

Working Paper

Volume V, Number 05, 2011

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## Impact of Preferential Policies on Ethnic Minority Groups in China

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**Indian Institute of Dalit Studies**

*Devoted to Studies on Social Exclusion, Marginalized Groups and Inclusive Policies*

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**Working Paper  
Indian Institute of Dalit Studies  
New Delhi  
2011**



## **Foreword**

Indian Institute of Dalit Studies (IIDS) has been amongst the first research organisations in India that focuses exclusively on development concerns of the marginalised groups and socially excluded communities, who suffered exclusion and discrimination due to their group identity, whether of caste, ethnicity, gender, religion, race, physical disability, region or any form of social identity. Since its inception, IIDS has undertaken several studies on different aspects of social exclusion and discrimination, human poverty and inclusive policies and programmes for the historically marginalised social groups such as the Scheduled Caste (SC), Scheduled Tribes (ST) and Religious Minorities in India and other parts of the Sub-Continent. The Working Paper Series of the Institute disseminates empirical findings of the on-going research and conceptual development on issues pertaining to the forms and nature of social exclusion and discrimination in multiple spheres, their consequences, and suggests measures for inclusive development. Some of our papers also critically examine inclusive policies for the marginalised social groups.

The working paper on “Impact of Preferential Policies on Ethnic Minority Groups in China” is a part of the study of Caste and Ethnicity-based Discrimination in South-East Asia, which has been undertaken with the financial support of Action Aid for nine countries namely, Palestine, India, China, Philippines, Malaysia, Sri Lanka, Nepal, Bangladesh and New Zealand.

The paper begins with a magnitude of ethnic diversity in China. Over 8 per cent of the Chinese population constitutes the ethnic minorities who have been largely living in poverty-stricken counties. China has introduced a number of policies and programmes for promoting equality and faster economic and social development of ethnic minorities which have yielded

encouraging results over the years. However, the paper finds that, due to various reasons, the level of socio-economic development among many ethnic minority communities is still considerably low. With the help of case studies of Gansu and Guizhou provinces of Western China, the paper makes an in-depth analysis of exploring causes of persistent poverty and inequality among the ethnic minorities in China. The rising private health costs are found to be the largest contributing factor to the overall expenditure inequality in the two sample provinces of Gansu and Guizhou. The major factors identified for focused policy interventions include addressing the inequality issues arising out of existing stricter land policy and establishing safety nets for ethnic minorities for their education and health care.

IIDS acknowledges the support of Action Aid for undertaking the study. We hope this working paper will be helpful to those interested in the issues of inequality, deprivations and affirmative action policies to promote faster and inclusive growth.

**Rajendra P. Mamgain**  
**Director, IIDS**

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## **Impact of Preferential Policies on Ethnic Minority Groups in China**

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### **I. INTRODUCTION**

The People's Republic of China is home to 56 nationalities, of which 55 are ethnic minorities. The Han ethnic community constitutes the dominant majority. According to the Fifth National Census conducted in 2000, the share of Han population accounted for 91.59 per cent of the total population of China; while the ethnic minorities comprised only 8.41 per cent. The spread of population can be analyzed in terms of the country's geographical locations. The distribution of the population indicates that the members of Han nationality mainly reside in the Yellow River Valley, Yangtze River Valley, Pearl River Valley and the Songliao Plains. On the other hand, the ethnic minorities are mainly concentrated in the Western part of China.

In the past, the socio-economic development of the ethnic minority areas was relatively neglected in comparison to Han dominated areas. Even the poor among the ethnic minorities live in worse economic environments than their counterparts in the Han inhabited areas. According to an estimate, 257 ethnic minority groups live in 592 poverty-stricken counties distributed across 19 provinces and autonomous regions of China, including some developed coastal provinces like Zhejiang, Guangdong, and Liaoning. Of these counties, 83.6 per cent (215 counties) are mainly concentrated in the central and western parts of China, and primarily include the western areas, that is, Inner Mongolia (31),

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Xinjiang (25), Ningxia (8), Guangxi (28), Tibet (5), Yunnan (51), Guizhou (34), Qinghai (12), Sichuan (21), and Gansu (12). The poverty rates in these counties are as follows: Ningxia (20.69 per cent), Shaanxi (12.25 per cent), Gansu (19.92 per cent), Xinjiang (22.19 per cent), Sichuan (9.37 per cent), Yunnan (17.1 per cent), Inner Mongolia (10.9 per cent), Guizhou (17.4 per cent), Guangxi (11.9 per cent), Tibet (19.0 per cent), and Qinghai (21.8 per cent).

## **II. POLICIES TOWARDS ESTABLISHING EQUALITY**

### **1. Ethnic Minorities**

#### *A. Adherence to Equality and Unity among Ethnic Groups*

The Chinese government introduced preferential policies and measures to guarantee the right to equality for all in legal, social and governance spheres under the Constitution. This has created a favourable social environment for the ethnic groups and they can treat each other on an equal footing and develop a mutual relationship of unity and harmony amongst themselves. Some of these measures included the following:

- (i) **Democratic Reforms for Ethnic Minorities:** China adopted several measures in the late 1950s to institute democratic reform in the minority areas in accordance with the will of the communities residing in these areas. Under the reforms, all the privileges enjoyed by the elite classes like feudal lords, nobles and tribal chiefs were abolished. The erstwhile system was based on exploitation and oppression of the under-privileged classes by the elite. Consequently, reforms brought emancipation and personal freedom for the minorities and they became masters of their homeland.
- (ii) **Participatory Measures of Ethnic Groups in the State Affairs:** In the areas inhabited by ethnic minorities, each community has its own deputy or deputies sitting in the local people's congresses. Ethnic minorities living in scattered groups also elect their own deputies to the local people's congresses, and the number of people represented by each of their deputies may be less than the number of people represented by each of the other deputies to such congresses.

The State also undertook training of cadres from ethnic minorities and enlisted their services. As such there are well over 2,700,000 minority cadres throughout the country. A large number of personnel

## **Preferential Policies for Ethnic Minority Groups**

from the ethnic minority communities work in the central and local state bodies, administrative bodies, judicial and procuratorial services, thus participating in the management of national and local affairs.

- (iii) Classification of Ethnic Minorities: China has carried out massive studies since 1953 to classify various ethnic groups in order to implement its democratic reforms. Each group fulfilling the criteria for scientific classification as an ethnic group, along with their past history and present condition, has been classified as a single ethnic group. Various unrecognized ethnic minority groups under the past rulers of China, have also been recognized and accorded equal rights.

### *B. Ethnic Minorities and Local Self-Government*

An important aspect of the political system in China is the granting of regional autonomy to ethnic minorities living in concentrated communities. The ethnic minorities undertake the task of administration and manage the internal affairs in their regions through the bodies of self-governance.

The autonomous areas for ethnic minorities in China include autonomous regions, autonomous prefectures and autonomous counties (banners). By the end of 1998, five autonomous regions, 30 autonomous prefectures and 120 autonomous counties (banners) had been established along with 1,256 ethnic townships. Among the 55 ethnic minorities, 44 have their own autonomous areas, accounting for 75 per cent of the total population of ethnic minorities and 64 per cent of the total area of the whole country.

The system of regional autonomy for ethnic minorities was established after a long period of exploration and trial when the Programme for the Implementation of Ethnic Regional Autonomy of the People's Republic of China was issued on 8<sup>th</sup> August, 1952. Under the Constitution of the People's Republic of China, adopted in 1954 and later amended and promulgated, regional autonomy is considered as an important political system of the State. The Law of the People's Republic of China on Ethnic Regional Autonomy, promulgated in 1984, provides political, economic and cultural rights and duties to the ethnic minority autonomous areas. China further established four autonomous regions, namely Xinjiang Uygur Autonomous Region (1955); Guangxi Zhuang Autonomous Region (1958); Ningxia Hui Autonomous Region (1958); and Tibet Autonomous Region (1965).

### *C. Policies to Safeguard the Cultures of Ethnic Minorities*

The cultures of different ethnic minorities have evolved through the ages. China is not only committed to preserve the traditional cultures of ethnic minorities, but also continues to adopt measures to pursue and develop their respective cultures. Apart from following their own folk traditions and customs, each ethnic minority group practice different lifestyles manifested in their various costumes and adornments, and rituals followed for marriages and funerals. In an effort to preserve the local culture of ethnic minorities, the government has set up departments to bring out publications through their collection, editing and translation and also protect the historical monuments, scenic spots, rare cultural relics, etc. It has also set up institutions for conducting research on the following three epics of the ethnic minorities: Gesars (Tibetans), Jianggar (Mongolians), and Manas (Kirgiz). These epics and treatises of the minority groups have been published in ethnic minority languages, as well as in Chinese and foreign languages. The government has earmarked millions of yuans for publication of Zhonghua Dazang Jing, an encyclopaedia of Tibetan studies in 150 volumes.

## **2. Preferential Policies for Minority Areas**

As the ethnic minority areas have suffered from underdevelopment in economic, cultural and educational spheres, the government introduced special preferential policies, in terms of finance and taxation for these areas. Simultaneously, favourable policies have also been pursued to promote the development of population, culture and education. Similarly, training of human resources have also been imparted to encourage economic development of the ethnic minorities.

### *A. Financial Policies for the Upliftment of Ethnic Minorities*

The areas inhabited by ethnic minorities are characterized by rigorous natural environment and harsh living conditions. To alleviate the hardships faced by people, the government began to implement preferential financial policies in these areas. In addition to the costs of implementing an autonomous system, the balance of receipts of finances incurred in the ethnic minority areas are submitted to the central government, and the deficit is subsidized by the State, which also offers special subsidies like production subsidy, health subsidy, social welfare money and interest-free loans. The Government also

## **Preferential Policies for Ethnic Minority Groups**

took efforts to ensure the stabilization of the social economy, at the same time also promoting the production of various goods and services. While economic development was gradually restored, the government implemented the 'appropriate favourable financial treatment and necessary subsidies'. It also ensured the balance during the previous year and that the extra dividends earned from the implementation of annual budget in the autonomous ethnic minority areas would be collected and used by the local governments of such areas.

### *B. Preferential Taxation Policies*

These policies focused on alleviating the economic burden of the ethnic minorities and also ensuring the development of agriculture, livestock farming, industry, traffic, and construction works. The Chinese government has been implementing liberal tax policies, that aim 'to collect tax according to laws, to reduce and exempt tax according to laws, and not to increase tax even when production increases' for the purpose of accelerating development in basic sectors such as agriculture, and livestock farming in the ethnic minority areas. Apart from the liberal tax policy being pursued for agricultural and urban areas, the policy also stipulates 'minor or major reduction of taxes depending on the extent of disaster' in ethnic minority areas and also in poverty-stricken areas. These areas are characterized by low living standards, poor production levels, and rough terrain. In some cases industrial and commercial taxes have also been completely exempted in ethnic minority areas. The implementation of liberal tax policies for agriculture and livestock farming has aided rehabilitation and accelerated production in the vast agricultural and pastoral areas.

### *C. Population Education Policies*

China has taken proactive measures to formulate policies for the education of its population, aimed at improving the quality of life and living standards of ethnic minorities to facilitate economic and cultural progress. In this regard, the Government implemented the 'Population Boom' policy in the 1950s with the core idea of 'encouraging child birth, improving fertility rate, lowering (the) mortality rate, and increasing the quantity of population and labour forces'. Since the middle of the 1960s, this policy ensured much faster growth. These policies were further followed by necessary cultural and educational policies to improve the cultural levels of the ethnic population.

#### *D. Policies for Industrial Development*

The main sectors of tertiary industry in the ethnic minority areas are the production enterprises dealing in trade and marketing of ethnic articles of daily consumption. These also hold the maximum potential for development. China has been conducting diversified trade activities in the ethnic minority areas.

The ethnic trade policies adopted by the State have played a key role in promoting communication and unity among ethnic groups, establishing a people's government and rebuilding the economy in these areas. The preferential policies for ethnic minority areas include extension of the prime lending rate for working capital loans to commercial companies, companies dealing in traditional Chinese medicines, supply and marketing cooperatives, the Xinhua Bookshop, and production enterprises marketing articles of daily consumption in the ethnic minority counties. At the end of the 1990s, the State further amended the preferential policies for ethnic trade and production of ethnic articles through the introduction of various measures such as reduction of interest on current capital loans, exemption of tax, and permitting special investment for ethnic trade and production enterprises dealing in ethnic articles, which allowed more than 400 ethnic trade counties and over 2000 production enterprises of ethnic articles to enjoy the benefits of these preferential policies.

#### *E. Policies on Poverty Alleviation and Economic Development*

As is the case with all developing countries, the Chinese government since the 1980's has concentrated on the implementation of poverty alleviation programmes and economic development for targeted groups and ethnic minorities. In the 1990s, the government focused on poverty-stricken ethnic minority areas for facilitating their development through poverty reduction with the help of preferential treatments in terms of both capital allocation and policy enforcement. In the State's Seven-year Priority Poverty Alleviation Programme (which was designated to lift 80 million people out of absolute poverty during the seven year period from 1994 to 2000), China decided to consider 592 counties as key poverty alleviation counties, of which 257 were ethnic minority counties, constituting 43.4 per cent of the total number of key poverty alleviation counties, and 38.9 per cent of the total number of counties and cities in the ethnic minority areas. The programme was aimed at poor people among the ethnic minorities, who comprised 35 per cent of the

## **Preferential Policies for Ethnic Minority Groups**

total population of the Chinese ethnic minorities, and were in need of special policies for combating poverty and traditional backwardness.

### *F. Policies of Opening-up and Integration*

In the period of economic reforms and liberalization in China, the Chinese ethnic minority areas have adopted a system of bidirectional opening up or an 'overall opening up'. Under this system, policies for horizontal integration and aid are implemented in the domestic market, while those for overall opening up and development of foreign trade along the border are enforced in the international market. Both domestic and foreign capital, resources and technologies are used to vigorously explore the domestic and international markets, and consequently strengthen economic development in the ethnic minority areas.

### *G. Employment Policy for Ethnic Minorities*

The government has laid down special regulations for the employment of ethnic minority groups to promote cordial relations with these groups and accelerate economic and cultural development in their areas. These regulations are stipulated in the Law of the People's Republic of China on Ethnic Regional Autonomy. Promulgated in 1984, this law specifies the exact percentage of the population of minority communities that should be enlisted for employment in the respective ethnic autonomous areas. In order to facilitate the number of minority employees, the conditions for recruitments have also been relaxed further for the minority communities. These regulations signify an important step forward in guaranteeing equal rights and equitable employment opportunities for all ethnic minority groups.

## **3. Impact of Policies**

The implementation of favourable policies for ethnic minorities and the areas where they reside by the State and ruling Communist Party of China have significantly improved the socio-economic conditions and living standards of the ethnic minorities. However, on account of various reasons, the level of socio-economic development among many ethnic minority communities is still considerably low, and many of them are still reeling under extreme poverty with no access to even adequate food and clothing. The main reasons for this state of affairs are as follows:

1. Some ethnic minority areas are exposed to severely adverse natural and geological environments. Most of these areas are border areas,

which are hostile to traffic movement and thereby less conducive to development.

2. These areas lack adequate infrastructural facilities and function under a weak economic system.
3. Social development in the ethnic minority areas has also lagged behind as compared to other areas. During the initial period of the Communist rule, these areas were mainly inhabited by the Oroqen, Lhoba, Yugur, Blang, Nu, Drung, and Jino tribes, all of which followed primitive socio-economic systems. Subsequently, others like the Moinba, Achang, Deang and Tibetan tribes, which were following the feudal system of serfs and slaves, settled in these areas. While the socio-economic conditions of these tribes have vastly improved over the years, their primitive social systems are still prevalent to a certain extent, thereby hampering their overall development.
4. The population sizes of the ethnic minorities are small and scattered over large areas, making it difficult to administer programmes effectively. Further, many of them are poverty-stricken and lack both the resources and inclination to foster their own growth. All the above factors make the development of the ethnic minority areas an uphill task for the State administration.

### **III. CASE STUDIES: GANSU AND GUIZHOU (WESTERN CHINA)**

#### **1. Gansu**

##### *A. Comparison of Economic and Social Development Levels*

Gansu Province is characterized by hostile natural conditions and a weak economy. Being one of the poorest provinces in China, Gansu also comprises 42 of the State's key poverty alleviation counties. There are 54 ethnic minorities throughout the whole province. According to Fifth National Census, the population of ethnic minorities in Gansu was 2,184,000, accounting for 9.52 per cent of the total population there in. Under the provincial administration, there are two autonomous prefectures of Linxia and Gannan in Gansu (with each of them having eight county-level administrative areas, respectively), five ethnic minority autonomous counties of Tianzhu, Sunan, Subei, Ekesai, and Zhangjiachuan, and 39 ethnic minority autonomous townships. The total land under the ethnic minority areas is 179,000 square km, accounting for 39.8 per cent of the total area of Gansu. Among the ethnic



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minorities, sixteen have populations of over 1000 each, of which the major ones include the Hui, Tibetan, Dongxiang, Tu, Yugur, Bonan, Mongolian, Salar, Kazak and Manchu communities. In addition, members of 38 other ethnic minorities also live in Gansu. As for the distribution of these communities, the Hui people are mainly concentrated in Linxia Hui and Zhangjiachuan Hui Autonomous Prefectures, and scattered in Lanzhou, Pingliang and Dingxi. The Tibetan community is mainly concentrated in Gansu Tibetan Autonomous Prefecture, and in the east and middle sections of Hexi Corridor and Qianlian mountainous areas. The Dongxiang, Bonan and Salar communities are mainly distributed in Linxia Hui Autonomous Prefecture, while the Yugur, Mongolian, and Kazak communities are largely found in the eastern and middle sections of Hexi Corridor and Qianlian mountainous areas.

Of all the 86 counties (including county-level cities and districts) in Gansu, 21 are ethnic minority autonomous counties, wherein 57 per cent of the population comprises the ethnic minorities, accounting for about 80 per cent of the total ethnic minority population in Gansu. For the sake of convenience, in the subsequent sections of this paper, the ethnic minority autonomous counties and the non-ethnic minority counties are referred to as EM counties and NEM counties, respectively.

**Table 1: Comparison of Area and Population of NEM Counties and EM Counties in Gansu Province**

	<i>No. of administrative areas at the level of the county</i>	<i>Average population of counties (10,000)</i>	<i>Average area per county (sq. km)</i>	<i>No. of State's key poverty alleviation counties</i>	<i>No. of hilly counties</i>	<i>No. of mountainous counties</i>	<i>No. of plain counties</i>	<i>No. of counties in the pastoral and semi-pastoral areas</i>
Total of Gansu	86	29.95	5475	42	12	49	15	20
Total of NEM counties	65	34.74	4482	28	10	31	14	10
Total of EM counties	21	15.13	8547	14	2	18	1	10

*Sources: Calculated on the basis of the relevant data in the County (City) Statistic Yearbook of Society and Economy in China 2005, and Gansu Yearbook 2006.*

Table 1 lists details of the area and population characteristics of the EM and NEM counties in Gansu Province. The EM counties have small populations but vast areas of land. The natural conditions prevailing in the EM counties are worse than those in the NEM counties. The 21 EM counties include 18 mountainous counties, two hilly counties, and one plain county. Half of the EM counties are pastoral and semi-pastoral areas, while two-thirds of them comprise the State's key poverty alleviation counties.

Table 2 compares the gap between NEM and EM counties in terms of the level of their economic development in 2005. According to multiple indicators reflecting economic development and their economic structures, the EM counties are largely economically backward. In 2005, the CDP per capita and average net income per peasant in the EM counties were about 44 per cent and 70 per cent, respectively, of the corresponding figures for NEM counties. Agriculture accounts for a higher percentage of the economic structure in these counties.

**Table 2: Comparison of Economic Development Levels between NEM and EM Counties in 2005**

	<i>GDP per capita (yuan)</i>	<i>average net income per peasant (yuan)</i>	<i>Percentage of agricultural population</i>	<i>Percentage of agriculture in the total GDP</i>
Mean value of NEM counties	8139	2108	76.72	28.69
Mean value of EM counties	3574	1474	79.30	29.99

*Sources: Calculated on the basis of the relevant data in the Gansu Yearbook 2006; the GDP per capita and average net income per peasant refer to the prices of current year, and the mean values refer to the weighted mean value calculated on the basis of the weight of population in each county.*

Tables 3 and Table 4 compare the gaps between EM and NEM counties in terms of health and education. All the indicators of the EM counties are lower than those of the NEM counties; there is a large gap in the enrolment ratio between EM and NEM counties, especially in the field of education.

**Table 3: Comparison of Health Development Levels between NEM and EM Counties**

Year	Number of beds in health organizations per 1000 persons (bed)		Number of practising doctors and assistant practising doctors per 1000 persons (person)		Life expectancy (year)	
	NEM counties	EM counties	NEM counties	EM counties	NEM counties	EM counties
2000	2.42	1.65	2.76	2.39	70.61	67.30
2006	2.65	1.80	3.32	3.02	--	--

Sources: Calculated on the basis of the relevant data in the Gansu Yearbook 2000 and 2006.

**Table 4: Comparison of Education Development Levels between NEM and EM Counties**

Year	Enrolment rate of school-age children in primary schools (%)		Enrolment rate of junior middle schools (%)		Enrolment rate of senior middle schools (%)		Illiteracy ratio (%)	
	NEM counties	EM counties	NEM counties	EM counties	NEM counties	EM counties	NEM counties	EM counties
2000	98.66	97.24	60.40	33.44	21.12	21.46	11.17	30.56
2006	98.71	97.62	84.39	57.10	42.49	35.14	--	--

Sources: Calculated on the basis of the relevant data in the Gansu Yearbook 2006; the illiteracy ratio and life expectancy are based on the population census of 2000.

**B. Comparison of the Rate of Economic Growth**

Table 5 compares the gaps in GDP per capita and average net income per peasant in the years 1994, 1999 and 2005 between NEM and EM counties. According to the gap in GDP per capita, the ratio between the two groups tends to reduce gradually, and was down to 2.28 times in 2005 from 2.48 times in 1994. However, the difference between two groups tends to increase gradually, and was up to 3,148 yuans in 2005 from 1,386 yuans in 1994. As far as the gap in the average net income per peasant is concerned, the gap between two groups, both relatively and absolutely, is smaller than the gap between two groups in terms of the GDP per capita; however, the relative gap and absolute gap in

terms of the average net income per peasant between two groups tends to increase gradually, and was up to 1.43 times in 2005 from 1.36 times in 1994, while the differences between these two indicators increased to 437 yuans in 2005 from 198 yuans in 1994.

**Table 5: Comparison of GDP per Capita and Average Net Income per Peasant between the NEM and EM Counties of Gansu Province**

Year	GDP per Capita (Yuan)				Average net income per peasant (Yuan)			
	NEM counties	EM counties	Differences between two groups of counties	Ratio between two groups of counties	NEM counties	EM counties	Differences between two groups of counties	Ratio between two groups of counties
1994	2320	934	1386	2.48	751	553	198	1.36
1999	2685	1102	1584	2.44	1143	802	340	1.42
2005	5613	2465	3148	2.28	1454	1017	437	1.43

*Sources: Calculated on the basis of the Gansu Yearbook of the various years; for arriving at the GDP per capita and average net income per peasant, the comparable prices of 1994 were adopted.*

Table 6 compares the growth rates of GDP per capita and of the average net income per peasant between the NEM and EM counties during the period 1994 to 2005. These two growth rates have changing characteristics. As regards the growth rate of GDP per capita, it was as low as 9 per cent for both the areas during the period 1994 to 1999, but was as high as 15 per cent in the NEM counties, and over 16 per cent in the EM counties during the period 1999 to 2005. This high growth rate was on account of the implementation of the Western Development Programme in China from 2000 onwards. If one were to compare the growth rates of GDP per capita between the NEM and EM counties, one would find that the growth rate in the NEM counties would always be higher than in EM counties. As regards the growth rate of the average net income per peasant, it was about 14 per cent in both the areas during the period 1994 to 1999, but fell to 6 per cent during the period 1999 to 2005. This indicates that the rate of growth of the average net income per peasant in Gansu Province has slowed down in recent years. A comparison of the growth rate of the average net income per peasant between the NEM and EM counties

indicates that the rate prevalent in the NEM counties has always been slightly higher than those in EM counties.

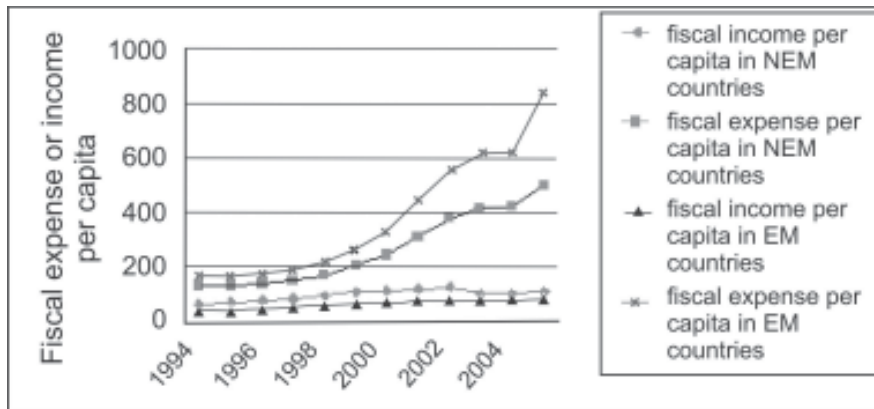
**Table 6: Comparison of Growth Rate of GDP per Capita and Growth Rate of Average Net Income per Peasant between NEM and EM Counties of Gansu Province**

Year	Growth rate of GDP per capita (%)		Growth rate of average net income per peasant (%)	
	NEM counties	EM counties	NEM counties	EM counties
1994-1999	8.68	9.09	14.79	13.70
1999-2005	15.00	16.32	5.87	5.80
1994-2005	12.09	12.98	9.84	9.32

Sources: Calculated on the basis of the Gansu Yearbook of the various years.

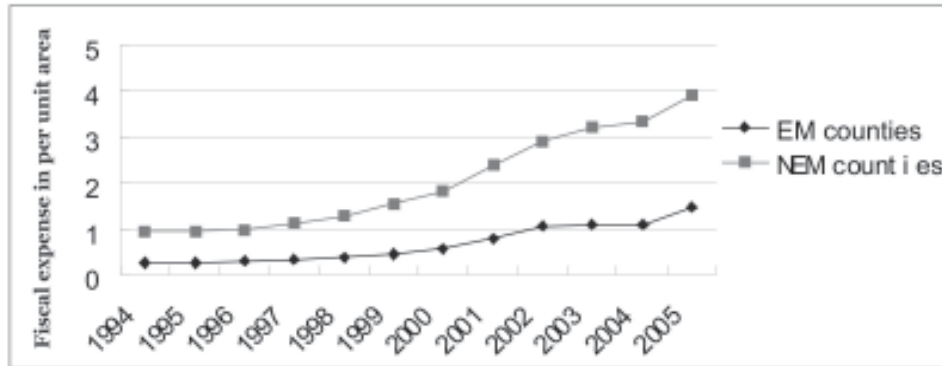
*C. Comparison of Fiscal Expense and Investment*

In literature, the commonest method of comparing fiscal disparity among regions is by comparing the disparity of fiscal income and expense per capita between different regions. Figure 1 shows the fiscal income and expense per capita in EM and NEM counties. The large gap between fiscal expense per capita and fiscal income per capita is complemented by fiscal transfers from the higher echelons of government. The distribution of fiscal transfers is preferential in the ethnic minority areas in Gansu Province, which is why, as shown in Figure 1, the EM counties get more fiscal transfers per capita.



**Figure 1: Fiscal Income and Expense per Capita in the NEM and EM Counties in 1994-2005 in Gansu Province**

During the period 1994 to 2005, the annual growth rate of fiscal income per capita was very low in all the counties, but the annual growth rate of fiscal expense per capita was high, and stood at 12.1 per cent in the NEM counties, and 15 per cent in the EM counties. As shown in Figure 1, the fiscal expense per capita in the EM counties was more than that in the NEM counties.



**Figure 2: Fiscal Expense in per Square Km Area in NEM and EM Counties**

A comparison of the fiscal expense per capita between NEM and EM counties seems to indicate that the level of public expense in the EM counties is higher than that in the NEM counties. However, since the differing costs in producing similar public goods in different areas have not been factored in, this indication cannot be accepted *in toto*. In fact, the EM counties need more funds for providing public services to local residents due to lower population density and more hostile natural conditions than those prevalent in the NEM counties. A comparison of the fiscal expense in per unit area – arrived at by dividing the amount of fiscal expense by the county's total area – in Figure 2 shows that the fiscal expense in a per square km area in the NEM counties is about threefold of that in EM counties.

It is very difficult to measure the exact cost of producing public goods in different regions, so we were unable to accurately compare the level of public expense between the NEM and EM counties. The above analysis suggests that we could not draw a firm conclusion by just comparing the levels of fiscal expense per capita. However, from Figure 1, we can conclude that the EM counties have a higher growth rate of fiscal expense than the NEM counties.

**Table 7: Total Investment per Capita in Fixed Assets  
(at a Comparable Price of 1998: RMB Yuan)**

Year	NEM counties	EM counties	Disparity between NEM and EM counties	Ratio of NEM to EM counties
1998	1072.61	281.20	791.41	3.81
1999	1296.87	281.69	1015.19	4.60
2000	1519.90	522.72	997.17	2.91
2001	1759.59	764.91	994.67	2.30
2002	2160.80	967.84	1192.96	2.23
2003	2422.23	1264.47	1157.75	1.92
2004	2617.88	1580.36	1037.52	1.66
2005	3056.64	2023.67	1032.98	1.51
2006	3545.45	2429.74	1115.72	1.46
Annual growth rate (%)				
1998- 2006	16.12	30.94		

Source: *Gansu Yearbook, China*.

Table 7 shows a comparison of the amount of total investment per capita in fixed assets between the NEM and EM counties during the period 1998 to 2006. It is obvious that the NEM counties had a higher investment per capita in fixed assets than the EM counties, but the EM counties, on the other hand, had a higher annual growth rate of total investment per capita in fixed assets.

#### *D. Analysis of Impact of Ethnic Minority Factors upon Economic Growth and Growth of Peasants' Income*

In the following sections, the Neoclassical Growth Model is used for conducting a thorough analysis of the growth rates of the GDP per capita and of the average net income per peasant in the counties of Gansu Province, irrespective of whether or not there are significant gaps in the growth rates between the ethnic minority areas and other areas, and whether or not the factor of ethnic minority is the main cause for the gap in economic growth rate between the different areas.

##### *1. Framework of Analysis*

According to the Neoclassical Economic Growth model, the economies with similar preferences and technologies may be converged to the same steady

state, and the growth rate of backward economies would be faster than that of the rich economies. In the Neoclassical Growth theory, there are two convergence concepts of regional economic growth: one is  $\hat{\sigma}$  convergence; if the standard deviation of the real income per person in each area is in a decreasing series, it indicates that there exists  $\hat{\sigma}$  convergence in the regional economy. The second concept is  $\hat{\alpha}$  convergence: if the backward region has a faster growth rate than a comparatively richer region, then the income (or output) per person in the backward region would catch up with that in the richer region, which indicates that there exists  $\hat{\alpha}$  convergence. The econometric model of calculating  $\hat{\alpha}$  convergence factors built by Barro, *et al.* (1991) is as follows:

$$[\ln(Y_t / Y_0)] / t = a + \beta \ln Y_0 + \mu \quad [\ln(Y_t / Y_0)] / t = a + \beta \ln Y_0 + \mu \quad (1)$$

In this model,  $Y_t$  and  $Y_0$ , respectively, refer to the ending and starting economic indicators (for example, the GDP per capita, income per person, etc.),  $t$  refers to the year of the observation period. If the estimated  $\hat{\alpha} < 0$ , then there exists convergence (the regional gaps become smaller); if  $\hat{\alpha} > 0$ , then there exists divergence (the regional gaps become larger). If one only depends upon the starting economic indicator,  $\hat{\alpha}$  in the above model is irrelevant with other variables in the economy. Therefore, the coefficient of  $\hat{\alpha}$  convergence measured and calculated via model (1) actually reflects a type of unconditional convergence, that is, absolute convergence.

If the other impact factors are considered, some new variables may be designed and added into the model as follows:

$$[\ln(Y_t / Y_0)] / t = a + \beta \ln Y_0 + \sum \gamma_j Z_j + \mu \quad [\ln(Y_t / Y_0)] / t = a + \beta \ln Y_0 + \sum \gamma_j Z_j + \mu \quad (2)$$

In the above equation,  $Y_t$ ,  $Y_0$ , and  $t$  have the same definitions as those in model (1):  $Z_j$  refers to other parameters;  $\tilde{\alpha}_j$  is the coefficient of  $Z_j$ . When these new variables are added, actually, the coefficient of  $\hat{\alpha}$  only measures a kind of conditional convergence, that is, the speed of convergence would also depend upon the other variables.



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In model (2), the left variables actually refer to the output (or income) growth rate. If the coefficient of one right variable is significantly positive, then such a variable has a positive impact upon the growth of output (or income); if the coefficient is significantly negative, then it has a negative impact upon the growth of output (or income). This research will use model (2) to estimate the impact on economic growth and the growth of the average net income per peasant by the factors of ethnic minority.

In order to control the impact of other variables on output (or income) growth as much as possible, the following variables would also be added into this model:

- (i) Industrial structure variable: This is indicated by the proportion of agriculture in the GDP.
- (ii) National condition variable: Uses two variables to indicate firstly, the terrain of all the areas, and secondly whether it is a pastoral or semi-pastoral area.
- (iii) Human resources variable: Indicated by the proportion of educated people at various levels in the total local population.

### *2. Data*

In this research, the data for the entire Gansu Province is used, including that pertaining to all counties, cities, and districts of the province. All the data are derived from official publications. The statistical data by counties prior to 1993 are incomplete (due to lack of GDP indicators for some counties and cities). Therefore, we use the data for the period 1994 to 2005. Since Hezuo City was established in 1998, it has been deleted from the samples, and only the data of 85 other counties (cities and districts) are used.

- (i) GDP per capita—This has been calculated on the basis of population and total amount of GDP of each county; the data have been derived from the Gansu Yearbook. In this research, GDP per capita by counties in 1994 is used as the starting indicator, while that in 2005 is used as the ending indicator.
- (ii) Average net income per peasant—Data for this have been derived from the Gansu Yearbook. In this research, the average net income per

peasant by counties in 1994 is used as the starting indicator, while that in 2005 is used as the ending indicator.

- (iii) Proportion of ethnic minority population— Statistics are used from the total population and population of the ethnic minority in each county as recorded in the data of the Fifth National Population Census.
- (iv) EM counties—There are two ethnic minority autonomous prefectures in Gansu Province, under which 16 counties (cities and districts) are included. There are five ethnic minority autonomous counties in the other region of Gansu Province. There are a total of 21 EM counties.
- (v) Terrain—In the County (City) Statistic Yearbook of Society and Economy in China 2005, the terrain in all the regions are divided into three categories: plains, hills, and mountainous areas. According to the principle that each county belongs to one category of terrain, there are 15 plain counties, 12 hilly counties, and 49 mountainous counties. However, 10 districts at the level of counties were not categorised into any type of terrain in the Statistic Yearbook. Since all these districts are located in the region that is largely inaccessible to traffic, they are deemed as plain counties in this research.
- (vi) Whether the areas are pastoral or semi-pastoral—As per the statistics on the pastoral or semi-pastoral areas given in the County (City) Statistic Yearbook of Society and Economy in China 2005, 20 counties of Gansu Province are located in the pastoral areas or semi-pastoral areas.
- (vi) Proportion of population at various educational levels— The Fifth National Population Census contained statistical data on population at various educational levels by counties and by urban and rural areas. In the statistical data, the educational levels are classified into four types: university or above, senior high school or technical secondary school, junior high school, and primary school. In the regression model of growth rate of GDP per capita, the research uses the proportion of populations at various educational levels by counties at large; while in the regression model of the growth rate of the average net income per

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peasant, this research uses the proportion of population at various education levels by townships and villages of counties.

### ***3. Results***

In this research, two regressions were made in the regression equation of growth rate of GDP per capita. The difference between the two equations lies in different variables pertaining to ethnic minority being used. In Equation 1, the proportion of ethnic minority population is used as a variable of ethnic minority, while in Equation 2, the data on 'whether it is an EM county or not' is used as a variable of ethnic minority. Two different variables of ethnic minority have been adopted to verify whether the impact of these variables on economic growth is steady or not. Please refer to Table 8 for the regression results.

According to the regression results of both the equations, both the variables of ethnic minority have a positive impact on the growth rate of GDP per capita. In Equation 1, the proportion of ethnic minority is significant at a level of 5 per cent; in Equation 2, the dummy variable of EM counties is significant at a level of 1 per cent. This result indicates that the implementation of preferential policies by the State in ethnic minority areas over the past several decades has had a significant effect on accelerating economic growth in these areas.

In the regression, it can be seen that there is no significant impact of the starting industrial structures, terrains and 'whether or not the areas are pastoral' on the economic growth in each place. The economic growth rate of the plains is slightly higher than the other areas. However, there is no significant gap with other areas. Human capital has a comparatively significant impact on economic growth: the educational background in terms of senior high school or technical secondary school and junior high school has a significant positive impact on economic growth; and though the educational background of primary school also has a positive impact on economic growth, it is not significant according to the statistical data; inexplicably, the regression coefficient of the proportion of university education and above is significantly negative in both the equations.

**Table 8: Regression Results of Growth Rate of GDP per Capita**

<i>Variables</i>	<i>Equation 1</i>		<i>Equation 2</i>	
	<i>Coefficient</i>	<i>t-value</i>	<i>Coefficient</i>	<i>t-value</i>
Logarithm of GDP per capita in 1994	-0.0268*	-3.20	-0.0228*	-2.86
Proportion of agriculture in GDP in 1994	-0.0389	-0.73	-0.0154	-0.66
Proportion of ethnic minority population	0.0331**	2.07	---	---
Whether or not the county is EM				
Yes	---	---	0.0277*	3.08
No	---	---	---	---
Terrain				
Plain	0.0294	1.52	0.1869***	1.72
Hill	---	---	---	---
Mountainous areas	0.0143	1.22	0.0136	1.35
Whether or the areas are pastoral or semi-pastoral				
Yes	0.0089	1.21	0.0067	0.79
No	---	---	---	---
Proportion of populations at various educational levels				
University or above	-0.3165*	-2.94	-0.2746**	-2.55
Senior high school or technical secondary school	0.5651*	3.30	0.4844**	2.44
Junior high school	0.1531***	1.83	0.1132**	2.27
Primary school	0.1124	1.53	0.1157	1.53
Number of values observed		85		85
Adj-R <sup>2</sup>		0.240		0.276
F-value		9.32		10.07

*Note:* No report of intercept; \*, \*\*, \*\*\* indicate that it is significant at the level of 1%, 5%, and 10%, respectively.

*Source:* Authors' calculation.

In this research, the processing of the equation of growth of average net income per peasant has been undertaken by adopting the same method as that used in the equation of growth of GDP per capita. It also estimates two equations respectively (refer to Table 9). The regression results indicate that there is no significant impact by factors like ethnic minority, industrial structure and

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terrain in each area on the growth of peasants' incomes; the income growth rate among peasants in pastoral areas and semi-pastoral areas is significantly higher than in other areas. This is consistent with the rapid development of animal husbandry in China over the past several decades; among the factors of human capital, there is a significant negative impact of the population with primary schooling on the growth of peasants' incomes, while there is no significant impact of the population with junior high schooling.

**Table 9: Regression of Growth Rate of Average Net Income/Peasants' Income**

	<i>Equation 1</i>		<i>Equation 2</i>	
	<i>Coefficient</i>	<i>t-value</i>	<i>Coefficient</i>	<i>t-value</i>
Logarithm of average net income per peasant in 1994	-0.0256*	-3.54	-0.0256*	-3.45
Proportion of agriculture in GDP in 1994	-0.0097	-0.82	-0.0101	-0.83
Proportion of ethnic minority population	-0.0072	-0.83	---	---
Whether or not the county is EM				
Yes	---	---	0.0958	0.18
No	---	---	---	---
Terrain				
Plain	0.0105	1.49	0.0101	1.64
Hill	---	---	---	---
Mountainous areas	-0.0076	-1.34	-0.0074	-1.32
Whether or not the areas are pastoral or semi-pastoral				
Yes	0.0094**	2.13	0.0090**	2.07
No	---	---	---	---
Proportion of populations at various educational levels				
University or above	-0.2626	-0.33	-0.4377	-0.54
Senior high school or technical secondary school	0.1352	0.72	0.1097	0.61
Junior high school	0.0371	0.59	0.0559	0.93
Primary school	-0.1054*	-3.10	-0.0940*	-2.63
Number of values observed	85		85	
Adj-R <sup>2</sup>	0.354		0.348	
F-value	6.95		6.84	

*Note:* No report of intercept; \*, \*\*, \*\*\* indicate that it is significant at the level of 1%, 5%, and 10%, respectively.

*Source:* Authors' calculation.

#### *4. Conclusion*

Summarizing from the research results, we conclude that the preferential policies adopted by the Chinese government for ethnic minority areas have significantly promoted economic growth in these areas at large, while there is no significant impact of the factor of ethnic minority on the average net income per peasant.

## **2. Guizhou**

### *A. Introduction of Household Survey Pilot in Guizhou Province*

Guizhou Province is a good choice for studying rural poverty since it is one of the poorest provinces in China. Poverty rate in Guizhou was 16.5 per cent, in 2009, a remarkable drop from 42 per cent in 1998, when it was almost twice the national average of 22 per cent (Xian and Sheng, 2001). By the end of 2009, the number of poor rural population in Guizhou was the highest in the country. In 2004, the per capita annual income in rural Guizhou was lowest at 1,722 yuan, among the 31 provinces in mainland China, as compared to 7,737 yuan in Shanghai, the richest province.

Puding County is one of the 592 counties officially designated as poor by the Central government. It has 11 townships, 317 administrative villages, and a total population of 4,02,000. About 94 per cent of the total population in this county resides in rural areas; the total number of agricultural labourers is 2,17,000, and account for 63 per cent of the total labour force in the country. The county has more than 20 ethnic groups, including the Han, Miao, Blang, Bouyei, Gelao, and Yi communities, among others. The minority population, which comprises all ethnic groups other than the Han community, accounts for roughly 20 per cent of the total population. With the implementation of a national programme, the '8-7 Poverty Alleviation Project', the number of people living below the poverty line in Puding has declined from 2,15,000 in 1993 to 88,000 in 2002 (Puding Poverty Alleviation and Development Office, 2003). By the end of 2002, there were 1,20,000 people, or 31 per cent of the total population, whose annual earnings were less than the official poverty line.

We first selected three representative administrative villages within Puding County on the basis of their locations and levels of economic development. Then, a census-type household survey of 805 households in these three administrative villages was conducted.<sup>1</sup> This survey collected detailed

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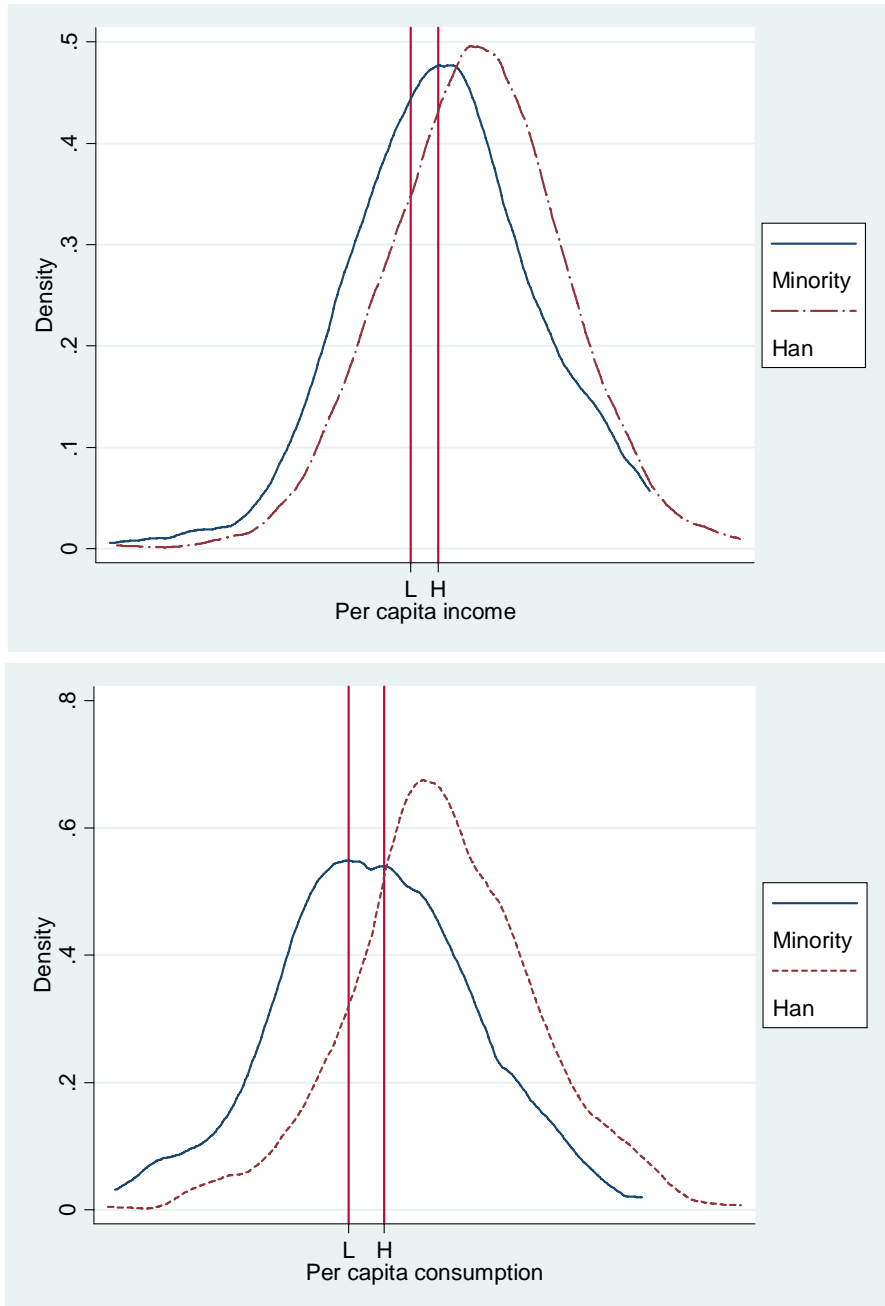
information on each individual, such as age, education, and health. Household characteristics such as income sources (agricultural production, non-farm activities, and transfers) and expenditure components (including productive and living expenditures) in 2004 were also recorded.<sup>2</sup>

### *B. Empirical Analysis*

Separate poverty lines have been used to calculate the poverty incidence between other ethnic minority groups and the Han group. The low and high poverty lines have been respectively set at 668 yuan and 892 yuan in 2004. The figure of 668 yuan is calculated on the basis of the officially defined poverty line of 300 yuan per capita annual income in 1995 and the inflation during the period 1995 to 2004. China's official poverty line for rural areas is 300 yuan per capita income per year at 1990 prices (635 at 2001 prices and 668 at 2004 prices), equivalent to \$0.66 per day measured in purchasing power parity (PPP) for 1985 (World Bank, 2000). The poverty line is defined as the level below which the income (and food production in rural areas) is insufficient for subsistence levels of food intake, shelter, and clothing. In 2001, China also used a higher poverty line of 865 yuan per capita consumption per year at prices for the year 2000 (924 yuan at 2004 prices), which is equivalent to \$1.17, without adjusting for rural/urban differences in the costs of living (Xian and Sheng, 2001). If using a poverty line of \$1.08 consumption per capita per day (850 yuan per person per year in 2002 as shown in Ravallion and Chen, 2007), the poverty line would be 892 in 2004.

We estimated three poverty indices from the Foster, Greer and Thorbecke (1984) class. P0 is the headcount ratio (the proportion of poor); P1 is the average normalised poverty gap; and P2 is the average squared normalised poverty gap. P2 is more sensitive to large poverty gaps among the poor than P1, which is, in turn, more sensitive than P0.

Figure 3 plots the income and consumption distribution between the ethnic minority group and the Han group. The two vertical lines in the graph represent the corresponding low and high poverty lines. It is apparent from the figure that those falling below the poverty lines in the first village significantly overtake those in the second and third villages in terms of both income and consumption. The areas underneath the distributional curves on the left poverty line in the bottom figure on consumption are larger than those in the top figure on income, suggesting that the proportion of poor measured in consumption is greater than in income.



**Figure 3: Per Capita Income and Consumption for the Minority and Han Groups**



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Table 10 compares the summary statistics of the ethnic minority group and the Han group in several dimensions. The minority group owns less per capita income than the non-minority group. The minority group also consumes less than the Han group, and cultivates 0.8 *mu* of land, which accounts for about 73 per cent of the non-poor group. Both the groups have a rather low level of school attainment with a narrow gap of 0.8 years.

**Table 10: Summary of the Ethnic Minority and Han Groups**

	<i>Income per capita</i>	<i>Living per capita</i>	<i>Land per capita</i>	<i>Average education</i>
Minority Group	1551.97	1520.41	1.06	3.24
Han Group	1050.00	949.64	0.81	2.42
Total	1388.02	1334.12	0.98	2.97

*Source: Authors' calculation.*

In the following paragraph, we estimate whether the minority group plays an important role in the income equation. Table 11 provides a statistical description of variables in the regression. The variables taken include the household characteristics, household size, religious beliefs of the respondents, whether minority members, marital status of the household head, and gender and age of the household head. For assessing human capital, we chose education, and whether at least one member of the family has received training, the share of primary age labourers in a household, the number of working days lost due to illness, and the number of years spent working outside the local county. We also selected two social capital variables –one whether the household has relatives working in the government, or whether any of them is a member of the Communist Party. The other variable concerns the assets of the household, including productive building or machinery, number of livestock per capita, per capita contract land, per capita rent-in land, and geographical factors such as the distance to township site, all of which were considered in the income equation.

**Table 11: Statistical Description of Variables**

<i>Variable</i>	<i>Description</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
lnpincome	Per Capita Net Income (log)	7.01	0.84	3.70	9.57
hhsize	Household size	3.84	1.58	1.00	10.00
hhrelg	Have a religion belief (1=yes)	0.10	0.30	0.00	1.00
minority	Being a minority (1=yes)	0.30	0.46	0.00	1.00
hhmarg	Marriage status (1=yes)	0.96	0.20	0.00	1.00
hhsex	Gender of household head (1= male)	0.94	0.24	0.00	1.00
hhage	Age of household head	46.52	14.13	21.00	89.00
aveduh	Household average year of schooling	2.92	2.14	0.00	12.63
trainingh	Have received training	0.10	0.30	0.00	1.00
laborh	Share of primary age labourers in a household	0.59	0.28	0.00	1.00
big sick	No. of working days lost due to illness	0.21	0.41	0.00	1.00
out experience	Years of working outside the local county	0.35	0.84	0.00	7.50
sc	Having relatives working in the government	0.13	0.33	0.00	1.00
cpmh	With a communist party member	0.07	0.25	0.00	1.00
asset	Having productive building or machinery	0.42	0.49	0.00	1.00
plivstock	Number of livestock per capita	0.54	0.41	0.00	5.00
pcland	Per capita contract land	0.95	0.83	0.00	6.00
prentinland	Per capita rent-in land	0.16	0.52	0.00	6.50
dtown	Distance township site (log)	1.51	0.88	0.41	2.77

*Note: Number of observation is 802 households*

*Source: Authors' calculation.*

Table 12 presents the regression results under four different specifications.<sup>3</sup> The first specification does not include any village-specific variables. In the

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second specification, we add the distance of each natural village to the county seat. The third regression replaces the distance variable with administrative village dummy variables. The last specification includes 25 natural village dummy variables. We use the adjusted R-square and Akaike's Information Criterion (AIC) to guide model selections. The lower the value of the AIC, the better fitting is the model. According to AIC, the second and third models exhibit better performance than the first and the fourth models. However, the difference among the four models is minimal. The last three models provide very similar results. The variables with significant coefficients are similar and the magnitudes of the coefficients are comparable.

It should be noted that several variables on household characteristics are significant in the first regression but not in the other three specifications. In particular, the coefficient for the minority dummy is only statistically significant in the first regression. As a matter of fact, most ethnic groups live in remote areas. The correlation coefficient between the minority dummy and distance to natural villages is nearly 0.6. About 50 per cent and 70 per cent of the variation in the minority can be explained by two administrative village dummies or 25 natural village dummies, respectively. Not surprisingly, when the distance variable or village dummy variables are included in a regression, the coefficient for the minority variable becomes insignificant.

Among the set of household characteristic variables, only the household size is statistically significant in the specifications. Its value is negative. Among the human capital variables, the average year of schooling and the training acquired and outside work experience are strongly related to a greater per capita income. The coefficient for the health shock variable is negative and insignificant. Being a Communist Party member or having a relative who works in the local government is positively related to income level though these variables are statistically insignificant.

Among the variables on household assets, the per capita contract land is highly significant. As land allocation in Guizhou Province has not been re-adjusted since the rural reforms of the early 1980s, the distribution of land holdings has become increasingly uneven due to demographic changes. As agricultural income is highly correlated with land holdings, the land tenure arrangement

may be an important explanatory factor for the observed inequality among farmers in a village. This result is consistent with the current literature, which finds that the initial land allocation does matter in income distribution (Benjamin and Brandt, 1997). In principle, a well-functioning land rental market can help mitigate this problem. However, the coefficient for the variable of rented land is positive but insignificant. Further research is required to evaluate the development of land rental markets.

Having estimated the income generation equation, we next apply the Shapley value decomposition method to quantify the contributions of each factor to overall inequality. The Shapley value decomposition involves rather extensive computations, and details of this technique can be found in Shorrocks (1999). Since the estimations are rather similar for the last three regressions, Table 9 presents only the Shapley decomposition results based on the first two regressions. We include only the significant variables in the decomposition. Several findings are apparent from Table 9. First, the contract land per capita is the largest contributing factor to overall inequality, which explains 27-32 per cent of the variation in overall inequality; followed by household size, which accounts for 18-21 per cent of the variation in overall inequality. This can be explained by the fact that land is scarce in the mountainous areas and that Guizhou Province has never re-adjusted land allocations since the rural reforms in the early 1980s. Due to demographic changes, the situation of unequal access to land has worsened. Since agricultural production still serves as a major source of income, the uneven distribution of land naturally translates into income inequality.

Second, the distribution of human capital matters to overall inequality. The contributions of education, skill training and acquisition of outside work experience, all make a sizable contribution. Summing up, these factors explain 34-43 per cent of the total income inequality depending on the underlying model selection. In the decomposition based on the first specification, the variation in minorities explains 4.25 per cent of the income inequality. In the first decomposition, the difference in the distance to the county seat contributes to 12 per cent of the overall inequality. However, further research is needed to disentangle the impact of geography and ethnicity.

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**Table 12: Regression of Income per Capita**

	<i>R1</i>	<i>R2</i>	<i>R3</i>	<i>R4</i>
Household size	-0.139 (6.23) <sup>***</sup>	-0.137 (6.46) <sup>***</sup>	-0.138 (6.36) <sup>***</sup>	-0.136 (6.13) <sup>***</sup>
Have a religious belief (1=yes)	0.016 -0.19	0.002 -0.02	0 0	-0.022 -0.18
Being a minority (1=yes)	-0.13 (2.10) <sup>**</sup>	-0.011 -0.16	-0.036 -0.45	0.044 -0.39
Marital status (1=yes)	0.123 (1.73) <sup>*</sup>	0.086 -1.27	0.082 -1.18	0.071 -0.97
Gender of household head (1= male)	-0.148 -1.3	-0.128 -1.18	-0.126 -1.16	-0.134 -1.19
Age of household head	0 -0.12	0 -0.06	0 -0.01	0 -0.16
Household average year of schooling	0.062 (3.85) <sup>***</sup>	0.052 (3.36) <sup>***</sup>	0.053 (3.38) <sup>***</sup>	0.054 (3.79) <sup>***</sup>
Have received training	0.314 (2.94) <sup>***</sup>	0.315 (3.06) <sup>***</sup>	0.315 (3.10) <sup>***</sup>	0.269 (2.52) <sup>**</sup>
Share of primary age labourers in a household	0.177 -1.49	0.173 -1.47	0.169 -1.42	0.185 -1.57
No. of working days lost due to illness	-0.048 -1.08	-0.05 -1.1	-0.049 -1.07	-0.062 -1.25
No. of years spent working outside the local county	0.061 (1.76) <sup>*</sup>	0.064 (1.85) <sup>*</sup>	0.065 (1.87) <sup>*</sup>	0.055 -1.53
Having relatives working in the government	0.183 (2.89) <sup>***</sup>	0.195 (3.27) <sup>***</sup>	0.196 (3.25) <sup>***</sup>	0.205 (3.01) <sup>***</sup>
With a communist party member	0.259 -1.48	0.247 -1.38	0.252 -1.41	0.282 -1.55
Having productive building or machinery	0.043 -0.95	0.062 -1.45	0.064 -1.5	0.073 -1.67
Number of livestock per capita	0.079 -1.43	0.087 -1.59	0.089 -1.6	0.075 -1.24
Per capita contract land	0.167 (4.80) <sup>***</sup>	0.156 (4.45) <sup>***</sup>	0.152 (4.44) <sup>***</sup>	0.15 (4.29) <sup>***</sup>
Per capita rent-in land	0.087 -1.36	0.091 -1.38	0.093 -1.4	0.078 -1.11
Distance to township site (log)		-0.118 (3.44) <sup>***</sup>		
Administrative village dummies			yes <sup>***</sup>	
Natural village dummies				yes <sup>***</sup>
Observations	801	801	801	801
Adjusted R-squared	0.253	0.261	0.260	0.258
AIC	2.216	2.206	2.208	2.238

*Note:* Figures in parentheses are robust t statistics with cluster adjusted at the natural village level. The symbols \*, \*\*, and \*\*\* stands for significance levels at 10%, 5%, and 1%, respectively.

*Source:* Authors' calculation.

#### **IV. Conclusion and Policy Implication**

The paper brings out how preferential policies for minority groups in China have a significant impact on poverty reduction and well being of these groups in the country. On the basis of a primary survey of households in Guizhou Province, which is nationally labeled as a poor county, we analyze the patterns and major correlates of village inequality in western China, especially the minority poverty issues. Several important findings emerge from this analysis. These findings are delineated below.

First, poverty still poses a severe problem in some of the rural villages in western China. As far as the minority group is concerned, its income is still lower than that of the Han group.

Second, from the income equation, we find that the per capita land area has a positive impact on the household income. Since Guizhou Province has adopted a stricter land policy of 'never adjusting land regardless of birth or death', access to land is likely to become increasingly unequal with demographic changes expected in the future. The increasingly uneven distribution of land may turn out to be a key contributing factor to overall inequality. The manner in which the development of a land rental market can be fostered deserves more research and policy attention.

Apart from land, another important asset for farmers is their human capital, which includes health and education. Our decomposition of expenditure inequality shows that medical care expenses constitute the largest contributing factor to the overall expenditure inequality. Most farmers cannot afford to see a doctor when they fall sick because of high medical expenses that entails, and especially in households with fewer members of working age, falling sick is a financial disaster that can directly drive the household into poverty. The large proportion of households that reported donation of their blood to earn extra cash should also send alarm signals about the appalling financial condition of the farmers in these poor rural regions. Although income from blood donations can help generate the much-needed funds to ease budget constraints in the short run; in the long run, it would negatively affect the donor's health, which is the most important element of human capital. This vicious circle may worsen the already high rate of income inequality. Therefore, there is an urgent need to establish a safety net for the inhabitants of these rural areas, especially for the rural poor.

**Endnotes**

- 1 The official number of residents in the three villages is 987, but the survey could locate only 805 households. We visited the missing households at least three times. According to the neighbours of these households, most of them had already migrated away for a significant period. After data cleaning, 801 households were kept in our analysis.
- 2 The questionnaires on income and expenditures are modified versions of those used by the Rural Survey Organisation of the National Bureau of Statistics of China. The total expenditure refers to the sum of expenses of rural households on agricultural production (including breeding, fertilisers, pesticides, and so on), living consumption (including food, clothes, durables, fuel, and so forth), and non-farm activities. The total income refers to the sum of the income earned from various sources by the rural households and their members during the reference period, including agricultural income, wage income, and income from household operations (self-employment and working outside), and transfers. Net income is equal to the total income minus corresponding expenses, such as household operation expenses, taxes and fees, depreciation of fixed assets for production, and gift expenditure. The expenditures on major production equipment and draft animals are not included as household operation expenses of the current period to avoid negative values.
- 3 The dummy variables for natural villages are statistically significant but are not reported in the table.

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