# Inequality in China: <br> Selected Literature 

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## 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



Pis i. Relothe Eequality betmea urbe ad aral Chin

- Ravallion and Chen (2007)


## Rural-Urban Disparity

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

TABLE 3
Ibequality Decompoatron er Unean akd Rupal Subghound

|  | 1995 |  |  |  | 202 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Thail L |  | Thail T |  | Theil L. |  | Thail T |  |
|  | Unadjusted | PPP | Unadjusted | PPP | Uradjusted | PPP | Unadjusted | PPP |
| Total | 0.363 | 0264 | 0.3 PE | 0.87 | 0.388 | 0.27 | 0.155 | 0263 |
| Eefwoen | 0.149 | 0.074 | $0.15{ }^{5}$ | 0.075 | 0.LE4 | 0.001 | 0.160 | 0.683 |
| Within | 0214 | 0.190 | 0.240 | 0.009 | 0.204 | 0.103 | 0.195 | 0.150 |
|  |  |  |  |  |  |  |  |  |
| Total | 100.0 | 100.9 | 10.0 | 100.0 | 1000 | 1000 | 1000 | 100.9 |
| Eefwoen | 41.0 | 27.9 | 3.7 | 27.3 | 44.6 | 300 | 45.1 | 3L. 6 |
| Within | 30.0 | 7.1 | 0.3 | 72.7 | 55.4 | 70.0 | 34.9 | 6. 4 |

 cation by a constant, and the inequality indiken and desompositians are nesie tovariant.

|  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Theil |  | Theil |  | Theil |  | Theil |  |
|  | 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 |
| Contribution of between and within effects (\%) |  |  |  |  |  |  |  |  |
| 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.

## Rural-Urban Disparity

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

|  | Standard Decomposition |  | Reverse Descmposition |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Unadjusted | PPP | Umadjusted | PPP |
| Difference in ln incomes | 1.169 | 0.848 | 1.169 | 0.48 |
| Contributions to diflerence (vilhes) |  |  |  |  |
| Constant term and provincial dummies | 0.008 | 0.387 | 0.708 | 0.387 |
| Other explanatory variables, of whin: | 0.461 | 0.461 | 0.461 | 0.461 |
| Coeffisients | 0.020 | 0.020 | 0.174 | 0.174 |
| Endowments | 0.441 | 0.441 | 0.286 | 0.286 |
| Contributions to diference (\%) |  |  |  |  |
| Constant term and provincial dummies | 60.6\% | 45.6\% | 60.6\% | 45.6\% |
| Other explanatory variables, of which: | 394\% | 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 12bDbcompositicen of the Dipharince fetween Mban 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 |
| Contributions to difference (values) |  |  |  |  |
|  |  |  |  |  |
| 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 |
| Contributions to diference (\%) |  |  |  |  |
| Constant term and provincial dummies | 86.2\% | 81.4\% | 86.2\% | 81.4\% |
| Other explamatory variables, of whish: | 13.7\% | 18.6\% | 13.7\% | 18.6\% |
| Coefficients | -26.0\% | -35.3\% | -198\% | -26.8\% |
| Endowments | 39.8\% | 54.0\% | 33.6\% | 45.7\% |


|  | Standard Decomposition |  |  | Reverse Decomposition |  |
| :--- | :---: | :---: | :--- | :---: | :---: |
|  | Unadjusted | PPP |  | Unadjusted | PPP |
| Difference in ln incomes | 1.169 | 0.848 |  | 1.169 | 0.48 |
| Contributions to difference (values) |  |  |  |  |  |
| 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 |
| $\quad$ Coefficients | 0.020 | 0.020 |  | 0.174 | 0.174 |
| $\quad$ Endowments | 0.441 | 0.441 |  | 0.286 | 0.286 |
| Contributions to difference (\%) |  |  |  |  |  |
| Constant term and provincial dummies | $60.6 \%$ | $45.6 \%$ |  | $60.6 \%$ | $45.6 \%$ |
| Other explanatory variables, of which: | $39.4 \%$ | $54.4 \%$ |  | $39.4 \%$ | $54.4 \%$ |
| $\quad$ Coefficients | $1.7 \%$ | $2.4 \%$ |  | $14.9 \%$ | $20.5 \%$ |
| $\quad$ 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 |
| Contributions to difference (values) |  |  |  |  |  |
| 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 |
| $\quad$ Coefficients | -0.313 | -0.313 |  | -0.238 | -0.238 |
| $\quad$ Endowments | 0.479 | 0.479 |  | 0.405 | 0.405 |
| Contributions to difference (\%) |  |  |  |  |  |
| Constant term and provincial dummies | $86.2 \%$ | $81.4 \%$ |  | $86.2 \%$ | $81.4 \%$ |
| Other explanatory variables, of which: | $13.7 \%$ | $18.6 \%$ |  | $13.7 \%$ | $18.6 \%$ |
| $\quad$ Coefficients | $-26.0 \%$ | $-35.3 \%$ |  | $-19.8 \%$ | $-26.8 \%$ |
| $\quad$ 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 standerds and sanitary conditions 2003

|  | $\begin{aligned} & \text { Cities } \\ & \text { Large } \end{aligned}$ | Rural areas |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 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 (geein) | 8292 | 6607 | 4589 | 3163 | 2187 | 1938 | 1187 |
| Per capita expenditure (ywan) | 6297 | 4791 | 3524 | 2466 | 1763 | 1666 | 1039 |
| Proportion of bouseholds using tap-water | 99.5 | 99.8 | 87.6 | 49.3 | 31.1 | 27.4 | 30.1 |
| Proportion of bouseholds using flush toilets | 86.1 | 93.5 | 57.6 | 13.5 | 4.1 | 2.1 | 1.2 |

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).

## Rural-Urban Disparity

- Zhao (2007)

Thable 16.3 Yaristione in montality and causes of death

|  | $\begin{aligned} & \text { Cities } \\ & \text { Large } \end{aligned}$ | Rural areas |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Mstium | Small | Type I | Type II | Type III | Type IV |
| Proportion of deathe by Infocticus and metemal diseases | 3.8 | 3.9 | 6.2 | 4.4 | 6.1 | 11.4 | 23.1 |
| Non-communicable chronic diseases | 84.2 | 508 | 74.7 | 809 | 78. 6 | 70.3 | 606 |
| Injury and poisoning | 6.0 | 7.4 | 4.8 | 10.3 | 11.2 | 13.1 | 102 |
| Unknown remeans | 6.0 | 7.9 | 14.3 | 4.4 | 4.0 | 5.1 | 61 |
| TB prevalence rate (per 100,000 papulation) | 37.3 | 69.9 | 150.1 | 81.1 | 96.3 | 1408 | 223.2 |
| Average life expoctancy 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 | 145 | 14.1 | 24.2 | 306 | 54.0 |

Scurcess Department of Control Disease of MOH and Chinese Acsiemy of Preventive Medicine 1997 and 1998. The life table for there districts and counties ane provided by Yong Cai. CHSI of MOH 2004.
" See the text for the clrasification 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 ${ }^{\text {a }}$ | 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. <br> ${ }^{\text {a }}$ 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 | $\begin{gathered} \text { Weight-for- } \\ \text { Age } \\ \text { Z Score } \\ \hline \end{gathered}$ | Stunted | Underweight |
| Predicted value Rural children | -0.93 *** | -0.35 *** | 19.67\% *** | 3.26\% *** |
|  | (0.01) | (0.01) | (0.0040) | (0.0018) |
| Urban children | $\begin{aligned} & -0.31 \quad * * * \\ & (0.02) \end{aligned}$ | $\begin{aligned} 0.09 & \text { *** } \\ (0.02) & \end{aligned}$ | $\begin{array}{rl} 9.38 \% & * * * \\ (0.0052) & \end{array}$ | $\begin{aligned} \mathbf{1 . 6 0 \%} & \text { *** } \\ \mathbf{( 0 . 0 0 2 4 )} & \end{aligned}$ |
| Difference in predicted value |  |  |  |  |
| Total difference (ruralurban) | $\begin{array}{rl} -0.62 & * * * \\ (0.03) & \end{array}$ | $\begin{array}{ll} -0.44 & * * * \\ (0.03) & \end{array}$ | $\begin{aligned} & \mathbf{1 0 . 2 9 \%} \text { *** } \\ & \mathbf{( 0 . 0 0 6 6 )} \end{aligned}$ | $\begin{aligned} \mathbf{1 . 6 7 \%} & \text { *** } \\ \mathbf{( 0 . 0 0 3 0 )} & \end{aligned}$ |
| Explained difference | -0.33 *** | -0.25 *** | 5.87\% *** | 0.92\% *** |
|  | (0.02) | (0.02) | (0.0042) | (0.0017) |
| Unexplained difference | $\begin{aligned} & -0.29 \\ & (0.03) \end{aligned}$ | $\begin{array}{rl} -0.19 & * * * \\ (0.03) & \end{array}$ | $\begin{array}{rl} 4.42 \% & * * * \\ (\mathbf{0 . 0 0 6 8}) \end{array}$ | $\begin{array}{r} 0.75 \% \\ (\mathbf{0 . 0 0 3 0}) \end{array}$ |

## Hukou

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

| Effocts of Hulkon eliminatioe ce mgiveal asd natioeal Gini coeffijents and Tbeil measures of ibounality using a model wib distilkative of efficiescies witin regives |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Regiveal divide in model vrinst asd dati in colmm beadiegs |  |  |  |  |
| 1 Regiceal nd natioeal Gimi ceefficems |  |  |  |  |
| Utase rumal | Rish-poer | EC-CW | EC-WD | E-C-W |
| Gine coufficent before Hikou removal |  |  |  |  |
| $G_{u}=0.3200$ | $\mathrm{G}_{\mathrm{R}}=0.464$ | $G_{\text {sce }}=0.419$ | $G_{\text {sc }}=0.4186$ | $G_{\mathrm{k}}=0.4226$ |
| $G_{R}=0.3500$ | $\mathrm{G}_{\mathrm{p}}=02030$ | $G_{\text {cw }}=0.2040$ | $G_{w D}=0.1600$ | $\begin{aligned} & G_{c}=0.1440 \\ & G_{w}=0.1600 \end{aligned}$ |
| $G=0.4690$ | $G=0.460$ | $G=0.4690$ | G-0.46s0 | $G=0.4600$ |
| Guit couflusemid afor Hakour remonal |  |  |  |  |
| $G_{u}=0357188$ | $\mathrm{G}_{\mathrm{k}}=0.421638$ | $\mathrm{Gsc}^{\text {ce }} 0.397921$ | $\mathrm{Gsc}_{\text {ce }} 0.22439$ | $\mathrm{G}_{\mathrm{k}}=0.254828$ |
| $G_{\mathrm{k}}=0.368747$ | $\mathrm{G}_{\mathrm{p}}=0.169154$ | $G_{\text {cw }}=0.11243$ | $G_{w D}=0.18127$ | $G_{C}=0.189328$ |
| $G=0.370538$ | $G=0377878$ | $G=0.347042$ | $\mathrm{G}=0.29139$ | $\mathrm{G}=0.299639$ |
| 2 Tbeill measures of tequality |  |  |  |  |
| Utan-rual | Rish-poor | EC-CW | EC-WD | E-C-W |
| Molll meanara before Hikou remonal |  |  |  |  |
| $\tau_{\mathrm{U}}=0.171850$ | $\mathrm{T}_{\mathrm{R}}=0.291932$ | $T_{\text {rc }}=0.288837$ | $T_{\text {cce }}=0.173458$ | $r_{\mathrm{k}}=0.12389$ |
| $T_{\mathrm{R}}=0.203112$ | $r_{p}=0078834$ | $T_{\text {cw }}=0.02791$ | $\tau_{\text {wD }}=0.118314$ | $T_{T_{c}}=-0.075964$ |
| $T_{2}=0.18971$ | $T_{*}=0.1961614$ | $T_{*}=0.212126$ | $T_{\mathrm{v}}=0.12327$ | ${ }_{T_{*}=0.043293}$ |
| $x_{b}=0.064300$ | $\mathrm{T}_{\mathrm{b}}=0.094295$ | $T_{\mathrm{b}}=0.065856$ | $\tau_{\mathrm{b}}=0.0035041$ | $\mathrm{T}_{\mathrm{b}}=0.069722$ |
| $r=0.250270$ | $r=0.250437$ | $r=0.278010$ | $T=0.158318$ | $T=0.113015$ |
| Thell meamura after Hisour removal |  |  |  |  |
| $T_{\mathrm{U}}=0.224532$ | $\mathrm{T}_{\mathrm{R}}=0315792$ | $T_{\text {sc }}=0.28137$ | $\mathrm{T}_{\text {sc }}=0.09659$ | $\mathrm{T}_{\mathrm{k}}=0.136043$ |
| $\mathrm{T}_{\mathrm{k}}=0.234390$ | $T_{p}=0063729$ | $\tau_{\text {cw }}=0.05677$ | $T_{\text {wo }}=0.077606$ | $T_{\mathrm{c}}=0.088320$ |
|  |  |  |  | ${ }_{\text {T }}=0.005021$ |
| ${ }_{T_{3}}=0.226873$ | $T_{*}=0233030$ | $T_{\sim}=0.186570$ | $T_{0}=0.094854$ | $T_{\sim}=0.115349$ |
| $\mathrm{T}_{\mathrm{b}}=0.009734$ | $\mathrm{T}_{\mathrm{b}}=0.010959$ | $\mathrm{T}_{\mathrm{b}}=0.010367$ | $\mathrm{T}_{\mathrm{b}}=0.002850$ | $\mathrm{T}_{\mathrm{b}}=0.010994$ |
| $T=0236607$ | $T=0243990$ | $T=0.196937$ | $T=0.097735$ | $T=0.128834$ |

 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 |
| Gini coefficients before Hukou removal |  |  |  |  |
| $G_{\mathrm{U}}=0.3200$ | $G_{\mathrm{R}}=0.4094$ | $G_{\text {EC }}=0.4119$ | $G_{\text {EC }}=0.4186$ | $G_{\mathrm{E}}=0.4226$ |
| $G_{\mathrm{R}}=0.3500$ | $G_{\mathrm{P}}=0.2030$ | $G_{\text {CW }}=0.2040$ | $G_{\text {WD }}=0.1600$ | $\begin{aligned} & G_{\mathrm{C}}=0.1440 \\ & G_{\mathrm{W}}=0.1600 \end{aligned}$ |
| $G=0.4600$ | $G=0.4600$ | $G=0.4600$ | $\mathrm{G}=0.4600$ | $G=0.4600$ |
| Gini coefficients after Hukou removal |  |  |  |  |
| $G_{\mathrm{U}}=0.357188$ | $G_{\mathrm{R}}=0.423638$ | $G_{\text {EC }}=0.397921$ | $G_{\text {EC }}=0.224439$ | $G_{\text {E }}=0.254828$ |
| $G_{\mathrm{R}}=0.368747$ | $G_{\mathrm{P}}=0.169154$ | $G_{\text {CW }}=0.112343$ | $G_{\text {WD }}=0.181277$ | $\begin{aligned} & G_{\mathrm{C}}=0.189328 \\ & G_{\mathrm{W}}=0.113556 \end{aligned}$ |
| $G=0.370538$ | $G=0.373878$ | $G=0.347042$ | $G=0.229139$ | $G=0.259639$ |
| 2 Theil measures of inequality |  |  |  |  |
| Urban-rural | Rich-poor | EC-CW | EC-WD | E-C-W |
| Theil measures before Hukou removal |  |  |  |  |
| $T_{\mathrm{U}}=0.171850$ | $T_{\mathrm{R}}=0.291932$ | $T_{\text {EC }}=0.285837$ | $T_{\text {EC }}=0.173458$ | $T_{\mathrm{E}}=0.122389$ |
| $T_{\mathrm{R}}=0.203112$ | $T_{\mathrm{P}}=0.0788384$ | $T_{\text {CW }}=0.102791$ | $T_{\text {WD }}=-0.118314$ | $\begin{aligned} & T_{\mathrm{C}}=-0.075694 \\ & T_{\mathrm{W}}=-0.070750 \end{aligned}$ |
| $T_{\mathrm{w}}^{1}=0.185971$ | $T_{\mathrm{w}}=0.1961614$ | $T_{\text {w }}=0.212126$ | $T_{\text {w }}=0.123277$ | $T_{\mathrm{w}}=0.043293$ |
| $T_{\mathrm{b}}^{1}=0.064300$ | $T_{\mathrm{b}}=0.084295$ | $T_{\text {b }}=0.065886$ | $T_{\text {b }}=0.035041$ | $T_{\mathrm{b}}=0.069722$ |
| $T=0.250270$ | $T=0.280437$ | $T=0.278010$ | $T=0.158318$ | $T=0.113015$ |
| Theil measures after Hukou removal |  |  |  |  |
| $T_{\mathrm{U}}=0.224532$ | $T_{\mathrm{R}}=0.315792$ | $T_{\text {EC }}=0.256137$ | $T_{\text {EC }}=0.096899$ | $T_{\mathrm{E}}=0.136043$ |
| $T_{\mathrm{R}}=0.234890$ | $T_{\mathrm{P}}=0.063729$ | $T_{\text {CW }}=0.025677$ | $T_{\text {WD }}=0.077606$ | $\begin{aligned} & T_{\mathrm{C}}=0.083320 \\ & T_{\mathrm{W}}=0.025021 \end{aligned}$ |
| $T_{\mathrm{w}}^{1}=0.226873$ | $T_{\mathrm{w}}=0.233030$ | $T_{\text {w }}=0.186570$ | $T_{\text {w }}=0.094884$ | $T_{\mathrm{w}}=0.115340$ |
| $T_{\mathrm{b}}^{1}=0.009734$ | $T_{\mathrm{b}}=0.010959$ | $T_{\mathrm{b}}=0.010367$ | $T_{\mathrm{b}}=0.002850$ | $T_{\mathrm{b}}=0.010194$ |
| $T=0.236607$ | $T=0.243990$ | $T=0.196937$ | $T=0.097735$ | $T=0.125534$ |

$T_{\mathrm{w}}$ refers to the Theil measure for within region inequality, $T_{\mathrm{b}}$ 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 <br> Province | Top 2 <br> 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
IkEquaLIT DECOHpogitiod

| Redative Coutribution (7) |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year | K | Dep | Edu | Gav | FDI | Trade | Reform | Urb | Locatian |
| 1987 | 13.49 | 3.85 | 6.5 | 13.35 | 4.45 | 11.66 | 11.06 | 17.92 | 17.69 |
| 1988 | 14.16 | 3.73 | 6.47 | 1306 | 5.68 | 12.11 | 10.3 | 17.8 | 17.63 |
| 1989 | 14.67 | 3.34 | 6.36 | 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 | 1064 | 16.40 | 17.61 |
| 1992 | 15.90 | 3.29 | 6.25 | 11.44 | 6.32 | 12.19 | 10.91 | 15.97 | 17.74 |
| 1998 | 16.04 | 3.23 | 6.96 | 11.29 | 6.10 | 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 | 5.00 | 13.51 | 6.75 | 10.96 | 13.85 | 13.12 | 16.23 |
| 1996 | 17.18 | 2.98 | 5.39 | 13.99 | 6.71 | 11.33 | 13.88 | 12.75 | 16.13 |
| 1997 | 17.30 | 2.69 | 5.32 | 14.20 | 6.81 | 11.66 | 13.94 | 12.20 | 15.88 |
| 1908 | 17.95 | 2.55 | 5.26 | 14.43 | 7.07 | 11.89 | 12.54 | 12.26 | 16.04 |
| 1999 | 18.08 | 0.81 | 5.10 | 13.72 | 6.94 | 13.77 | 14.8 | 11.92 | 15.38 |
| 2000 | 17.82 | 0.49 | 4.36 | 14.37 | 6.55 | 14.17 | 15.27 | 11.44 | 15.20 |
| 2001 | 18.37 | 0.90 | 4.77 | 13.3 | 6.98 | 14.34 | 14.77 | 11.44 | 15.12 |

Relative Contribution (\%)

| Year | 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 | 12.59 | 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

| Decomporition remults |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Grim | \% | Absimoc | \% | Theil-L | \% | Theal $-T$ | \% | $c v^{2}$ | \% |
| 1992 |  |  |  |  |  |  |  |  |  |  |
| Depandescy | 0.0246 | 15.96 | 0.0061 | 16.60 | 0.0053 | 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 |
| Ediuration | 0.0294 | 19.07 | 0.0067 | 18.12 | 0.0068 | 18.10 | 0.0067 | 16.69 | 0.0138 | 15.81 |
| Family siza | -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 |
| TVE | 0.0457 | 29.71 | 0.0130 | 35.10 | 0.0132 | 35.03 | 0.0148 | 37.17 | 0.0353 | 40.33 |
| Rosiduas | 0.0360 | 23.22 | 0.0136 | 36.92 | 0.0141 | 37.35 | 0.0146 | 36.5 | 0.0313 | 35.73 |
| Toeal | 0.1539 | 100 | 0.0369 | 100 | 0.0376 | 100 | 0.0399 | 100 | 0.0875 | 100 |
| 1993 |  |  |  |  |  |  |  |  |  |  |
| Depandescry | 0.0237 | 14.79 | 0.0059 | 14.61 | 0.0050 | 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 |
| Eduratice | 0.0293 | 18.27 | 0.0070 | 17.41 | 0.0072 | 17.36 | 0.0070 | 15.92 | 0.0144 | 14.84 |
| Family sizo | -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 |
| TVE | 0.0471 | 29.32 | 0.0134 | 33.28 | 0.0137 | 33.18 | 0.0152 | 34.49 | 0.0353 | 36.44 |
| Revidual | 0.0309 | 19.25 | 0.0136 | 33.62 | 0.0141 | 34.08 | 0.0152 | 34.6 | 0.0343 | 35.37 |
| Toeal | 0.1605 | 100 | 0.0404 | 100 | 0.0412 | 100 | 0.0439 | 100 | 0.0968 | 100 |
| 1994 |  |  |  |  |  |  |  |  |  |  |
| Depandency | 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 |
| Eduratica | 0.0342 | 20.42 | 0.0087 | 20.37 | 0.0088 | 20.32 | 0.0086 | 19.04 | 0.0173 | 17.97 |
| Family sizo | -0.0015 | -0.91 | -0.0064 | -15.12 | $-0.0067$ | -15.48 | -0.0075 | -16.35 | -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 |
| TVE | 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 | 30.50 | 0.0131 | 28.99 | 0.0255 | 26.47 |
| Toeal | 0.1674 | 100 | 0.0425 | 100 | 0.0434 | 100 | 0.0450 | 100 | 0.0964 | 100 |
| 1995 |  |  |  |  |  |  |  |  |  |  |
| Depandsacy | 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 |
| Edicatioc | 0.0288 | 16.00 | 0.0069 | 14.00 | 0.0070 | 13.93 | 0.0069 | 13.49 | 0.0143 | 13.27 |
| Family sizo | -0.0030 | -1.64 | -0.0064 | -13.10 | -0.0067 | -13.34 | -0.0073 | -14.35 | -0.0180 | -16.70 |
| Lamd | 0.0053 | 2.94 | 0.0009 | 1.88 | 0.0009 | 1.85 | 0.0011 | 2.15 | 0.0028 | 2.62 |
| TVE | 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 |
| Tosal | 0.1800 | 100 | 0.0490 | 100 | 0.0502 | 100 | 0.0511 | 100 | 0.1078 | 100 |


| 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 |
| TVE | 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 |
| TVE | 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 |
| TVE | 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 |
| TVE | 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

|  | 1987 | 1991 | 1995 | 1999 |
| :---: | :---: | :---: | :---: | :---: |
|  | Contrbution to Variance |  |  |  |
| Dependert variable in Oncome por capitak: Without spatial defator: |  |  |  |  |
| Contribution of region | . 186 | . 162 | . 154 | .120 |
| Contribution of province | . 237 | . 218 | . 183 | . 153 |
| Contribution of village | . 500 | . 465 | 413 | A24 |
| With spatal defiztor. |  |  |  |  |
| Contribution of region | . 069 | . 063 | . 062 | . 047 |
| Contribution of province | . 133 | . 105 | . 055 | . 077 |
| Contribution of vilbge | . 431 | . 359 | 344 | . 373 |
| Dependert variable h (consumption per capita): Without spatial defator: |  |  |  |  |
| Contribution of region | . 190 | . 184 | . 162 | . 181 |
| Contribution of province | . 278 | . 246 | . 189 | 231 |
| Contribution of village | . 560 | . 529 | . 5007 | 525 |
| With spatal deflator. |  |  |  |  |
| Contribution of province | . 137 | . 102 | . 083 | . 117 |
| Contribution of village | . 474 | . 439 | 442 | . 454 |

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

|  | 1987 | 1991 | 1995 | 1999 |
| :---: | :---: | :---: | :---: | :---: |
|  | Contribution to Variance |  |  |  |
| Dependent variable In (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 In (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 |

## Inequality in Urban Area

Chi, Li, Yu (2011)

Table 6. Decomposition of the increase in income inequality.

|  | 1987-1996 |  |  |  | 1996-2004 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Variance | $\begin{aligned} & \text { 10:50 } \\ & \text { ratio } \end{aligned}$ | $\begin{aligned} & \text { 50:90 } \\ & \text { ratio } \end{aligned}$ | $\begin{aligned} & \text { 10:90 } \\ & \text { ratio } \end{aligned}$ | Variance | $\begin{aligned} & \text { 10:50 } \\ & \text { ratio } \end{aligned}$ | $\begin{aligned} & 50: 90 \\ & \text { ratio } \end{aligned}$ | $\begin{aligned} & \text { 10:90 } \\ & \text { ratio } \end{aligned}$ |
| Overall changes | 0.235 | 0.217 | 0.201 | 0.415 | 0.202 | 0.206 | 0.116 | 0.325 |
| Composition effect | - 0.043 | -0.093 | - 0.001 | - 0.096 | 0.087 | 0.067 | 0.019 | 0.088 |
| 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 |
| Wage structure effect | 0.278 | 0.31 | 0.202 | 0.511 | 0.115 | 0.139 | 0.097 | 0.237 |
| 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

——Income -=: Consumption


## Inequality in Urban Area



## Education

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

Table 2
The dinnlention of achooling by yaus and leanls, 1988-2001

| Yar | Schooling (yarn) | Collage and abow <br> (\%) | Toctrical schosel (\%) | Squior high <br> (\%) | Jumior bigh <br> (8) | Primary and balow (\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 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 <br> (years) | College and <br> above <br> $(\%)$ | Technical <br> school <br> $(\%)$ | Senior <br> high <br> $(\%)$ | Junior <br> high <br> $(\%)$ | Primary <br> and below <br> $(\%)$ |
| :--- | :--- | :--- | :--- | :--- | :--- | ---: |
| 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 | 14.5 | 29.1 | 28.3 | 3.9 |
| 1999 | 11.7 | 26.3 | 13.2 | 29.3 | 26.4 | 3.5 |
| 2000 | 11.8 | 28.9 | 13.1 | 30.3 | 24.1 | 3.4 |
| 2001 | 11.8 | 28.1 |  | 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

Estimatos of ratos of returns to education in urban Chima, 1988-2001

| Your | Years of <br> schooling | Colloge/above <br> varrus high <br> school | Tochnical <br> school varnus <br> high school | High school <br> varus jumior <br> high | Junior high <br> versus primary <br> 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 |

Noter. (i) The reaults are based on a basic Mincer equation with gender and regional dummy variables. (ii) The regronsions aro rum saparataly for each your.

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

| Year | Years of <br> schooling | College/above <br> versus high <br> school | Technical <br> school versus <br> high school | High school <br> versus junior <br> high | Junior high <br> versus primary <br> 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 | 16.5 | 17.3 | 10.9 |
| 1998 | 8.1 | 32.1 | 17.0 | 16.2 | 12.2 |
| 1999 | 9.9 | 38.1 | 38.7 | 17.8 | 21.0 |
| 2000 | 10.1 | 37.3 | 20.5 | 14.8 |  |
| 2001 | 10.2 |  |  | 21.4 | 16.4 |

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)


Men

|  | India |  |  | China |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Period | 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.


## 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.
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- Meng and Zhang (2001)
$-82 \%$ of hourly wage differential between urban and rural migrant workers are due to unequal payment within the occupation.


## 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

Brimates of the deremination of the growth rate of income per capita.

|  | $\begin{aligned} & 1 \\ & 2515 \end{aligned}$ | $\begin{aligned} & 2 \\ & 281.5 \end{aligned}$ | $\begin{aligned} & 3 \\ & \mathbf{2} \text { K. } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| Constant | $14.26^{\prime \prime}$ | 13.13"* | $13.28^{\prime \prime}$ |
|  | (288) | (2.98) | (296) |
| Leg initial CDP per capita | $\begin{gathered} -1.931^{\prime \prime \prime} \\ (0.402) \end{gathered}$ | $\begin{aligned} & -1,832^{\prime \prime} \\ & (0.401) \end{aligned}$ | $\begin{aligned} & -1714^{\prime \prime} \\ & (0408) \end{aligned}$ |
| Sasio of investment to CDP | $\begin{gathered} 0.034 \\ (0.018) \end{gathered}$ | $\begin{gathered} 0.027 \\ (0,018) \end{gathered}$ | $\begin{gathered} 0.024 \\ (0.018) \end{gathered}$ |
| Trade residual | $\begin{gathered} 0822^{\prime \prime} \\ (0279) \end{gathered}$ | $\begin{gathered} 0.304^{\circ "} \\ (0.282) \end{gathered}$ | $\begin{gathered} 08088^{\prime \prime} \\ (0284) \end{gathered}$ |
| Aveage years of sichooling | -0.018 | -0.019 | 0.171 |
|  | (0.092) | (0.096) | [caiberted] |
| Bureascasic quality | $0.247^{\prime \prime}$ | 0.086 | -0012 |
| Tropical area | $\stackrel{(0.112)}{-0.883}$ | (0.156). | (0150) |
| ¢ | (0.346) | (0.353) | (0360) |
| Sectaral clange | 0.418" | 0.468** | 0543* |
|  | (0.119) | (a.131) | (0117) |
| Life expectancy | $\begin{array}{r} 0.093^{\prime \prime} \\ (0.027) \end{array}$ | $\begin{gathered} 0.1008^{\prime \prime} \\ (0.080) \end{gathered}$ | $\begin{gathered} 0073^{\prime \prime} \\ (0028) \end{gathered}$ |
| Leg stare of woding-age population | $\begin{aligned} & 6575^{\prime \prime} \\ & (2.195) \end{aligned}$ | $\begin{aligned} & 5.789^{\prime \prime} \\ & (2.287) \end{aligned}$ | $\begin{aligned} & 4868^{\prime \prime} \\ & (2373) \end{aligned}$ |
| Growth of stare of worling-age population | $\begin{gathered} 0.538 \\ (0.376) \end{gathered}$ | $\begin{gathered} -2.149 \\ (1.449) \end{gathered}$ | $\begin{aligned} & -2180 \\ & (1.455) \end{aligned}$ |
| Growth of share of worling-aye poplation times buexacratic quality |  | $\begin{aligned} & 0.735^{1 "} \\ & (0.344) \end{aligned}$ | $\begin{gathered} 0763^{\prime \prime} \\ (0342) \end{gathered}$ |
| Time dummies for counties other than Chies and ledia | Yes | Yes | Yes |
| $\underset{R^{*}}{N}$ | $\begin{aligned} & 571 \\ & 0.287 \end{aligned}$ | $\begin{aligned} & 571 \\ & 0.258 \end{aligned}$ | $\begin{aligned} & 571 \\ & 0247 \end{aligned}$ |

Bxed an 5 -year pasel of growth rates, over the period $1960-2000$. Time dummies tor courtries other than Chima and ladia lincladed but bot reported. Heteroskedazicity-comastent zadaad errors are reported in parentheses. Secoral clange, growth of shas of woding-age popelation, asd the growth of stare of wodring age population times bureascasic quality indeacive term instrumented in the 251.5 regressions.


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

|  | $\begin{aligned} & 1 \\ & 2 \mathrm{SLS} \end{aligned}$ | $\begin{aligned} & 2 \\ & 2 \mathrm{SLS} \end{aligned}$ | $\begin{aligned} & 3 \\ & 2 \mathrm{SLS} \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| Constant | 14.26 ** | 13.13 ** | 13.28** |
|  | (2.88) | (2.93) | (2.96) |
| Log initial GDP per capita | -1.931** | $-1.832^{* *}$ | $-1.714^{* *}$ |
|  | (0.402) | (0.401) | (0.409) |
| Ratio of investment to GDP | $0.034^{*}$ | 0.027 | 0.024 |
|  | (0.018) | (0.018) | (0.018) |
| Trade residual | $0.822^{* *}$ | $0.804^{* *}$ | $0.808{ }^{* *}$ |
|  | (0.279) | (0.282) | (0.284) |
| Average years of schooling | -0.018 | -0.019 | 0.171 |
|  | (0.092) | (0.096) | [calibrated] |
| Bureaucratic quality | $0.247^{* *}$ | 0.036 | -0.012 |
|  | (0.112) | (0.156) | (0.150) |
| Tropical area | $-0.983^{* *}$ | $-0.922^{* *}$ | $-0.830^{* *}$ |
|  | (0.346) | (0.353) | (0.360) |
| Sectoral change | $0.418^{* *}$ | $0.468{ }^{* *}$ | $0.543^{* *}$ |
|  | (0.119) | (0.131) | (0.117) |
| Life expectancy | 0.093** | $0.108^{* *}$ | $0.073^{* *}$ |
|  | (0.027) | (0.030) | (0.028) |
| Log share of working-age population | $6.575^{* *}$ | 5.789** | 4.868** |
|  | (2.195) | (2.287) | (2.373) |
| Growth of share of working-age population | 0.538 | -2.149 | -2.180 |
|  | (0.376) | (1.449) | (1.455) |
| Growth of share of working-age population times bureaucratic quality |  | $0.735^{* *}$ | $0.763{ }^{* *}$ |
|  |  | (0.344) | (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.
${ }^{*} p<.05$.
** $p<.01$.

## Policy

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

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Royited | Vobuntry |
|  | Housbold iecoce | Total expeeditrue | Expoditure ca food | Expenditure ca mon-food | Expendinure on | adurasoen | catratioen |
|  | arcain | crain | parcupis | par cyita |  | exponditurper | expendituro per |
|  | Section A 2000-2007 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | -0.677 | -2.2m | -0.014 | .780 | -0.476 | 0.613 | 0.651 |
|  | (2885) | (2.214) | (0.4s4) | (1.389) | (a.00) | (0.13) $+\cdots$ | (0.266)** |
| Osseraticas | 2134 | 2134 | 2134 | 2134 | 2134 | 2134 | 2134 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Section B - 2000-2004 |  |  |  |  |  |  |  |
| Hypotbatical transfectotal fumily mambar | 4.498 | 0.84 |  | -0.007 | 0.69 | 0.149 | 0231 |
|  |  |  |  |  |  |  |  |
|  | (5.66) | (2.013) | (0.42) | (1.080) | (1239) | (0.109) | (0.188) |
| Osservatics | 2991 | 2991 | 2991 | 2991 | 2991 | 299 | 2991 |
| Requmed | 0.21 | 0.28 | 0.43 | 0.17 | 0.06 | 0.63 | 0.88 |
| VIllige vaibles in your $2000 \%$ Yeur 2007 damy | Yas | Yos | Ye | Yos | Ya | Yo | Yos |
| Log valuw of howrebod incoesoper | No |  | Yer | Ya | Yos | Yos | Yos |
| capit | Yos | Yos | Yos | Yes | Yas | Ya | Yos |
| Number of bide eralled | Yos | Ya | Yos | Ya | Yor | Yor | Yos |
|  | Yes | Yas | Yos | Ya | Yos | Ya | Yes |
| Your fixadeflict | Yas | Ya | Yos | Yos | Ya | Ya | Yos |
| Vilhge fixal efsact | Yes | Yes | Yos | Yes | Yo | Yo | Yos |

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 | -2.222 | -0.014 | -1.770 | -0.476 | -0.613 | 0.651 |
|  | (2.869) | (2.214) | (0.464) | ) (1.539) | (0.700) | (0.137)*** | (0.264)** |
| 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 |  |  |  |  |  |  |  |
|  | (5.665) | (2.013) | (0.542) | (1.080) | (1.259) | (0.109) | (0.198) |
| 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 |

[^0]
## Policy

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

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

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

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

## 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


[^0]:    Standard errors in parentheses, clustered by village; * significant at $10 \% ; * *$ significant at $5 \% ; * * *$ significant at $1 \%$

