



# Changes in Income Inequality in China

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# Structure of presentation

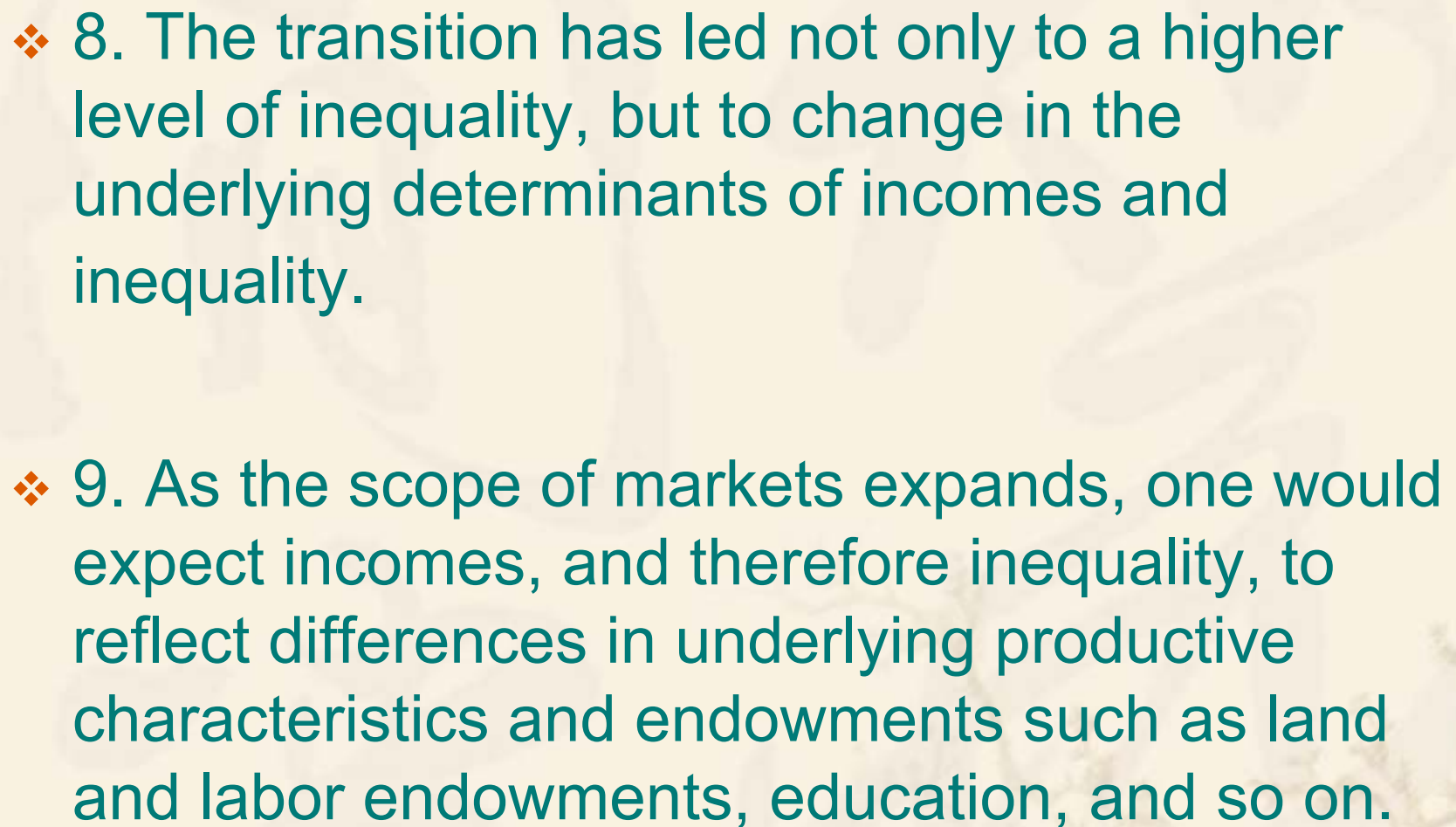
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# Background

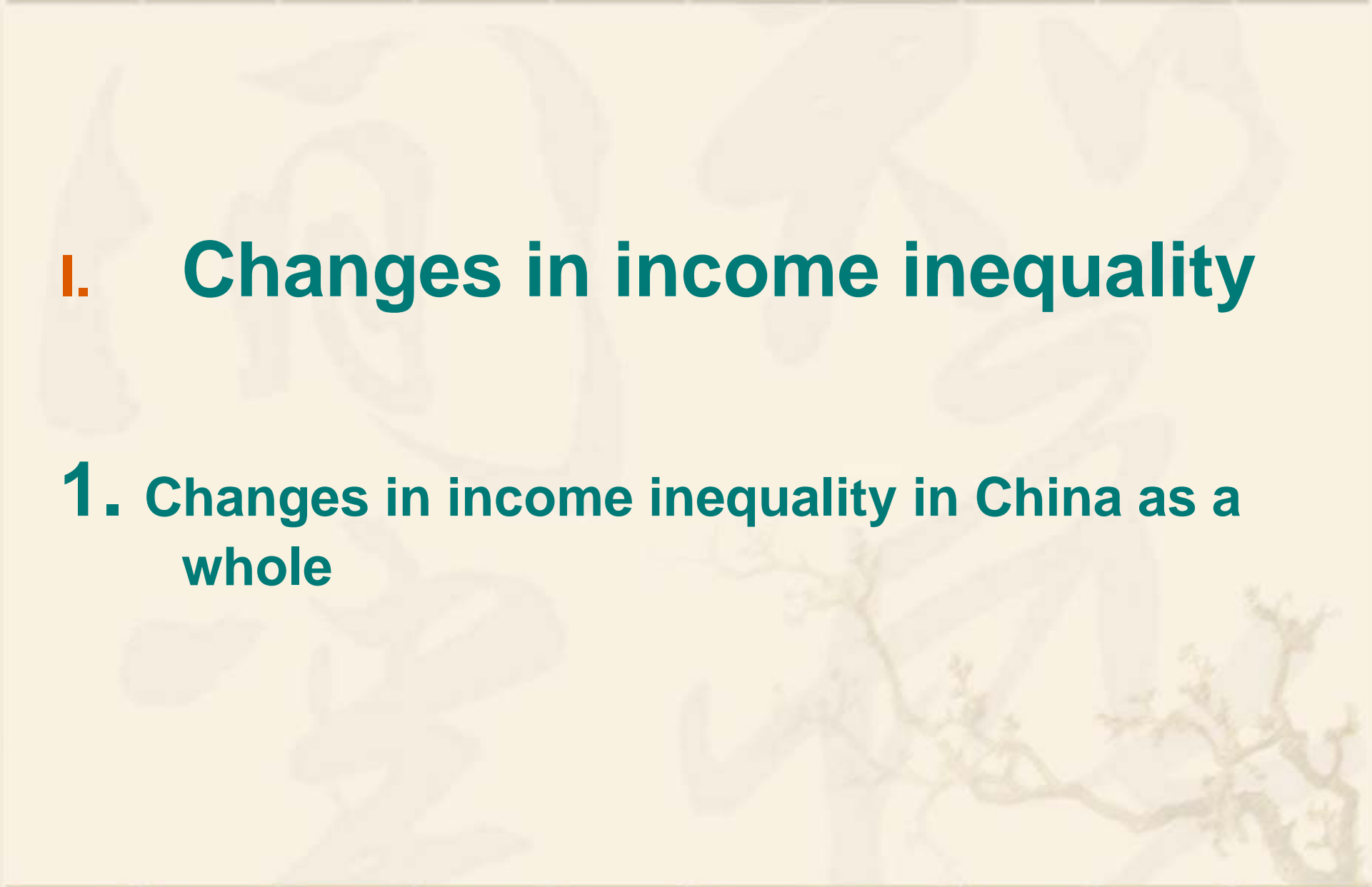
- ❖ 1. Economic transition in terms of economic institution and economic structure.
- ❖ 2. Prior to the transition wage differentials in urban areas were compressed and based largely on seniority and ownership classification of the enterprise.
- ❖ 3. In rural areas collective farms distributed earnings in an egalitarian fashion, and income inequality was mainly the result of differences among collective farms in resource endowments

- ❖ 4. Economic reform has allowed, if not encouraged, some people to get rich first.
- ❖ 5. In urban areas wage differentials and bonuses have increased.
- ❖ 6. In rural areas farming is now household-based, and income differences reflect variation in household resources, abilities and effort.
- ❖ 7. Restrictions on private economic activities have been lifted, permitting diversification in sources of income and allowing returns to entrepreneurship.



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- ❖ 8. The transition has led not only to a higher level of inequality, but to change in the underlying determinants of incomes and inequality.
  - ❖ 9. As the scope of markets expands, one would expect incomes, and therefore inequality, to reflect differences in underlying productive characteristics and endowments such as land and labor endowments, education, and so on.

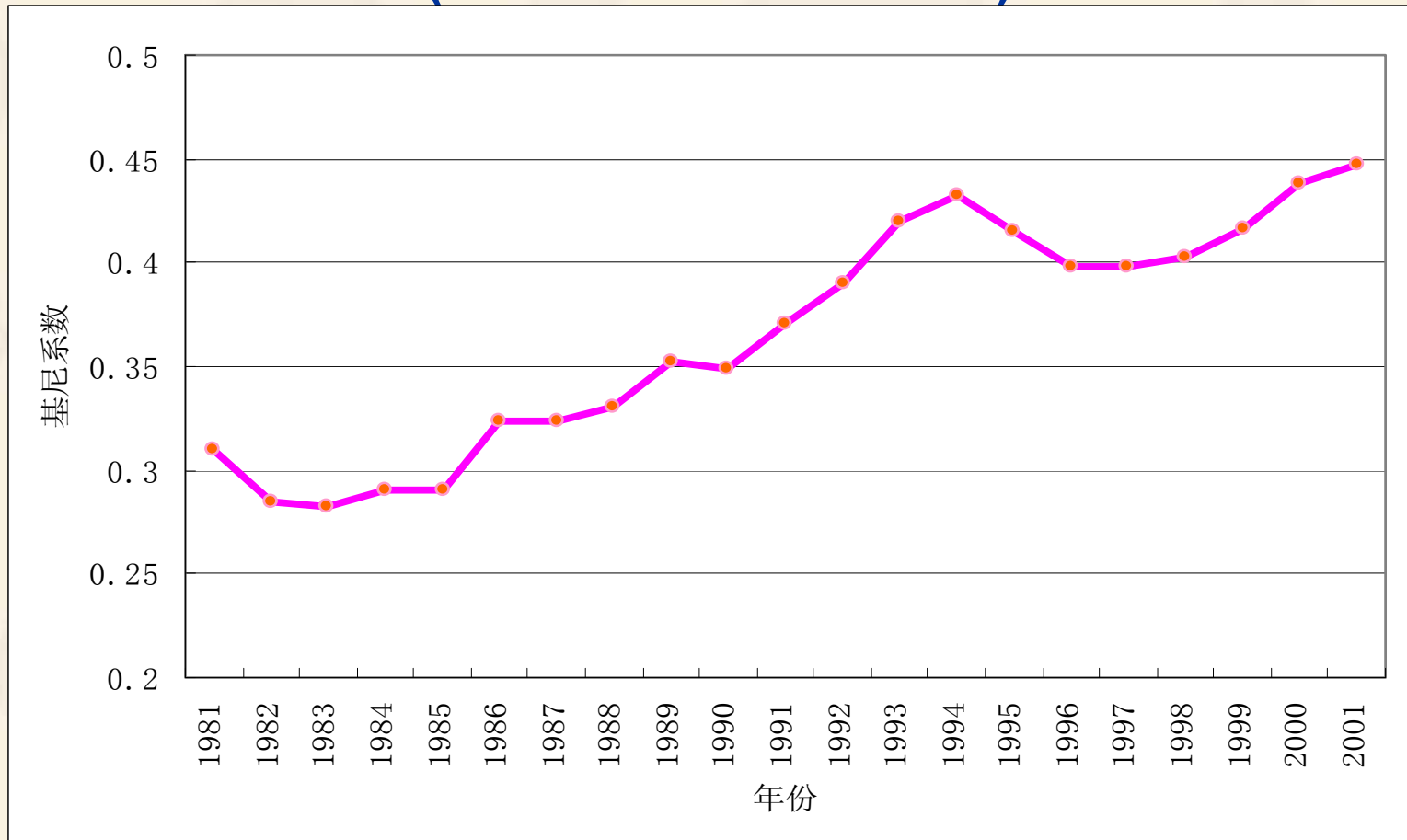
- ❖ 10. Substantial government interventions remain, especially in labor and capital markets. Hukou system and rural and urban segmentation.
- ❖ 11. The Communist Party continues to influence personnel decisions and the implementation of government policies, which likely gives advantages to those with political status and connections.
- ❖ 12. With such interventions, one would expect variables such as geographic location and political status also to determine incomes and inequality.



# **I. Changes in income inequality**

## **1. Changes in income inequality in China as a whole**

**Figure 1. Gini coefficient in China as a whole, 1981-2001  
(World Bank's estimates)**



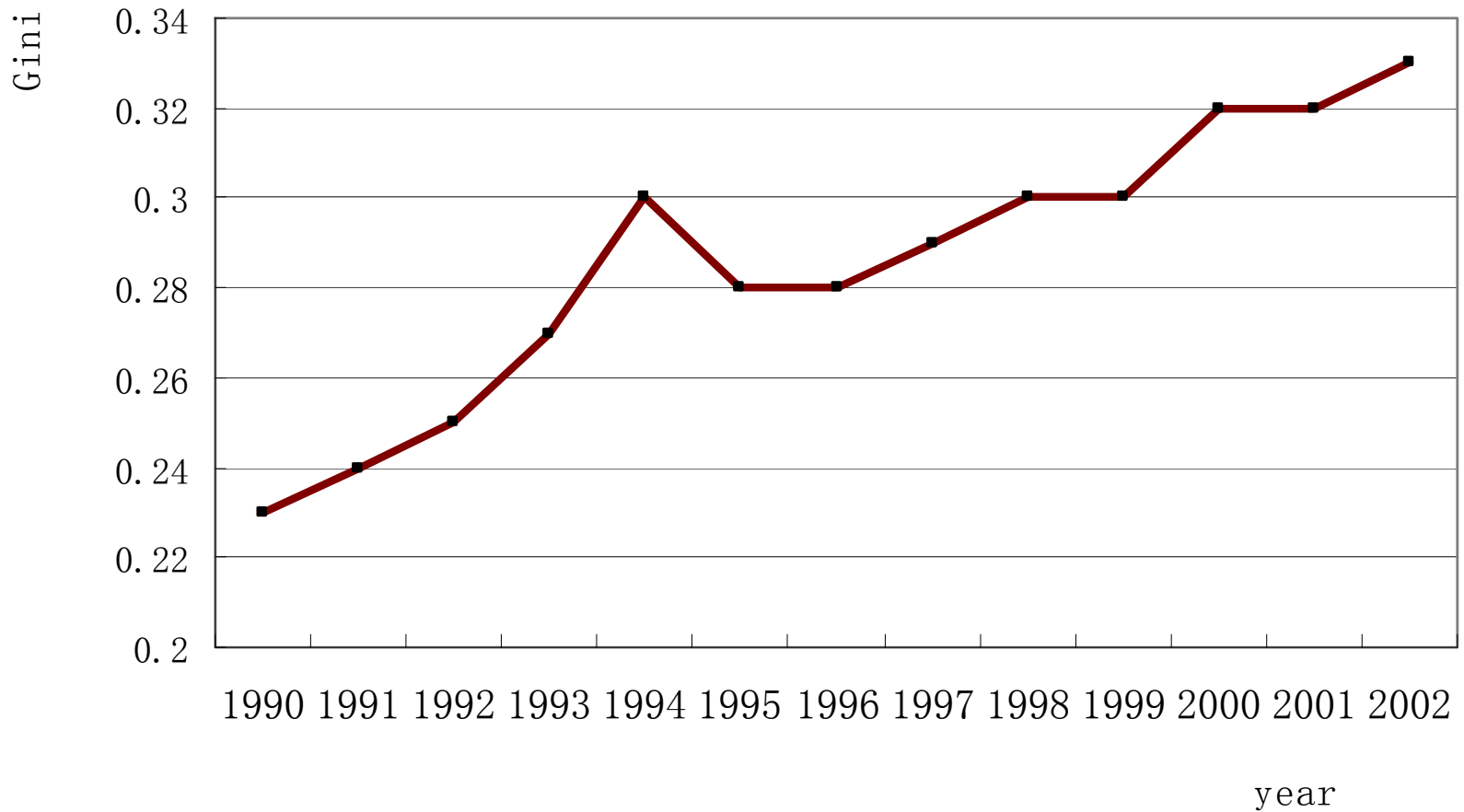
Martin Ravallion and Shaohua Chen, "China's (Uneven) Progress Against Poverty", World Bank, June 16, 2004.



## 2. Changes in income inequality in urban China

- ❖ Gini was 0.16 in 1980 and 0.19 in 1985.

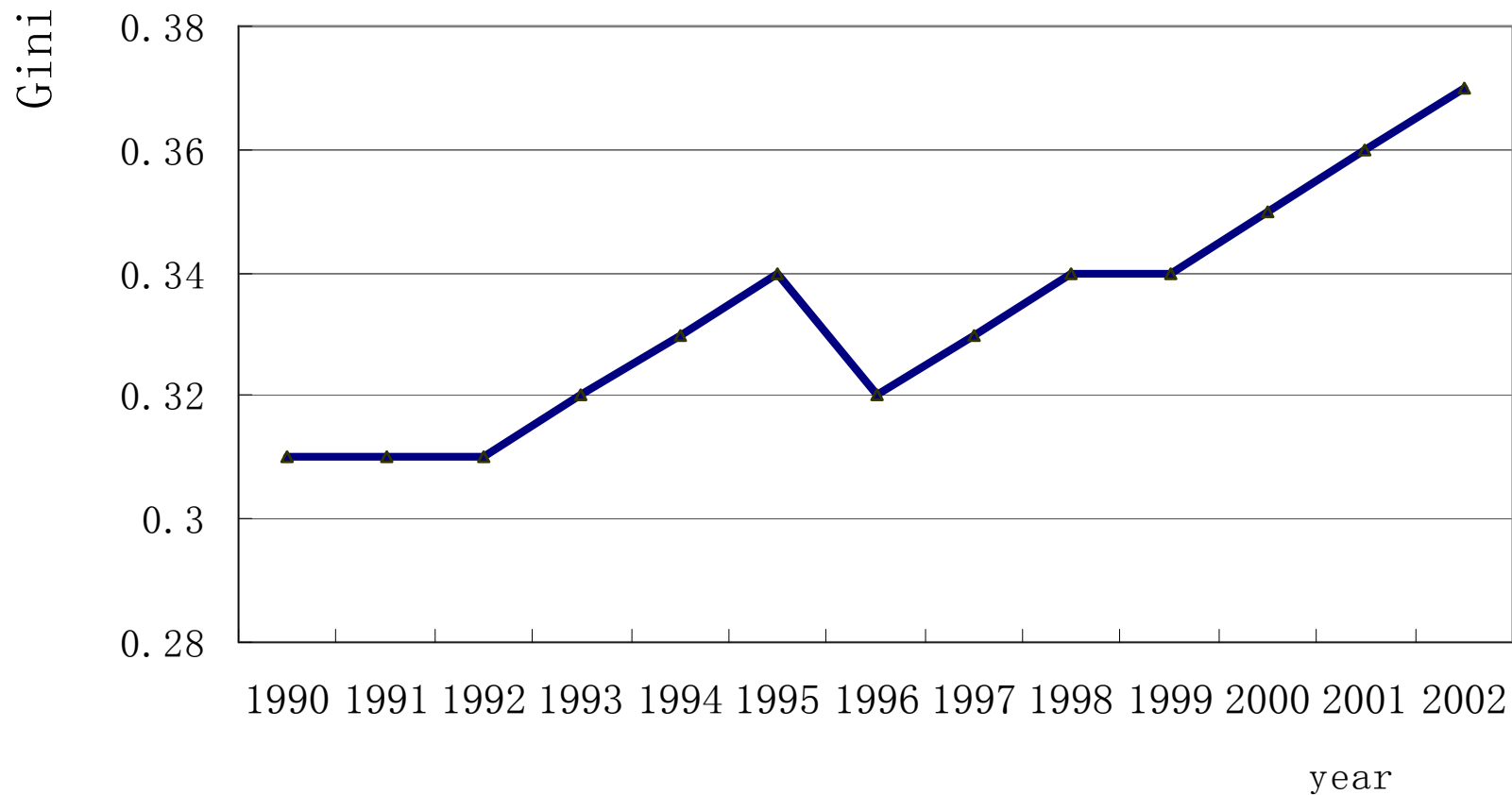
Figure 2 Changes in income inequality in urban China, 1990-2002 (NBS' estimates)



### **3.Changes in income inequality in rural China**

Gini was 0.21 in 1978 and 0.25 in 1985.

Figure 3 Changes in income inequality in rural China, 1990-2002 (NBS's estimates)



## 4. Changes in income gap between urban and rural areas

- ❖ (1) Absolute gap
- ❖ (2) Relative gap



**Figure 4. Income growth of urban and rural households in China , 1990-2003**

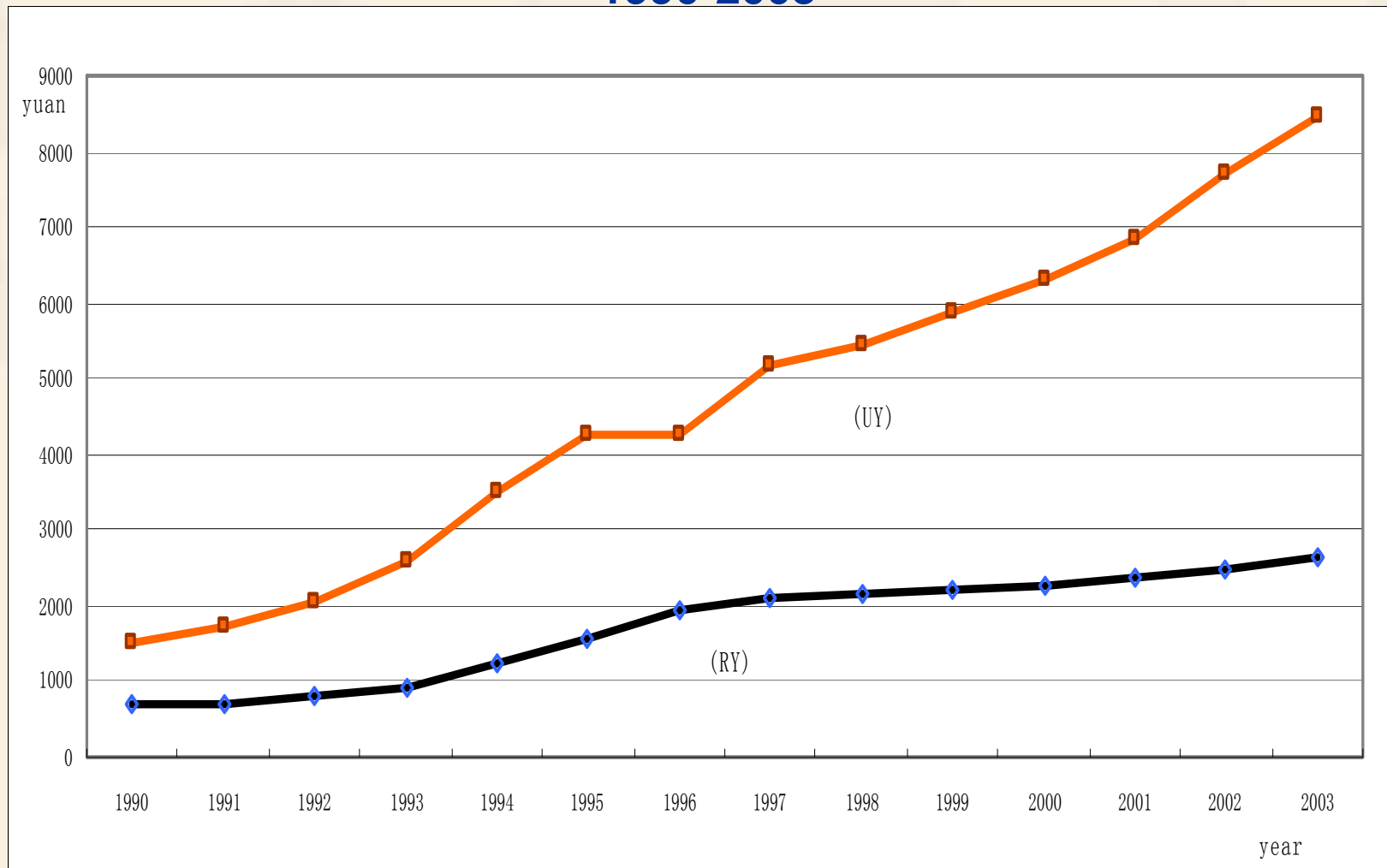
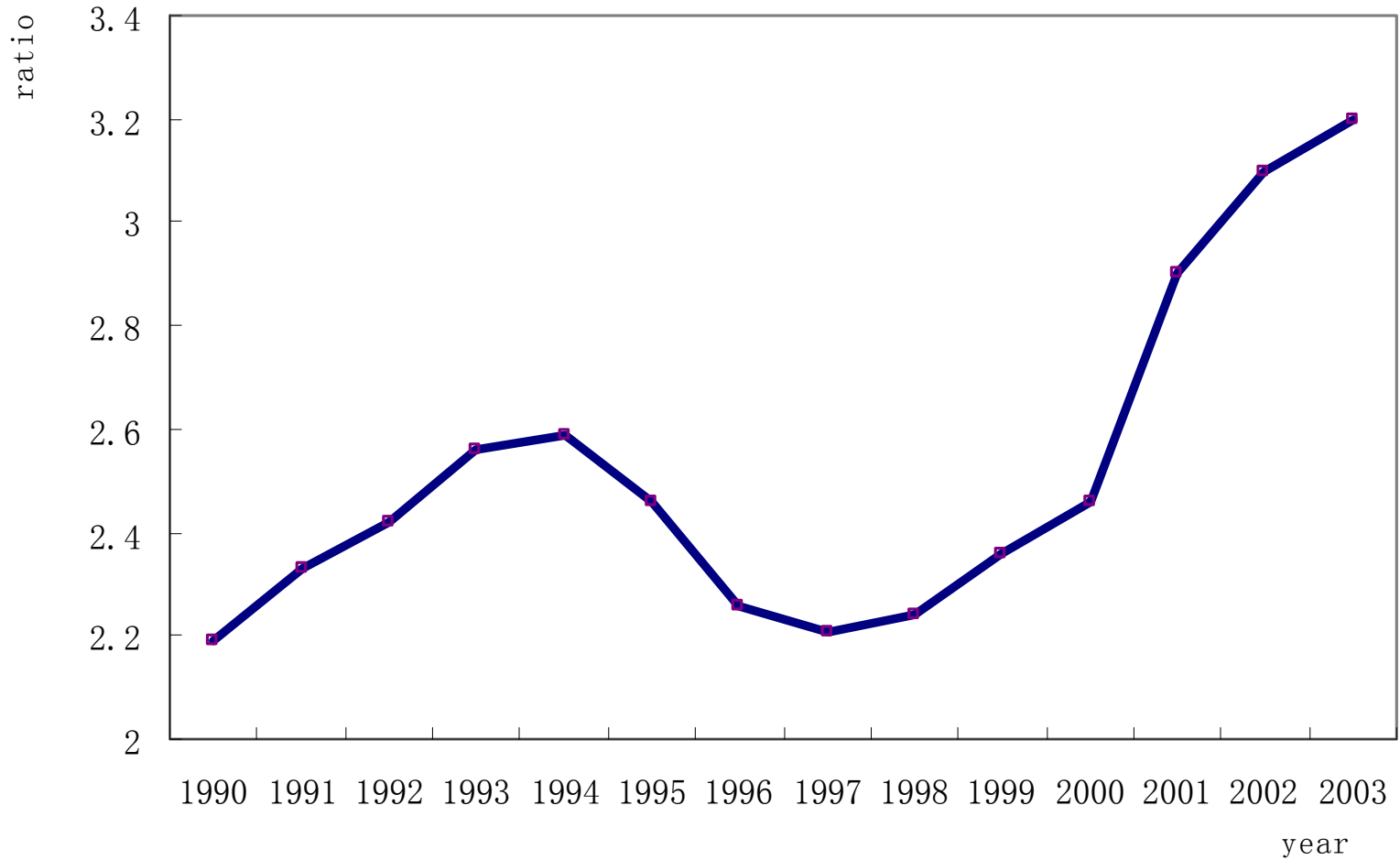


Figure 5. Income ratio of urban to rural households, 1990-2003



# II. Structure of income inequality in 2002

## ❖ 1. Data description and income definition

# 2002 Survey description

## Rural Survey 2002.

No. of provinces	No. of counties	Number of households	Number of individuals
22	122	9200	37313

## Urban Survey 2002.

No. of provinces	No. of cities	Number of households	Number of individuals
12	70	7000	20634

**Table 4-1. Various Measures of Income Inequality in China as a Whole, 2002**

Gini coefficient	0.455
Relative mean deviation	0.333
Coefficient of variation	0.963
Standard deviation of logs	0.860
Theil entropy measure	0.349
Theil mean log deviation measure	0.333



## Table 4-2. Inequality in China as a whole, 2002

Decile	Mean income	Income share as a percentage of total income (%)	When mean income of the lowest decile=1	Proportion of rural population
1	788	1.7	1.0	0.99
2	1327	2.8	1.7	0.97
3	1764	3.7	2.2	0.94
4	2246	4.8	2.9	0.88
5	2830	6.0	3.6	0.76
6	3625	7.7	4.6	0.59
7	4717	10.0	6.0	0.43
8	6294	13.3	8.0	0.26
9	8535	18.1	10.8	0.15
10	15065	31.9	19.1	0.11

Table 2. Decomposition of total inequality

	within urban	within rural	urban- rural
2002			
MLD ( $\alpha=0$ )	0.068	0.141	0.157
(%)	18.5	38.5	43.0
1995			
MLD ( $\alpha=0$ )	0.039	0.180	0.122
(%)	11.4	52.7	35.9

Table 7 Inequality and the Contributions of Explanatory Variables to Inequality, 1995 and 2002

	1995	2002
overall inequality	0.399	0.361
average education of working-age adults, total	-1.16	36.14
average age of working-age adults, total	-14.14	-9.77
household size, total	8.62	2.63
% of household members of working age	-22.65	-23.18
% of working-age members in the Party	1.39	2.93
% of working-age members in poor health		0.33
% of household members that are ethnic minority	1.15	
contracted farm land per capita	-6.53	-4.38
location dummy variables, total	79.52	90.41
constant	-15.29	-54.93
residual	69.10	59.83

## Table 5-1. Various Measures of Income Inequality in Rural China , 2002

Gini coefficient	0.416
Relative mean deviation	0.290
Coefficient of variation	1.012
Standard deviation of logs	0.720
Theil entropy measure	0.312
Theil mean log deviation measure	0.227

## Table 5-2. Inequality in Rural China, 2002

decile	Mean Income (yuan)	Percentage in total income (%)	When mean income of the lowest decile=1	Proportion of population in coast region	Proportion of population in western region
1	653	2.5	1.0	0.14	0.54
2	1060	4.1	1.6	0.11	0.51
3	1348	5.2	2.1	0.13	0.43
4	1621	6.3	2.5	0.15	0.35
5	1913	7.4	2.9	0.19	0.32
6	2231	8.6	3.4	0.24	0.32
7	2610	10.1	4.0	0.26	0.26
8	3153	12.2	4.8	0.36	0.22
9	4022	15.5	6.2	0.48	0.18
10	7264	28.1	11.1	0.71	0.09



**Table 5-4. Decomposition of Income Inequality  
in Rural China, by Region, 2002**

	GE(0)	GE(1)
Within-region inequality	0.210	0.224
Between-region inequality	0.051	0.053
Within-region inequality as a percentage of total inequality	80.5	80.9
Between-region inequality as a percentage of total inequality	19.5	19.1

**Table 5-6. Decomposition of Income Inequality  
in Rural China, by Province, 2002**

	GE(0)	GE(1)
Within-province inequality	0.191	0.203
Between-province inequality	0.070	0.075
Within-province inequality as a percentage of total inequality	73.2	73.0
Between-province inequality as a percentage of total inequality	26.8	27.0

## Table 6-1. Various Measures of Income Inequality in Urban China , 2002

Gini coefficient	0.316
Relative mean deviation	0.224
Coefficient of variation	0.644
Standard deviation of logs	0.580
Theil entropy measure	0.169
Theil mean log deviation measure	0.168

## Table 6-2. Inequality in Urban China, 2002

decile	Mean Income (yuan)	Percentage in total income (%)	When mean income of the lowest decile=1
1	2441	3.1	1.0
2	3665	4.6	1.5
3	4555	5.8	1.9
4	5414	6.9	2.2
5	6337	8.0	2.6
6	7286	9.2	3.0
7	8345	10.6	3.4
8	9729	12.3	4.0
9	11958	15.2	4.9
10	19167	24.3	7.9

## Table 6-4. Decomposition of Income Inequality in Urban China, by Region, 2002

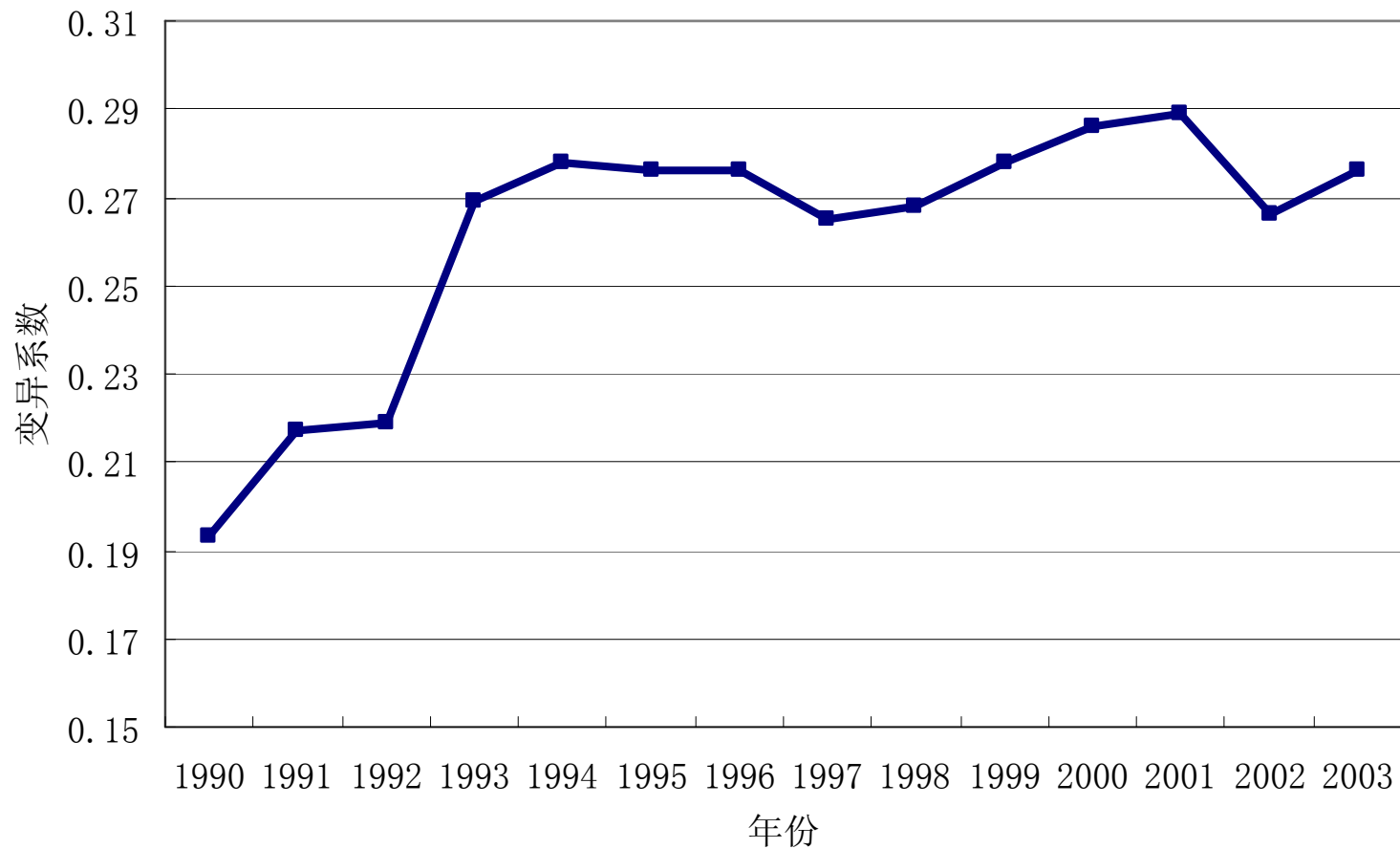
	GE(0)	GE(1)
Within-region inequality	0.151	0.151
Between-region inequality	0.017	0.018
Within-region inequality as a percentage of total inequality	89.9	89.3
Between-region inequality as a percentage of total inequality	10.1	10.7

**Table 6-6. Decomposition of Income Inequality  
in Urban China, by Province, 2002**

	GE(0)	GE(1)
Within-province inequality	0.141	0.140
Between-province inequality	0.027	0.029
Within-province inequality as a percentage of total inequality	83.9	82.8
Between-province inequality as a percentage of total inequality	16.1	17.2

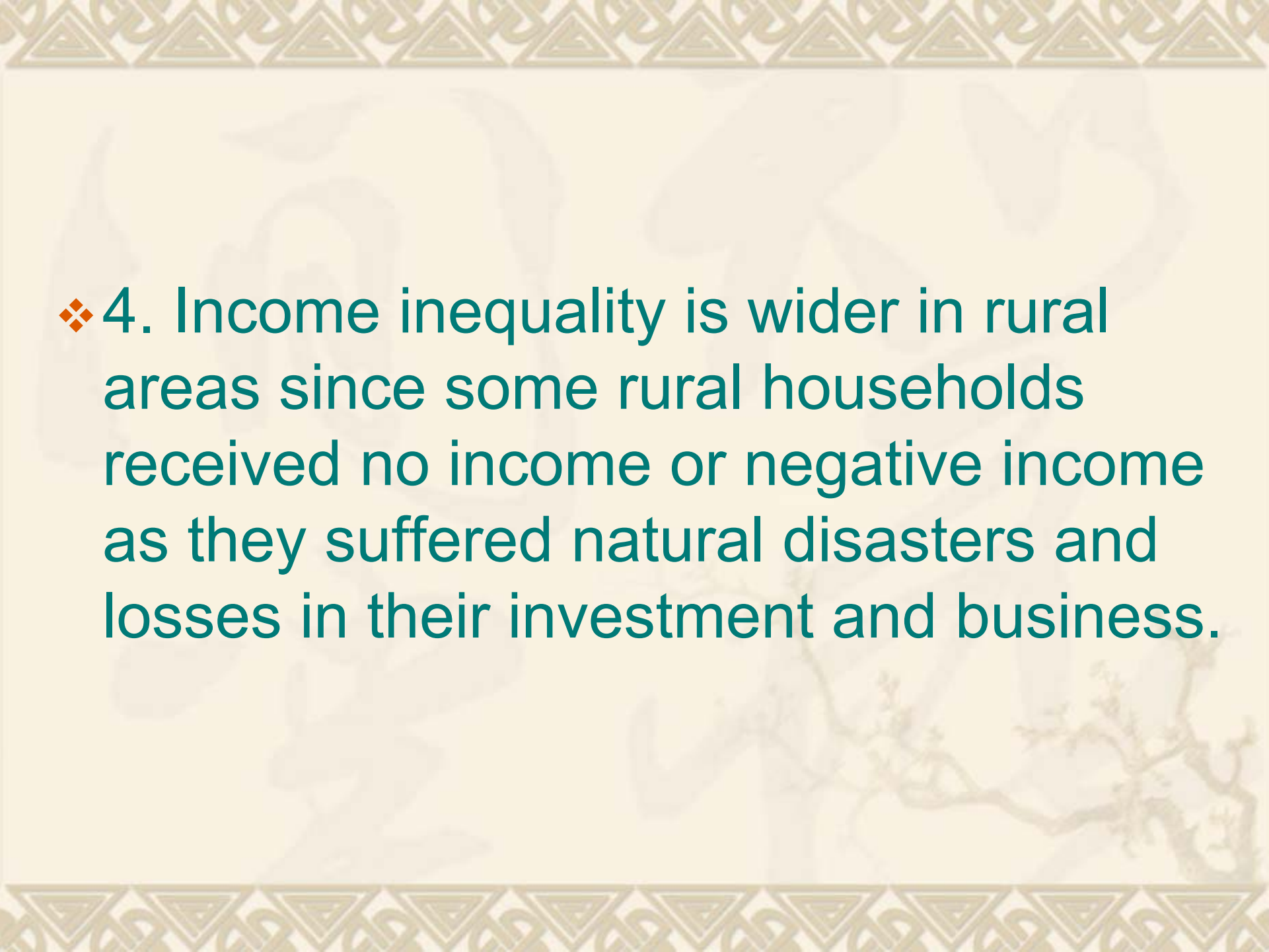


Figure 6-7 Provincial differences in household income in urban China (coefficient of variation)


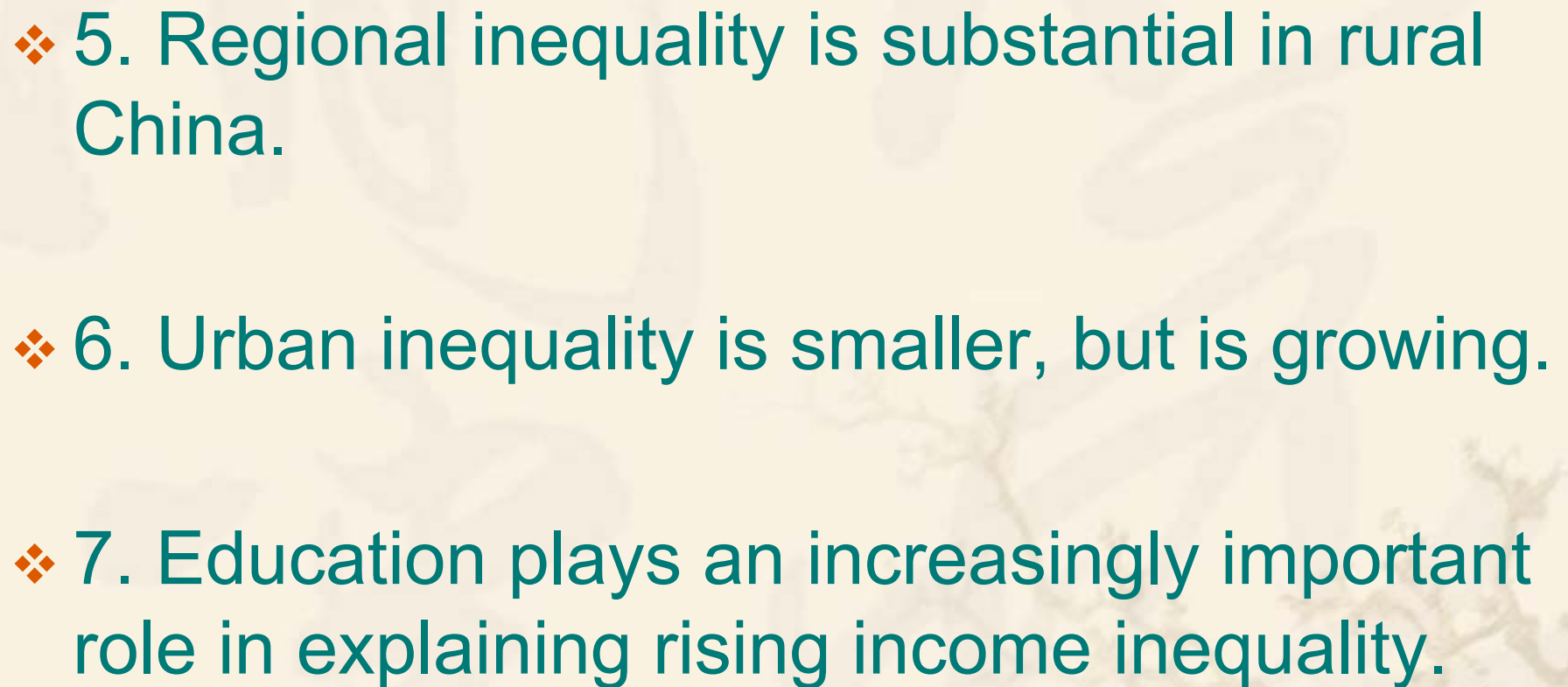


# Conclusions

- ❖ 1. Income inequality has increased significantly in the last three decades in rural China, urban China and China as a whole.
- ❖ 2. China becomes one of the countries with highest inequality in Asia and the World.
- ❖ 3. Over 40% of the total inequality can be attributed to the inequality between rural and urban areas.



❖ 4. Income inequality is wider in rural areas since some rural households received no income or negative income as they suffered natural disasters and losses in their investment and business.

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- ❖ 5. Regional inequality is substantial in rural China.
  - ❖ 6. Urban inequality is smaller, but is growing.
  - ❖ 7. Education plays an increasingly important role in explaining rising income inequality.
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