Concerning the Government Cooperation Project between Chongqing University and Tibet autonomous region. August 10, 2011, Chongqing Academy of Animal Science and Agriculture and the Animal Husbandry Academy of Sciences of Tibet autonomous region sign a technological cooperation agreement
Fujian	July 25, 2011, the Fujian Agricultural University and Linzhi prefecture of Tibet autonomous region sign a strategic cooperation agreement. The cooperation projects involve mushroom and grass promoting, bee products processing, wild flowers breeding, and the design of the Linzhi Natural History Museum. August 9 to 10, 2011, the Fujian Academy of Agricultural Sciences visits Lhasa city, Tibet autonomous region, to participate in the Symposium of Agricultural Science and Technology Cooperation during the "12th Five-Year Plan," and sign an agreement on cooperation with the Tibet Academy of Agricultural Sciences. November 18, 2011, Fujian and Linzhi prefecture sign a framework agreement concerning the cooperation between Fujian Agriculture and Forestry University and Linzhi prefecture of Tibet. December 4, 2011, a delegation of Linzhi prefecture of Tibet autonomous region visits Fujian Province. Representatives from the two places hold the "Symposium of the Cooperation between Longyan of Fujian and Linzhi prefecture of Tibet." May 4, 2012, the China People's Political Consultative Committees of Zhangzhou city (Fujian Province) and Motuo county (Linzhi prefecture, Tibet autonomous region) sign a strategic cooperation agreement. Under the agreement, the two sides will establish a long-term strategic cooperative relationship in the fields of economic, cultural, scientific research, and social studies
Gansu	June 23, 2005, Gansu Province and Tibet autonomous region sign the "Cooperation Framework Agreement" in which Gansu will become the major partnership of Tibet's mineral processing.

August 5, 2005, Gansu Province and Tibet sign, in Lhasa city of Tibet autonomous region, several cooperation agreements, including the "Lhasa-Dunhuang Regional Tourist Cooperation Agreement" (signed by Dunhuang Municipal Government and Lhasa Municipal Tourism Bureau); the "Agreement of Reconstruction and Expansion Project of the Xiang Bala Tibetan Culture Theme Hotel" (signed by the Xiang Bala Industrial Group Corporation of Gansu and the Government of Chengguan District, Lhasa); and the "Agreement of Construction of New Energy and Materials Base and the Expansion Project of 2-Million-Ton Lithium Carbonate" (signed by the Baiyin High-Tech Industrial Park of Gansu province and the Tibet Mineral Development Co., Ltd). July 30, 2012, the Mining Company of Tibet and the Jinchuan Group Limited of Gansu sign a comprehensive strategic cooperation agreement. August 17, 2011, the Gansu Electric Power Company and the Tibet Power Co., Ltd. hold a meeting concerning the operation of the 750 kV/± 400 kV DC Qinghai–Tibet interconnection project; the two sides also reach consensus on other cooperative projects

Guangdong   August 2, 2005, officials in charge of the publishing industry of Guangdong visit Tibet to implement the pairing-aid activities and to strengthen the two places' cooperation. August 8–12, 2010, the "Guangdong-Tibet Cooperation Forum" is held in Lhasa city, Tibet. The Guangdong delegation inspects the Modern Agricultural Demonstration Zone of Tibet Academy of Agricultural Sciences. For the past 15 years, Guangdong Province has dispatched six batches of 218 cadres to work in Tibet, and provided 1.737 billion yuan of aid (in more than 720 projects) to Tibet autonomous region. October 21, 2010, Nyingchi prefecture of Tibet and Shaoguan city of Guangdong sign a regional tourist cooperation agreement. August 2, 2011, a team led by the Science and Technology Department of Guangdong Province visits Nyingchi prefecture of Tibet to inspect the pairing-aid work. Guangdong Academy of Agricultural Sciences and the Science and Technology Bureau of Nyingchi prefecture sign a cooperation agreement. April 28, 2012, the "Nyingchi Investment and Trade Fair" opens. The Bomi county of Tibet and the Pharmaceutical Group of Guangzhou sign a framework agreement concerning the development of Tibetan medicine and pharmacology; the Nyingchi county and the China Travel Service (Group) Co., Ltd. of Guangdong Province sign a strategic cooperation framework agreement concerning the planning and development of the small town of Lulang International tourism in Nyingchi county

Guangxi	August 2005, the governments of Tibet and Gansu sign a cooperative framework agreement; one important element of this agreement is to strengthen the labor cooperation between the two sides. Now Tibet has hosted more than 60,000 workers from Linxia and more than 25,000 workers from Nanzhou. October 18, 2005, a Tibetan delegation visits Nandan of Guangxi Zhuang autonomous region; the two sides reach a cooperation agreement on the joint exploitation of the mineral resources in Tibet autonomous region. August 31, 2006, the Labor and Social Security Department of Tibet autonomous region signs a cooperation framework agreement with Gansu Province. May 29, 2010, the Liaison Office of the Yucai Shareholding Co. Ltd. of Guangxi in Tibet is established in Lhasa city. September 16, 2011, the Inspection and Quarantine Bureaus (IQBs) of Guangxi Zhuang autonomous region and Tibet autonomous region sign, in Lhasa, an agreement concerning the strengthening of pairing aid and exchange and the promotion of common prosperity and stability of their respective frontier regions. The two bureaux will implement the national arrangement of the pairing aid to Tibet, which is assigned by the General Administration of Quality Supervision, Inspection and Quarantine Bureau of the PRC. All this will strengthen the exchange and cooperation between, and to promote the common development of, Guangxi and Tibet
Guizhou	October 2005, the Yibai Company of Giuzhou and the Tibetan Medicine Corporation, two of the well-known medical shareholding enterprises, reach a strategic cooperation framework agreement. November 18, 2006, Yibai Company of Giuzhou and the Tibetan Medicine Corporation decide to jointly bid for the CCTV's gold time advertisement in 2007, which is successfully done at the price of 116 million yuan. August 6–12, 2011, an oil-crop specialists' group of Guizhou Province visits Tibet to carry out cooperation between Guizhou and Tibet in the research of rape planting, the introduction and identification of new varieties and the innovation of new germplasm resources. July 25–27, 2012, the Vice President of the Women's Federation of Guizhou Province visits Lhasa city of Tibet, aiming to strengthen the coordination in the fields of female labor transfer, ethnic embroidery, weaving, and other skill training and to build a mutually beneficial cooperation mechanism in resource sharing
Hainan	November 12, 2009, a religious delegation composed of 30 Lamas from Tibet visits Sanya city of Hainan Province and conducts cultural exchanges with the Buddhist monks of the Conglin Nanshan Temple at Haitian of Sanya city. August 30, 2010, the Sanya Power Supply Bureau of State Grid Corporation (Hainan Branch) and the Tibet Power Co., Ltd. (Qamdo Branch)

hold, in Sanya city of Hainan Province, the signing ceremony of friendly relationship. The Deputy Chief of Sanya Power Supply Bureau and the CCP Committee Members (also the Deputy General Manager) of Tibet Power Company sign the "Agreement Concerning the Establishment of Friendly Business Relationship." The agreement aims to promote the enterprises' friendship and ethnic solidarity between Hainan and Tibet, to expand the technological exchange and inter-enterprise cooperation, and to improve enterprise management. March 31, 2011, the Chinese Academy of Tropical Agriculture (CATA, Hainan province) and the Tibet Academy of Agriculture and Animal Husbandry Sciences sign, in Haikou, a strategic cooperation framework agreement. Under the agreement, the CATA will carry out extensive cooperation with Tibet Academy of Agriculture and Animal Husbandry Sciences in the fields of discipline construction, talent training, scientific and technological aid to Tibet, project cooperation, and scientific and technological exchange

Hebei   August 11, 2011, the China Power Investment Corporation, the Hebei Power Co., Ltd., and Tibet autonomous region hold, in Lhasa city, an energy project development forum and sign a strategic cooperation framework agreement. According to the agreement, the former two sides will increase investment in Tibet, so as to develop Tibet's solar, wind, geothermal, and other clean energies. October 9, 2011, a Hebei provincial government delegation visits Lhasa city of Tibet autonomous region to participate in a pairing-aid forum. The Hebei provincial government presents condolatory fund and materials to Ali prefecture. December 15, 2011, Hebei Province and Tibet autonomous region hold, in Shijiazhuang city of Hebei, a civil aviation forum. Both sides pledge to establish a flight route between Tibet and Hebei, to expand economic cooperation, and to promote the prosperity and stability of Tibet. February 22, 2012, the Press and Publication Bureau of Hebei Province donates 500,000 yuan to the Press and Publication Bureau of Ngari prefecture of Tibet; the two sides establish a long-term pairing aid in personnel training and technological development

Heilongjiang   June 14, 2011, the Tibet (Rikaze prefecture) Tourism Symposium is held in Harbin city. Heilongjiang Province and Rikaze prefecture reach a consensus on the further strengthening of tourist exchange and cooperation. The two sides will jointly develop tourist products and establish air routes between Rikaze and Harbin and between Harbin and Lhasa (Rikaze). June 15, 2012, in the "China (Harbin) International Economic and Trade Fair," Tibet autonomous region and Heilongjiang Province hold a meeting on pairing-aid work, aiming to promote the friendship

	between the two sides and to promote bilateral economic cooperation and cultural exchange; Heilongjiang Provincial Bureau of Geology and Mineral Resources holds a symposium of mineral resource exploitation with the Rikaze Civil Administration of Tibet, and both sides sign a strategic cooperation framework agreement
Henan	May 14, 2004, Henan Province and Tibet autonomous region sign a cooperation agreement concerning the conservation of cultural heritages. September 1, 2004, a new class of Tibetan students enters the No. 4 High School of Zhengzhou city (Note: one author of this book was the honor of being their classmate). This is part of China's long-term pairing-aid program in which Henan Province offers free education for Tibetan students. December 2, 2008, as part of the State Grid's task, the Power Co. Ltd. of Henan sends technical staff to serve for 1.5 years in the affiliated units of the Tibet Power Co., Ltd. August 8, 2011, the Henan Academy of Geological Survey conducts a joint exploration with its Tibetan pairing and finds a large-size lead–zinc mine and a medium-size silver mine in Goma of Lhari county of Tibet; the estimated reserves are 524,100 tons (lead ore), 107,000 tons (zinc ore), 710.33 tons (silver ore), and 38,600 tons (copper ore), whose average deposit grades are Pb7.48 % Zn1.53 %, Ag101.44 × 10, and Cu0.55 %, respectively
Hubei	March 19, 2007, the Yarra Xiangbu Industrial Co., Ltd. of Shannan prefecture holds, in Wuhan, a products promotion meeting. January 17–18, 2010, a delegation, led by the Chief of the Shannan Prefectural Civil Affairs Bureau, visits Hubei. The two sides hope to enrich the airing aid and cooperation. August 29, 2010, Shannan prefecture and the Daye Nonferrous Investment Co., Ltd. of Hubei sign a cooperation agreement of large-scale industrial projects. November 28, 2011, the Daohuaxiang Group of Hubei signs investment agreements with Shannan prefecture and Jiacha county of Tibet. The Hubei Group will invest 50 million yuan to build the Wencheng Wine Project in Tibet. May 30, 2012, the "2012 China (Tibet) Yarlung Culture Festival Promotion," organized by the Shannan Prefectural CCP Committee, Shannan Prefectural Administration Department, sponsored by Cultural Bureau and Tourist Bureau of Shannan prefecture and co-organized by the Aiding-Tibet Office of Hubei Province, is held in Wuhan. July 30, 2012, a medical team of Hubei Province, composed of the Asian Heart Hospital and relevant staff of Hubei Province, visits Nanshan prefecture of Tibet to screen congenital heart diseases and give free treatments
Hunan	March 2, 2011, the Lightning Protection Center of Hunan Province and the Tibet autonomous region sign, in Lhasa city,

a technological cooperation agreement. December 1, 2011, the CCP Secretary and the Governor of Hunan Province meet, in Changsha city of Hunan, a government delegation of Shannan prefecture of Tibet. Both sides have an in-depth exchange in bilateral cooperation and aiding-Tibet works. The delegation also pays an inspection to Shaoshan, Xiangtan, Changsha, Changde, Yueyang, and Zhuzhou of Hunan Province. April 27, 2012, a large economic and trade fair and the signing ceremony of project agreement, sponsored by the Hunan Provincial Department of Commerce and the Department of Commerce of Tibet autonomous region, are held in Changsha city of Hunan. The 5100 Tibet Glacier Mineral Water Company signs a cooperation agreement with the Shengdong Trade Co., Ltd. of and the Yiqingyuan Tea Industry Co., Ltd. of Hunan, with a total contracted value of 40 million yuan. The two sides open a new round of pairing-aid cooperation. September 20, 2012, Hunan Vocational Technical School of Mass Media donates more than 400 books to Tibet College of Nationalities; the two sides also sign a pairing-aid framework agreement

Inner Mongolia December 22, 2005, Inner Mongolia and Tibet hold in Hohhot city of Inner Mongolia, an exchange and cooperation forum. The Vice Chairmen of the two regions sign a scientific and technological cooperation agreement. September 22, 2011, the Laoniu (old ox) Foundation of Inner Mongolia joins the public project of Aiding-Tibet Development Foundation. The Foundation donates 740,000 yuan. The Aiding-Tibet Development Foundation is nation's only privately owned foundation in Tibet. Founded in 1987, and without any political attachment, it has received capitals and supplies amounting to a total value of 200 million yuan. The Foundation has carried out 824 aid projects, involving culture, education, health, poverty and disaster relief, technology, economic, and ecological and environmental protection

Jiangsu April 3–4, 2007, the Jiangsu and Lhasa governments sign the "2006–2008 Pairing Aid Construction Project Agreements." August 2010, the Productivity Promotion Centers of Jiangsu and Tibet sign a cooperation agreement; the Jiangsu Center will volunteer technical supports (including personnel training, R&D, project assessment and counseling and training) to the Tibet Center. September 3–9, 2010, the Maritime Bureaux of Jiangsu and Tibet become pairing-aid partnerships during 2010–2014. May 23, 2011, the Jiangsu Jianghuai Power Co., Ltd. acquires the Tibet Zhongkai (Holdings) Co., Ltd. September 2011, the Jiangsu Nantong Middle School and Tibet sign an agreement; The School will host 85 Tibetan students per year. September 9–22, 2011, Jiangsu Province, the Blood Center of Tibet

autonomous region, and Health Department of Tibet sign the "Agreement Concerning the Pairing-Aid Work of Blood Supply and Collection," aiming to ensure blood supply to Tibet. March 6, 2012, Jiangsu Institute of Animal and Husbandry and Tibet Collage of Professional Technology sign a cooperation agreement. August 16, 2012, Jiangsu Province and the Audio-Visual Library of Tibet sign a cooperation agreement concerning the joint promotion of regional educational informatization

Jiangxi   2001, the Jiangxi Provincial Government Office establishes the leading team of Tibet pairing aid. December 21, 2009, the "Summary and Exchange Meeting of the National Education Assistance for Tibet" is held in Nanchang city of Jiangxi. According to statistics, from 2007 to 2009, Tibet has received 275 million yuan of aid via a total of 474 projects, with 136,400 sq. m of campuses and dormitories being built and nearly 2,000 teachers and staff being trained. The provinces from all over China have donated 530,000 books and dispatched nearly 980 teachers and cadres to Tibet. April 26, 2012, the Jiangxi Provincial Transportation and Communication Department, the Jiangxi Vocational and Technical College, and the Tianlu Co., Ltd. of Tibet hold a signing ceremony of the school-enterprise cooperation. The Jiangxi School will continue to host the Tianlu Tibetan Class. July 7, 2012, the Tibet Department of Education, the Tibetan Medicine College of Tibet, and Jiangxi College of Traditional Chinese Medicine hold a symposium concerning the joint training of marketing talents in Tibetan medicine, aiming to implement the central government's decision on pairing-aid work. August 19, 2012, Jiangxi College of Traditional Chinese Medicine and Tibet College of Tibetan Medicine pledge to jointly establish a research center on traditional Chinese and Tibetan folk medicine resources

Jilin   October 25, 2002, Jilin Province and Tibet autonomous region pledge to strengthen ethnic friendship and to promote economic and social development in Tibet. June 25, 2004, a second team of Jilin's aiding-Tibet cadres arrives in Xigaze, Tibet. September–October, 2004, Jilin's aiding-Tibet cadres carry out the "solar stove project" in Dinggye, Saga and Kuala of Tibet. The project costs two million yuan, and 4,000 farmers and herdsmen will benefit from it. August 26–29, 2006, the Everest Cultural Tourism Festival is held in the Tibetan Folk Customs Garden of Xigaze prefecture (Tibet). The Garden is part of the pairing-aid program provided by Jilin Province; the total investment of the program is 33 million yuan. October 13, 2008, 15 high-school teachers from Xigaze of Tibet and backbone teachers from Northeast Normal University of Jilin carry out one-month

	training course. This is an important part of the pairing-aid cooperation between Jilin and Tibet. The Educational Science School of Northeast Normal University, the Affiliated High School of Northeast Normal University, and the schools appointed by Education Department of Changchun city participate in the cooperation. November 18, 2010, the Institute of Vegetables and Flowers of Jilin and Xigaze Institute of Agricultural Research of Tibet sign a cooperation agreement on potato production technology. September 13, 2011, Jilin's pairing-aid project (entitled "Medical Care Training Course") to Xigaze prefecture of Tibet is launched in the CCP School of Liaoyuan city, Jilin Province
Liaoning	March 22, 2011, Liaoning Province carry out pairing-aid work to Tibet; Liaoning decides to provide over 200,000 yuan per year to Nagqu prefecture, mainly used for bilateral cooperation projects and staff training. May 15, 2011, the Liaoning headquarters for the pairing aid to Nagqu visits Nagqu prefecture to inspect the hospital relocation project and the CCP School construction project; the two projects will cost 59.09 million yuan. August 15, 2012, the comprehensive vocational training center of the aiding Nagqu (Tibet) project, invested by the Human Resource and Social Security Department of Liaoning Province, starts. This project will cost 2.3 million yuan, mainly focusing the professional trainings of automotive repair, electric, and electronic, Tibetan home knitting, Tibetan painting, and Tibetan sewing embroidery. September 9, 2012, a delegation, led the Director of the Economic Cooperation Office (the office of pairing aid to Tibet) of Liaoning, visits Nagqu prefecture to inspect the progress of the Liaoning-aided projects including the "Liaoning Departments," the Tibetan Hospital and the CCP School Administration Building
Ningxia	November 3, 2009, the Ningxia Electric Power Company and the Tibet Power Co., Ltd. sign a strategic cooperation framework agreement. The two sides will further consolidate bilateral linkage and promote exchange and cooperation; aiming to speed up the construction of smart grid. Before 2020, the construction of China's smart grid will cost about 200 billion yuan. July 31, 2012, the Mobile Learning Service Center is established in Lhasa of Tibet, which is jointly invested by Tibet University and Ningxia University. The center provides service in Qamdo, Nyingchi, Ali, Rikaze, and Lhasa of Tibet autonomous region and Guyuan and Shizuishan and Yinchuan of Ningxia. The project aims to build a multimode and multichannel platform of modern distant education, to transmit digitized quality education resources and to better serve the economic and social development of minority areas in Western China. May 9, 2012, from

January to April, Ningxia has transmitted a total amount of 220 million kw h of electricity to Tibet, which accounts for 28 % of Tibet's total electricity need. Different from Ningxia, Tibet is abundant in hydropower resources (except for the dry season) but lacks coal and petroleum. For the 12th five-year plan period (2011–2015), Ningxia will provide Tibet 4 billion kw h of electricity. This will not only completely resolve Tibet's power shortage during the dry season, but it will also reduce 3.55 million tons of greenhouse gas emissions annually

Qinghai September 4, 2005, Qinghai Province and Tibet autonomous region sign, in Lhasa city, a framework cooperation agreement. Under the agreement, the two sides will make use of their comparative advantages to enhance the exchange and cooperation in economic, trade, cultural, and other fields and to jointly build the Qinghai–Tibet Economic Cooperation Zone. March 18, 2008, the China Telecom Tibet Company and the China Communications Services Co., Ltd. Qinghai Company sign a strategic cooperation framework agreement. September 16, 2010, Qamdo of Tibet and Yushu of Qinghai sign a tourism strategic cooperation agreement; the two sides will implement the "General Development Plan of the China Shangri-la Ecological Tourism Zone." October 11, 2010, the Meteorological Observatories of Tibet and Qinghai sign the "Technological Cooperation Work Framework Agreement." The two sides will carry out cooperation in data sharing, technological exchange, scientific research, weather alarm, etc., aiming to further explore the climate change and its physical mechanism in the Qinghai–Tibet Plateau. November 26, 2010, the governments of Tibet autonomous region and Qinghai Province sign, in Xining city, the "Agreement Concerning the Cooperative Construction of the Coordinative Leadership Mechanism in the Golmud Tibet-Qinghai Industrial Park"

Shaanxi July 25, 2009, the Entry-Exit IQBs of Shaanxi and Tibet sign the "Memorandum of Shaanxi's Exports of Fruit via the Tibet Port." April 27, 2010, the State Development Bank Shaanxi Branch and Tibet Nationalities College sign an agreement on development and cooperation of ethnic career; the two sides establish a national unity education base. October 29, 2010, the Administration of Quality and Technical Supervisions of Tibet and Shaanxi hold, in Lhasa city, a signing ceremony of memorandum of cooperation to aid Tibet. Shaanxi will strengthen aid to Tibet in financial assistance, project support, technical guidance, and personnel training. April 12–30, 2012, Xi'an city of Shaanxi holds the "Personnel Training Courses" in Ali prefecture of Tibet. August 16, 2012, the Shaanxi Institute of Archaeology and the Tibet Institute of Cultural Relics and Archaeology

sign, in Lhasa city, Tibet, a cooperation agreement on cultural relic and archeological research, covering training and personnel exchange, equipment supply, and literature exchange. The two sides will cooperate in the subjects of the "Tibet's Tibetan Buddhist Statues" and the "Archaeological Investigation and Research of Large Cemeteries in the Tubo Period." September 7, 2012, Shaanxi Salt Bureau donates 300,000 yuan to the Salt Industry Corporation of Tibet autonomous region

Shandong
July 1991, a Tibetan middle school in Shandong Province is established in Ji'nan city; it, as one of the pairing-aid projects of Shandong province, is the only specialized boarding school recruiting students from Tibet. April 9, 2007, an aiding-Tibet work forum of Shandong Province is held in Ji'nan city. According to Statistics, Shandong has completed 755 pairing-aid projects, with a total investment of 930 million yuan. January 6, 2011, Shandong University and Tibet University sign an inter-school cooperation agreement. Tibet University has received aid from a number of high-level universities for more than a decade. January 7, 2011, Shandong and Tibet sign, in Ji'nan city, a cooperation agreement concerning personnel training in tourism and hotels. April 28, 2011, the scenic spots of Yarlung River, Lake Namtso, Mt. Tanggula and Nujiang Headstream of Tibet, and the Taishan Mountain scenic spots of Shandong sign a pairing-aid agreement. August 25, 2011, the Administration of Quality and Technical Supervisions of Shandong Province and of Rikaze prefecture of Tibet sign an agreement; Shandong will provide assistance in project construction and personnel training. September 8, 2012, a delegation of the China (Shandong) Science and Technology Association signs a friendship agreement with Rikaze. Both sides hope to strengthen technological cooperation in agriculture and energy. November 2, 2012, 115 Tibetans with congenital heart diseases from Namling, Nyalam, and Panam Counties of Rikaze arrive in Ji'nan city for free treatments

Shanghai
June 7, 2010, the Association of Industry and Commerce of Tibet, the Shanghai Media and Entertainment Group, and the Shanghai Association of Newspaper Industry sign, in Shanghai, a cooperation framework agreement, aiming to support Tibet's private enterprises which have comparative advantages to enter Shanghai and other developed region in the Yangtze River Delta. September 21, 2010, the Lhasa (Shanghai) tourism promotion is held in Shanghai. The Tourism Bureaux of the two places sign a memorandum of cooperation. November 10, 2010, Shanghai and Rikaze prefecture sign a sanitation aid agreement. Under the agreement, Shanghai will provide equipments for Xigaze health sectors. Shanghai also donates one million yuan of disease

control equipments to Xigaze. January 17 2011, Tongzhou School of Shanghai and the No. 2 Primary School of Chenguan District (Lhasa) establish friendly school relations. The two sides announce the "2011 Pando Education Fund." August 29, 2012, the "Meeting of Aiding-Tibet Work of Dungkar (Doilungdêgên county of Lhasa city) Power Generation Co. Ltd.," organized by the State Grid Corporation, is held in Lhasa. The Shanghai Electric Power Company and others will provide aid to the Tibet Power Company; the two sides also sign a technological aid agreement. September 3, 2012, the Jianshe Road and Bridge Machinery Co., Ltd. of Shanghai will provide the equipments for the 2000 tons/day cement clinker dry production line for Tibet

Shanxi   September 1985, the first batch of 1,301 Tibetan students, from seven cities (or prefectures) of Tibet, enter 17 high schools of 16 provinces (or cities) including Shanxi; this is part of the nation-wide aiding-Tibet work. May 14, 2007, Pingyang county of Shanxi Province and Jiali county of Tibet hold, in Lhasa city, a pairing-aid symposium. Shanxi will further implement aid work. December 11, 2009, the Shanxi Electric Power Corporation helps to train, in the training bases of substation simulation of and transmission lines of Datong city and Linfen city, 60 techni-cal workers from the Tibet Power Company. This is the first time that the two companies carry out training cooperation. April 21, 2010, a delegation of the Electric Power Corporation of Shanxi visits the Electric Power Corporation of Tibet for the aid work in Tibet. March 27, 2012, at the Affiliated High School of Shanxi University, more than 200 students and teachers of Tibetan Classes hold the "Serfs Emancipation Day"

Sichuan   July 12, 2006, the Tibet government and Sichuan University sign, in Lhasa, a comprehensive cooperation agreement. January 17, 2012, Sichuan and Tibet pledge to cooperate in infrastructure construction, processing of agricultural products, exploitation of mineral resources, tourism, maintenance of social stability, and others. March 14, 2012, Ya'an city of Sichuan and Lhasa city of Tibet autonomous region sign, in Beijing, a regional coopera-tion framework agreement. The two sides will jointly develop the Tibetan Tea market, aiming to transform their resource advan-tages to economic benefits. In 2008, the Ya'an tea production technique has been included in China's national nonmaterial cultural heritage lists. April 9, 2012, the Bureaux of Surveying and Mapping Geographic Information of Sichuan and Tibet sign, in Chengdu, a strategic cooperation agreement. May 28, 2012, Tibet and Sichuan will strengthen cooperation in R&D of Tibetan medicine, personnel exchange, management of emergent affair, and others. July 12, 2012, the Frontier Defense Corps of the

Public Security Bureaux of Tibet and Sichuan sign, in Chengdu, an agreement concerning the joint law enforcement on illegal immigration activities. August 2, 2012, Tibet and Sichuan sign a cooperation agreement on agriculture and animal husbandry. September 30, 2012, the Commercial Departments of Tibet and Sichuan sign in, Chengdu city, a commercial cooperation agreement. Both sides will carry out cooperation in domestic trade, logistics and circulation, trade channel construction in South Asia, foreign trade, etc.

Tianjin   1994, at the third round of aiding-Tibet conference sponsored by the central government, Tianjin, and Changdu of Tibet establish pairing-aid relationships. As of 2010, Tianjin had donated a total value of 511 million yuan, including materials and funds to Changdu; 60 aid projects were completed, including infrastructure construction, new rural reconstruction, the Jinchang Bridge, the Tianjin Square of Lancang River area, the Songda Power Station in Changdu, and the Jinchang Sport Center. June 27, 2011, Tianjin Vocational Normal University and Tibet sign a cooperation agreement on joint education. According to the agreement, the University will provide tuitions, living expenses, and scholarships for the Tibetan students. September 5, 2011, the Administration of Quality and Technical Supervision (AQTS) of Tianjin and Lhasa city of Tibet sign an agreement concerning the implementation of a new round of pairing-aid work deployed by the Tianjin municipal CCP committee, the Tianjin municipal government, and the General AQTS of the PRC. August 30, 2012, the first batch of Tianjin's medical care team visits Changdu, Jiangda, and Dingqing of Tibet; the team will carry out compulsory treatment for the children who have congenital heart diseases

Xinjiang   August 29, 2003, the National Nature Reserve Management Office of Aerjin Mountain of Xinjiang, the National Nature Reserve Management Bureau of Qiangtang of Tibet, and other two National Nature Reserve Management Bureaux (Kekexili and the water source of the three Rivers of Yangtze, Yellow and Mekong) jointly sign a memorandum of information exchange and cooperation of Tibetan antelopes protection, aiming to strengthen the protection of the Tibetan antelope, to strengthen supervision and enforcement of the crime activities, such as smuggling and sales of Tibetan antelope products, and to effectively curb illegal and criminal activities in the protected areas. April 10, 2006, the Geological Exploitation Bureaux of Tibet and Xinjiang autonomous regions and the China Geological Survey Bureau sign an agreement of wild workstation management, aiming to strengthen the safety of scientific investigation activities

	in wild areas. November 11, 2010, the Customers' Committees (or Associations) of Xinjiang and Tibet jointly hold a conference on the protection of consumers' rights and sign an agreement. According to the agreement, the Consumers' Committee of any side which receives the complaints from other five sides should promptly investigate, handle, and report the treatment progress or suggestions to the complaint side as soon as possible
Yunnan	September 16, 2010, Diqing Tibetan autonomous prefecture of Yunnan and Changdu prefecture of Tibet sign a strategic cooperation agreement to jointly develop tourist routes to eliminate the interregional barriers of policy, market, traffic, and service in tourism. December 5, 2011, the Datang (Yunnan) International Hydropower Development Corporation in the upper reaches of the Nu River and the Yadong county of Rikaze prefecture (Tibet) sign a cooperation agreement on the Yadong solar energy project. Both sides will build the solar energy generator in Pali, Duina, and other towns in the northern high altitude areas of Yadong county. According to the agreement, the first phase of the photovoltaic power plant has the capacity of more than 100 MW. October 20, 2012, the Procuratorates of Nujiang Lisu autonomous prefecture of Yunnan Province and Linzhi prefecture of Tibet autonomous region sign, in Linzhi Town, a framework agreement on attorney coordination; both sides will strengthen cooperation to prevent and combat cross-border crimes
Zhejiang	September 2, 2006, a 100-people team of the Hongwuhuan Mechanical Co. Ltd. of Zhejiang visits Naqu prefecture of Tibet and establishes a long-term pairing-aid relationship with No. 3 Primary School of Naqu. The Company also calls for its staff to establish the one-to-one aid relations with dozens of the orphans of the School. September 22, 2011, the blood centers of Zhejiang and Tibet sign an agreement concerning blood collection and supply, aiming to meet the demand of clinical-used blood in Tibet. March 30, 2012, the management scheme of Zhejiang's pairing-aid projects to Naqu prefecture (including Naqu, Biru and Jiali Counties) is enacted. June 9, 2012, at the "2012 Zhejiang Investment and Trade Fair and the Mid-West Industrial Development Seminar," Naqu of Tibet holds a project introduction and investment promotion meeting; Zhejiang and Tibet sign four cooperation agreements. August 28, 2012, Tibet's arts workers hold a series of the performances in Zhejiang, aiming to acknowledge Zhejiang's pairing aid to Tibet. September 14, 2012, the Haining Municipal Bureau of Justice of Zhejiang and the Judicial Office of Naqu prefecture of Tibet sign a website construction agreement; Zhejiang will help Tibet to build the first law popularization website

References

CCTV (25 May 2011) Tibet middle school in Beijing, CCTV (Channel 9) News. http://english.cntv.cn/program/china24/20110525/103652.shtml. Accessed 21 Mar 2013

China Daily (23 September 2005) Aid program brings sea changes to Tibet. http://www.china.org.cn/english/China/143275.htm. Accessed 18 Mar 2013

China Daily (27 April 2011) Tibetan cadre Kong Fansen. http://www.chinadaily.com.cn/china/2011-04/27/content_12404405.htm. Accessed 25 Mar 2013

CNRadio (10 November 2006) News—Qingzang railway transported 0.73 M passengers, boosts Tibet economy (in Chinese). http://www.cnradio.com.cn/2004news/internal/200611/t20061110_504324840.html. Accessed 15 Apr 2013

Huang C (9 February 2011) The successful practice of pairing-aid mechanisms (in Chinese). China Ethn Dly. http://www.mzb.com.cn/html/report/172316-1.htm. Accessed 2 Mar 2013

ICT (International Campaign for Tibet) (2003) Tracking the steel dragon: how China's economic policies and the railroad are transforming Tibet. Washington. http://www.savetibet.org/media-center/ict-press-releases/tracking-steel-dragon-how-chinas-economic-policies-and-railroad-are-transforming-tibet. Accessed 12 Apr 2013

Mackerras CP (2005) People's Republic of China: background paper on the situation of the Tibetan population, A Writenet Report commissioned by United Nations High Commissioner for Refugees, Protection Information Section (DIP). http://www.unhcr.org/cgi-bin/texis/vtx/refworld/rwmain/opendocpdf.pdf?docid=423ea9094. Accessed 25 Apr 2013

People's Daily (19 May 2011) Funds sent to Tibet from inland regions total 13 billion yuan. People's Daily Beijing. http://english.people.com.cn/90001/90776/90882/7385769.html. Accessed 12 Mar 2013

People's Daily (21 July 2011) 'Pairing-up' support program for Tibet reflects superiority of socialist system. People's Daily, Beijing. http://english.people.com.cn/90001/90776/90785/7446998.html. Accessed 2 Mar 2013

People's Daily (23 August 2005) Status of the national pairing aid to Tibet (in Chinese). http://politics.people.com.cn/GB/8198/50050/52280/3636709.html. Accessed 21 Mar 2013

Postiglione G, Zhu ZY, Ben J (2004) From ethnic segregation to impact integration: state schooling and identity construction for rural Tibetans. Asian Ethnicity 5(2):195–217

Postiglione GA, Ben J, Ngawang T (2009) Tibetan student perspectives about neidi schools. In: Minglang Z, Ann H (eds) Affirmative action in China and the United States: a dialogue on inequality and minority education. Palgrave-Macmillan, London, pp. 127–142

SEAC (2008) National Border Defense Work Conference. State Ethnic Affairs Commission (SEAC), Beijing. http://www.seac.gov.cn/gjmw/zt/2008-12-15/1229136023815597.htm. Accessed 12 Apr 2014

SEAC (various years) China ethnic statistical yearbook. The State Ethnic Affairs Commission (SEAC) of the People's Republic of China, Beijing, China

Tibet Daily (14 January 1999) All students in inland middle schools and classes to return to Tibet for examination. Cited from Wu (2013)

Wolman D (2006) Train to the roof of the world. Wired Mag Issue 14.07. http://www.wired.com/wired/archive/14.07/chinarail.html?pg=2&topic=chinarail&topic_set=. Accessed 1 May 2013

Wu X (2013) The evolutions and performances of the Tibetan middle schools (classes) sponsored by inland provinces. J Northwest Norm Univ (Social Sciences Edition) No. 5. Available at http://www.cssn.cn/mzx/rlxyy/201401/t20140115_944469.shtml. Accessed 31 Aug 2014

Xinhua (16 November 2011) New progress in development-oriented poverty reduction program for rural China. Xinhua News Agency Beijing. http://news.xinhuanet.com/english2010/china/2011-11/16/c_131249948.htm. Accessed 11 Apr 2013

Xinhuanet (25 June 2003) To build the Qingzang Railway and to benefit multiethnic people. Xinhua News Agency, Beijing. http://www.qh.xinhuanet.com/qztlw/2003-06/25/content_639390.htm. Accessed 15 Apr 2013

Xinhuanet (3 March 2005) News—the Qingzang railway will no longer let 100 yuan to be only 54 yuan. Xinhua News Agency, Beijing. http://www.qh.xinhuanet.com/2005-03/03/content_3810355.htm. Accessed 15 Apr 2013

Chapter 3
Tibetan Unrest and the Dalai Lama: Narrative

Abstract Historically and politically, harmonious Han-Tibetan relations had once been achieved during the Qing dynasty (1644–1911). However, during the PRC era, especially since the Dalai Lama's flight to India in 1959, the China–Tibet relationships have been worsening. Some Tibetans, especially those in exile, have been denying the Chinese rule over Tibet and believed that what the Chinese have done in Tibet is the real cause for the Tibetan unrest in and outside Tibet. In this chapter, the following incidents will be briefly narrated: (i) the Tibetan rebellion in 1959, (ii) the Tibetan unrest from 1987 to 1989, (iii) the Lhasa riots in 2008, and (iv) the self-immolation protests from 2009 to 2013. The focus is mainly on the causes and consequences of these incidents, with some further implications being given to the future of Tibet and its relations with China.

3.1 Tibetan (1959) Rebellion

The 1959 Tibetan Rebellion, which is also called the 1959 Tibetan Uprising, began on March 10, 1959. The revolt erupted in Lhasa, the capital of Tibet, which had been under the effective control of the People's Liberation Army (PLA) of the People's Republic of China (PRC) in 1951. The anniversary of the uprising is observed by the Tibetan exiles as the "Tibetan Uprising Day"; by way of contrast, in the PRC and in Tibet autonomous region, it is celebrated as the "Serfs Emancipation Day."

3.1.1 Early Signs of Unrest

Although the 14th Dalai Lama's flight occurred in 1959, armed conflict between Tibetan rebels and the Chinese army started in as early as 1956 in the Kham and Amdo (western Sichuan and Qinghai provinces in the Chinese administrative hierarchy), which were subjected to socialist reform. The guerrilla warfare later spread to other areas of Tibet and lasted through 1962. From 1959 to 1961, the destruction of most of Tibet's more than 6,000 monasteries happened (Craig 1992, p. 125).

In 1951, a 17-point agreement between the PRC and representatives of the Dalai Lama was put into effect. Socialist reforms such as redistribution of land were delayed in Tibet proper. However, eastern Kham and Amdo regions were outside the administration of the Tibetan government in Lhasa, and were thus treated more like other Chinese provinces, with land redistribution implemented in full. The Khampas and nomads of Amdo traditionally owned their own land (Grunfeld 1996, p. 9).

Armed resistance broke out in Amdo and eastern Kham in June 1956. By 1957, Kham was in chaos. PLA reprisals against Khampa resistance fighters such as the Chushi Gangdruk became increasingly brutal. Reportedly, monks and nuns were forced to have sex with each other and forcibly renounce their celibacy vows. Kham's monastic networks came to be used by guerilla forces to relay messages and hide rebels (Knaus 2000, p. 86). Punitive strikes were carried out by the Chinese government against Tibetan villages and monasteries. The PLA used Chinese Muslim soldiers, who formerly had served under Ma Bufang (a former Nationalist general), to crush the Tibetan revolt in Amdo. In southern Kham, Hui cavalry were stationed (Smith 1996, pp. 443–444).

3.1.2 Major Events

Chinese authorities have interpreted the uprising as a revolt of the Tibetan elite against socialist economic reforms that were improving the lot of Tibetan serfs. Tibetans-in-exile and many third-party sources, on the other hand, have usually interpreted it as a popular uprising against the alien Chinese presence.

The selected major events relating to the 1959 Uprising include:

> On March 10, several thousand Tibetans surrounded the Dalai Lama's palace to prevent him from leaving or being removed. The huge crowd had gathered in response to a rumor that the Chinese would have planned to arrest the Dalai Lama when he was going to a cultural performance at the PLA's headquarters. This marked the beginning of the uprising in Lhasa.

> On March 12, protesters appeared in the streets of Lhasa declaring Tibet's independence. Barricades went up on the streets of Lhasa, and the PLA soldiers and the Tibetan rebel forces began to fortify positions within and around Lhasa in preparation for conflict.

On March 15, preparations for the Dalai Lama's evacuation from the city were set in motion, with the Tibetan troops being employed to secure an escape route from Lhasa.

On March 17, two artillery shells landed near the Dalai Lama's palace, triggering his flight into exile.

On March 19, the PLA started to shell the Norbulingka, prompting the full force of the Uprising. Combat lasted only about 2 days, with Tibetan rebel forces being badly outnumbered and poorly armed.[1]

As a result of the armed conflicts, Lhasa's three major monasteries—Sera, Ganden, and Drepung—were seriously damaged by shelling, with Sera and Drepung being damaged nearly beyond repair. In April 1959, the 19-year-old 10th Panchen Lama, the second ranking spiritual leader in Tibet, residing in Shigatse (Rikaze in Chinese), called Tibetans to support the Chinese government (Feigon 1996, p. 163). However, in 1967 the Panchen Lama was formally arrested and imprisoned until his release in 1977. During China's Cultural Revolution (1966–1976), nearly all Tibet's monasteries were ransacked and destroyed.

3.1.3 Direct Causes

To a large extent, the 1959 Uprising was coined with the famine in Tibet. The famine was part of China's most horrible famine which resulted largely from the failure of the Great Leap Forward movement launched by Mao Zedong during the late 1950s. According to a confidential report by the Panchen Lama sent to Chinese Premier Zhou Enlai in 1962.

"[In] many parts of Tibet people have starved to death… In some places, whole families have perished and the death rate is very high. This is very abnormal, horrible and grave… In the past Tibet lived in a dark barbaric feudalism but there was never such a shortage of food, especially after Buddhism had spread… In Tibet, from 1959 to 1961, for 2 years almost all animal husbandry and farming stopped. The nomads have no grain to eat and the farmers have no meat, butter or salt."[2]

There are more direct factors resulting in the 1959 Uprising. On February 7, 1959, a significant day on the Tibetan calendar, the Dalai Lama attended a religious dance, after which the acting representative in Tibet, Tan Guansan, offered the Dalai Lama a chance to see a performance from a dance troupe native to Lhasa at the Norbulingka to celebrate the Dalai Lama's completion of his lharampa geshe degree. On March 1, an unusual invitation to attend a theatrical performance at the People's Republic Army (PLA) headquarters outside Lhasa was extended to the Dalai Lama. The Dalai Lama—at the time studying for his lharampa geshe degree—initially postponed the meeting, but the date was eventually set for March

---

[1]For other, slightly different versions, see Richardson (1984, pp. 209–210), Smith (1996, p. 446), TGIE (1998), Chen (2006), and People's Daily (17 April 2008).

[2]Source: http://www.subliminal.org/tibet/testimony/1962-panchen.html. Accessed 2013-3-20.

10. On March 9, the head of the Dalai Lama's bodyguard was visited by Chinese army officers. The officers insisted that the Dalai Lama would not be accompanied by his traditional armed escort to the performance, and that no public ceremony for the Dalai Lama's procession from the palace to the camp should take place.[3]

3.2 Tibetan (1987–1989) Unrest

3.2.1 A Brief Narrative

The 1987–1989 Tibetan unrest were a series of pro-independence protests that took place between September 1987 and March 1989 in Tibet autonomous region and the Tibetan ethnic prefectures in Gansu, Qinghai, Sichuan, and Yunnan provinces. Police and security officers attempted to put down the protests, but as tensions escalated an even greater crowd of protesters amassed.

The largest demonstrations began on March 5, 1989 in the Tibetan capital of Lhasa, when a group of monks, nuns, and laypeople took to the streets as the 30th anniversary of the 1959 Tibetan uprising approached. According to official sources, the riots that occurred on March 5, 1989 are reported as the following:

> Immediately after 12:00 noon of March 5, there was a sudden commotion in the crowd at the Jokhang Temple Plaza, with a dozen of lamas, nuns, and other young Tibetans shouting "Tibet independence" slogans and one holding the "Snow Lion" flag—a symbol of "Tibetan independence." Thereafter, the number of Tibetans on march increased to more than 500, most of whom wore, in a threatening manner, masks and a few of monks and nuns being dressed in civilian clothing. The street was completely in chaos…

> At the police station entrance in the Barkhor (balang) Street, rioters threw stones at the security personnel on the spot, with two policemen being wounded in their legs. The number of rioters attacking security personnel was getting larger and larger, with stones being thrown from the Jokhang temple roof to the nearby police station. At the same time, in order to expel the rioters, public security personnel began to cast tear gas. But the number of rioters increased even larger. The streetlights and many Tibetan-style buildings near the Jokhang Temple Plaza were seriously destroyed.

> At about 3 pm, the rioters, after regathered, marched to the Barkhor St, the East Beijing Rd, and the Jiri Rd, where the doors and windows of more than 20 public agencies, hotels, and restaurants were destroyed. In the East Beijing Rd, more than 500 rioters, about 300 of whom wearing masks, were attacking a primary school and a hospital…

> At about 5 pm, in the East Beijing Rd, a grain shop was set on fire. The fire soon spread to nearby residential areas and shops. When a fire-fighting brigade composed of 37 staff was dispatched to the scene, more than 300 rioters set up roadblocks to prevent them to enter. This resulted in 10 brigade members being injured (including two being seriously injured).

> In the riots, two armed police were shot wounded and one dead. And it is believed that some firearms that the rioters used were smuggled from abroad.[4]

---

[3]See Avedon (1997, p. 50) and Smith (1996, p. 446).
[4]Source: http://www.people.com.cn/GB/historic/0307/587.html (accessed on 2014-9-18)—Excerpted and translated by author based on the Chinese text.

3.2.2 Timeline of the Events

After 3 days of violence, martial law was declared on March 8, 1989, and foreign journalists and tourists were evacuated from Tibet on March 10 of the same year. This signified an end to the provision of information to the rest of the world on the riots. In summary, a chronology of the major events that occurred from September 27, 1987 to March 7, 1989 is shown as follows:[5]

- On September 27, 1987, a demonstration in Lhasa was broken up.
- On October 1, 1987, riots took place in Lhasa. Six people died, including a monk from the Sera Monastery, and two other Tibetans were injured. The demonstrators stoned the police and set a police station afire. Official said 19 policemen were hurt during the conflict.
- On March 5, 1988, a revolt took place at the celebration of the Great Prayer (Monlam Prayer Festival). The riots cost the lives of three persons according to Chinese sources.
- On December 10, 1988, further riots in Lhasa. According to official sources one person died; unofficial sources spoke of twelve.
- On January 19, 1989, sentences were pronounced in consequence of the arrests made during the riots of 1988 with deterrent harshness. The sentences extended from 3 years imprisonment to the death penalty (with delay of execution).
- On January 28, 1989, the 10th Panchen Lama of Tibet—the second authority after the Dalai Lama—dies.
- On February 6, 1989, riots occurred around Monlam and the Tibetan Losar (new year). Chinese authorities canceled the celebration of Monlam Qenmo, which precedes Losar each year.
- On March 5, 1989, a religious event ended in a massacre. Official sources speak of 11 deaths and 100 wounded. The occasion for the massacre, according to Chinese sources, was the stoning of a Han Chinese police officer.
- On March 6, 1989, riots spread to the center of Lhasa. Han Chinese stores were wrecked and as a result a state of emergency was called.
- On March 7, 1989, all foreigners including journalists were evacuated from Tibet.

3.2.3 Causes and Consequences

The political status of Tibet has been a sensitive topic since the rectification of the 17-point Agreement between Tibet and the People's Republic of China (PRC) in 1951, and after the Dalai Lama's exile in Dharamsala in 1959 in particular. During

---

[5]Sources: Becker (1989), Cargan (1987), and the Tibetan Youth Congress (2004).

the early 1980s, when China began to experiment political and economic reforms, Tibet had enjoyed a period of social and political liberalization. A few monasteries which had been destroyed by the Red Guards have begun to rebuild since the 1980s (with limited support from the Chinese government) and greater religious freedom has been granted—although it is still limited (Laird 2007, pp. 351–352).

At the end of the decade, however, monks in the Drepung and Sera monasteries started protesting for independence, and so the Chinese government halted reforms and started an anti-separatist campaign. In addition, the 1989 Tibetan unrest also related to the death of the 10th Panchen Lama. Since both the Chinese government and the Dalai Lama took separate initiatives to search for his successor (reincarnation), many Tibetans were concerned about the unprecedented interference in a centuries-old tradition of succession.

The exiled government in Dharamsala, led by the Dalai Lama, claims that they possesses not only legitimate sovereignty over the present Tibetan autonomous region (TAR) of the PRC, but also other areas of the PRC where ethnic Tibetans reside (i.e., the "Greater Tibet Region" [GTR]). This amounts to roughly one-fourth of the total area of the PRC. The exiled Tibetan parliament claims to represent the overall GTR which includes the regions of Amdo and Kham that are currently under the administration of Qinghai and Sichuan provinces, respectively (CTA 1993, p. 1). Stronger support for full independence of the GTR, however, comes primarily from the more fanatical independent groups like the Tibetan Youth Congress (TYC) or the International Tibetan Independent Movement (ITIM). For instance, the TYC's website states that its members should "struggle for the total independence of Tibet even at the cost of one's life".[6]

3.3 Lhasa (2008) Riots

3.3.1 A Brief Narrative

The Lhasa riots, also known from its Chinese name as the "3/14 Lhasa Riots," were a series of demonstrations, protests, and riots that started in the city of Lhasa on March 14, 2008 and spread to other Tibetan areas and a number of monasteries. What originally began as an annual observance of Tibetan Uprising Day resulted in street protests by monks, that later descended into rioting, burning, looting, and killing. The violence was mostly directed at the Han and the Hui civilians by Tibetans participating in the unrest (The Economist, 14 March 2008).

---

[6]Cited from Shen (2010, p. 63).

A detailed scenario about the March-14 riots was given by the Chinese government:

At about 11 am, some monks from the Xiaozhao ("Ramoqê Gönba" in Tibetan) Temple suddenly attacked police with tones. Almost at the same time, a number of local Tibetans began to gather in the Barkhor (balang) Street, chanted separatist slogans, and started violence—with sticks, stones, and daggers—against police officers and the masses. In the Barkhor St, the North Linlang Rd, the Salad Rd, the Najin Rd, the No. 2 Loop Rd, the Beijing Rd, lawless elements gathered in crowds, frantically attacked government organs, street shops, banks' automatic teller machines (ATMs), hotels, and schools…

What followed were fires filled with the smell of burning rubber and fabric, with cars, shops, hotels being smashed or burned. Shortly thereafter, electricity and telecommunication lines were cut off.

At about 3 pm, a clothing store named "Yichun" located in Middle Beijing Rd was set on fire. Among the six, all in 20 s, female staff, only Drolma (Tibetan) escaped from the fire and survived. The five victims are Tsrudraga (Tibetan), Yang Dongmei, Chen Jia, He Xinxin, and Liu Yan.

These lawless elements were also a group of greedy robbers. They looted everything in the shops and put the robbed mattress, tables, and chairs in the middle of the road to block the traffic.

A Swede, who had been riding a bicycle to travel in Tibet, was eating in a small restaurant in the Middle Beijing Rd. He recalled: "At the beginning, I heard the glass-breaking voices. Then I saw a group of people set the shop on fire, burn cars, and beaten the passers-by. Their behaviors were quite unreasonable." "Those men were armed with sticks, iron bars and knives, and they brought backpacks with stones. The violence was completely organized," the Swede added.[7]

3.3.2 Causes and Consequences

Violence started in Lhasa in Tibet on March 14 when police cars, fire engines, and other official vehicles were set on fire as anger erupted following the police's dispersal of a peaceful demonstration. Rioters attacked Han and Hui pedestrians and burned down Han- or Hui-owned businesses. A mob tried to storm the city's main mosque and succeeded in setting fire to the front gate. Shops and restaurants in the Muslim quarter were destroyed. Police used tear gas and cattle prods to quell the riots. A Chinese businessman reported that many Hui Muslim beef shops were burnt, also stationary shops, banks, a wholesale market at Tsomtsikhang—one of the most important Tibetan markets, where many shops are owned by Hans and Hui Muslims (BBC, 15 March 2008; Demick, 23 June 2008).

---

[7]Source: http://www.huaxia.com/zt/tbgz/08-059/1270522.html (accessed on 2014-9-18)—Excerpted and translated by author based on the Chinese text.

According to the Chinese administration governing Tibet, the unrest was motivated by separatism and orchestrated by the Dalai Lama. The Dalai Lama denied the accusation and said that the situation was caused by wide discontent in Tibet. Tibetan exile groups claimed that the riot police response was brutal; but according to a correspondent from *The Economist*, the riot police response was tame (CNN, 20 March 2008).

In the riots, more than 300 places were set on fire. In total, 848 shops, 7 schools, 6 hospitals, and 120 residential buildings (of which at least 20 buildings were burned in ruins) were damaged, and 84 vehicles were destroyed. In total, there was a direct property loss of more than 300 million yuan for Lhasa city. According to the Tibet regional government, 18 civilians and 1 police officer had been confirmed dead in the unrest. In addition, the number of injured civilians rose to 382, of whom 58 were critically wounded. 241 police officers were injured, of whom 23 were critically wounded (People's Daily, 22 March 2008).

3.3.3 Riots in Other Areas

The Tibetan riots spread, for the first time, to other areas outside of the Tibet autonomous region. On March 15, 2008, demonstrations by the Tibetans (including civilians and monks) took place in the northwest of Gansu province. The riots were centered around Gansu's Labrang Monastery, which is one of the largest Tibetan Buddhist monasteries outside of Tibet autonomous region. There were reports of government offices being damaged by the rioters, as well as of police using tear gas and force to break up the demonstrations (Spencer, 15 March 2008a). There are reports about the Tibetan and the Han- and Hui-Chinese deaths; but the accurate numbers are not clear. China's Xinhua News Agency reported the cost of damage in Gansu at an estimated ¥230 million (about US$32.7 million) (Xinhua, 25 March 2008).

Chinese authorities have reportedly arrested 12 Tibetan monks after an incident in the historic region of Rebkong (Spencer, 15 March 2008b), which is located in the Huangnan Tibetan autonomous prefecture in Qinghai. Qinghai province borders Tibet and has a large Tibetan population. And the Huangnan area is also known to Tibetans as Amdo.

In the western area of Sichuan province incorporating the traditional Tibetan areas, Tibetan monks and police clashed on March 16 in Ngawa county after the monks staged a protest, killing at least one policeman, and setting fire to three or four police vans. There are claims that police shot between 13 and 30 protesters after a police station was set on fire; however, reports of deaths have been impossible to verify because of restrictions on journalists (Watts and Branigan, 18 March 2008).

At the same time, protests mostly supporting the Tibetans erupted in cities in North America and Europe. According to a Hong Kong-based newspaper *Wen Wei Po* (31 March 2008), attacks on between 10 and 20 Chinese embassies and consulates occurred around the same time as attacks on non-Tibetan interests in the Tibet autonomous region and several other ethnic Tibetan areas.

3.4 Self-Immolation (2009–2013) Protests

3.4.1 Historical Context

Self-immolation refers to killing oneself as a sacrifice. While usage historically refers to a much wider range of suicidal options, such as leaping off a cliff, starvation, or seppuku (ritual disemboweling), the term has now typically referred only to setting oneself on fire. Self-immolation is often used as a form of protest or for the purposes of martyrdom. Like a suicidal attack, an act of self-immolation involves an individual intentionally killing himself or herself (or at least gambling with death) on behalf of a collective cause. In most cases, an act of self-immolation, which is unlike a suicidal attack, is not intended to cause physical harm to anyone else or to inflict material damage.

Self-immolation is tolerated by some elements of Mahayana Buddhism and Hinduism, and it has been practiced for many centuries, especially in India, for various reasons, including Sati, political protest, devotion, and renouncement. From 1963 to 2002, India accounts for 47.8 % of the total cases of self-immolations; and the highest wave of self-immolations has been recorded in 1990 protesting the Reservation in India (Biggs 2005). Tamil Nadu has the highest number of self-immolations in India till date. It is considered to be the capital of self-immolation in India. The practice continues with India leading—as many as 1,451 and 1,584 self-immolations have been reported in 2000 and 2001, respectively (Coleman 2004, p. 66).

3.4.2 Facts and Data

On February 27, 2009, a young monk from Kirti Monastery, set himself on fire in the marketplace in Aba town, Aba Tibetan and Qiang autonomous prefecture, Sichuan province. Since the first case of self-immolation recorded in the twenty-first century, an increasing number of Tibetans have followed suit. Most such incidents have taken place in China's Sichuan province, especially around the Kirti Monastery in Aba town, others in Gansu and Qinghai provinces and Tibet autonomous region. Self-immolation protests by Tibetans also occurred in India and Nepal. The selected cases of self-immolation protests by Tibetans in and outside Tibet autonomous region from 2011 to 2013 are shown below:[8]

- March 2011: A monk of Kirti Monastery in Aba; died.
- August 2011: A monk of Nyitso monastery in Kham Tawu; died.

---

[8]*Sources*: (1) http://en.wikipedia.org/wiki/List_of_political_self-immolations (from 2009/2/27 to 2012/3/10); (2) *The Economist* (26 March 2012; 31 March 2012a), Wong, (2 June 2012) and miscellaneous news clippings for the other cases. More details can be found in Annex at the end of this chapter.

- September 2011: Two monks of Kirti Monastery in Aba; details unknown.
- October 2011: A monk of Kirti Monastery in Aba; saved. Two former monks of Kirti Monastery in Aba; died. A former monk of Kirti Monastery in Aba; saved. A Nun of Mame Dechen Chokorling in Aba; died. A monk of Kardze Monastery in Kardze, Amdo; status unknown.
- November 2011: A nun in Tawu, Kardze; died. A layperson outside Chinese embassy in New Delhi, with minor burns.
- December 2011: An ex-monk, Karma Monastery in Chamdo; died.
- January 2012: A former monk of Andu monastery in Aba; deceased. More self-immolation; details unknown.
- February 2012: Three laypersons; unconfirmed. A former monk of Kirti Monastery in Aba; died. A monk of Lab Monastery in Tridu town, Yushu, Qinghai; condition unclear. A nun of Mame Dechen Chokorling, Aba; died. A monk of Kirti Monastery in Aba; status unknown. A monastic official of Bongthak monastery in Themchen, Tsonub, Amdo; died. A layperson in Dzamthang, Amdo; died.
- March 2012: A girl from Tibetan middle school at Maqu county, Gansu; died. A person whose occupation unknown in in Aba; died. A person whose occupation unknown in Aba; deceased. A monk of Kirti Monastery in Aba; died. A monk of Rongpo monastery in Rebkong, Amdo; status unknown. A monk of Kirti Monastery in Aba; died. A farmer in Rebkong, Amdol; died. Two monks of Tsodun monastery in Barkham, Amdo; status unknown.
- May 2012: A former monk in Kathmandu, Nepal; saved.
- November 2012: Two suspects are found in Tongren county, Qinghai province.
- February 2013: Two persons in Aba prefecture, Sichuan province; died.
- April 2013: Two monks of Kirti Monastery in Ngaba in northeastern Tibet died after setting themselves on fire.
- July 2013: A Tibetan monk Kunchok Sonam, aged at 18, died after setting himself on fire in Aba prefecture, Sichuan province.

Most of the self-immolation protesters have been monks and nuns, or ex-monks. Some of the protesters who set themselves on fire were teenagers (see Fig. 3.1). Most the above self-immolations have done to protest against Chinese rule, and to call for the return to Tibet of the Dalai Lama—the exiled spiritual leader of Tibet. The Chinese government said that such extreme actions hurt social harmony and that Tibet and the Tibetan areas of Sichuan are integral parts of Chinese territory (Wen, 14 March 2012).

3.4.3 Linkage to the Dalai Lama

There have been two completely different views about the causes of the self-immolations by Tibetans living in and outside Tibet autonomous region. Baima Chilin, Governor of Tibet autonomous region, told correspondents that Tibetan
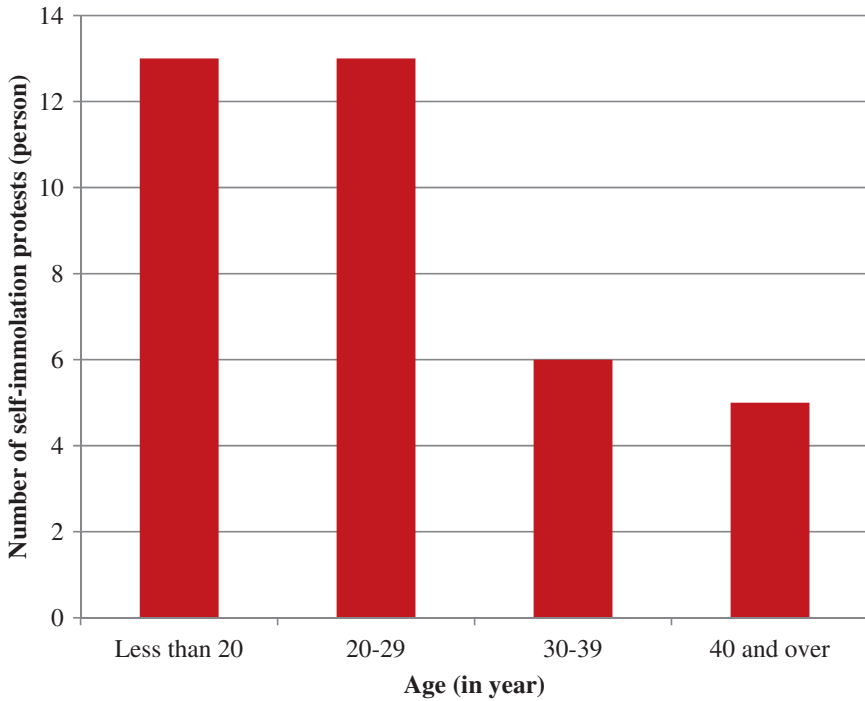
Fig. 3.1 Statistics of selected self-immolation protests in and outside Tibet (2009–2013). *Note* Only those whose ages are confirmed are included. *Sources* (1) http://en.wikipedia.org/wiki/List_of_political_self-immolations (from 2009/2/27 to 2012/3/10); and (2) The Economist (31 March 2012a, 26 March 2012 and 31 March 2012b), Wong (2 June 2012) and miscellaneous news clippings for the other cases

Buddhism has a long history and the religion itself is not to teach people to kill themselves. Xiangba Pingcuo, Director of the Standing Committee of the People's Congress of Tibet autonomous region, pointed out that there are more than 1700 temples in Tibet autonomous region, but the self-immolation incidents only occurred in some specific temples. "You can reach a conclusion by some simple analyses that it was the Dalai Lama clique that planned and instigated [the self immolations]."[9]

Regarding the relationship between "Tibet independence" and the "Tibetan self-immolation incidents," Lian Xiangmin, Senior Research Fellow of the China Center for Tibetan Studies in Beijing, released the following facts: that no self-immolations took place in Tibet autonomous region, that most of the existing self-immolation protesters were young, about 20-year-old, monks, and that the self-immolations had a very strong political purpose which was closely linked to the Tibet "government in exile." He also believed that there was evidence showing

---

[9]Cited from Xia (8 March 2013).

that members of the Dalai clique published through the Internet the guidelines for self-immolations, including how to organize, plan, and implement self-Immolations.[10]

By way of contrast, the Dalai Lama has blamed the self-immolations on "cultural genocide" by the Chinese (Reuters, 19 February 2012). In an interview in July 2012 with *The Hindu*—an Indian newspaper—he called self-immolation a "very, very delicate political issue" (Krishnan, 9 July 2012):

> Now, the reality is that if I say something positive, then the Chinese immediately blame me. If I say something negative, then the family members of those people feel very sad. They sacrificed their own life. It is not easy. So I do not want to create some kind of impression that this is wrong.

Self-immolations by Tibetans protesting Chinese domination of Tibet have had a greater impact than earlier protests. Since the images of most of these self-immolations have been recorded by their sponsors, they can be easily transmitted over the Internet to news media and supporters. Internet access has reached even remote areas where Tibetans live.

3.5   Further Implications

Tibet has once upon a time functioned as an independent kingdom in ancient history. During the Qing dynasty (AD 1644–1911), Tibet is an internationally acknowledged constituent of China that enjoys full autonomy, whereas Beijing held suzerainty over Tibet. After the fall of the Qing court and the establishment of the Republic of China (ROC), however, the legal status of Tibet became in dispute. Yet, since the Chinese government only exerted a very limited control over Tibet from 1911 to 1951, Tibet had gradually turned itself into a situation of quasi de facto independence during the interwar period. Since its annexation of Tibet in 1950 to 1951, the PRC government has maintained effective control and gained substantial international recognition over its full sovereignty.

Historically, the population of the region consisted of primarily ethnic Tibetans and some other ethnic groups. The original ancestors of the Tibetan people, as represented by the six red bands in the old Tibetan flag, are Se, Mu, Dong, Tong, Dru, and Ra. Other traditional ethnic groups with a significant population or with the majority of the ethnic group residing in Tibet (excluding the area disputed with India) include (in order of population size): Han, Hui, Monba, Lhoba, Kirgiz, Kazak, Naxi, Tu, Dongxiang, Manchu, Nu, Tujia, Miao, Yi, Bai, Mongol, Salar, Uyghur, Dong, Zhuang, Yao, and Qiang.[11]

A brief review of the Han-Tibet unrest during the past decades reveals that almost all the four cases have been highly correlated. In the West, the Tibet

---

[10]Cited from http://news.china.com/domestic/945/20140117/18294404.html. Accessed on 2014-9-2.

[11]Based on the 2010 National Population Census of the PRC.

question always refers to the human rights of people, religious autonomy, and self determination, whereas in China it is always read as a case of sovereignty, national unity, and anti-separatism. Although China established the Tibetan autonomous region (TAR) as one of its constituent provinces successfully, the West often regards the exiled Tibetan government led by the Dalai Lama to be the authentic regime representing the ethnic Tibetans, leading the Chinese border along the TAR to be one of the sensitive and fragile borders.

Since its annexation of Tibet, the PRC government has maintained effective control and gained substantial international recognition over its full sovereignty. On the other hand, the Han-Tibetan unrest has also tended to increase in Tibet. It seems that the Tibetans, especially those who are in exile, have not satisfied with what the Chinese did in Tibet. Tibet, after more than 50 years of socialist construction with Chinese characteristics, is still a politically fragile region.

Annex

Timeline of the Tibetan unrest in and outside Tibet autonomous region (1955–2013)

1955   Tibetans in Kham and Amdo (Qinghai) begin revolt against Chinese rule

1956   Dalai Lama visits India for 2,500th anniversary of the Buddha's birth. The United States begins to arm the Tibetan resistance via CIA

1959   March 10: Several thousand Tibetans surround the Dalai Lama's palace to prevent him from leaving or being removed. The huge crowd gathers in response to a rumor that the Chinese are planning to arrest the Dalai Lama when he goes to a cultural performance at the PLA's headquarters. This marks the beginning of the uprising in Lhasa

   March 12: Protesters appear in the streets of Lhasa declaring Tibet's independence. Barricades go up on the streets of Lhasa, and Chinese and Tibetan rebel forces begin to fortify positions within and around Lhasa in preparation for conflict

   March 15: Preparations for the Dalai Lama's evacuation from the city are set in motion, with Tibetan troops being employed to secure an escape route from Lhasa

   March 17: Two artillery shells land near the Dalai Lama's palace, triggering his flight into exile

   March 19: the Tibetan insurgent troops have reached 7000 people in Lhasa. They occupied the Potala Palace, the Norbulingka Yaowang Mountain and some key points in Lhasa, which encircles the Chinese Communist Party Central Committee representatives in Tibet from three directions

   March 20–22: the Chinese PLA's fight against the insurgency in Lhasa ends in victory, in which more than 5300 Tibetans are killed, and more than 8000 firearms, 81 heavy machine guns, 27 mortars, 6 artilleries, and 10,000,000 bullets are seized

April 4–9: The PLA Tibet military District uses four regiments of troops marches on to the south, and, after crossing the Yaluzangbu river, initiates the suppression of armed rebellion in the Shannan area

July 17: The Preparatory Committee for the Tibet autonomous region passes the "Resolution Concerning the Democratic Reforms".

1960 The first famine begins in Tibet

1961 By the end of this year, the armed rebellion in Tibet, which lasts for nearly 3 years, is completely suppressed. In all the fights, the PLA annihilates more than 93,000 of Tibetan rebels and seizes more than 35,500 firearms, 70 artilleries, 41 radios

1963 Foreign visitors are banned from Tibet

1964 The Panchen Lama is arrested after calling for Tibetan independence

1966 The Cultural Revolution reaches Tibet and results in the destruction of a large number of monasteries and cultural artifacts

1977 Resistance burns 100 PLA vehicles in last major military operation

1979 Tibet is opened to non-Chinese tourism for the first time since 1963

1985 Bomb defuses in Lhasa during the 20th anniversary celebration of Tibet autonomous region

1987 September 27: A demonstration occurs in Lhasa

October 1: Riots take place in Lhasa. Six people die, including a monk from the Sera Monastery, and two other Tibetans are injured. The demonstrators stoned the police and set a police station afire. Official says 19 policemen are hurt during the conflict

1988 March 5: A revolt takes place at the celebration of the Great Prayer (Monlam Prayer Festival). The riots cost the lives of three persons according to Chinese sources

December 10: Further riots in Lhasa. According to official sources one person died; unofficial sources speak of twelve

1989 January 19: Sentences are pronounced in consequence of the arrests made during the riots of 1988 with deterrent harshness. The sentences extend from 3 years imprisonment to the death penalty (with delay of execution)

On January 28, 1989, following the death of the Panchen Lama, the Chinese government took initiative to search for his successor (reincarnation); in the meantime, the Dalai Lama also decided to do the same job

February 6: Riots around Monlam and the Tibetan new year (Losar). Chinese authorities cancel the celebration of Monlam Qenmo, which precedes Losar each year

March 5: A religious event ends in a massacre. Official sources speak of 11 deaths and 100 wounded. The occasion for the massacre, according to Chinese sources, is the stoning of a Han Chinese police officer

March 6: Riots spread to the center of Lhasa. Han Chinese stores are wrecked and as a result a state of emergency is called

March 7: All foreigners including journalists are evacuated from Tibet.

1990   China lifts martial law in Lhasa 13 months after imposing it. The Voice of America initiates a Tibetan-language broadcast service

1995   The Dalai Lama recognizes 6-year-old Gedhun Choekyi Nyima as the 11th Panchen Lama. China denounces the Dalai Lama's choice of Panchen Lama as a "fraud" and selects rival candidate Gyaincain Norbu by golden urn process

2008   March 14: Violence starts in Lhasa in Tibet when police cars, fire engines, and other official vehicles are set on fire as anger erupts following the police's dispersal of a peaceful demonstration. Rioters attack Han and Hui passers-by and burned down Han- or Hui-owned businesses. Police use tear gas and cattle prods to quell the riots. According to the Tibet regional government, 18 civilians and 1 police officer have been confirmed dead in the unrest. In addition, the number of injured civilians rises to 382, of whom 58 are critically wounded. 241 police officers are injured, of whom 23 are critically wounded

        March 15: The Tibetan riots spread outside of the Tibet autonomous region for the first time. Demonstrations by ethnic Tibetans and monks take place in the northwest province of Gansu

2009   January: Chinese authorities detain 81 people and question nearly 6,000 alleged criminals. In March, China marks flight of Dalai Lama with new "Serfs' Liberation Day" public holiday

        February 27: Tapey, a young monk of Kirti Monastery sets himself on fire in Aba of western Sichuan; saved

        October: China confirms that at least two Tibetans have been executed for their involvement in anti-China riots in Lhasa in March 2008

2011   March 16: A monk of Kirti Monastery sets himself on fire in Aba; died

        August 15: A monk of Nyitso monastery sets himself on fire in Kham Tawu; died

        September 26: Two monks of Kirti Monastery set themselves on fire in Aba; details unknown

        October 3: A monk of Kirti Monastery sets himself on fire in Aba; saved; October 7: Two former monks of Kirti Monastery set themselves on fire in Aba; died. October 15: A former monk of Kirti Monastery in Aba; saved. October 17: A Nun of Mame Dechen Chokorling in Aba; died

        October 25: A monk of Kardze Monastery sets himself on fire in Kardze, Amdo; status unknown

        November 3: A nun in Tawu, Kardze sets herself on fire; died. November 4: A layman sets himself on fire outside Chinese embassy in New Delhi, with minor burns

        December 1: An ex-monk of Karma Monastery sets himself on fire in Chamdo; died

2012   January 6: Two youths set themselves on fire; details unknown. January 8: One man, details unknown, sets himself on fire. January 14: A former monk of Andu monastery sets himself on fire in Aba; deceased

February 3: Three laypersons; unconfirmed, set themselves on fire. February 8: A former monk of Kirti Monastery sets himself on fire in Aba; died. February 9: A monk of Lab Monastery sets himself on fire in Tridu town, Yushu, Qinghai; condition unclear. February 11: A nun of Mame Dechen Chokorling sets herself on fire in Aba; died. February 13: A monk of Kirti Monastery sets himself on fire in Aba; status unknown. February 17: A monastic official of Bongthak monastery sets himself on fire in Themchen, Tsonub, Amdo; died. February 19: A layman sets himself on fire in Dzamthang, Amdo; died

March 3: A girl from Tibetan middle school at Maqu county, Gansu sets herself on fire; died

March 4: A person whose occupation unknown sets himself on fire in Aba; died. March 5: A person whose occupation unknown sets himself on fire in Aba; deceased. March 10: A monk of Kirti Monastery sets himself on fire in Aba; died. March 13: A monk of Rongpo monastery sets himself on fire in Rebkong, Amdo; status unknown. March 16: A monk of Kirti Monastery sets himself on fire in Aba; died. March 17: A farmer sets himself on fire in Rebkong, Amdol; died. March 30: Two monks of Tsodun monastery set themselves on fire in Barkham, Amdo; status unknown

May 31: A former monk sets himself on fire in Kathmandu, Nepal; saved.

November 19: Two persons set themselves on fire in Tongren county, Qinghai province

2013   February 19: Two persons set themselves on fire in Aba prefecture, Sichuan province; died

April 24: Two monks of Kirti Monastery set themselves on fire in Ngaba in northeastern Tibet died after setting themselves on fire

July 21: A Tibetan monk Kunchok Sonam, aged at 18, died after setting himself on fire in Aba prefecture, Sichuan province

References

Avedon J (1997) In exile from the land of snows: the definitive account of the Dalai Lama and Tibet since the Chinese conquest. Harper Perennial, New York

BBC, 15 March 2008, Accounts from Lhasa and beyond, BBC News. Available at: http://news.bbc.co.uk/2/hi/asia-pacific/7302319.stm. Accessed 18 Mar 2013

Becker J, 1989, Tibetans fear more secret brutality. *The Guardian* (London), Mar 10

Biggs M, (2005), Dying without killing: self-immolations, 1963–2002. In: *Diego Gambetta. Making sense of suicide missions*. Oxford University Press. Available at http://users.ox.ac.uk/~sfos0060/immolation.pdf. Accessed 21 Aug 2014

Cargan E, 3 October 1987, Tibetan protest for independence becomes violent. New York Times. Available at: http://www.nytimes.com/1987/10/03/world/tibetan-protest-for-independence-becomes-violent.html Accessed 18 Mar 2013

Chen J (2006) The Tibetan rebellion of 1959 and China's changing relations with India and the Soviet Union, *J Cold War Stud*, **8**(3). Available.at: http://www.fas.harvard.edu/~hpcws/jcws.2006.8.3.pdf. Accessed 10 Apr 2013

CNN, 20 March 2008, Transcript: James Miles interview on Tibet. Available at: http://www.cnn.com/2008/WORLD/asiapcf/03/20/tibet.miles.interview/. Accessed 18 Mar 2013

Coleman L (2004) The copycat effect: how the media and popular culture trigger the mayhem in tomorrow's headlines. Paraview Pocket Books, New York

Craig M (1992) Tears of blood: a cry for Tibet. Harper Collins Publishers, London

CTA (1993) Tibet: proving truth from facts. Department of information and international relations, central Tibetan administration, Dharamsala

Demick B, 23 June 2008, Tibetan-Muslim tensions roil China, *Los Angeles Times*

Economist, 14 March 2008, Fire on the roof of the world. Available at: http://www.economist.com/daily/news/displaystory.cfm?story_id=10870258&top_story=1. Accessed 25 Mar 2013

Economist, 26 March 2012a, Self-immolation in India: Frighteningly common. Available at: http://www.economist.com/blogs/banyan/2012/03/self-immolation-india Accessed 10 Mar 2013

Economist, 31 March 2012b, No impact: Tibetan protests seem increasingly ineffective. Available at: http://www.economist.com/node/21551540. Accessed 25 Feb 2013

Feigon L (1996) Demystifying Tibet: unlocking the secrets of the land of the snows. Dee Publisher, Chicago, Ivan R

Grunfeld AT (1996) The making of modern Tibet. East Gate Book, New York

Knaus JK (2000) Orphans of the cold war America and the tibetan struggle for survival, illustrated edn. PublicAffairs, New York

Krishnan A, 9 July 2012, Dalai Lama speaks of dilemma on spreading self-immolations. *The Hindu*. New Delhi. Available at: http://www.thehindu.com/news/national/dalai-lama-speaks-of-dilemma-on-spreading-selfimmolations/article3617428.ece. Accessed 20 Apr 2013

Laird T (2007) The story of Tibet: conversations with the Dalai Lama. Grove Press, New York

People's Daily, 17 April 2008, Tell you a true Tibet—How does the 1959 armed rebellion occur? People's Daily, Beijing. Available at: http://english.peopledaily.com.cn/90001/90776/90785/6394257.html Accessed 23 Mar 2013

People's Daily, 22 March 2008, 18 civilians, 1 police officer killed by Lhasa rioters. Available at: http://english.peopledaily.com.cn/90001/90776/6378824.html. Accessed 12 Mar 2013

Reuters, 19 February 2012, Teenage Tibetan monk self-immolates, dies: rights group. Available at: http://www.reuters.com/article/2012/02/20/us-china-tibet-idUSTRE81J06B20120220. Accessed 29 Mar 2013

Richardson HE (1984) *Tibet and its history* (Second Edition, Revised and Updated). Shambhala Publications, Boston

Shen S (2010) Territorial fragility and the future of Tibet: Sub-sovereignty, problems and theoretical solutions. In: Guo R, Freeman C (eds) Managing fragile regions: method and pplication. Springer, New York, pp 61–79

Smith WW (1996) A history of Tibet: nationalism and self-determination. Westview Press, Boulder CO

Spencer R, March 15, 2008a, Tibet riots continue after day of violence. The Daily Telegraph (London)

Spencer R, March 15, 2008b, Q&A: The showdown in Tibet. Why would Tibet boil over right now. Chicago Tribune. Available at: http://www.chicagotribune.com/news/nationworld/chi-tibet_q_and_amar15,0,1154784.story. Accessed 1 Apr 2013

TGIE (Tibetan Government in Exile), 1998, History leading up to March 10th 1959. 7 September. Available at: http://www.tibet.com/Status/10march59.html. Accessed 6 Apr 2013

Tibetan Youth Congress, 2004, Tibetans protest seeking release of political prisoners. Tibetan Youth Congress. September 27. Available at: http://www.tibetanyouthcongress.org/tycnews/27thseptrtyc1.htm. Accessed 15 Feb 2013

Watts J, Tania B, March 18, 2008, Tension rises as armed police mass in capital. The Guardian (London). Available at: http://www.guardian.co.uk/world/2008/mar/18/tibet.china. Accessed 15 Mar 2013

Wen J, 14 March 2012, China Premier Wen Jiabao's comments at NPC press conference. Reuters. Available at: http://www.reuters.com/article/2012/03/14/china-npc-highlights-idU-SL4E8EE11K20120314. Accessed 5 Apr 2013

Wen WP, 31 March 2008, Premier: ample facts prove Dalai's role in Lhasa riot, door of dialogue still open) (in Chinese). Hong Kong: Wen Wei Po. 31 Mar 2008

Wong E, 2 June 2012, In occupied Tibetan monastery, a reason for fiery deaths. *The New York Times*. Available at: http://www.nytimes.com/2012/06/03/world/asia/wave-of-tibet-self-immolations-challenges-chinese-rule.html. Accessed 7 Apr 2013

Xia H, 8 March 2013, Officials from Tibet AR talk about self Immolations: The Dalai Lama clique shall bear the sloe responsibilities. China News Network. Available at http://money.163.com/13/0308/14/8PEUOJGB00253B0H.html. Accessed 2 Sept 2014

Xinhua, 25 March 2008, Questions, answers about casualties, damages of recent riots. Xinhua News Agency, Beijing. Available at: http://news.xinhuanet.com/english/2008-03/25/content_7857168.htm. Accessed 12 Apr 2013

Chapter 4
Determinants of Spatial (Dis)Integration: Analytics

Abstract Using a modified gravity model of trade and China's interprovincial panel data, this chapter shows that the negative effect of distance-related transactions costs on trade tends to rise from 2000 to 2010. After constructing all the 56 ethnic groups into a single, interprovincial similarity index, we cannot find any evidence that supports the view that ethnic links may serve as a factor promoting bilateral trade. However, our estimated coefficients on 37 major ethnic groups suggest that both positive and negative ethnic influences on trade exist in China. Finally, we find that the Tibetan and 12 other ethnic groups tend to contribute to China's interprovincial integration and that the Dai, the Han, the Kazak, and the Va ethnic groups tend to be responsible for China's spatial disintegration.

4.1 An Interprovincial Puzzle

The first decade of the twenty-first century was unusual to China. Promoted by its entry into the World Trade Organization (WTO) on December 11, 2001, China's economic growth has been significantly driven by its remarkable performance in foreign trade. WTO data shows that China's exports and imports enjoyed an average annual growth rate of 18 and 16 % from 2000 to 2010, respectively, much higher than the average annual growth rate of the global trade volume in the same period, which was only 3 %.[1] In 2000, for example, China was the 7th leading exporter and 8th largest importer of merchandise trade. Since 2001, China has

---

[1]Calculated by author based on the data released by the World Trade Organization (http://www.wto.org/english/thewto_e/countries_e/china_e.htm).

steadily increased its share of global manufactured exports. Notwithstanding the global reductions in trade, which resulted from the US financial crisis in 2008, China replaced Germany as the world's largest exporting nation in 2009. In 2010, China continued to be the leading merchandise exporter (US$1.58 trillion, or 10.4 % of world exports), followed by the United States (8.4 % of world exports), Germany (8.3 % of world exports), and Japan (5.1 % of world exports).[2]

When looking inside China, however, one can only find less encouraging news. For example, compared with its surging foreign trade as mentioned above, which has increased by more than four (for exports) or three (for imports) times from 2000 to 2010, China's domestic trade has only achieved a growth of 86.26 % during the same period (see Table 4.1). This means that China's domestic trade—both intra-provincial and interprovincial—has only had an average annual growth rate of about 6 % from 2000 to 2010. Frankly speaking, this may not have been treated as a low figure in many other countries during that period of time. However, compared with its 16–18 % of annual foreign trade growth rate and 10 % of annual gross domestic product (GDP) growth rate from 2000 to 2010, China's domestic trade performance can only but be labeled as "poor".

Even worse news comes from China's interprovincial trade performance. China's official statistics on interprovincial trade (in terms of freight exchange via national railways) are puzzling. For example, except for China's two peripheral territories (i.e., Hainan and Tibet) whose data are not available in 2000, the proportions of interprovincial trade to total domestic trade have risen in only 17 provincial economies (i.e., Beijing, Jiangsu, Guizhou, Ningxia, Shandong, Gansu, Chongqing, Jilin, Guangxi, Yunnan, Inner Mongolia, Fujian, Guangdong, Sichuan, Shanghai, Hubei, and Shaanxi) from 2000 to 2010. By way of contrast, the proportions for the remaining provincial economies have either decreased (i.e., in Tianjin, Zhejiang, Qinghai, Anhui, Henan, Jiangxi, Heilongjiang, Hebei, Hunan, and Liaoning) or been kept almost unchanged (i.e., in Shanxi and Xinjiang) during the same period (see Table 4.1 for more details).[3]

Indeed, the above phenomenon is unusual, especially after the following facts are taken into account:

(i) Since the 1990s, there has been a significant improvement of transport infrastructures (including, inter alia, the completion of various expressways and high-speed railways across the nation) in China;
(i) Since 1999, the "Western Regional Development Policy" has been implemented by the Chinese central government in order speed up the development of the western and central provinces by encouraging the economic cooperation between the East-West provinces; and
(ii) Since 2008, and as a result of the global reductions in trade, which resulted from the US financial crisis, the Chinese government has made various efforts to stimulate China's domestic consumption.

---

[2]*Data sources* Rumbaugh and Blancher (2004) and WTO (2011).

[3]Note that Beijing and Shanghai's reductions of domestic trade from 2000 to 2010 are mainly due to their removals of large industrial, pollution-making plants during the above period.

Table 4.1 Changes of China's domestic and interprovincial trade from 2000 to 2010

Provincial economy	Domestic trade (thousand tons)			Ratio of interprovincial trade (%)		
	2000	2010	Change (%)	2000	2010	Change (%)
Anhui	6,087	12,092	98.65	56.84	47.93	−8.91
Beijing	2,612	1,571	−39.85	72.21	95.23	23.02
Chongqing	1,613	2,197	36.21	56.79	65.95	9.16
Fujian	2,475	3,704	49.66	46.22	53.48	7.26
Gansu	3,236	6,186	91.16	52.10	61.27	9.17
Guangdong	4,521	7,505	66.00	74.70	79.72	5.02
Guangxi	2,815	6,109	117.02	67.10	75.82	8.72
Guizhou	3,585	7,991	122.90	69.29	82.98	13.69
Hainan	311	542	74.28	NA	10.89	NA
Hebei	11,399	16,481	44.58	60.61	56.09	−4.52
Heilongjiang	12,701	16,888	32.97	54.47	49.19	−5.28
Henan	9,655	13,374	38.52	78.92	71.53	−7.39
Hubei	3,937	5,698	44.73	62.81	66.57	3.75
Hunan	4,668	5,783	23.89	65.62	61.27	−4.35
Inner Mongolia	9,171	37,698	311.06	69.55	77.00	7.46
Jiangsu	4,076	6,372	56.33	63.67	85.75	22.08
Jiangxi	2,959	5,376	81.68	57.92	51.95	−5.97
Jilin	5,630	7,674	36.31	60.55	69.53	8.98
Liaoning	12,520	18,118	44.71	34.03	29.94	−4.09
Ningxia	1,782	4,414	147.70	73.12	86.45	13.33
Qinghai	647	3,096	378.52	81.14	61.66	−19.48
Shaanxi	3,280	8,836	169.39	65.95	69.09	3.15
Shandong	10,585	18,285	72.74	52.24	62.67	10.43
Shanghai	1,054	959	−9.01	89.56	93.53	3.97
Shanxi	28,469	60,812	113.61	91.96	92.76	0.80
Sichuan	5,516	7,389	33.96	46.79	51.59	4.80
Tianjin	2,004	7,240	261.28	81.64	54.46	−27.18
Tibet	NA	30	NA	NA	100.00	NA
Xinjiang	3,353	6,775	102.06	73.67	74.05	0.39
Yunnan	2,882	5,209	80.74	59.51	67.92	8.41
Zhejiang	1,929	3,806	97.30	62.10	41.59	−20.51
All	165,472	308,210	86.26	65.53	69.06	5.39

Notes (1) "Trade" only includes freight exchange via national railways. (2) *NA* data are not available

Source Calculated by the author based on China Association of Communications and Transportation and the National Development and Reform Commission of the PRC (2001 and 2011)

4.1.1 How to Open the Pandora's Box?

Then, what are the driving forces behind the dynamic patterns of China's domestic trade and how to explain the interprovincial economic puzzle?

Past studies of the determinants of spatial economic interdependence seem controversial, or at least incomplete. According to the Heckscher-Ohlin theorem, if the two factors of production are capital and labor, countries with dissimilar levels of per capita income (or, more precisely, dissimilar capital/labor ratios) will trade more than countries with similar levels (Heckscher 1919; Ohlin 1933). However, a number of empirical results indicate that the inclusion of income level as a determinant of trade contradicts the assumptions of traditional Heckscher-Ohlin theory (e.g., Linder 1961; Deardorff 1998, p. 15). In order to fill up this gap, economists have put forward new theories that base international trade on, among others, economies of scale, market imperfections, and cross-national differences in technology (e.g., Markusen 1986; Helpman 1987; Krugman 1995).

However, past studies have raised more questions than they have answered. For example, the effects of geographical proximity on trade have not been shown to fall over time. Rather, these effects have been shown to strengthen over time for 1950–1988 (Boisso and Ferrantino 1997) and 1965–1992 (Frankel et al. 1997a).[4] Similarly, using panel data from 1970, 1980 and 1990, Rauch (1999) finds little evidence that the effects of distance-related barriers declined from 1970 to 1990. Clearly, this provides no evidence that, as a result of technological innovation, declining distance-related transactions costs should have led to increased trade flows. One possibility is that these analyses exclude important explanatory variables, thereby biasing the estimates. To clarify related issues, it is necessary to isolate the influences of all distance-related variables on trade. In particular, the inclusion of some relevant cultural variables might allow us to gain a better understanding of the black box containing the distance-related transactions costs that affect spatial economic activities.

China has officially identified, except other unknown ethnic groups and foreigners with Chinese citizenship, 56 ethnic groups. Although the majority of China's population is of the Han nationality (which accounts for more than 90 % of China's total population), the non-Han ethnic groups have a population of more than 100 million. Thanks to the easing migration policy that has been implemented since the 1980s, China's interprovincial labor flows have increased dramatically. It is noteworthy that these flows have also been conducted by people coming from the inland, ethnic-minority areas and moving into the coastal, Han-majority areas. Consequently, China's interprovincial ethnic networks have been enhanced. As of

---

[4]In their analyses of the negative correlation between distance-related costs and the interdependence for sovereign countries, Frankel et al. (1997a) use the data from the 1980s and obtain slightly larger coefficients (around $0.5-0.6$) on distance compared with Eichengreen and Irwin's (1995) interwar estimates (around $0.3-0.6$) based on data from the 1930s.

2010 when the Sixth National Population Census of the PRC was conducted, each of China's 31 provinces has become home to almost all ethnic groups. How have these growing ethnic networks contributed to (or impeded) China's interprovincial economic cooperation and integration?

4.2   Analytical Framework

4.2.1   Cultural Influences on Trade

There is a widely held view that easily observable impediments, such as transportation costs, do not adequately capture transactions costs in international trade. Trade is also reduced by hidden transaction costs associated with unobserved trade barriers.[5] In addition, some studies use international panel data and find that cultural distance or dissimilarity—as proxied by, among other things, the ethnic/linguistic and religious differences across national populations—is a robust determinant of the volume of international trade (see, for example, Rauch and Trindade 2002; Noland 2005; Guiso et al. 2006; Guo 2009, pp. 77–102).

Since the 1990s, numerous quantitative studies have examined the role that cultural factors play in international trade (e.g., Havrylyshyn and Pritchett 1991; Foroutan and Pritchett 1993; Frankel and Wei 1995; Frankel et al. 1997a; Rauch 1999). These studies used linguistic links as one or more explanatory variables. The estimated results suggest that countries which are linguistically similar to one another have been more likely to trade with each other in the postwar period. In other words, there is evidence of linguistic barriers to trade. However, linguistic variables have been highly simplified in these studies. Using the cross-sectional data of East Asia, in which linguistic and religious factors are treated as continuous variables, Guo (2007) finds that religion tends to have more significant influences on intra-regional trade than language, while language tends to exert more significant influences on inter-regional trade than religion.

In this context, the analysis then turns to how cultural variables may affect trade. The emphasis on the role of cultural linkage in economic activities may be traced back to biological analyses showing that cooperation among animals is influenced by genetic similarity. In general, four aspects of differences in cultural behavior are relevant:

(i)   feelings of superiority (and occasionally inferiority) toward people who are perceived as being very different;
(ii) fear of and lack of trust in such people;

---

[5]These trade barriers take a number of forms including legal and institutional differences (Anderson and Marcouiller 2002; Linders et al. 2005; Combes et al. 2005; Guiso et al. 2006), ethnic/linguistic networks (Rauch 2001; Rauch and Trindade 2002) and linguistic/religious dissimilarities (Guo 2004).

(iii) communication difficulties resulting from differences in language and accepted civil behavior; and

(iv) lack of familiarity with the assumptions, motivations, relationships, and social practices of other people (Huntington 1996, p. 129).

Trade and economic cooperation may also be affected by cultural dissimilarities, as it is easier and more efficient for people with the same cultural identity (ethnicity, language, religion, or any other cultural element) to trust and communicate each other than for those with different cultural identities. In this chapter, our particular interest is to test how ethnic differences have influenced China's interprovincial trade and economic cooperation. Even though language is an effective tool of communication and that religion can provide insights into the characteristics of a culture, we would rather select ethnicity as the explanatory variable. The rationale is that most, if not all, of China's ethnic groups are identified in terms of either linguistic or religious traditions. Another reason lies in the fact that, in China, it is more difficult, if not impossible, to collect interprovincial panel data on linguistic and religious groups than those on ethnic groups.

4.2.2 Gravity Model

The gravity model is most commonly used by international and regional economists to study trade.[6] The classic early application of the model was by Linnemann (1966), who continued work first reported in Tinbergen (1962) and then in Pöyhönen (1963). Some of the most recent work on the application of the model was Frankel et al. (1997a, b), Rauch (1999) and Rose (2004), among others. Generally, a gravity model assumes that the volume of trade between any two economies will be directly proportional to the product of their economic masses (measured by GDP or GNP) and inversely proportional to the distance between them. Per capita incomes (measured by product of per capita GDPs or GNPs) have become a standard covariate in the gravity models of, for example, Eaton and Tamura (1994), Frankel et al. (1997a, b), and Rauch (1999).

In addition to "distance", "adjacency" (that is, the country pair shares a common land border) and "cultural links" also influences trade (see, for example, Rauch and Trindade 2002; Noland 2005; Guiso et al. 2006; Guo 2009, pp. 77–102). The basic form of the gravity model to be used in our empirical analysis of interprovincial trade is as the following:

$$\ln(\text{TRADE}_{ij}) = \alpha_0 + \alpha_1 \ln(\text{GDP}_i \text{GDP}_j) + \alpha_2 \ln(\text{GDPPC}_i \text{GDPPC}_j)$$
$$+ \alpha_3 \ln \text{DISTANCE}_{ij} + \alpha_4 \text{ADJACENT}_{ij} + \alpha_5 \text{ETHNIC56}_{ij} \quad (4.1)$$

---

[6]The earliest application of the gravity model can be traced back to the 1940s (see, e.g., Zipf 1946; Stewart 1948).

In Eq. (4.1), "ln" represents natural logarithm; TRADE_{ij}, measured in thousand tons, is the total freight exchange between provinces i and j. GDP_iGDP_j is the product of GDP (in Chinese currency) of the ith and jth provinces. $\text{GDPPC}_i\text{GDPPC}_j$ is the product of GDP per capita (in Chinese currency) of the ith and jth provinces. DISTANCE_{ij} represents the distance between the geographical centers of gravity of the ith and jth provinces (in kilometers). ADJACENT_{ij} is a dummy variable, which takes the value of "1" for provinces i and j to have a common border and "0" otherwise. ETHNIC56_{ij} represents the extent to which the ith and jth provinces are ethnically linked each other (details about the measurement will be discussed in Eq. (4.6) in Sect. 4.3).

Note that since ETHNIC56 is a comprehensive index for all of China's 56 ethnic groups, it can only be used to derive a general pattern of correlation between interprovincial trade and ethnic linkage. If we want to examine the role that each ethnic group plays, the gravity model can be now written as the following:

$$\ln(\text{TRADE}_{ij}) = \alpha_0 + \alpha_1\ln(\text{GDP}_i\text{GDP}_j) + \alpha_2\ln(\text{GDPPC}_i\text{GDPPC}_j)$$
$$+ \alpha_3\ln\text{DISTANCE}_{ij} + \alpha_4\text{ADJACENT}_{ij} + \sum_{k=1}^{37} \beta_k\text{ETHNIC}_{ijk}$$

(4.2)

In Eq. (4.2), ETHNIC_{ijk} represents the extent to which the kth ethnic group is linked between the ith and jth provinces (details about the measurement will be discussed in Eq. (4.5) in Sect. 4.3). We only include 37 ethnic variables in this equation.[7] Of China's 56 officially recognized ethnic groups, 19 ethnic groups (Achang, Baonan, Deang, Derung, Ewenki, Gaoshan, Hezhe, Jing, Jino, Lhoba, Monba, Nu, Oroqen, Pumi, Russian, Tajik, Tatar, Uzbek, and Yugur) have the smallest populations. Each of these ethnic groups, as of 2010, has a population of less than 100,000 (see 4. Annex 1 for more detailed information). Therefore, they are assumed to have much weaker, if any, interprovincial economic influences than the 37 ethnic groups selected in this chapter.

4.2.3 Nonlinear Ethnic Influences

Theoretically, cultural (ethnic) dissimilarity can result in both social transactions costs (a factor directly impeding trade) and "economic complementarity" (an important factor directly facilitating trade) simultaneously. As a result, the relationship between trade and cultural (ethnic) similarity may follow a nonlinear pattern (Guo 2004, 2009, pp. 96–101). Our interest now goes to the clarification of specific ethnic groups which may have different types of influences on trade with provinces differing in income levels. To go further, we employ a new explanatory

---

[7]The corresponding names of these 37 ethnic groups are shown in Table 4.2.

variable: $\ln(\text{GDPPC}_i\text{GDPPC}_j)\text{ETHNIC56}_{ij}$. Consequently, we obtain a modified form of gravity model[8]:

$$\ln(\text{TRADE}_{ij}) = \alpha_0 + \alpha_1\ln(\text{GDP}_i\text{GDP}_j) + \alpha_2\ln\text{DISTANCE}_{ij} + \alpha_3\text{ADJACENT}_{ij}$$
$$+ \alpha_4\ln(\text{GDPPC}_i\text{GDPPC}_j)\text{ETHNIC56}_{ij} + \sum_{k=1}^{37} \beta_k\text{ETHNIC}_{ijk}$$

(4.3)

In Eq. (4.3), ethnicity variable is now entered into the gravity model linearly and also as a product with the natural log of per capita GDPs. Thus, the effect of an ethnic group on interprovincial trade is now allowed to exist separately and to depend on the levels of trading partners' economic development, measured by the natural log of their per capita GDPs. As a matter of fact, since ETHNIC56_{ij} can be written as $\text{Ethnic}_{ij1} + \text{Ethnic}_{ij2} + \ldots + \text{Ethnic}_{ijk} + \ldots + \text{Ethnic}_{ij56}$, the non-linear effects of some, if not all ethnic variables on interprovincial trade may be derived from Eq. (4.3).

Specifically, as for the kth ethnic group ($k = 1, 2, \ldots, 37$), if the estimated coefficients on Ethnic_{ijk} (that is, β_k) and on $\ln(\text{GDPPC}_i\text{GDPPC}_j)\text{ETHNIC56}_{ij}$ (that is, α_4) have different signs (such as $\alpha_4 < 0$ and $\beta_k > 0$; or $\alpha_4 > 0$ and $\beta_k < 0$) and are statistically significant in Eq. (4.3), we obtain a threshold value $(\ln(\text{GDPPC}_i\text{GDPPC}_j)_k^*)$ by letting the first-order differential of the dependent variable—$\ln(\text{TRADE}_{ij})$-with respect to Ethnic_{ijk} be zero, that is:

$$\ln(\text{GDPPC}_i\text{GDPPC}_j)_k^* = -\beta_k/\alpha_4 > 0 \text{ (with } \alpha_4 < 0 \text{ and } \beta_k > 0; \text{ or } \alpha_4 > 0 \text{ and } \beta_k < 0).$$

(4.4)

As for the case of $\alpha_4 < 0$ and $\beta_k > 0$, we have

(i)   If $\ln(\text{GDPPC}_i\text{GDPPC}_j)_k$ is smaller than $\ln(\text{GDPPC}_i\text{GDPPC}_j)_k^*$, the kth ethnic group has a positive effect on the trade between the ith and jth provinces;
(ii) If $\ln(\text{GDPPC}_i\text{GDPPC}_j)_k$ is larger than $\ln(\text{GDPPC}_i\text{GDPPC}_j)_k^*$, the kth ethnic group has a negative effect on the trade between the ith and jth provinces.

4.3 Interprovincial Variables and Data

4.3.1 Ethnic Linkage Index

Interprovincial ethnic linkage (or similarity) indexes can be constructed in different ways. The simplest method is to introduce a dummy that uses "1" for provinces to be ethnically linked with each other and "0" otherwise. Although it has been applied in a number of studies,[9] this method cannot precisely measure the

---

[8]We have also tried other forms of gravity models. But, after running their regressions, we found that they could more easily result in multicollinearity than Eq. (4.3).

[9]See, for example, Havrylyshyn and Pritchett (1991), Foroutan and Pritchett (1993), Frankel and Wei (1995), and Frankel et al. (1997a).

extent to which provinces are ethnically linked to each other, particularly when the provinces have two or more ethnic groups. In this chapter, a more comprehensive method is used to construct interprovincial ethnic linkages. Suppose that there are k ethnic groups in both provinces i and j. If the ith and jth provinces' population shares for the kth ethnic group are expressed by x_k (it ranges between 0 and 1) and y_k (it ranges between 0 and 1), respectively, the kth ethnic group's linkage index between provinces i and j can be measured by the following formula:

$$\text{ETHNIC}_{ijk} = \min(x_k, y_k), \text{ where } x_k \in (0, 1) \text{ and } y_k \in (0, 1). \quad (4.5)$$

In Eq. (4.5), min (•) denotes the minimization of the variables within parentheses. The data on the population shares (x_k and y_k) are calculated by the author based on the data released by the Fifth and Sixth National Population Census of the PRC (conducted at 0:00 a.m. on November 1 of 2000 and 2010, respectively).

Since there are 56 ethnic groups in China, the overall ethnic linkage between provinces i and j can be measured by the following formula[10]:

$$\text{ETHNIC56}_{ij} = \text{ETHNIC}_{ij1} + \text{ETHNIC}_{ij2} + \ldots + \text{ETHNIC}_{ij56} = \sum_{k=1}^{56} \min(x_k, y_k) \quad (4.6)$$

In Eq. (4.6), min (•) denotes the minimization of the variables within parentheses. For all k, $x_k \in (0, 1)$, $y_k \in (0, 1)$, and $\sum x_k = \sum y_k = 1$. Consequently, ETHNIC56_{ij} ranges between 0 and 1. In the extreme cases, when $\text{ETHNIC56}_{ij} = 1$, provinces i and j have a common ethnic structure (i.e., for all k, $x_k = y_k$); when $\text{ETHNIC56}_{ij} = 0$, the two provinces do not have any ethnic linkage with each other (i.e., for all k, x_k (or y_k) = 0). In other words, greater values of ETHNIC56_{ij} indicate greater degrees of ethnic linkages between the two provinces. This formula has been used in Guo (2004, 2009, p. 89) and Noland (2005). Several other methods can also be used.[11] However, Eq. (4.6) can prevent the index of interprovincial ethnic linkages from further reduction when the values of x_k and y_k are small.

The data on the interprovincial ethnic linkages are provided in Annex 4.3 at the end of this chapter.

4.3.2 Other Variables

(1) Interprovincial trade. The data on interprovincial trade are cited from "China Communications Yearbook" (2000 and 2010, edited by China Association of

---

[10]In addition to China's 56 ethnic groups, other unknown ethnic groups and foreigners with Chinese citizenship also exist in China. However, since these ethnic identities are still not known and that there are no specific statistical data on the nationalities of these foreigners for each province, these populations will not be included in the measurement of interprovincial ethnic linkages.

[11]Boisso and Ferrantino (1997), for example, use $\sum x_k y_k$ as the construct of similarity index.

Communications and Transportation and the National Development and Reform Commission of the PRC and published by China Communications Yearbook Press in 2001 and 2011, respectively). The data on the freight exchange via local or privately owned railways are not considered in this table. Notice that "re-exports" may exist in China's interprovincial trade. They are generated by either the unavailability of or the inconvenient access to national railways. For example, in 2000 the freight exchange between Anhui and Hainan provinces may possibly be conducted via railway from Anhui to Guangdong and via other land/sea route from Guangdong to Hainan. In this case, the amount of the freight exchange should not be included (as either the "export" or the "import") in the "Anhui-Guangdong" entry for the year 2000. Unfortunately, we are not able to identify such kind of "re-exports" in this research.

(2) Gross domestic product (GDP) and per capita GDP. In China, the GDP reported by each province is also called gross regional product (GRP). In this chapter, the terms GDP and GRP are used interchangeable. China's 2000 and 2010 provincial GDP and per capita GDP data are from China Statistical Yearbooks (NBS 2001, 2011).

(3) Distance. Unlike those of many Western democratic economies, China's provincial capitals usually are also the economic centers of these provinces. To this end, we use the following terms to express China's interprovincial geographical proximity. "Distance between capitals" is represented by the distance (in kilometers) between two provinces' capitals via national railway. The data on "distance between capitals" are calculated by the author based on the data released by the Ministry of Railways of the PRC). If there are two or more rail lines between two provinces' capitals, our calculations are based on the following rules: (i) if both freight and passenger rail lines exist, only freight lines are considered; and (ii) if two or more freight (or passenger) rail lines exist, only the shortest distance is considered.

(4) Adjacency. "Interprovincial adjacency" denotes whether or not the provinces share a common land boundary. The data on "interprovincial adjacency" are set as "1" if the provinces share a common land boundary and as "0" otherwise. All data are correct as of 2012.

The data of the above variables are provided in Annex 4.3 at the end of this chapter.

4.3.3 Interprovincial Panel Data

The major task of this chapter is to quantitatively investigate the sources for changes in China's spatial economic integration over time. Thus, the use of the cross-sectional data from China' s provincial economies in different years enables that the estimated results are not artifact of any particular time period and to allow for changes in coefficients. Generally, a decade-long period is appropriate

for this kind of research because analysis for a shorter period would not reflect relevant social and economic changes, while significant changes in transportation and communication technologies would have to be accounted for if a longer one is used. Of course, a longer period is still more helpful if three or more sets of cross-sectional data are available. However, this would increase inevitably the costs in data collection. In this chapter, after taking into account data availability, we only focus on two years—2000 and 2010.

The largest numbers of observations (i.e., interprovincial samples) for both 2000 and 2010 are 465, which are counted as the following:

$$C_{31}^2 = \frac{31!}{2!(31-2)!} = \frac{31 \times 30}{2} = 465,$$

where 31 is the number of China's provinces.

However, because the data on interprovincial trade are unavailable for the two provinces of Hainan and Tibet (including 59 province pairs) from 2000 as well as for 13 province pairs (i.e., Beijing-Hainan, Guizhou-Tibet, Hainan-Heilongjiang, Hainan-Jilin, Hainan-Liaoning, Hainan-Ningxia, Hainan-Shanghai, Hainan-Tianjin, Hainan-Tibet, Hainan-Xinjiang, Jilin-Tibet, Ningxia-Tibet, and Tibet-Yunnan) from 2010, the total numbers of observations that can be actually used for our regressions are reduced to 406 (i.e., 465−59 = 406) for 2000 and 452 (i.e., 465–13 = 452) for 2010 accordingly.

A brief statistical description of selected variables included in Eqs. (4.1), (4.2) and (4.3) is given in Table 4.2 (for 2000 and 2010).

4.4 Statistical Estimation

Using the gravity models constructed in Sect. 4.2 and the data described in Sect. 4.3, the determinants of China's interprovincial trade can be estimated by utilizing the SPSS statistics software. More details about the whole regressions as well as technical notes to the estimated results can be found in Annex 4.2 at the end of this chapter.

4.4.1 Basic Results

Table 4.3 shows the estimated results of Eq. (4.1). The economic determinants of trade seem controversial in existing studies. For example, according to the Heckscher-Ohlin theorem (see Heckscher 1919; Ohlin 1933), trading partners with dissimilar levels of per capita income will trade more than the others with similar levels. However, Helpman (1987) and Krugman (1995) predict that the sum of the logs of per capita GNPs of two countries will have a positive effect on the log form of trade between the two countries. With regard to the case of China's inter-provincial trade, the estimated coefficients on the product of per capita GDPs are negative and statistically significant in both 2000 (see Table 4.3) and 2010

Table 4.2 Descriptive statistics for the panel data on selected variables, 2000 and 2010

Variable	N	Minimum	Maximum	Mean	SD
2000					
lnTRADE$_{ij}$	406	2.99573	11.59910	6.84499	1.36932
ln(GDP$_i$GDP$_j$)	465	5.73532	13.62832	10.70744	1.43231
ln(GDPPC$_i$GDPPC$_j$)	465	16.19674	20.00507	17.70224	0.69716
ln(Distance$_{ij}$)	465	4.91998	8.75037	7.47203	0.64053
Ethnic56$_{ij}$	465	0.06160	0.99930	0.75563	0.24827
$k = 1$. Bai	465	0.00001	0.00532	0.00004	0.00028
$k = 2$. Blang	465	0.00000	0.00001	0.00000	0.00000
$k = 3$. Buyi	465	0.00001	0.00129	0.00005	0.00008
$k = 4$. Dai	465	0.00000	0.00008	0.00000	0.00001
$k = 5$. Daur	465	0.00000	0.00120	0.00001	0.00006
$k = 6$. Dong	465	0.00001	0.01331	0.00011	0.00077
$k = 7$. Dongxiang	465	0.00000	0.00303	0.00001	0.00015
$k = 8$. Gelao	465	0.00000	0.00009	0.00001	0.00001
$k = 9$. Han	465	0.06061	0.99682	0.74690	0.25065
$k = 10$. Hani	465	0.00000	0.00003	0.00001	0.00001
$k = 11$. Hui	465	0.00025	0.15621	0.00371	0.00904
$k = 12$. Jingpo	465	0.00000	0.00001	0.00000	0.00000
$k = 13$. Kazak	465	0.00000	0.00012	0.00000	0.00001
$k = 14$. Kirgiz	465	0.00000	0.00004	0.00000	0.00000
$k = 15$. Korean	465	0.00002	0.01072	0.00013	0.00064
$k = 16$. Lahu	465	0.00000	0.00002	0.00000	0.00000
$k = 17$. Li	465	0.00000	0.00159	0.00001	0.00007
$k = 18$. Lisu	465	0.00000	0.00023	0.00000	0.00001
$k = 19$. Manchu	465	0.00006	0.03705	0.00118	0.00443
$k = 20$. Maonan	465	0.00000	0.00089	0.00000	0.00004
$k = 21$. Miao	465	0.00004	0.03037	0.00069	0.00280
$k = 22$. Mongol	465	0.00008	0.01789	0.00064	0.00164
$k = 23$. Mulao	465	0.00000	0.00081	0.00000	0.00004
$k = 24$. Naxi	465	0.00000	0.00047	0.00000	0.00002
$k = 25$. Qiang	465	0.00000	0.00004	0.00000	0.00000
$k = 26$. Salar	465	0.00000	0.00047	0.00000	0.00003
$k = 27$. She	465	0.00000	0.00372	0.00004	0.00024
$k = 28$. Shui	465	0.00000	0.00035	0.00001	0.00003
$k = 29$. Tibetan	465	0.00002	0.22530	0.00074	0.01057
$k = 30$. Tu	465	0.00000	0.00121	0.00002	0.00006
$k = 31$. Tujia	465	0.00003	0.04172	0.00066	0.00438
$k = 32$. Uyghur	465	0.00002	0.00027	0.00004	0.00002
$k = 33$. Va	465	0.00000	0.00005	0.00000	0.00000
$k = 34$. Xibe	465	0.00000	0.00187	0.00001	0.00009
$k = 35$. Yao	465	0.00000	0.01114	0.00009	0.00064

(continued)

Table 4.2   (continued)

Variable	N	Minimum	Maximum	Mean	SD
$k = 36$. Yi	465	0.00002	0.02577	0.00022	0.00196
$k = 37$. Zhuang	465	0.00005	0.02701	0.00025	0.00142
2010					
$\ln\text{TRADE}_{ij}$	452	2.30259	12.62984	6.95446	1.76181
$\ln(\text{GDP}_i\text{GDP}_j)$	465	8.83243	16.76316	13.75672	1.38476
$\ln(\text{GDPPC}_i\text{GDPPC}_j)$	465	19.15152	22.40275	20.60043	0.62203
$\ln(\text{DISTANCE}_{ij})$	465	4.91998	8.75037	7.47203	0.64053
ETHNIC56_{ij}	465	0.08280	0.99870	0.75979	0.24414
$k = 1$. Bai	465	0.00000	0.00526	0.00005	0.00027
$k = 2$. Blang	465	0.00000	0.00016	0.00000	0.00001
$k = 3$. Buyi	465	0.00001	0.00231	0.00007	0.00016
$k = 4$. Dai	465	0.00000	0.00011	0.00001	0.00002
$k = 5$. Daur	465	0.00000	0.00105	0.00001	0.00005
$k = 6$. Dong	465	0.00001	0.01301	0.00013	0.00076
$k = 7$. Dongxiang	465	0.00000	0.00282	0.00002	0.00015
$k = 8$. Gelao	465	0.00000	0.00033	0.00001	0.00003
$k = 9$. Han	465	0.08176	0.99660	0.75070	0.24660
$k = 10$. Hani	465	0.00000	0.00014	0.00001	0.00001
$k = 11$. Hui	465	0.00020	0.14827	0.00356	0.00865
$k = 12$. Jingpo	465	0.00000	0.00002	0.00000	0.00000
$k = 13$. Kazak	465	0.00000	0.00071	0.00002	0.00004
$k = 14$. Kirgiz	465	0.00000	0.00089	0.00000	0.00004
$k = 15$. Korean	465	0.00001	0.00856	0.00013	0.00058
$k = 16$. Lahu	465	0.00000	0.00003	0.00000	0.00000
$k = 17$. Li	465	0.00001	0.00396	0.00003	0.00018
$k = 18$. Lisu	465	0.00000	0.00026	0.00001	0.00001
$k = 19$. Manchu	465	0.00011	0.03156	0.00111	0.00378
$k = 20$. Maonan	465	0.00000	0.00080	0.00000	0.00004
$k = 21$. Miao	465	0.00005	0.03136	0.00088	0.00296
$k = 22$. Mongol	465	0.00005	0.01774	0.00056	0.00157
$k = 23$. Mulao	465	0.00000	0.00073	0.00001	0.00003
$k = 24$. Naxi	465	0.00000	0.00038	0.00000	0.00002
$k = 25$. Qiang	465	0.00000	0.00005	0.00001	0.00001
$k = 26$. Salar	465	0.00000	0.00053	0.00001	0.00003
$k = 27$. She	465	0.00000	0.00306	0.00004	0.00021
$k = 28$. Shui	465	0.00000	0.00029	0.00001	0.00003
$k = 29$. Tibetan	465	0.00002	0.24438	0.00080	0.01149
$k = 30$. Tu	465	0.00000	0.00120	0.00003	0.00007
$k = 31$. Tujia	465	0.00006	0.04210	0.00079	0.00438
$k = 32$. Uyghur	465	0.00001	0.00036	0.00004	0.00003
$k = 33$. Va	465	0.00000	0.00006	0.00001	0.00001

(continued)

Table 4.2 (continued)

Variable	N	Minimum	Maximum	Mean	SD
$k = 34$. Xibe	465	0.00000	0.00158	0.00001	0.00008
$k = 35$. Yao	465	0.00001	0.01086	0.00011	0.00064
$k = 36$. Yi	465	0.00002	0.03288	0.00027	0.00220
$k = 37$. Zhuang	465	0.00005	0.02644	0.00031	0.00141

Notes N number of observations; and *SD* standard deviation

Table 4.3 Regression for interprovincial trade-56 ethnic groups as a single variable, 2000 and 2010

Explanatory variable	Coefficient	SE	VIF
2000			
Constant	13.027	1.424[a]	
$\ln(\text{GDP}_i\text{GDP}_j)$	0.657	0.047[a]	1.837
$\ln(\text{GDPPC}_i\text{GDPPC}_j)$	−0.178	0.070[a]	1.449
$\ln(\text{Distance}_{ij})$	−1.239	0.098[a]	2.146
Adjacent_{ij}	0.515	0.151[a]	1.705
Ethnic56_{ij}	−1.447	0.327[a]	2.034
Coefficient of correlation (R^2)	0.633		
SE of regression	0.834		
F-statistic	138.195		
Sig.of regression	0.000		
Number of observations	405		
2010			
Constant	25.977	2.351[a]	
$\ln(\text{GDP}_i\text{GDP}_j)$	0.807	0.063[a]	2.336
$\ln(\text{GDPPC}_i\text{GDPPC}_j)$	−0.923	0.105[a]	1.423
$\ln(\text{DISTANCE}_{ij})$	−1.377	0.129[a]	2.222
ADJACENT_{ij}	0.597	0.199[a]	1.618
ETHNIC56_{ij}	−1.302	0.372[a]	2.595
Coefficient of correlation (R^2)	0.571		
SE of regression	1.160		
F-statistic	118.960		
Sig of regression	0.000		
Number of observations	451		

Notes The regression is done by ordinary least squares (OLS) method. Dependent variable is the natural log of interprovincial trade in 2000 and 2010. *SE* standard error; *VIF* variance inflation factor. "[a]" denotes statistically significant at greater than the 1 % level

(see Table 4.3). The negative coefficients on per capita GDPs may stem from the fact that China's interprovincial trade mainly includes homogeneous products which are more agricultural.[12]

---

[12]Based on Professor James E. Rauch's (University of California at Santiago) e-mail sent to the author.

Early comparative studies, using the international panel data of China and East Asia, show that geographical influence on international trade was reduced from the 1980s to 1990s (Guo 2007; 2013b, p. 210). One of the major driving forces contributing to this tendency might be technological advance in transportation and communications. Intuitively, wide application of E-commerce and the declining of distance-related transactions costs have increasingly contributed to the growth of international trade. However, in this chapter, the negative effect of "distance" on interprovincial trade is found to rise from 2000 to 2010. Obviously, this does not reflect China's improvement of transport infrastructures; neither does it conform to the general pattern of international trade. It simply reveals that the distance-related transactions costs have been *increased* in China during the past decade. The main cause of China's interprovincial trade barriers may be the market-segmenting behavior that the Chinese provinces carry on in order to maintain social stability and maximize fiscal incomes (Poncet 2005). Undoubtedly, our finding shows a sign of China's spatial economic disintegration during the first decade of the twenty-first century.

The estimated coefficients on "ADJACENT," which are statistically significant, slightly increase from 2000 to 2010, indicating that adjacent provinces tend to trade more easily over time than distant provinces. However, this variable may, at least to some extent, be correlated with some specific ethnic variables.[13] Consequently, compared with those that will be reported in Tables 4.4 and 4.6 (in which the individual ethnic variables are included), the estimated coefficients on "ADJACENT" might be artificially enlarged in Table 4.3 (in which the individual ethnic variables are not included).

The estimated coefficients on "ETHNIC56" are statistically significant for 2000 and 2010. However, they are negative, suggesting that the interprovincial links of 56 ethnic groups as a whole have only but impeded China's interprovincial economic activities. Obviously, this provides no evidence that supports the widely recognizable view that ethnic linkage index tends to encourage trade between provinces that are multi-ethnically linked. In fact, since the partial correlation between the natural log of TRADE and the ETHNIC56 scores yields an inverted-U shape curve for 2010 (see Fig. 4.1), the above estimated coefficients on ETHNIC56 may be misleading (at least for 2010).

4.4.2 Ethnic Influences

In order to have a better clarification of the complicated relationships between ethnic links and trade, we need to examine if (or how) China's ethnic groups have

---

[13]For example, since some ethnic minorities are usually found in China's transprovincial border areas (here ADJACENT = 1), it is natural to believe that interprovincial ethnic linkage scores are large when ADJACENT = 1 and small when ADJACENT = 0. However, since the Pearson correlation coefficients of "ADJACENT" and all the ethnic variables are less than 0.30 (detailed information is not reported here), they do not suggest potential multicollinearity causing imprecise regression results.

Table 4.4 Regression for interprovincial trade-ethnicity as individual variables, 2000 and 2010

Explanatory variable	Coefficient	SE	VIF
2000			
Constant	12.026	1.388[a]	
$\ln(\text{GDP}_i\text{GDP}_j)$	0.751	0.053[a]	3.178
$\ln(\text{GDPPC}_i\text{GDPPC}_j)$	−0.204	0.075[a]	2.162
$\ln(\text{Distance}_{ij})$	−1.207	0.093[a]	2.576
Adjacent_{ij}	0.258	0.151[c]	2.253
Bai	−1111.725	311.344[a]	6.594
Blang	−143382.289	82687.366[c]	2.648
Dai	−25322.387	15047.769[c]	6.929
Daur	1459.585	653.472[b]	1.324
Dong	89.568	65.501	2.241
Dongxiang	1283.312	485.477[a]	4.523
Gelao	17661.905	8009.100[b]	5.595
Han	−1.298	0.317[a]	2.617
Hani	−26808.936	11710.097[b]	3.891
Hui	9.726	4.739[b]	1.605
Jingpo	359133.304	85213.774[a]	3.611
Kazak	−8361.329	11470.119	7.672
Kirgiz	−15958.902	19559.097	1.284
Korean	−51.497	69.669	1.767
Lahu	7943.778	34481.342	4.622
Li	−22444.486	8884.008[a]	3.903
Lisu	6391.919	6291.013	4.079
Manchu	51.197	11.158[a]	2.143
Miao	74.991	32.200[b]	6.594
Mongol	28.096	25.884	1.582
Qiang	−8033.854	16369.829	2.315
She	−4.971	150.345	1.119
Shui	205.540	2401.597	3.323
Tibetan	47.256	35.007	1.867
Tu	−616.774	1044.623	3.182
Tujia	−23.329	11.271[b]	2.145
Uyghur	1093.855	2390.064	1.673
Va	6985.266	13451.429	3.397
Xibe	−6.959	408.855	1.191
Yao	−46.837	77.176	2.091
Yi	43.219	37.176	4.702
Zhuang	14.840	38.157	2.258
Coefficient of correlation (R^2)	0.745		
SE of regression	0.725		
F-statistic	29.910		

Table 4.4   (continued)

Explanatory variable	Coefficient	SE	VIF
Sig.of regression	0.000		
Number of observations	405		
2010			
Constant	31.400	2.696[a]	
$\ln(GDP_iGDP_j)$	0.982	0.067[a]	3.487
$\ln(GDPPC_iGDPPC_j)$	−1.258	0.124[a]	2.639
$\ln(Distance_{ij})$	−1.471	0.126[a]	2.829
$Adjacent_{ij}$	0.087	0.201	2.176
Bai	−265.726	342.161	3.902
Buyi	632.081	734.375	6.337
Dai	−16370.263	5133.512[a]	3.085
Daur	2591.335	968.310[a]	1.168
Dong	157.650	87.212[c]	2.002
Dongxiang	1188.605	402.562[a]	1.707
Gelao	−3560.112	4361.579	5.925
Han	−1.462	0.363[a]	3.351
Hani	−1333.259	8917.799	5.583
Hui	12.977	6.610[b]	1.492
Jingpo	58569.747	33647.494[c]	2.048
Kazak	−7360.507	3106.760[b]	6.439
Kirgiz	4312.912	2560.362[c]	5.138
Korean	−104.386	105.163	1.697
Lahu	62076.007	27479.538[b]	5.361
Li	−230.772	267.051	1.101
Lisu	4720.585	7208.820	4.082
Manchu	53.390	17.787[a]	2.063
Miao	−8.304	34.847	4.848
Mongol	112.320	36.450[a]	1.491
Naxi	−3290.571	8397.319	2.406
Qiang	28800.598	11888.284[b]	2.449
She	493.943	247.431[b]	1.267
Shui	−1416.603	2558.354	2.698
Tibetan	13.845	4.513[a]	1.227
Tu	−881.422	929.877	1.683
Tujia	−16.134	14.245	1.778
Uyghur	2626.353	1984.043	1.522
Va	−44560.824	11534.513[a]	4.851
Xibe	−62.065	669.836	1.191
Yao	62.694	102.244	1.946
Yi	9.777	40.396	3.615
Zhuang	84.596	43.125[b]	1.687

Table 4.4 (continued)

Explanatory variable	Coefficient	SE	VIF
Coefficient of correlation (R^2)		0.699	
SE of regression		1.008	
F-statistic		26.039	
Sig of regression		0.000	
Number of observations		451	

Notes The regression is done by ordinary least squares (OLS) method. Dependent variable is the natural log of interprovincial trade in 2000 and 2010. *SE* standard error; *VIF* variance inflation factor. (2000) The "Buyi", "Maonan", "Mulao", "Naxi" and "Salar" variables with VIFs above 10 are omitted from the regression. "a", "b" and "c" denote statistically significant at greater than the 1, 5 and 10 % levels, respectively. (2010) The "Blang", "Maonan", "Mulao", and "Salar" variables with VIFs above 10 are omitted from the regression. "a", "b" and "c" denote statistically significant at greater than the 1, 5 and 10 % levels, respectively

Table 4.5 Ethnic influences on interprovincial trade, by ethnic group (%)

Ethnic group	Minimum		Maximum		Mean	
	2000	2010	2000	2010	2000	2010
Bai	−0.431[a]	−0.103	−99.711[a]	−75.275	−5.650[a]	−1.381
Blang	0.000[c]	NA	−100.000[c]	NA	−9.882[c]	NA
Buyi	NA	0.662	NA	331.313	NA	4.364
Dai	−4.899[c]	−3.195[a]	−93.793[c]	−83.418[a]	−27.036[c]	−18.435[a]
Daur	0.087[b]	0.154[a]	363.840[b]	1424.279[a]	1.192[b]	2.126[a]
Dong	0.048	0.084[c]	220.771	677.967[c]	1.156	2.043[c]
Dongxiang	0.047[a]	0.044[a]	3653.127[a]	2772.134[a]	2.254[a]	2.086[a]
Gelao	4.236[b]	−0.833	32029.822[b]	−68.762	29.987[b]	−5.149
Han	−10.066[a]	−11.263[a]	−72.561[a]	−76.697[a]	−62.248[a]	−66.619[a]
Hani	−6.863[b]	−0.353	−97.551[b]	−16.846	−24.64[b]	−1.397
Hui	0.194[b]	0.260[b]	322.947[b]	584.975[b]	3.528[b]	4.734[b]
Jingpo	0.000[a]	0.000[c]	40969.594[a]	166.827[c]	86.661[a]	10.715[c]
Kazak	−3.537	−3.120[b]	−99.745	−99.479[b]	−18.791	−16.742[b]
Kirgiz	−0.093	0.025[c]	−100.000	4600.21[c]	−4.747	1.323[c]
Korean	−0.045	−0.090	−35.635	−59.062	−0.682	−1.377
Lahu	0.228	1.798[b]	27.439	565.102[b]	2.889	24.929[b]
Li	−17.678[a]	−0.200	–	−59.901	−53.571[a]	−0.786
Lisu	0.549	0.406	434.249	244.712	3.875	2.847
Manchu	0.569[a]	0.594[a]	403.131[a]	439.185[a]	5.832[a]	6.090[a]
Maonan	NA	NA	NA	NA	NA	NA
Miao	0.345[b]	−0.038	950.438[b]	−22.927	6.858[b]	−0.732
Mongol	0.133	0.532[a]	64.612	633.387[a]	1.582	6.475[a]
Mulao	NA	NA	NA	NA	NA	NA
Naxi	NA	−0.168	NA	−71.143	NA	−1.429
Qiang	−0.710	2.589[b]	−31.459	287.346[b]	−5.510	22.531[b]

(continued)

Table 4.5 (continued)

Ethnic group	Minimum		Maximum		Mean	
	2000	2010	2000	2010	2000	2010
Salar	NA	NA	NA	NA	NA	NA
She	−0.001	0.105[b]	−1.507	352.347[b]	−0.018	1.835[b]
Shui	0.017	−0.119	6.243	−34.121	0.231	−1.577
Tibetan	0.073	0.021[a]	–	2847.607[a]	3.858	1.115[a]
Tu	−0.162	−0.232	−52.399	−65.384	−1.730	−2.463
Tujia	−0.129[b]	−0.089	−62.546[b]	−49.297	−1.825[b]	−1.265
Uyghur	1.314	3.184	47.554	154.481	3.956	9.763
Va	1.174	−7.173[a]	50.770	−92.714[a]	8.012	−38.840[a]
Xibe	−0.001	−0.011	−1.091	−9.325	−0.009	−0.082
Yao	−0.038	0.051	−39.856	97.497	−0.522	0.702
Yi	0.081	0.018	314.109	37.910	1.158	0.261
Zhuang	0.080	0.458[b]	48.050	836.251[b]	0.454	2.614[b]

Notes Figures in each row are calculated based on Tables 4.2 and 4.4 (detailed calculation process is defined in the text). They represent percentages by which provinces that are linked by the left-side ethnic group would increase (or decrease if the figures are negative) bilateral trade as opposed to those that are not linked by the same ethnic group. *NA* is not available for ethnic variables that are omitted from the regressions in Table 4.4. "–" denotes that figures cannot be derived since the data reported in Table 4.2 are excluded from the regression reported in Table 4.4. "a", "b", and "c" denote that figures are based on coefficients that are statistically significant at greater than the 1, 5, and 10 % levels, respectively

Table 4.6 Regression for interprovincial trade-ethnicity as nonlinear variables, 2000 and 2010

Explanatory variable	Coefficient	SE	VIF
2000			
Constant	9.096	0.896[a]	
$\ln(GDP_iGDP_j)$	0.724	0.049[a]	2.703
$\ln(DISTANCE_{ij})$	−1.220	0.093[a]	2.597
$Adjacent_{ij}$	0.285	0.149[b]	2.183
$\ln(GDPPC_iGDPPC_j)Ethnic56_{ij}$	−0.087	0.017[a]	2.747
Bai	−1043.873	377.405[a]	9.681
Blang	−156376.962	82334.27[b]	2.624
Buyi	−479.532	1232.347	8.338
Dai	−29622.302	15015.58[b]	6.894
Daur	1461.096	653.743[b]	1.324
Dong	61.092	69.215	2.500
Dongxiang	1327.445	485.050[a]	4.511
Gelao	17938.606	10024.476[c]	8.759
Hani	−25805.959	11811.008[b]	3.955
Hui	10.300	4.707[b]	1.582
Jingpo	381356.119	83737.313[a]	3.484

(continued)

Table 4.6 (continued)

Explanatory variable	Coefficient	SE	VIF
Kazak	−8706.316	11471.360	7.667
Kirgiz	−20077.795	19489.611	1.274
Korean	−55.645	69.639	1.764
Lahu	13928.307	34171.524	4.536
Li	−24338.588	8912.331[a]	3.925
Lisu	6938.655	6270.095	4.048
Manchu	51.314	11.137[a]	2.133
Maonan	1300.350	1140.108	1.936
Miao	76.241	34.190[b]	7.428
Mongol	27.886	25.852	1.577
Qiang	−9344.785	16336.634	2.304
She	10.181	151.928	1.142
Tibetan	51.286	34.997	1.865
Tu	−603.635	1044.716	3.179
Tujia	−19.055	11.507[c]	2.234
Uyghur	−542.286	2241.309	1.470
Va	8460.306	13444.415	3.390
Xibe	−67.759	408.801	1.190
Yao	−31.027	77.674	2.116
Yi	53.539	37.494	4.779
Zhuang	27.264	34.207	1.813
Coefficient of correlation (R^2)	0.745		
SE of regression	0.725		
F-statistic	29.877		
Sig.of regression	0.000		
Number of observations	405		
2010			
Constant	7.893	1.433[a]	
$\ln(GDP_i GDP_j)$	0.852	0.071[a]	3.313
$\ln(DISTANCE_{ij})$	−1.391	0.137[a]	2.830
$ADJACENT_{ij}$	0.361	0.216[c]	2.133
$\ln(GDPPC_i GDPPC_j)$	−0.115	0.019[a]	3.408
$ETHNIC56_{ij}$			
Bai	−852.609	365.675[b]	3.774
Blang	−15049.321	8101.364[c]	1.484
Buyi	2162.286	812.611[a]	6.571
Dai	−14120.100	5578.333[a]	3.085
Daur	1979.042	1049.567[c]	1.162
Dong	35.859	100.950	2.272
Dongxiang	1453.097	459.453[a]	1.883
Gelao	−10982.303	4742.520[b]	5.932

(continued)

Table 4.6 (continued)

Explanatory variable	Coefficient	SE	VIF
Hani	6180.082	9703.332	5.597
Hui	16.204	7.192[b]	1.496
Jingpo	73328.024	36594.619[b]	2.051
Kazak	−4504.447	3257.443	5.995
Kirgiz	1915.167	2715.880	4.895
Korean	−163.609	114.056	1.690
Lahu	45512.270	29790.704	5.335
Li	−224.571	290.145	1.101
Lisu	−7684.539	7695.459	3.940
Manchu	38.324	19.250b	2.046
Maonan	5071.086	1869.775[a]	1.876
Miao	59.170	36.985[c]	4.625
Mongol	68.249	39.168[c]	1.458
Naxi	4013.692	9075.684	2.380
Qiang	−3440.074	12399.241	2.256
She	420.341	269.303	1.271
Shui	−7021.754	3219.605[b]	3.619
Tibetan	13.694	4.796[a]	1.173
Tujia	−7.173	15.752	1.841
Uyghur	−5678.266	1947.121[a]	1.242
Va	−52403.342	12530.668[a]	4.848
Xibe	−287.616	727.727	1.190
Yao	85.332	111.853	1.973
Yi	98.013	42.656[b]	3.413
Zhuang	100.583	47.247[b]	1.714
Coefficient of correlation (R^2)	0.645		
SE of regression	1.095		
F-statistic	20.337		
Sig of regression	0.000		
Number of observations	451		

Notes The regression is done by ordinary least squares (OLS) method. Dependent variable is the natural log of interprovincial trade in 2000 and 2010. *SE* standard error; *VIF* variance inflation factor. (2000) The "Han", "Mulao", "Naxi", "Salar", and "Shui" variables with VIFs above 10 are omitted from the regression. "a", "b", and "c" denote statistically significant at greater than the 1, 5, and 10 % levels, respectively. (2010) The "Han", "Mulao", "Salar", and "Tu" variables with VIFs above 9 are omitted from the regression. "a", "b", and "c" denote statistically significant at greater than the 1, 5, and 10 % levels, respectively

played different roles in the promotion of interprovincial trade. To go further, we run Eq. (4.2) and obtain the estimated coefficients on a group of ethnic variables. The estimated results shown in Table 4.4 (for 2000 and 2010) are derived by excluding the variables whose VIFs (variance inflation factors) exceed 10 (a value

Fig. 4.1 Partial correlations between trade and ethnic linkage, 2000 and 2010
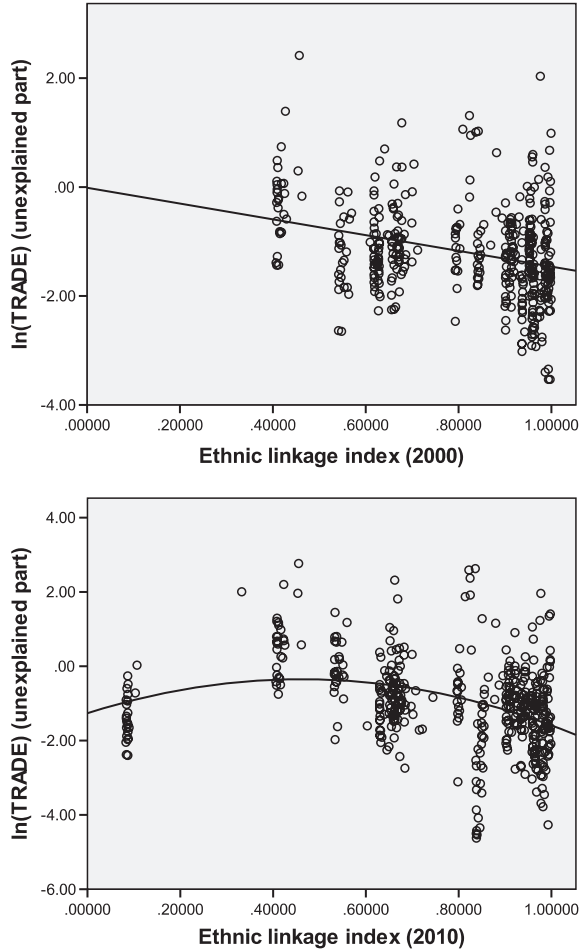
that is often regarded as indicating multicollinearity). These results, compared with those shown in Tables 4.3 (for 2000 and 2010), can help us to better explain the diverse ethnic influences on interprovincial trade:

- As for 2000, the estimated coefficients on 14 ethnic variables (Bai, Blang, Dai, Daur, Dongxiang, Gelao, Han, Hani, Hui, Jingpo, Li, Manchu, Miao, and Tujia) are statistically significant (see Table 4.4). Specifically, seven ethnic groups (Daur, Dongxiang, Gelao, Hui, Jingpo, Manchu, and Miao) have positive effects while seven others (Bai, Blang, Dai, Han, Hani, Li, and Tujia) have negative effects on interprovincial trade.
- As for 2010, the estimated coefficients on 17 ethnic variables (Dai, Daur, Dong, Dongxiang, Han, Hui, Jingpo, Kazak, Kirgiz, Lahu, Manchu, Mongol, Qiang, She, Tibetan, Va, and Zhuang) are statistically significant (see Table 4.4). Specifically, 13 ethnic groups (Daur, Dong, Dongxiang, Hui, Jingpo, Kirgiz, Lahu, Manchu,

Mongol, Qiang, She, Tibetan, and Zhuang) have positive effects while four others (Dai, Han, Kazak, and Va) have negative effects on interprovincial trade.

It is noteworthy that the fact that there are less ethnic groups with negative influences on interprovincial trade than those with positive influences does not contradict the negative coefficients on ETHNIC56 shown in Tables 4.3 (for 2000 and 2010). This may stem from the fact that the Han majority whose estimated coefficients are negative for both 2000 and 2010 (see Table 4.4) has a much larger weight than any other ethnic minorities.

Using the estimated coefficients reported in Table 4.4 (for 2000 and 2010), we may calculate each ethnic group's contributions to interprovincial trade (the results are reported in Table 4.5). Let us take the Hui ethnic group as an example. Since the estimated coefficient on the Hui is 12.977 (statistically significant at greater than the 5 % level) in Table 4.4 and the interprovincial linkage indexes of the Hui are 0.00020 (minimum value), 0.14827 (maximum value), and 0.00356 (mean value) in Table 4.2, Hui's contributions to interprovincial trade would range from 0.260 % (i.e., $\exp(12.977 \times 0.00020)/\exp(12.977 \times 0.00000)-1$) to 584.975 % (i.e., $\exp(12.977 \times 0.14827)/\exp(12.977 \times 0.00000)-1$), with the mean of 4.734 % (i.e., $\exp(12.977 \times 0.00356)/\exp(12.977 \times 0.00000)-1$)th the mean of 4.734 % (i.e., $\exp(12.977 \times 0.00356)/\exp(12.977 \times 0.00000)-1$).

In other words, compared with those that are not linked by the Hui group, provinces with Hui links would increase their bilateral trade by 4.734 % (mean level) in 2010. Using the mean values reported in Table 4.5, we observe that, from 2000 to 2010[14]:

- Three ethnic groups (Daur, Han, and Hui) have *increased* their influences-either positive or negative-on interprovincial trade.
- Three ethnic groups (Dai, Dongxiang, and Jingpo) have *reduced* their influences-either positive or negative-on interprovincial trade.
- Ten ethnic groups (Dong, Kazak, Kirgiz, Lahu, Mongol, Qiang, She, Tibetan, Va, and Zhuang) have *increased* their statistical significance.
- Six ethnic groups (Bai, Gelao, Hani, Li, Miao, and Tujia) have *reduced* their statistical significance.

4.4.3 Focusing Tibetans

It must be noted that the estimated coefficients on Mongol, Tibetan, and Uyghur-three important ethnic minorities in China-are statistically insignificant in Table 4.4. This result may indicate that the three ethnic minorities did not exert any significant

---

[14]Note that since their max values are not available, the mean values of the Li and Tibetan groups should be slightly smaller than those reported in Table 4.5. However, this will not affect the analytical results below. In addition, since we have excluded, for purpose of overcoming the problems with multicollinearity, six ethnic groups (Blang, Buyi, Maonan, Mulao, Naxi, and Salar) from the regressions (shown in Table 4.4), we are not able to identify how these ethnic groups have changed their influences on interprovincial trade during the period from 2000 to 2010.

influences on China's interprovincial trade in 2000. Yet, there may be other reasons. For example, in China's Fifth National Population Census conducted in November 2000, since "floating" populations were not counted according to their current residences, this could affect the final estimated coefficients (remember that the "floating" populations may sometimes play more important roles in interprovincial marketing and trade than permanent residents). Since the ultimate reason(s) leading to the statistically insignificantly estimated coefficients on Mongol, Tibetan, and Uyghur is (are) still unclear, one must be very careful when he or she intends to analyze the changes of ethnic influences on interprovincial trade from 2000 to 2010.

In Sect. 4.2, Eqs. (4.1) and (4.2) each only provide partial information about ethnic influences on trade. In order to provide a complete picture for relationship between ethnic linkages and interprovincial trade, let us run Eq. (4.3). The estimated results are reported in Table 4.6 (for 2000 and 2010). As for 2000, only 13 ethnic groups (Bai, Blang, Dai, Daur, Dongxiang, Gelao, Hani, Hui, Jingpo, Li, Manchu, Miao, and Tujia) are statistically significantly estimated in Table 4.6, as compared with 14 ethnic groups in Table 4.4. It is noteworthy that the estimated coefficients on Mongol, Tibetan, and Uyghur-three important ethnic minorities in China-are statistically insignificant in both Tables 4.4 and Table 4.6.

However, our 2010's estimated results shown Table 4.6 seem to be more ideal than those shown in Table 4.4. The main reason may be twofold: First, 19 ethnic variables and the ADJACENT variable are statistically significantly estimated in Table 4.6, while only 17 ethnic variables are statistically significantly estimated and that the ADJACENT variable is statistically insignificantly estimated in Table 4.4; secondly, given that the two regressions have very similar model significances, the regression shown in Table 4.6 includes more statistical information about ethnic variables than the one shown in Table 4.4.

Using the statistically significantly estimated coefficients shown in Table 4.6, we observe that, in 2010:

- For seven ethnic groups (Bai, Blang, Dai, Gelao, Shui, Uyghur, and Va), the negative effects of ethnic linkages on interprovincial trade tend to increase with respect to the increase of per capita GDPs of the provinces concerned.
- For 12 ethnic groups (Buyi, Daur, Dongxiang, Hui, Jingpo, Manchu, Maonan, Miao, Mongol, Tibetan, Yi, and Zhuang), the positive effects of ethnic linkages on interprovincial trade tend to decrease with respect to the increase of per capita GDPs of the provinces concerned.

As for the first case, since the negative effects on interprovincial trade follow an increasing marginal law (with respect to the provincial economic development), the Uyghur and six other ethnic groups will increasingly contribute to the making of China's spatial economic disintegration. As for the second case, since all the threshold values (represented by $-\beta_k/\alpha_4$ in Eq. (4.4), where $k = 3, 5, 7, 11, 12, 19, 20, 21, 22, 29, 36$ and 37) are much greater than the maximum value of $\ln(\text{GDPPC}_i\text{GDPPC}_j)$ (i.e., 22.40275, which is shown in Table 4.2), it is unlikely that all the Tibetan and 11 other ethnic groups would exert negative influences on

interprovincial trade.[15] In other words, even though their positive effects on interprovincial trade follow a diminishing marginal law, these ethnic groups will, ceteris paribus, continue to contribute to the making of China's spatial economic integration in the future.

4.5 Analytical Implications

Although there has been a growing concern about the role of culture in international economic analyses, few quantitative studies have been conducted for intranational cases. The Chinese economy is far too huge and spatially complicated and culturally diversified to be misinterpreted. Most of China's 31 provinces are the average size and scale of a European country in population and land area. Yet, many still are considerable political and cultural systems in their own right. During the past decades, along with the gradual reform in the decentralization of authority (that is, transferring economic management and decision making from the central government to provincial and local governments), China's interprovincial relations have been transformed accordingly. Naturally, the examination of the driving forces to the causes and consequences of interprovincial economic (dis) integration in China is an important taskforce not only to economists but also to policymakers who have concerns about their internal spatial economic efficiencies.

It has been suggested that overseas ethnic Chinese (mainly encompassing the Han ethnic Chinese) networks play an important role in international trade. Rauch and Trindade (2002), for example, find that ethnic Chinese networks have a quantitatively important impact on bilateral trade through the mechanisms of market information and matching and referral services, in addition to their effect through community enforcement of sanctions that deter opportunistic behavior. Their estimated results show that for trade between countries with ethnic Chinese population shares at the levels prevailing in Southeast Asia, the smallest estimated average increase in bilateral trade in differentiated products attributable to ethnic Chinese networks is nearly 60 %.

However, in this chapter, we have not found any evidence that supports that the Han majority has played positive roles in China's interprovincial trade. It is impossible for us to provide more detailed evidence here. But we believe that our negative coefficients on the Han (see Table 4.4) stem from the very fact that the Han majority accounts for more than 90 % of China's total population (more than 1.3 billion). A large population per se also implies a great degree of diversity or dissimilarity of its members among the provinces concerned. As a result, a common standard cannot be fully realized among different provinces' Han people. In addition, since the estimated coefficients on the ETHNIC56 variable are negative

---

[15]For example, the threshold value for the Tibetan group is $\ln(\text{GDPPC}_i\text{GDPPC}_j)^* = -\beta_k/\alpha_4 = -13.694/(-0.115) = 119.078$, indicating that the positive effect of the Tibetan linkage on interprovincial trade will not reverse until the geometric mean of per capita GDP of two trading provinces reaches 7.20304×10^{25} yuan!.

(see Table 4.3), we can only but conclude that all the 56 ethnic groups as a whole have a negative effect on China's interprovincial trade (although this kind of effect has slightly been reduced from 2000 to 2010). Nevertheless, from Tables 4.4 and 4.5 one may find both negative and positive effects for the ethnic influences on China's interprovincial economic cooperation or integration.

It is quite difficult for us to judge which one of the 2000's estimated results reported in Tables 4.4 and 6a is better in statistics. However, as for the year 2010, our estimated coefficients shown in Table 4.6 seem to be more ideal than those shown in Table 4.4 (reasons have been discussed in Sect. 4.4). If the results shown in Table 4.6 are correct, we may conclude that seven ethnic groups (Bai, Blang, Dai, Gelao, Shui, Uyghur, and Va) tend to play growing roles in the possible making of China's interprovincial economic disintegration and that 12 ethnic groups (Buyi, Daur, Dongxiang, Hui, Jingpo, Manchu, Maonan, Miao, Mongol, Tibetan, Yi, and Zhuang) tend to play positive roles in the making of China's spatial economic integration, even though the effects follow a diminishing marginal law.

Among the above-mentioned ethnic minorities, the Uyghur (a true ethnic majority in Xinjiang) and Tibetan (a true ethnic majority in Tibet) groups are noteworthy. During the past decades, these two ethnic groups have been labeled as of "problematic" in China. Furthermore, there have been Uyghur and Tibetan exiles seeking the separations of Xinjiang and Tibet from China, respectively. However, the Uyghurs (with a negative coefficient) and the Tibetans (with a positive coefficient) are found to play different roles in China's interprovincial economic integration. We will present more detailed analyses of these issues in Chapter 5.

Even though we have constructed 56 ethnic groups into an explanatory variable in this chapter, we have only estimated China's 37 ethnic groups (each with a population of more than 100,000) as individual ethnic variables. Therefore, we cannot clarify if or how the other small ethnic minorities have influenced China's interprovincial economic activities. For the purpose of overcoming the problems with multicollinearity, we have also excluded a few of other ethnic groups from some regressions in this chapter. Consequently, we are not able to identify the roles that these ethnic groups have played in interprovincial trade. But we will continue to pursue this research by either exploring new analytical techniques or incorporating more explanatory variables.

Annex

A.1 China's Ethnic Profile[16]

1 Achang (395,550 persons)
   Five major host provinces: Yunnan, Guangdong, Henan, Shandong, and Jiangsu
   Language(s): Achang; *Religion(s)*: Buddhism

---

[16]*Source*: The Sixth (2010) National Population Census of the PRC for the population of each ethnic group and author for the other indicators.

2   Bai (1,933,510 persons)
    Five major host provinces: Yunnan, Guizhou, Hunan, Guangdong, and Zhejiang
    Language(s): Bai, most also speak Chinese; *Religion(s)*: Animism

3   Baonan (20,070 persons)
    Five major host provinces: Gansu, Qinghai, Xinjiang, Inner Mongolia, and Yunnan
    Language(s): Baonan, Chinese (spoken and written); *Religion(s)*: Islam

4   Blang (119,640 persons)
    Five major host provinces: Yunnan, Guangdong, Shandong, Zhejiang, and Chongqing
Language(s): Blang, Dai; *Religion(s)*: Buddhism

5   Buyi (2,870,030 persons)
    Five major host provinces: Guizhou, Zhejiang, Guangdong, Yunnan, and Fujian
Language(s): Dai; *Religion(s)*: Buddhism

6   Dai (1,261,310 persons)
    Five major host provinces: Yunnan, Sichuan, Guangdong, Zhejiang, and Shandong
    Language(s): Dai, most also speak Chinese; *Religion(s)*: Buddhism

7   Daur (131,990 persons)
Five major host provinces: Inner Mongolia, Heilongjiang, Xinjiang, Beijing, and Liaoning
    Language(s): Daur (spoken), Chinese (written); *Religion(s)*: Lamaism

8   Deang (20,560 persons)
    Five major host provinces: Yunnan, Guangdong, Shandong, Zhejiang, and Sichuan
    Language(s): Deang; *Religion(s)*: Buddhism

9   Derung (6,930 persons)
    Five major host provinces: Yunnan, Guizhou, Henan, Guangdong, and Sichuan
    Language(s): Derung; *Religion(s)*: NA

10 Dong (2,879,970 persons)
    Five major host provinces: Guizhou, Hunan, Guangxi, Zhejiang, and Guangdong
    Language(s): Dong, Chinese; *Religion(s)*: animism

11 Dongxiang (621,500 persons)
    Five major host provinces: Gansu, Xinjiang, Qinghai, Ningxia, and Guizhou
    Language(s): Dongxiang, most also speak Chinese; *Religion(s)*: Islam

12 Ewenki (30,880 persons)
    Five major host provinces: Inner Mongolia, Heilongjiang, Liaoning, Beijing, and Shandong
    Language(s): Ewenki (spoken), Mongolian (written), Chinese (written); *Religion(s)*: shamanism

13 Gaoshan (4,010 persons)
    Five major host provinces: Henan, Fujian, Guangxi, Liaoning, and Hebei
    Language(s): Gaoshan (spoken), Chinese; *Religion(s)*: NA

14 Gelao (550,750 persons)
    Five major host provinces: Guizhou, Zhejiang, Guangdong, Guangxi, and Yunnan
    Language(s): Gelao, Chinese; *Religion(s)*: Islam

15 Han (1,220,844,520 persons)
    Five major host provinces: Guangdong, Shandong, Henan, Jiangsu, and Sichuan
    Language(s): Mandarin,; *Religion(s)*: individual choice
16 Hani (1,660,930 persons)
    Five major host provinces: Yunnan, Guangdong, Zhejiang, Shanghai, and Shandong
    Language(s): Hani; *Religion(s)*: animism
17 Hezhe (5,350 persons)
    Five major host provinces: Heilongjiang, Guangdong, Jilin, Beijing, and Liaoning
    Language(s): Hezhe (spoken), Chinese; *Religion(s)*: NA
18 Hui (10,586,090 persons)
    Five major host provinces: Ningxia, Gansu, Xinjiang, Henan, and Qinghai
    Language(s): Chinese; *Religion(s)*: Islam
19 Jing (28,200 persons)
    Five major host provinces: Guangxi, Guizhou, Yunnan, Guangdong, and Jiangxi
    Language(s): Jing, Chinese (spoken and written); *Religion(s)*: NA
20 Jingpo (147,830 persons)
    Five major host provinces: Yunnan, Guangdong, Shandong, Guizhou, and Jilin
    Language(s): Jingpo; *Religion(s)*: animism
21 Jino (23,140 persons)
    Five major host provinces: Yunnan, Sichuan, Chongqing, Guangdong, and Jiangsu
    Language(s): Jino; *Religion(s)*: NA
22 Kazak (1,462,590 persons)
    Five major host provinces: Xinjiang, Henan, Guangdong, Gansu, and Hunan
    Language(s): Kazaki; *Religion(s)*: Islam
23 Kirgiz (186,710 persons)
    Five major host provinces: Xinjiang, Tibet, Heilongjiang, Guangdong, and Zhejiang
    Language(s): Kirgiz, Uygur (written), Kazaki (written); *Religion(s)*: Islam, Lamaism
24 Korean (1,830,930 persons)
    Five major host provinces: Jilin, Heilongjiang, Liaoning, Shandong, and Beijing
    Language(s): Korean, Chinese; *Religion(s)*: individual choice
25 Lahu (485,970 persons)
    Five major host provinces: Yunnan, Shandong, Zhejiang, Guangdong, and Jiangsu
    Language(s): Lahu; *Religion(s)*: animism
26 Lhoba (3,680 persons)
    Five major host provinces: Tibet, Guizhou, Fujian, Beijing, and Liaoning
    Language(s): Lhoba (spoken); *Religion(s)*: Lamaism

27 Li (1,463,060 persons)
    Five major host provinces: Hainan, Guizhou, Guangdong, Zhejiang, and Guangxi
    Language(s): Li, some also speak Chinese; *Religion(s)*: animism
28 Lisu (702,840 persons)
    Five major host provinces: Yunnan, Sichuan, Hebei, Shandong, and Guangdong
    Language(s): Lisu; *Religion(s)*: NA
29 Manchu (10,387,960 persons)
    Five major host provinces: Liaoning, Hebei, Jilin, Heilongjiang, and Inner Mongolia
    Language(s): most speak Chinese; a small portion speak Manchu; *Religion(s)*: individual choice
30 Maonan (101,190 persons)
    Five major host provinces: Guangxi, Guizhou, Guangdong, Zhejiang, and Fujian
    Language(s): Maonan, Zhuang, Chinese (written); *Religion(s)*: Islam
31 Miao (9,426,010 persons)
    Five major host provinces: Guizhou, Hunan, Yunnan, Chongqing, and Guangxi
    Language(s): Miao; the majority also assimilated into Chinese language; *Religion(s)*: animism
32 Monba (10,560 persons)
    Five major host provinces: Tibet, Jiangsu, Gansu, Jiangxi, and Guangxi
    Language(s): Monba, Tibetan; *Religion(s)*: Lamaism
33 Mongol (5,981,840 persons)
    Five major host provinces: Inner Mongolia, Liaoning, Hebei, Xinjiang, and Jilin
    Language(s): Mongolian, Mandarin; *Religion(s)*: Lamaism
34 Mulam (216,260 persons)
    Five major host provinces: Guangxi, Guizhou, Guangdong, Zhejiang, and Hunan
    Language(s): Mulam and Zhuang (spoken), Chinese (written); *Religion(s)*: Lamaism
35 Naxi (326,300 persons)
    Five major host provinces: Yunnan, Sichuan, Tibet, Zhejiang, and Beijing
    Language(s): Naxi, most also speak Chinese; *Religion(s)*: Dongba
36 Nu (37,520 persons)
    Five major host provinces: Yunnan, Hainan, Guangdong, Tibet, and Shandong
    Language(s): Nu; *Religion(s)*: NA
37 Oroqen (8,660 persons)
    Five major host provinces: Heilongjiang, Inner Mongolia, Liaoning, Beijing, and Hebei
    Language(s): Oroqen (spoken), Chinese (written); *Religion(s)*: shamanism
38 Pumi (42,860 persons)
    Five major host provinces: Yunnan, Sichuan, Guangdong, Shandong, and Chongqing
    Language(s): Pumi; *Religion(s)*: NA

39 Qiang (309,580 persons)
Five major host provinces: Sichuan, Guangdong, Guizhou, Zhejiang, and Jiangsu
Language(s): Qiang (spoken); *Religion(s)*: Lamaism

40 Russian (15,390 persons)
Five major host provinces: Xinjiang, Inner Mongolia, Beijing, Heilongjiang, and Shanghai
Language(s): Russian; *Religion(s)*: Eastern Orthodox

41 Salar (130,610 persons)
Five major host provinces: Qinghai, Gansu, Xinjiang, Shanghai, and Guangdong
Language(s): Salar (spoken), Chinese (spoken and written); *Religion(s)*: Islam

42 She (708,650 persons)
Five major host provinces: Fujian, Zhejiang, Jiangxi, Guizhou, and Guangdong
Language(s): Chinese; *Religion(s)*: animism

43 Shui (411,850 persons)
Five major host provinces: Guizhou, Guangxi, Jiangsu, Zhejiang, and Yunnan
Language(s): Shui, most also speak Chinese; *Religion(s)*: animism

44 Tajik (51,070 persons)
Five major host provinces: Xinjiang, Zhejiang, Guangdong, Jiangxi, and Shandong
Language(s): Tajik (spoken), Uygur; *Religion(s)*: Islam

45 Tatar (3,560 persons)
Five major host provinces: Xinjiang, Guangdong, Guangxi, Beijing, and Jiangsu
Language(s): Tatar, Uygur, Kazaki; *Religion(s)*: Islam

46 Tibetan (6,282,190 persons)
Five major host provinces: Tibet, Sichuan, Qinghai, Gansu, and Yunnan
Language(s): Tibetan; *Religion(s)*: Lamaism

47 Tu (289,570 persons)
Five major host provinces: Qinghai, Gansu, Guangdong, Yunnan, and Guizhou
Language(s): Tu, Chinese; *Religion(s)*: Lamaism

48 Tujia (8,353,910 persons)
Five major host provinces: Hunan, Hubei, Guizhou, Chongqing, and Zhejiang
Language(s): Tujia, most also speak Chinese; *Religion(s)*: animism

49 Uyghur (10,069,350 persons)
Five major host provinces: Xinjiang, Beijing, Hunan, Guangdong, and Zhejiang
Language(s): Uygur; *Religion(s)*: Islam

50 Uzbek (5,670 persons)
Five major host provinces: Xinjiang, Zhejiang, Guangdong, Beijing, and Hunan
Language(s): Uzbek, Uygur, Kazaki; *Religion(s)*: Islam

51 Va (429,710 persons)
Five major host provinces: Yunnan, Shandong, Guangdong, Zhejiang, and Henan
Language(s): Va; *Religion(s)*: animism

52 Xibe (190,480 persons)
Five major host provinces: Liaoning, Xinjiang, Heilongjiang, Jilin, and Inner Mongolia
Language(s): Xibe; *Religion(s)*: Islam

53   Yao (2,796,000 persons)
     Five major host provinces: Guangxi, Hunan, Guangdong, Yunnan, and Guizhou
     Language(s): Yao, most also speak Chinese; *Religion(s)*: animism
54   Yi (8,714,390 persons)
     Five major host provinces: Yunnan, Sichuan, Guizhou, Zhejiang, and Guangdong
     Language(s): Yi (spoken), males also speak and write Chinese; *Religion(s)*: animism
55   Yugur (14,380 persons)
     Five major host provinces: Gansu, Xinjiang, Qinghai, Beijing, and Shandong
     Language(s): Yugur, Chinese (spoken and written); *Religion(s)*: Lamaism
56   Zhuang (16,926,380 persons)
     Five major host provinces: Guangxi, Yunnan, Guangdong, Zhejiang, and Guizhou
     Language(s): Zhuang (spoken), most also speak and write Chinese; *Religion(s)*: animism

A.2 Notes to the Regressions

Equations (4.1), (4.2) and (4.3) can be estimated by using standard statistical techniques. If the equations include variables that may be strongly correlated with each other, then additional regressions should be pursued by excluding the variables that are found to have the potential impacts of multicollinearity. Because this chapter employs cross-sectional data, it is also necessary to conduct tests for heteroscedasticity, even though taking logs of the dependent and explanatory variables can be quite effective at reducing heteroscedasticity and usually does not have adverse affects on interpretation or specification. More specifically, while ordinary least squares (OLS)-estimated coefficients are biased, weighed least squares (WLS) estimation should be used to provide more efficient results in terms of smaller coefficient standard errors (Greene 2002, p. 499). After each OLS run, heteroscedasticity tests are performed for each individual regression model. If heteroscedasticity is significant, WLS estimation should be performed to correct this problem.

In order to overcome the problems with multicollinearity, we have omitted a number of ethnic groups from our regressions. These include the Buyi, the Maonan, the Mulao, the Naxi, and the Salar in Table 4.4, the Blang, the Maonan, the Mulao, and the Salar in Table 4.4, the Han, the Mulao, the Naxi, the Salar, and the Shui in Table 4.6, and the Han, the Mulao, the Salar, and the Tu in Table 4.6. The general rule of thumb is that VIF (variance inflation factor) values exceeding 4 warrant further investigation, while VIFs exceeding 10 are signs of serious multicollinearity requiring correction (Simon 2004).

In weaker models, especially in those that are not supported by large sets of data, VIFs above 2.5 may also merit further investigation (Berry and Feldman

1985, p. 49; Arceneaux and Huber 2007). In this chapter, we have re-run all the regressions by omitting the explanatory variables with VIFs exceeding 4 (the estimated results are not reported here). But we have found that the estimated results are quite stable after the variables with VIFs exceeding 10 (for Tables 4.4 and 4.6) or 9 (for Table 4.6) are omitted from the regressions. Thus, even though the variables with VIFs exceeding 4 are included, the estimated coefficients reported in this chapter are not affected by multicollinearity.

In the Sixth National Population Census, conducted on November 1, 2010, China adopted a different method form that employed in the Fifth National Population Census in 2000. For example, "floating" populations were not counted in 2000 (they had to be counted in their original, permanent residences); in 2010, however, these populations were counted if they had already resided in the current residences for over six months. Since these "floating" populations may sometimes play more important roles in interprovincial marketing and trade than permanent residents, the 2000s estimated results would be less convincing than the 2010s.

The data on interprovincial trade (which is the sum of export and import) are only represented by those of the freight exchange via national railways. Note that China has both national and local and privately owned railways. It should also be noted that interprovincial freight exchange via national railways only accounts a portion of the whole interprovincial freight exchange, especially in China's nearby provinces where railway is a less economical means of transportation than highway. In addition, our 2000s data on interprovincial trade do not include those of Hainan and Tibet-China's two provincial economies that are homes to the Tibetan and the Li ethnic groups, respectively. Accordingly, this could affect the quality of estimated coefficients on these two ethnic groups.

A.3 Data on Selected Interprovincial Variables, 2000 and 2010

Province-province	Distance	Ethnic links		Export		Import	
		2000	2010	2000	2010	2000	2010
Anhui-Beijing	1074	0.9636	0.9658	160	220	210	130
Anhui-Chongqing	1562	0.9366	0.9343	60	210	80	80
Anhui-Fujian	1196	0.9870	0.9828	1720	1720	380	240
Anhui-Gansu	1832	0.9190	0.9119	150	380	230	700
Anhui-Guangdong	1826	0.9864	0.9818	1200	1100	220	70
Anhui-Guangxi	2098	0.6179	0.6301	170	500	310	510
Anhui-Guizhou	2076	0.6274	0.6611	70	340	100	200
Anhui-Hainan	2448	0.8283	0.8380		10		
Anhui-Hebei	914	0.9631	0.9647	320	1050	600	600
Anhui-Heilongjiang	2227	0.9554	0.9673	160	240	430	1380

(continued)

Province-province	Distance	Ethnic links		Export		Import	
		2000	2010	2000	2010	2000	2010
Anhui-Henan	645	0.9940	0.9942	600	1090	3060	5450
Anhui-Hubei	1181	0.9585	0.9591	260	3620	560	740
Anhui-Hunan	1222	0.9012	0.9028	330	2790	150	290
Anhui-Inner Mongolia	1777	0.7984	0.8018	70	230	400	680
Anhui-Jiangsu	312	0.9960	0.9961	17170	19550	3040	6360
Anhui-Jiangxi	478	0.9944	0.9945	2150	8060	360	290
Anhui-Jilin	1985	0.9140	0.9253	190	220	320	790
Anhui-Liaoning	1650	0.8459	0.8544	320	320	670	460
Anhui-Ningxia	2002	0.6610	0.6550	10	40	60	140
Anhui-Qinghai	2048	0.5470	0.5367	30	180	90	350
Anhui-Shaanxi	1156	0.9979	0.9978	240	360	750	1700
Anhui-Shandong	613	0.9993	0.9987	980	3430	4290	5470
Anhui-Shanghai	615	0.9978	0.9926	2040	1790	580	390
Anhui-Shanxi	1145	0.9960	0.9957	150	350	3890	7480
Anhui-Sichuan	1998	0.9523	0.9414	220	900	310	400
Anhui-Tianjin	973	0.9796	0.9810	110	200	140	70
Anhui-Tibet	3863	0.0649	0.0868		80		20
Anhui-Xinjiang	3724	0.4125	0.4114	70	180	130	320
Anhui-Yunnan	3098	0.6725	0.6728	100	570	110	230
Anhui-Zhejiang	451	0.9926	0.9797	5550	8230	450	380
Beijing-Chongqing	2087	0.9377	0.9366	100	170	40	50
Beijing-Fujian	2334	0.9624	0.9668	120	50	170	80
Beijing-Gansu	1811	0.9320	0.9204	160	80	90	180
Beijing-Guangdong	2289	0.9601	0.9644	410	140	620	70
Beijing-Guangxi	2561	0.6192	0.6321	70	90	140	60
Beijing-Guizhou	2539	0.6309	0.6661	60	160	60	30
Beijing-Hainan	3088	0.8300	0.8409				
Beijing-Hebei	277	0.9867	0.9869	5180	4750	14720	12580
Beijing-Heilongjiang	1288	0.9779	0.9847	330	140	1710	1200
Beijing-Henan	689	0.9694	0.9711	520	260	550	490
Beijing-Hubei	1225	0.9598	0.9614	210	230	280	290
Beijing-Hunan	1583	0.9028	0.9053	220	120	180	190
Beijing-Inner Mongolia	667	0.8237	0.8273	540	810	3760	5530
Beijing-Jiangsu	1160	0.9603	0.9638	560	280	350	210
Beijing-Jiangxi	1449	0.9581	0.9606	160	60	70	120
Beijing-Jilin	1046	0.9365	0.9482	230	240	1010	630
Beijing-Liaoning	741	0.8691	0.8775	1290	1030	1790	1300
Beijing-Ningxia	1343	0.6775	0.6675	70	30	340	240

(continued)

(continued)

Province-province	Distance	Ethnic links		Export		Import	
		2000	2010	2000	2010	2000	2010
Beijing-Qinghai	2092	0.5633	0.5499	40	40	20	180
Beijing-Shaanxi	1159	0.9618	0.9642	410	310	170	420
Beijing-Shandong	497	0.9638	0.9667	880	850	2270	330
Beijing-Shanghai	1463	0.9631	0.9696	250	70	410	260
Beijing-Shanxi	514	0.9600	0.9618	820	840	14030	9200
Beijing-Sichuan	2042	0.9537	0.9437	300	330	310	330
Beijing-Tianjin	137	0.9838	0.9837	5180	3230	3180	3500
Beijing-Tibet	4064	0.0657	0.0877		10		
Beijing-Xinjiang	3768	0.4294	0.4253	130	200	190	450
Beijing-Yunnan	3178	0.6839	0.6828	150	110	110	90
Beijing-Zhejiang	1589	0.9596	0.9646	260	200	160	170
Chongqing-Fujian	2196	0.9380	0.9394	80	180	200	390
Chongqing-Gansu	1466	0.9137	0.9070	60	100	520	750
Chongqing-Guangdong	1670	0.9396	0.9391	800	1090	1390	2720
Chongqing-Guangxi	1338	0.6282	0.6404	1220	1610	620	2270
Chongqing-Guizhou	463	0.6801	0.7152	1200	1490	1260	3660
Chongqing-Hainan	1837	0.8361	0.8463		40		30
Chongqing-Hebei	1810	0.9367	0.9343	100	240	480	1080
Chongqing-Heilongjiang	3431	0.9365	0.9339	50	200	220	400
Chongqing-Henan	1598	0.9365	0.9339	140	320	630	1410
Chongqing-Hubei	1220	0.9766	0.9740	390	340	570	690
Chongqing-Hunan	1094	0.9581	0.9583	130	320	400	1040
Chongqing-Inner Mongolia	2081	0.7930	0.7969	20	70	80	430
Chongqing-Jiangsu	1828	0.9371	0.9357	160	340	260	360
Chongqing-Jiangxi	1579	0.9365	0.9341	40	120	150	500
Chongqing-Jilin	3185	0.9096	0.9215	20	50	120	330
Chongqing-Liaoning	2827	0.8406	0.8495	70	90	230	210
Chongqing-Ningxia	1596	0.6557	0.6503	20	20	40	170
Chongqing-Qinghai	1682	0.5418	0.5321	10	30	70	430
Chongqing-Shaanxi	747	0.9363	0.9342	120	130	340	870
Chongqing-Shandong	1956	0.9366	0.9341	160	290	280	740
Chongqing-Shanghai	2167	0.9373	0.9376	70	70	150	210
Chongqing-Shanxi	1441	0.9365	0.9339	40	70	80	700
Chongqing-Sichuan	338	0.9389	0.9372	3650	6050	2820	6240
Chongqing-Tianjin	2091	0.9371	0.9353	40	60	100	290
Chongqing-Tibet	3654	0.0621	0.0833		20		30
Chongqing-Xinjiang	3358	0.4082	0.4074	60	180	270	460

(continued)

(continued)

Province-province	Distance	Ethnic links		Export		Import	
		2000	2010	2000	2010	2000	2010
Chongqing-Yunnan	1101	0.6838	0.6849	240	620	540	1460
Chongqing-Zhejiang	2312	0.9389	0.9445	150	220	260	400
Fujian-Gansu	3065	0.9166	0.9099	130	230	200	280
Fujian-Guangdong	1588	0.9864	0.9872	380	2060	80	820
Fujian-Guangxi	1860	0.6191	0.6345	60	120	360	360
Fujian-Guizhou	1838	0.6290	0.6671	150	400	310	820
Fujian-Hainan	2374	0.8298	0.8423				10
Fujian-Hebei	1915	0.9610	0.9628	270	180	640	230
Fujian-Heilongjiang	3451	0.9552	0.9675	270	80	410	340
Fujian-Henan	1549	0.9869	0.9825	470	460	1810	2020
Fujian-Hubei	1013	0.9602	0.9645	570	490	1270	1170
Fujian-Hunan	984	0.9029	0.9084	1170	730	1440	1020
Fujian-Inner Mongolia	3303	0.7959	0.7998	90	70	180	200
Fujian-Jiangsu	1174	0.9862	0.9831	770	250	1120	570
Fujian-Jiangxi	622	0.9859	0.9819	1070	8500	3430	5500
Fujian-Jilin	3209	0.9125	0.9244	120	30	210	400
Fujian-Liaoning	2904	0.8435	0.8524	280	70	170	30
Fujian-Ningxia	3235	0.6587	0.6532	50	70	60	70
Fujian-Qinghai	3281	0.5447	0.5351	60	70	70	140
Fujian-Shaanxi	2389	0.9868	0.9826	300	620	360	120
Fujian-Shandong	1837	0.9869	0.9827	320	230	1280	670
Fujian-Shanghai	1173	0.9878	0.9875	470	440	470	200
Fujian-Shanxi	2521	0.9857	0.9810	140	100	1140	1020
Fujian-Sichuan	2805	0.9533	0.9445	390	1120	300	310
Fujian-Tianjin	2197	0.9778	0.9801	70	20	140	10
Fujian-Tibet	4887	0.0648	0.0863		20		
Fujian-Xinjiang	4957	0.4113	0.4105	210	500	200	320
Fujian-Yunnan	2477	0.6710	0.6750	260	440	280	590
Fujian-Zhejiang	972	0.9896	0.9900	2620	1800	790	1140
Gansu-Guangdong	2787	0.9138	0.9073	790	1690	350	470
Gansu-Guangxi	3059	0.6179	0.6298	100	250	70	270
Gansu-Guizhou	2139	0.6283	0.6616	130	320	40	990
Gansu-Hainan	3596	0.8284	0.8384		10		
Gansu-Hebei	1599	0.9224	0.9151	360	1590	450	470
Gansu-Heilongjiang	3099	0.9177	0.9097	80	150	190	380
Gansu-Henan	1187	0.9247	0.9173	1240	3090	930	2930
Gansu-Hubei	1723	0.9146	0.9079	490	2490	120	950
Gansu-Hunan	2081	0.9011	0.9025	320	810	150	180

(continued)

(continued)

Province-province	Distance	Ethnic links		Export		Import	
		2000	2010	2000	2010	2000	2010
Gansu-Inner Mongolia	1144	0.8026	0.8059	330	690	1270	2280
Gansu-Jiangsu	1182	0.9151	0.9083	1000	2520	750	1490
Gansu-Jiangxi	2088	0.9135	0.9066	90	440	40	80
Gansu-Jilin	2952	0.9150	0.9115	60	160	70	140
Gansu-Liaoning	2552	0.8475	0.8552	320	320	300	400
Gansu-Ningxia	468	0.7039	0.6996	670	1210	4440	7550
Gansu-Qinghai	215	0.6094	0.6031	1570	1510	1570	1930
Gansu-Shaanxi	676	0.9174	0.9107	2210	6360	720	2570
Gansu-Shandong	1853	0.9191	0.9125	360	2220	440	1560
Gansu-Shanghai	2185	0.9176	0.9108	310	1080	150	140
Gansu-Shanxi	1327	0.9156	0.9083	340	830	540	1340
Gansu-Sichuan	1172	0.9303	0.9267	2900	3310	790	720
Gansu-Tianjin	1948	0.9320	0.9212	500	610	260	1330
Gansu-Tibet	2188	0.0827	0.1067		230		20
Gansu-Xinjiang	1892	0.4570	0.4551	870	1950	9970	20340
Gansu-Yunnan	2272	0.6854	0.6857	400	490	520	660
Gansu-Zhejiang	2311	0.9135	0.9074	380	1660	170	170
Guangdong-Guangxi	1334	0.6290	0.6449	3630	12560	3880	3660
Guangdong-Guizhou	1560	0.6300	0.6657	2550	5710	4500	6730
Guangdong-Hainan	794	0.8374	0.8469		110		150
Guangdong-Hebei	2012	0.9582	0.9602	810	260	1940	800
Guangdong-Heilongjiang	2928	0.9524	0.9655	790	100	750	160
Guangdong-Henan	1600	0.9863	0.9815	1050	1060	6250	5480
Guangdong-Hubei	1064	0.9612	0.9638	1970	1300	4200	4310
Guangdong-Hunan	706	0.9062	0.9100	7170	15380	13950	10540
Guangdong-Inner Mongolia	2962	0.7932	0.7972	160	90	690	400
Guangdong-Jiangsu	1804	0.9871	0.9837	480	120	1820	590
Guangdong-Jiangxi	1022	0.9866	0.9818	1340	3080	2840	2480
Guangdong-Jilin	3341	0.9098	0.9218	310	20	560	110
Guangdong-Liaoning	3036	0.8408	0.8498	890	10	580	100
Guangdong-Ningxia	2957	0.6559	0.6505	130	110	150	420
Guangdong-Qinghai	3003	0.5420	0.5324	90	170	210	410
Guangdong-Shaanxi	2111	0.9862	0.9817	820	1220	1130	500
Guangdong-Shandong	2151	0.9864	0.9819	590	140	1720	380
Guangdong-Shanghai	1803	0.9874	0.9868	390	190	470	190
Guangdong-Shanxi	2243	0.9864	0.9815	390	290	2170	1680
Guangdong-Sichuan	2527	0.9532	0.9437	2330	6540	2090	3270

(continued)

Province-province	Distance	Ethnic links		Export		Import	
		2000	2010	2000	2010	2000	2010
Guangdong-Tianjin	2431	0.9752	0.9775	210	20	290	20
Guangdong-Tibet	4980	0.0622	0.0837		20		
Guangdong-Xinjiang	4679	0.4086	0.4078	650	970	650	1150
Guangdong-Yunnan	2199	0.6780	0.6825	3530	5950	2360	4210
Guangdong-Zhejiang	1602	0.9899	0.9878	830	260	610	310
Guangxi-Guizhou	865	0.6408	0.6522	2320	7940	10610	28410
Guangxi-Hainan	739	0.6340	0.6453		230		170
Guangxi-Hebei	2262	0.6183	0.6302	490	390	860	650
Guangxi-Heilongjiang	3855	0.6179	0.6297	100	50	350	350
Guangxi-Henan	1870	0.6179	0.6298	710	1260	2620	3160
Guangxi-Hubei	1336	0.6227	0.6342	690	1430	1410	2460
Guangxi-Hunan	978	0.6468	0.6581	1750	8570	3050	5650
Guangxi-Inner Mongolia	3234	0.6180	0.6301	40	70	190	540
Guangxi-Jiangsu	2076	0.6185	0.6316	590	530	360	350
Guangxi-Jiangxi	1294	0.6174	0.6296	420	960	660	1230
Guangxi-Jilin	6313	0.6179	0.6297	60	60	160	650
Guangxi-Liaoning	3411	0.6180	0.6300	280	130	210	120
Guangxi-Ningxia	3229	0.6180	0.6304	20	50	30	50
Guangxi-Qinghai	3275	0.5422	0.5324	10	70	80	130
Guangxi-Shaanxi	2383	0.6178	0.6299	120	450	780	430
Guangxi-Shandong	2538	0.6179	0.6299	340	430	540	390
Guangxi-Shanghai	2075	0.6185	0.6331	370	430	200	430
Guangxi-Shanxi	2515	0.6179	0.6298	120	220	1080	950
Guangxi-Sichuan	1832	0.6199	0.6323	2030	5640	2110	2870
Guangxi-Tianjin	2703	0.6185	0.6310	80	60	100	60
Guangxi-Tibet	4992	0.0624	0.0837		20		10
Guangxi-Xinjiang	4951	0.4082	0.4072	40	160	70	190
Guangxi-Yunnan	1504	0.6610	0.6724	2040	9110	2860	7950
Guangxi-Zhejiang	1874	0.6199	0.6397	890	930	310	240
Guizhou-Hainan	1374	0.6366	0.6731		110		10
Guizhou-Hebei	2262	0.6293	0.6627	480	490	210	410
Guizhou-Heilongjiang	3833	0.6275	0.6595	50	330	150	360
Guizhou-Henan	1850	0.6284	0.6617	330	760	530	1170
Guizhou-Hubei	1314	0.6653	0.6976	250	940	730	1280
Guizhou-Hunan	956	0.7118	0.7445	1480	6710	1040	2310
Guizhou-Inner Mongolia	3100	0.6290	0.6627	30	160	70	210
Guizhou-Jiangsu	2054	0.6251	0.6593	400	710	280	450
Guizhou-Jiangxi	1272	0.6241	0.6570	340	1890	250	1430

(continued)

(continued)

Province-province	Distance	Ethnic links		Export		Import	
		2000	2010	2000	2010	2000	2010
Guizhou-Jilin	3591	0.6288	0.6612	30	320	50	370
Guizhou-Liaoning	3286	0.6290	0.6625	270	280	120	100
Guizhou-Ningxia	2309	0.6286	0.6567	40	210	20	30
Guizhou-Qinghai	2355	0.5480	0.5389	10	50	10	40
Guizhou-Shaanxi	1809	0.6266	0.6595	60	310	180	390
Guizhou-Shandong	2516	0.6276	0.6612	480	1670	220	490
Guizhou-Shanghai	2053	0.6275	0.6646	260	200	150	330
Guizhou-Shanxi	2450	0.6248	0.6572	140	280	80	220
Guizhou-Sichuan	967	0.6504	0.6845	1710	4910	1820	2620
Guizhou-Tianjin	2681	0.6296	0.6639	180	80	50	100
Guizhou-Tibet	4117	0.0656	0.0875				
Guizhou-Xinjiang	3993	0.4146	0.4143	40	280	140	190
Guizhou-Yunnan	639	0.6862	0.7217	940	4050	1680	1230
Guizhou-Zhejiang	1852	0.6277	0.6743	440	730	230	420
Hainan-Hebei	2811	0.8288	0.8386				10
Hainan-Heilongjiang	4433	0.8284	0.8381				
Hainan-Henan	2399	0.8283	0.8382		20		70
Hainan-Hubei	1883	0.8324	0.8418		10		120
Hainan-Hunan	1501	0.8381	0.8482		40		90
Hainan-Inner Mongolia	3747	0.7940	0.7983				10
Hainan-Jiangsu	2597	0.8289	0.8397				10
Hainan-Jiangxi	1750	0.8274	0.8370		50		40
Hainan-Jilin	4187	0.8284	0.8382				
Hainan-Liaoning	3925	0.8285	0.8384				
Hainan-Ningxia	3716	0.6567	0.6517				
Hainan-Qinghai	3802	0.5428	0.5336				10
Hainan-Shaanxi	2887	0.8281	0.8381				10
Hainan-Shandong	2795	0.8283	0.8382				10
Hainan-Shanghai	2574	0.8293	0.8416				
Hainan-Shanxi	2976	0.8284	0.8378				20
Hainan-Sichuan	2829	0.8305	0.8408		60		140
Hainan-Tianjin	3198	0.8293	0.8398				
Hainan-Tibet	5774	0.0629	0.0845				
Hainan-Xinjiang	5478	0.4090	0.4087				
Hainan-Yunnan	1567	0.6839	0.6841		40		50
Hainan-Zhejiang	2407	0.8296	0.8457				10
Hebei-Heilongjiang	1673	0.9863	0.9835	2860	1290	4340	3040
Hebei-Henan	412	0.9666	0.9679	2770	3300	960	1640
Hebei-Hubei	948	0.9587	0.9592	1450	2680	1150	1190

(continued)

(continued)

Province-province	Distance	Ethnic links		Export		Import	
		2000	2010	2000	2010	2000	2010
Hebei-Hunan	1306	0.9015	0.9027	1180	1370	410	330
Hebei-Inner Mongolia	871	0.8245	0.8250	2600	1900	10640	109520
Hebei-Jiangsu	964	0.9594	0.9613	3300	2930	700	4160
Hebei-Jiangxi	1293	0.9576	0.9595	600	860	160	200
Hebei-Jilin	1431	0.9481	0.9579	1980	1170	2440	1030
Hebei-Liaoning	1126	0.8807	0.8872	5430	4860	5090	6290
Hebei-Ningxia	1547	0.6680	0.6622	160	210	530	14540
Hebei-Qinghai	1815	0.5534	0.5429	150	60	100	1240
Hebei-Shaanxi	923	0.9614	0.9632	550	1230	740	3100
Hebei-Shandong	301	0.9632	0.9652	3990	12040	4760	20740
Hebei-Shanghai	1267	0.9618	0.9643	1470	1430	280	210
Hebei-Shanxi	231	0.9596	0.9609	3910	4680	105090	300860
Hebei-Sichuan	1765	0.9527	0.9417	770	2570	670	880
Hebei-Tianjin	419	0.9725	0.9753	14030	30070	4280	18120
Hebei-Tibet	3787	0.0650	0.0869		70		
Hebei-Xinjiang	3491	0.4184	0.4170	360	750	900	940
Hebei-Yunnan	2901	0.6758	0.6757	290	540	500	760
Hebei-Zhejiang	1393	0.9580	0.9603	1340	1600	320	180
Heilongjiang-Henan	2085	0.9565	0.9683	1060	1250	440	480
Heilongjiang-Hubei	2519	0.9533	0.9588	410	720	320	590
Heilongjiang-Hunan	2877	0.9011	0.9022	440	880	280	110
Heilongjiang-Inner Mongolia	1955	0.8234	0.8221	2330	3840	9170	39590
Heilongjiang-Jiangsu	2277	0.9538	0.9666	1610	1060	610	560
Heilongjiang-Jiangxi	2689	0.9522	0.9648	260	690	80	70
Heilongjiang-Jilin	242	0.9557	0.9548	18330	17240	4710	12580
Heilongjiang-Liaoning	547	0.8818	0.8797	26210	40960	7040	11960
Heilongjiang-Ningxia	2631	0.6633	0.6566	130	110	60	60
Heilongjiang-Qinghai	3386	0.5499	0.5380	50	140	30	100
Heilongjiang-Shaanxi	2453	0.9555	0.9678	490	560	180	160
Heilongjiang-Shandong	1614	0.9558	0.9684	3990	2030	2590	2150
Heilongjiang-Shanghai	2577	0.9563	0.9697	590	580	300	140
Heilongjiang-Shanxi	1802	0.9542	0.9666	720	630	550	530
Heilongjiang-Sichuan	3336	0.9525	0.9413	850	1920	230	210
Heilongjiang-Tianjin	1354	0.9631	0.9766	2120	680	570	470
Heilongjiang-Tibet	5409	0.0648	0.0851		50		

(continued)

Province-province	Distance	Ethnic links		Export		Import	
		2000	2010	2000	2010	2000	2010
Heilongjiang-Xinjiang	5062	0.4153	0.4125	150	240	80	110
Heilongjiang-Yunnan	4472	0.6706	0.6699	210	650	80	310
Heilongjiang-Zhejiang	2706	0.9522	0.9656	680	1230	410	130
Henan-Hubei	536	0.9585	0.9589	22970	24780	2210	2490
Henan-Hunan	894	0.9011	0.9024	5480	10120	600	710
Henan-Inner Mongolia	1362	0.8028	0.8060	450	380	920	2110
Henan-Jiangsu	695	0.9901	0.9905	9210	8470	3320	12620
Henan-Jiangxi	927	0.9885	0.9889	3250	5070	160	330
Henan-Jilin	1843	0.9152	0.9263	400	320	490	630
Henan-Liaoning	1538	0.8477	0.8554	820	2360	1250	2130
Henan-Ningxia	1357	0.6669	0.6603	160	70	170	430
Henan-Qinghai	1403	0.5528	0.5421	410	1200	400	1310
Henan-Shaanxi	511	0.9924	0.9928	2120	960	1930	4770
Henan-Shandong	666	0.9941	0.9947	4650	5160	3420	17410
Henan-Shanghai	998	0.9924	0.9930	1270	1180	470	470
Henan-Shanxi	577	0.9905	0.9906	1710	1280	7170	25400
Henan-Sichuan	1353	0.9525	0.9414	1760	5000	960	1030
Henan-Tianjin	831	0.9854	0.9863	410	200	540	1090
Henan-Tibet	3375	0.0648	0.0867		250		30
Henan-Xinjiang	3079	0.4182	0.4167	340	970	2740	4250
Henan-Yunnan	2489	0.6776	0.6775	360	1250	650	770
Henan-Zhejiang	1124	0.9885	0.9793	2650	2350	190	230
Hubei-Hunan	358	0.9422	0.9431	2630	4690	1570	1350
Hubei-Inner Mongolia	1898	0.7940	0.7977	100	350	420	950
Hubei-Jiangsu	1231	0.9591	0.9604	560	1070	560	750
Hubei-Jiangxi	391	0.9575	0.9582	1530	2040	490	1460
Hubei-Jilin	2277	0.9106	0.9224	180	430	170	540
Hubei-Liaoning	1972	0.8416	0.8504	340	480	410	610
Hubei-Ningxia	1893	0.6567	0.6511	40	90	240	330
Hubei-Qinghai	1939	0.5428	0.5329	40	180	100	1430
Hubei-Shaanxi	1047	0.9584	0.9591	570	1690	3020	10380
Hubei-Shandong	1202	0.9585	0.9590	1690	2710	1220	3910
Hubei-Shanghai	1230	0.9593	0.9625	220	180	270	250
Hubei-Shanxi	1179	0.9586	0.9589	610	620	7950	20010
Hubei-Sichuan	1737	0.9543	0.9439	1680	4160	2430	3950
Hubei-Tianjin	1367	0.9591	0.9601	290	230	180	230
Hubei-Tibet	3911	0.0628	0.0841		70		

(continued)

Province-province	Distance	Ethnic links		Export		Import	
		2000	2010	2000	2010	2000	2010
Hubei-Xinjiang	3615	0.4092	0.4083	130	680	850	950
Hubei-Yunnan	1953	0.6718	0.6718	640	1000	150	410
Hubei-Zhejiang	1029	0.9602	0.9669	660	980	220	210
Hunan-Inner Mongolia	2256	0.7943	0.7977	70	70	430	1360
Hunan-Jiangsu	1200	0.9017	0.9040	470	550	530	1030
Hunan-Jiangxi	418	0.8999	0.9017	2020	3650	1580	5830
Hunan-Jilin	2635	0.9011	0.9023	160	50	170	1180
Hunan-Liaoning	2330	0.8419	0.8504	360	160	370	520
Hunan-Ningxia	2251	0.6570	0.6512	50	50	70	240
Hunan-Qinghai	2297	0.5431	0.5330	30	30	190	600
Hunan-Shaanxi	1405	0.9009	0.9025	200	400	870	2680
Hunan-Shandong	1560	0.9011	0.9024	320	940	840	1700
Hunan-Shanghai	1189	0.9021	0.9064	730	530	400	540
Hunan-Shanxi	1537	0.9011	0.9023	180	280	2320	8490
Hunan-Sichuan	1923	0.9032	0.9052	540	1950	820	1670
Hunan-Tianjin	1725	0.9020	0.9039	160	100	130	160
Hunan-Tibet	4273	0.0635	0.0843		10		20
Hunan-Xinjiang	3973	0.4097	0.4084	120	230	120	580
Hunan-Yunnan	1595	0.6997	0.7016	530	680	390	1220
Hunan-Zhejiang	998	0.9029	0.9141	1470	1940	1160	310
Inner Mongolia-Jiangsu	1827	0.7945	0.7983	1490	1810	220	280
Inner Mongolia-Jiangxi	2674	0.7928	0.7964	200	670	20	30
Inner Mongolia-Jilin	1713	0.8258	0.8246	5280	29560	1480	1830
Inner Mongolia-Liaoning	1408	0.8371	0.8359	10740	70060	4790	4850
Inner Mongolia-Ningxia	676	0.6690	0.6634	1120	1480	720	890
Inner Mongolia-Qinghai	1360	0.5696	0.5593	220	280	160	1790
Inner Mongolia-Shaanxi	1291	0.7967	0.8004	530	1190	50	220
Inner Mongolia-Shandong	1164	0.7986	0.8028	3560	4360	820	1740
Inner Mongolia-Shanghai	2130	0.7971	0.8021	710	1330	100	180
Inner Mongolia-Shanxi	640	0.7949	0.7980	1610	1360	2390	2670
Inner Mongolia-Sichuan	2133	0.7944	0.7982	560	1770	140	190

(continued)

(continued)

Province-province	Distance	Ethnic links		Export		Import	
		2000	2010	2000	2010	2000	2010
Inner Mongolia-Tianjin	801	0.8092	0.8141	8520	10270	700	4620
Inner Mongolia-Tibet	3332	0.0650	0.0871		20		
Inner Mongolia-Xinjiang	3035	0.4253	0.4233	160	530	400	720
Inner Mongolia-Yunnan	3233	0.6764	0.6768	60	150	100	260
Inner Mongolia-Zhejiang	2256	0.7929	0.7974	800	1640	120	80
Jiangsu-Jiangxi	838	0.9976	0.9965	670	2630	620	310
Jiangsu-Jilin	2035	0.9111	0.9229	460	310	650	520
Jiangsu-Liaoning	1730	0.8421	0.8509	760	370	1420	480
Jiangsu-Ningxia	2052	0.6572	0.6517	90	320	200	350
Jiangsu-Qinghai	2095	0.5433	0.5335	400	2000	400	1760
Jiangsu-Shaanxi	1205	0.9975	0.9976	580	3100	3140	6740
Jiangsu-Shandong	663	0.9957	0.9952	1360	2510	10380	6070
Jiangsu-Shanghai	303	0.9971	0.9928	2360	710	360	170
Jiangsu-Shanxi	1195	0.9992	0.9976	360	6560	18500	27880
Jiangsu-Sichuan	2048	0.9528	0.9427	1020	2030	1220	950
Jiangsu-Tianjin	1023	0.9760	0.9784	320	130	380	90
Jiangsu-Tibet	4072	0.0635	0.0847		50		
Jiangsu-Xinjiang	3774	0.4090	0.4086	470	1760	800	2500
Jiangsu-Yunnan	2693	0.6691	0.6704	500	810	440	800
Jiangsu-Zhejiang	429	0.9933	0.9817	2680	1560	250	300
Jiangxi-Jilin	2456	0.9095	0.9212	60	60	210	1690
Jiangxi-Liaoning	2151	0.8404	0.8491	170	200	260	160
Jiangxi-Ningxia	2258	0.6555	0.6497	10	30	50	40
Jiangxi-Qinghai	2304	0.5414	0.5315	10	20	20	250
Jiangxi-Shaanxi	1412	0.9959	0.9958	60	80	560	3500
Jiangxi-Shandong	1137	0.9940	0.9933	250	440	1400	2600
Jiangxi-Shanghai	837	0.9949	0.9895	970	820	660	490
Jiangxi-Shanxi	1944	0.9979	0.9974	40	100	1870	4550
Jiangxi-Sichuan	2239	0.9511	0.9402	340	800	220	460
Jiangxi-Tianjin	1444	0.9741	0.9758	30	70	180	60
Jiangxi-Tibet	4101	0.0616	0.0828		10		10
Jiangxi-Xinjiang	4391	0.4069	0.4061	50	150	80	290
Jiangxi-Yunnan	1911	0.6669	0.6675	120	350	540	860
Jiangxi-Zhejiang	636	0.9943	0.9812	4120	4900	2370	7210
Jilin-Liaoning	305	0.8939	0.8953	16250	23800	8540	15550
Jilin-Ningxia	2389	0.6645	0.6583	10	50	30	140
Jilin-Qinghai	3144	0.5536	0.5418	30	70	10	100

(continued)

(continued)

Province-province	Distance	Ethnic links		Export		Import	
		2000	2010	2000	2010	2000	2010
Jilin-Shaanxi	2211	0.9134	0.9251	130	270	50	90
Jilin-Shandong	1373	0.9145	0.9264	1590	930	1620	1540
Jilin-Shanghai	2335	0.9137	0.9268	510	250	300	240
Jilin-Shanxi	1560	0.9115	0.9229	280	300	830	1440
Jilin-Sichuan	3094	0.9110	0.9227	650	1650	150	160
Jilin-Tianjin	1012	0.9217	0.9346	780	410	380	410
Jilin-Tibet	5163	0.0649	0.0867				
Jilin-Xinjiang	4820	0.4186	0.4159	130	120	50	110
Jilin-Yunnan	4230	0.6719	0.6717	170	690	90	340
Jilin-Zhejiang	2464	0.9095	0.9219	740	1400	220	100
Liaoning-Ningxia	2084	0.6663	0.6598	110	150	940	1460
Liaoning-Qinghai	2839	0.5650	0.5530	180	130	90	150
Liaoning-Shaanxi	1906	0.8443	0.8531	390	890	230	160
Liaoning-Shandong	1067	0.8462	0.8555	2320	2110	2350	2260
Liaoning-Shanghai	2033	0.8447	0.8548	540	190	410	130
Liaoning-Shanxi	1255	0.8425	0.8507	830	1080	11620	17070
Liaoning-Sichuan	2789	0.8419	0.8507	850	810	410	350
Liaoning-Tianjin	707	0.8543	0.8639	3080	2720	610	530
Liaoning-Tibet	4901	0.0649	0.0869		10		
Liaoning-Xinjiang	4515	0.4238	0.4208	200	330	260	400
Liaoning-Yunnan	3925	0.6736	0.6732	170	240	190	250
Liaoning-Zhejiang	2159	0.8405	0.8499	690	310	400	170
Ningxia-Qinghai	684	0.7002	0.6824	410	550	50	240
Ningxia-Shaanxi	846	0.6594	0.6535	1430	640	80	530
Ningxia-Shandong	1840	0.6610	0.6553	120	630	190	800
Ningxia-Shanghai	2355	0.6596	0.6548	300	370	50	70
Ningxia-Shanxi	1316	0.6575	0.6511	80	240	190	280
Ningxia-Sichuan	1342	0.6570	0.6515	740	5450	220	240
Ningxia-Tianjin	1480	0.6776	0.6685	1450	1130	240	1010
Ningxia-Tibet	2656	0.0650	0.0874				
Ningxia-Xinjiang	2088	0.4544	0.4533	230	1450	240	1210
Ningxia-Yunnan	2442	0.6712	0.6655	50	70	50	290
Ningxia-Zhejiang	2481	0.6556	0.6507	70	480	50	20
Qinghai-Shaanxi	892	0.5453	0.5353	390	740	230	380
Qinghai-Shandong	2068	0.5470	0.5371	220	1190	160	1230
Qinghai-Shanghai	2401	0.5458	0.5366	80	430	30	70
Qinghai-Shanxi	1543	0.5435	0.5328	210	970	350	730
Qinghai-Sichuan	1388	0.5585	0.5518	360	1120	270	210
Qinghai-Tianjin	2235	0.5616	0.5483	150	210	130	140
Qinghai-Tibet	1972	0.2906	0.3323		1010		50

(continued)

Province-province	Distance	Ethnic links		Export		Import	
		2000	2010	2000	2010	2000	2010
Qinghai-Xinjiang	2108	0.4626	0.4610	60	90	420	1010
Qinghai-Yunnan	2488	0.5603	0.5504	30	190	30	350
Qinghai-Zhejiang	2527	0.5417	0.5326	80	550	50	60
Shaanxi-Shandong	1177	0.9978	0.9972	890	9480	670	3320
Shaanxi-Shanghai	1509	0.9982	0.9927	470	520	450	420
Shaanxi-Shanxi	651	0.9979	0.9975	510	1500	1390	2510
Shaanxi-Sichuan	842	0.9521	0.9414	2650	6540	1600	950
Shaanxi-Tianjin	1301	0.9779	0.9794	340	220	310	460
Shaanxi-Tibet	2964	0.0647	0.0865		70		10
Shaanxi-Xinjiang	2468	0.4107	0.4099	260	460	1100	2310
Shaanxi-Yunnan	1942	0.6706	0.6710	430	1060	620	750
Shaanxi-Zhejiang	1635	0.9923	0.9795	570	1480	190	150
Shandong-Shanghai	966	0.9979	0.9934	1980	670	390	290
Shandong-Shanxi	532	0.9960	0.9950	2850	27790	36030	92070
Shandong-Sichuan	2019	0.9523	0.9412	800	2240	820	1260
Shandong-Tianjin	360	0.9798	0.9819	970	780	680	780
Shandong-Tibet	3925	0.0648	0.0868		60		
Shandong-Xinjiang	3745	0.4124	0.4117	420	1840	770	2770
Shandong-Yunnan	3119	0.6724	0.6729	320	830	500	1400
Shandong-Zhejiang	1092	0.9925	0.9797	6500	4880	390	140
Shanghai-Shanxi	1498	0.9968	0.9907	140	140	2120	2010
Shanghai-Sichuan	2351	0.9530	0.9442	630	1250	430	760
Shanghai-Tianjin	1326	0.9789	0.9827	220	280	230	30
Shanghai-Tibet	4373	0.0652	0.0867		10		
Shanghai-Xinjiang	4077	0.4116	0.4120	350	550	220	580
Shanghai-Yunnan	3069	0.6711	0.6743	270	410	280	660
Shanghai-Zhejiang	201	0.9934	0.9847	780	510	1320	930
Shanxi-Sichuan	1493	0.9523	0.9411	830	2930	350	300
Shanxi-Tianjin	650	0.9761	0.9770	34980	27400	1200	3870
Shanxi-Tibet	3515	0.0633	0.0842		30		
Shanxi-Xinjiang	3219	0.4089	0.4075	170	1140	530	720
Shanxi-Yunnan	2593	0.6688	0.6687	70	210	410	310
Shanxi-Zhejiang	1624	0.9925	0.9794	4370	3280	120	140
Sichuan-Tianjin	2185	0.9531	0.9426	420	450	350	760
Sichuan-Tibet	3360	0.0786	0.1030		190		100
Sichuan-Xinjiang	3026	0.4094	0.4088	470	570	1660	2960
Sichuan-Yunnan	1100	0.6993	0.7074	2730	5410	2700	7660
Sichuan-Zhejiang	2552	0.9529	0.9445	700	1030	440	800
Tianjin-Tibet	4174	0.0652	0.0874		30		
Tianjin-Xinjiang	3911	0.4270	0.4230	690	900	1020	1370

(continued)

(continued)

Province-province	Distance	Ethnic links		Export		Import	
		2000	2010	2000	2010	2000	2010
Tianjin-Yunnan	3320	0.6831	0.6824	110	250	190	130
Tianjin-Zhejiang	1452	0.9749	0.9777	210	40	110	60
Tibet-Xinjiang	4080	0.0659	0.0896				30
Tibet-Yunnan	4460	0.0691	0.0910				
Tibet-Zhejiang	4308	0.0620	0.0839				40
Xinjiang-Yunnan	4126	0.4235	0.4225	410	1060	190	550
Xinjiang-Zhejiang	4065	0.4083	0.4081	430	1880	320	760
Yunnan-Zhejiang	2868	0.6691	0.6780	590	830	350	570

Note Blank space indicates that data are not available

References

Anderson JE, Marcouiller D (2002) Insecurity and the pattern of trade: empirical investigation. Rev Econ Stat 84:342–352

Arceneaux K, Huber GA (2007) What to do (and not to do) with multicollinearity in state politics research. State Politics Policy Q 7(1):81–101

Berry WD, Feldman S (1985) Multiple regression in practice. Sage Publications, London

Boisso D, Ferrantino M (1997) Economic distance, cultural distance and openness in international trade: empirical puzzles. J Econ Integr 12:456–484

China Association of Communications and Transportation and the National Development and Reform Commission of the PRC (2001) China communications Yearbook 2000. China Communications Yearbook Press, Beijing

China Association of Communications and Transportation and the National Development and Reform Commission of the PRC (2011) China communications Yearbook 2010. China Communications Yearbook Press, Beijing

Combes P-P, Lafourcade M, Mayer T (2005) The trade-creating effects of business and social networks: evidence from France. J Int Econ 66(1):1–29

Deardorff AV (1998) Determinants of bilateral trade: does gravity work in a neoclassical world? In: Frankel JA (ed) The regionalization of the world economy. University of Chicago Press, Chicago, pp 7–22

Eaton J, Tamura A (1994) Bilateralism and regionalism in Japanese and U.S. trade and direct foreign investment patterns. J Jpn Int Econ 8:478–510

Eichengreen B, Irwin D (1995) Trade blocs, currency blocs and the reorientation of trade in the 1930s. J Int Econ 38(2):89–106

Foroutan F, Pritchett L (1993) Intra-Sub-Saharan African trade: is it too little? J Afr Econ 2(May):74–105

Frankel JA, Wei S-J (1995) European integration and the regionalization of world trade and currencies: the economics and the politics. In: Eichengreen B, Frieden F, von Hagen J (eds) Monetary and fiscal policy in an integrated Europe. Springer, New York, pp 23–51

Frankel JA, Stein E, Wei S-J (1997a) Regional trading blocs in the world economic system. Institute for International Economics, Washington

Frankel JA, Stein E, Wei S-J (1997b) Trading blocs and the Americas: the natural, the unnatural, and the super-natural. J Dev Econ 47(1):61–95

Greene WH (2002) Econometric analysis, 5th edn. Prentice-Hall, Upper Saddle River

Guiso L, Sapienza P, Zingales L (2006) Does culture affect economic outcomes? J Econ Perspect 20:23–48

Guo R (2004) How culture influences foreign trade: Evidence from the U.S. and China. J SocioEcon 33:785–812

Guo R (2007) Linguistic and religious influences on foreign trade: evidence from East Asia. Asian Econ J 21(1):100–121

Guo R (2009) Intercultural economic analysis: theory and method. Springer, New York

Guo R (2013) Understanding the Chinese economies. Academic Press/Elsevier, Oxford

Havrylyshyn O, Pritchett L (1991) European trade patterns after the transition. policy, research and external affairs working paper no. 74. The World Bank, Washington

Heckscher EF (1919) The effect of foreign trade on the distribution of income. Ekonomisk Tidskrift 21:497–512

Helpman E (1987) Imperfect competition and international trade: evidence from fourteen industrial countries. J Jpn Int Econ **1**(March), 62–81

Huntington SP (1996) The clash of civilization and the remaking of world order. Simon and Schuster, New York

Krugman PR (1995) Growing world trade: causes and consequences. Brook Pap Econ Act 1:327–362

Linder SB (1961) An essay on trade and transformation. Wiley, New York

Linnemann H (1966) An econometric study of international trade theory. North-Holland, Amsterdam

Markusen J (1986) Explaining the volume of trade: An eclectic approach. Am Econ Rev 76:1002–1011

NBS (National Bureau of Statistics) (2001) China statistical yearbook 2000. China Statistics Publishing House, Beijing

NBS (National Bureau of Statistics) (2011) China statistical yearbook 2010. China Statistics Publishing House, Beijing

Noland M (2005) Affinity and international trade. Working paper series WP 05-3. Institute for International Economics, Washington

Ohlin B (1933) Interregional and international trade. Harvard University Press, Cambridge

Poncet S (2005) A fragmented China: measure and determinants of Chinese domestic market disintegration. Rev Int Econ 13(3):409–430

Pöyhönen P (1963) A tentative model for the volume of trade between countries. Weltwirtschaftliches Archiv 90(1):93–99

Rauch JE (1999) Networks versus markets in international trade. J Int Econ 48(1):7–35

Rauch JE (2001) Business and social networks in international trade. J Econ Lit 39(4):1177–1203

Rauch JE, Trindade V (2002) Ethnic Chinese networks in international trade. Rev Econ Stat 84(1):116–130

Rose AK (2004) Macroeconomic determinants of international trade. NBER working paper. National Bureau of Economic Research, Cambridge

Rumbaugh T, Blancher N (2004) China: International trade and WTO accession. IMF working paper WP/04/36, International Monetary Fund (IMF), Washington

Simon LJ (2004) Detecting multicollinearity using variance inflation factors, Penn State Department of Statistics, the Pennsylvania State University. Available at http://online. stat.psu.edu/online/development/stat501/12multicollinearity/05multico_vif.html. Accessed 13 April 2013

Stewart JQ (1948) Demographic gravitation: evidence and applications. Sociometry 2:31–58

Tinbergen J (1962) An analysis of world trade flows, the Linder hypothesis, and exchange risk. In: Tinbergen J (ed) Shaping the world economy. The Twentieth Century Fund, New York

WTO (2011) World Trade 2010, prospects for 2011 (Trade growth to ease in 2011 but despite 2010 record surge, crisis hangover persists), World Trade Organization (WTO) Press/628, 7 April. Available at: http://www.wto.org/english/news_e/pres11_e/pr628_e.htm. Accessed December 5, 5 April 2013

Zipf GK (1946) The P^1P^2/D hypothesis: on the intercity movement of persons. Am Sociol Rev 11(6):677–686

Chapter 5
Going Back to Tibet: Analytic Narrative

Abstract This chapter sets out to investigate how China's interprovincial economic (dis)integration has been determined in Tibet. Given the ethnic homogeneity within Tibet and the similar religious beliefs adopted by the Tibetans and Han Chinese (both of which belong to the Mongoloid group), the harmonious Han–Tibetan relations had once ever been achieved. It is found that Tibet's spatial economic disparities are much smaller than Xinjiang's, which could be responsible for its long-term economic progress and social stability. Finally, we also find that China's development policies toward Tibet have been more successful than those toward Xinjiang. This may be witnessed not only by the Tibetan's better social and economic performances than Xinjiang's but also by the less tensed (at least compared to the Han–Uyghur relations in Xinjiang) Han–Tibetan relations in Tibet.

Keywords Tibet · Geopolitics · Trade · Development strategy · Tibetan culture · Cultural homogeneity · Analytic narrative

5.1 A Bird's-Eye View of Tibet

5.1.1 International Connections

Tibet adjoins Bhutan and Nepal on the south, Myanmar on the southeast, and India on both the southeast and the northwest. Most of these land boundaries are set along the water parting of high-elevation mountains (including the Altai, the Tianshan, the Pamirs, the Karakoram range, and the Himalayas) and at uninhabited places, not suitable for cross-border communication and transportation. Tibet has much more complicated boundary and external conditions than, except Xinjiang, other frontier provinces in China.

Fig. 5.1   The railway systems of western China. *Source* Author

Tibet's frontier railway system was built much later than those of other Chinese frontier provinces. On September 26, 2010, China started to construct a 253-km long railway connecting Lhasa and Rikaze (see Fig. 5.1). This project, which was completed in August 2014, extends Tibet's railway system to China's boundary with Nepal. If the rail line that has reached up to Rikaze from mainland China could be extended up to Kathmandu, the whole time of goods transportation from inland Chinese cities to Nepal will be cut to less than a week from 12 to 18 days (via sea route).[1] As a result, the economic ties between Nepal and China could be taken to a new height; and, undoubtedly, economic infrastructure could be further developed on the Himalayan transit points between Nepal and China.

Even though Tibet's frontier railway system has been built much later, it is going to play an important role in the promotion of international trade in Tibet. While the Qinghai–Tibet Railway has announced extending the railway southward to Rikaze, a land bridge concept from time to time rumors. This land bridge connects the Pacific and Indian oceans, linking the east coast port city of Lianyungang

---

in East China, Xi'an, Lanzhou, Xining, Lhasa, through Nepal, and finally arriving in India and Pakistan. If the land bridge is completed, it will benefit all the countries involved (including, but limited to, India, Bangladesh, Nepal, and China). Since it is located between China and India—the world's two most populous and fastest-growing economies, Tibet will be in a crucial geographical position. Regardless of a demand that may have strategic geopolitical implications for India, Nepal has asked China to extend the Beijing–Lhasa railway line to Kathmandu and offered that it is committed not to allow anti-China activities from its soil (Pradhan, October 12 2009).

There have been worries in India that the cross-border rail connectivity will make Nepal and Bangladesh–India's traditional partners—come closer to China. In addition, India also fears that China now has the capability to deploy and sustain more than half a million troops for over a month on the Line of Actual Control (LAC) in case of a high-threat scenario with India (Gupta, May 11 2011). The China–Indian relations have been shadowed by the territorial disputes in Jammu and Kashmir. India lays claim to vast territories of land that is in the possession of China. For a long time, the demarcation of China's land boundaries with India has been the subject of political argument. The whole disputed area includes Aksai Chin (which is currently under the administration of Xinjiang Uygur autonomous region) and some small pieces of land (which is currently under the administration of Tibet autonomous region). India, however, claims the area as part of Ladakh district of the Indian state of Jammu and Kashmir. In 1962 there was a short border war between China and India. The war lasted from October 20 to November 22. It ended with a Chinese victory and the birth of the LAC that India never accepts (Guo 2012, p. 65).

There is a different story about the China–India boundary dispute in Tibet. The dispute began at the early 1910s. In 1913 and 1914, the British administrator in India, Sir Henry McMahon, drew up the so-called McMahon Line as the boundary between China and India. China has never recognized the validity of the McMahon Line. In 1962, China and India fought a battle in this area, with a Chinese victory. After the war, the Chinese army withdrew from the McMahon Line. This disputed area acquired an independent political status on January 20, 1972, when it was declared as Union Territory, an administrative division of India ruled directly by the national government, under the name of Arunachal Pradesh. The state of Arunachal Pradesh bill was passed by the Indian Parliament in 1986 and, with effect from February 20, 1987, Arunachal Pradesh became the 24th state of Indian Union (Guo 2012, pp. 57–59). Since it was China that withdrew its army from this disputed area, the Sino-India territorial dispute is now dormant.

Thanks to Tibet's geocultural connections to India, the Dalai Lama XIV was able to establish its government-in-exile in Dharamsala, North India. Dharamshala had been connected with Hinduism and Buddhism for a long time, with many monasteries having been established there in the past, by Tibetan immigrants in the nineteenth century. Following the 1959 Tibetan uprising there was an influx of Tibetan refugees—who followed the Dalai Lama XIV—in India, Nepal, and Bhutan. As soon as the Dalai Lama and several thousand other Tibetans fled

to India, the Indian government settled them in the Dharamshala area where the Central Tibetan Administration (CTA) was also established. Now most of these Tibetans and their descendants have lived in and around the McLeodGanj village in Upper Dharamshala, where they have built monasteries, temples, and schools. As a result, McLeodGanj is sometimes known as the "Little Lhasa"—after the Tibetan capital city of today's Tibet autonomous region in China—or "Dhasa" (a compound of the words "Dharamshala" and "Lhasa"). Today, the Dalai Lama's presence and the Tibetan population have made Dharamshala a popular destination for tourists.

In terms of religion, Tibet and its neighboring countries are almost homogeneous. Even though different schools of Buddhism have been adopted, they are not conflicting with each other. This is quite different from that in other frontier regions in China. For example, there are at least three different—and sometimes incompatible—religious beliefs in Xinjiang:

- Buddhism (which is also adopted in northern India and Mongolia).
- Islam (which is also adopted in Afghanistan, part of Kazakhstan, part of Kyrgyzstan, Pakistan, and Tajikistan).
- Eastern Orthodox (which is also adopted in part of Kazakhstan, part of Kyrgyzstan, and Russia).

Table 5.1 shows a brief summary of Tibet's international and boundary conditions (for ease of comparison, the data of both Tibet and its neighbor, Xinjiang are included). For example, during the past decades, even though many other domestic issues have played some roles in Xinjiang's social unrest, it seems that the fact that Xinjiang's geographical proximity to Afghanistan and Pakistan is also a critical factor. The most illustrating case is the East Turkestan Islamic Movement (ETIM). The ETIM, which was found in 1997, is believed to organize various terrorist attacks in southern Xinjiang near the border with Afghanistan and Pakistan. On September 11, 2002, the ETIM was at the UN Security Council list of entities associated with Al-Qaeda and the Taliban.[2]

5.1.2 Interprovincial Linkages

The interprovincial boundaries of Tibet are much simpler than their international boundaries. Tibet autonomous region has four neighbors (Qinghai, Sichuan, Xinjiang, and Yunnan). Without good reason, interprovincial boundaries are usually more geographically accessible and less politically sensitive than international boundaries. As a result, there are always, *ceteris paribus*, strong interprovincial vis-à-vis international socioeconomic links in the contemporary world. Tibet has no exceptions.

---

[2]See Guo (2015, Chap. 3) for a more detailed analysis.

Table 5.1 Boundary and external conditions: Xinjiang and Tibet

Geopolitical indicator	Xinjiang	Tibet
Land area (sq. km)	1,660,000	1,228,400
Length of international land borders (km)	6,012	3,800
Per capita GDP in PPP	8,300[a]	5,600[a]
Adjacent countries (per capita GDP in PPP)	Afghanistan (1,079), Kazakhstan (15,701), Kyrgyzstan (2,626), India (4,148), Mongolia (4,889), Pakistan (2,559), Russia (17,553), Tajikistan (2,561)	Bhutan (5,449), India (4,148), Myanmar (1,300), Nepal (1,396)
Adjacent Chinese provinces	Gansu, Qinghai, Tibet	Qinghai, Sichuan, Xinjiang Yunnan
Political status		
(1) Pre-PRC era	Province	Independent kingdom[b]
(2) PRC era	Autonomous region	Autonomous region
Political goal(s) of elite-in-exile	Independent from China	Full political autonomy[c]; independent from China[d]

Notes GDP = gross domestic product; and PPP = purchasing power parity
[a]Estimated by author
[b]Tibet unilaterally proclaimed as an independent state from 1913 to 1951, but this was not recognized by Beijing or a portion of the Tibetans
[c]It is claimed by the Dalai Lama (1996, pp. 47–51)
[d]It is claimed by the Tibetan Youth Congress (2009)
Sources Guo (2013b, p. 200) for the data on the length of international land borders and Heston et al. (2012) for the data on per capita GDP in PPP (except for those that are cited otherwise)

Tibet's interprovincial railway system has been built much later than any other Chinese provinces. In 2006 the construction of the 2,000 km Qinghai–Tibet Railway was completed (see Sect. 2.4 of Chap. 2 for more details). This stretches from Xining—capital of Qinghai province—to Lhasa, and across the Kunlun Mountains and Tanggulashan. The railway makes Tibet more accessible, with direct passenger trains running from Lhasa to major inland cities (as shown in Table 3.3 of Chap. 3). With the operation of the Qinghai–Tibet Railway—the world's highest railway—the cost of transportation of both passengers and goods should be greatly reduced, allowing for an increase in volume—the cost per ton-kilometer will be reduced from 0.38 yuan to 0.12 yuan (Cnradio, November 10 2006). According to a report released by the Qingzang Railway Corporation, in 2012 a total number of 6.83 million passengers and 40.22 million tons of cargos were transported from and to Tibet (Askci 2013).

Since the 1980s, China has implemented a more flexible policy to ease interprovincial migration. As a result, interprovincial labor flows have been increased. It is noteworthy that these flows have also been conducted by people coming from the inland, ethnic minority, areas and moving into the coastal, Han-majority areas. Consequently, China's interprovincial ethnic networks have been enhanced. Using the data released by China's Fifth and Sixth National Population Censuses (which

were conducted on November 1, 2000 and 2010, respectively), the Tibetans (the ethnic majority of Tibet) are illustrated below as an example.

The Tibetans were found to have stronger interprovincial links in 2010 than in 2000. Specifically, Tibet autonomous region has the largest Tibetan links with the following provincial administrations (represented by the share of Tibetan population):

1. Qinghai (24.44 % in 2010, up from 22.53 % in 2000),
2. Gansu (1.91 % in 2010, up from 1.76 % in 2000),
3. Sichuan (1.86 % in 2010, up from 1.54 % in 2000),
4. Yunnan (0.31 % in 2010, up from 0.30 % in 2000),
5. Xinjiang (0.04 % in 2010, up from 0.03 % in 2000),
6. Beijing (0.03 % in 2010, up from 0.02 % in 2000),
7. Shaanxi (0.02 % in 2010, up from 0.01 % in 2000),
8. Tianjin (0.01 % in both 2010 and 2000),
9. Inner Mongolia (0.01 % in both 2010 and 2000),
10. Chongqing (0.01 % in both 2010 and 2000),
11. Shanghai (0.01 % in both 2010 and 2000),
12. Ningxia (0.01 % in both 2010 and 2000),
13. Guangdong (0.01 % in both 2010 and 2000), and
14. Zhejiang (0.01 % in 2010, up from 0.00 % in 2000).[3]

5.2 Internal Economic Performance

5.2.1 General Situation[4]

Tibet, averaging more than 4,000 m above sea level, forms the main part of the Qinghai–Tibet Plateau and is well known as the "Roof of the World." Mount Everest (about 8,848 m above sea level), located on the border with Nepal, is the highest mountain on earth. Several major rivers have their source on the Tibetan Plateau (mostly in Qinghai province). These include the Yangtze, the Yellow, the Indus, the Mekong, the Ganges, the Salween, and the Yarlung Tsangpo (Brahmaputra) rivers. The Yarlung Tsangpo Grand Canyon is among the deepest and longest in the world. The Indus and Brahmaputra originate from western Tibet.

The atmosphere is severely dry for 9 months each year, and the average annual snowfall is only 460 mm. The Indian monsoon exerts some influence on eastern Tibet. Northern Tibet is subject to high temperatures in summer and intense cold in winter. Western passes receive a small amount of fresh snow each year

---

[3]Calculated by author based on the Fifth (2000) and the Sixth (2010) National Population Censuses of the PRC.

[4]This subsection is an excerpt of Guo (2013a pp. 310–315).

but remain traversable all year round. Low temperatures are prevalent throughout these western regions, where bleak desolation is unrelieved by any vegetation bigger than a low bush, and where wind sweeps unchecked across vast expanses of arid plain.

There are more than 90 known mineral types in the area, of which 26 have proven reserves and 11 rank among the top five in China. The minerals include chromite, lithium, copper, gypsum, boron, magnesite, barite, arsenic, mica, peat, kaolin, salt, natural soda, mirabilite, sulfur, phosphorus, potassium, diatomaceous earth, iceland spar, corundum, rock quartz, and agate. In 2007 Chinese central government issued a report outlining the discovery of a large mineral deposit in Tibet. This may double China's previous reserves of zinc, copper, and lead. Government sees this as a way to alleviate the nation's dependence on foreign mineral imports for its growing economy. However, the exploitation of these vast resources could harm Tibet's fragile ecosystem and also undermine its culture.

Tibet is rich in hydro, geothermal, solar, and wind energy. It produces approximately 200 million kw of natural hydroenergy annually, about 30 % of the nation's total. It has 354.8 billion cubic meters of surface water resources, about 13.5 % of the nation's total, and 330 billion cubic meters of glacial water resources. The region has 56.59 million kw exploitable hydroenergy resources, about 15 % of the nation's total. It also leads China in geothermal energy. The Yangbajain geothermal field in Damxung county, Lhasa, is the country's largest high-temperature steam geothermal field and also one of the largest in the world.

Due to limited arable land, the primary occupation on the Tibetan Plateau is raising livestock, such as sheep, cattle, goats, camels, yaks, dzo, and horses. The main crops grown are barley, wheat, buckwheat, rye, potatoes, and assorted fruits and vegetables. The development of agriculture and animal husbandry has been given top priority in the Tibetan economy. The major agricultural products, such as broad beans, barley, wheat, rapeseed, garlic, and mushrooms, have great competitive advantage in terms of quality due to several unique natural conditions. As of 2010, "public management and social organization" and "culture, sports and entertainment" are relatively strong, while "services to households and other services," "real estate," "manufacturing," and "mining" are relatively weak.[5]

The economy of Tibet autonomous region is dominated by subsistence agriculture, though tourism has been growing in recent decades. In 1981 there were only 2,005 foreigners visiting Tibet; while the number has reached 214,136 persons in 2010 (TBS 2011). At present, priorities for foreign investments are infrastructure (such as transportation and communications), education, agriculture (plateau agriculture, water-conservative agriculture, food processing), and Tibetan medicine. Foreign investments come mainly from Nepal, Japan, the United States, the United Kingdom, South Korea, Denmark, Canada, and Australia.

---

[5]Note that all the sectors defined here are according to China's official categories.

5.2.2 How Tibet Differs from Xinjiang

Located at the westernmost end of China, both Xinjiang and Tibet have large, sparsely populated areas. However, compared with Xinjiang, Tibet is still far sparser, with an average population density of less than 2.5 persons per square kilometer (see Table 5.2). In addition, Tibet is the least urbanized area in China, with an economy that depends on agriculture, finance from central government, and a thriving tourism industry. Economic development in the area is stunted by high transportation costs and high exploration costs.

Table 5.2 Socioeconomic performances: Xinjiang versus Tibet

Indicator	Year	(1) Xinjiang	(2) XPCC	(3) Xinjiang excl. XPCC	(4) Tibet	(5) = (3) ÷ (4)
Population (million persons)	2000	19.25	2.43	16.82	2.62	6.42
	2010	21.85	2.57	19.28	3.01	6.41
Ratio of urban population (%)	2000	33.8	41.9	31.09	18.9	1.75
	2010	42.2	47.1	41.55	28.2	1.47
Population density (persons/ sq. km)	2000	11.59	35.2	10.48	2.13	4.92
	2010	13.16	37.2	12.03	2.45	4.91
Illiterate rate of population (%)	2000	5.56	2	6.07	32.5	0.19
	2010	2.36	1.08	2.53	24.42	0.10
Per capita gross regional product (GRP) (yuan)	2000	7,372	4,076	7,848	4,484	1.75
	2010	25,057	23,416	25,276	16,861	1.50
Per capita income of urban residents (yuan)	2000	5,645			7,426	
	2010	13,644	14,391	13,531	14,980	0.90
Per capita income of rural residents (yuan)	2000	1,618			1,330	
	2010	4,643	9,169	4,097	4,138	0.99
Urban/rural income ratio	2000	3.49			5.58	
	2010	2.94	1.57	3.30	3.62	0.91
Per capita GRP ratio of top to bottom prefecture	2000	25.62			3.76	
	2010	23.43			1.63	

Notes (1) XPCC = Xinjiang Production and Construction Crops; GRP = gross regional product.
(2) All monetary values are measured at current prices
Source Calculated by author based on XBS (2001 and 2011); TBS (2001 and 2011) and XPCC (2001)

In terms of the UNDP's Human Development Index, Tibet is ranked the lowest among China's 31 provinces (UNDP 2010). Tibet has had a much higher illiterate rate of population than any other Chinese provinces. For example, the proportion of ethnic Tibetans over age 15 in the Tibetan autonomous region recorded as illiterate or semiliterate in the 1990 census was as high as 72.8 % compared with China's national average of 22.8 % (Ma 1996, p. 51). In 2000, its illiterate rate of population aged 15 or over was 32.5 %, which is much higher than that of Xinjiang (5.56 %); in 2010, the ratio has reduced to 24.42 %, but it is still higher than that of Xinjiang (2.36 %) (see Table 5.2).

Ever since the initiation of China's opening-up and reform drive in 1979, Xinjiang's economy has been changed dramatically. As of 2010, industry leads with a contribution of 47.70 % to the gross regional product (GRP). The service sector also makes a substantial contribution at 32.50 %; while agriculture contributes the remaining 19.80 % (see Table 2.3 of Chap. 2). In Tibet, industry is playing an increasingly important role in the economy although service sector has still been the major economic player over the last few decades (see Table 3.1 of Chap. 3). Industrial products such as minerals, medicine, Qingke barley wine, carpets, and building materials are renowned globally. Traditional Tibetan medicine, in particular, boasts a long history in Tibet. While Tibet could be a large producer of natural resources and raw materials, there have been few advances in these areas. The focus is on expanding secondary industries, in particular energy, mining, and new building materials. Due to limited arable land, the primary occupation of the Tibetan Plateau is raising livestock, such as sheep, cattle, goats, camels, yaks, dzo, and horses. The main crops grown are barley, wheat, buckwheat, rye, potatoes, and assorted fruits and vegetables.

From 2000 to 2010, Tibet's net income level of rural residents has increased at a much faster rate than its income level of urban residents. For example, in 2000, the urban/rural income ratio of Tibet is as high as 5.58, which is much higher than that of Xinjiang (3.49). After 10 years, in 2010, Tibet has dramatically reduced its urban/rural income ratio to 3.62, which is much close to that of Xinjiang (see Table 5.2). A simple comparison of the income levels between Xinjiang and Tibet also reveals that the people's living conditions in Tibet have been improved more significantly than those in Xinjiang during the period from 2000 to 2010, especially in urban areas. For example, Xinjiang's per capita gross regional product (GRP) is 1.75 and 1.50 times that of Tibet in 2000 and 2010, respectively. However, in 2010 its per capita incomes of urban and rural residents have been only 90 % and 99 % those of Tibet, respectively (see Table 5.2).

When referring to Xinjiang's regional (especially its rural area) economic development, one must pay attention to the Xinjiang Production and Construction Crops (XPCC) (see Guo (2015, Chap. 2) for details). In general, the XPCC equipped with the well-educated staff and with strong support from the Chinese central government, has much higher economic growth rate than the rest of Xinjiang (Shao, 3 April 2012). However, after excluding the XPCC, the rest of Xinjiang has made less social and economic progress than Xinjiang as a whole. For example, since the rural residents of the XPCC has much higher income level

than the other rural residents of Xinjiang, the inclusion of the XPCC's agricultural areas into Xinjiang's rural areas has automatically increased the net income of rural residents and therefore reduced the urban–rural income ratio in Xinjiang.

Last but not least, Xinjiang and Tibet are different from each other in terms of spatial economic disparity. Tibet's economy is a rather convergent among its regions. And its interregional gap of per capita gross regional product (GRP), represented by the ratio of the richest region's per capita GRP to the poorest one, has reduced from 3.76 to 1.63 from 2000 to 2010. Given China's great spatial economic disparities,[6] Tibet can be treated as an exception. By way of contrast, Xinjiang has much greater spatial economic disparities than Tibet and any other inland Chinese provinces. In 2000, the per capita gross regional product (GRP) of the richest region (i.e., Karamay municipality) was 25.62 times that of the poorest region (i.e., Ili prefecture). In 2010, this ratio was slightly reduced to 23.43 times but still much higher than other places in China.

Then, what is the driving force behind the large spatial economic inequality and how will it imply to Xinjiang's regional economic development and social stability? We will give more detailed analyses in the next section.

5.3 External Economic Performance

5.3.1 An Export–Import Puzzle

China's border development has mainly benefited from its "open-door" policy and rapprochement with the neighboring countries since the mid-1980s. In 1984 the Chinese government promulgated the "Provisional Regulations for the Management of 'Small-volume' Border Trade" and opened up hundreds of frontier cities and towns. Inspired by Deng Xiaoping's Southern Speech in early 1992, China has embarked on a deeper outward-looking policy in an attempt to promote development in the frontier regions. As for Tibet, favorable and flexible measures have been granted to international trade and economic cooperation. They include: "Resolutions Concerning the Further Reform and Opening up to the Outside World" (issued by the State Council on July 14, 1992).[7]

In 2010, Xinjiang's exports amounted to US$12.9 billion (which is 38.68 times that in 1990), while its imports turned out to be only US$4.2 billion (which is 55.48 times that in 1990) (XBS 2011). Major imports in the region include rolled steel, medical equipment, crude oil, oil products, and fertilizers; major exports are clothing and other daily consumers' goods. Compared with Xinjiang, Tibet

---

[6]For example, as of 2010, the per capita GDP ratio of China's top five to bottom five provinces was 3.98 (if Beijing, Shanghai and Tianjin are included) or 3.16 (if Beijing, Shanghai and Tianjin are excluded)—cited from Guo (2013, p. 157).

[7]The full text of this document can be found in *Bulletins of the State Council of the People's Republic of China*, 1992.

had only US$771.02 million of exports and US$64.92 million of imports in 2010, which are 55.31 times and 27.66 times those in 1990, respectively (TBS 2011). Tibet's major exports include light industry products, livestock products, traditional Chinese medicine, and carpets; while its main imports are motor vehicles and machinery products.

At present, Xinjiang and Tibet have far poorer foreign trade performances than their coastal counterparts. This is simply due to the fact that in China the frontier provinces have always disadvantageous locations in conducting trade and economic cooperation with the world's major market economies. However, compared with other inland Chinese provinces, Xinjiang and Tibet still have locational advantages in cross-border trade and economic cooperation with their respective adjacent nations.

By cross-border trade (or border trade for short), it generally refers to the flow of goods and services across the international borders between jurisdictions. In this sense, it is a part of normal trade that flows through standard export/import frameworks of nations. In China, border trade is defined as the one that is conducted by people living on the frontier areas within 15 km (sometimes 20 km) away from an international boundary (Cihai 1999, p. 1250). Subject to the government approval, border trade may enjoy tariff exemption for a certain amount of goods (in monetary value) and may be able to receive a reduced tariff rate for remaining goods.

Generally, cross-border economic cooperation and trade are facilitated by both geographical factor and also the fact that people on both sides of the border either belong to the same ethnic group or share similar cultural characteristics. Although both have international geographical adjacencies, Xinjiang has cross-border trade advantages over Tibet. For example, China's first border free trade zone (i.e., the Horgos Free Trade Zone) is located at the Xinjiang–Kazakhstan border city of Horgos. Horgos is the largest "land port" in China's far western region and it has easy access to the Central Asian market. In March 2006, Xinjiang opened its second border trade market—called the Jeminay Border Trade Zone—near its border with Kazakhstan.

Xinjiang's cross-border trade was very small before 1990; since then, it has grown steadily. This is because Alashankou (the Ala Pass), which is located on the China–Kazakhstan boundary has been the only railway station connecting Xinjiang and its neighboring nations (i.e., Afghanistan, India, Kazakhstan, Kyrgyzstan, Mongolia, Pakistan, Russia, and Tajikistan); it was constructed in the 1980s and went into operation in September 1990. As a result, most of Xinjiang's cross-border trade has been directed to and from Kazakhstan. In 2010, for example, Xinjiang's exports to and imports from Kazakhstan account for 60.82 % and 87.65 % of its total exports to and imports from all the neighboring nations, respectively (XBS 2011). Xinjiang's cross-border trade has followed a nonlinear pattern of growth during the period from 2000 to 2010 (shown in Fig. 5.2). Specifically, the sharp declining of exports in 2009 and 2010 may have stemmed from the following two factors:««
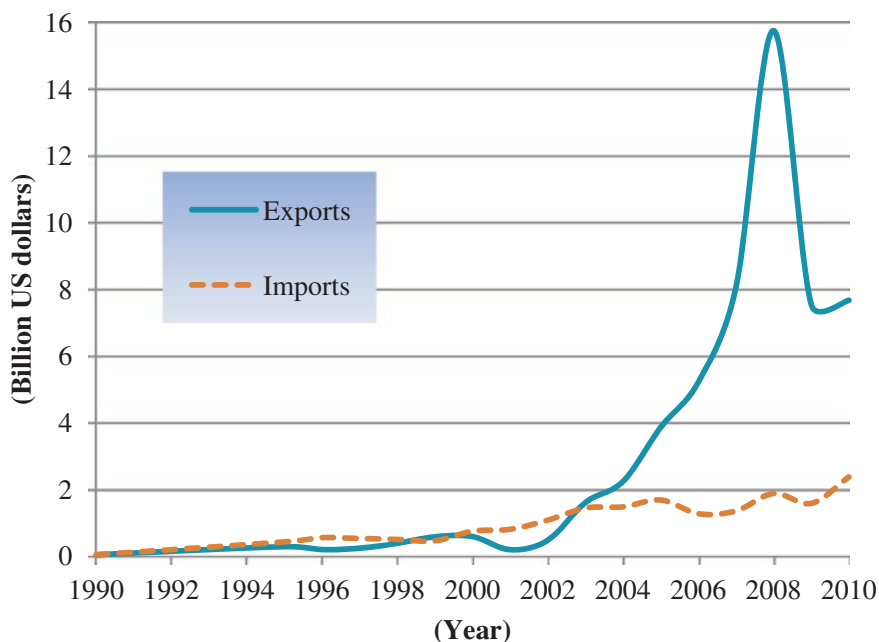
Fig. 5.2 Xinjiang's cross-border trade (1990–2010). *Source* Author based on XBS (2011)

(i) The 2008 US financial crisis which resulted in worldwide trade stagnation; and
(ii) A series of violent riots that occurred in Urumqi in 2009 and damaged the busi-
     ness environment in Xinjiang.[8]

Tibet's lower level of foreign trade volume is mainly due to the fact that Tibet has
disadvantages in social production. In addition, the less-developed transportation
network in Tibet has also been a factor retarding its cross-border trade. Before
2000, Tibet has very small volumes of cross-border trade; since then, especially
since 2005, Tibet's cross-border exports have grown sharply (see Fig. 5.3). If this
has been promoted by the operation of the Qinghai–Tibet Railway in 2006, one
can expect that, after the Lhasa–Rikaze Railway is completed, Tibet's cross-border
trade will be further fostered. Regardless of its sharp growth of exports, Tibet's
imports have only maintained at a very small size during the past decades. This is
an issue that needs further clarifications.

   Till now, there is still one puzzling issue. As mentioned in Sect. 5.1.1, Xinjiang
currently has a much more developed cross-border railway network than Tibet.
However, its foreign trade growth has been much slower than the latter during the
past decade. Even worse, regardless of the fact that Tibet's cross-border exports

---

[8]Note that since most of Xinjiang's cross-border trade has been conducted with Kazakhstan in
northern Xinjiang where the Han Chinese account for the majority of population, it is reasonable
to say that the Han Chinese have been major player of cross-border trade in Xinjiang.
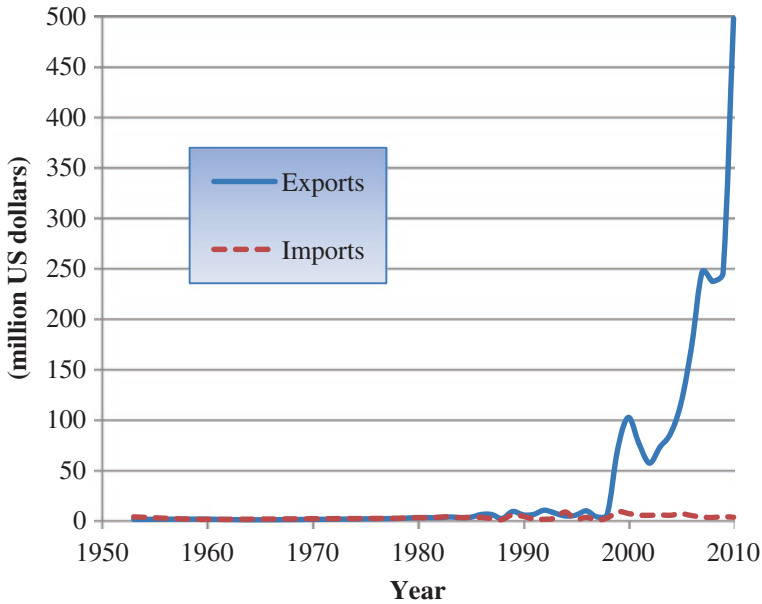
Fig. 5.3 Tibet's cross-border trade (1953–2010). *Source* Author based on TBS (2011)

had increased by 110.20 % from 2008 to 2010, Xinjiang's cross-border exports had declined by 51.33 % during the same period.[9] If the US financial crisis, which had resulted in the globe-wide trade stagnation, had affected Xinjiang's foreign trade from 2008 to 2010, why did Tibet not experience a declining of foreign trade for that period of time? If the Han–Uyghur unrest from 2007 to 2010 (see Chap. 3 for details) had been responsible for Xinjiang's foreign trade stagnation from 2008 to 2010, why did Tibet (in which there was also serious social unrest in 2008) not experience a decline in foreign trade for that period of time?

In addition, as shown in Fig. 5.3, Tibet's remarkable growth in foreign trade for the period from 2000 to 2010 has only happened since the mid-2000s when the Qinghai–Tibet Railway went into operation. Since we cannot find any other key events or factors contributing to this remarkable foreign trade growth of Tibet, we must presume that it was the Qinghai–Tibet Railway that helped Tibet to serve as an entrepot by which China's inland provinces conduct exports to or imports from the South Asian nations. For example, with the operation of the Qinghai–Tibet railway, the cost of transportation of both passengers and goods should be greatly reduced, allowing for an increase in volume—the cost per ton-kilometer will be reduced from 0.38 yuan to 0.12 yuan (Cnradio 2006). As a result, more commodities will be carried to and from Tibet by the railway.

---

[9]Calculated by author based on TBS (2011) and XBS (2011).

If Tibet's robust cross-border exports have benefited from the Qinghai–Tibet Railway which was completed in 2006, why have its cross-border imports been decreased by 36.96 % from 2006 to 2010 (see Fig. 5.3)? Nevertheless, the above presumption seems to be reasonable since Tibet's exports have been much larger than its imports.[10] Tibet has natural and economic conditions similar to, and has no obvious industrial advantages over, its neighboring nations. Obviously, without the participation by inland provinces, Tibet could not have sustained such large amount of cross-border trade surplus.

Compared with Tibet's stagnation in cross-border import from 2006 to 2010, Xinjiang's cross-border import has enjoyed an 87.26 % growth during the same period. How to explain the Xinjiang–Tibet differences in both exports and imports? We must mention the fact that Xinjiang has a much more developed railway networks than Tibet. However, the railway system is, though still important, not a sufficient factor by which to explain the Xinjiang–Tibet puzzle. In order to have a concrete account of Tibet's (vis-à-vis Xinjiang's) remarkable foreign trade (export in particular) growth, we must pay some attention to their social and economic ties with China's inland provinces.

It should be noted that the interprovincial ethnic linkages (represented by population shares) of Tibet stated in Sect. 5.1.2 are quite small in percentages. However, there are huge numbers of population in most of the Chinese provinces. Therefore, the above population shares—along with the other, even smaller population shares still denote the significant presence of interprovincial ethnic links for Tibet (in terms of the Tibetan ethnic group).

5.3.2 Explaining the Puzzle

What have the above interprovincial ethnic links implied to the trade puzzle of Xinjiang and Tibet? To have a concrete understanding of this issue, let us first look at the estimated results reported in Chap. 4. Since the estimated coefficients on Uyghur and Tibetan ethnic groups are statistically insignificant for 2000 (see Table 4.6 (2000) of Chap. 4), we may simply assume that, the interprovincial Uyghur and Tibetan links—no matter how large they are—do not have any significant influences on the interprovincial trade of Xinjiang and Tibet, respectively. However, since the estimated coefficients are statistically significant for 2010, the interprovincial Uyghur and Tibetan links will tend to influence interprovincial trade in 2010.

To go further, let us use the estimated coefficients reported in Tables 4.6 (2010) to calculate each ethnic group's contributions to interprovincial trade in 2010 (the results are reported in Table 5.3). The figures reported in the third and fifth

---

[10]For example, in 2010 the export-to-import ratio of Tibet was as high as 171 times (TBS 2011) and that of Xinjiang was about 3.2 times (XBS 2011).

Table 5.3 How the Uyghurs and Tibetans influence interprovincial trade, 2010

Province	Xinjiang		Tibet	
	Uyghur link	Trade effect (%)	Tibetan link	Trade effect (%)
Anhui	1.1933E−5	−6.5513	2.1496E−5	0.0294
Beijing	3.5565E−4	−86.7273	2.8426E−4	0.3900
Chongqing	4.0283E−5	−20.4463	1.0698E−4	0.1466
Fujian	3.1417E−5	−16.3385	4.7138E−5	0.0646
Gansu	7.5738E−5	−34.9530	1.9095E−2	29.8863
Guangdong	6.1715E−5	−29.5618	5.3720E−5	0.0736
Guangxi	3.9002E−5	−19.8654	1.7708E−5	0.0243
Guizhou	1.6054E−5	−8.7125	3.7527E−5	0.0514
Hainan	4.5321E−5	−22.6900	2.8600E−5	0.0392
Hebei	1.2024E−5	−6.5999	2.6930E−5	0.0369
Heilongjiang	2.3073E−5	−12.2793	1.5373E−5	0.0211
Henan	3.2277E−5	−16.7463	1.9260E−5	0.0264
Hubei	4.5023E−5	−22.5591	3.8000E−5	0.0521
Hunan	1.0222E−4	−44.0350	2.4688E−5	0.0338
Inner Mongolia	2.6633E−5	−14.0349	1.3191E−4	0.1808
Jiangsu	5.5518E−5	−27.0392	4.2691E−5	0.0585
Jiangxi	1.9117E−5	−10.2869	2.5804E−5	0.0353
Jilin	4.1052E−5	−20.7930	2.3750E−5	0.0325
Liaoning	4.3821E−5	−22.0285	4.2998E−5	0.0589
Ningxia	9.7281E−5	−42.4427	1.0411E−4	0.1427
Qinghai	3.7144E−5	−19.0158	2.4438E−1	2740.4746
Shaanxi	4.2060E−5	−21.2451	1.6998E−4	0.2330
Shandong	4.8386E−5	−24.0236	2.2403E−5	0.0307
Shanghai	2.2825E−4	−72.6394	1.0452E−4	0.1432
Shanxi	1.8761E−5	−10.1053	2.9318E−5	0.0402
Sichuan	2.4186E−5	−12.8323	1.8610E−2	29.0254
Tianjin	1.6772E−4	−61.4160	1.3719E−4	0.1880
Tibet	6.8337E−5	−32.1611	9.0551E−1	NA
Xinjiang	4.5854E−1	NA	3.8128E−4	0.5235
Yunnan	2.7892E−5	−14.6473	3.0950E−3	4.3294
Zhejiang	9.8810E−5	−42.9403	5.2373E−5	0.0717

Notes (1) Interprovincial Uyghur and Tibetan links are measured using Eq. (4.5) of Chap. 4. (2) Trade effects denote percentages by which provinces that are linked by an ethnic group—either Uyghur or Tibetan—would increase (or decrease if the figures are negative) bilateral trade as opposed to those that are not linked by the same ethnic group. The calculation is based on the following formula: $\exp(xy)-1$, where x denotes interprovincial Uyghur and Tibetan links (see the second and fourth columns of this table) and y denotes the estimated coefficients on the Uyghur group (−52403.342) and Tibetan group (13.694) shown in Table 4.6 (2010). (3) "NA" denotes there is no interprovincial trade

columns of this table denote percentages by which provinces that are linked by an ethnic group—Uyghur or Tibetan—would increase (or decrease if the figures are negative) bilateral trade as opposed to those that are not linked by the same ethnic group. From Table 5.3, one may observe that ethnic links have exerted different influences on interprovincial trade performances in Xinjiang and Tibet in 2010. For example, while the presence of the Tibetans has only slightly increased Tibet's trade with most inland Chinese provinces by percentages of less than 0.5 %, it has increased Tibet's trade with the four neighbors of Qinghai, Gansu, Sichuan, and Yunnan—where certain amounts of Tibetans reside—by as high as 2740.4746, 29.8863, 29.0254, and 4.3294 %, respectively.

However, ethnic links have not always promoted interprovincial trade in China. In fact, the Uyghur ethnic group has already been proved to retard interprovincial trade in 2010 (as stated in Table 4.6 (2010) of Chap. 4). This is a quite unusual phenomenon. After further calculations (see Table 5.3), one may observe that Xinjiang's interprovincial trade has been reduced by its Uyghur presence at the inland Chinese provinces, with the reductions ranging from 6.5999 % (with Hebei) to as high as 86.7273 % (with Beijing).

How to explain the negative correlation between Uyghur links and interprovincial trade in Xinjiang? It seems that our 2010s estimated results on Xinjiang and the Uyghur ethnic group in particular might have closely stemmed from the various incidents of Han–Uyghur unrest from 2007 to 2010.[11] Among the many other incidents that could have affected Xinjiang's interprovincial trade in 2010, the Shaoguan incident and the Urumqi riots (both in 2009) and the Aksu bombing (in 2010) are worth mentioning. However, we should be cautious of any arbitrary conclusions before more concrete theoretical and empirical findings are discovered. In addition to the above-mentioned factor, other factors—especially the differing natural resources, geographical and cultural features, and regional development policies—may also have some influences on the differing trade performances of Xinjiang and Tibet.

Next, let us explain how Tibet's large foreign trade surplus has been determined by China's interprovincial trade. After replacing the dependent variable "ln(TRADE$_{ij}$)" in Eq. (4.3) of Chap. 4 with ln(EXPORT$_{ij}$) and ln(IMPORT$_{ij}$), we may quantitatively test the determinants of China's interprovincial export and import, respectively (see Annex 1 at the end of this chapter for the estimated results). Note that sometimes the terms "export" and "import" may be interchangeable. For example, Xinjiang's export to Anhui is also Anhui's import from Xinjiang. Since all province pairs are arranged in alphabetic order, the bilateral export and import between Xinjiang and Anhui are only reported in the "Anhui-Xinjiang" entry. As a result, in most circumstances the export and import concepts used in this section can also be known as inland Chinese provinces' export from and import to Xinjiang or Tibet, respectively.[12]

---

[11]See Chap. 3 for a more detailed account of the Han-Uyghur unrest during the past decades.

[12]This is due to the fact that both Xinjiang and Tibet are located behind most of the Chinese provinces (Yunnan and Zhejiang are the only exceptions) in all the 465 province pairs shown in Annex of Chap. 4.

Table 5.4 The marginal effects of interprovincial ethnic links on trade (2000 and 2010)

Ethnic group	Year	(I) Exports	(II) Imports	(III) = (II) − (I)
Dongxiang	(A) 2000	–	$1615.179–0.110x > 0$	>0
	(B) 2010	–	$1708.348–0.149x > 0$	>0
	(C) = (B) − (A)	–	>0	
Han	(A) 2000	$–0.089x < 0$	$–0.110x < 0$	<0
	(B) 2010	$–0.119x < 0$	$–0.149x < 0$	<0
	(C) = (B) − (A)	<0	<0	
Hui	(A) 2000	$20.287–0.089x > 0$	–	<0
	(B) 2010	$19.307–0.119x) > 0$	$14.504–0.149x > 0$	<0
	(C) = (B) − (A)	<0	>0	
Kazak	(A) 2000	–	–	
	(B) 2010	–	$–7433.313–0.149x<0$	<0
	(C) = (B) − (A)		<0	
Manchu	(A) 2000	$39.180–0.089x > 0$	$68.726–0.110x > 0$	>0
	(B) 2010	–	$54.840–0.149x > 0$	>0
	(C) = (B) − (A)	<0	<0	
Mongol	(A) 2000	$65.428–0.089x > 0$	–	<0
	(B) 2010	$55.066–0.119x > 0$	–	<0
	(C) = (B) − (A)	<0		
Tibetan	(A) 2000	NA	NA	
	(B) 2010	$17.124–0.119x > 0$	–	<0
	(C) = (B) − (A)	>0		
Uyghur	(A) 2000	–	–	
	(B) 2010	$–4722.224–0.119x < 0$	$–4489.638–0.149x<0$	>0
	(C) = (B) − (A)	<0	<0	

Notes (1) The explanatory variable $\ln(\text{GDPPC}_i\text{GDPPC}_j)\text{Ethnic56}_{ij}$ as included in Annex 1 can be rewritten as $\ln(\text{GDPPC}_i\text{GDPPC}_j)(\text{Ethnic}_{ij1} + \text{Ethnic}_{ij2} + \cdots +\text{Ethnic}_{ij56})$. (2) $x = \ln(\text{GDPPC}_i\text{GDPPC}_j)$. Since GDPPC (per capita GDP) ranges between from 2,662 yuan and 13,119 yuan (for Guizhou in 2000 and 2010, respectively) to 34,547 yuan and 76,074 yuan (for Shanghai in 2000 and 2010, respectively) for all provinces, x ranges from 15.773 and 20.900 in 2000 and from 18.964 and 22.479 in 2010. (3) "–" denotes no statistically significant effect exists. (4) NA denotes not available for Tibet since the latter had no interprovincial trade via railway in 2000
Source see Annex 1 of Chap. 5

The marginal effects of the ethnic links on interprovincial exports and imports can be obtained by deriving the first-order differential of the dependent variable—$\ln(\text{EXPORT}_{ij})$ and $\ln(\text{IMPORT}_{ij})$—with respect to Ethnic_{ijk}, respectively. From Table 5.4, we may observe that the marginal effect of the Tibetan ethnic links on interprovincial exports in 2010 (denoted by $17.124–0.119x$) follows a decreasing law with respect to x (denoted by the natural log of per capita GDPs of two trading

provinces). However, this marginal effect is always positive since x is much less than $17.124/0.119 = 143.90$. In the meantime, the Tibetan ethnic links are not found to exert any influences on interprovincial imports. Obviously, this indicates that the Tibetan ethnic links tend to promote interprovincial exports vis-à-vis imports. Since the negative marginal effect of the Han ethnic links on interprovincial imports are always larger than that on interprovincial exports, it can be judged that interprovincial imports are more seriously retarded by the Han ethnic links than interprovincial exports.

The above results suggest that most of the inland Chinese provinces' exportation to Tibet is always more robust than their importation from Tibet. In the meantime, we can also conclude that it was China's inland provinces that have fostered Tibet's exportation to its neighboring nations in 2010. Unfortunately, since Tibet's interprovincial trade data are not available for the year 2000, we are not able to clarify the differences of ethnic influences on trade between 2000 and 2010.

How to explain Xinjiang's robust cross-border importation (vis-à-vis exportation) from 2006 to 2010? Different from Tibet which is mainly dominated by a single ethnic group (Tibetan), Xinjiang is ethnically diverse (see Sect. 5.4.2 for details). In order to clarify how these ethnic groups have exerted different influences on Xinjiang's interprovincial exports and imports, let us employ the estimated coefficients on seven major ethnic groups (i.e., Dongxiang, Han, Hui, Kazak, Manchu, Mongol, and Uyghur) to calculate their marginal effects on interprovincial exports and imports (see Table 5.4). Specifically, these ethnic groups' influences on trade have different patterns:

- Dongxiang: its marginal effect on imports is always larger than that on exports in 2010. And its marginal effect on imports in 2010 is always larger than that in 2000.
- Han: its marginal effects on exports and imports in 2010 are always smaller than those in 2000. And, for both years its marginal effects on imports are always smaller than those on exports.
- Hui: its marginal effect on exports in 2010 is smaller than that in 2000; by contrast, its marginal effect on imports in 2010 is larger than that in 2000.
- Kazak: its marginal effects on exports in both 2000 and 2010 cannot be determined. However, its marginal effect on imports in 2010 is always smaller than that in 2000.
- Manchu: its marginal effects on exports and imports in 2010 are always smaller than those in 2000. However, its marginal effects on imports are always larger than those on exports in both years.
- Mongol: its marginal effects on imports in both 2000 and 2010 cannot be determined. However, its marginal effect on exports in 2010 is always smaller than that in 2000.
- Uyghur: its marginal effects on exports and imports in 2010 are always smaller than those in 2000. However, its marginal effect on imports is always larger than that on exports in 2010.

After taking into account of all these ethnic groups, we may conclude that the eth-
nic determinants of inland Chinese provinces' importation from and exportation to
Xinjiang are quite complicated. Specifically, the Dongxiang and the Manchu eth-
nic groups have fostered China's inland provinces' importation from Xinjiang as
well as from its neighboring nations for which Xinjiang has served as an entrepot.
In the meantime, the Uyghur ethnic group has retarded China's inland provinces'
exportation to Xinjiang as well as to its neighboring nations for which Xinjiang
has served as an entrepot. All these have made Xinjiang different from Tibet in
terms of cross-border trade.

5.4   Understanding the Tibet Problem

5.4.1   Focusing Tibetans

The differences between two ethnic groups can be identified according to vari-
ous criteria. Obviously, linguistic difference is an important indicator. Although it
is not the only tool for building trusting relationships, doors usually open more
quickly when knocked on by someone who speaks a familiar language. Sharing
a common language, however, does not necessarily mean effective communica-
tion in technical terms. More importantly, religion can have a deep impact not
only on attitudes toward economic matters but also on values that influence them.
Specifically, religious attitudes and values help to determine what one thinks is
right or appropriate, what is important, what is desirable, and so on (Guo 2007).

   The Tibetans and the Han Chinese belong to the Mongoloid group.[13] This
group, including most peoples of East Asia and the American Indians, has been
described as having skin of saffron to yellow or reddish brown. The hair is dark,
straight. The eyes are from black to dark brown. In addition, Chinese and
Tibetan—two major languages adopted by the Han and Tibetans, respectively—
encompass the most important part of the Sino-Tibetan family of language. The
Tibetan language is spoken in numerous regional dialects which generally cannot
be understood by the speakers of the different oral forms. Although spoken
Tibetan varies according to the region, the written language, based on Classical
Tibetan, is consistent throughout. This is probably due to the long-standing influ-
ence of the Tibetan empire, whose rule embraced (and extended at times far
beyond) the present Tibetan linguistic area, which runs from northern Pakistan in
the west to Yunnan and Sichuan in the east, and from north of Lake Qinghai to
south as far as Bhutan.

---

[13]For example, the following was reported by Ben Hillman in 2008: "[W]hen I visited Lhasa's
Potala Palace a few years ago, I was surprised to find a young Han Chinese man dressed in
Tibetan costume selling tickets. When I queried him, he laughed and said, 'tourists don't know
the difference anyway'" (Hillman 2008, p. 10).

Unlike the Tibetans and the Han Chinese, the Uyghurs—the ethnic majority of Xinjiang—belong to the Caucasoid. The Caucasoid group, found in Europe, North Africa, and from the Middle East to North India, is characterized as having skin of pale reddish white to olive brown. The hair is light blond to dark brown. The color of the eyes varies from light blue to dark brown. In addition, Uyghur—one of the Turkic languages—belongs to the Ural–Altaic Phylum. The other Turkic languages adopted in Xinjiang include Kazakh, Uzbek, Kirgiz, and so on.

Religion is extremely important to the Tibetans and has a strong influence over all aspects of their lives. Tibetan Buddhism, a distinctive form of Mahayana and Vajrayana, was introduced into Tibet from the Sanskrit Buddhist tradition of northern India. Tibetan Buddhism is practiced not only in Tibet but also in Mongolia, parts of northern India, and some other parts of China. While Buddhism is adopted by both the Tibetans and the Han Chinese in most part of China, the Uyghurs and many other ethnic groups in Xinjiang are Muslims. In the mid-seventh century, Muslim Arab and Persian merchants came overland through Central Asia to today's Xinjiang, bringing with them the Islamic faith. Now, Muslim people in Xinjiang include not only the Uyghurs but several other ethnic groups such as the Uzbeks, the Kyrgyz, the Tatars, the Kazakhs, and the Hui Chinese.

In short, the Tibetans, not like the Uyghurs, have several similarities with the Han Chinese. And, since the Uyghurs, the Tibetans and the Han Chinese represent the ethnic majorities of Xinjiang, Tibet, and the other Chinese provinces as a whole, respectively, this may have largely contributed to the differing interprovincial trade patterns of Xinjiang and Tibet (see Table 5.3).

5.4.2 Tibet Is Culturally Homogeneous

Ethnic diversity is another key factor by which to distinguish Tibet and Xinjiang. Unlike Xinjiang, which is an ethnically heterogeneous place, Tibet is ethnically homogeneous, with 90 % of its population being the Tibetans.

After 1949, the Han Chinese began to return to Xinjiang. And till 1964, they comprised 33 % of the population (with the Uyghurs being 54 %), a share similar to that of the Qing times. A decade later, at the beginning of the Chinese economic reform in 1978, the demographic balance was 46 % of the Uyghurs and 40 % of the Han Chinese (Toops 2004). Military personnel are not counted and national minorities are undercounted in the Chinese population census, as in most censuses (Starr 2004, p. 242). In addition to the Uyghurs, the Han Chinese, the Kazakhs, and the Hui Chinese, other ethnic groups in the region include the Uzbeks, the Kyrgyz, the Tatars, the Mongols, the Daurs, the Dongxiang, the Russians, the Xibes, and the Manchus.

Using the method and the data shown in Annex 2 at the end of this chapter, we can calculate the ethnic diversity scores for Xinjiang and Tibet:

- Xinjiang: 0.6242 (for 2000); 0.6194 (for 2010), with a slight reduction of 0.77 % from 2000 to 2010.
- Tibet: 0.1357 (for 2000); 0.1733 (for 2010), with an increase of 27.71 % from 2000 to 2010.

Note that the increase of ethnic diversity score in Tibet mainly results from the faster growth of the Han Chinese minority (with the rate of 54.67 %) from 2000 to 2010; during the same period, however, the total amount of the Tibetan majority has only increased by 11.92 % (see Annex 2 at the end of this chapter for details). It should be noted that many of the Chinese population in Tibet were cadres and government workers sent to Tibet to participate in economic development as well as to further the PRC's political control there. Since the early 1990s, there has been another upsurge of Han immigration. There are still Han military, who are not counted in the census, and various other Han government employees. However, since the 1990s, the balance of Han immigrants has shifted to entrepreneurs or others keen to take advantage of the economic opportunities that derived from the newly invigorated policies of economic development (Iredale et al. 2001, pp. 157–158).[14]

Xinjiang is much more ethnically diverse than Tibet. Moreover, the spatial distribution of ethnic groups is quite uneven in Xinjiang. For example, the Uyghurs are the majority in southwestern Xinjiang, including the prefectures of Kashgar, Hotan, Kizilsu, and Aksu (about 80 % of Xinjiang's Uyghurs live in those four prefectures), as well as Turpan prefecture in eastern Xinjiang. The Han Chinese are the majority in eastern and northern Xinjiang (Zungar), including the cities of Urumqi, Karamay, Shihezi and the prefectures of Changji, Bortala, Bayingolin, Ili (especially the city of Kuitun), and Kumul. The Kazakhs are mostly concentrated in northern Xinjiang, especially in Altay prefecture in the northernmost part of Xinjiang (see Guo 2015, Table 5.6 for a more detailed account of Xinjiang's ethnic diversity).

There have been two divergent views on the development of multiculturally based economies. On the one hand, some global-scale cities, such as New York and Los Angeles, are amongst the most troubled in terms of racial relations; at the same time they are constant producers of innovation in the arts and business. As a matter of fact, the United States itself is an economically successful melting pot, but many of its social problems are related to racial and ethnic cleavages (Alesina and Ferrara 2005). On the other hand, the "tragedy of Africa" is, according to Easterly and Levine (1997), largely a result of ethnic conflict, which is indeed pervasive in many parts of the developing world.

It has been found that (i) religious diversity tends to retard growth in high inequality nations and to encourage growth in low inequality places; and (ii) income inequality tends to encourage growth in religious homogeneous (but not in heterogeneous) nations (Guo 2009, pp. 120–129). The above finding supports the presumption that lower inequality economies will not only be less sensitive to the

---

[14]One of the implications of this is that "many Han immigrants, possibly even most, do not stay in Tibet long. They may even stay too short a period to be counted in the census figures. That means that there are probably far more Han than the census shows" (Mackerras 2005, p. 21).

measures of religious diversity than higher inequality places in which religious diversity leads to barriers to intranational trade or, more significantly, to violence. A brief comparison of Tibet's and Xinjiang's interethnic unrest cases (see Table 6.3 of Chap. 6) can further support—at least in part—that Tibet's relatively lower frequency of social unrest has stemmed from its lower ethnic diversity or lower income inequality and that Xinjiang's relatively higher frequency of social unrest has stemmed from its higher ethnic diversity *and* higher income inequality.[15]

5.4.3 Development Policies

Historically and culturally, Tibet and Xinjiang had been quite far away from China proper. While Xinjiang has only become China's provincial administration till the 1880s, Tibet had been already an independent kingdom throughout much of the past 2,000 years. It did not come under Chinese rule until the Yuan dynasty (AD 1279–1368) and declared as an independent state from 1912 to 1950.

Since the PRC was founded in 1949, the Chinese central government has made various efforts in order to stabilize Xinjiang and Tibet and to fully assimilate them into China. At present, the Chinese central government exempts Tibet from all taxation and provides most of Tibet's government expenditures. Xinjiang has also received huge amount of fiscal subsidies from the central government.

The establishment of the Xinjiang Production and Construction Crops (XPCC), which has been organized as over a dozen of quasi-militaristic development zones, is not new in Chinese history. Similar organs had been established in the Qing dynasty (AD 1644–1911), especially during the period from AD 1760 to 1830 when "state farms" were opened and the Chinese in Xinjiang grew rapidly. At the start of the nineteenth century, there were something like 155,000 Han and Hui Chinese in northern Xinjiang, and somewhat more than twice that number of Uyghurs in southern Xinjiang (Millward 2007, p. 306). However, as described in Guo (2015, Chap. 2), the XPCC is much larger in size than Qing's state farms. With more than two and a half million of population, the XPCC is now in fact a quasi-sub-provincial level administration in Xinjiang and in China as well.

The XPCC has played a critical role in China's effective rule of Xinjiang during the most years of the PRC era. In the meantime, it has also contributed positively to Xinjiang's local economic development (Shao, 3 April 2012). But it also has negative effects on the Uyghurs, the Han Chinese living in Xinjiang as well as on

---

[15]Even though there have not been precise calculations of Xinjiang and Tibet's income inequalities, it has been generally admitted that Xinjiang's Gini coefficient (0.49) is much higher than Tibet's (0.28) (see, for example, Lu and Xu 2004; Liu et al. 2009). Clearly, this conforms to the fact that the spatial economic disparities in Xinjiang are larger than those in Tibet (shown in Table 5.4).

the Han–Uyghur relations.[16] If it was a necessary measure that the Chinese established the XPCC as quasi-militaristic development zones in politically instable areas such as Xinjiang during the early stage of the PRC, now it is time for the Chinese policymakers to reevaluate the legality of the XPCC. Along with China's calling for a harmonious society, it is not a good policy for the Chinese government to keep so many quasi-militaristic administrative zones in Xinjiang (we will discuss this issue in details in Sect. 6.3 of Chap. 6).

In general, large construction projects have different functions from the abovementioned aid programs. A large construction project, as its name suggests, will bring about huge amount of capital flows. It will also promote local economic development by stimulating the developments of both the upper and lower chains of small and medium enterprises as well as by offering a large number of jobs to local residents. Restricted by its natural and geographical conditions, Tibet has hosted far less number of China's large construction projects. The Qinghai–Tibet Railway is the only largest one that China has ever constructed in Tibet during recent history. In 2006 the construction of the 1,956 km Qinghai–Tibet Railway was completed. This stretches from Xining—capital of Qinghai province—to Lhasa, and across the Kunlun Mountains and the Tanggulashan Pass. As the world's highest railway, it makes Tibet more accessible (see Sect. 2.4 of Chap. 2 for a detailed description). In Xinjiang, China has constructed far more large construction projects.[17]

Even though it is the driving force for the fast economic development of a region as a whole, the construction of large construction projects also have several unwanted effects. First of all, as in many other authoritative places throughout the world, the construction of large state-owned industrial projects in China is always accompanied by corruption and rent-seeking activities (Rodrik 2007; Qian 2012). Second, the construction of a large project in a single place—instead of several smaller ones in different places—will, *ceteris paribus*, inevitably result in interregional economic disparities and the unequal income distribution.[18] Last but not the least, the construction of large construction projects also implies the large consumption of nonrenewable natural resources as well as the damages to the environment.

While the local communities and residents in Xinjiang may have not been the major beneficiaries of the large construction projects that China built, they may easily become the major victims whenever disasters and environmental accidents occur there. In Tibet, however, there is a different story. Compared with the large industrial projects constructed in Xinjiang, such as the West–East Gas Pipeline whose consumers are in eastern coastal areas (Guo 2015, Chap. 2), the Qinghai–Tibet Railway—the only largest infrastructure project built in Tibet till present—can benefit more local residents in Tibet. Even though the construction

---

[16]See Becquelin (2000, pp. 65–90), McMillen (1981, pp. 65–96), O'Neill (13 April 2008), Rossabi (2005), and Seymour (2000, pp 171–193) for more detailed accounts.

[17]See Guo (2015, Chap. 2) for a detailed description.

[18]As shown in the last row of Table 5.4, Xinjiang's interregional economic gap has been much larger than Tibet's.

and operation of the railway may also bring about some impacts on Tibet's fragile environment and natural ecology, these negative impacts are far less serious than those of the large industrial projects in Xinjiang.

During the past decades, the PRC has undertaken a massive, benevolent, and patriotic policy by which to encourage the wealthier eastern coast to help the western parts of China, including Tibet, catch up in prosperity and living standards. As a result, Tibet has achieved a more social and economic progress than what was usually predicted by the outside sources during the past decades. In a paper written for the United Nations High Commissioner for Refugees (UNHCR), Mackerras (2005, p. 20) points out:

> [S]ince the early 1960s, the Tibetan population has been increasing, probably for the first time for centuries. What seems to follow from this is that the TGIE's [Tibetan Government in Exile] allegations of population reduction due to Chinese rule probably have some validity for the 1950s but are greatly exaggerated. However, since the 1960s, Chinese rule has had the effect of increasing the population of the Tibetans, not decreasing it, largely due to a modernization process that has improved the standard of living and lowered infant, maternity and other mortality rates.

After more than 30 years of practice in China, the pairing-aid program has been recognized an effective management measure, especially when dealing with disaster relief and recovery work. For example, within 2 years after the Wenchuan Earthquake happened in May 2008, about 90 % of the affected infrastructure and residential areas were reconstructed (Qian et al. 2012, pp. 67–74). As described in Guo (2015, Chap. 2) and Sect. 2.1 and Annex of Chap. 2, China's pairing-aid programs have had different effects on the regional developments of Xinjiang and Tibet. Specifically, the pairing-up Tibet programs have entirely benefited the Tibetan-based areas, while the pairing-up Xinjiang programs have only partially benefited the Uyghur- and other non-Han-based areas (see Table 5.5).

China's pairing-up Tibet programs have also been combined with the other similar aid program (that is, "aid-Tibet cadres"—see Sects. 2.2 of Chap. 2 for details). All of these programs have had significant effects on the social and economic developments of Tibet, especially in its poor, rural areas. By way of contrast, the pairing-up Xinjiang programs seem to be limited to certain geographical areas and industrial sectors, not the entire Uyghur community.

What are the differences between the "inland middle-school classes for Xinjiang" program and the "inland middle schools and classes for Tibet" program? As their names suggest, as for Xinjiang, there are only inland middle school classes; as for Tibet, however, there are both inland middle schools and the inland middle school classes. For example, as of 2014, there are five inland middle schools that are solely established for Tibetan students, which are Beijing City Tibetan Middle School (Beijing municipality), Kunming Army Seminary Affiliated Tibetan Middle School (Yunnan province), Shaoxing Tibetan Middle School (Zhejiang province), Changzhou City Tibetan Ethnic Middle School (Jiangsu province), Ji'nan Tibetan Middle School (Shandong province), and Chengdu City Tibetan Middle School (Sichuan province) (see Table 2.4 of Chap. 2 for more details). However, there is still no inland middle school that is solely established for either the Uyghur or other ethnic minority students from Xinjiang.

Table 5.5   Availability of interprovincial pairing-aid programs, Tibet and Xinjiang

Province	Tibet[a]	Xinjiang	Notes on Xinjiang
Anhui	X	X	
Beijing	X	X	Partly for XPCC-14
Chongqing	X	NA	
Fujian	X	X	Mainly for Han and Hui Chinese
Gansu	X	NA	
Guangdong	X	X	Partly for XPCC-3
Guangxi	X	NA	
Guizhou	X	NA	
Hainan	X	NA	
Hebei	X	X	Entirely for XPCC-2
Heilongjiang	X	X	Mainly for Kazakhs and XPCC-10
Henan	X	X	Entirely for XPCC-13
Hubei	X	X	Mainly for Mongols and XPCC-5
Hunan,	X	X	
Inner Mongolia	X	NA	
Jiangsu	X	X	Mainly for Kirgizs, Kazakhs and XPCC-4(66)
Jiangxi	X	X	Mainly for Kirgizs
Jilin	X	X	Mainly for Kazakhs
Liaoning	X	X	
Ningxia	NA	NA	
Qinghai	X	X	
Shaanxi	X	NA	
Shandong	X	X	
Shanghai	X	X	
Shanxi	X	X	Mainly for Hui Chinese and XPCC-6
Sichuan	X	NA	
Tianjin	X	X	
Tibet	NA	NA	
Xinjiang	X	NA	
Yunnan	X	NA	
Zhejiang	X	X	Partly for XPCC-1

Notes The pairing-aid programs undertaken by China's central ministries and departments and the large state-owned enterprises are not included in this table
[a]Also includes the "aid-Tibet cadres" and the "Inland middle schools and classes for Tibetans" programs and other government-driven investment projects
Abbreviations NA = not available; XPCC = Xinjiang Production and Construction Crops; XPCC-$m(n)$ denotes the mth Agricultural Division (the nth Regiment) of the XPCC
Source Author based on Annex of Chap. 2 (for Tibet) and Guo (2015, Annex of Chap. 2) (for Xinjiang)

Table 5.6 A comparison of college entrance criteria between Tibet and Xinjiang

Type	Scores (liberal arts)		Scores (sciences)	
	Tibet	Xinjiang	Tibet	Xinjiang
Specially planned colleges	490 (H), 320 (M)	415 (H), 330 (MH), 310 (MM)	460 (H), 280 (M)	415 (H), 315 (MH), 300 (MM)
Regular colleges I				
Regular colleges II	345 (H), 278 (M)		325 (H), 242 (M)	
Regular colleges III				
Junior/technical/vocational colleges	240 (M) 320 (H),	305 (H), 300 (MH), 284 (MM)	300 (H), 210 (M)	290 (H), 284 (MH), 280 (MM)

Note Data are as of 2012
Abbreviations H = Han students, and M = minority students, MH = minority students to enter Han-dominated universities, and MM = minority students to enter minority-dominated universities
Source the College Entrance Leading Group for the Tibet and Xinjiang Students in Inland Provinces, the Ministry of Education, Beijing, China

As is shown in Table 5.6, with the exception of the Han students, in which case the College Entrance Leading Group for the Tibet and Xinjiang Students in Inland Provinces, the Ministry of Education, has set higher college entrance scores for Tibet than for Xinjiang, the minority (mainly the Tibetan) students from Tibet have received more preferential treatments than the minority (mainly the Uyghur, the Hui, the Kazak, etc.) students from Xinjiang.[19]

In addition, after quantitatively comparing the cases of Tibet (see Fig. 2.1 of Chap. 2) and of Xinjiang (see Guo 2015, Table 2.5), we may find that:

(i)   For Xinjiang, the "inland middle-school classes" program was not implemented until 2000. However, for Tibet, the "inland middle schools and classes" program was implanted in as early as 1985 (for junior classes) and 1989 (for senior classes).

(ii) After being divided by their respective total populations, the relative number of Tibet's students enrolled in the inland middle schools is much larger than that of Xinjiang's (see Fig. 5.4).

(iii) For Xinjiang, students can only enroll in inland provinces' senior middle school classes. However, for Tibet, students can enroll in both junior and senior middle school classes in inland provinces.

What do the above findings imply? They only imply that the "inland middle-schools and classes" program has had much greater effects in Tibet than in Xinjiang.

---

[19]Of course, the college entrance scores for both Tibet and Xinjiang (as shown in Table 5.6) are still far lower than those for the rest of China (see Table 2.5 of Chap. 2 for more details).
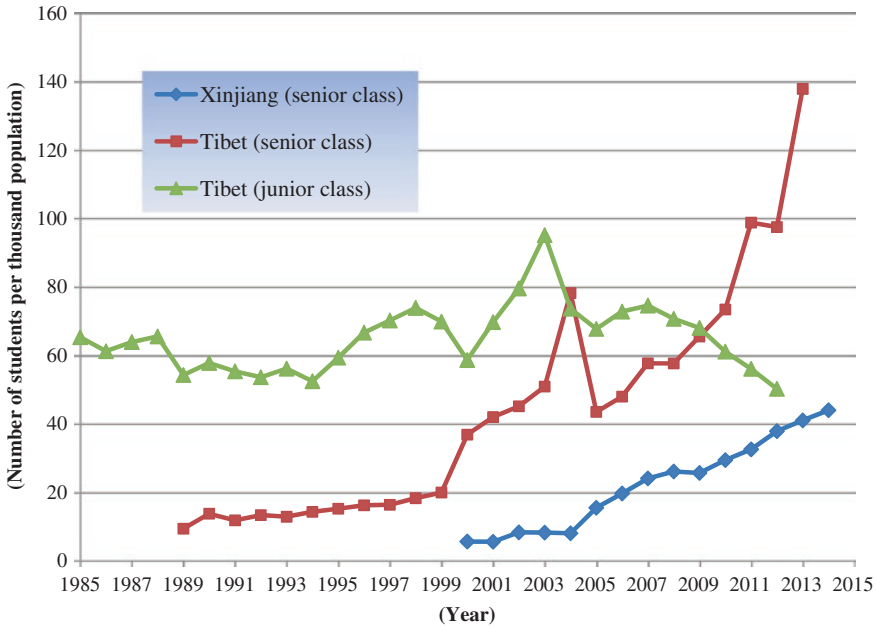
Fig. 5.4 How the "inland middle schools and classes" program differs between Xinjiang and Tibet, 1985–2014. *Source* Author based on SEAC (various years) and TBS (various years) (for Tibet) and Guo 2015, (Table 2.5) and XBS (various years) (for Xinjiang)

5.4.4 Interethnic Policy

Chinese history is dotted with examples of interethnic marriage as a strategy to maintain peace and harmony. One of the most famous stories is the marriage between Chinese Princess Wencheng of the Tang dynasty (AD 618–907) and Songtsan Gambo (AD 604–650), then king of the Tibetan empire, which sealed a peace treaty between China and Tibet.

Since the first Han–Tibetan marriage in AD 641, more than 1000 years have passed. In the summer of 2014, officials in Tibet autonomous region began to reemphasize ethnically mixed couples. So far, the government push has seen some success. According to a report released by the Research Office of the Tibetan CCP Committee, the interethnic (mainly Han–Tibetan) marriages have been growing dramatically in Tibet, from 666 cases in 2008 to 4,795 cases in 2013, with an average annual growth rate of 48.8 % for this period. Among the married couples are civil servants, staff of enterprises and institutions, as well as urban residents, farmers, and herdsmen.[20]

The local governments in Tibet have also been offering a series of favorable treatments to these intermarriage couples and their children. This includes a series of

---

[20]Cited from *Tibet Daily*, August 5, 2014. Available at http://www.guoxue.org/index.php?s=/New/see/id/5931. Accessed on 2014-9-2.

preferential policies on birth control, education, employment, social security, and so on, all of which are to encourage the interethnic exchange and marriages between the Tibetan, the Han, the Hui, and other ethnic minorities in Tibet. The government-run newspapers in Tibet have featured happy mixed couples in which the children of intermarriage families love both cultures and equally speak Tibetan and Mandarin.

The following story, for example, was reported by the *Tibet Daily*—an official newspaper of Tibet autonomous region's Party Committee:

> The deep, blue sky is dotted by pieces of white clouds … For a long time, the sacred and beautiful scenes of Tibet—the roof of the world—had attracted Zhang Jiajia who was a Han student from an inland college. Finally, she decided to come to Yala town of Suo county, Nagqu prefecture, and married a Tibetan guy there.
>
> In August 2009, after her graduation, Zhang got a job in Tibet. At first, she did not adapt to the local habits there. Without knowing Tibetan language, she could not communicate with the Tibetans. But the local residents liked the young girl and gave many helps to her. And, gradually, Zhang was accustomed to eating tsampa and butter tea and learn to communicate with local Tibetans through body language. At the end of 2009, Zhang met Kelsang Wangdu who is an official in charge of the Gajia Temple. Both of them had favorable impressions to each other. As a graduate from an inland middle school and thus being fluent in Chinese, Kelsang gave various supports to Zhang. With this help, Zhang began to have a deeper understanding of Tibet and its people.
>
> In March 2010, Zhang decided to marry Kelsang. At first, none of their parents agreed this marriage. But, with some persuasive efforts, the young couple smoothly completed their Tibetan- and Han-style wedding ceremonies in Yala town and Zhang's hometown in Henan province, respectively. On September 2, 2011, their son, Zhang Lingxiao, was born.
>
> Now, their baby is almost 3 years old, and he has been learning both Tibetan and Chinese languages. Having spent his winter in Henan and his summer in Tibet, the Han–Tibetan boy is quite proud of his special identity: "my father is a Tibetan and my mother is a Han… my *yeye* [father's father] and *nainai* [father's mother] teach me to cook cottage cheese, butter tea, and to speak in Tibetan language; my *laolao* [mother's mother] and *laoye* [mother's father] in Henan make dumplings and noodles for me, and they teach me Chinese language as well."[21]

The government has sold the effort in state-run media as a way to achieve interethnic unity, but critics have argued that its true aim is to further weaken Tibetan culture. Tsering Woeser—a Tibetan poet, and an activist who has frequently clashed with Chinese authorities—likened the promotion of intermarriage to the worst practices of colonization. Woeser herself is married to a Han Chinese, dissident writer, Wang Lixiong. But she said that the authorities should not use intermarriage as a tool and neither should they create policies to encourage it. She compared the Han–Tibetan marriages to the Japanese police being encouraged to marry local women during Japan's occupation of Taiwan.[22]

For a long period of time, especially during the early PRC era, the Chinese government responded to ethnic unrest in Xinjiang and Tibet with a familiar strategy:

---

[21]Translated by author based on Xie (14 June 2014)—the English version is slightly shortened in length.

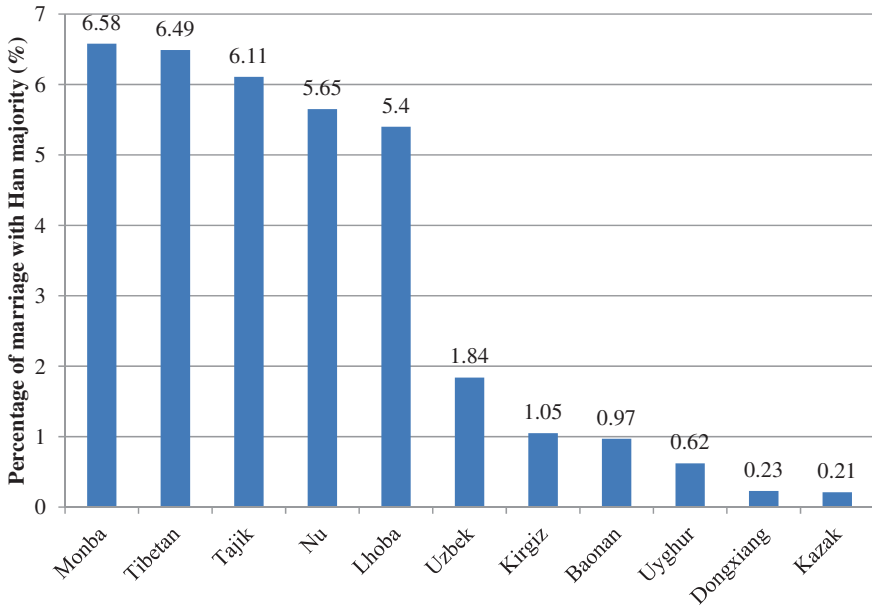[22]Cited from Wan and Xu (16 August 2014).

Fig. 5.5 The ethnic minorities with the lowest percentages of interethnic marriages with the Han majority. *Source* Author based on the Fifth National Population Census, 2001

that some suffocating security controls were put in place, that significant investment and assistance were promised in development and infrastructure, and that more Han majority were migrated into both regions. Recently, it seems that China has shifted its policy toward a concept of "interethnic fusion," which is a move away from China's long-standing idea of "separate but equal" ethnicities and toward a more American-style concept of a "melting pot" (Denyer, September 1 2014).

According to the Fifth National Population Census, the percentage of Tibetan's intermarriages with the Han majority is 6.49 %, which is among the highest of all ethnic minorities in Tibet and Xinjiang (see Fig. 5.5). At present, it is still too early to tell if this interethnic policy will become successful. However, it seems that this policy has been more successful in Tibet (if the above story is true and can be successfully duplicated in Tibet) than in Xinjiang.[23]

5.5 Policy Implications

In this chapter, Xinjiang and Tibet are compared in various aspects—natural environment, geopolitics, economic development, ethnicity, and religion. The rationale for the inclusion of Tibet and Xinjiang is that both of them are the ethnic minority

[23]For a detailed analysis of the intermarriages of Xinjiang, see Guo (2015, Sect. 5.4.4).

regions that pose the most enduring separatist challenge to the Chinese government (see Clarke (2013) for a more detailed analysis).

When different peoples meet together, it does not always indicate a conflict. However, conflict and disagreement do occur more often in heterogeneous places than in homogeneous places, especially in China's far western regions. Uyghur independence activists claim that the Han population will dilute the Uyghur character of the region. But the Han and the Hui Chinese—who mostly live in northern Xinjiang (also called Zungar) and are separated from areas of historical Uyghur dominance south of the Tian Shan mountains (southwestern Xinjiang)—may insist that their ancestors arrived in the eastern portions of the Tarim basin about 3,000 years ago.

During the past decades, the Uyghur and Tibetan ethnic groups have been labeled as of "problematic" in China and have had cliques seeking the separations of Xinjiang and Tibet from China, respectively. In this chapter, we have found that the Tibetans (with a positively estimated coefficient in Table 4.6 (2010) of Chap. 4) are helpful for China's interprovincial economic integration and that the Uyghurs (with a negatively estimated coefficient in Table 4.6 (2010) of Chap. 4) are found to play a negative role in China's interprovincial economic integration. It must be noted that the above results do not imply that the Tibetans are satisfactory with their current political and cultural conditions; neither do they suggest that most people in Xinjiang want an independent state for themselves.

The findings presented at this chapter would be useful for policymakers to reappraise which of China's ethnic groups are playing the most (least) important roles in, and to introduce the optimal informal institutions into, the promotion of interprovincial economic cooperation in China. Since there are so many differences in Xinjiang and Tibet, this chapter calls for different strategies toward these two non-Han ethnic autonomous regions. Definitely, differentiated policies will not only help Xinjiang and Tibet to enhance the spatial economic efficiencies of their own, but they will also eventually benefit China as a whole. Specifically, the development policies toward Xinjiang and Tibet can be optimized as the following.

First, given that Xinjiang's ethnic (and also religious) diversity is already very high, Xinjiang's income inequality would be harmful to its social stability and economic development. In this case, substantial measures must be taken in order to reduce the chance of interethnic clash in Xinjiang.[24]

Second, as Tibet has a very low ethnic (and also religious) diversity score, it can tolerate a relatively high level of income inequality. In other words, policymakers are able to consider more radical reform and development measures in order to promote the economic development in Tibet.

A more detailed analysis of Tibet will be conducted in the next chapter.

---

[24]See Guo (2015, Chap. 6) for a detailed analysis of Xinjiang.

Annex

A.1 Regressions for Interprovincial Export and Import, 2000 and 2010

The following four tables report the estimated results using the data shown in Annex of Chap. 4 (Tables 5.7, 5.8, 5.9, 5.10).

Table 5.7 Regression for interprovincial export, 2000

Explanatory variable	Coefficient	SE	VIF
Constant	6.595	1.060[a]	
$\ln(GDP_i GDP_j)$	0.819	0.058[a]	2.703
$\ln(DISTANCE_{ij})$	−1.150	0.110[a]	2.597
$ADJACENT_{ij}$	0.351	0.176[b]	2.183
$\ln(GDPPC_i GDPPC_j)ETHNIC56_{ij}$	−0.089	0.020[a]	2.747
Bai	−760.910	446.189[c]	9.681
Blang	−182781.261	97340.146[c]	2.624
Buyi	155.540	1456.949	8.338
Dai	−18185.339	17752.257	6.894
Daur	660.850	772.891	1.324
Dong	74.658	81.830	2.500
Dongxiang	762.334	573.453	4.511
Gelao	19470.916	11851.492[c]	8.759
Hani	−13571.259	13963.630	3.955
Hui	20.287	5.564[a]	1.582
Jingpo	140353.281	98998.902	3.484
Kazak	−13467.204	13562.079	7.667
Kirgiz	−1684.449	23041.700	1.274
Korean	58.256	82.331	1.764
Lahu	−11570.940	40399.474	4.536
Li	−21719.708	10536.653[b]	3.925
Lisu	4129.284	7412.855	4.048
Manchu	39.810	13.167[a]	2.133
Maonan	83.656	1347.899	1.936
Miao	71.785	40.421[c]	7.428
Mongol	65.428	30.564[b]	1.577
Qiang	−17980.181	19314.076	2.304
She	98.786	179.618	1.142
Tibetan	92.398	41.375[b]	1.865
Tu	−446.159	1235.122	3.179
Tujia	−22.363	13.605[c]	2.234
Uyghur	635.522	2649.800	1.470

(continued)

Table 5.7 (continued)

Explanatory variable	Coefficient	SE	VIF
Va	11635.832	15894.735	3.390
Xibe	−234.930	483.307	1.190
Yao	−16.717	91.830	2.116
Yi	56.901	44.327	4.779
Zhuang	25.434	40.441	1.813
Coefficient of correlation (R^2)	0.692		
SE of regression	0.857		
F-statistic	23.020		
Sig. of regression	0.000		
Number of observations	405		

Notes The regression is done by ordinary least squares (OLS) method. Dependent variable is the natural log of interprovincial export in 2000. SE = standard error; VIF = variance inflation factor. The "Han," "Mulao," "Naxi," "Salar," and "Shui" variables with VIFs above 10 are omitted from the regression. [a], [b], and [c] denote statistically significant at greater than the 1, 5, and 10 % levels, respectively

Table 5.8 Regression for interprovincial import, 2000

Explanatory variable	Coefficient	SE	VIF
Constant	8.003	1.094[a]	
$\ln(GDP_iGDP_j)$	0.699	0.060[a]	2.703
$\ln(DISTANCE_{ij})$	−1.118	0.114[a]	2.597
$ADJACENT_{ij}$	0.219	0.182	2.183
$\ln(GDPPC_iGDPPC_j)ETHNIC56_{ij}$	−0.100	0.021[a]	2.747
Bai	−949.340	460.489[b]	9.681
Blang	−81385.096	100459.722	2.624
Buyi	−1794.339	1503.641	8.338
Dai	−29597.036	18321.184[c]	6.894
Daur	1977.710	797.661[a]	1.324
Dong	38.569	84.453	2.500
Dongxiang	1615.179	591.832[a]	4.511
Gelao	22890.425	12231.311[c]	8.759
Hani	−34531.277	14411.139[b]	3.955
Hui	2.849	5.743	1.582
Jingpo	495810.433	102171.638[a]	3.484
Kazak	−8014.516	13996.719	7.667
Kirgiz	−38077.094	23780.145[c]	1.274
Korean	−166.955	84.969[b]	1.764
Lahu	10679.459	41694.204	4.536
Li	−25836.816	10874.333[b]	3.925
Lisu	5889.771	7650.423	4.048
Manchu	68.726	13.589[a]	2.133

Table 5.8 (continued)

Explanatory variable	Coefficient	SE	VIF
Maonan	2313.609	1391.097[c]	1.936
Miao	60.626	41.717	7.428
Mongol	4.097	31.543	1.577
Qiang	−7207.410	19933.057	2.304
She	3.652	185.374	1.142
Tibetan	27.170	42.701	1.865
Tu	−64.798	1274.705	3.179
Tujia	−6.111	14.041	2.234
Uyghur	341.386	2734.722	1.470
Va	10685.150	16404.132	3.390
Xibe	−2.107	498.796	1.190
Yao	5.552	94.773	2.116
Yi	68.282	45.748	4.779
Zhuang	32.165	41.738	1.813
Coefficient of correlation (R^2)	0.638		
SE of regression	0.885		
F-statistic	18.058		
Sig. of regression	0.000		
Number of observations	405		

Notes The regression is done by ordinary least squares (OLS) method. Dependent variable is the natural log of interprovincial import in 2000. SE = standard error; VIF = variance inflation factor. The "Han," "Mulao," "Naxi," "Salar," and "Shui" variables with VIFs above 10 are omitted from the regression. "a", "b", and "c" denote statistically significant at greater than the 1, 5, and 10 % levels, respectively

Table 5.9 Regression for interprovincial export, 2010

Explanatory variable	Coefficient	SE	VIF
Constant	4.885	1.515[a]	
$\ln(GDP_i GDP_j)$	0.868	0.078[a]	3.389
$\ln(DISTANCE_{ij})$	−1.148	0.147[a]	2.871
$ADJACENT_{ij}$	0.507	0.229[b]	2.108
$\ln(GDPPC_i GDPPC_j)ETHNIC56_{ij}$	−0.119	0.021[a]	3.554
Bai	−613.510	387.083	3.793
Blang	−8718.239	8560.834	1.486
Buyi	2323.611	860.947[a]	6.579
Dai	−4637.048	6539.570	3.423
Daur	1208.476	1138.550	1.226
Dong	98.081	106.625	2.273
Dongxiang	610.299	489.701	1.909
Gelao	−13505.988	5030.687[a]	5.937
Hani	8167.987	10370.989	5.706

Table 5.9 (continued)

Explanatory variable	Coefficient	SE	VIF
Hui	19.307	7.616[a]	1.502
Jingpo	9909.153	38883.464	2.068
Kazak	−3332.796	3667.967	1.907
Kirgiz	−27068.949	21962.448	1.203
Korean	71.405	120.672	1.697
Lahu	1924.840	31583.749	5.350
Li	−49.698	306.809	1.103
Lisu	−7509.658	8224.292	4.031
Manchu	22.090	20.327	2.046
Maonan	3273.855	1974.582[c]	1.877
Miao	48.015	39.163	4.620
Mongol	55.066	41.385	1.459
Naxi	644.792	9602.879	2.386
Qiang	3243.565	13475.109	2.309
She	445.364	285.042	1.277
Shui	−5595.609	3402.173[c]	3.622
Tibetan	17.124	5.098[a]	1.190
Tujia	−8.788	16.643	1.843
Uyghur	−4722.224	2105.352[b]	1.291
Va	−30004.668	13393.614[b]	4.922
Xibe	−68.108	769.974	1.195
Yao	70.182	118.142	1.974
Yi	87.951	45.220[b]	3.442
Zhuang	96.058	49.926[b]	1.715
Coefficient of correlation (R^2)	0.556		
SE of regression	1.156		
F-statistic	14.196		
Sig. of regression	0.000		
Number of observations	451		

Notes The regression is done by ordinary least squares (OLS) method. Dependent variable is the natural log of interprovincial export in 2010. SE = standard error; VIF = variance inflation factor. The "Han," "Mulao," "Salar," and "Tu" variables with VIFs above 9 are omitted from the regression. "a", "b", and "c" denote statistically significant at greater than the 1, 5, and 10 % levels, respectively

Table 5.10 Regression for interprovincial import, 2010

Explanatory variable	Coefficient	SE	VIF
Constant	8.934	1.608[a]	
$\ln(GDP_iGDP_j)$	0.755	0.080[a]	3.034
$\ln(DISTANCE_{ij})$	−1.372	0.152[a]	2.695
$ADJACENT_{ij}$	0.251	0.238	2.130
$\ln(GDPPC_iGDPPC_j)ETHNIC56_{ij}$	−0.149	0.023[a]	3.056
Bai	−791.995	405.691[b]	3.824
Blang	−13201.843	8930.512	1.485
Buyi	1771.032	897.155[b]	6.583
Dai	−9046.386	6193.076	3.123
Daur	2412.806	1157.321[b]	1.163
Dong	−39.013	111.363	2.277
Dongxiang	1708.348	518.020[b]	1.972
Gelao	−7943.123	5259.897	5.994
Hani	7676.700	10712.254	5.596
Hui	14.502	7.946[c]	1.503
Jingpo	54498.460	40674.281	2.040
Kazak	−7433.313	4147.905[c]	7.676
Kirgiz	4123.559	3367.084	6.191
Korean	−218.037	125.806[c]	1.692
Lahu	33552.767	33373.530	5.448
Li	−758.185	320.527[b]	1.106
Lisu	−7250.915	8595.609	4.044
Manchu	54.840	21.219[a]	2.045
Maonan	6708.817	2060.374[a]	1.876
Miao	55.448	40.931	4.657
Mongol	30.480	43.378	1.470
Naxi	3012.143	10158.051	2.406
Qiang	−9203.970	14337.173	2.323
She	520.898	296.784[c]	1.271
Shui	−8706.201	3547.775[b]	3.613
Tibetan	1.214	5.354	1.205
Tujia	0.553	17.366	1.843
Uyghur	−4489.638	2164.083[b]	1.243
Va	−47127.865	14282.604[a]	5.148
Xibe	−419.181	802.744	1.193
Yao	125.010	123.302	1.974
Yi	92.856	47.564[b]	3.496
Zhuang	84.894	52.078[c]	1.715
Coefficient of correlation (R^2)	0.536		

Table 5.10 (continued)

Explanatory variable	Coefficient	SE	VIF
SE of regression		1.207	
F-statistic		12.449	
Sig. of regression		0.000	
Number of observations		451	

Notes: The regression is done by ordinary least squares (OLS) method. Dependent variable is the natural log of interprovincial import in 2010. SE = standard error; VIF = variance inflation factor. The "Han," "Mulao," "Salar," and "Tu" variables with VIFs above 9 are omitted from the regression. "a", "b", and "c" denote statistically significant at greater than the 1, 5, and 10 % levels, respectively

A.2 Measuring Ethnic Diversity

There are several different methods for the measurement of ethnic diversity (Guo 2009, pp. 113–118). The simplest method is derived from the number of ethnic groups: thus, the ethnic diversity of a society is positively related to the number of ethnic groups involved. However, this method ignores the influence of population composition among all ethnic groups. For example, given two societies having the same number of ethnic groups, but that in which population is equally distributed among all ethnic groups might be more ethnically diverse than one in which population is unevenly distributed among an ethnic *majority* and much smaller ethnic minorities. To demonstrate this point, let us consider an extreme case in which the ethnic majority accounts for almost 100 % of the total population, while each of the minorities retains a tiny share. Such a society can only be defined as an ethnically homogeneous, no matter how many minority groups exist.

The second method defines ethnic diversity in relation to the population ratio of the largest ethnic group. In many cases, the lower the ratio of the largest ethnic group, the greater the ethnic diversity it implies. However, as it only takes account of one (that is, the largest) ethnic group, this method may miscalculate the ethnic diversity when two or more large ethnic groups exist simultaneously. Although the understanding of ethnic diversity may vary according to the perspective taken, the number of ethnic groups and their populations should be taken into account simultaneously.

In this research, we use the ethnic fractionalization index, which measures the probability that two individuals who meet at random will be from different ethnic groups (Mauro 1995; Easterly and Levine 1997; La Porta et al. 1999; Bluedorn 2001; Ottaviano and Peri 2004; Alesina and Ferrara 2005; and Montalvo and Reynal-Querol 2005). Specifically, the ethno diversity measure is defined as follows:

$$\text{Diversity} = 1 - \sum_{i=1}^{N} S_i^2 \tag{6.1}$$

where s_i is the share of group i over the total of the population. This index represents the probability that two randomly drawn individuals from the population belong to different ethnic groups. This index reaches a theoretical maximum of 1 when every individual belongs to a different group. This measure implies that a country composed of, say, 100 equally sized groups is more fractionalized than a country with two equally sized groups.

Using Eq. (6.1) and data shown in Table 5.11, we may calculate the ethnic diversity scores for Xinjiang and Tibet, which are shown in Table 5.12 in which the diversity scores of other Chinese provinces are also given.

Table 5.11 Ethnic populations of Xinjiang and Tibet, 2000 and 2010

Ethnic group	Xinjiang (in persons)			Tibet (in persons)		
	2000	2010	Change (%)	2000	2010	Change (%)
Achang	2	5	150.00			NA
Bai	409	407	−0.49	722	395	−45.29
Baonan	571	568	−0.53	24	15	−37.50
Blang	9	23	155.56	16	4	−75.00
Buyi	977	797	−18.42	437	81	−81.46
Dai	59	121	105.08	14	35	150.00
Daur	5541	5536	−0.09	3	5	66.67
Deang	14	3	−78.57	1		−100.00
Derung	51	11	−78.43	6	37	516.67
Dong	946	753	−20.40	66	179	171.21
Dongxiang	55841	61613	10.34	111	757	581.98
Ewenki	72	26	−63.89			NA
Gaoshan	41	44	7.32		2	NA
Gelao	110	260	136.36	32	27	−15.63
Han	7489919	8829994	17.89	158570	245263	54.67
Hani	62	190	206.45	24	23	−4.17
Hezhe	22	33	50.00	1		−100.00
Hui	839837	983015	17.05	9031	12630	39.85
Jing	12	69	475.00		5	NA
Jingpo	27	33	22.22			NA
Jino		3	NA		1	NA
Kazak	1245023	1418278	13.92	8	2143	26687.50
Kirgiz	158775	180472	13.67		2678	NA
Korean	1463	1128	−22.90	51	26	−49.02
Lahu	28	73	160.71	19	4	−78.95
Lhoba	33	4	−87.88	2691	3489	29.65
Li	115	418	263.48	3	26	766.67
Lisu	34	104	205.88	17	25	47.06

(continued)

Table 5.11   (continued)

Ethnic group	Xinjiang (in persons)			Tibet (in persons)		
	2000	2010	Change (%)	2000	2010	Change (%)
Manchu	19493	18707	−4.03	153	718	369.28
Maonan	9	28	211.11		1	NA
Miao	7006	7626	8.85	389	416	6.94
Monba	11	4	−63.64	8481	9663	13.94
Mongol	149857	156280	4.29	690	307	−55.51
Mulao	29	77	165.52	5	2	−60.00
Naxi	73	89	21.92	1223	1133	−7.36
Nu	18	58	222.22	408	492	20.59
Oroqen	14	12	−14.29			NA
Pumi	10	12	20.00	15	16	6.67
Qiang	284	317	11.62	20	94	370.00
Russian	8935	8489	−4.99	20	3	−85.00
Salar	3762	3728	−0.90	228	255	11.84
She	166	167	0.60	6	8	33.33
Shui	301	90	−70.10		14	NA
Tajik	39493	47261	19.67	4		−100.00
Tatar	4501	3242	−27.97			NA
Tibetan	6153	8316	35.15	2427168	2716388	11.92
Tu	2837	3455	21.78	335	1068	218.81
Tujia	15787	17850	13.07	303	451	48.84
Uyghur	8345622	10001302	19.84	701	205	−70.76
Uzbek	12096	5444	−54.99	1	2	100.00
Va	68	142	108.82	7	43	514.29
Xibe	34566	34399	−0.48		6	NA
Yao	723	942	30.29	26	137	426.92
Yi	1593	2954	85.44	287	396	37.98
Yugur	302	391	29.47	3	4	33.33
Zhuang	5642	5646	0.07	192	173	−9.90

Notes Banks denote no population is found. NA = not available
Source The Fifth and Sixth National Population Census of the PRC (conducted in 2000 and 2010, respectively)

Table 5.12 Ethnic diversity scores by province (2000 and 2010)

Province	2000	2010	Change (%)
Anhui	0.0134	0.0132	−1.49
Beijing	0.0838	0.0795	−5.13
Chongqing	0.1227	0.1272	3.67
Fujian	0.0338	0.0425	25.74
Gansu	0.1645	0.1764	7.23
Guangdong	0.0295	0.0391	32.54
Guangxi	0.5140	0.5055	−1.65
Guizhou	0.5876	0.5481	−6.72
Hainan	0.2932	0.2804	−4.37
Hebei	0.0841	0.0806	−4.16
Heilongjiang	0.0945	0.0700	−25.93
Henan	0.0248	0.0236	−4.84
Hubei	0.0840	0.0830	−1.19
Hunan	0.1894	0.1866	−1.48
Inner Mongolia	0.3433	0.3377	−1.63
Jiangsu	0.0071	0.0097	36.62
Jiangxi	0.0062	0.0068	9.68
Jilin	0.1714	0.1504	−12.25
Liaoning	0.2785	0.2655	−4.67
Ningxia	0.4564	0.4604	0.88
Qinghai	0.6307	0.6351	0.70
Shaanxi	0.0099	0.0101	2.02
Shandong	0.0140	0.0151	7.86
Shanghai	0.0126	0.0238	88.89
Shanxi	0.0063	0.0052	−17.46
Sichuan	0.0966	0.1169	21.01
Tianjin	0.0531	0.0503	−5.27
Tibet	0.1357	0.1733	27.71
Xinjiang	0.6242	0.6194	−0.77
Yunnan	0.5405	0.5402	−0.06
Zhejiang	0.0171	0.0437	155.56

References

Alesina A, Ferrara EA (2005) Ethnic diversity and economic performance. J Econ Lit 43(3):762–800

Askci (2013) The Qinghai-Tibet railway has made a new breakthrough in both passengers and cargos transportation" (in Chinese). China Business Intelligence Network (Askci). Available at http://www.askci.com/news/201301/21/211092956370.shtml. Assessed on 12 May 2013

Becquelin N (2000) Xinjiang in the nineties. China J 44:65–90

Bluedorn JC (2001) Can democracy help? Growth and ethnic divisions. Econ Lett 70:121–126

Cihai (1999), Cihai. Shanghai Cishu Press, Shanghai

Clarke M (2013) Ethnic separatism in the People's Republic of China: History, causes and contemporary challenges. Eur J East Asian Stud 12:109–133

Cnradio (10 November 2006) News—Qingzang railway transported 0.73 M passengers, boosts Tibet economy (in Chinese). Available at http://www.cnradio.com.cn/2004news/internal/200611/t20061110_504324840.html. Accessed 15 Apr 2013

Denyer S (1 September 2014) China's campaign for mixed marriages spreads to troubled Xinjiang. Washington Post, Washington, DC. Available at http://www.washingtonpost.com/blogs/worldviews/wp/2014/09/01/chinas-campaign-for-mixed-marriages-spreads-to-troubled-xinjiang/. Accessed on 2 Sept 2014

Easterly W, Levine R (1997) Africa's growth tragedy: Policies and ethnic division. Q J Econ 112:1203–1250

Guo R (2007) Linguistic and religious influences on foreign trade: Evidence from East Asia. Asian Econ J 21(1):100–121

Guo R (2009) Intercultural economic analysis: Theory and method. Springer, New York

Guo R (2012) Territorial disputes and conflict management: The art of avoiding war. Routledge, London

Guo R (2013a) Regional China: a business and economic handbook. Palgrave-Macmillan, London

Guo R (2013b) Understanding the Chinese economies. Academic Press/Elsevier, Oxford

Guo R (2015) China's spatial disintegration: political economy of the interethnic unrest in Xianjiang., Elsevier Asian Studies series. Elsevier, Oxford

Gupta S (11 May 2011) Army warns PM: China can deploy 500,000 troops on LAC. The Indian Express, New Delhi. Available at: http://www.indianexpress.com/news/army-warns-pm-china-can-deploy-500000-troops-on-lac/788722/. Accessed 1 May 2013

Heston A, Summers R, Aten B (2012) Penn World Table Version 7.1, Center for International Comparisons of Production, Income and Prices at the University of Pennsylvania, July. Available at http://pwt.econ.upenn.edu/php_site/pwt71/pwt71_form.php. Accessed 1 May 2012

Hillman B (2008) Money can't buy Tibetans' love. Far East Econ Rev 171(3):8–16

Iredale RN, Bilik F, Guo S Wang, Hoy C (2001) Contemporary minority migration, education and ethnicity in China. Edward Elgar, Cheltenham

La Porta R, Lopez de Silanes F, Shleifer A, Vishni RW (1999) The quality of government. J Law Econ Organ 15(1):222–279

Lama D (1996) Misconceptions on the Tibetan issue. In: Shiromany AA (ed) The spirit of Tibet, vision for human liberation: selected speeches and writing of HH the XIV Dalai Lama. Tibetan Parliamentary and Policy Research Center, New Delhi, pp 47–51

Liu Q, Zhu Y, Wang Z, Dong Y (2009) A study of China's regional economic disequilibrium, extremity, and its evolutions (in Chinese). Stat Decis No. 12, pp 1–12

Lu F, Xu J (2004) China's regional economic disparities: evidence from the Gini and the Theil coefficients. The Working Papers of RCEWCC, vol. 1. East China Normal University, Shanghai

Ma R (1996) Population and society of Tibet (in Chinese). Tongxin Press, Beijing

Mackerras CP (2005) People's Republic of China: Background paper on the situation of the Tibetan population, A Writenet Report commissioned by United Nations High Commissioner for Refugees, Protection Information Section (DIP). Available at http://www.unhcr.org/cgi-bin/texis/vtx/refworld/rwmain/opendocpdf.pdf?docid=423ea9094. Accessed 25 Apr 2013

Mauro P (1995) Corruption and growth. Q J Econ 110:681–712

McMillen, Donald H (1981) Xinjiang and the Production and Construction Corps: A Han organization in a non-Han region. Aust J Chin Aff 6:65–96

Millward JA (2007) Eurasian crossroads: a history of Xinjiang. Columbia University Press, New York

Montalvo JG, Reynal-Querol M (2005) Ethnic polarization, potential conflict and civil war. Am Econ Rev 95(3):796–816

O'Neill M (13 April 2008) The conqueror of China's wild west. Asia Sentinel. Available at: http://www.asiasentinel.com/index.php?option=com_content&task=view&id=1148&Itemid=31. Accessed 13 Mar 2013

Ottaviano G, Peri G (2004) The economic value of cultural diversity: evidence from US cities. NBER Working Paper No. 10904 (November), National Bureau of Economic Research, Cambridge

Pradhan SB (12 October 2009) Extend Tibet railway line to Kathmandu, Nepal tells China. The Indian Express, Kathmandu. Available at: http://www.indianexpress.com/news/extend-tibet-railway-line-to-kathmandu-nepal-tells-china/527936/. Accessed 1 May 2013

Qian X, Zhuo W, Yamada K, Wang Q (2012) Pairing aid system in disaster relief and recovery management: lessons from Wenchuan earthquake in China. In: Proceedings of international conference on disaster management. Available at: http://iiirr.ucalgary.ca/files/iiirr/A3-2_.pdf. Accessed 2 Mar 2013

Qian W (2012) Comparative case studies of rent-seeking in China's state-owned enterprises: the Ministry of Railway and China Mobile. CMC Senior Teses. Paper 498. Available at: http://scholarship.claremont.edu/cmc_theses/498. Accessed 26 Mar 2013

Rodrik D (2007) Normalizing industrial policy. Draft, Harvard University. Available at: http://www.hks.harvard.edu/fs/drodrik/Research%2520papers/Industrial%2520Policy%2520_Growth%2520Commission_.pdf. Accessed 25 Mar 2013

Rossabi M (2005) Governing China's multiethnic frontiers. University of Washington Press, Seattle

Seymour, JD (2000) Xinjiang's production and construction corps, and the sinification of Eastern Turkestan, vol 2. Innner Asia, pp 171–193

Shao W (3 April 2012) XPCC ranks second among China's provincial economic growth rates (in Chinese). China Daily, Beijing. Available at: http://www.chinadaily.com.cn/dfpd/2012-04/03/content_14974971.htm. Accessed 16 Apr 2013

Starr SF (2004) Xinjiang: China's Muslim Borderland. New York, M.E, Sharpe

TBS (Tibet Bureau of Statistics) (2001) Tibet statistical yearbook 2000. China Statistics Publishing House, Beijing

TBS (Tibet Bureau of Statistics) (2011) Tibet statistical yearbook 2010. China Statistics Publishing House, Beijing

Toops S (2004) Demographics and development in Xinjiang after 1949. East-West Center, Washington, DC. Working Papers (East-West Center), Available at: http://www.eastwestcenter.org/fileadmin/stored/pdfs/EWCWwp001.pdf. Accessed 15 Mar 2013

UNDP, 2010, China Human Development Report 2009/2010. United Nations Development Program (UNDP) and Renmin University of China, Beijing

Wan W, Yangjingjing X (16 August 2014) China promotes mixed marriages in Tibet as way to achieve 'unity'. Washington Post, Washington, DC. Available at http://www.washingtonpost.com/world/asia_pacific/china-promotes-mixed-marriages-in-tibet-as-way-to-achieve-unity/2014/08/16/94409ca6-238e-11e4-86ca-6f03cbd15c1a_story.html. Accessed on 2 Sept 2014

XBS (Xinjiang Bureau of Statistics) (2001) Xinjiang statistical yearbook 2000. China Statistics Publishing House, Beijing

XBS (Xinjiang Bureau of Statistics) (2011) Xinjiang statistical yearbook 2010. China Statistics Publishing House, Beijing

Xie W (14 June 2014) Zhang Jiajia and Gesang Wangdui: A love song rises above the Suoqu river (in Chinese). Tibet Daily, Lhasa, Tibet. Available at http://epaper.chinatibetnews.com/xzrb/html/2014-06/14/content_547250.htm. Accessed on 2 Sept 2014

XPCC (2001) Xinjiang production and construction crops statistical yearbook 2000. China Statistics Publishing House, Beijing

Chapter 6
Ethnic Autonomy and Tibet: Policy Options

Abstract China has made various efforts to keep its peripheral, non-Han Chinese areas under its effective control and to achieve a harmonious society for China as a whole. However, till present, the costs spent are quite high and the outcomes achieved are not so encouraging in Tibet autonomous region (TAR). Given the TAR's low levels of ethnic (and also religious) diversity and of economic inequality—all being foundations for a stable harmonious society, we suggest that policymakers should consider more radical reforms that may generate incentives to promote the local political and economic developments in the TAR. This chapter also compares a series of policy options aiming to upgrade the TAR's political autonomy and to re-allocate the Tibetan autonomous prefectures (TAPs) and the Tibetan autonomous counties (TACs) outside the TAR. At last, the Dalia Lama's role in the long-term development of all Tibetan areas is discussed.

6.1 Regional Ethnic Autonomies in China

6.1.1 Evolution and Organization

In 1947, China's first, and ethnically based, autonomous region, Inner Mongolia, was established at the provincial level by the Chinese Communist Party (CCP). Then, after the foundation of the People's Republic of China in 1949, the Chinese government began to introduce a system of regional autonomy for other

non-Han ethnic areas. In 1952, the Chinese government issued the Program for the Implementation of Regional Ethnic Autonomy of the People's Republic of China, which included provisions on the establishment of ethnic autonomous areas and the composition of organs of self-government, as well as the right of self-government for such organs.

The first National People's Congress (NPC), convened in 1954, included the system of regional autonomy for ethnic minorities in the Constitution of the People's Republic of China. Thereafter, four autonomous regions appeared in China. They are Xinjiang Uyghur autonomous region (October 1955), Guangxi Zhuang autonomous region (March 1958), Ningxia Hui autonomous region (October 1958), and Tibet autonomous region (September 1965).

On May 31, 1984, on the basis of summarizing the experience of practicing regional autonomy for non-Han ethnic minorities, the second session of the Sixth NPC adopted the "Law of the People's Republic of China on Regional Ethnic Autonomy." The Law, which was further amended in 2001, has been the basic legal document for implementing the system of regional autonomy for ethnic minorities. It defines the relationship between the central government and the ethnic autonomous areas, as well as the relationship between different ethnic groups in ethnic autonomous areas.

In most cases, the name of an ethnic autonomous area consists of the name of the place, the name of the ethnic group, and the character indicating the administrative status, in that order. Take the Ningxia Hui autonomous region as an example: 'Ningxia' is the name of the place, 'Hui' is the name of the ethnic group and 'region' indicates the level of administration. At present, China has five provincial-level autonomous regions as the following:

- Guangxi Zhuang autonomous region
- Inner Mongolia autonomous region
- Ningxia Hui autonomous region
- Tibet autonomous region
- Xinjiang Uyghur autonomous region

Communities of one ethnic group may establish, according to their respective sizes, different autonomous administrations. If we take the Hui ethnic group as an example, this includes:

(i)   A provincial-level administration, called Ningxia Hui autonomous region;
(ii)   A prefectural-level administration, called the Linxia Hui autonomous prefecture of Gansu province; and
(iii) A county-level administration, called the Mengcun Hui autonomous county of Hebei province.

In places where different ethnic groups live, each autonomous administration can be established based on either one ethnic group (such as Tibet autonomous region; Liangshan Yi autonomous prefecture of Sichuan province; and Jingning She autonomous county of Zhejiang province); or two or more ethnic groups (such as Haixi Mongolian-Tibetan autonomous prefecture of Qinghai province;

and Jishishan Bao'nan-Dongxiang-Salar autonomous county of Gansu province). If a minority ethnic group lives in an autonomous area of a bigger ethnic group, the former may establish their own subordinate autonomous areas. For example, Yili (Ili) Kazak autonomous prefecture and Yanqi Hui autonomous county are all established within the Xinjiang Uyghur autonomous region.

6.1.2 Tibetan Autonomous Areas

In China, Tibet is officially called 'Tibet autonomous region' (TAR). In areas outside the TAR, China has established ten Tibetan autonomous prefectures (TAPs) in four provinces:

- Gansu province: Gannan TAP
- Qinghai province: Golog TAP; Haibei TAP; Hainan TAP; Haixi TAP[1]; Huangnan TAP; Yushu TAP
- Sichuan province: Aba TAP[2]; Ganzi TAP
- Yunnan province: Diqing TAP

In addition, two Tibetan autonomous counties (TACs) have also been created in Gansu and Sichuan provinces:

- Gansu province: Tianzhu TAC of Wuwei city
- Sichuan province: Muli TAC of Liangshan Yi autonomous prefecture

Table 6.1 presents a brief statistical summary of all the three types of Tibetan autonomous areas. Specifically, on the one hand, the total land area of the TAPs and TACs as a whole is more 80 % that of TAR, on the other hand, the total population of the TAPs and TACs as a whole (5.44 million) is much larger than that of TAR (3.00 million). Even only Tibetan ethnic population is taken into account, TAR is still smaller than the TAPs and TACs as a whole.

In 2010, TAR's per capita gross regional output (GRP) (17,319 yuan) is lower than that of the ten TAPs as a whole (19,853 yuan), but is still higher than that of the two TACs as a whole (11,826 yuan). However, within the TAPs, there are greater economic disparities. For example, Haixi TAP has a per capita GRP of 78,180 yuan, which is 9.16 and 7.92 times those of Yushu TAP of Qinghai province and Gannan TAP of Gansu province, respectively. Obviously, these ratios are much larger than Tibet's the top-to-bottom prefecture ratio of 1.63 in 2010 (as shown in Table 5.2).

It is also noteworthy that of the ten TAPs, Gannan (Gansu), Ganzi (Sichuan), and Golog Hainan, Huangnan, Yushu (all of Qinghai province) each have populations of which more than 50 % are Tibetans. However, the remaining TAPs as well as the TACs are no longer Tibetan dominated.

---

[1]It is officially called 'Mongol and Tibetan autonomous prefecture.'

[2]It is officially called 'Tibetan and Qiang autonomous prefecture'.

Table 6.1 Major indicators of the Tibetan areas under Chinese administrations, 2010

Tibetan area	Land area (sq. km)	Population		Per capita GRP (yuan)
		Total (persons)	Tibetans (%)	
TAR	1,228,400[a]	3,002,166	92.77	17,319
All TAPs outside TAR	985,613	5,101,067	58.50	19,853
Aba TAP[b], Sichuan	*83,426*	*898,713*	*56.60*	*14,772*
Diqing TAP, Yunnan	*23,870*	*400,182*	*32.36*	*20,289*
Gannan TAP, Gansu	*38,312*	*689,132*	*55.60*	*9,876*
Ganzi TAP, Sichuan	*151,078*	*1,091,872*	*78.29*	*11,659*
Golog TAP, Qinghai	*76,312*	*181,682*	*90.00*	*11,243*
Haibei TAP, Qinghai	*34,100*	*273,304*	*24.36*	*19,358*
Hainan TAP, Qinghai	*46,000*	*441,689*	*66.31*	*15,690*
Haixi TAP[c], Qinghai	*325,800*	*489,338*	*10.93*	*78,180*
Huangnan TAP, Qinghai	*17,921*	*256,716*	*63.95*	*17,888*
Yushu TAP, Qinghai	*188,794*	*378,439*	*97.00*	*8,531*
All TACs outside TAR	20,401	341,200	30.84	11,826
Muli TAC, Sichuan	*13,252*	*131,700*	*32.39*	*11,483*
Tianzhu TAC, Gansu	*7,149*	*209,500*	*29.87*	*12,042*
All Tibetan areas	2,234,414	8,444,433	69.56	18,628

Abbreviations TAC Tibetan autonomous county; *TAP* Tibetan autonomous prefecture; *TAR* Tibet autonomous region; and *GRP* gross regional product. *Notes* [a]including the disputed areas occupied by India; [b]officially called Tibetan-Qiang autonomous prefecture; [c]officially called Mongol-Tibetan autonomous prefecture. *Source* Author's calculations based on TBS (Tibet Bureau of Statistics) (2011), Guo (2013), and other miscellaneous news clippings

6.2 Inequality, Ethnic Diversity, and Tibet

6.2.1 Inequality and Diversity

A substantial literature has analyzed the effects of income inequalities on macro-economic performances. Most argue that greater income inequality is actually an impediment to economic growth. A seemingly plausible argument points to the existence of credit market failures such that people are unable to exploit growth-promoting opportunities for investment (see, for example, Benabou 1996; Aghion

Table 6.2 Theoretical effects of income inequality and of cultural diversity

	Negative effects	Positive effects
Income inequality	Inequality motivates the poor to engage in crime, riots, and other disruptive activities (Hibbs 1973; Venieris and Gupta 1986; Gupta 1990; Alesina and Perotti 1996); inequality may lead to higher fertility rates, which in turn could reduce economic growth (Perotti 1996); rise in inequality tends to reduce the average productivity of investment (Barro 2000)	Higher inequality tends to induce stronger incentives for people to work hard (Li and Zou 1998); rise in inequality implies a higher level of saving rates, which tends to raise investment and to enhance economic growth (Barro 2000)
Cultural diversity	Cultural diversity reduces the effectiveness of democratic institutions (Hannan and Carroll 1981); rise in cultural diversity tends to increase the cost for intercultural communication and mistrust in economic cooperation (Bollen and Robert 1985; Huntington 1993; Montalvo and Reynal-Querol 2003); inability to agree on common public goods and public policies (Alesina and Ferrara 2005).	Cultural diversity holds the potential for innovation and creative, nonlinear solutions (Shanker 1996); potential benefits of heterogeneity come from variety in production (Alesina and Ferrara 2005); comparative economic advantages usually exist between culturally dissimilar economies more often than between cultural homogeneous places (Guo 2004).

et al. 1999; and Barro 2000). With the limited access to credit, the exploitation of investment opportunities depends on individuals' levels of assets and incomes. Specifically, poor households tend to forego human capital investments that offer relatively high rates of return. In this case, a distortion-free redistribution of assets and incomes from rich to poor tends to raise the quantity and average productivity of investment. With declining marginal products of capital, the output loss from the market failure will be greater for the poor. So the higher the proportion of poor people there are in the economy the lower the rate of growth (Ravallion 2001).

Indeed, the negative effects of income inequality might exist in almost every sphere of human life. But there also exists evidence that supports the view that income inequality could encourage economic growth—both directly and indirectly. The most intuitive thesis is that a lower degree of inequality would mean a greater amount of redistribution from rich to poor. It is this redistribution that would become an impediment to the creation of incentives for people (especially the poorest and richest groups of them) to work hard (Li and Zou 1998). There is also a positive view for the effect of inequality on economic growth: if individual saving rates rise with the level of income, then a redistribution of resources from rich to poor tends to lower the aggregate rate of saving in an economy. Through this channel, a rise in income inequality tends to raise investment.[3] In this case,

---

[3]This effect arises if the economy is partly closed, so that domestic investment depends, to some extent, on desired national saving (Barro 2000, p. 8).

greater inequality would enhance economic growth. However, there is an argument that inequality may lead to higher fertility rates, which in turn could reduce economic growth (Perotti 1996).

Worsening inequality of wealth and income motivates the poor to engage in crime, riots, and other disruptive activities (see, for example, Hibbs 1973; Venieris and Gupta 1986; Gupta 1990; Alesina and Perotti 1996). In a civilized world the existence of millions of starving people is not only unacceptable from an ethical point of view but also can hardly be expected to lead to peace and tranquility. As a consequence, it is widely believed that inequality could become an impediment to economic development. Unfortunately, the existing empirical analyses, using data on the performance of a broad panel of countries, have yielded conflicting results. Perotti (1996) and Benabou (1996), for instance, report an overall tendency for income inequality to generate lower economic growth in cross-country regressions, whereas some panel studies, such as that of Forbes (1997) and Li and Zou (1998), find relationships with the opposite sign. Nevertheless, Deininger and Squire (1998) provide evidence in support of the view that inequality retards economic growth in poor countries but not in richer countries. Using a large bulk of time series and cross-national data, Barro (2000) also supports this hypothesis.[4] However, others carefully conducted research projects, such as Eichera and Garcia-Penalosab (2001) and Ravallion (2001), provide little evidence that supports the above views.

Alesina and Ferrara (2005) highlight three 'microfoundations' underlying the nonlinear relationship between cultural (ethnic) diversity and economic performance. First, diversity can affect economic choices by directly entering individual preferences. Second, diversity can affect economic outcomes by influencing the strategies of individuals. Even when individuals have no taste for or against homogeneity, it may be optimal from an efficiency point of view to transact preferentially with members of one's own type if there are market imperfections. Finally, diversity may enter the production function. People differ in their productive skills and, more fundamentally, in the way they interpret problems and use their cognitive abilities to solve them. This can be considered the origin of the relationship between individual heterogeneity and innovation or productivity. An elegant formalization of the third microfoundation is provided by Hong and Page (1998), who prove two key results on this point. First, a group of 'cognitively diverse' problem solvers can find optimal solutions to difficult problems; second, under certain conditions a more diverse group of people with limited abilities can outperform a more homogeneous group of high-ability problem solvers. The intuition is that an individual's likelihood of improving decisions depends more on her having

---

[4]There is an indication in Barro's (2000) study that growth tends to fall with greater inequality when per capita GDP is below around $2000 (1985 US dollars) and to rise with inequality when per capita GDP is above $2000.

a different perspective from other group members than on her own high expected score.[5]

6.2.2 Joint Effects of Inequality and Diversity

In brief, many theories exist for assessing the macroeconomic effects of cultural diversity and of income inequality—both negative and positive (see Table 6.2 for some summarized statements of these effects). The potential benefits of heterogeneity come from variety in production, and the costs come from the inability to agree on common public goods and public policies. This is an empirically plausible implication: the benefits of skill differentiation are likely to be more relevant in more advanced and complex societies. The problem is that most of these theories tend to have offsetting effects and that the net effects on growth, which depend entirely on all the internal and external conditions and environment concerned, are ambiguous. For example, while cultural diversity raises risks and costs for economic transactions between different groups of people, including the rich and poor or those with different cultural values and religious beliefs, they may also become incentives and even productive factors contributing to technological innovations and economic development.

Our interest will focus on the joint effects of income distribution and of cultural diversity on economic growth. Specifically, it is important to explore the conditions that might diminish the negative effects of inequality and cultural factors as nations overcome barriers to intra-national economic activities or, more strongly, attain a reduction in violence, as sources of growth-inhibiting friction. The negative effects of income inequality and cultural diversity on economic development would become very small if diverse groups learned to live with each other and purse their differences peacefully. This leads to the presumption that the socially stable and economically harmonious societies will be less sensitive to the measures of income inequality and cultural diversity than those otherwise. On the evidence of the above analysis, we can summarize five hypotheses as follows:

(i)   The relatively equal distribution of incomes could retard growth in culturally homogeneous nations.
(ii) Cultural homogeneity could retard growth in nations with relatively equal distribution of incomes.
(iii) The probability of political and economic crises usually grows with respect to the increases of cultural diversity and income inequality indexes.
(iv) Higher cultural diversity could become a source of productive factors contributing growth in high income or low inequality nations.
(v)   Higher inequality could help growth in high income or culturally homogeneous nations where there are very few, if any, intercultural barriers.

---

[5]Cited from Alesina and Ferrara (2005).

6.2.3 Policy Implications: Tibet Can Bear Radical Reforms

According to new institutional economics, the system, like other production factors required in economic development, is a special kind of scarce resource to support economic growth and thus should be treated properly. The economic system of any nation is the mechanism that brings together natural resources, labor, technology, and the necessary managerial talents. Anticipating and then meeting human needs through production and distribution of goods and services is the end purpose of every economic system. While the type of economic system applied by a nation is usually artificially decided, it is also to a large extent the result of historical experience, which becomes over time a part of political culture.

In Annex of this chapter, we develop a model of economic growth with respect to, either individually or in an interactive term, cultural diversity and income inequality. We find that high inequality tends to retard growth in the 1980s and to encourage growth in the 1990s. Although we have not found evidence for the relation between linguistic diversity and economic growth, which is consistent with the findings of Lian and Oneal (1997), our estimated results do suggest that the growth rate of real per capita GDP is related to religious diversity under certain circumstances.

The indication that economic development is more related to religious diversity than to linguistic diversity may be reasonable: since most governments have endeavored to popularize their official languages, fewer and fewer people—most of whom are either illiterates or economically inactive—meet linguistic difficulties in communicating nationally. As a result, the influence of linguistic diversity on economic development becomes less significant than that of religious diversity. If our results are correct, the make-up of cultural diversity should be much more complicated than either emphasizing language most heavily (as Adelman and Morris (1967) and Haug (1967) suggested) or treating language and religion equally (as Lian and Oneal (1997) suggested).

Our regressions provide evidence to support the view that the world economy has been more significantly influenced by religious diversity in the post-Cold War period than in the Cold War period. While it is easy to understand why the economic activities have been determined by religious diversity since the end of the Cold War, we find that, for the 1990s, religious diversity tends to retard growth in high inequality nations and to encourage growth in low inequality places. We also find some evidence to support the view that inequality tends to encourage growth in religious homogeneous nations.

The above evidence supports the presumption that culturally homogenous economies will be less sensitive to the measures of income inequality than culturally heterogeneous places in which inequality may lead to violence. In other words, culturally homogenous economies can benefit from more frequent and radical institutional reforms and social changes even though the latter may easily result in social and economic inequalities.

With regard to Tibet—a culturally homogenous place in which there a very low income inequality, the negative effects of any radical institutional reforms can

be kept at the minimum level. One striking example is the historical evidence in which a series of political transformations have occurred in Tibet during the early 1950s. Had the Chinese government implemented a correct cultural policy toward Tibet and, in particular, dealt more properly with the Dalai Lama, there would not have been the uneasy Tibetan-Han relations in the following years.

6.3 Upgrading Tibet's Autonomy: A Proposal

6.3.1 Tibet's Uneasy Relations with China

After the Qing dynasty (AD 1644–1911) replaced the Ming dynasty (AD 1368–1644), it put Amdo (i.e., part of the Tibetan areas under the administrations of Qinghai, Gansu, and Sichuan provinces) under their control in 1724, and incorporated eastern Kham (i.e., today's Ganzi (or Garzê) Tibetan autonomous prefecture in Sichuan province as well as part of eastern Tibet and the Tibetan areas under the administrations of Qinghai and Yunnan) into neighboring Chinese provinces in later years. The Manchus of the Qing dynasty granted the Dalai Lama as the ruler to lead the government of Tibet. As the Qing dynasty weakened, its authority over Tibet also gradually weakened; by the mid 19th century, its influence was minuscule. Qing authority over Tibet had become more symbolic than real in the late 19th century, although in the 1860s the Tibetans still choose for reasons of their own to emphasize the empire's symbolic authority and make it seem substantial (Fairbank 1978, p. 407).

After the Republic of China (ROC) was founded in 1912, the Dalai Lama refused any Chinese title and declared himself ruler of an independent Tibet in collusion with Mongolia. For the next 36 years, the thirteenth Dalai Lama and the regents who succeeded him governed Tibet. The People's Republic of China (PRC) incorporated Tibet in 1950 and negotiated the Seventeen Point Agreement with the newly enthroned fourteenth Dalai Lama's government, affirming the PRC's sovereignty but granting the area autonomy. Subsequently, on his journey into exile, the fourteenth Dalai Lama completely repudiated the agreement, which he has repeated on many occasions. After the Dalai Lama government fled to Dharamsala, India during the 1959 Tibetan Rebellion, it established a rival government in exile. Afterwards, the Chinese central government in Beijing renounced the agreement and began implementation of the halted social and political reforms.

The Cultural Revolution launched in 1966 was a catastrophe for Tibet, as it was for the rest of the PRC. Large numbers of Tibetans died due to it, and the number of intact monasteries in Tibet was reduced from thousands to less than ten. Tibetan resentment toward the Chinese deepened (Powers 2004, pp. 141–142). During the Cultural Revolution, Red Guards, which included Tibetan members, inflicted a campaign of organized vandalism against cultural sites in the entire PRC, including Buddhist sites in Tibet (Shakya 1999, pp. 314–347). In spite of claims by the Chinese that most of the damage to Tibet's institutions occurred subsequently

during the Cultural Revolution (1966–1976), it is well established that the destruction of most of Tibet's more than 6,000 monasteries happened between 1959 and 1961 (Craig 1992, p. 125). During the mid-1960s, the monastic estates were broken up and secular education introduced.

Following Mao's death in 1976, Deng Xiaoping launched initiatives of rapprochement with the exiled Tibetan leaders. The Chinese leadership, hoping to persuade the Dalia Lama to come to live in China, decided to invite, for the first time since Dalai Lama's flight to India, representatives of the Dalai Lama to pay a visit to Tibet. Below is reported in Goldstein (1997, pp. 61–63):

> Ren Rong, who was Communist Party Secretary in Tibet, thought that Tibetans in Tibet were happy under Chinese Communist rule and that they shared the Chinese Communist views of the pre-Communist Tibetan rulers as oppressive despots. So, when delegations from the Tibetan government in exile visited Tibet in 1979–1980, Chinese officials expected to impress the Tibetan exiles with the progress that had occurred since 1950 and with the contentment of the Tibetan populace… Ren even organized meetings in Lhasa to urge Tibetans to restrain their animosity towards the coming representatives of an old, oppressive regime… The Chinese, then, were astonished and embarrassed at the massive, tearful expressions of devotion which Tibetans made to the visiting Tibetan exiles. Thousands of Tibetans cried, prostrated, offered scarves to the visitors, and strove for a chance to touch the Dalai Lama's brother.

6.3.2 Tibet with Higher Autonomy

Organizationally, China's non-Han ethnic administrative areas are oriented in a multi-ethnic manner. For example, in addition to deputies from the ethnic group or groups exercising regional autonomy in the area concerned, the people's congresses of the autonomous areas also include an appropriate number of members from other ethnic groups who live in that autonomous area. Among the chairman or vice-chairmen of the standing committee of the people's congress of an autonomous area there shall be one or more citizens of the ethnic group or groups exercising regional autonomy in the area concerned. The head of an autonomous region, autonomous prefecture, or autonomous county alike shall be a citizen of the ethnic group exercising regional autonomy in the area concerned. Other members of the people's governments of the autonomous areas shall include an appropriate number of members of the ethnic group exercising regional autonomy alongside members of other ethnic minorities. The functionaries of the working departments subsidiary to the organs of self-government shall be composed in a similar fashion.

By autonomy it generally means that the head of government would be an ethnic majority in the region. However, the head is always subordinate to the secretary of the autonomous regional committee of the Chinese Communist Party (CCP), who was usually a Han Chinese. As a result, the role of the non-Han ethnic groups in the high-level decision making of the autonomous region is very limited.

In general, the establishment of the Tibet autonomous region (TAR) has followed the model of other earlier autonomous regions setup for Guangxi (in 1958),

Inner Mongolia (in 1947), Ningxia (in 1958), and Xinjiang (in 1955). While an autonomous region is in theory different from a province, their extent of administrative control is actually quite the same. The term "autonomy" only implies that head of government will be an ethnic Tibetan. The TAR's head is always subordinate to the Secretary of the Chinese Communist Party (CCP) TAR Committee, who was a Han Chinese. As a result, the role of ethnic Tibetans in the high-level decision making of the TAR was very limited.

As noted in Chap. 1, earlier Chinese regimes had never set up a province in Tibet. What this means is that the establishment of the TAR was a significant measure in terms of strengthening the power of the central Chinese authorities in Tibet (Mackerras 2005, p. 6). From 2002 to 2010, Chinese officials have held ten rounds of talks with the envoys of the Dalai Lama XIV[6]:

- first round (September 2002) in Beijing, Lhasa, Linzhi, Shigatse, Chengdu, Shanghai, etc.
- second round (from end of May to early June, 2003) in Jiangsu, Zhejiang, Diqing Tibetan autonomous prefecture of Yunnan province, etc.
- third round (September 2004) in Guangdong, Hubei, Ganzi Tibetan autonomous prefecture of Sichuan, etc.
- fourth round (from June 30 to July 1, 2005) in Chinese Embassy in the Switzerland.
- fifth round (from February 15–2, 2006) in Guilin city of Guangxi, etc.
- sixth round (from June 29 to July 5, 2007) in Shanghai and Nanjing of Jiangsu province.
- seventh round (May 4, 2008) in Shenzhen city of Guangdong province.
- eighth round (from July 1–2, 2008) in Beijing.
- ninth round (from October 31 to November 5, 2008) in Beijing.
- tenth round (from January 26–31, 2010) in Beijing.

However, China has effectively ruled out dialog with the Tibetan government in exile and will only meet with representatives of the Dalai Lama and will limit any talks to the Tibetan spiritual leader's future. The Chinese central government's policy is that provided the Dalai Lama genuinely abandons his 'Tibet independence' stance, it can talk about his personal future. And the content of negotiations can only be about the Dalai Lama's future, or at most that of a few of his personal aides (Reuters, 14 May 2011).

China's official narrative has dated Tibet's incorporation into China to Sakya leader's submission to the Mongol Yuan dynasty (1279–1368). Tibetans point out that the Tibetan–Mongol relationship, like the latter relationship between Tibet and the Qing dynasty (1644–1911), was not one of pure subordination but rather a priest-patron relationship of equals between spiritual and temporal powers (Yeh 2013, p. 2). At present, little of substance has been achieved in the various Beijing-Dharamsala negotiations. While the Dalai Lama has wanted to gain more

---

[6]Source: Author based on miscellaneous news clippings.

independent political and cultural status for Tibet, Beijing insisted that the existing autonomous system be kept in Tibet. At present, the topic of Tibet is highly controversial in nature. Suggestions for dealing with Tibet range from full independence to full integration within the People's Republic of China (PRC). The different views held by and the suggestions given on the Tibet question by various scholars and politicians are summarized as the following[7]:

A. The Greater Tibet Region (GTR) as an independent sovereign state in the traditional international system
B. Tibetans enjoy the utmost level of autonomy over the GTR, within the PRC
C. Tibetans enjoy a high level of autonomy within the GTR, without possessing external and military power
D. Tibetans enjoy a high level of autonomy only in cultural and spiritual spheres within the GTR
E. Preserving the status quo until the death of the Dalai Lama XIV
F. Continuous discussion as a means of mutual engagement
G. Constructing a bottom-up self-governing polity in the TAR
H. Progressively and fully assimilating everything in Tibet into the PRC

The "Greater Tibet Region" (GTR), which is claimed by the Tibetan government in exile, includes the regions of Amdo and Kham and many other Tibetan autonomous prefectures as mentioned in Table 6.1 and Fig. 6.1. At present, Amdo is part of the Tibetan areas under the administrations of Qinghai, Gansu, and Sichuan provinces; while part of Kham now is called "Ganzi (or Garzê) Tibetan autonomous prefecture" of Sichuan province. Altogether, the entire GTR amounts to over one-fifth of the total area of the PRC. Proposal B, which argues for the highest level of self-governance by the Tibetans in the whole GTR, but without officially ceding from the PRC, can be seen as a revision of Proposal C (Hari, 7 June 2004). However, unlike Proposal B, Proposal C would leave Beijing to handle Tibet's diplomatic and military policies. Proposal D can be seen as a de facto concession made by the Dalai Lama after 2003.

Obviously, both the Chinese central government and the Dalai Lama have disagreed over the geopolitical conceptualization of the TAR vis-à-vis the GTR. To the Dalai Lama, any solution that disregards the concept of the GTR is unlikely to be approved by the Tibetan government in exile in Dharamsala, while any area of Tibet that exceeds the TAR is unlikely to be accepted by Beijing. However, this does not mean that a compromise cannot be realized if both sides want to read an agreement. Specifically, the rationale for the status quo of the following Tibetan autonomous prefectures (TAPs) and Tibetan autonomous counties (TACs) outside Tibet autonomous region (TAR) is as the following:

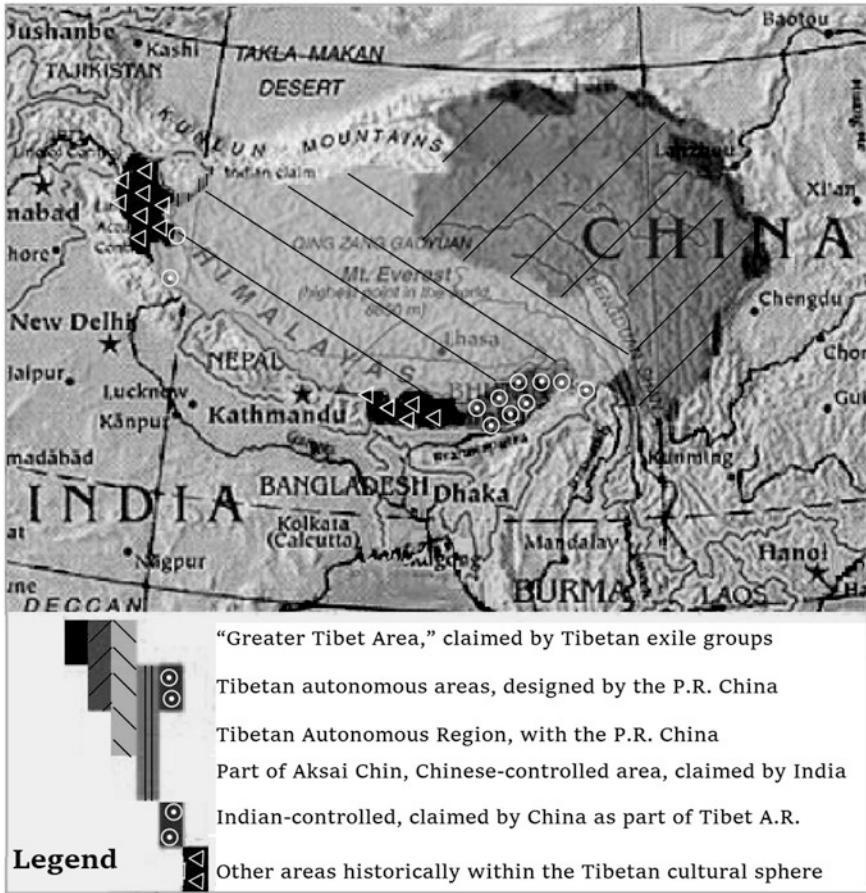[7]Cited from Shen (2010, pp. 63–68).

Fig. 6.1 The definitions of Tibet's territories. *Source* Author based on a map in public domain

- Diqing TAP (of Yunnan province), Haibei and Haixi TAPs[8] (all of Qinghai province), and Muli Tibetan AC (of Liangshan Yi autonomous prefecture, Sichuan province) and Tianzhu Tibetan AC (of Wuwei city, Gansu province), whose Tibetan populations only account for less than 50 % of their respective total populations (see Table 6.1 for details), are no longer Tibetan-dominated areas and have economic conditions dissimilar to those of the TAR. By way of contrast, the above TAPs and TACs have already geographical and economically incorporated into their respective provinces outside the TAR.

---

[8]Haixi TAP is officially called 'Haixi Mongol and Tibetan autonomous prefecture'.

On the other hand, the rationale for the possible re-allocation of the following Tibetan autonomous prefectures (TAPs) outside Tibet autonomous region (TAR) is as the following:

- Ganzi TAP (of Sichuan province), Golog and Yushu TAPs (all of Qinghai province), whose Tibetan populations account for more than 90 % of their respective total populations (see Table 6.1 for details), are Tibetan-dominated areas and have geographical and economic conditions similar to those of the TAR. If the above poor TAPs are transferred to the TAR's administration and that the TAR is granted with higher political and economic autonomies, then the economic burdens of the central government and of the Sichuan and Qinghai provincial governments in particular will be largely reduced. In the enlarged TAR or, alternatively, the reduced GTR, there are 1,644,584 sq. km of land area and 4,654,159 of population.

However, there is still a problem in relation to the above arrangement. If Yushu TAP, whose Tibetans account for 97.00 % of its total population, is more suitable to be part of the TAR vis-à-vis Qinghai province, then how to deal with Haixi TAP? Even though Haixi is officially called 'Haixi Mongol and Tibetan autonomous prefecture,' the Tibetans and the Mongols only account for 10.93 and 5.53 % of its total population, respectively; and the Han *minority* there now has 66.01 % of Haixi's total population.[9] Since Haixi is located between the TAR and Yushu TAP, if the latter are integrated into a single administration, then Haixi TAP will become an enclave.

In addition, both Beijing and the Daliai Lama have a different understanding of what is meant by a high level of autonomy, or independence. Many Tibetans, especially those overseas Tibetans, wish to emphasize their unique international identity, whereas Beijing will never acknowledge a full or de facto Tibetan independence. However, if the PRC is willing to upgrade Tibet's political and cultural autonomies, then its uneasy relations with those Tibetans will be improved significantly. In order to pacify more Tibetans, the PRC could introduce further institutional reforms within the TAR by allowing more bottom-up elements into self-governance, as long as the elected Tibetan officials pledged their loyalty to the PRC and provided that Beijing could establish pragmatic criteria for the composition of the TAR government. This would be similar to the current arrangement of "one-country, two-systems" that operates in the Hong Kong and Macau.[10]

It is understood that the Dalai Lama's "autonomy" was that the head of Tibet (with assumed reference to the GTR) would be elected by the Tibetans but that Beijing had the de facto power to reject the appointment; the Dalai Lama would

---

[9]Data source: The Sixth National Population Census of the PRC conducted in November 2010. Available at http://www.docin.com/p-427917347.html. Accessed on 2014-5-21.

[10]Hong Kong and Macao—which returned to China in 1997 and 1999, respectively—are now China's two special administrative regions (SARs). It was agreed on handover that the existing political and economic systems that prevailed prior to these dates would be maintained for 50 years.

enjoy permanent ownership of the Potala Palace and would be free to travel both inside and outside of China; and Tibetan Buddhists would enjoy exclusive rights to preach and to select successors to the Dalai Lama and the Panchen Lama (Shih, 14 May 2008).

At the very least, the Chinese government should engage in further negotiations with the Dalai Lama XIV, before the latter is replaced by other, tougher negotiators. Nevertheless, compared with the Dalai Lama's government in exile in Dharamsala, other fanatical independent groups, such as the Tibetan Youth Congress (TYC) or the International Tibetan Independent Movement (ITIM), have stronger support for full independence of the GTR. For example, in its official website (www.tibetanyouthcongress.org/conclusion.htm), the TYC has explicitly argued that the Tibet question is neither just about the return of the Dalai Lama to Tibet nor regional autonomy, but is directed at complete independence.[11]

6.3.3   Tibet with Dalai Lama

"Dalai" is the Mongolian translation of the Tibetan name Gyatso, or "ocean"; and the term "lama" means "superior person" in Tibetan. The name Dalai Lama was first given in AD 1578 by Altan Khan of the Mongols to Sonam Gyatso, a high lama of the Gelug school (also known as Yellow Hats). Historically the Dalai Lamas had political and religious influence in the Western Tibetan area of Ü-Tsang around Lhasa, where the Gelug school of Tibetan Buddhism was popular.

The current fourteenth Dalai Lama (religious name: Tenzin Gyatso) was born on July 6, 1935 in Taktser, Qinghai province (also known as Amdo to Tibetans), and was selected as the rebirth of the Dalai Lama XIII two years later. He was formally recognized as the Dalai Lama XIV on November 17, 1950, at the age of 15.[12]

During the 1959 Tibetan uprising, which China regards as an uprising of feudal landlords, the Dalai Lama fled to India, where he denounced the People's Republic of China and established a Tibetan government in exile. He has since traveled the world, advocating for the welfare of Tibetans. On the other hand, institutions around the world face pressure from China not to accept him. However, the Dalai Lama's influential roles have never been erased, both within and outside Tibet. As stated in Chap. 3, the fact that all the large-scale protests and riots have occurred in March reveals that the Dalia Lama XIV and his March Uprising of 1959 have been the main focus of the Tibetan unrest.

Another noticeable phenomenon is that the number of self-immolation protests has been increasing dramatically since 2009. Most of these protests have intended to call for the return of the Dalai Lama to Tibet as well as to oppose Chinese rule

---

[11]Cited from Shen (2010, p. 76).

[12]Source: http://space.tv.cctv.com/act/article.jsp?articleId=ARTI1206177684005500). Accessed 2013-4-20.

Table 6.3 How the Han-Uyghur and Han-Tibetan unrest differs

No.	Incident	Direct cause
	The Han-Uyghur Cases	
(A)	Urumqi (1989) unrest	Han-Muslim distrust
(B)	Baren (1990) riot	Han-Muslim distrust
(C)	Yining (1997) incident	Han-Uyghur distrust
(D)	Xinjiang (2007) raid	Counter-terrorist action
(E)	Kashgar (2008) attack	Han-Uyghur distrust
(F)	Shaoguan (2009) incident	Common civil case
(G)	Urumqi (2009) riots	Induced by case (E)
(H)	Aksu (2010) bombing	Han-Uyghur distrust
(I)	Hotan (2011) attack	Han-Uyghur distrust
(J)	Yecheng (2012) attack	Terrorist attack
(K)	Bachu (2013) raid	Suspected terrorism
(L)	Shanshan (2013) raid	Suspected terrorism
(M)	Tiananmen (2013) attack	Terrorism
(N)	Kunming (2014) attack	Terrorism
(O)	Mong Cai (2014) clash	Illegal immigration
(P)	Urumqi (2014) attacks	Terrorism
	The Han-Tibetan Cases	
(a)	Tibetan (1959) rebellion	Socialism reform in Tibet
(b)	Tibetan (1987–1989) unrest	Induced by case (a)
(c)	Lhasa (2008) riots	Induced by case (a)
(d)	Self-immolation (2009–2013)	Induced by case (a)

Source: Guo (2015, Chap. 3) (for the Han-Uyghur cases) and Chap. 3 (for the Han-Tibetan cases)

in Tibet (see Sect. 3.4 of Chap. 3 for details). The Chinese government must face this situation since self-immolation protests have had a greater global impact than earlier protests. Any of China's impropriety in dealing with this kind of protests would harm its international reputation. After a brief comparison of the Han-Tibetan and the Han-Uyghur unrest that occurred during the past, we may observe that the unrest in Tibet was far less frequent and less physically horrible than that in Xinjiang. What is more, while the Han-Uyghur tension becomes tenser with time; the Han-Tibet tensions in Tibet have mainly focused on the return of Dalai Lama (see Table 6.3).

6.3.4 Dalai Lama as a Cultural Asset

The Dalai Lama XIV has been successful in gaining Western sympathy for himself and the cause of greater Tibetan autonomy or independence. During the past decade, the Dalai Lama has received numerous awards over his spiritual and political

career. On May 28, 2005, he received the Christmas Humphreys Award from the Buddhist Society in the United Kingdom. On June 22, 2006, he became one of only five people ever to be recognized with Honorary Citizenship by the Governor General of Canada. The Dalai Lama was a 2007 recipient of the Congressional Gold Medal, the highest civilian award bestowed by American lawmakers. In 2012, the Dalai Lama was awarded the Templeton Prize. After the Tiananmen Square protests of 1989, the Dalai Lama was awarded the 1989 Nobel Peace Prize. The Committee officially gave the prize to the Dalai Lama for "the struggle of the liberation of Tibet and the efforts for a peaceful resolution."[13]

The Dalai Lama has expressed to the Tibetans who were calling for independence and a more radical approach that his "Middle Way" (i.e., the one of seeking meaningful autonomy, within the framework of the PRC Constitution) was "the only realistic way" to address the Tibetan question. In a wide-ranging interview with *The Hindu* (an Indian newspaper) in his residence in Dharamsala on July 6, 2012—the day the Tibetan community there grandly celebrated the exiled leader's 77th birthday with prayers and songs—the Dalai Lama spoke of the new challenges being faced by the Tibetan movement. He expressed that he would address the issue of his succession, but cautioned China against "trying to take responsibility for the Dalai Lama's reincarnation." "If the Dalai Lama becomes 100 percent pro-Chinese, then Tibetans will not respect the Dalai Lama." (Krishnan, 9 July 2012)

Finally, imagine if the cultural legacy of the Dalai Lama becomes an asset to the PRC, in the same way that the intangible asset of the Holy See has been skillfully used by the Italian state, the PRC's attraction to the world—as well as convincing the world of its "peaceful rise" or "peaceful development" strategy—would be considerably boosted (Shen 2010, p. 77). Alternatively, if the Chinese government really dislikes the Dalai Lama XIV (who is almost 80-year old now) or that both sides cannot reach any compromise, it is time for today's government to investigate all possible political agendas that they can discuss with the Dalai Lama XV some day in the future. However, as the Dalai Lama XIV would relinquish, as he has said before, the four century-old tradition of political guidance in favor of a popularly elected leader by the Tibetan diaspora. In giving up his political powers, the 80-year-old would make it more difficult for China to manage the course of the independence movement after his death.

There is no doubt that China has many misconducts and miscalculations in relation to Tibet during the past decades, especially during the 1950 and 1960s. At the very least, the Chinese Communist Party (CCP) had a big mistake in 1959 in which China's top leader allowed the Dalai Lama to escape from Tibet. For example, regarding the Dalai Lama's possible flee in 1959, Mao Zedong ordered the PLA forces in Tibet:

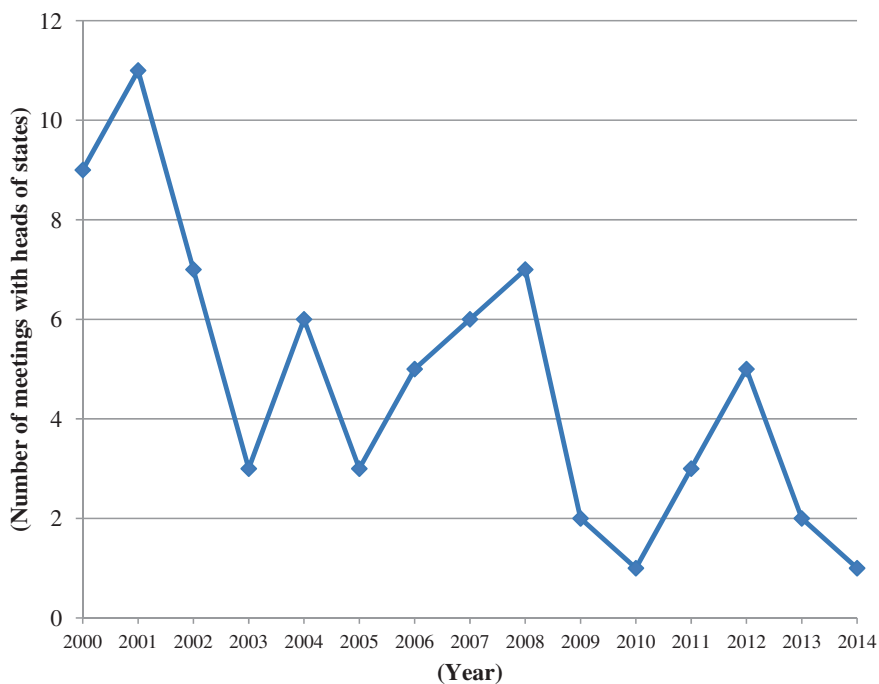[13]Cited from "Presentation Speech by Egil Aarvik, Chairman of the Norwegian Nobel Committee". Available at http://nobelprize.org/peace/laureates/1989/presentation-speech.html. Accessed 2013-4-19.

Fig. 6.2 The number of Dalai Lama's meetings with heads of states, 2000–2014. *Source* http://www.mintpressnews.com/one-likes-dalai-lama-anymore/196250/ (accessed on 2014-9-9). Re-drawn by author

> Do not hold back [Dalai Lama], let him go to Shannan [southern Tibet—part of which is currently called 'Arunachal Pradesh' and administrated by India], India or wherever he wants.[14]

It natural to believe that, had the Dalai Lama been still in Tibet, it would not have been so hard for the Chinese policymakers to handle the Tibet issue. At present, thanks to China's growing economic influences, on the one hand, and its continuing pressure to international community, the Dalai Lama has only decreasing influences world-wide (see Fig. 6.2). Thus, it is now a good opportunity for the Chinese government to arrange new negotiations with the Dalai Lama on the "Tibet" problem.

6.4 Broader Implications

China has invested much heavily in Tibet (see Chap. 2 for details) in order to progressively and fully assimilate everything in Tibet into the PRC. For example, the Chinese central government have exempted Tibet from all taxation and provided

---

[14]Cited from Zhang (2009, p. 191).

90 % of Tibet's government expenditures (Grunfeld 1996, p. 224). China has been the second largest economy in the world—and, definitely, if based on PPP rates, its economy would have already surpassed that of the U.S. China is now much richer than any period in its past history. However, China's current policies toward Tibet are unsustainable. It seems that, till present, Tibet has been a big burden to China. And what China has gained—politically and economically—is far less than what it has paid for.

China needs smarter policies. Given that the Chinese economy is still operated under the highly centralized system, it seems unlikely that the central government will be willing to, and, of course, be able to carry out any dramatic administrative reconstruction of Tibet. This requires further political reforms of China as a whole. Of course, this chapter only presents some preliminary ideas about the future of Tibet. If the PRC government is smart enough, the proposals suggested in this chapter could be further developed into more practical measures. Furthermore, they can be applied not only to Tibet, but also to other ethnic minority areas.

More than three decades ago, when addressing Hong Kong's return to China's sovereignty in 1997, Deng Xiaoping proposed the "One country, two systems." According to the mini-constitution "Basic Law," "[t]he Hong Kong Special Administrative Region may on its own, using the name of 'Hong Kong, China,' maintain and develop relations and conclude and implement agreements with foreign states and regions and relevant international organizations in the appropriate fields, including the economic, trade, financial and monetary, shipping, communications, tourism, cultural and sports fields."[15]

It should be noted that Hong Kong and its people are not the only winner for the post-1997 arrangement of Hong Kong—a former colony of United Kingdom. Mainland China has also benefited by granting Hong Kong as a "quasi-state" under the framework of "one country, two systems." Since the return to its motherland, Hong Kong has not only avoided becoming a "trouble-maker" to mainland China's socialist system, it but also has helped to raise China's international influences. For example, the appointment of Margaret Chan as the Director-General of the World Health Organization (WHO) in 2006 with the extensive back up from the Beijing government triumphs the success of "second-tier sovereignty" system in modern state diplomacy (Shen 2009, pp. 361–382). In the WHO, Mrs. Chen not only represents "Hong Kong, China," she represents China as a whole.

If the PRC's new leaders are wiser than Deng Xiaoping, they could successfully apply the Hong Kong mode (or a revision of it) to Tibet, given the latter's independent-state status cannot be recognized. In this way, China's soft power could be greatly enhanced. Furthermore, if both sides of the Taiwan Straits are wiser than their predecessors, the PRC and Taiwan—both of which share a single Chinese ancestor—can form a "Greater China Community" or a "Pan-Chinese Union." Only till that day comes, can China itself eventually realize its "dream of a strong nation."

---

[15]Cited from "The Basic Law of the Hong Kong Special Administrative Region of the People's Republic of China" (Chap. 7: External Affairs, Article 151).

Annex

Estimating the joint effects of cultural diversity and inequality

In past literature relating to the determinants of economic growth, income inequality and cultural diversity have been treated separately. In this section, we try to investigate their joint effects. Our task is to clarify (1) the cultural conditions under which income inequality encourages (retards) economic growth; and (2) the economic conditions under which cultural diversity encourages (retards) economic growth. Our empirical work considers average growth rates of real per capita GDP over two decades, from 1980 to 1989 and from 1990 to 1999. We define these periods as those of the Cold War and the post-Cold War, respectively. What we intend to do is to see if the determinants of economic growth are different in the two periods.

Our analytical model is based on Barro's (2000) findings on the determinants of economic growth. In Barro's model, which was estimated by the three-stage least squares (3SLS) technique, 11 explanatory variables (the log of real per capita GDP and its square, the ratio of government consumption to GDP, a subjective index of the maintenance of the rule of law, a subjective for democracy (electoral rights) and its square, the ratio of inflation, the years of schooling, the log of total fertility rate, the ratio of investment to GDP, and the growth rate of the terms of trade) are used. In order to avoid possible estimation errors resulting from multicolinearity, we will only focus on how the growth rate that remains unexplained in Barro's model is related to GINI (Gini coefficient, representing income inequality) and DIVERSITY (cultural diversity, including language and religion).

As suggested in Table 6.2, the effects of income inequality and cultural diversity on economic growth, both positive and negative, may be offsetting. Consequently, the regressions might not be statistically significant. In order to clarify the conditions under which economic growth can be both positively and negatively related to income inequality and cultural diversity, we allow the influences of the DIVERSITY and GINI variables on growth to depend on each other. To this end, the DIVERSITY and GINI variables are now entered into the growth model both individually and jointly as a product. We also allow income level (measured by natural log of per capita GDP, or lnGDPPC) and DIVERSITY and GINI as joint explanatory variables in the growth model.

The dependent variable is defined as the average growth rates of real per capita GDP which remain unexplained in Barro's baseline panel regression (Barro 2000, p. 12, tab. 1).[16] The real per capita GDP, the data of which come from the World

---

[16]The estimation is by three-stage least squares. Instruments are the actual values of the schooling and terms of trade variables, lagged values of the other variables aside from inflation, and dummy variables for prior colonial status. Since some explanatory variables employed by Barro (such as a subjective index of the maintenance of the rule of law, a subjective for democracy, the ratio of inflation, the log of total fertility rate, and the growth rate of the terms of trade) could either be influenced by cultural diversity or their data are not available, we ignore their effects on growth rates when calculating the data.

Economic Outlook of the International Monetary Fund (various years), is measured in 1985 US dollars for all sample nations. The data of the Gini coefficients come from a revised version of the World Income Inequality Database (WIID2 Beta), available at the website of the World Institute for Development Economics Research (WIDER): www.wider.unu.edu/wiid/wiid.htm. Our empirical work considers the average level for all annual Gini coefficients available within each period. Instead, when national data are absent, regional (urban or rural areas) data are used.

The data on the linguistic and religious diversity indexes are calculated based on Eq. 5.5. To save the time in data collection, we will not calculate the period average data for cultural diversity indexes. Instead, we only collect the mid-period data. Specifically, we collect the cultural data for two years: 1985 for the period 1980–1989 and 1995 for the period 1990–1999. The framework includes countries with vastly different social, economic and cultural conditions. The attractive feature of this broad sample is that it encompasses great variation in the explanatory variables that are to be evaluated. Our view is that it is impossible to use the experience of one or a few countries to get an accurate empirical assessment of the long-term growth implications from a set of social, economic, and cultural variables. However, one drawback of this kind of diverse sample is that it creates difficulties in measuring variables in a consistent and accurate way across countries and over time.

The other empirical issue, which is likely to be more important, is the sorting out of directions of causation. From a longer perspective of the human history, the extent of cultural diversities (especially in terms of religion, which appears in our model as the explanatory variable) is the final result of economic development (which appears in our model as the dependent variable). But we argue that within a shorter period of time this kind of causation is very weak.

Our baseline panel regressions do not yield any overall relation between growth and income inequality for the 1980 and 1990s as a whole (the estimated results are not reported here). But the estimated coefficients on income inequality (GINI) become statistically significant when the panel regressions are based on the data of the 1980s and the 1990s separately. Specifically, the income inequality (GINI) tends to retard growth in the 1980s and to encourage growth in the 1990s (see also Fig. 6.3 for the scatter diagrams).[17] The above results are similar to Barro's (2000) findings when the full (that is, from 1980 to 1989 and from 1990 to 1999) samples are considered in a single regression, but different from with his findings when the 1980–1989 and the 1990–1999 samples are considered in separate regressions.

Might be there any forms of nonlinear relation between growth and cultural diversity? Our regressions show that the coefficients on the linguistic diversity (LANGUAGE) and on its interactive term with income inequality (LANGUAGE*GINI) are statistically insignificant for both the 1980–1989 and the

---

[17]Note that the only difference between the two panel data is that five nations (Mali, Nicaragua, Singapore, Yemen and Zambia) are missing in the 1990 s' sample.
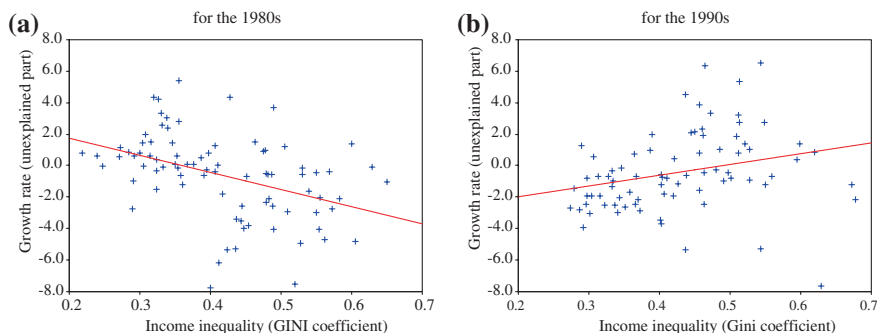
Fig. 6.3   Growth rate versus income inequality

1990–1999 periods (the regressions are omitted here). We suspect that impacts of linguistic barriers on economic activities do not exist in the 1990s, or, if they do, have at least become insignificant in contrast to the previous estimates by Adelman and Morris (1967), Haug (1967), and Reynolds (1985). The reason for this might be that educational and technological advances have to a certain extent reduced the linguistic barriers, especially for international and intercultural economic activities in the developed economies (Guo 2004).

However, our regressions show that the coefficients on income inequality (GINI), religious diversity (RELIGION) and on their interactive terms are statistically significant for the 1990–1999 period, though not for the 1980–1989 period (the estimated results are not reported here).[18] Since the 1980 and 1990s were branded by the Cold War and the post-Cold War periods, respectively, the question arises as to whether the findings are determined to any extent by the Cold War policies. Since countries may make choices in terms of their ideological preferences (Huntington 1996, p. 125), the determination of the economic activities during that period might be distorted, or at any rate, different from that of the post-Cold War period. Following this analytical logic, we are also led to believe that during the Cold War era cultural influences on economic activities might be largely reduced, if not dismissed.

More interesting results emerge in our regressions when the effect of religious diversity on economic growth is allowed to depend on the level of income inequality measured by Gini coefficient. As intuited from Fig. 6.4, religious diversity tends to encourage economic growth for low inequality (represented by Gini coefficient) nations (see Fig. 6.4a) and tends to retard economic growth for high inequality nations (see Fig. 6.4b). This result may be supported by the following presumptions. On the one hand, the lower inequality economies will be less sensitive to the measures of cultural diversity than higher inequality economies in which cultural diversity leads to barriers to intra-national trade or, more strongly,

---

[18]We have also tested other forms of regressions (including those that include the interactive term of GINI and lnGDPPC), none of which has yielded statistically meaningful results.
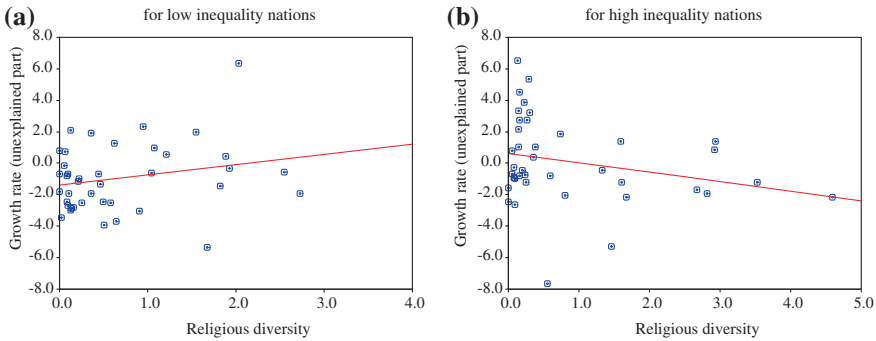
(a) for low inequality nations   **(b)** for high inequality nations

Fig. 6.4 Growth rate versus religious diversity (for the 1990s)

to violence. On the other hand, higher cultural diversity implies more comparative economic advantages for low inequality places.

These results have far-reaching implications. For a long time, there has been a serious concern that societal conflict arises from cultural dissimilarity (Huntington 1993). Ultimately, this may to some extent be traceable to a biological basis, since in most circumstances cooperation among animals is importantly influenced by genetic similarity (Wilson 1980, p. 448). As a result ascriptive ties are said to dampen coalition building and to inhibit compromise across groups (that cross-cutting cleavages promote), thus increasing chances for social conflict (Bollen and Jackman 1985). But our empirical evidence indicates that the above hypothesis might not be completely copied into human societies, at least during the post-Cold War period.

The major concern here is that we are trying to identify the roles of inequality and cultural variables whose effect on economic growth is indirect. In Barro's (2000) regressions, which are based on the data of three periods (1965 to 1975, 1975 to 1985, and 1985 to 1995), higher inequality tends to retard growth in poor countries and to encourage growth in richer places. However, in our regressions, when the effect of income inequality is allowed to depend on the level of economic development, measured by the natural log of real per capita GDP, the estimated coefficients on the interactive term 'GINI*lnGDPPC' (to save space, we omit the estimated results here) are not statistically significant for the 1980 and 1990s samples.

Our regressions suggest that for the 1990s income inequality tends to encourage economic growth for religious diversity indexes (DIVERSITY) to be low and tends to retard growth for religious diversity indexes to be high. Since there are quite few nations with a high religious diversity index (see Fig. 6.5b), we still need more statistical evidence to support the view that income inequality (GINI) retards economic growth in nations with higher religious diversity indexes. Nevertheless, Fig. 6.5a does provide some evidence that supports the view that income inequality (GINI) tends to encourage economic growth in nations with lower religious diversity indexes.
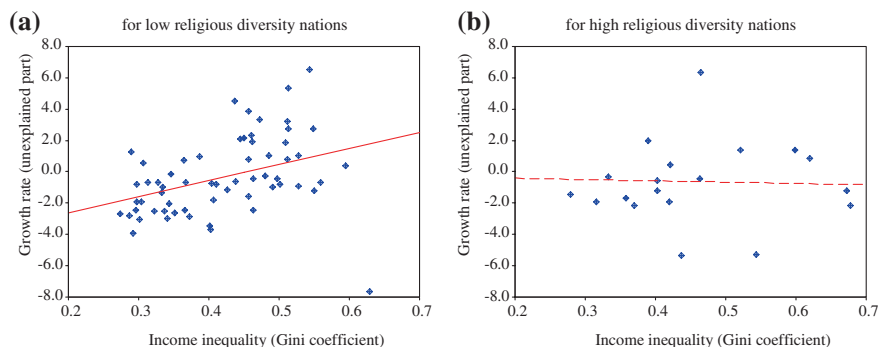
Fig. 6.5 Growth rate versus income inequality (for the 1990s)

References

Adelman I, Morris CT (1967) Society, politics, and economic development. Johns Hopkins University Press, Baltimore

Aghion P, Caroli E, Garcia-Penalosa C (1999) Inequality and economic growth: the perspective of the new growth theories. J Econ Lit 37(4):1615–1660

Alesina A, Ferrara EA (2005) Ethnic diversity and economic performance. J Econ Lit 43(3):762–800

Alesina A, Perotti R (1996) Income distribution, political instability and investment. Eur Econ Rev 81:1170–1189

Barro RJ (2000) Inequality and growth in a panel of countries. J Econ Growth 5:5–32

Benabou R (1996) Inequality and growth. NBER macroeconomics annual. MIT Press, Cambridge, pp.11–73

Bollen KA, Robert J (1985) Economic and noneconomic determinants of political democracy in the 1960s. In: Braungart RG (ed) Research in political sociology. Jai, Greenwich, pp 123–143

Craig Mary (1992) Tears of blood: a cry for Tibet. HarperCollins Publishers, London

Deininger K, Squire L (1998) New ways of looking at old issues: inequality and growth. J Dev Econ 57:259–287

Eichera TS, Garcia-Penalosab C (2001) Inequality and growth: the dual role of human capital in development. J Dev Econ 66:173–197

Fairbank JK (ed) (1978) Cambridge History of China: Late Ch'ing 1800–1911 (Part 1), vol. 10. Cambridge University Press, New York

Forbes K (1997) A reassessment of the relationship between inequality and growth. Unpublished Paper, MIT

Goldstein MC (1997) The Snow Lion and the Dragon: China, Tibet, and the Dalai Lama. University of California Press, Los Angeles

Grunfeld A Tom (1996) The making of modern Tibet. East Gate Book, New York

Guo R (2004) How culture influences foreign trade: evidence from the US and China. J Soc Econ 33:785–812

Guo R (2013) Regional China: a business and economic handbook. Palgrave-Macmillan, London

Gupta D (1990) The economics of political violence. Praeger, New York

Hannan MT, Carroll GR (1981) Dynamics of formal political structure: an event-history analysis. Am Sociol Rev 46(February):567–598

Hari J (7 June 2004) The Dalai Lama: a life less ordinary. The independent. www.independent.co.uk/news/people/profiles/the-dalai-lama-a-life-less-ordinary-6168194.html. Accessed 23 Apr 2014

Haug MR (1967) Social and cultural pluralism as a concept in social system analysis. Am J Sociol vol. 73:294–304

Hibbs D (1973) Mass political violence: a cross-sectional analysis. Wiley, New York

Hong L, Page SE (1998) Diversity and optimality. Santa Fe Institute, Working Paper 98-08-077

Huntington SP (1993) The clash of civilizations? Foreign Aff 71(Summer):2–32

Huntington SP (1996) The clash of civilization and the remaking of world order. Simon and Schuster, New York

Krishnan A (9 July 2012) Dalai Lama speaks of dilemma on spreading self-immolations. The Hindu. New Delhi. http://www.thehindu.com/news/national/dalai-lama-speaks-of-dilemma-on-spreading-selfimmolations/article3617428.ece. Accessed 20 Apr 2013

Li H, Zou H (1998) Income inequality is not harmful for growth: theory and evidence. Rev Dev Econ 2:318–334

Lian B, Oneal JR (1997) Cultural diversity and economic development: a cross-national study of 98 countries, 1960–1985. Econ Dev Cult Change 46(1):61–77

Mackerras CP (2005) People's Republic of China: background paper on the situation of the Tibetan population, A Writenet Report commissioned by United Nations High Commissioner for Refugees, Protection Information Section (DIP). http://www.unhcr.org/cgi-bin/texis/vtx/refworld/rwmain/opendocpdf.pdf?docid=423ea9094. Accessed 25 Apr 2013

Perotti R (1996) Growth, income distribution, and democracy: what the data say. J Econ Growth 1:149–187

Powers J (2004) History as Propaganda: Tibetan Exiles versus the People's Republic of China. Oxford University Press, Oxford

Ravallion M (2001) Growth, inequality and poverty: looking beyond averages. World Dev 29:173–197

Reuters (14 May 2011) China effectively rules out talks with new exiled Tibetan PM. http://www.chinapost.com.tw/china/local-news/tibet/2011/05/14/302312/China-effectively.htm. Accessed 30 Mar 2013

Shakya Tsering (1999) The dragon in the land of snows. Columbia University Press, New York

Shanker R (1996) Culture and Development. Development Express, no. 8. Hull, Québec: International Development Information Center

Shen S (2009) Borrowing the Hong Kong identity for Chinese diplomacy: implications of margaret chan's world health organization election campaign. Pac Aff 81(3):361–382

Shen S (2010) Territorial fragility and the future of Tibet: sub-sovereignty, problems and theoretical solutions. In: Guo Rongxing, Freeman Carla (eds) Managing fragile regions: method and application. Springer, New York, pp 61–79

Shih CY (14 May 2008) Tibet cultural self-governing, cultural genocide and ethnocide (xizang wenhua zizhi wenhua miejue yu qu zuqunhua). Mingpao, Hong Kong

TBS (Tibet Bureau of Statistics) (2011) Tibet statistical yearbook 2010. China Statistics Publishing House, Beijing

Venieris Y, Gupta D (1986) Income distribution and sociopolitical instability as determinants of savings: a cross-sectional model. J Polit Econ 94:873–883

Wilson EA (1980) Sociobiology. Belknap, Cambridge

Yeh ET (2013) Taming Tibet: landscape transformation and the gift of chinese development (Studies of the Weatherhead East Asian Institute, Columbia University). Cornell University Press, Ithaca

Zhang S (2009) Mao Zedong and the decisions of key affairs of the People's Republic (in Chinese). Hubei People's Press, Wuhan

Epilogue
Center Versus Peripheries

After I pass away,
And my pure doctrine is absent,
You will appear as an ordinary being,
Performing the deeds of a Buddha
And establishing the Joyful Land, the great Protector,
In the Land of the Snows.

–Root Tantra of Manjushri (Tib. 'Jam-dpal rtsa-rgyud)[1]

Getting Away from the Center

In modern-day China, a person with a permanent residential right in Beijing–China's political center—has usually been more or less regarded as having some sort of superiority to those who come from the other peripheral places. Obviously, this has inherently rooted at traditional Chinese culture. But, as time just entered into the second decade of the 21st century, there have been some problems with the center.

In late 2011, Beijingers began to worry about the various reports on the air quality in downtown Beijing. On the one hand, the U.S. Embassy in Sanlitun, Dongcheng district, publicized that, based on their monitored data on the PM2.5 indicator, the air pollution had exceeded far behind the standard level. On the other hand, however, a Chinese environmental protection agency in Beijing criticized the U.S. Embassy as saying that the latter had not the authority to publish data on China's air quality in China. They also announced that, according to their PM10 data which had been officially applied in China, Beijing's air pollution had not been as serious as what had been reported by the U.S. Embassy.[2]

A few weeks had passed before the Beijingers as well as the government officials in charge of environmental protection were no longer interested in the

---

[1]Cited from Gyatso (1997, p. 3).

[2]PM2.5 and PM10 denote particulate matter being smaller than 2.5 and 10 micrometers in diameter, respectively.

differences between the PM2.5 and the PM10 reports. And, as winter came near, more and more people were found to wear masks while walking in the streets—It seemed that air pollution became worse.

I decided to consider moving out of downtown Beijing. But my son did not agree to move—he, like many other young gays, preferred to a downtown life. After several rounds of debates and a detailed cost-benefit analysis, we eventually agreed to resettle at a small town in northeastern Beijing.

Now, air pollution became less serious at our new residence, even though we missed at the first days our downtown lives—we had lived in Wudaokou, Haidian district for more than ten years. In the years following our resettlement, air pollution in downtown Beijing has continued to worsen. As a result, the price of the housing in peripheral Beijing has increased at a higher rate than that in the other places where air pollution is a problem. We had made a smart decision!

However, the resettlement also resulted in some kind of identity problem. One day, my son suddenly reported to me that the local residents did not refer to themselves as "Beijingers".[3] He also complained that he might have been localized if we would continue to reside far away from the center of Beijing. But I consoled my son that our residential area—a district of Beijing municipality—was only about 30 min (via express way) away from the central district of Beijing. I also criticized my son for his "spatial discrimination"—a harmful idea that had been banned in many free democracies.

Only when my neighbor invited me to climb the Great Wall, did I really realize that my home is completely located at the periphery of Beijing (and perhaps of China in ancient times). We are only about 10 min away from the Great Wall! The Wall (see Fig. E.1) had once-ever served as the forbidden border between the Han Chinese and their northern enemies. In China, there have been many blooding and tearing stories about the Great Wall during the past thousands of years. At war times, in order to protect Beijing and other Han Chinese areas (on the south of the Great Wall) from attack, people living near the Great Wall had always been victims. I congratulated myself that I had not been among those who lived at the war times.

Nevertheless, I was still not quite disappointed for my moving away from the center—I had also got away from pollutants. In those days when I stayed at my yard by watching the blue sky, I was wondering how Beijing's air pollution problem could be solved.

> "If some people still want to sit at the center and show superiority to other, peripheral areas and peoples, and still more people want to come to ingratiate themselves with the former, Beijing can only but become the source with more pollutants," my wife murmured.

> "Downtown air pollution may become a good thing for Beijing and for China as a whole!" A strange idea suddenly came into mind.

I even made a bold forecast for China's political reforms:

> Some day in the future, the worsening air pollution may become an impelling force for policymakers to make institutional changes from the top layer.

---

[3]According to the official definition, Beijing municipality includes not only the six central districts (i.e., Chaoyang, Dongcheng, Fengtai, Haidian, Shijingshan, and Xicheng) but also several other, peripheral districts and counties.

Fig. E.1   The ruins of the Great Wall

What I mean is that China has still been an overly centralized state, even though it has undergone decades of administrative reforms.[4] The decentralization of political and economic powers may be fulfilled by simplifying or removing some government functionaries and, if necessary, relocating them out of central Beijing. Consequently, central Beijing will have a less population and fewer pollution makers. Beijing's air pollution problem can be resolved automatically.

> "Is it so easy for them to make this kind of change?" My wife asked.
>
> "Without a change, they will die of pollution, sooner or later; then central Beijing will become a new peripheral place," my son quickly responded.

I pointed out my son's inappropriate usage of the word "die". But he insisted on his prediction by quoting Su Dongpo (AD 1037–1101)—a famous Song-poet—as saying "When viewed with a belief that things are bound to change, there is not even a single element in the heaven and earth that does not change…"

---

[4]For example, I heard, in a live-broadcasted press conference on March 17, 2013, that Chinese Premier Li Keqiang announced that there had still been as many as 1,700 administrative approval items before the Chinese government would cut at least one third of them within five years (2013–18).

Furthermore, using what he just learnt in his textbook, he further explained his hypothesis:

> No places were born to be centers or peripheries; neither will they be forever. For example, Beijing means 'northern capital'. It had been served as China's northern periphery for a long period of time before the Yuan dynasty (AD 1279–1368) was established. Since then, Beijing has been served as China's political center. What is more, only since the vast territories on the northern side of the Great Wall fell under Chinese control, has Beijing no longer been treated as the peripheral area of China.

Yes, it is time now for the Chinese policymakers to take some actions, before it is too late…

Center Under Heaven

Throughout history, physical terrain, political fiat, and conquest have divided states into separate political entities as much as race, ethnicity, language and religion. The result is the man-made and sometimes arbitrary or even imposed boundaries as well as the rise and fall of political centers within and beyond those boundaries. China has no exception.

The western part of Shaanxi province, with much proximity to Gansu province, is quite a peripheral place in contemporary China. But had not been the case before 2500 years or so—the Western Zhou dynasty (1046–771 BC) first constructed that place as its political center. During the past century or so, there have been various news and reports that many Zhou-dynasty relics were excavated in western Shaanxi. Below is just one of them:

> There was a household named Chen at the West Street of Jiacun village on the northeast of the suburb Baoji city. One day of 1963, in the morning, Mr. Chen, went to his backyard to see if everything there, after a night-long heavy rain, had been OK. When he arrived, he suddenly found an ancient bronze vessel in the three-meter-high cliff just behind his house.
>
> The Chen family—not knowing the vessel's true value—cleaned up its earth and used it for containing food.
>
> In August 1965, due to their worsening economic conditions, Chen sold the bronze to a salvage station for about a dozen kg of maize.
>
> In September of the same year, a Baoji City Museum worker occasionally found the vessel at the salvage station and shipped it back to the Museum. Originally called "Taotie Bronze Vessel", its true value had not been proved until 1975 when an exhibition was held in the Beijing Palace Museum.
>
> In the exhibition, experts found inscriptions at the bottom of the vessel's tank. Since then, the vessel has become a national treasure, called "Hezun", which is named after 'He', the original owner of the vessel.[5]

With a height of 38.8 cm, a top-opening diameter of 28.8 cm and a weight of 14.6 kg, the Hezun wine vessel was made in the first years of the Zhou dynasty (see Fig. E.2). There is an inscription of 122 Chinese characters at the bottom inside the vessel. The main ideas of these characters are as the following:

---

[5]Source: Author based on miscellaneous news clippings.

Fig. E.2 Hezun (c. 1039 BC)

In the fourth month of the fifth year of King Cheng [reign 1043–1007 BC] of the Zhou dynasty [i.e., in May 1039 BC], the construction work of the Metropolis began at Luoyi [today's Luoyang city in central China's Henan province]. In the meantime, King Cheng was offering a sacrifice to his father [i.e., King Wu].

On the 23rd day of this month, King Cheng taught a young man, named He, of the King's family, a lesson in the Palace, saying:

> Your late father had followed King Wen [King Wu's father and King Cheng's grant-father]. In the later years, King Wen was instructed by God to govern the nation, and King Wu, after defeating the Shang dynasty, offered a sacrifice to Heaven and ordered his liegemen:

> 'Luoyi, as the center under heaven, will become Zhou's capital from which to govern the whole nation'.

Thereafter, King Cheng rewarded He with 30 shells. To commemorate this important event, He decided to order people to manufacture this wine vessel.[6]

The inscription in the Hezun has been regarded as the earliest literal record for the Chinese name 'China' ('zhongguo'). And King Wu's thought was further developed by his son, King Cheng, as recorded by Sima Qian (145–87 BC) in his famous book *Shiji* ("Records of the Great Historian"):

---

[6]The text is translated by the author based on the Chinese inscription.

> Here [Luoyi] is the center under heaven, from which all other states bear same distance when they come to pay tributes.[7]

For thousands of years, Chinese kings, emperors and other rulers have treated their palaces as centers under heaven. Naturally, these centers have had superiority—politically, culturally and economically—to other, peripheral areas of China and the rest of the world. However, periphery and center sometimes could be interchangeable. For example, before King Wu of the Zhou defeated the Shang dynasty in the central and eastern parts of China, the political center was located in today's western Shaanxi. After having put the whole China under his control, the King ordered to move the "center under heaven" to Luoyi (in today's Henan province).

Alas, had the vessel's owner, He, known that his palace have become so peripheral later on, he would have been ashamed of his later generations! But the Zhou's rulers should also take the blame. They had not followed the instructions by Kings Wu and Cheng. Had they moved the Zhou's capital to Luoyi—called as the "center under heaven" by King Wu—earlier, the Zhou's Palace might not have been destroyed so easily by their enemies from the far west, ending the first stage of the dynasty.[8]

Nevertheless, Mr. He should still be feeling lucky. Hezun is now, as part of a collection of the Baoji Bronze Ware Museum, under a special, state-level protection. It has been among the limited number of China's national treasures that are prohibited for overseas exhibitions.

Mr. Chen and his family must have been very proud of their residence—a site which had been a royal palace. However, had they had the knowledge of the Hezun's real value and preserved it for a longer time, they could have received a far bigger reward than just the one-dozen-or-so kg of maize.

Of course, all of us and our later generations will still be luckier. Through the Hezun, we are now able to take the 3000-year-ago lessons from Kings Wu and Cheng. Their theory of "center under heaven" has still been influencing China and the Chinese culture!

Center Versus Peripheries

In any consideration of the factors that have contributed to China's urban growth, particular emphasis should be given to the role of the large numbers of workers from peripheral, usually rural areas. In Beijing, for example, each year there are more than one million temporary migrants from the countryside. Without these workers, Beijing's urban constructions (such as those of the Bird's Nest and other

---

[7]The original words are "ci tianxia zhi zhong, sifang rugong daoli jun"—cited from Sima (104 BC, p. 17).

[8]The Zhou dynasty is divided into two periods: the Western Zhou (1046–771 BC) had its capital in Hao (west of today's Xi'an of Shaanxi province) in the west; while the Eastern Zhou (771–221 BC) had its capital in Luoyi (today's Luoyang of Henan province) in the east.

facilities used by the 2008 Olympic Games) would have been impossible. By contrast, very few, if any, of Beijing's 'officially registered' labors are now found to be carrying out physical and menial jobs in the low-level service sectors.

At the end of September 2012, when the National Day came near, my wife and I were considering how to spend the seven-day long holidays. In recent years, there were various reports that the number of tourists visiting the scenic spots in Beijing had reached a record high. It was not an ideal place to spend our holidays in Beijing. We decided to pay visits to some peripheral places. The first stop was Qufu—hometown of Confucius (551–475 BC)—in Shandong province.

Thanks to the high-speed rail that was opened in July 2011, travelling by trains has become much more convenient in China than before. It took us only about two hours from Beijing to Qufu—I remember it would have usually taken about ten hours before the mid-1990s. We spent a very pleasant time in Qufu where we visited the Confucian Mansion and other scenic spots relating to Confucius.

Our next stop is Shanghai—China's largest city. But it was China's peripheral area 150 years ago. Upon boarding the train, my wife began to compare Qufu and Beijing. She first raised a question to me: "The Confucian Mansion seems to be much smaller than the Summer Palace (a royal yard where the Qing rulers used to spend their summer vocations). Had the Qing empires respected Confucius as much as they promised, why had they not constructed a larger mansion for Confucius' descendants?" I did not reply, as I was very tired and wanted to have a nap. My wife continued her topic:

> Probably the Manchus did not want Qufu to become as famous and influential as Beijing. They had only used the Confucian theory to rule China, but always with precautions against all the Han Chinese including Confucius' descendants.

While I was closing my eyes and going to sleep, I felt that a scholar-like man—who just sat opposite my seat—was smiling at me. When I said hello to him, he responded in English—he told me he came from Japan. Knowing that he was a U.S.-trained historian teaching in a Japanese university, we talked about Confucius, the city of Qufu and, naturally, about the recent developments in the East China Sea where China and Japan had been quarrelling with each other over some uninhabited islands.

> "You Japanese should have learnt from the Manchus before you wanted to have an effective control of China." When referring to the Second World War, I raised a hypothesis to him.
> "Why that? I know that the Japanese of the 1930s had strong superiority to those of their neighboring states including China. And its economic and military might was much stronger than China's. But do you think Japan could have put China under its effective control?" The Japanese asked.

It seemed that he did not like this topic—neither did he like Japanese militarists. "Yes, but it is subject to certain conditions," I replied, with a further explanation:

> When they established the Qing dynasty [AD 1644–1911], the Manchus were a much small people in China. However, using the way acceptable to the Han Chinese, they had ruled China quite well, even better than the Han Chinese did in the Ming dynasty [AD 1368–1644]. Some Han Chinese even missed the Manchu rulers after the Qing court fell in 1911.
> "Really?"

I continued my topic, telling him a short story about my grand-father who was born in the 1890s. During the first years since the Republic of China (ROC) was established in 1912, he and many other Han-ethnic men, facing with the punishment by the government, refused to cut their Manchu-style hairs. It seemed that the Japanese was still not quite clear. I added:

> China, like an old, ill-functioning cart with heavy freight, cannot be easily managed to run. But as long as it keeps running, neither can it be easily managed to stop running.

While I was referring to China's weakness, I also pointed out the uniqueness of the Chinese culture. No matter how strong they had been at the beginning of the Qing dynasty, the Manchus, like the other earlier non-Han rulers of China, were quickly Sinolized or Chinesized during the following years. And far before the collapse of the Qing dynasty in AD 1911, most Manchus had already forgotten their own language and the most components of their culture and tradition. Now, one can hardly find any differences between the Manchus and the Han Chinese.

The Japanese asked anxiously: "Then, do you think that, had the Japanese successfully conquered mainland China, Japanese would become the second Manchus in China?" "The longer they stay in China, the more likely they will be Sinolized or Chinesized." I was quite proud of the Chinese culture and, in particular, of the 'smart' power of the Han Chinese, saying:

> While the U.S. troops defeated the Japanese troops, Japan is still Japan and Japanese are still the Japanese. However, if Japan defeats China and if China becomes Japan's overseas territory, then Japanese themselves—at least those who want to stay in China as rulers and to effectively rule the Chinese—might eventually become an ethnic minority of China later (as the Manchus and the other earlier non-Han rulers of China did).

"In that case," I made a bold prediction, "Japan per se might eventually become China's (or Chinese-dominated) territory, as Manchuria—homeland to all the Manchus—did." It seemed that the Japanese did not agree my viewpoint. After a while, he pointed out a fundamental weakness of the Han Chinese or of the Chinese culture, which is widely referred to as "Han-jian" (meaning "traitors who betray China or the Han Chinese") in China:

> I learnt that some Han Chinese had cooperated with Japanese troops during the Sino-Japanese War. Under the Japanese help, they also established a new government in Nanjing, in opposition to China's central government in Chongqing. They even helped Japanese troops to fight against other Chinese troops. How do you explain this?

> "They had been peripheralized," I replied.

"Peripheralized?" Since the broadcaster was announcing news, the Japanese did not hear clearly, I spelled the word loudly, adding: "What they had done was to help themselves rather than the Japanese, because they realized that their Han-Chinese rulers were more harmful to them than the Japanese." When finding he still did not understand, I tried to explain it in a greater detail:

> China is too big as a country in terms of both population and land area. The larger the country, the longer is the distance—physically and morally—between the center and the peripheries. In turn, the peripheral areas and peripheralized people will find it more

difficult to establish efficient relations with the center. In some circumstances, distrusts and conflicts are more likely to occur between the center and the peripheries. In short, peripheral areas and peripheralized people are always bigger losers in larger countries (like China).

"Wake up! We have now arrived in Shanghai!" My wife wakened me—I had slept and dreamt along the whole journey.

While my wife and I were going to leave the exit of the railway station, a young couple rushed towards us. The young man introduced himself as a classmate of my son and the young woman as his girlfriend. Since I had lived in Shanghai before, I could identify the young woman was a native Shanghaiese. But my son had never mentioned his friend or classmate working in Shanghai. In a strange place, my wife and I must be suspicious of anyone who tried to get in touch with us.

Upon finding that I was confused by his hospitalities, the young man continued introducing himself:

> My Chinese is very poor. I am from Tibet. I finished my middle-school education in Zhengzhou where Luc had been my roommate for more than two years…