International Seminar on Tax System, Sao Paulo, Brazil

The Taxation System and Reform in China

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Outline

1. Introduction
2. Government structure in China
3. Tax Sharing System(TSS) reform in 1993
   - Assignment of revenues and responsibilities
   - Fiscal transfers (tax rebate & equalization grants)
   - Impacts of TSS
4. Tax system in China
5. Systematic tax reform in China
6. Conclusion: Future of tax reform

1. Introduction

- **Three Stages** of China's Financial Administration Reform
  - 1979-1993: Phase out *the old stuff*
  - 1994-2008: Install *the new stuff* – Policy innovations
  - Since 2009: underlying structure

- Advances Fast and Encouraging
  - Stage 1: phase out frustrating and difficult
  - Stage 2: new policy adoption / implementation charged ahead
  - Stage 3: entanglement of multiple players; public participation

- Problems Prominent and Pressing
  - Tax burden; inefficiency; corruption; lack of trust; …

Per Capita Gross National Income of China
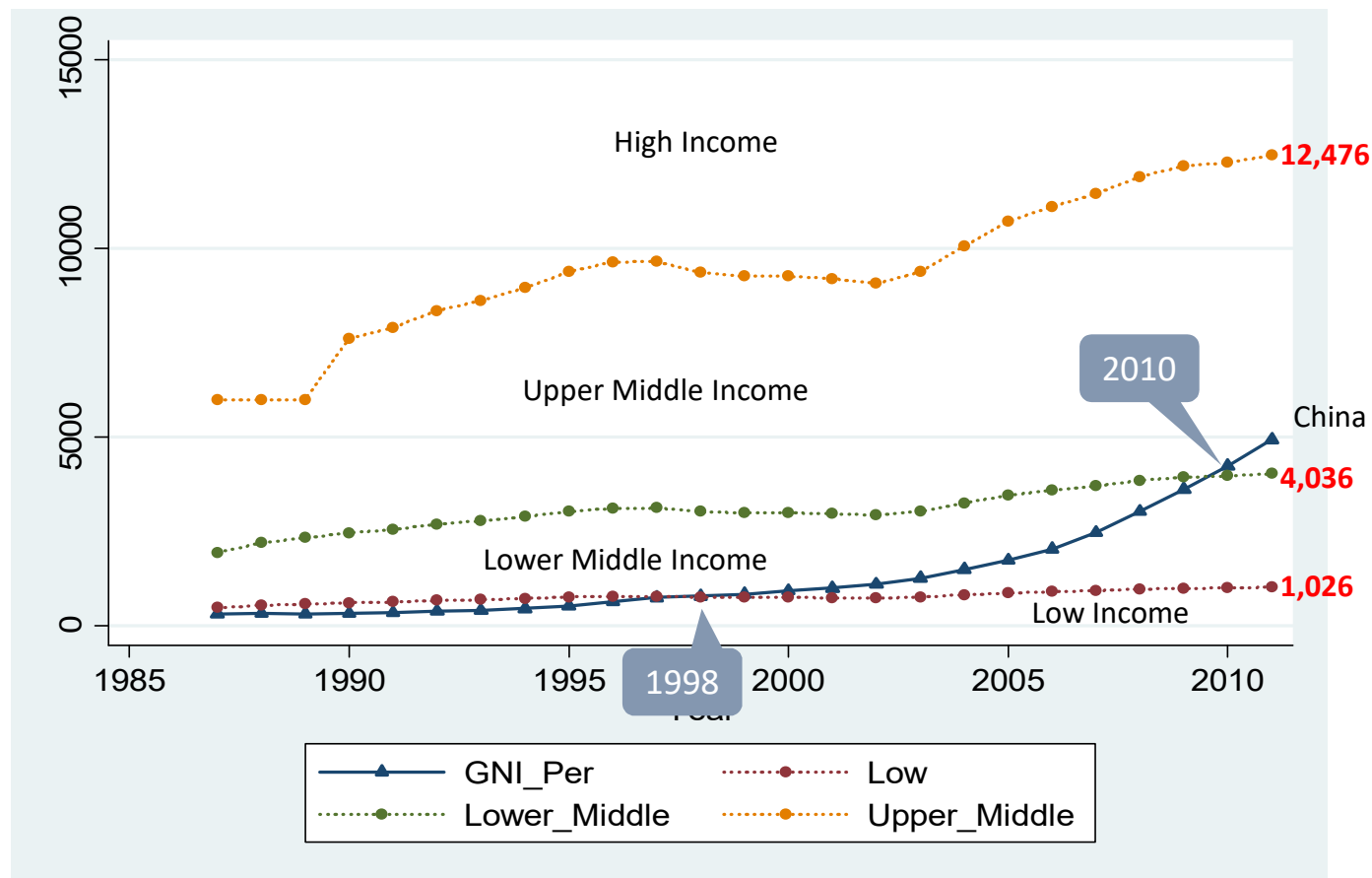
35 years ago in Beijing

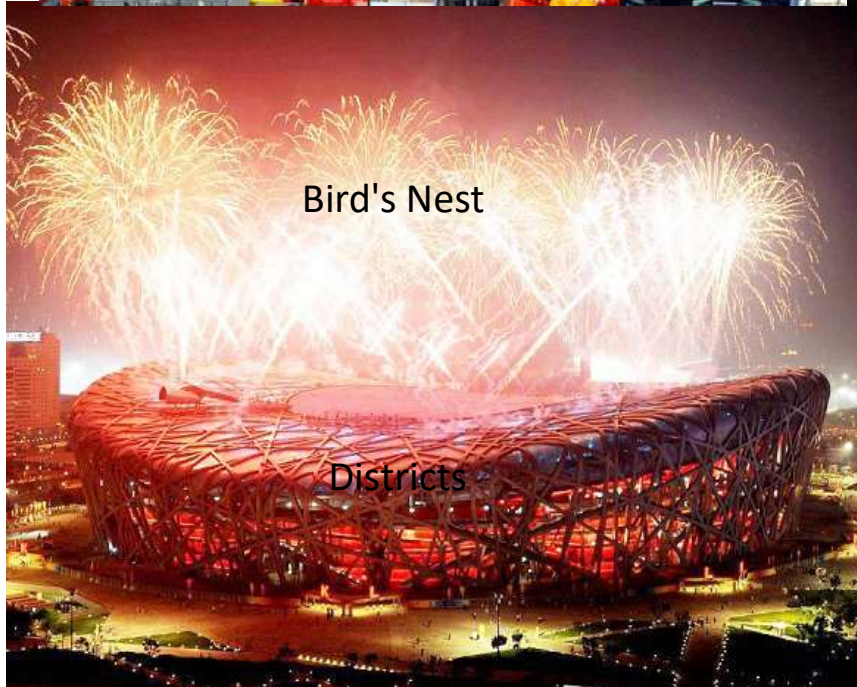China Central Television

Financial Street
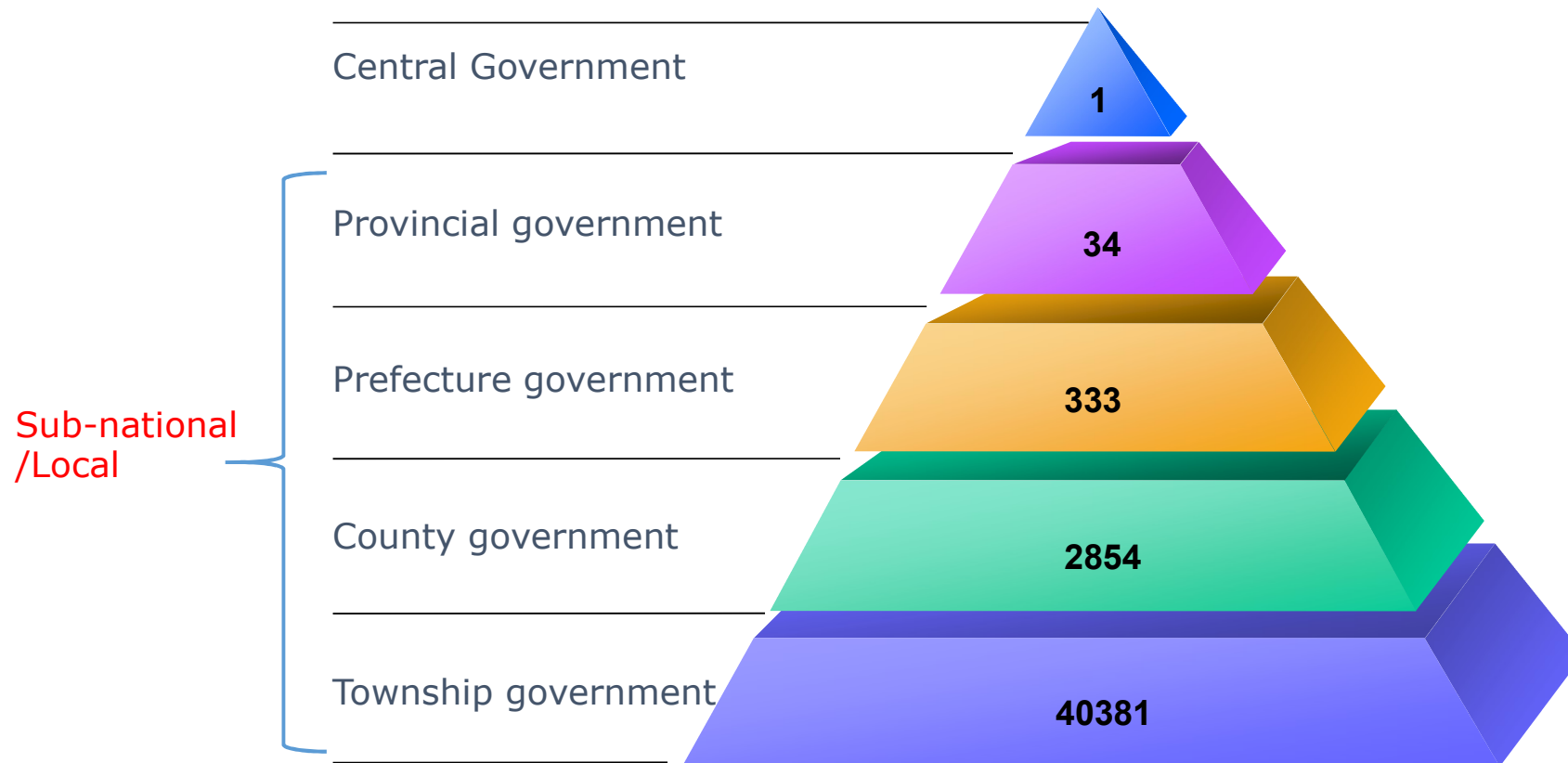
Bird's Nest

Districts

National Grand Theater

Shanghai,1994

2. Government structure in China

- Five levels of government
- Comparison

China map

Government structure in China (2014)

Central Government — 1

Sub-national /Local:
- Provincial government — 34
- Prefecture government — 333
- County government — 2854
- Township government — 40381

China's governmental hierarchy in 2004

Level	Administrative Units	No.
Central	State Council	1
Province	4 Directly-Supervised Municipalities, 23 Provinces (Including Taiwan), 5 Minority Autonomous Regions, and 2 Special Administrative districts (Hongkong and Macao)	34
Municipality	283 Municipalities, 17 Regions, 33 Minority Autonomous Regions	333
County	862 Districts, 374 County-Level Municipalities, 1,464 Counties, 117 Minority Autonomous Counties, and 55 Others	2,862
Town	36,042 Towns, 5,829 Streets, 1,404 Minority Autonomous Towns	43,275
Self-Government Organizations	625,147 Villager's Committee, 80,017 Urban Residents' Committee	705,164

PRC's governmental hierarchy in 2014

Level	Administrative Units	No.
Central	State Council	1
Province	4 Directly-Supervised Municipalities, 23 Provinces (Including Taiwan), 5 Minority Autonomous Regions, and 2 Special Administrative districts (Hongkong and Macao)	34
Municipality	288 Municipalities, 12 Regions, 33 Minority Autonomous Regions	333
County	897 Districts, 361 County-Level Municipalities, 1,425 Counties, 117 Minority Autonomous Counties, and 54 Others	2,854
Town	31,281 Towns, 7,696 Streets, 1,404 Minority Autonomous Towns	40,381
Self-Government Organizations	585,451 Villager's Committee, 96,693 Urban Residents' Committee	682,144

Top-down control is strengthened by the hierarchical system of the ruling party.

Comparison

- China
  - Unitary system (politically), *fiscally/financially?*

- USA
  - Federal system

- Advantage vs. disadvantage

3. Tax Sharing System (TSS) Reform

- Assignment of revenues and responsibilities
- Fiscal transfers (tax rebate & equalization grants)
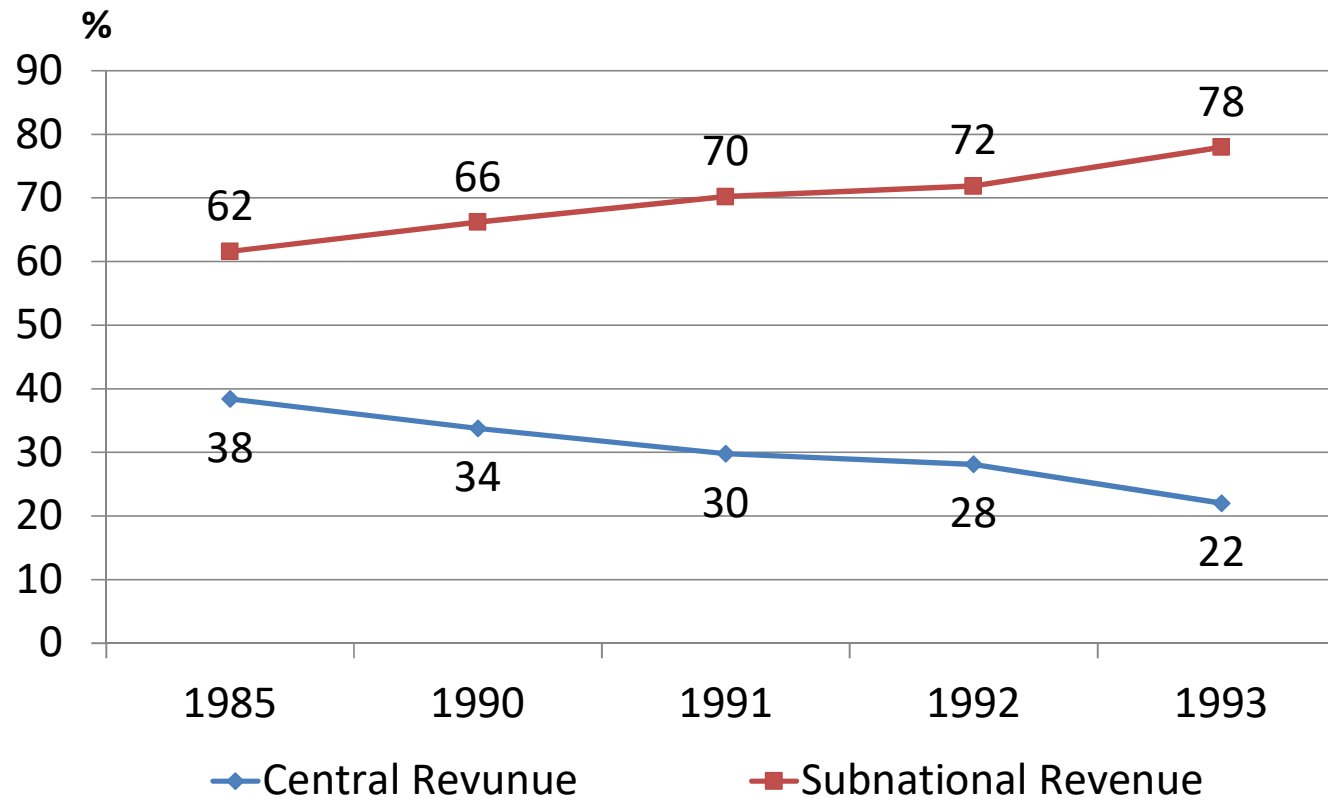- Effects of TSS

Since 1978, China began the economic reform and open-up policy.

From 1978 to 1993, the intergovernmental fiscal relationship experienced a transition from relatively high centralization to decentralization.

Deng Xiaoping

Share of revenue: 1985-1993

- In the late 1980s and early 1990s, the revenue of central government is far from enough to effectively implement policies. The central budget is "on the edge of cliff".

- "Without reforming present fiscal system, there will be no central budget anymore".

  ——**Zhu Rongji** (Vice Premier) at the national conference on finance and taxation in July, 1993

3.1 The Tax Sharing System (TSS) reform

The TSS Reform

- The Vice Premier Zhu Rongji spent two months in preparing the TSS reform, negotiating with governors of 13 wealthy provinces, and discussing the assignments of revenues and responsibilities between central and sub-national governments.

Zhu Rongji

What is TSS?

- Tax sharing system (TSS) is a contract between central and sub-national governments to assign revenues/taxes according to their responsibilities they undertake. The present agreement was reached in 1993 and was effective since 1994.

Responsibilities of central government

- Defense
- Foreign affairs
- Operation of the central government
- Operational expenses for cultural, education, scientific and public health undertakings at the central level
- Key capital construction
- Technical renovation and new product development in centrally owned enterprises
- Agriculture
- Subsidies
- Macro-economic control and the regional coordination of economic development
- Public safety
- Debt

Responsibilities of sub-national governments

- Operation of local governments
- Operational expenses on cultural, educational, scientific and public health undertakings at the local level
- Local capital construction
- Fund for technical renovation and new product development in locally owned enterprises
- Agriculture
- Urban maintenance and construction
- Social Security
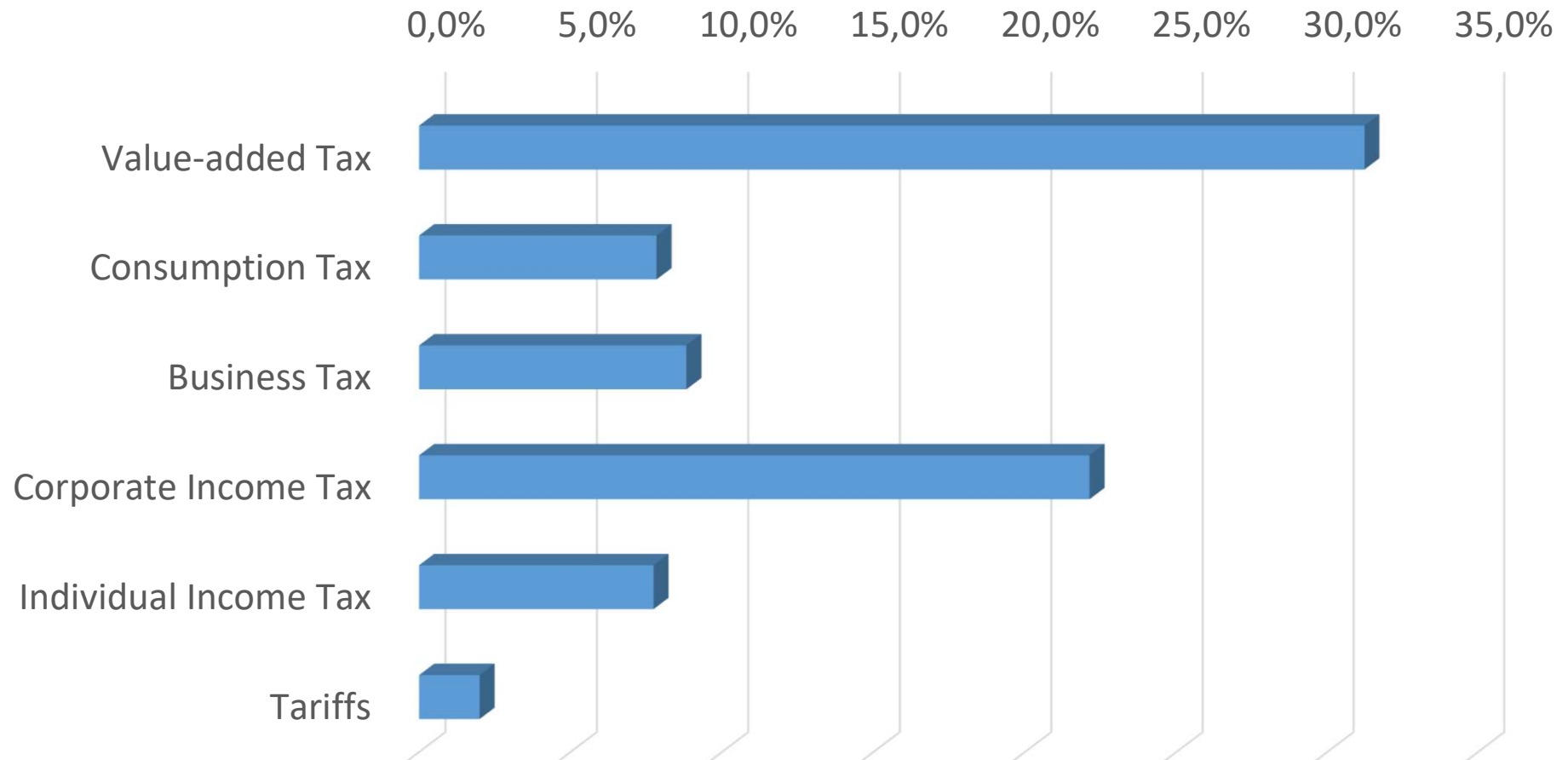- Public safety
- Subsidies

2011 total tax revenue: 8974 billion Yuan (China)
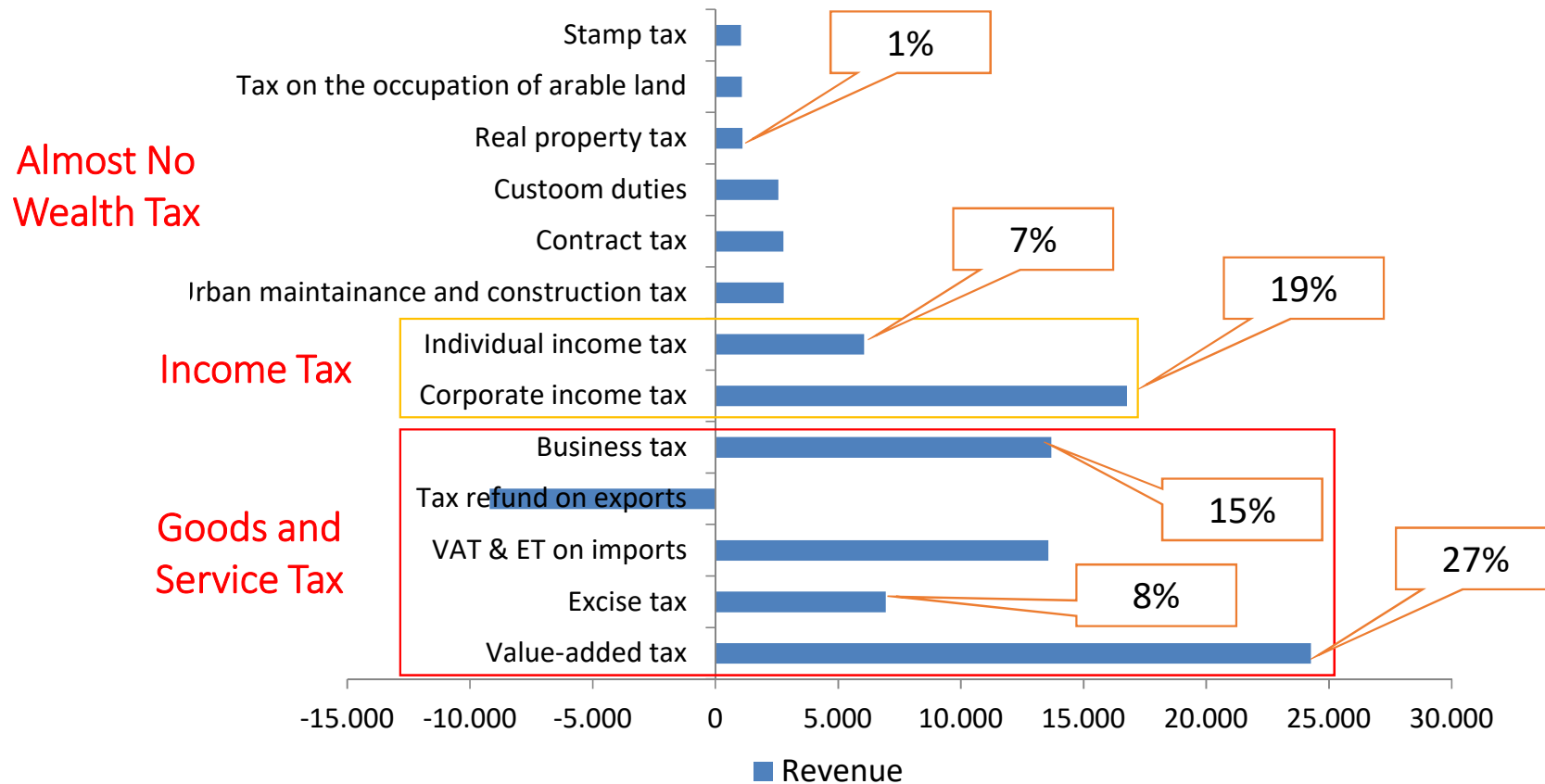
2007-2008 total tax revenue: 3854 billion dollars (USA)
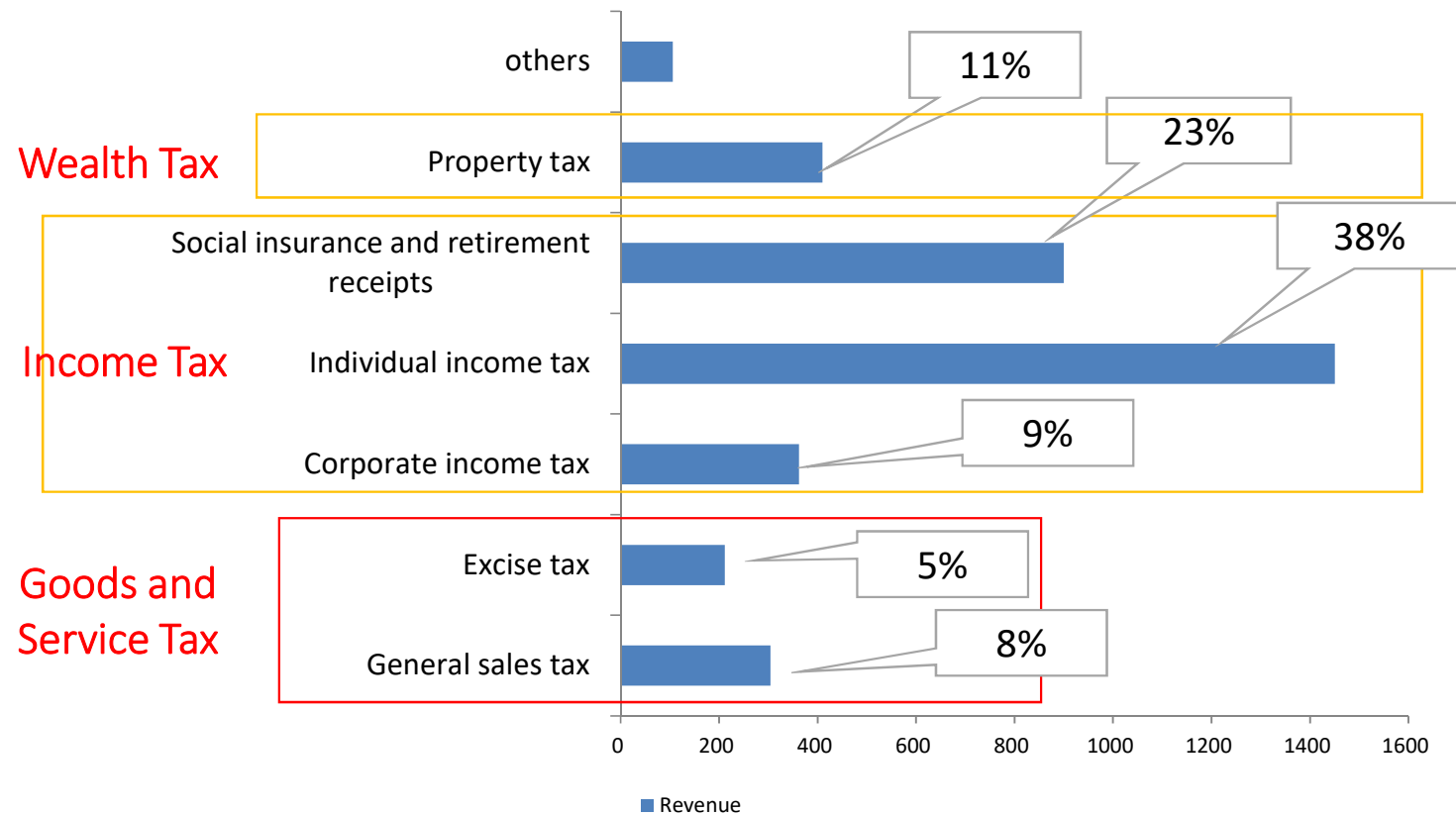
The tax revenue structure of China in 2016

Revenues of central government

- Custom duties
- VAT on imports
- Excise tax
- Corporate income tax
  (From: rail transportation, state-owned post service, 4 state-owned commercial banks and 3 state-owned policy banks, and enterprises of offshore oil and natural gas)
- Business tax, urban maintenance and construction tax
  (From: rail transportation, the headquarters of banks and insurance corporations)
- Profit remittances by all centrally owned enterprises
- Tax refund on exports

Revenues of sub-national governments

- Business tax
    (other than from rail transportation, the headquarters of banks and insurance corporations)
- Urban and township land use tax
- Urban maintenance and construction tax
    (other than from rail transportation, the headquarters of banks and insurance corporations)
- Property tax
- Vehicle and vessel utilization tax
- VAT on land
- Stamp tax
- Contract tax
- Tax on the occupation of arable land
- Profit remittances by all locally owned enterprise
- Revenue from compensation for use of state-owned land **(a related rumor)**
- Gift and bequest tax

Shared revenue between central and sub-national governments

- VAT (75:25, 50:50 from 2016)
- Excise taxes (100:0)
- Stamp tax on security transaction (97:3; 100:0 since 2016)
- Individual income tax
  (0:100 in 1993; 50: 50 in 2002; 60:40 from 2003)
- Corporate income tax excluding special items
  (40:60 in 1993; 50: 50 in 2002; 60:40 from 2003)
- Resource tax
  (offshore: 100% for central; on land: 100% for local)

Fiscal structure

Fiscal revenue of central and sub-central governments (1978-2016)

Fiscal structure, cont.

Fiscal expenditure of central and sub-central governments (1978-2016)
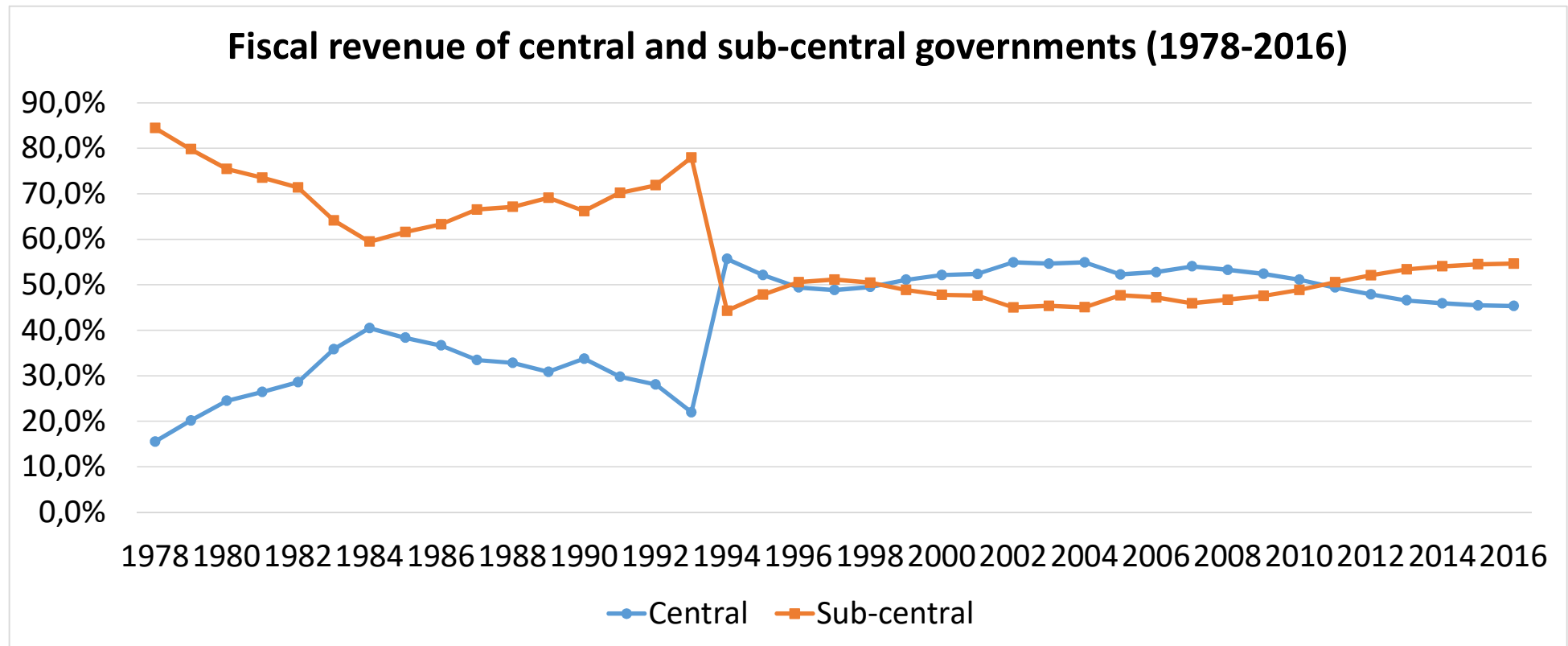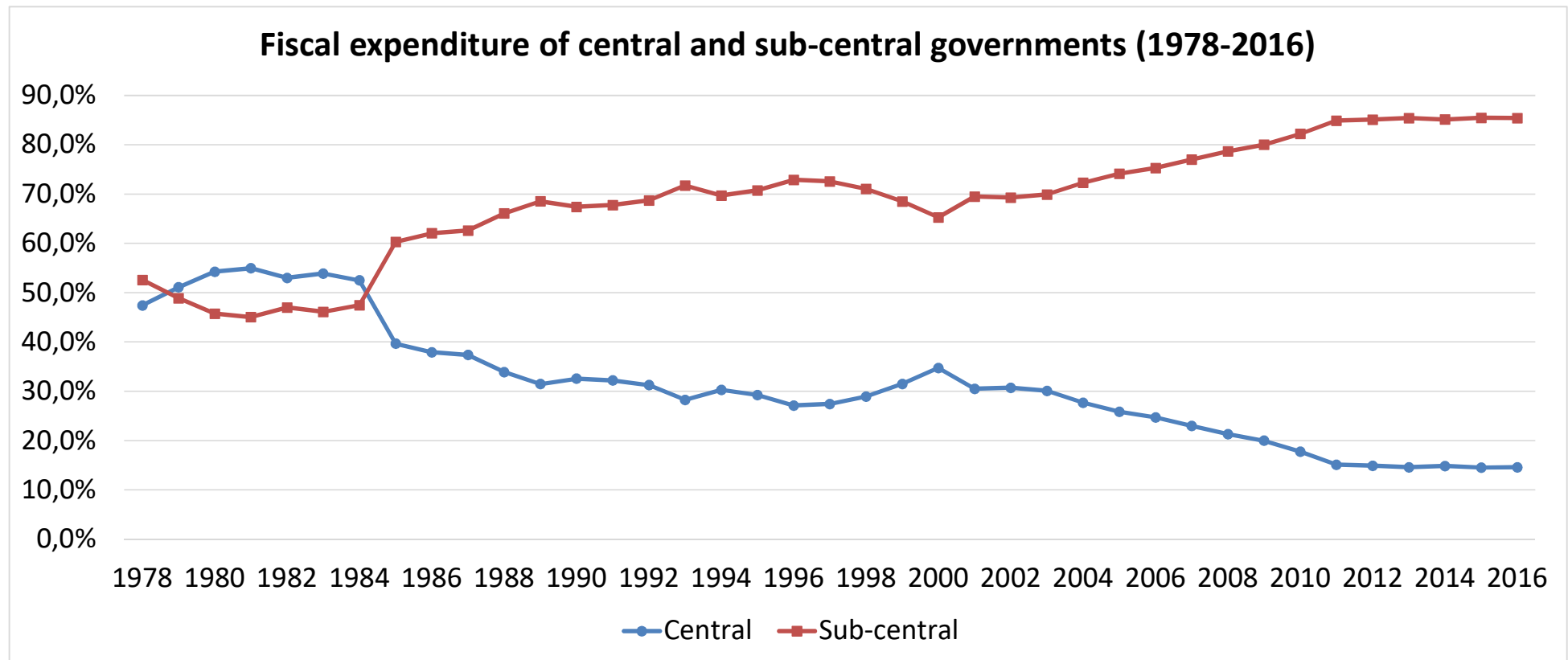
Considering the huge off-budget revenues and land sales revenues collected by local government, the share of local government expenditure is even higher!

3.2 Fiscal transfers:
tax rebate & equalization grants

Fiscal Year 2011

Revenue and expenditure of central and local government

	billion RMB yuan
	Amount
Revenue	
Central revenue	**5133**
Local revenue	5255
Expenditure	
Central expenditure	1651
Local expenditure	**9273**
Tax rebate and grants	**3995**
Tax rebate	504
General purpose grants	1831
Equalization grant	749
Special purpose grants	1657

78%

43%

Source: http://www.mof.gov.cn/zhuantihuigu/czjbqk2011/cztz2011/201208/t20120831_679750.html
Note: Budget of Fiscal Year 2011

- In Fiscal Year 2011

- 78% of central revenue is used for tax rebate and grants.

- Tax rebate and grants accounted for 43% of local expenditure.

Tax rebate and grants (2011): 3995 billion

Equalization grant: 19%

+

Other general grants: 27%

Tax rebate 13%

1

General purpose grants: 46%

2

Special purpose grants: 41%

3
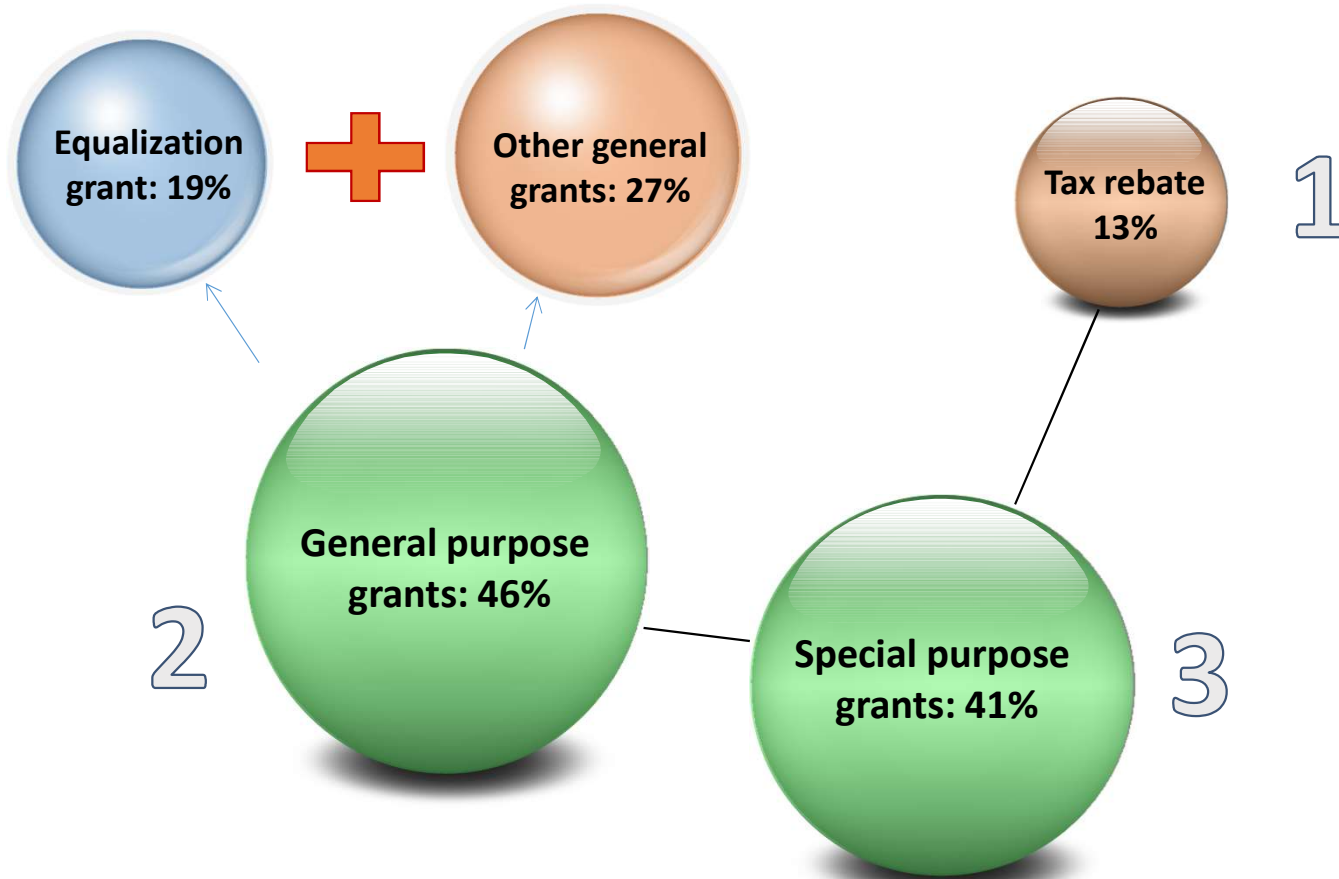
Tax rebate

- In 1994, VAT and excise taxes were brought under central tax administration and a program of tax rebates were instituted for VAT and excise taxes in 1994 according to which a fraction of these revenues were returned to provinces.

- The provinces were assured that under centralized collection, each province would receive at the minimum level of VAT and excise tax revenues it retained in 1993. For VAT and excise taxes, provinces have also been assured that the current rebates would equal to last year's rebate plus 30% of the growth in VAT and excise tax revenues.

Tax Rebate

Algebraically,

$$TR_t = TR_{t-1}[1 + 0.3(\frac{VAT_t - VAT_{t-1} + ET_t - ET_{t-1}}{VAT_{t-1} + ET_{t-1}})]$$

Where:

TR_t - tax rebate to a province at year t

VAT – value-added tax

ET – Excise taxes

Example

If (75%*VAT+ET)=100

1993

    Then, Tax Rebate=100

If growth rate=15%

1994

    Then, Tax Rebate=100*(1+0.3*15%)=105

If growth rate=15%

    Then, Tax Rebate=105*(1+0.3*15%)=109

1995

The aim of tax rebate

- Notes：
    - The provincial governor's term of office is 5 years. After 5 years, another governor is appointed.
    - During the first 5 years, the revenue of certain province will not be affected so much. But gradually larger portion of 75%*VAT+ET will belong to the central government.

Example

	1993	1994	1995	2000	2005	2010	2012
75%*VAT+ET	100	115	132	266	535	1076	1423
Tax Rebate	100	105	109	136	170	211	231
Growth Rate		15%	15%	15%	15%	15%	15%
Tax Rebate/(75%*VAT+ET)	100%	91%	83%	51%	32%	20%	16%

A simulation
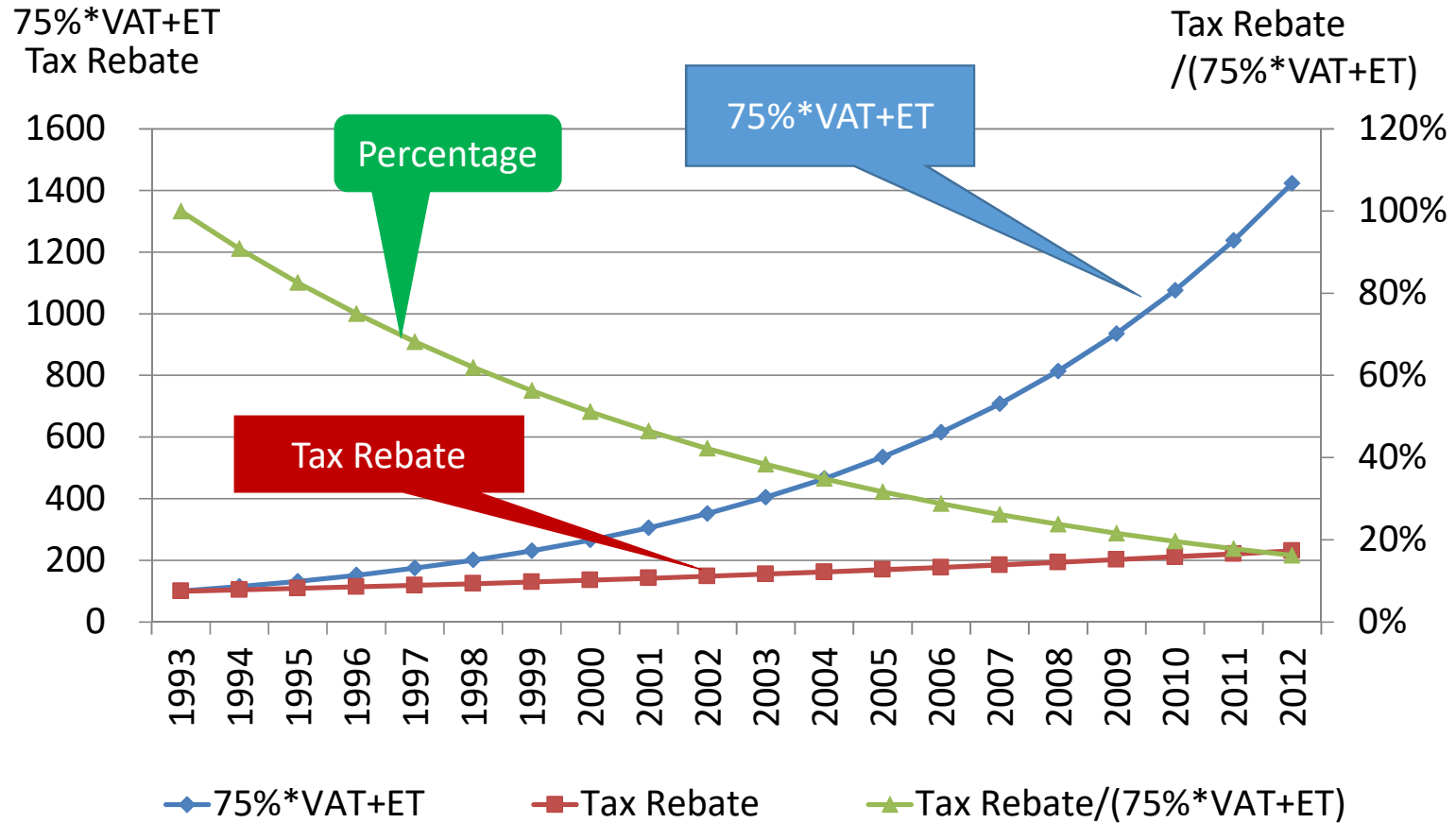
Actual amount

Year	Central Level		Tax Rebate	Tax Rebate /(75%*VAT+ET)
	75%*VAT	ET		
2003	5426	1182	2527	**38%**
2007	11603	2207	3215	**23%**
2011	18277	6936	5040	**20%**

Equalization grant/transfer

- In 1995, the equalization grant/transfer was established to reduce regional fiscal disparities.

- The amount of the equalization grant for a province i is determined by three factors: standard revenue of the province, standard expenditure of the province, and the share of the provincial standard fiscal gap of the total fiscal gap of all provinces.

Equalization grant

$$ET_i = (SE_i - SR_i) * \frac{TET}{SE - SR}$$

Every unit of gap they should have is the amount they can get.

"Standard" means "Should", not "actually"

Where

ET_i -- the equalization transfer for province i

TET – total equalization grant available in the budget year

SE_i – standard expenditure of province i

SR_i – standard revenue of province i

SE – total standard expenditure of the country

SR – total standard revenue of the country

Standard revenues

- The standard revenues are equal to standard local own and shared taxes plus tax rebate and various grants.

- For each type of tax, standard tax revenue is determined by multiplying the standard tax base with the standard tax rate.

- Example:
    - The income tax base of salaries is estimated using per capita taxable salaries net of exemptions multiplying by number of employees. The tax rate of salaries is local average effective tax rate.

Standard expenditures

- The standard expenditures are measured as the total spending of seven sectors.

- For each sector, the standard spending cover personal expenditure (salaries and bonus) and operating expenditures (vehicles, heating, and others).

Example

- Total equalization grant available is 10 billion
- Assuming
  - Standard revenue of province i is 60
  - Standard expenditure of province i is 80
  - Standard revenue of province j is 200
  - Standard expenditure of province j is 280
- The equalization grant for province i is:
  (80-60)*10/(20+80)=2 billion

Gap 20

Gap 80

3.3 Effects of TSS

Trend of equity of fiscal capacity: measure of C.V.
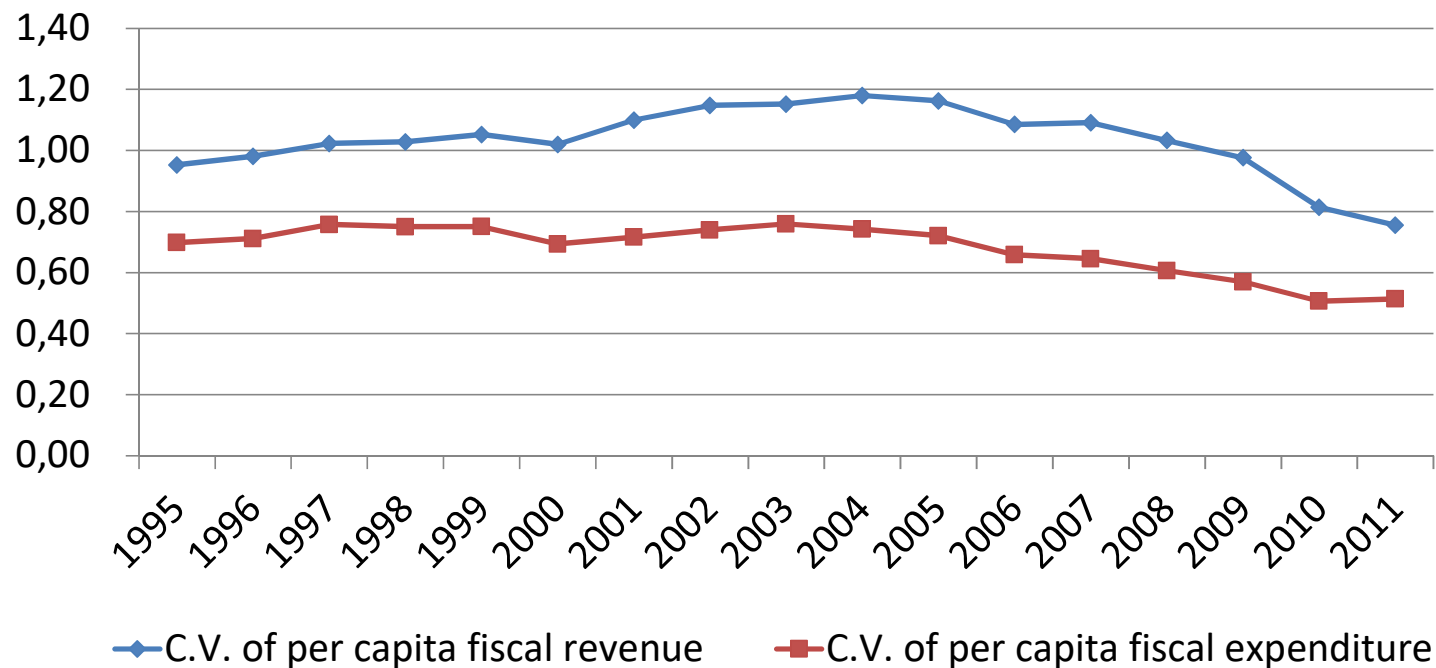
Source: Calculated according to *China Statistical Abstract (1996-2012)*

Note: C.V. refers to Coefficient of Variation. The coefficient of variation (C.V.) is defined as the ratio of the standard deviation to the mean.

50

Trends of equity of fiscal capacity: measured by Gini coefficient
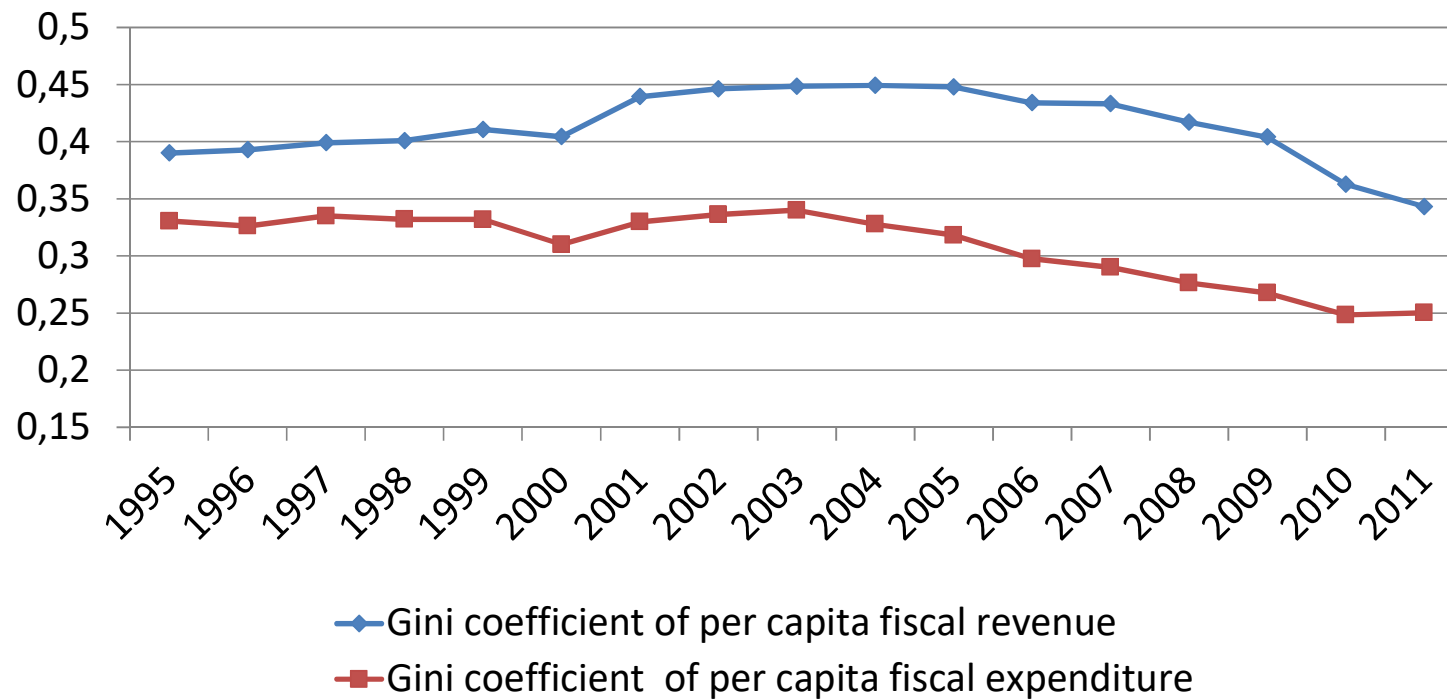
Source: Calculated according to *China Statistical Abstract (1996-2012)*

Gini Index - Income Disparity since World War II

where 0 is perfect equality, and 100 is perfect inequality (i.e., one person has all the income)
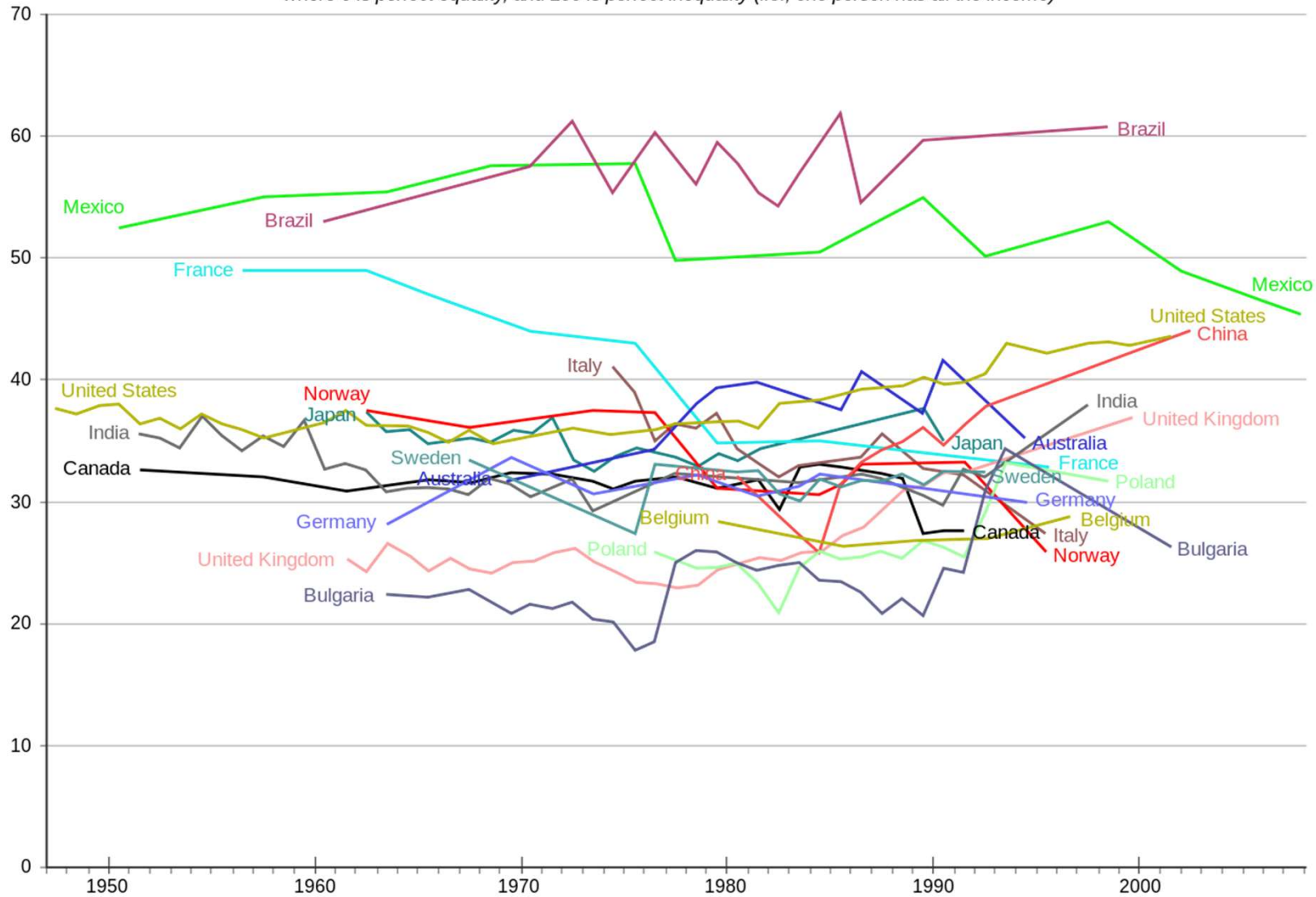
- Problems to be solved
  - Intergovernmental fiscal relations under central level is not uniform
  - Special purpose grants is hard to be administered
  - Intra-provincial disparities are also significant

Expenditure at sub-provincial level as a percentage of provincial totals

1993

2006

(.8,1]
(.7,.8]
(.5,.7]
[0,.5]
No data or missing

(.8,1]
(.7,.8]
(.5,.7]
[0,.5]
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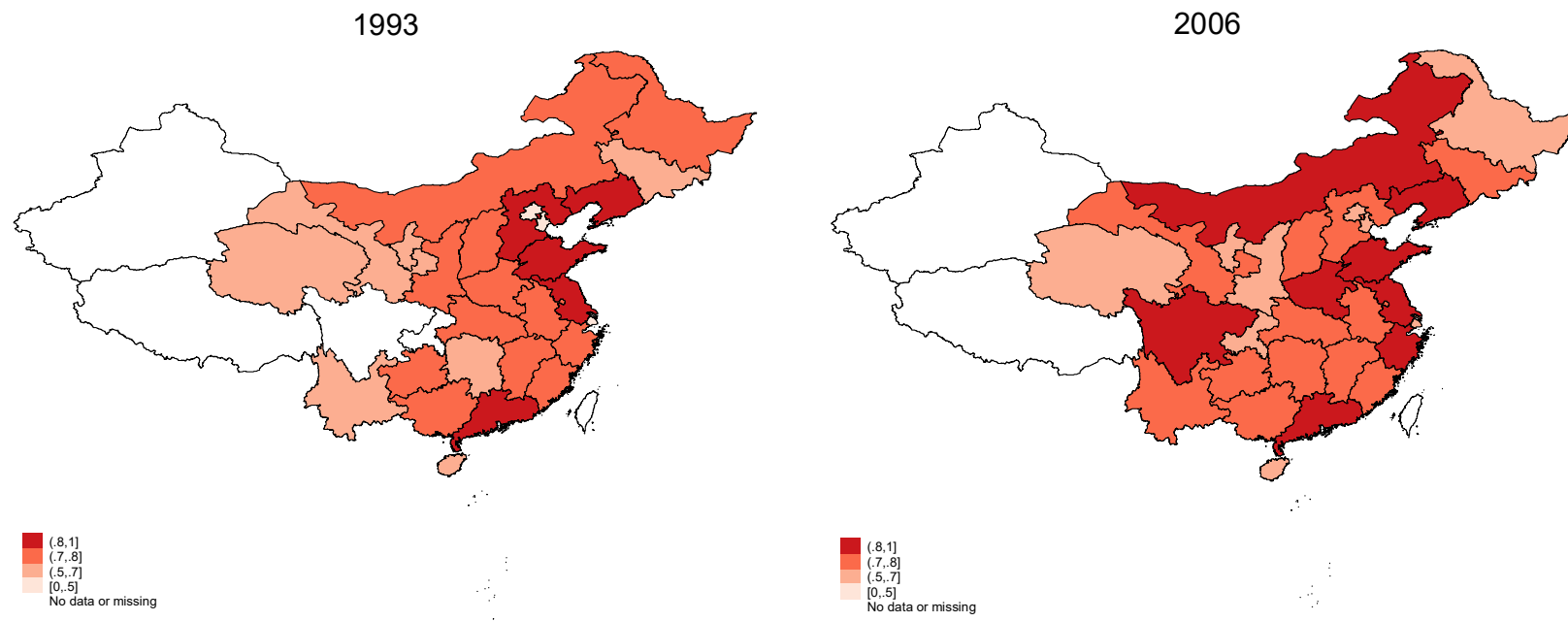
Inter-jurisdictional heterogeneity of own revenue within each province
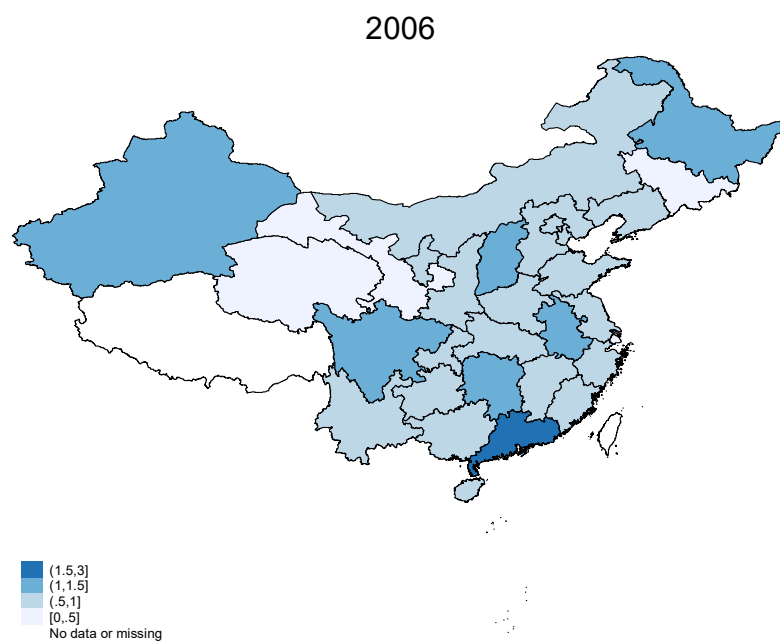
2006
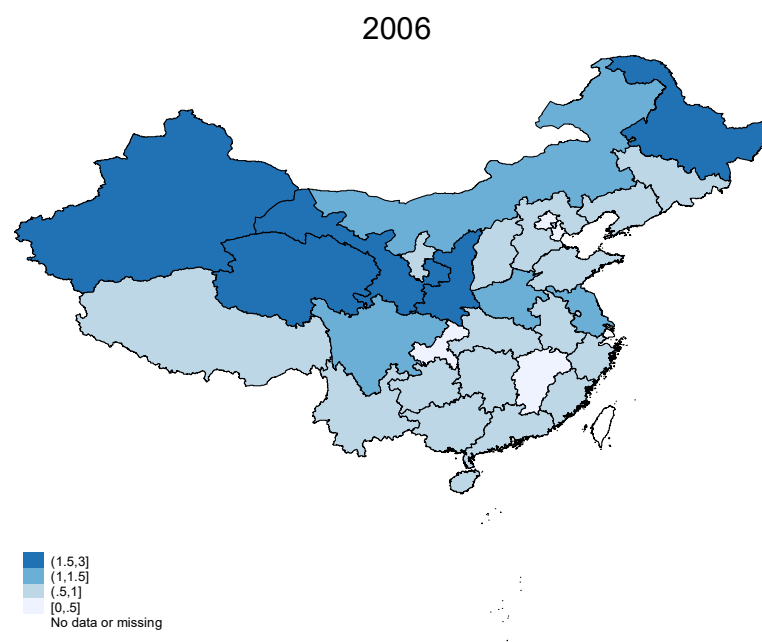
2006

Districts

Counties

Per capita revenue (own), expenditures in different regions and government levels in 2006 (in RMB yuan)

	East		Interior		West	
	District	**County**	**District**	**County**	**District**	**County**
Revenue*	1680	696	496	309	647	310
Expenditures	1823	1171	884	920	1056	1092
Grants**	143	475	388	611	408	783
Grants/Revenue	9%	68%	78%	198%	63%	253%

Notes:
* Revenue refers to own source revenue.
** On the basis of reality, the gap between revenue (own) and expenditures is complemented by grants. Thus, here grants is calculated by local expenditures minus own source revenue.

4. <u>Taxation reform in China</u>

- Turn over tax

- Income tax

- Wealth tax

The tax revenue structure of China in 2016

Turnover Tax (50%)
- Value-added Tax
- Consumption Tax
- Business Tax
- Tariffs

Income Tax (30%)
- Corporate Income Tax
- Individual Income Tax

0,0% 5,0% 10,0% 15,0% 20,0% 25,0% 30,0% 35,0%

58

Value added tax (VAT)

- The replacement of business tax with value-added tax (营改增) is considered the most significant transformation in China's turnover tax system since the 1994 tax reform.

- The reform is to restructure the Chinese economy from one driven by labor-intensive manufacturing to one that is service-oriented by easing the tax burden on service industries, which have historically paid a disproportionate share.
  - Initiated on August 1, 2012 as experiments for some provinces and industries, fully adopted on May 1, 2016.

Income tax

- Historical income tax changes:
  - 1980, 1986, 1987, 1993, 1999, 2005, 2007, 2011

- Monthly deduction changes

800 ($130)   **1600 ($260)**   **2000 ($300)**   **3500 ($500)**

2006.1.1   **2008.3.1**   **2011.9.1**
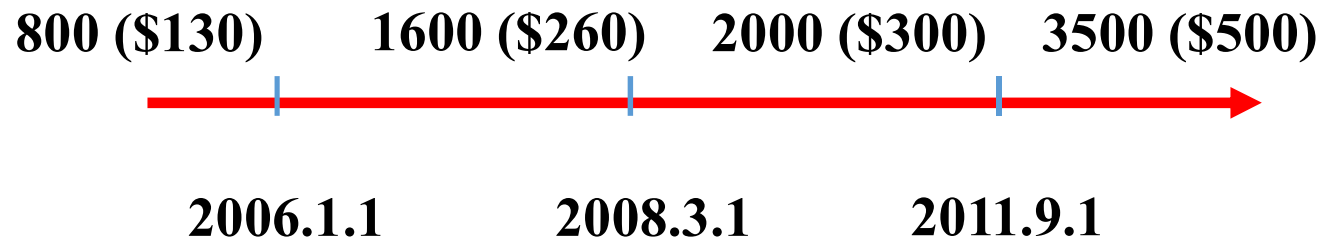
Monthly taxable income (CNY) (1)		Tax rate (%)	Quick deduction (CNY)
Grossed income	Net income (2)		
0 - 1,500	0 - 1,455	3	0
Over 1,500 - 4,500	Over 1,455 - 4,155	10	105
Over 4,500 - 9,000	Over 4,155 - 7,755	20	555
Over 9,000 - 35,000	Over 7,755 - 27,255	25	1,005
Over 35,000 - 55,000	Over 27,255 - 41,255	30	2,755
Over 55,000 - 80,000	Over 41,255 - 57,505	35	5,505
Over 80,000	Over 57,505	45	13,505

4. Future taxation reform: property tax?

- Income tax
  - Increase the deduction level?

- Property tax reform
  - Two pilot cities: Shanghai & Chongqing
  - Related issues for property tax reform

- Policy implications & suggestions

Income Gini coefficient in China

Year	2003	2004	2005	2006	2007	2008	2009
Gini	0. 479	0. 473	0. 485	0. 487	0. 484	0. 491	0. 490
Year	2010	2011	2012	2013	2014	2015	2016
Gini	0. 481	0. 477	0. 474	0. 473	0. 469	0. 462	0. 465

Soure: Tian, Hu, & Gong (2017)

Personal income tax

- These is a cry from residents to increase monthly deduction again since the change in 2011 after 7 years
  - However, in 2011 with the deduction at 3500 ($500), only around 200 million population (1.4% of total) was paying income tax
  - Currently, with the increase of income, around 1000 million population (7%) is paying income tax

→ The effect of income tax on decreasing inequality is small

- Future
  - Household based
  - More comprehensive coverage of income sources

Property tax reform

Details of LPT in Shanghai and Chongqing

LPT in Shanghai
- Eligibility: Newly purchased 2nd (or more) housing units
- Assessed Value: 70% of market price
- Tax Rate: 0.4% ~ 0.6%
- Tax Exemption: 60 m^2 per household member
- Calculation: $Property\ Tax = (FS - 60 \times N) \times MP \times 70\% \times TR$
    - FS - Floor space   N - Number of household members
    - MP - Market price/m^2 TR - Tax rate

LPT in Chongqing
- Eligibility
    - ➤ Detached housing including earlier purchase
    - ➤ Newly purchased apartments with market price/m2 > double average in previous two years (luxury housing)
- Assessed Value: 100% of market price
- Tax Rate: 0.5% ~ 1.2%
- Tax Exemption: 100 or 180 m2 per household
- Calculation: $Property\ Tax = (FS - 100\ or\ 180) \times MP \times TR$
    - FS - Floor space   MP - Market price /m2   TR - Tax rate

Background

- After 40 years of economic reforms, China has created a huge middle class, with over half of urban households owning homes.
  - Given the swift appreciation of real estate in urban centers since the late 1990s, housing assets represent about two-thirds of household wealth.
  - Wealth distribution: Among all households, those at the top 1 percent own one-third of the national total, while the bottom 25 percent of households together own only 1 percent of the total. No Wealth Tax

- A heated debate has been ongoing in China for over a decade about whether the country should adopt a nationwide real property tax.

The case of China

- China's current move toward adopting the property tax faces several huge hurdles:

  1. Multiplicity of housing types and categories defies easy classification
  2. Behavior and pattern of housing purchase often involves multiple households of family relations
     - For example, home purchase by a young couple takes not only their own income stream but also the life savings of husband and wife's parents
     - Housing price rose very fast in the past 15 years
     - Price-income ratio is substantially higher than in most developed countries

Related issues

- Ability to pay
- Willingness to pay
- Redistributive effects
- Adequacy

Indexes of ability to pay the property tax:
Varying effective tax rates and units owned

Panel A: Comparison between several Effective Tax Rate (ETR), 1st unit only				
ETR	1%	0.5%	0.3%	0.1%
Income based	18.3	36.6	61.0	183.1
Consumption based	20.4	40.8	67.9	203.8
Wealth based	18.8	37.6	62.7	188.1
Cash flow based	18.7	37.5	62.4	187.3
Panel B: Comparison between families with varying # units（ETR = 0.5%）				
# units owned	Mean	1 unit	2 units	3 or more units
Income based	36.6	40.8	22.8	14.9
Consumption based	40.8	45.9	24.1	16.6
Wealth based	37.6	41.6	24.3	16.7
Cash flow based	37.5	41.5	24.1	16.5

Ability to pay the property tax, by province

Code	Province	Sample	First house	All house(s)	Feasible ETR based on average ATP	
					one	multiple
11	Beijing	24	10.33	8.66	0.12%	0.11%
12	Tianjin	45	20.04	15.42	0.24%	0.20%
13	Hebei	45	39.70	32.64	0.47%	0.43%
14	Shanxi	58	42.88	36.74	0.51%	0.48%
21	Liaoning	360	40.54	36.80	0.48%	0.48%
22	Jilin	57	78.31	75.18	0.93%	0.99%
23	Heilongjiang	207	77.86	72.56	0.92%	0.95%
31	Shanghai	352	13.09	11.74	0.15%	0.15%
32	Jiangsu	16	34.30	21.45	0.41%	0.28%
33	Zhejiang	14	20.64	20.23	0.24%	0.27%
34	Anhui	23	50.30	46.35	0.59%	0.61%
36	Jiangxi	23	47.38	43.06	0.56%	0.57%
37	Shandong	39	31.78	29.35	0.38%	0.39%
41	Henan	170	42.25	39.07	0.50%	0.51%
42	Hubei	94	30.07	26.54	0.36%	0.35%
43	Hunan	130	59.00	48.62	0.70%	0.64%
44	Guangdong	147	49.36	44.69	0.58%	0.59%
50	Chongqing	34	31.72	29.77	0.38%	0.39%
51	Sichuan	34	79.82	77.41	0.94%	1.02%
52	Guizhou	20	55.13	46.73	0.65%	0.61%
53	Yunnan	9	51.34	51.34	0.61%	0.67%
61	Shaanxi	20	63.22	47.53	0.75%	0.62%
62	Gansu	104	43.72	39.68	0.52%	0.52%
East		1042	30.25	26.96	0.36%	0.35%
Interior		762	56.51	51.11	0.67%	0.67%
West		221	50.45	45.78	0.60%	0.60%
Total/Average		2025	42.28	38.07	0.52%	0.51%

Measures of Willingness-To-Pay

- Measure 1: **household threshold benefit ratio**

$$= ln\left[\frac{public\ service\ benefit * number\ of\ famly\ members}{property\ tax\ payment}\right]$$

- Measure 2: **threshold plus education**

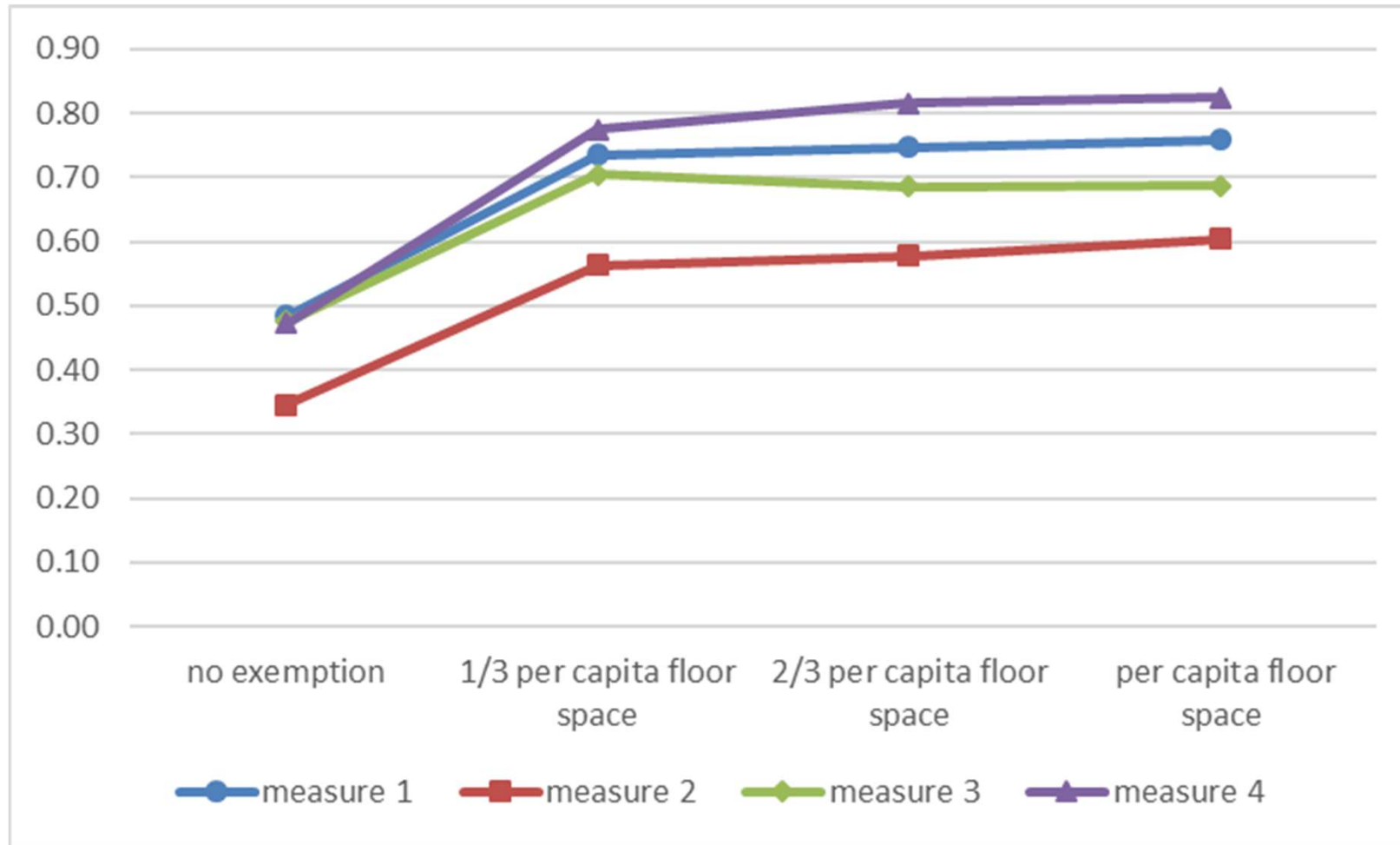$$= ln\left[\frac{education\ outlay + public\ service\ benefit * \#members}{property\ tax\ payment}\right]$$

- Measure 3: **threshold plus culture and recreation**

$$= ln\left[\frac{culture\ \&\ recreation + benefit * \#members}{property\ tax\ payment}\right]$$

- Measure 4: **sum of 1-3 plus daily necessities**

$$= ln\left[\frac{necessities + education + culture\ \&recreation + benefit * \#members}{property\ tax\ payment}\right]$$
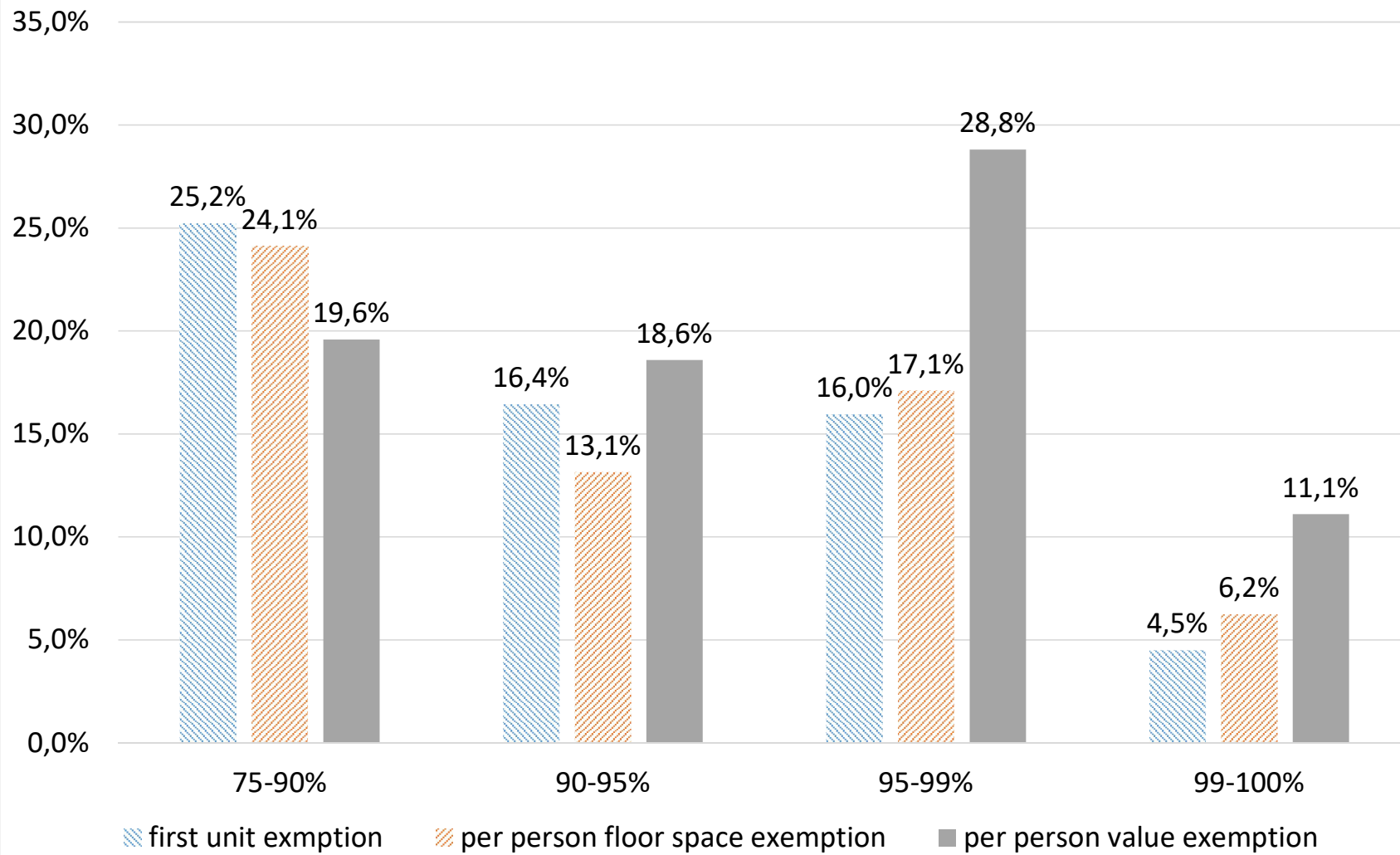
Correlation between WTP and ATP
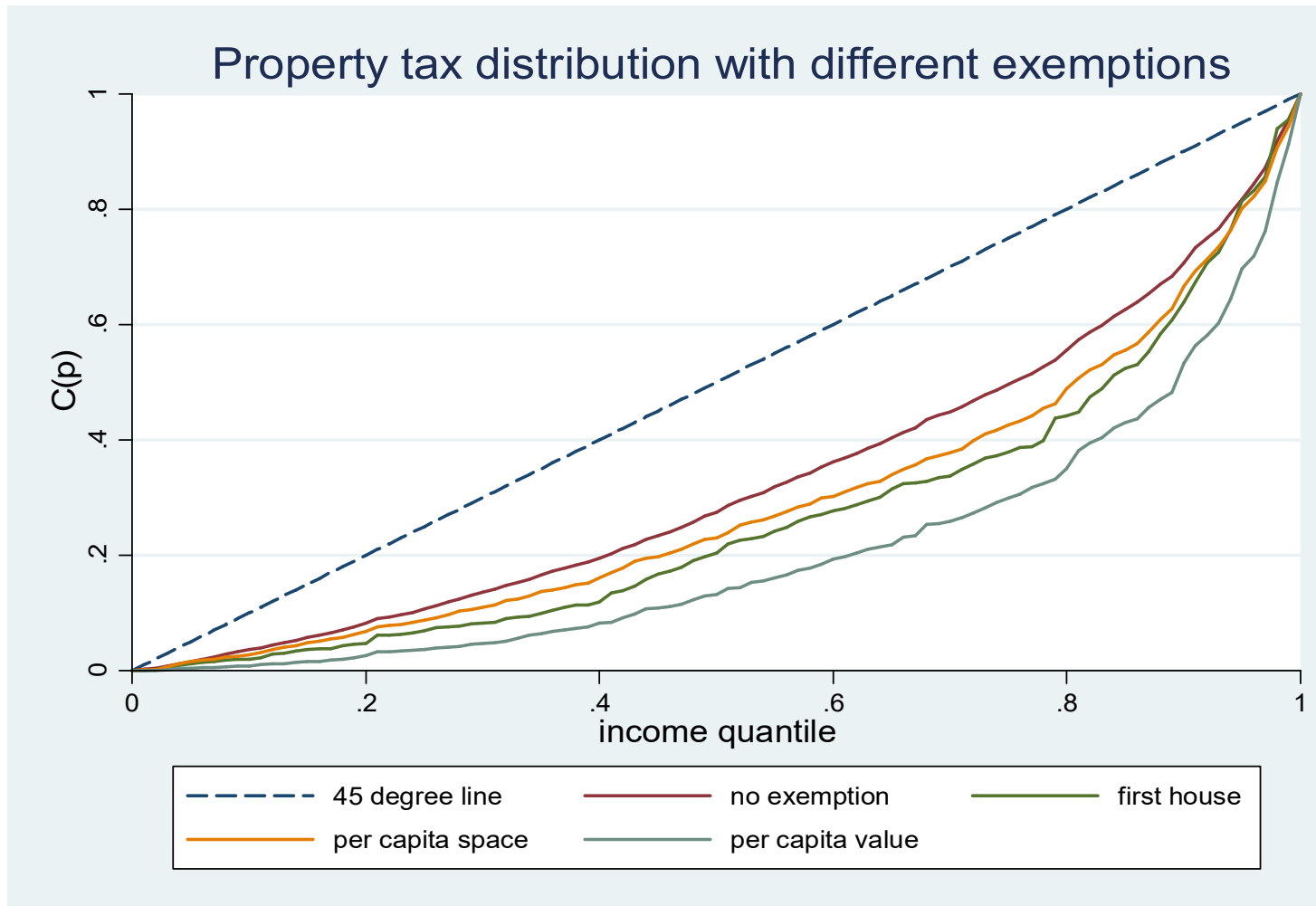
Tax Burden Distribution by Family Income

Income quartile	No exemption	1st Unit exemption	Per person Floor space Exemption	Per person value exemption
0-25%	9.2%	7.0%	8.8%	3.7%
25-50%	15.1%	12.8%	14.1%	9.2%
50-75%	21.9%	18.1%	19.7%	17.1%
75-100%	**53.8%**	**62.1%**	**57.4%**	**70.0%**
75-90%	21.8%	25.2%	22.7%	21.2%
90-95%	12.4%	16.4%	13.1%	16.2%
95-99%	14.9%	16.0%	15.9%	23.9%
99-100%	4.7%	4.5%	5.7%	8.8%

Distribution of tax burden by family income quartile

first unit exmption   per person floor space exemption
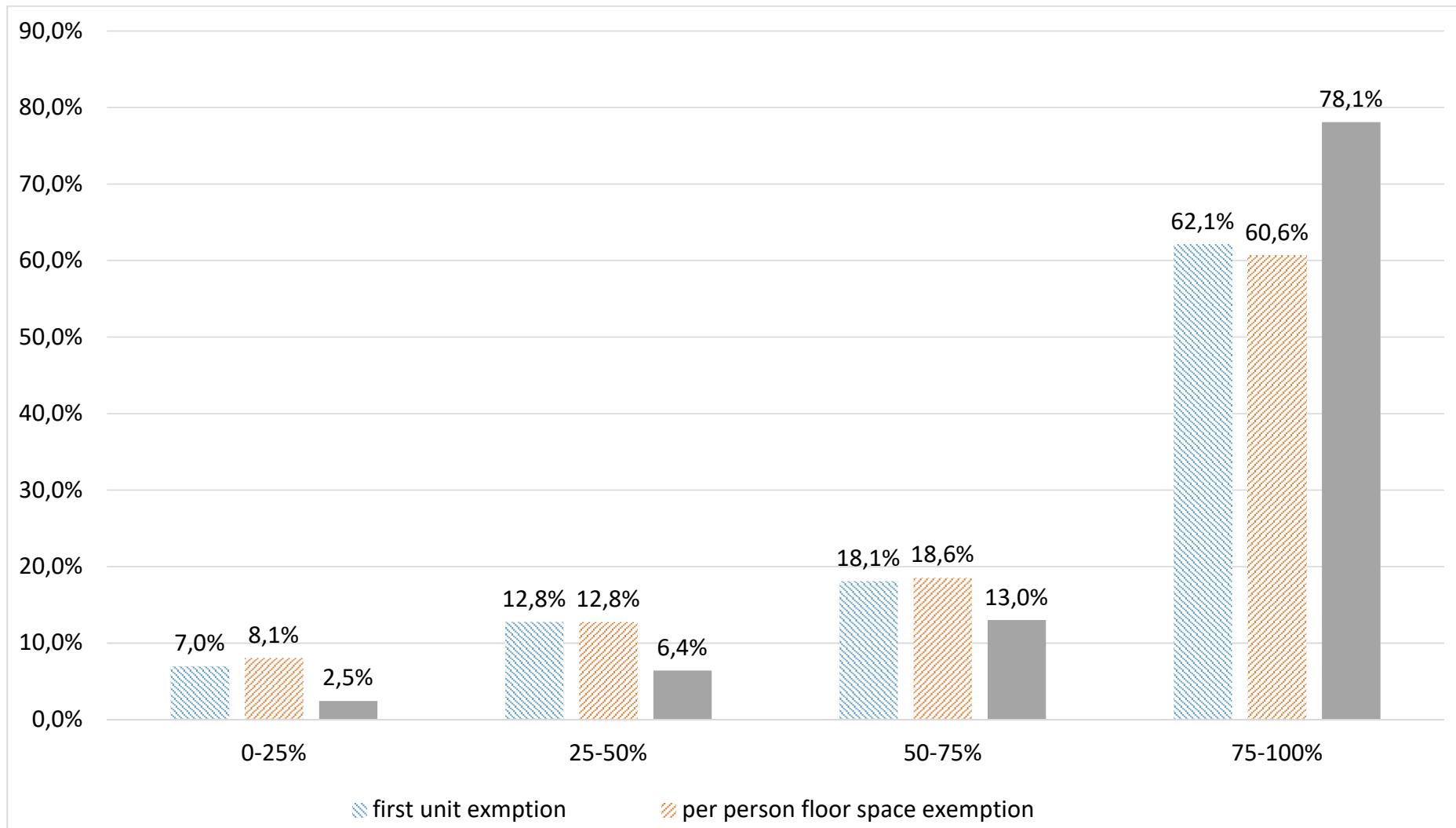
Distribution of property tax burden for high-income families

	first unit exemption	per person floor space exemption	per person value exemption
75-90%	25,2%	24,1%	19,6%
90-95%	16,4%	13,1%	18,6%
95-99%	16,0%	17,1%	28,8%
99-100%	4,5%	6,2%	11,1%

**Property tax distribution among families by income group**

Source: Zhang & Hou (2016)

Adequacy: Exemption Proposals & Thresholds

Property tax revenue as percent of tax base under three exemption quotas

		(1)	(2)	(3)
Exemption Proposal		1st Unit	Per person floor space	Per person value quota
Per person quota of exemption under (2) & (3)	10 m²		75%	70%
	30 m²	22%	35%	38%
	50 m²		17%	24%

Source: Zhang & Hou (2016)

Interactive process of tax scheme design under ATP and WTP frameworks
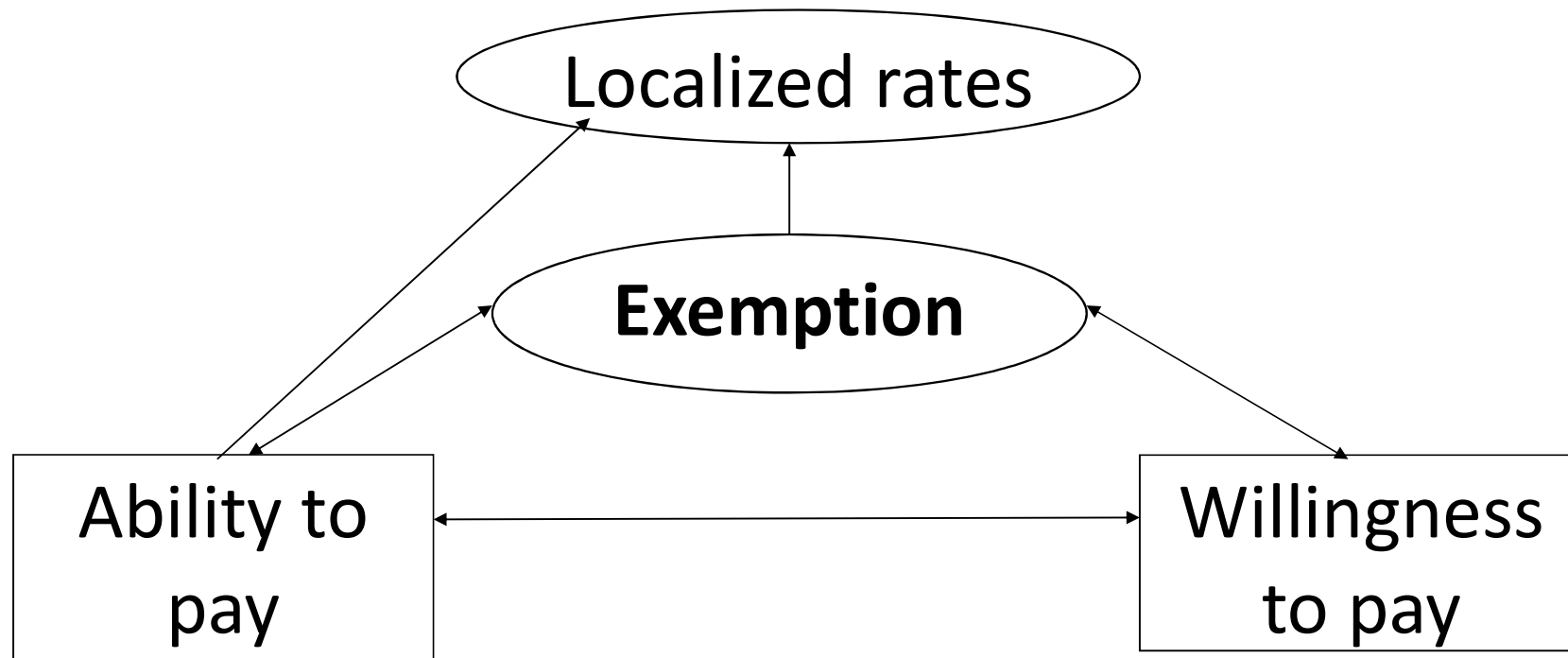
Back to Optimal Design of Property Taxation

a. A full tripod in use, even for a long time, is no guarantee of optimality

b. Early tax systems (e.g., USA, Britain) were not designed; they evolved

c. Even an optimal design may and will decay over time, losing optimality

- Examples of (b) and (c) abound in US, eroding/violating the evaluation criteria

d. Causes of the damage/violation of criteria

- Confusion of social policy with tax policy
- Higher level government intervenes in lower level tax authority

e. Optimality is a continuing, non-stop process for new AND old systems

Implication

- The striking variation of ATP/WTP in different regions highlights the demand for the localization of property tax in terms of policy design and tax administration.

- Property tax will impose substantive effects on wealth and income distribution.

- Comparing different designs, **per person value exemption is the best option**, considering the equity for different groups, adjustment of income distribution, and facilitation of tax administration.

Future of tax reform

- Trials of broader based local property taxes will be implemented in many more localities in the next few years. The time for full adoption of the broad based model is not far.

- The main idea of future tax reform in China: property tax (direct tax) as the main stable revenue of local governments and VAT (indirect/turnover tax) mainly goes to the central government.

- A comprehensive reform of the taxation system is on the way!

Thank you!