

Inequality in China: Selected Literature

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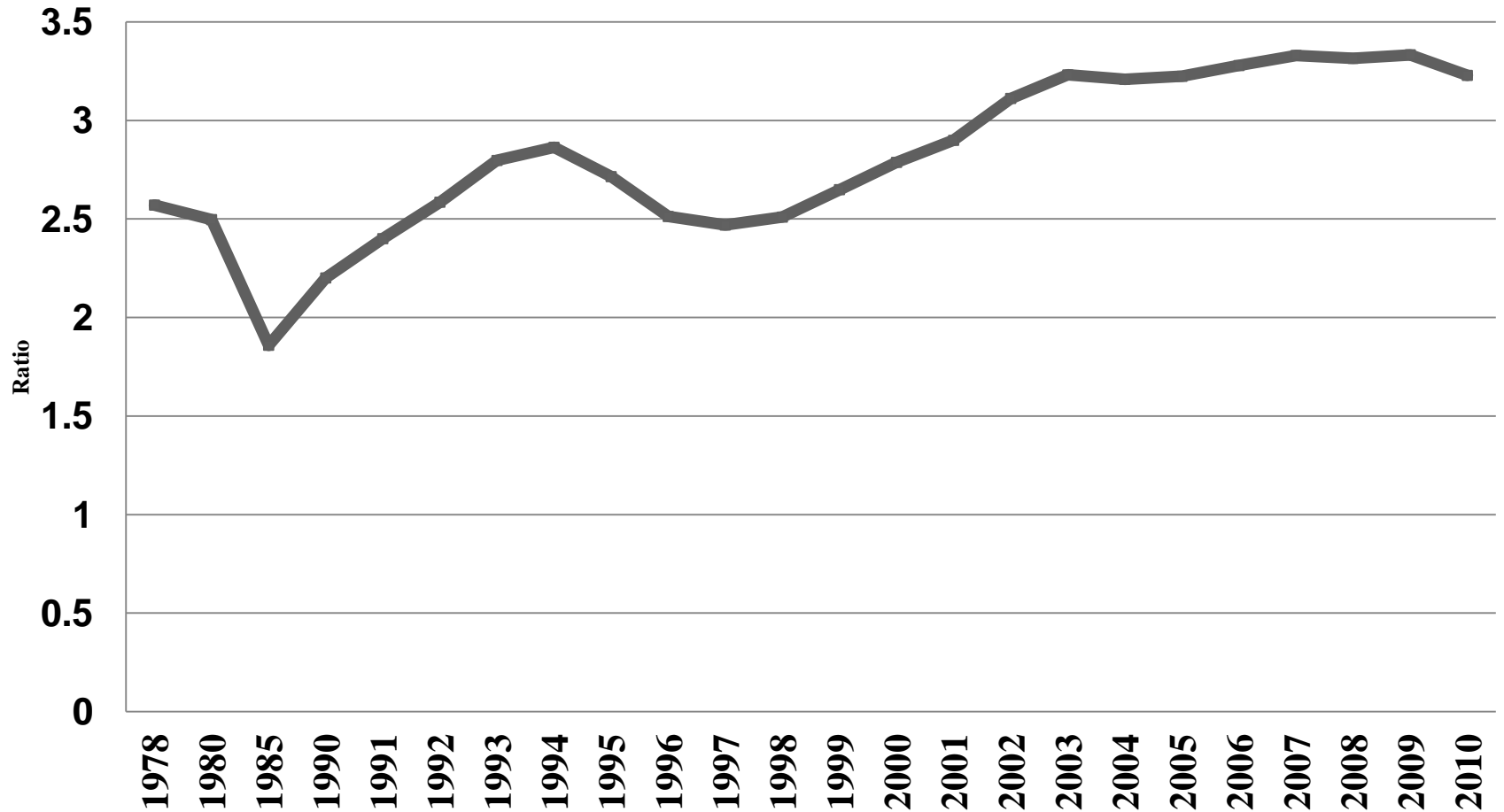
October 20, 2012

Outline

- Two major aspects: rural-urban disparity and regional difference
- Inequality in rural area and in urban area
- Mincerian equation
 - Education
 - Other variables
 - Labor market segmentation
- Intergenerational mobility and transmission
- Linkage
- Policy and interventions

Rural-Urban Disparity

Ratio of Urban to Rural Income



Rural-Urban Disparity

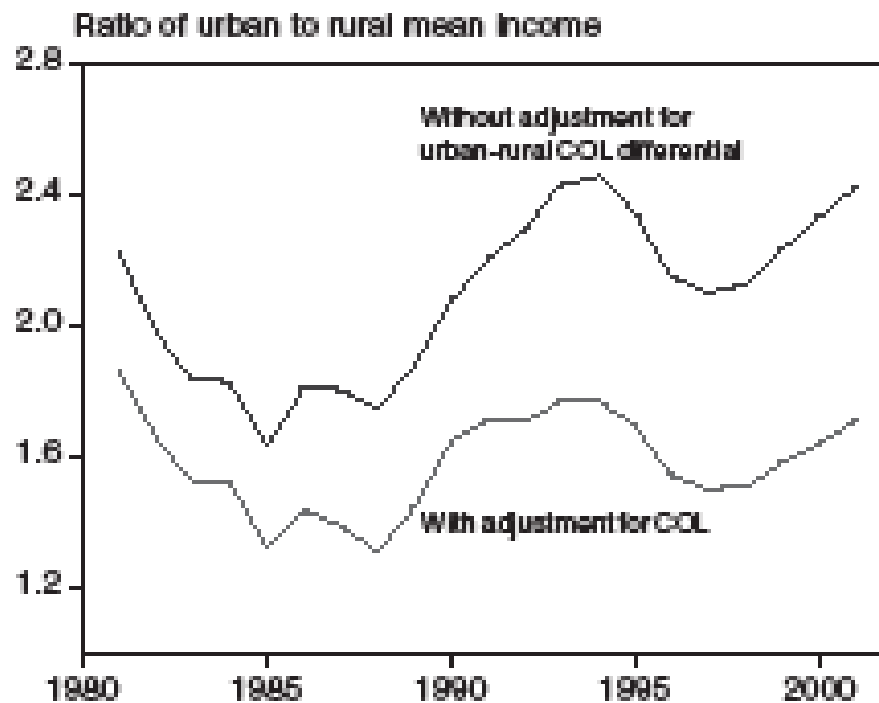


Fig. 3. Relative inequality between urban and rural China.

- Ravallion and Chen (2007)

Rural-Urban Disparity

- Sicular, Yue, Gustafsson and Li (2007), CHIP 1995, 2002, income

TABLE 3
INEQUALITY DECOMPOSITION BY URBAN AND RURAL SUBGROUPS

	1995				2002			
	Theil L		Theil T		Theil L		Theil T	
	Unadjusted	PPP	Unadjusted	PPP	Unadjusted	PPP	Unadjusted	PPP
Total	0.363	0.264	0.398	0.287	0.368	0.275	0.355	0.263
Between	0.149	0.074	0.158	0.078	0.164	0.083	0.160	0.083
Within	0.214	0.190	0.240	0.209	0.204	0.193	0.195	0.180
<i>Contribution of between and within effects (%)</i>								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Between	41.0	27.9	39.7	27.3	44.6	30.0	45.1	31.6
Within	59.0	72.1	60.3	72.7	55.4	70.0	54.9	68.4

Note: The notes to Table 1 apply. PPP figures are comparable across years because deflation involves multiplication by a constant, and the inequality indices and decompositions are scale invariant.

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Total	0.363	0.264	0.398	0.287	0.368	0.275	0.355	0.263
Between	0.149	0.074	0.158	0.078	0.164	0.083	0.160	0.083
Within	0.214	0.190	0.240	0.209	0.204	0.193	0.195	0.180
<i>Contribution of between and within effects (%)</i>								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Between	41.0	27.9	39.7	27.3	44.6	30.0	45.1	31.6
Within	59.0	72.1	60.3	72.7	55.4	70.0	54.9	68.4

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Rural-Urban Disparity

- Sicular, Yue, Gustafsson and Li (2007), CHIP 1995, 2002

DECOMPOSITION OF THE DIFFERENCE BETWEEN MEAN URBAN AND RURAL INCOMES, 1995

	Standard Decomposition		Reverse Decomposition	
	Unadjusted	PPP	Unadjusted	PPP
Difference in ln incomes	1.169	0.848	1.169	0.48
<i>Contributions to difference (values)</i>				
Constant term and provincial dummies	0.708	0.387	0.708	0.387
Other explanatory variables, of which:	0.461	0.461	0.461	0.461
Coefficients	0.020	0.020	0.174	0.174
Endowments	0.441	0.441	0.286	0.286
<i>Contributions to difference (%)</i>				
Constant term and provincial dummies	60.6%	45.6%	60.6%	45.6%
Other explanatory variables, of which:	39.4%	54.4%	39.4%	54.4%
Coefficients	1.7%	2.4%	14.9%	20.5%
Endowments	37.7%	52.0%	24.5%	33.7%

Notes follow Table 12c.

TABLE 12b

DECOMPOSITION OF THE DIFFERENCE BETWEEN MEAN URBAN AND RURAL INCOMES, 2002

	Standard Decomposition		Reverse Decomposition	
	Unadjusted	PPP	Unadjusted	PPP
Difference in ln incomes	1.205	0.887	1.205	0.887
<i>Contributions to difference (values)</i>				
Constant term and provincial dummies	1.039	0.722	1.039	0.722
Other explanatory variables, of which:	0.165	0.165	0.165	0.165
Coefficients	-0.313	-0.313	-0.238	-0.238
Endowments	0.479	0.479	0.405	0.405
<i>Contributions to difference (%)</i>				
Constant term and provincial dummies	86.2%	81.4%	86.2%	81.4%
Other explanatory variables, of which:	13.7%	18.6%	13.7%	18.6%
Coefficients	-26.0%	-35.3%	-19.8%	-26.8%
Endowments	39.8%	54.0%	33.6%	45.7%

Notes follow Table 12c.

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Constant term and provincial dummies	60.6%	45.6%	60.6%	45.6%
Other explanatory variables, of which:	39.4%	54.4%	39.4%	54.4%
Coefficients	1.7%	2.4%	14.9%	20.5%
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TABLE 12b

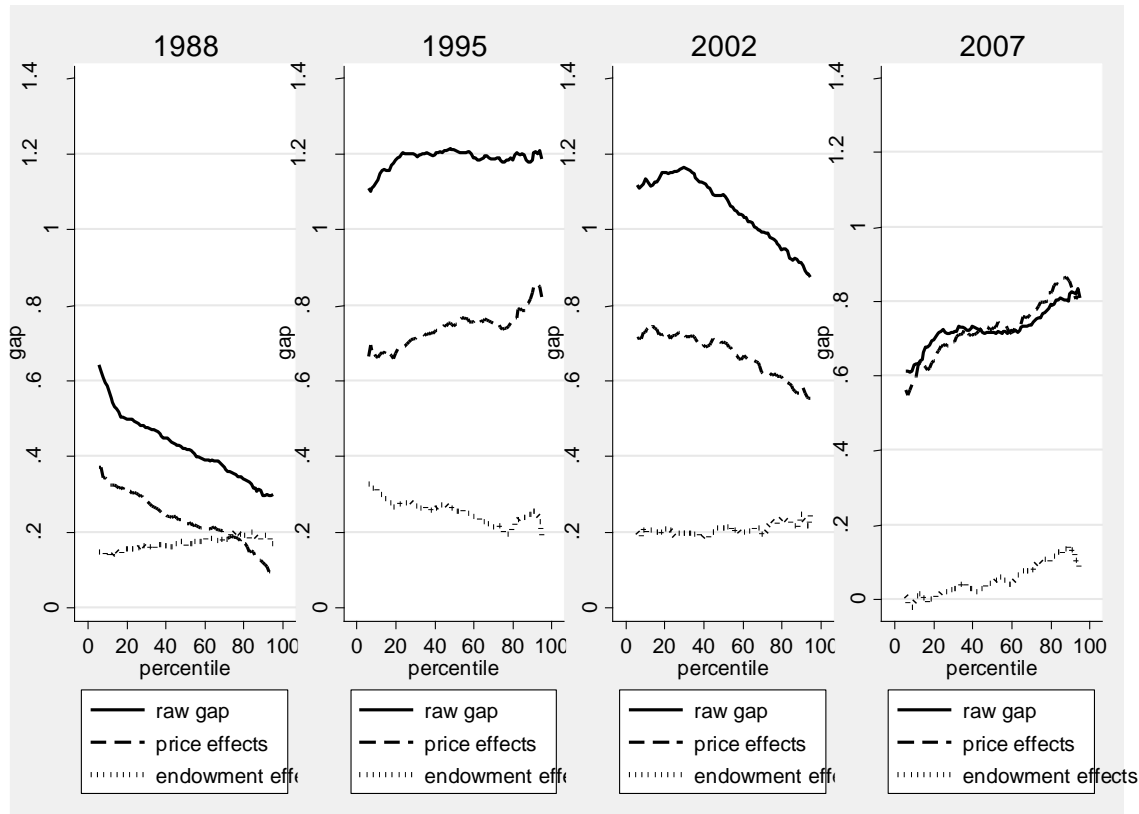
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Constant term and provincial dummies	1.039	0.722	1.039	0.722
Other explanatory variables, of which:	0.165	0.165	0.165	0.165
Coefficients	-0.313	-0.313	-0.238	-0.238
Endowments	0.479	0.479	0.405	0.405
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Endowments	39.8%	54.0%	33.6%	45.7%

Notes follow Table 12c.

Rural-Urban Disparity

- Qu and Zhao (2010), CHIP 1988, 1995, 2002, RUMiC 2008, consumption



Rural-Urban Disparity

- Zhao (2007)

Table 16.1 Disparities in the availability of health care, living standards and sanitary conditions 2003

	Cities			Rural areas			
	Large	Medium	Small	Type I	Type II	Type III	Type IV
Number of doctors per 1000 population	5.8	4.4	1.7	1.3	1.0	0.8	0.6
Number of nurses per 1000 population	5.8	4.8	1.4	1.1	0.7	0.6	0.4
Proportion having no medical care coverage	38.5	41.2	55.0	67.8	80.7	88.6	70.8
Per capita income (yuan)	8292	6607	4589	3163	2187	1938	1187
Per capita expenditure (yuan)	6297	4791	3524	2466	1763	1666	1039
Proportion of households using tap-water	99.5	99.8	87.6	49.3	31.1	27.4	30.1
Proportion of households using flush toilets	86.1	93.5	57.6	13.5	4.1	2.1	1.2

Sources: CHSI of MOH (2004).

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Number of nurses per 1000 population	5.8	4.8	1.4	1.1	0.7	0.6	0.4
Proportion having no medical care coverage	38.5	41.2	55.0	67.8	80.7	88.6	70.8
Per capita income (<i>yuan</i>)	8292	6607	4589	3163	2187	1938	1187
Per capita expenditure (<i>yuan</i>)	6297	4791	3524	2466	1763	1666	1039
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Sources: CHSI of MOH (2004).

Rural-Urban Disparity

- Zhao (2007)

Table 16.3 Variations in mortality and causes of death

	Cities			Rural areas			
	Large	Medium	Small	Type I	Type II	Type III	Type IV
Proportion of deaths by							
Infectious and maternal diseases ^a	3.8	3.9	6.2	4.4	6.1	11.4	23.1
Non-communicable chronic diseases	84.2	80.8	74.7	80.9	78.6	70.3	60.6
Injury and poisoning	6.0	7.4	4.8	10.3	11.2	13.1	10.2
Unknown reasons	6.0	7.9	14.3	4.4	4.0	5.1	6.1
TB prevalence rate (per 100,000 population)	37.3	69.9	150.1	81.1	96.3	140.8	223.2
Average life expectancy at birth	77.7	77.7	75.7	73.8	73.0	71.3	65.2
Average infant mortality rate in 2000	6.0	8.6	14.5	14.1	24.2	30.6	54.0

Sources: Department of Control Disease of MOH and Chinese Academy of Preventive Medicine 1997 and 1998. The life tables for these districts and counties are provided by Yong Cai, CHSI of MOH, 2004.

^a See the text for the classification of these categories.

Table 16.3 Variations in mortality and causes of death

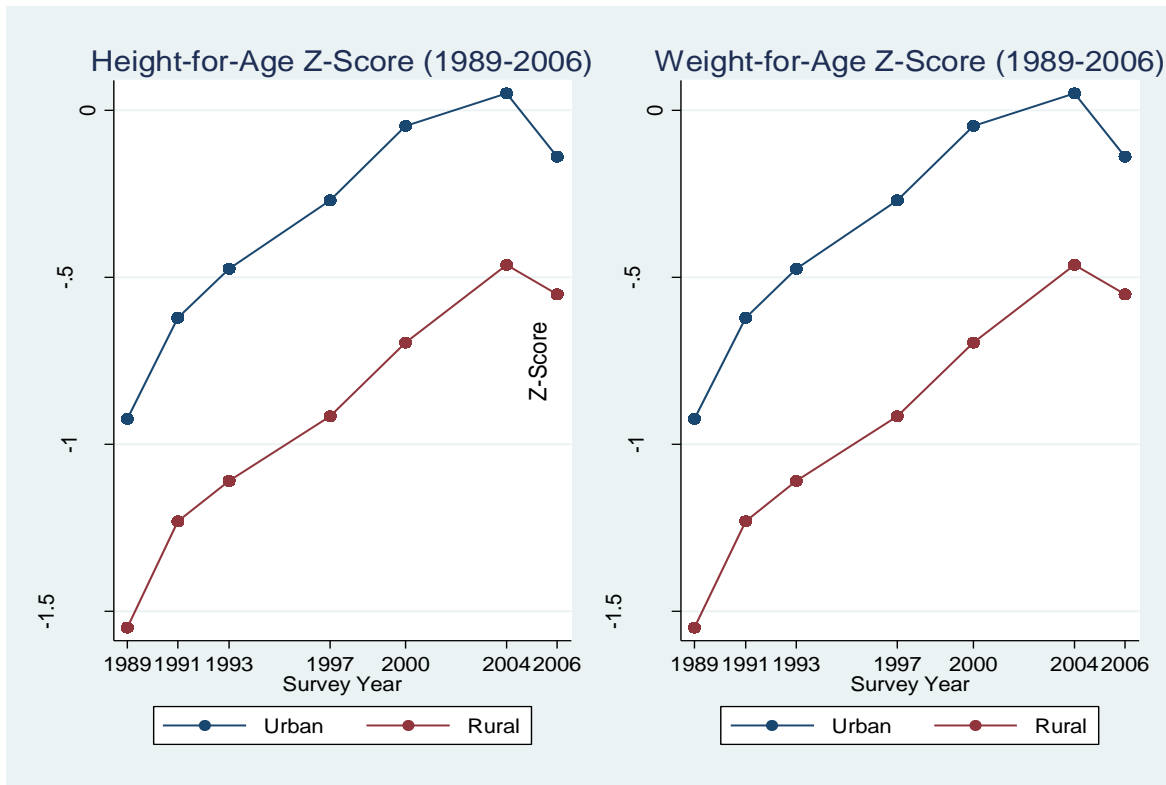
	Cities			Rural areas			
	Large	Medium	Small	Type I	Type II	Type III	Type IV
Proportion of deaths by							
Infectious and maternal diseases ^a	3.8	3.9	6.2	4.4	6.1	11.4	23.1
Non-communicable chronic diseases	84.2	80.8	74.7	80.9	78.6	70.3	60.6
Injury and poisoning	6.0	7.4	4.8	10.3	11.2	13.1	10.2
Unknown reasons	6.0	7.9	14.3	4.4	4.0	5.1	6.1
TB prevalence rate (per 100,000 population)	37.3	69.9	150.1	81.1	96.3	140.8	223.2
Average life expectancy at birth	77.7	77.7	75.7	73.8	73.0	71.3	65.2
Average infant mortality rate in 2000	6.0	8.6	14.5	14.1	24.2	30.6	54.0

Sources: Department of Control Disease of MOH and Chinese Academy of Preventive Medicine 1997 and 1998. The life tables for these districts and counties are provided by Yong Cai. CHSI of MOH, 2004.

^a See the text for the classification of these categories.

Rural-Urban Disparity

- Liu, Fang and Zhao (2012), CHNS 1996-2006



Rural-Urban Disparity

Blinder–Oaxaca Decomposition Results between Urban Children and Rural Children

	OLS Regression		Logistic Regression	
	Height-for-Age Z Score	Weight-for- Age Z Score	Stunted	Underweight
Predicted value				
Rural children	-0.93 ***	-0.35 ***	19.67% ***	3.26% ***
	(0.01)	(0.01)	(0.0040)	(0.0018)
Urban children	-0.31 ***	0.09 ***	9.38% ***	1.60% ***
	(0.02)	(0.02)	(0.0052)	(0.0024)
Difference in predicted value				
Total difference (rural– urban)	-0.62 ***	-0.44 ***	10.29% ***	1.67% ***
	(0.03)	(0.03)	(0.0066)	(0.0030)
Explained difference	-0.33 ***	-0.25 ***	5.87% ***	0.92% ***
	(0.02)	(0.02)	(0.0042)	(0.0017)
Unexplained difference	-0.29 ***	-0.19 ***	4.42% ***	0.75% **
	(0.03)	(0.03)	(0.0068)	(0.0030)

Hukou

- Whalley and Zhang (2007): *Hukou* - labor mobility and inequality
 - Numerical simulation; Data: 2001

Effects of Hukou elimination on regional and national Gini coefficients and Theil measures of inequality using a model with distribution of efficiencies within regions

Regional divide in model variant and data in column headings				
1 Regional and national Gini coefficients				
Urban-rural	Rich-poor	EC-CW	EC-WD	E-C-W
<i>Gini coefficients before Hukou removal</i>				
$G_U=0.3200$	$G_R=0.4094$	$G_{EC}=0.4119$	$G_{EC}=0.4186$	$G_E=0.4226$
$G_R=0.3500$	$G_P=0.2030$	$G_{CW}=0.2040$	$G_{WD}=0.1600$	$G_C=0.1440$
$G=0.4600$	$G=0.4600$	$G=0.4600$	$G=0.4600$	$G=0.4600$
<i>Gini coefficients after Hukou removal</i>				
$G_U=0.357188$	$G_R=0.423638$	$G_{EC}=0.397921$	$G_{EC}=0.224439$	$G_E=0.254828$
$G_R=0.368747$	$G_P=0.169154$	$G_{CW}=0.112343$	$G_{WD}=0.181277$	$G_C=0.189328$
$G=0.370538$	$G=0.373878$	$G=0.347042$	$G=0.229139$	$G=0.259639$
2 Theil measures of inequality				
Urban-rural	Rich-poor	EC-CW	EC-WD	E-C-W
<i>Theil measures before Hukou removal</i>				
$T_U=0.171850$	$T_R=0.291932$	$T_{EC}=0.285837$	$T_{EC}=0.173458$	$T_E=0.122389$
$T_R=0.203112$	$T_P=0.0788384$	$T_{CW}=0.102791$	$T_{WD}=-0.118314$	$T_C=-0.075694$
$T_w=0.185971$	$T_w=0.1961614$	$T_w=0.212126$	$T_w=0.123277$	$T_w=0.043293$
$T_b=0.064300$	$T_b=0.084295$	$T_b=0.065886$	$T_b=0.035041$	$T_b=0.069722$
$T=0.250270$	$T=0.280437$	$T=0.278010$	$T=0.158318$	$T=0.113015$
<i>Theil measures after Hukou removal</i>				
$T_U=0.224532$	$T_R=0.315792$	$T_{EC}=0.256137$	$T_{EC}=0.096899$	$T_E=0.116043$
$T_R=0.234890$	$T_P=0.063729$	$T_{CW}=0.025677$	$T_{WD}=0.077606$	$T_C=0.083320$
$T_w=0.226873$	$T_w=0.233030$	$T_w=0.186570$	$T_w=0.094884$	$T_w=0.115340$
$T_b=0.009734$	$T_b=0.010959$	$T_b=0.010367$	$T_b=0.002850$	$T_b=0.010894$
$T=0.236607$	$T=0.243990$	$T=0.196937$	$T=0.097735$	$T=0.125334$

T_w refers to the Theil measure for within region inequality, T_b to between region inequality.

Effects of Hukou elimination on regional and national Gini coefficients and Their measures of inequality using a model with distribution of efficiencies within regions

Regional divide in model variant and data in column headings

1 Regional and national Gini coefficients

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$G_R=0.3500$	$G_P=0.2030$	$G_{CW}=0.2040$	$G_{WD}=0.1600$	$G_C=0.1440$
				$G_W=0.1600$
$G=0.4600$	$G=0.4600$	$G=0.4600$	$G=0.4600$	$G=0.4600$
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$G_U=0.357188$	$G_R=0.423638$	$G_{EC}=0.397921$	$G_{EC}=0.224439$	$G_E=0.254828$
$G_R=0.368747$	$G_P=0.169154$	$G_{CW}=0.112343$	$G_{WD}=0.181277$	$G_C=0.189328$
				$G_W=0.113556$
$G=0.370538$	$G=0.373878$	$G=0.347042$	$G=0.229139$	$G=0.259639$

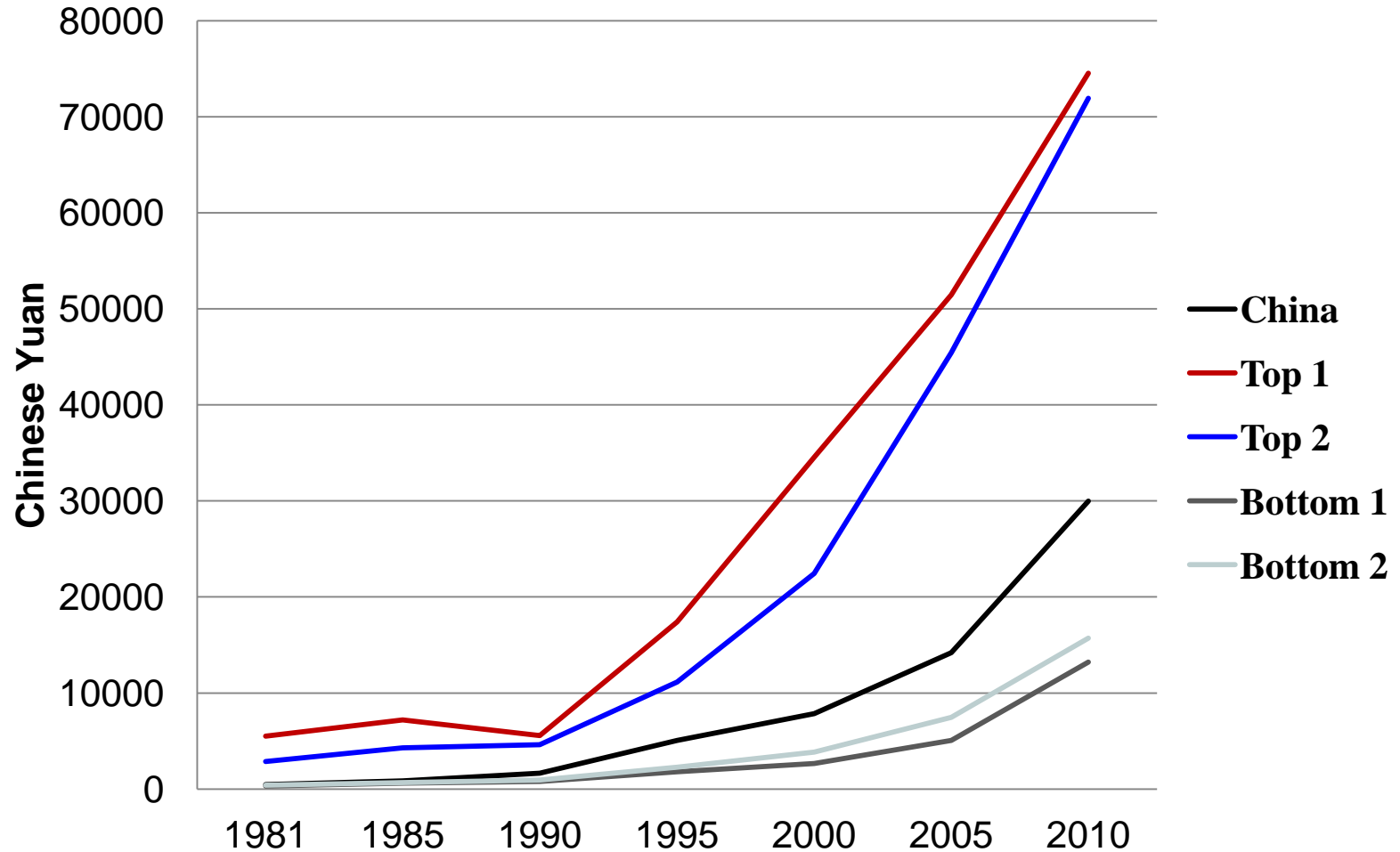
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				$T_W=-0.070750$
$T_w^1=0.185971$	$T_w=0.1961614$	$T_w=0.212126$	$T_w=0.123277$	$T_w=0.043293$
$T_b^1=0.064300$	$T_b=0.084295$	$T_b=0.065886$	$T_b=0.035041$	$T_b=0.069722$
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				$T_W=0.025021$
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$T_b^1=0.009734$	$T_b=0.010959$	$T_b=0.010367$	$T_b=0.002850$	$T_b=0.010194$
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T_w refers to the Theil measure for within region inequality, T_b to between region inequality.

Regional Difference

GDP Per Capita in Top 2 and Bottom 2 Province



Regional Difference

Government Expenditure Per Capita (Chinese Yuan)

Total Government Total Expenditure Per Capita							
Year	Whole China	Top 1 Province	Top 2 Province	Bottom 1 Province	Bottom 2 Province	Ratio of Bottom 1 to Top1	Ratio of Bottom 1&2 to Top1&2
1995	563.38	1234.24	921.35	225.97	227.78	0.18	0.21
2000	1253.44	3205.48	2496.36	225.29	481.34	0.07	0.12
2005	2594.93	6881.09	5976.66	1165.14	1189.81	0.17	0.18
2010	6702.48	13850.44	11998.22	3632.08	3920.49	0.26	0.29
Total Government Education Expenditure Per Capita							
2000	128.14	502.41	434.67	30.56	79.01	0.06	0.12
2005	303.99	1028.92	948.45	171.12	191.88	0.17	0.18
2010	935.93	2294.79	1812.15	613.53	639.97	0.27	0.31
Total Government Health Expenditure Per Capita							
2000	38.06	206.44	194.63	9.65	18.45	0.05	0.07
2005	79.29	426.68	293.29	38.65	40.89	0.09	0.11
2010	358.28	952.26	695.16	261.55	274.63	0.27	0.33

Regional Difference

Wan, Lu and Chen (2007)

TABLE
INEQUALITY DECOMPOSITION

Year	Relative Contribution (%)								
	K	Dep	Edu	Gov	FDI	Trade	Reform	Urb	Location
1987	13.49	3.85	6.56	13.35	4.45	11.66	11.03	17.92	17.69
1988	14.16	3.73	6.47	13.06	5.08	12.11	10.38	17.36	17.63
1989	14.67	3.34	6.38	12.99	5.49	12.42	10.43	17.05	17.62
1990	14.92	3.16	7.40	11.97	5.60	12.70	10.45	16.46	17.34
1991	15.39	3.10	6.24	11.91	6.04	12.67	10.64	16.40	17.61
1992	15.90	3.29	6.25	11.44	6.32	12.19	10.91	15.97	17.74
1993	16.04	3.23	6.96	11.29	6.30	11.81	11.87	15.26	17.23
1994	16.19	3.37	5.74	12.57	6.66	11.51	13.07	13.92	16.98
1995	16.72	3.05	5.80	13.51	6.75	10.96	13.85	13.12	16.23
1996	17.18	2.93	5.39	13.59	6.71	11.33	13.98	12.75	16.13
1997	17.30	2.69	5.32	14.20	6.81	11.66	13.94	12.20	15.88
1998	17.95	2.55	5.26	14.43	7.07	11.89	12.54	12.28	16.04
1999	18.08	0.81	5.10	13.72	6.94	13.77	14.28	11.92	15.38
2000	17.82	0.49	4.38	14.37	6.85	14.17	15.27	11.44	15.20
2001	18.37	0.90	4.77	13.32	6.98	14.34	14.77	11.44	15.12

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1989	14.67	3.34	6.38	12.59	5.49	12.42	10.43	17.05	17.62
1990	14.92	3.16	7.40	11.97	5.60	12.70	10.45	16.46	17.34
1991	15.39	3.10	6.24	11.91	6.04	12.67	10.64	16.40	17.61
1992	15.90	3.29	6.25	11.44	6.32	12.19	10.91	15.97	17.74
1993	16.04	3.23	6.96	11.29	6.30	11.81	11.87	15.26	17.23
1994	16.19	3.37	5.74	12.57	6.66	11.51	13.07	13.92	16.98
1995	16.72	3.05	5.80	13.51	6.75	10.96	13.85	13.12	16.23
1996	17.18	2.93	5.39	13.59	6.71	11.33	13.98	12.75	16.13
1997	17.30	2.69	5.32	14.20	6.81	11.66	13.94	12.20	15.88
1998	17.95	2.55	5.26	14.43	7.07	11.89	12.54	12.28	16.04
1999	18.08	0.81	5.10	13.72	6.94	13.77	14.28	11.92	15.38
2000	17.82	0.49	4.38	14.37	6.85	14.17	15.27	11.44	15.20
2001	18.37	0.90	4.77	13.32	6.98	14.34	14.77	11.44	15.12

Inequality in Rural Area

- Wan (2004), 1992-1995, income

Decomposition results

	Gini	%	Atkinson	%	Theil-L	%	Theil-T	%	CV ²	%
1992										
Dependency	0.0246	15.96	0.0061	16.60	0.0063	16.61	0.0067	16.82	0.0153	17.33
Capital	0.0163	10.56	0.0029	7.77	0.0029	7.76	0.0032	8.12	0.0072	8.26
Education	0.0294	19.07	0.0067	18.12	0.0068	18.10	0.0067	16.69	0.0138	15.81
Family size	-0.0041	-2.68	-0.0066	-17.74	-0.0068	-18.10	-0.0075	-18.82	-0.0187	-21.43
Land	0.0061	3.96	0.0012	3.25	0.0012	3.24	0.0014	3.43	0.0033	3.74
FFE	0.0457	29.71	0.0130	35.10	0.0132	35.03	0.0148	37.17	0.0353	40.33
Residual	0.0360	23.42	0.0136	36.92	0.0141	37.35	0.0146	36.59	0.0313	35.73
Total	0.1539	100	0.0369	100	0.0376	100	0.0399	100	0.0875	100
1993										
Dependency	0.0237	14.79	0.0039	14.61	0.0060	14.62	0.0064	14.46	0.0143	14.78
Capital	0.0239	14.88	0.0049	12.21	0.0050	12.17	0.0052	11.89	0.0109	11.25
Education	0.0293	18.27	0.0070	17.41	0.0072	17.36	0.0070	15.92	0.0144	14.84
Family size	-0.0013	-0.78	-0.0039	-14.51	-0.0061	-14.84	-0.0066	-14.98	-0.0161	-16.61
Land	0.0069	4.27	0.0014	3.44	0.0014	3.42	0.0016	3.64	0.0038	3.94
FFE	0.0471	29.32	0.0134	33.28	0.0137	33.18	0.0152	34.49	0.0353	36.44
Residual	0.0309	19.25	0.0136	33.62	0.0141	34.08	0.0152	34.61	0.0343	35.37
Total	0.1605	100	0.0404	100	0.0412	100	0.0439	100	0.0968	100
1994										
Dependency	0.0250	14.92	0.0073	17.14	0.0075	17.17	0.0081	18.04	0.0189	19.56
Capital	0.0234	13.96	0.0056	13.19	0.0057	13.16	0.0062	13.71	0.0139	14.36
Education	0.0342	20.42	0.0087	20.37	0.0088	20.32	0.0086	19.04	0.0173	17.97
Family size	-0.0015	-0.91	-0.0064	-15.12	-0.0067	-15.48	-0.0075	-16.55	-0.0184	-19.06
Land	0.0058	3.44	0.0013	2.94	0.0013	2.95	0.0014	3.11	0.0033	3.45
FFE	0.0433	25.86	0.0132	31.06	0.0135	31.01	0.0152	33.67	0.0359	37.25
Residual	0.0373	22.31	0.0129	30.42	0.0134	30.90	0.0131	28.99	0.0255	26.47
Total	0.1674	100	0.0425	100	0.0434	100	0.0450	100	0.0964	100
1995										
Dependency	0.0231	12.82	0.0063	12.77	0.0064	12.76	0.0070	13.59	0.0161	14.97
Capital	0.0316	17.55	0.0075	15.22	0.0076	15.13	0.0081	15.90	0.0179	16.56
Education	0.0288	16.00	0.0069	14.00	0.0070	13.93	0.0069	13.49	0.0143	13.27
Family size	-0.0030	-1.64	-0.0064	-13.10	-0.0067	-13.34	-0.0073	-14.35	-0.0180	-16.70
Land	0.0053	2.94	0.0009	1.88	0.0009	1.85	0.0011	2.15	0.0028	2.62
FFE	0.0457	25.38	0.0135	27.45	0.0137	27.27	0.0153	29.94	0.0361	33.50
Residual	0.0485	26.96	0.0205	41.78	0.0213	42.38	0.0201	39.28	0.0386	35.79
Total	0.1800	100	0.0490	100	0.0502	100	0.0511	100	0.1078	100

Decomposition results

	Gini	%	Atkinson	%	Theil-L	%	Theil-T	%	CV^2	%
1992										
Dependency	0.0246	15.96	0.0061	16.60	0.0063	16.61	0.0067	16.82	0.0153	17.53
Capital	0.0163	10.56	0.0029	7.77	0.0029	7.76	0.0032	8.12	0.0072	8.26
Education	0.0294	19.07	0.0067	18.12	0.0068	18.10	0.0067	16.69	0.0138	15.81
Family size	-0.0041	-2.68	-0.0066	-17.74	-0.0068	-18.10	-0.0075	-18.82	-0.0187	-21.43
Land	0.0061	3.96	0.0012	3.25	0.0012	3.24	0.0014	3.43	0.0033	3.74
<i>TVE</i>	0.0457	29.71	0.0130	35.10	0.0132	35.03	0.0148	37.17	0.0353	40.33
Residual	0.0360	23.42	0.0136	36.92	0.0141	37.35	0.0146	36.59	0.0313	35.73
Total	0.1539	100	0.0369	100	0.0376	100	0.0399	100	0.0875	100
1993										
Dependency	0.0237	14.79	0.0059	14.61	0.0060	14.62	0.0064	14.46	0.0143	14.78
Capital	0.0239	14.88	0.0049	12.21	0.0050	12.17	0.0052	11.89	0.0109	11.25
Education	0.0293	18.27	0.0070	17.41	0.0072	17.36	0.0070	15.92	0.0144	14.84
Family size	-0.0013	-0.78	-0.0059	-14.51	-0.0061	-14.84	-0.0066	-14.98	-0.0161	-16.61
Land	0.0069	4.27	0.0014	3.44	0.0014	3.42	0.0016	3.64	0.0038	3.94
<i>TVE</i>	0.0471	29.32	0.0134	33.28	0.0137	33.18	0.0152	34.49	0.0353	36.44
Residual	0.0309	19.25	0.0136	33.62	0.0141	34.08	0.0152	34.61	0.0343	35.37
Total	0.1605	100	0.0404	100	0.0412	100	0.0439	100	0.0968	100
1994										
Dependency	0.0250	14.92	0.0073	17.14	0.0075	17.17	0.0081	18.04	0.0189	19.56
Capital	0.0234	13.96	0.0056	13.19	0.0057	13.16	0.0062	13.71	0.0139	14.36
Education	0.0342	20.42	0.0087	20.37	0.0088	20.32	0.0086	19.04	0.0173	17.97
Family size	-0.0015	-0.91	-0.0064	-15.12	-0.0067	-15.48	-0.0075	-16.55	-0.0184	-19.06
Land	0.0058	3.44	0.0013	2.94	0.0013	2.95	0.0014	3.11	0.0033	3.45
<i>TVE</i>	0.0433	25.86	0.0132	31.06	0.0135	31.01	0.0152	33.67	0.0359	37.25
Residual	0.0373	22.31	0.0129	30.42	0.0134	30.90	0.0131	28.99	0.0255	26.47
Total	0.1674	100	0.0425	100	0.0434	100	0.0450	100	0.0964	100
1995										
Dependency	0.0231	12.82	0.0063	12.77	0.0064	12.76	0.0070	13.59	0.0161	14.97
Capital	0.0316	17.55	0.0075	15.22	0.0076	15.13	0.0081	15.90	0.0179	16.56
Education	0.0288	16.00	0.0069	14.00	0.0070	13.93	0.0069	13.49	0.0143	13.27
Family size	-0.0030	-1.64	-0.0064	-13.10	-0.0067	-13.34	-0.0073	-14.35	-0.0180	-16.70
Land	0.0053	2.94	0.0009	1.88	0.0009	1.85	0.0011	2.15	0.0028	2.62
<i>TVE</i>	0.0457	25.38	0.0135	27.45	0.0137	27.27	0.0153	29.94	0.0361	33.50
Residual	0.0485	26.96	0.0205	41.78	0.0213	42.38	0.0201	39.28	0.0386	35.79
Total	0.1800	100	0.0490	100	0.0502	100	0.0511	100	0.1078	100

Inequality in Rural Area

- Benjamin, Brandt and Giles (2005): 1987-1999
- Income and consumption

TABLE 4
CONTRIBUTION OF LOCATION TO INCOME AND CONSUMPTION INEQUALITY: RCRE, SELECTED YEARS

	1987	1991	1995	1999
	Contribution to Variance			
Dependent variable ln (income per capita):				
Without spatial deflator:				
Contribution of region	.186	.162	.154	.120
Contribution of province	.237	.218	.183	.153
Contribution of village	.500	.466	.413	.424
With spatial deflator:				
Contribution of region	.069	.063	.062	.047
Contribution of province	.133	.105	.085	.077
Contribution of village	.431	.389	.344	.373
Dependent variable ln (consumption per capita):				
Without spatial deflator:				
Contribution of region	.190	.184	.162	.181
Contribution of province	.278	.246	.189	.231
Contribution of village	.560	.529	.507	.525
With spatial deflator:				
Contribution of region	.051	.063	.064	.085
Contribution of province	.137	.102	.083	.117
Contribution of village	.474	.439	.442	.454

TABLE 4

CONTRIBUTION OF LOCATION TO INCOME AND CONSUMPTION INEQUALITY: RCRC, SELECTED YEARS

	1987	1991	1995	1999
	Contribution to Variance			
Dependent variable ln (income per capita):				
Without spatial deflator:				
Contribution of region	.186	.162	.154	.120
Contribution of province	.237	.218	.183	.153
Contribution of village	.500	.466	.413	.424
With spatial deflator:				
Contribution of region	.069	.063	.062	.047
Contribution of province	.133	.105	.085	.077
Contribution of village	.431	.389	.344	.373
Dependent variable ln (consumption per capita):				
Without spatial deflator:				
Contribution of region	.190	.184	.162	.181
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Contribution of village	.560	.529	.507	.525
With spatial deflator:				
Contribution of region	.051	.063	.064	.085
Contribution of province	.137	.102	.083	.117
Contribution of village	.474	.439	.442	.454

Inequality in Urban Area

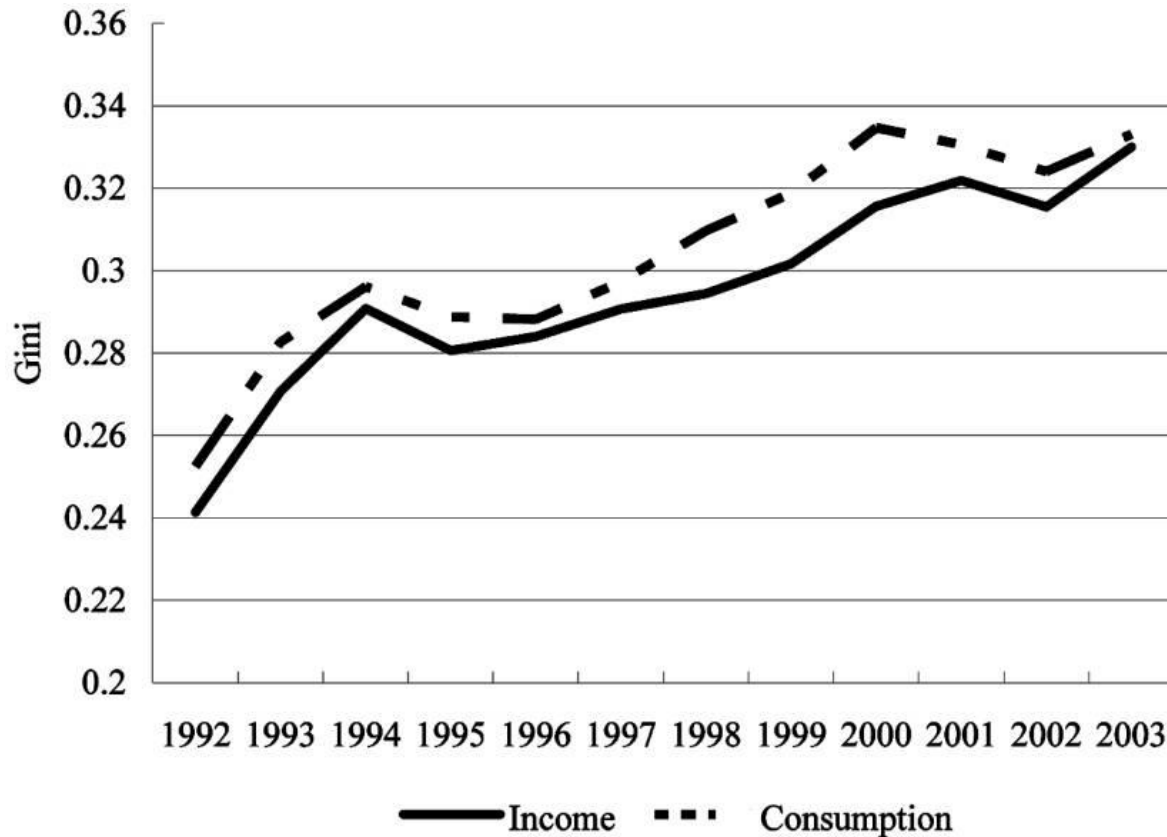
Chi, Li, Yu (2011)

Table 6. Decomposition of the increase in income inequality.

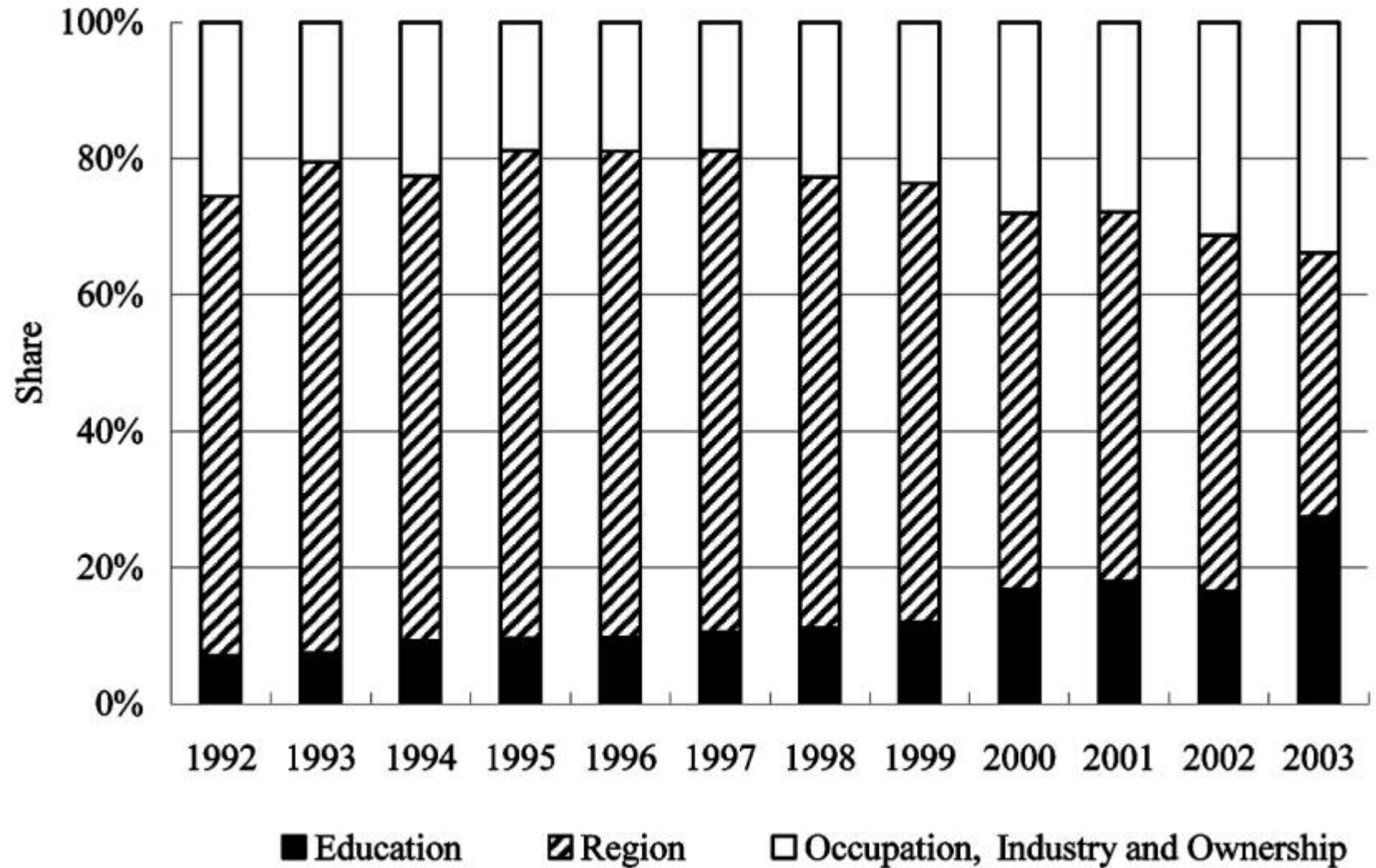
	1987–1996				1996–2004			
	Variance	10:50 ratio	50:90 ratio	10:90 ratio	Variance	10:50 ratio	50:90 ratio	10:90 ratio
<i>Overall changes</i>	<i>0.235</i>	<i>0.217</i>	<i>0.201</i>	<i>0.415</i>	<i>0.202</i>	<i>0.206</i>	<i>0.116</i>	<i>0.325</i>
<i>Composition effect</i>	<i>- 0.043</i>	<i>- 0.093</i>	<i>- 0.001</i>	<i>- 0.096</i>	<i>0.087</i>	<i>0.067</i>	<i>0.019</i>	<i>0.088</i>
Age	- 0.061	- 0.098	- 0.023	- 0.121	- 0.043	- 0.029	- 0.020	- 0.049
Gender	0.005	0.003	0.009	0.012	0.038	0.025	0.017	0.042
Education	- 0.020	- 0.030	- 0.003	- 0.034	0.021	0.017	0.003	0.021
Ownership of employers	0.014	0	0.009	0.01	0.068	0.027	0.028	0.055
Industry	- 0.003	- 0.009	0.009	- 0.001	0.018	0.023	- 0.004	0.02
Occupation	0.012	0	0.006	0.006	0.047	0.064	0.008	0.072
Region	0.047	0.021	0.034	0.055	0.001	0.001	0.051	0.052
Constant	- 0.037	0.02	- 0.042	- 0.023	- 0.063	- 0.061	- 0.064	- 0.125
<i>Wage structure effect</i>	<i>0.278</i>	<i>0.31</i>	<i>0.202</i>	<i>0.511</i>	<i>0.115</i>	<i>0.139</i>	<i>0.097</i>	<i>0.237</i>
Age	0.106	0.192	- 0.036	0.156	- 0.041	- 0.114	0	- 0.114
Gender	- 0.040	- 0.097	- 0.001	- 0.098	0.005	0.026	- 0.042	- 0.016
Education	0.035	0.06	0.016	0.075	0.005	- 0.003	0.025	0.023
Ownership of employers	0.013	0.046	0.003	0.049	0.005	- 0.031	- 0.006	- 0.037
Industry	0.035	0.041	0.006	0.046	- 0.027	- 0.138	0.045	- 0.092
Occupation	- 0.055	- 0.101	0.004	- 0.097	- 0.005	0.014	0.001	0.015
Region	- 0.059	- 0.030	0.015	- 0.014	0.019	0.003	0.009	0.011
Constant	0.243	0.199	0.195	0.394	0.154	0.382	0.065	0.447

Inequality in Urban Area

- Cai, Chen and Zhou (2010), 1992-2003, Urban Household Income and Expenditure Survey, consumption



Inequality in Urban Area



Education

Zhang, Zhao, Park and Song (2005): UHS: 1988-2001

Table 2
The distribution of schooling by years and levels, 1988–2001

Year	Schooling (years)	College and above (%)	Technical school (%)	Senior high (%)	Junior high (%)	Primary and below (%)
1988	10.4	12.6	11.8	22.6	42.0	10.5
1989	10.5	13.2	12.0	24.5	40.1	9.7
1990	10.6	14.1	12.8	24.3	39.5	9.0
1991	10.7	15.6	12.4	24.7	37.4	9.6
1992	11.0	18.2	13.3	26.2	34.8	7.4
1993	11.1	18.3	13.2	26.7	35.3	6.4
1994	11.3	20.4	14.1	27.1	32.9	5.2
1995	11.3	21.6	13.3	28.8	30.7	5.4
1996	11.3	22.1	13.7	28.1	31.2	4.7
1997	11.4	22.8	13.0	28.9	31.1	4.1
1998	11.5	24.5	14.2	29.1	28.3	3.9
1999	11.7	26.3	14.5	29.3	26.4	3.5
2000	11.8	28.9	13.2	30.3	24.1	3.4
2001	11.8	28.1	13.1	30.7	25.1	2.9

Table 2

The distribution of schooling by years and levels, 1988–2001

Year	Schooling (years)	College and above (%)	Technical school (%)	Senior high (%)	Junior high (%)	Primary and below (%)
1988	10.4	12.6	11.8	22.6	42.0	10.5
1989	10.5	13.2	12.0	24.5	40.1	9.7
1990	10.6	14.1	12.8	24.3	39.5	9.0
1991	10.7	15.6	12.4	24.7	37.4	9.6
1992	11.0	18.2	13.3	26.2	34.8	7.4
1993	11.1	18.3	13.2	26.7	35.3	6.4
1994	11.3	20.4	14.1	27.1	32.9	5.2
1995	11.3	21.6	13.3	28.8	30.7	5.4
1996	11.3	22.1	13.7	28.1	31.2	4.7
1997	11.4	22.8	13.0	28.9	31.1	4.1
1998	11.5	24.5	14.2	29.1	28.3	3.9
1999	11.7	26.3	14.5	29.3	26.4	3.5
2000	11.8	28.9	13.2	30.3	24.1	3.4
2001	11.8	28.1	13.1	30.7	25.1	2.9

Mincerian Equation

- Rate of return to education
 - Yang (2005): CHIP 88, 95 urban sample
 - 1988: 3.26% to 3.89%
 - 1995: 5.91% to 7.32%

Mincerian Equation

Zhang, Zhao, Park and Song (2005): UHS: 1988-2001

Estimates of rates of returns to education in urban China, 1988–2001

Year	Years of schooling	College/above versus high school	Technical school versus high school	High school versus junior high	Junior high versus primary school
1988	4.0	12.2	3.1	11.0	13.9
1989	4.6	14.4	5.8	11.6	17.3
1990	4.7	16.6	9.9	11.5	12.8
1991	4.3	15.9	8.0	9.7	13.4
1992	4.7	20.1	9.2	9.8	10.8
1993	5.2	20.4	7.0	11.5	13.6
1994	7.3	28.7	15.3	14.5	20.2
1995	6.7	24.4	12.0	15.3	18.9
1996	6.8	25.2	10.4	15.6	14.9
1997	6.7	22.3	12.0	17.3	10.9
1998	8.1	32.1	16.5	16.2	12.2
1999	9.9	38.1	17.0	21.0	14.8
2000	10.1	38.7	16.2	20.5	16.4
2001	10.2	37.3	17.8	21.4	13.8

Notes. (i) The results are based on a basic Mincer equation with gender and regional dummy variables. (ii) The regressions are run separately for each year.

Estimates of rates of returns to education in urban China, 1988–2001

Year	Years of schooling	College/above versus high school	Technical school versus high school	High school versus junior high	Junior high versus primary school
1988	4.0	12.2	3.1	11.0	13.9
1989	4.6	14.4	5.8	11.6	17.3
1990	4.7	16.6	9.9	11.5	12.8
1991	4.3	15.9	8.0	9.7	13.4
1992	4.7	20.1	9.2	9.8	10.8
1993	5.2	20.4	7.0	11.5	13.6
1994	7.3	28.7	15.3	14.5	20.2
1995	6.7	24.4	12.0	15.3	18.9
1996	6.8	25.2	10.4	15.6	14.9
1997	6.7	22.3	12.0	17.3	10.9
1998	8.1	32.1	16.5	16.2	12.2
1999	9.9	38.1	17.0	21.0	14.8
2000	10.1	38.7	16.2	20.5	16.4
2001	10.2	37.3	17.8	21.4	13.8

Notes. (i) The results are based on a basic Mincer equation with gender and regional dummy variables. (ii) The regressions are run separately for each year.

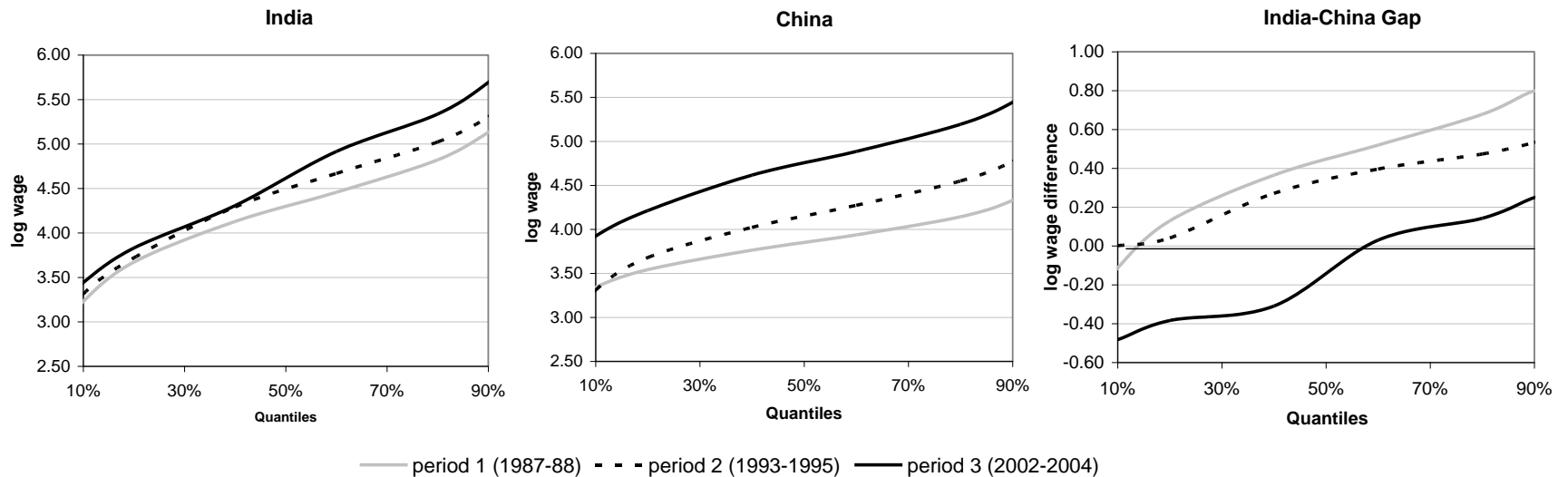
Mincerian Equation

- Rate of return to education
 - Li, Liu and Zhang (2012): 2002 Twins sample
 - 2.7% to 3.8% (below college level)
 - 16% to 23%: vocational school/vocational college
 - 31% to 40%: college

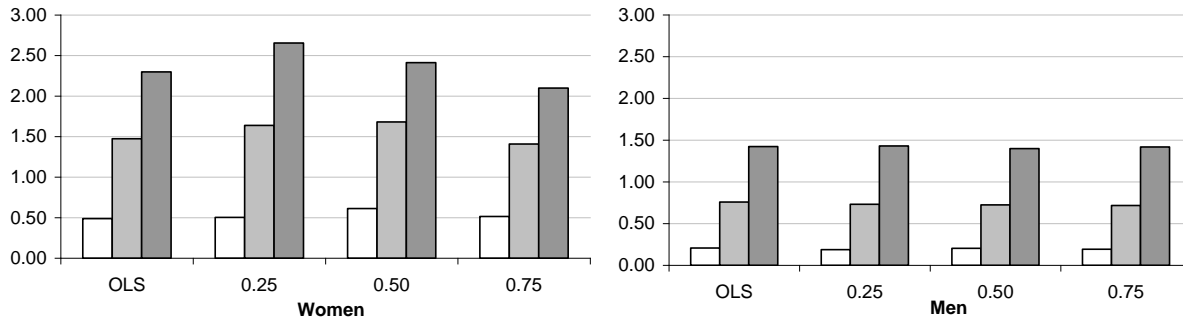
Education

Bargain, Bhaumik, Chakrabarty and Zhao (2010)

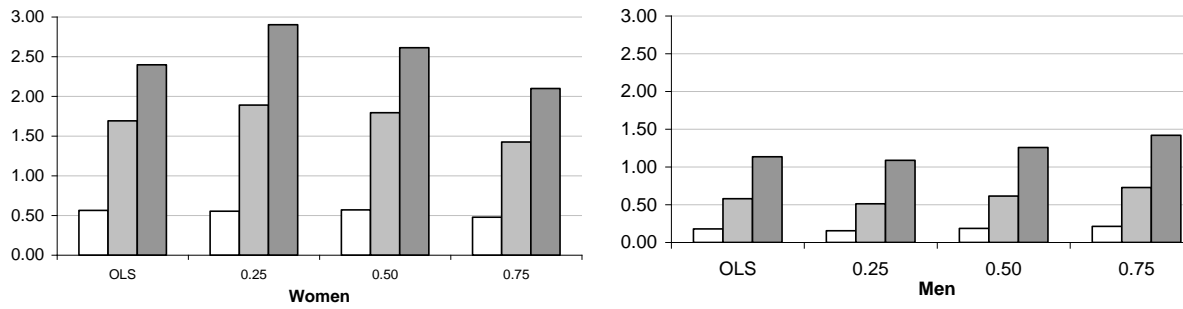
Log-wage Distributions: 1987-2004



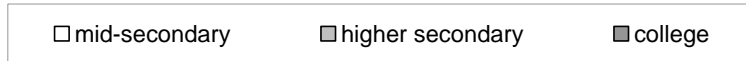
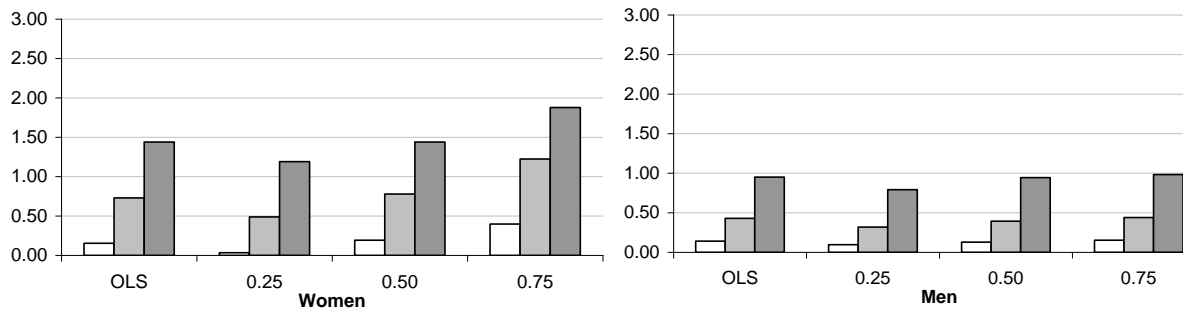
Period 1 (1987-88)



Period 2 (1993-95)



Period 3 (2002-04)



ref: no or primary education

Men

Period	India			China		
	1	2	3	1	2	3
No of observations	19,116	18,226	8,183	8,665	6,089	4,609
Age	37.3	37.8	37.5	39.4	40.5	42.2
Education (years)	9.0	9.4	10.1	9.6	11.1	11.7
Education (categories):						
No or primary education	0.33	0.25	0.19	0.11	0.05	0.02
Middle secondary education	0.15	0.16	0.19	0.36	0.28	0.22
High secondary education	0.29	0.31	0.34	0.35	0.38	0.36
College	0.23	0.28	0.29	0.18	0.29	0.39
Industry:						
Manufacturing	0.28	0.28	0.25	0.45	0.45	0.32
Construction and utilities*	0.16	0.16	0.18	0.09	0.06	0.14
Wholesale & retail trade	0.06	0.07	0.13	0.11	0.11	0.06
Finance, insurance, real estate	0.06	0.05	0.05	0.02	0.02	0.04
Services	0.15	0.17	0.19	0.15	0.15	0.21
Public administration	0.25	0.23	0.17	0.12	0.14	0.16
Others**	0.03	0.04	0.03	0.06	0.03	0.05
Weekly wage	92	107	144	57	77	144

Note: period 1 is 1987 for India (1988 for China); period 2 is 1993/4 (1995); period 3 is 2004 (2002). Selection: urban workers in formal sector, aged 21-60. Weekly wages are expressed in 2000 PPP international USD.

** Transportation, communications, electricity, gas, sanitary services, water supply*

*** Agricultural, forestry, fishing, mining*

Mincerian Equation: Others

- Party membership:
 - Dennis Tao Yang (2005): CHIP urban sample,
 - 1988: 7% to 9%; 1995: 11% to 13%
 - Li, Liu, Ma and Zhang (2005): Twins sample
 - Insignificant
- Ownership:
 - Dong and Bowles (2002): 1998
 - Labor market segmentation along ownership was diminishing.
 - Appleton et al (2005)
 - Private sector was 29% lower than SOE in 1988, and 9% in 2002. They also found that there was no difference between SOE and foreign company in 1988, but foreign company earned 29% more in 2002.
 - Chen (2005) : 1995
 - Working hour was a main factor for wage gap across ownership using 1995 data.

Mincerian Equation: Others

- Gender:
 - Meng and Kidd (1997) : 1981 data
 - Gender wage gap was 14%.
 - Yang (2005): CHIP urban sample
 - 1988: 9.7% and 1995: 15% to 17%
 - Appleton et al (2005)
 - Gender wage gap was 12%, 15%, 22% and 19% in 1988, 1995, 1999 and 2002.
 - Maurer-Fazio and Hughes (2002): 1992 data,
 - Gender wage gap was bigger in joint ventures and was smaller in State-owned enterprises.
 - Gustafsson et al (2001)
 - Gender wage gap in China was only one-thirds of gap in former Soviet Union.

Migrants

- Qu and Zhao (2011)
 - Hourly wage: migrants: 3.23 in 2002 and 5.49 in 2007, and 6.76 and 10.5 for urban natives.
 - Working hours: migrants: 72 hours/week in 2002 and 65 in 2007; 43 and 45 for urban natives
- Meng and Zhang (2001)
 - 82% of hourly wage differential between urban and rural migrant workers are due to unequal payment within the occupation.

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Intergenerational Mobility

- Hau Chyi (2012): CHNS 1989 to 2006, 7 waves, father and son
 - Using one wave data: 0.25 to 0.31,
 - Using average of two waves: 0.34 to 0.50, average 0.41
 - Using average of three waves: 0.32 to 0.58, average 0.49
 - Britain: 0.4-0.6; Canada: 0.23, Germany: 0.11, Taiwan: 0.17-0.23; US: 0.4

Intergenerational Transmission

- Brown (2006): Gansu Survey of Children and Families, 2000
 - Father (mother) has one more year of education
 - Increases predicted spending on nonrequired educational goods for daughters by 2.3% (3.3%)
 - Raises the probability of having children's reading materials by 1.5 (1.7) percentage points
 - Raises the probability of having a designated study area by 1.0 (1.4) percentage points
 - No systematic gender difference
 - Also increase time to helping children

Intergenerational Transmission

- Li, Meng, Shi and Wu (2012), Chinese College Students Survey, 2010
 - Have a cadre parent: 9% to 20% premium

Social Interaction

- Social network
 - Increase probability of nonfarm employment, Zhang and Guo (2003)
 - Increase probability of migration: Zhao (2003), Chen, Jin and Yue (2010)
 - Increase probability of self-employment of migrants, Zhang and Zhao (2012)
 - Increase the labor market outcomes, Giulietti, Guzi, Zimmermann and Zhao (2011)

Linkage

- Chen and Zhou (2007), CHNS
 - 1959–1961 Great Chinese Famine
 - Impact: 3 cm
- Gørgens, Meng, Vaithianathan (2012), CHNS
 - 1959–1961 Great Chinese Famine
 - Taller children were more likely to survive the famine
 - Children under the age of five who survived the famine grew up to be 1 to 2 cm shorter

Linkage

- Bloom, Canning, Hub, Liu, Mahal and Yip (2010): India and China

Table 6
Estimates of the determination of the growth rate of income per capita.

	1	2	3
	2SLS	2SLS	2SLS
Constant	14.26** (2.88)	13.13** (2.99)	13.28** (2.96)
Log initial GDP per capita	-1.931** (0.402)	-1.832** (0.401)	-1.714** (0.409)
Ratio of investment to GDP	0.034* (0.018)	0.027 (0.018)	0.024 (0.018)
Trade residual	0.822** (0.279)	0.804** (0.282)	0.808** (0.284)
Average years of schooling	-0.018 (0.092)	-0.019 (0.096)	0.171 [calibrated]
Bureaucratic quality	0.247** (0.112)	0.096 (0.156)	-0.012 (0.150)
Tropical area	-0.983** (0.346)	-0.922** (0.353)	-0.830** (0.360)
Sectoral change	0.418** (0.119)	0.468** (0.131)	0.543** (0.117)
Life expectancy	0.093** (0.027)	0.108** (0.030)	0.073** (0.028)
Log share of working-age population	6.575** (2.195)	5.789** (2.287)	4.868** (2.373)
Growth of share of working-age population	0.538 (0.376)	-2.149 (1.449)	-2.180 (1.455)
Growth of share of working-age population times bureaucratic quality		0.735** (0.344)	0.763** (0.342)
Time dummies for countries other than China and India	Yes	Yes	Yes
N	571	571	571
R ²	0.287	0.258	0.247

Based on 5-year panel of growth rates, over the period 1960–2000. Time dummies for countries other than China and India included but not reported. Heteroskedasticity-consistent standard errors are reported in parentheses. Sectoral change, growth of share of working-age population, and the growth of share of working-age population times bureaucratic quality interactive term instrumented in the 2SLS regressions.

* $p < .05$.

** $p < .01$.

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Policy

- Shi (2012): educational fee reduction in rural China: intra-household flypaper effect

Table 4 Impacts of the educational fee reduction reform on household expenditure

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Household income per capita	Total expenditure per capita	Expenditure on food per capita	Expenditure on non-food items and service per capita	Expenditure on health care per capita	Required educational expenditure per capita	Voluntary educational expenditure per capita
Section A 2000-2007							
Transfer/total family member	-0.677 (2.869)	-2.222 (2.214)	-0.014 (0.464)	-1.770 (1.539)	-0.476 (0.700)	-0.613 (0.137)***	0.651 (0.265)**
Observations	2134	2134	2134	2134	2134	2134	2134
R-squared	0.25	0.22	0.50	0.13	0.11	0.45	0.53
Wald Test: H0: Absolute values of coefficients in columns (6) and (7) are equal; P-value=0.899							
Section B 2000-2004							
Hypothetical transfer/total family member	4.498 (5.665)	0.844 (2.013)	-0.227 (0.542)	-0.007 (1.080)	0.699 (1.259)	0.149 (0.109)	0.231 (0.196)
Observations	2991	2991	2991	2991	2991	2991	2991
R-squared	0.21	0.28	0.43	0.17	0.06	0.63	0.58
Village variables in year 2000*Year 2007 dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log value of household income per capita	No	Yes	Yes	Yes	Yes	Yes	Yes
Household endowments	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of kids enrolled	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household demographic structure	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Village fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses, clustered by village; * significant at 10%; ** significant at 5%; *** significant at 1%

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Policy

- Chen and Feng (2012): allow migrants enroll into local public school

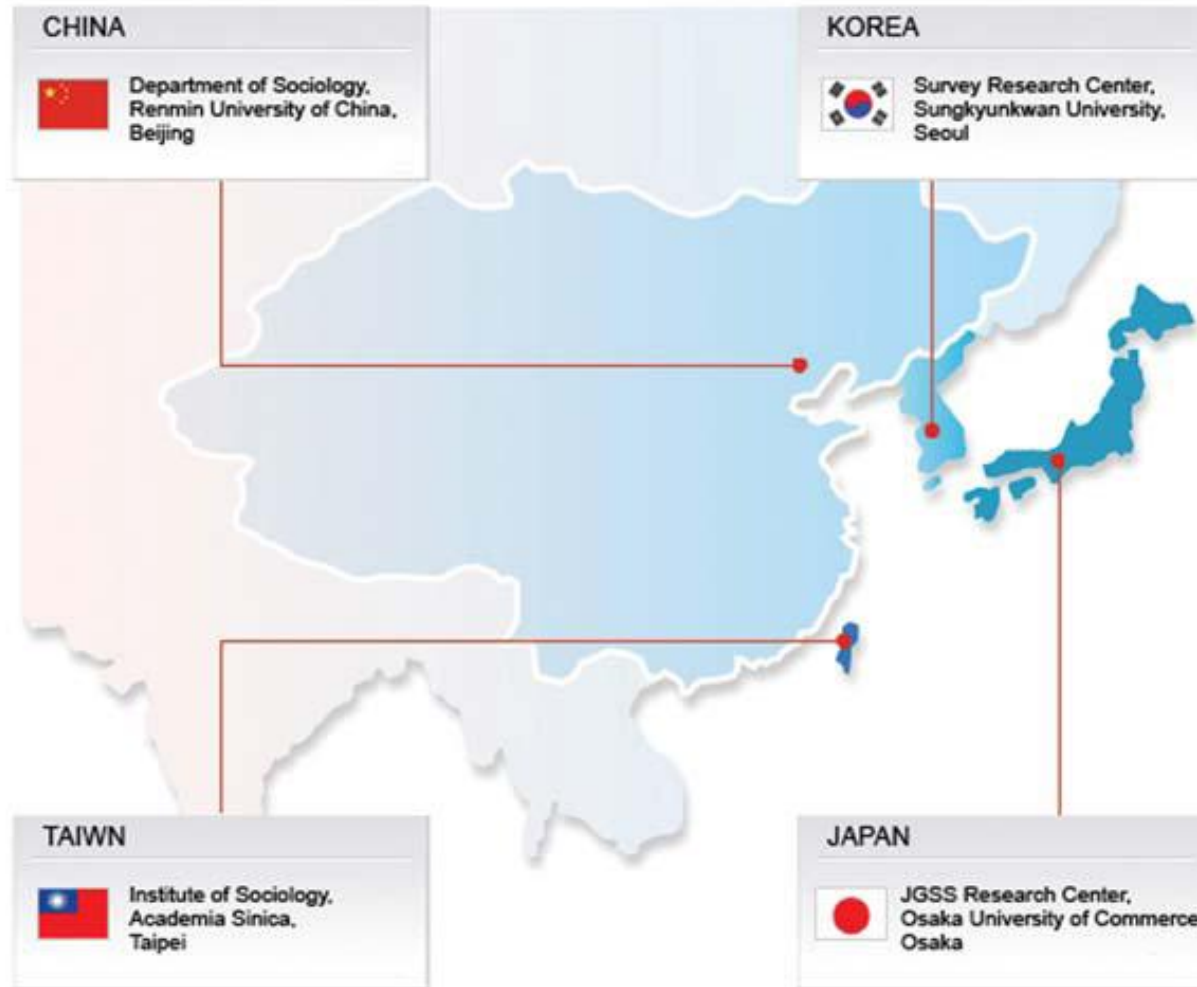
Table 5 Regression results on the standardized test scores of migrant students

VARIABLES	Chinese		Mathematics	
	OLS	IV	OLS	IV
Migrant School	-7.63*** (1.46)	-5.37** (2.30)	-12.11*** (2.45)	-7.99** (3.89)
Rural Hukou	-3.07** (1.32)	-3.58** (1.41)	-4.24* (2.44)	-5.69** (2.37)
Female	1.73** (0.85)	1.85** (0.82)	-1.69* (0.92)	-1.54* (0.93)
Student age in months				
Born after 2001/09	0.01 (0.19)	0.06 (0.19)	0.03 (0.18)	0.10 (0.18)
Born between 2000/09-2001/09	-0.14 (0.09)	-0.14 (0.09)	0.02 (0.13)	0.01 (0.12)
Born before 2000/09	-0.11 (0.08)	-0.13* (0.07)	-0.31*** (0.10)	-0.33*** (0.10)
Single Child	1.87** (0.81)	2.07** (0.81)	1.80 (1.20)	2.24* (1.24)
Kindergarten	-0.43 (1.48)	-0.11 (1.53)	1.90 (1.85)	2.43 (1.93)
1-2 hour daily homework time	2.58*** (0.91)	2.69*** (0.90)	5.14*** (1.22)	5.48*** (1.21)
>2 hours daily homework time	1.57 (1.26)	1.60 (1.24)	3.31** (1.29)	3.51*** (1.27)
Years since migration	0.15** (0.07)	0.17** (0.07)	0.33*** (0.10)	0.37*** (0.11)

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East Asian Social Survey



East Asian Social Survey

- 2006: family
- 2008: culture and globalization
- 2010: health
- 2012: social capital
- 2014: work
- Rotate the module every ten years