

Economics 270c
Graduate Development Economics

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University of California, Berkeley

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Graduate Development Economics

Lecture 1 – January 16, 2007

Lecture 1: Introduction to Economics 27

- Lecturer: Prof. Ted Miguel

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Office hours: Mondays 9-11:30am, Evans 647

Lecture 1: Global patterns of economic growth and development (1/16)

The political economy of development

Lecture 2: Inequality and growth (1/23)

Lecture 3: Corruption (1/30) – Guest lecture by Ben Olken

Lecture 4: History and institutions (2/6)

Lecture 5: Democracy and development (2/13)

Lecture 6: Ethnic and social divisions (2/20)

Lecture 7: Economic Theories of Conflict (2/27)

Lecture 8: War and Economic Development (3/6)

Human resources

Lecture 9: Human capital and income growth (3/13)

Lecture 10: Increasing human capital (3/20)

Lecture 11: Health and nutrition (4/3)

Lecture 12: The Economics of HIV/AIDS (4/10)

Lecture 13: Labor markets and migration (4/17)

Lecture 14: Environment and development (4/24)

Lecture 15: Social Learning and Technology Adoption (5/1)

- Prerequisites: Graduate microeconomics, econometrics
- Grading:
 - Three referee reports – 30%
 - Two problem sets – 20%
 - Research proposal – 15%
 - Final exam – 30%
 - Class participation – 5%
- Course structure:
 - 1) Cross-country growth empirics (lecture 1)
 - 2) The political economy of development (lectures 2-8)
 - 3) Human resources (lectures 9-13)
 - 4) Other topics (lectures 14-15)
- All readings are available online (see syllabus)

Lecture 1 outline

- (1) This Course
- (2) Development in Human terms
- (3) Jones [1997]
- (4) Cross-country growth empirics
(Deaton [2005], Levine and Renelt [1992])

(2) Development in human terms

- Themes:

(3) Jones (1997, JEP)

- Characterizes economic growth patterns across countries in the post-war period, using national accounts data
- Has there been income convergence or not?
- The most recent (Jones 2005) empirical evidence points against the convergence hypothesis: “twin peaks”?

Figure 1

World Income Distribution, 1960 and 1988

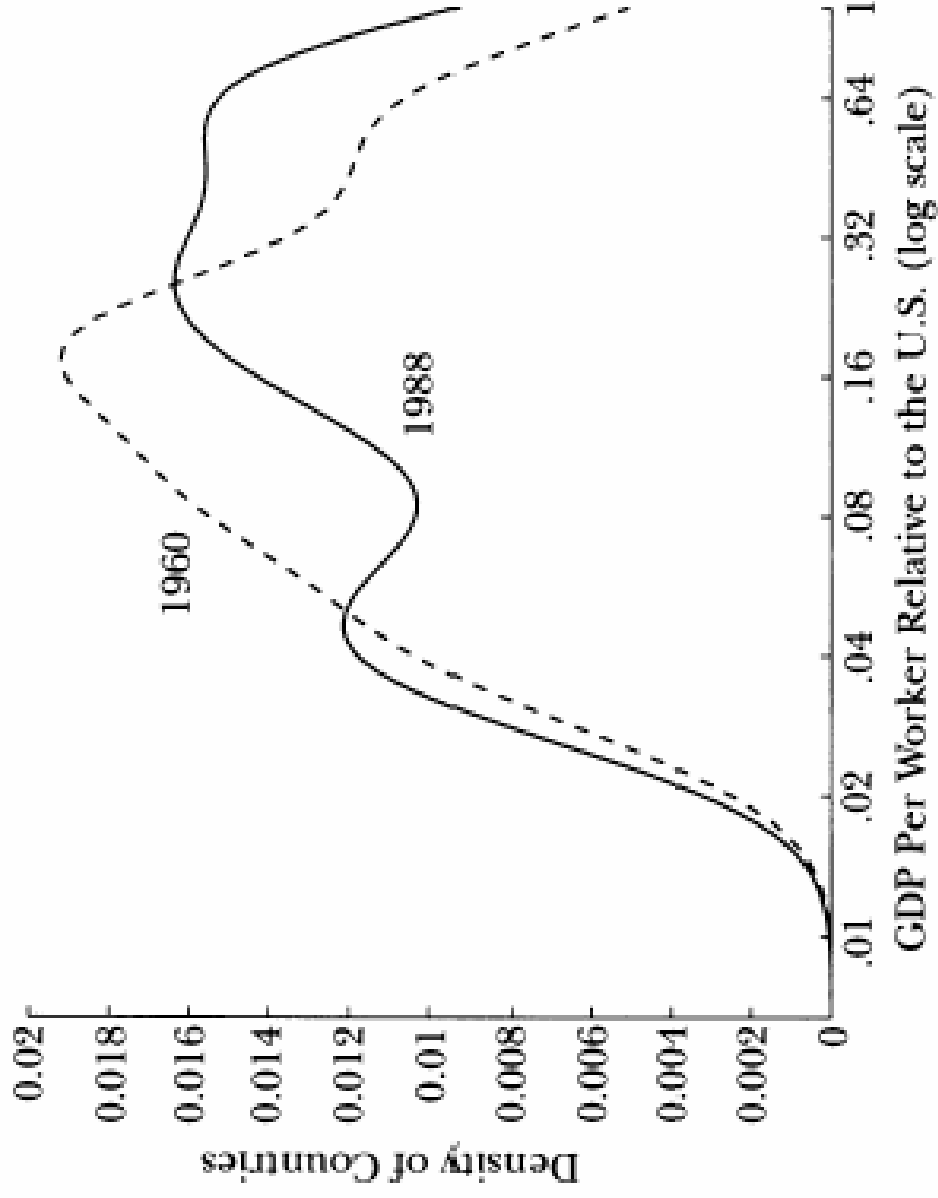


Figure 2
 Relative Y/L, 1960 vs. 1988
 (log scale)

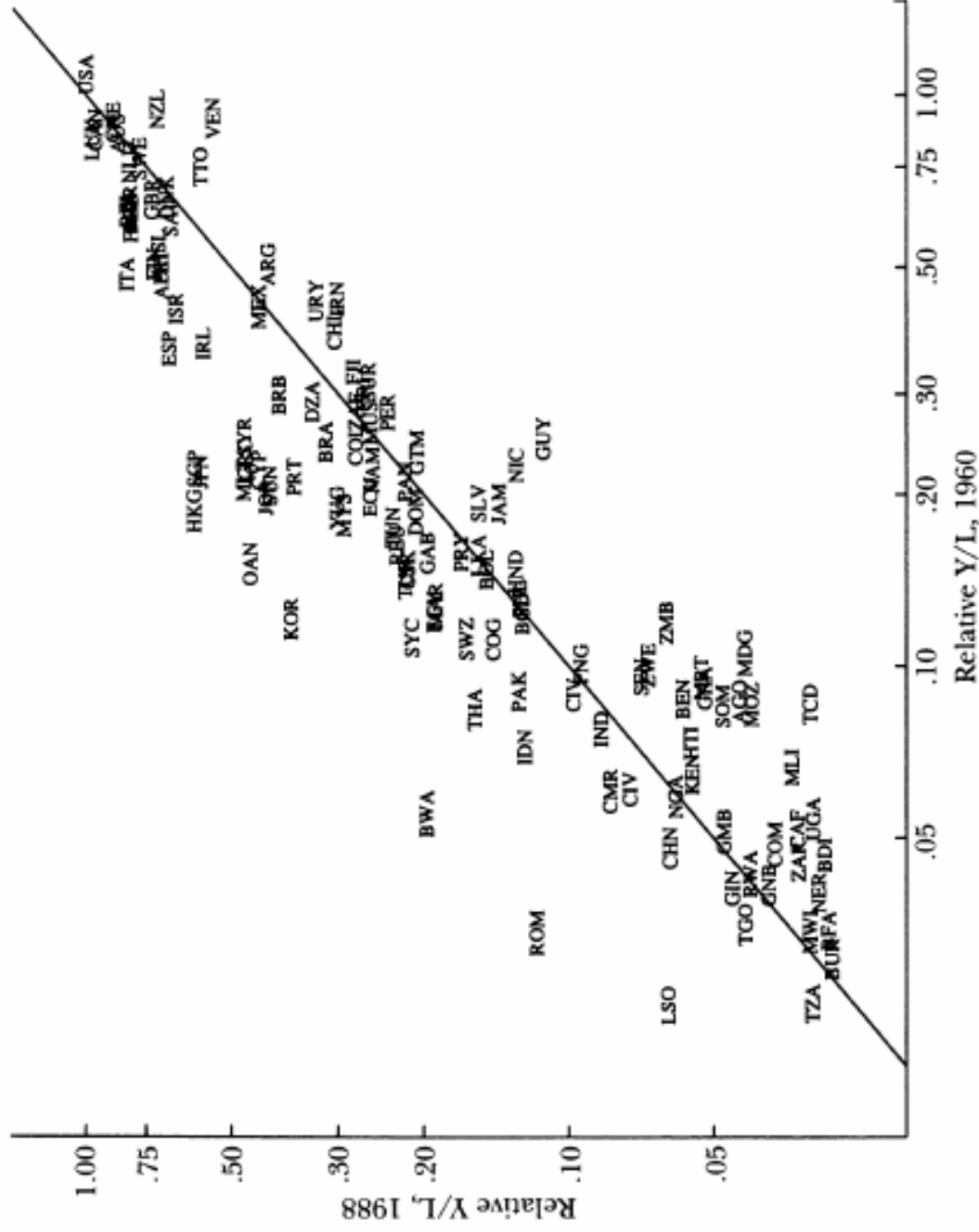


Table 1
Frequency of Growth Miracles and Growth Disasters

<i>Interval</i>	<i>Number of Countries</i>	<i>Fast Growth</i>	<i>Intermediate Growth</i>	<i>Slow Growth</i>
All Countries	(121)	40	45	15
$\tilde{y} \leq .05$	(18)	22	61	17
$.05 < \tilde{y} \leq .10$	(23)	22	35	43
$.10 < \tilde{y} \leq .20$	(31)	65	32	3
$.20 < \tilde{y} \leq .40$	(24)	42	50	8
$.40 < \tilde{y} \leq .80$	(21)	43	52	5
$\tilde{y} > .80$	(4)	0	75	25

Notes: Entries in the main part of the table reflect the percentage of countries in each interval exhibiting fast, intermediate and slow growth. Fast growth is defined to be one percentage point faster than U.S. growth (1.4 percent), and slow growth is defined to be one percentage point slower.

Figure 3

Density of GDP Per Worker Weighted by Population

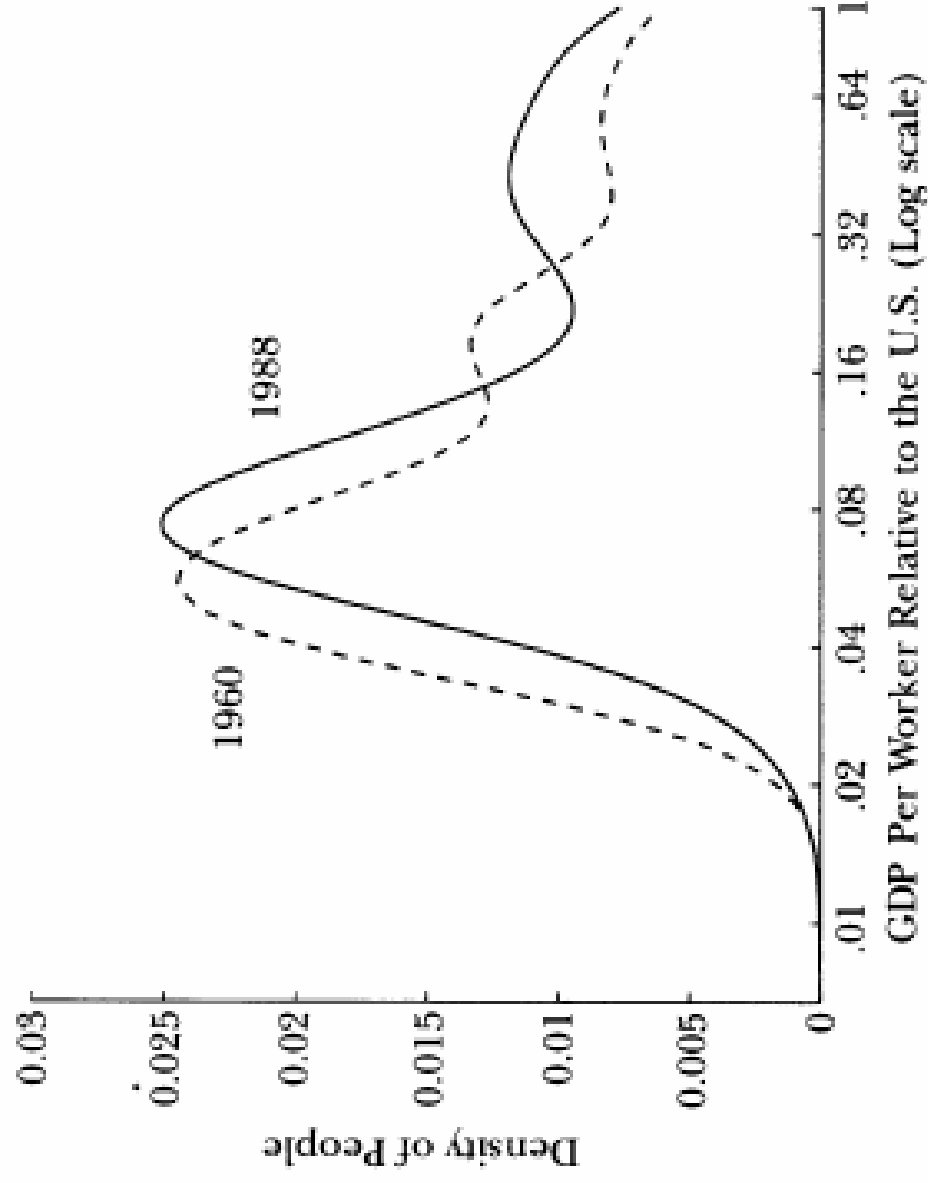
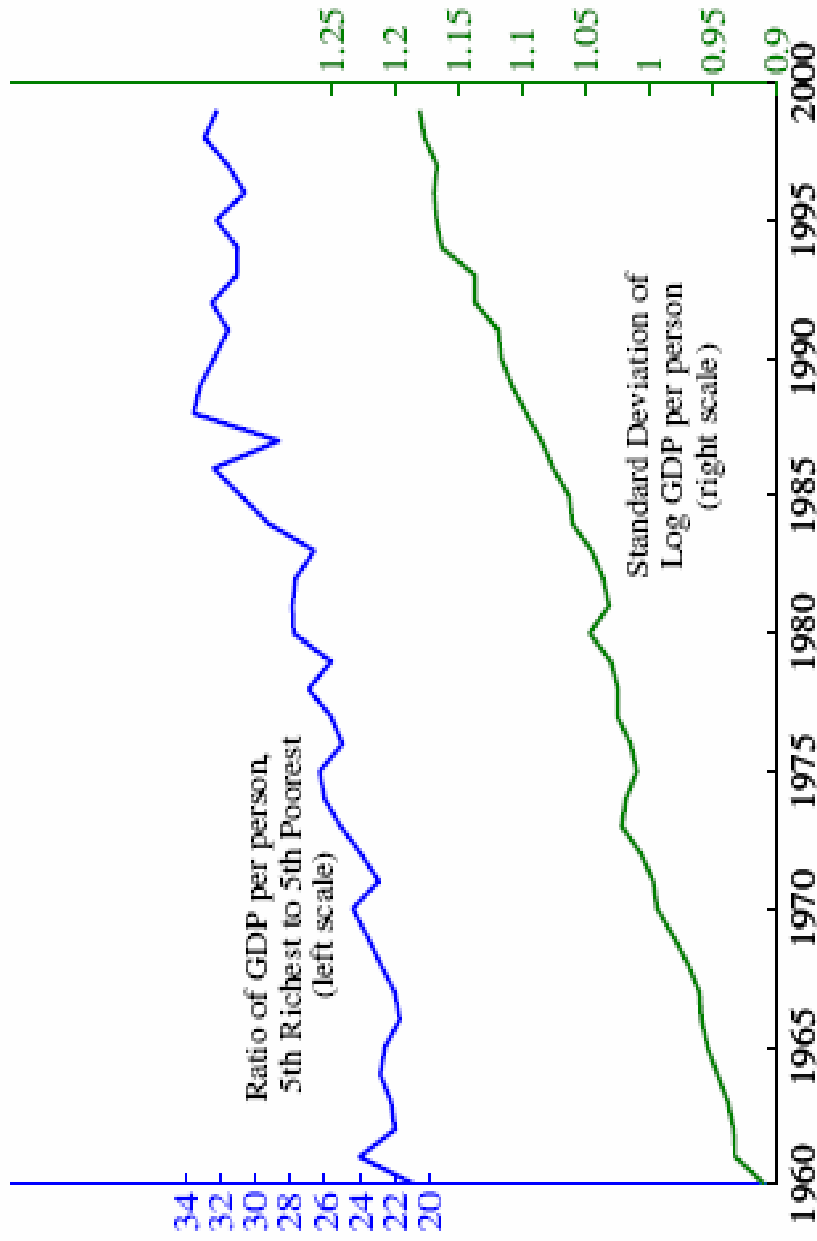


FIGURE 2. Divergence in the Last Half Century



Note: Computed using Penn World Tables, Mark 6.1 of Heston, Summers and Aten (2002) using the 104 countries with continuous data from 1960 to 1999.

TABLE 2.
Ratios of Per Capita GDP at Various Percentiles

	1960	1970	1980	1990	1999	Factor Increase
Max/Min	39.3	62.1	50.4	54.5	87.4	2.23
95/5	20.3	24.4	27.3	31.8	32.1	1.58
90/10	11.8	14.8	16.7	22.2	27.1	2.29
80/20	5.2	7.9	9.2	10.7	12.5	2.39
95/50	4.6	5.2	5.2	6.1	5.9	1.29
90/50	3.5	4.2	4.7	5.6	5.5	1.56
80/50	2.2	3.1	3.3	3.8	3.8	1.72
95/80	2.1	1.7	1.6	1.6	1.6	0.75
50/5	4.4	4.7	5.3	5.2	5.4	1.23
50/10	3.3	3.5	3.5	3.9	4.9	1.47
50/20	2.4	2.6	2.8	2.8	3.3	1.39

Note: Using the 104 countries that have continuous data for 1960 to 1999, the table reports the ratio of per capita GDP from various percentiles. For example, the 3rd row reports the 90th percentile to the 10th percentile in each year. The last column of the table shows the ratio of the 1999 column to the 1960 column. Underlying data from Penn World Tables 6.1.



Human development index (HDI) value 2003

Life expectancy at birth (years) 2003

Adult literacy rate (% ages 15 and above) 2003^b

Combined gross enrolment ratio for primary, secondary and tertiary schools (%) 2002/03^c

GDP per capita (PPP US\$) 2003

	Human development index (HDI) value 2003	Life expectancy at birth (years) 2003	Adult literacy rate (% ages 15 and above) 2003 ^b	Combined gross enrolment ratio for primary, secondary and tertiary schools (%) 2002/03 ^c	GDP per capita (PPP US\$) 2003
Developing countries	0.694	65.0	76.6	63	4,359
Least developed countries	0.518	52.2	54.2	45	1,328
Arab States	0.679	67.0	64.1	62	5,685
East Asia and the Pacific	0.768	70.5	90.4	69	5,100
Latin America and the Caribbean	0.797	71.9	89.6	81	7,404
South Asia	0.628	63.4	58.9	56	2,897
Sub-Saharan Africa	0.515	46.1	61.3	50	1,856
Central and Eastern Europe and the CIS	0.802	68.1	99.2	83	7,939
OECD	0.892	77.7	..	89	25,915
High-income OECD	0.911	78.9	..	95	30,181

HDI rank	GDP						Annual growth rate	
	PPP US\$		GDP per capita		1975–2003		1990–2003	
	US\$ billions	billions	US\$	PPP US\$				
2003	2003	2003	2003	1975–2003	1990–2003			
Developing countries	6,981.9 T	21,525.4 T	1,414	4,359	2.3	2.9		
Least developed countries	221.4 T	895.1 T	329	1,328	0.7	2.0		
Arab States	773.4 T	1,683.6 T	2,611	5,685	0.2	1.0		
East Asia and the Pacific	2,893.6 T	9,762.2 T	1,512	5,100	6.0	5.6		
Latin America and the Caribbean	1,745.9 T	3,947.0 T	3,275	7,404	0.6	1.1		
South Asia	902.2 T	4,235.9 T	617	2,897	2.6	3.5		
Sub-Saharan Africa	418.5 T	1,227.4 T	633	1,856	-0.7	0.1		
Central and Eastern Europe and the CIS	1,189.9 T	3,203.5 T	2,949	7,939	..	0.3		
OECD	29,650.5 T	29,840.6 T	25,750	25,915	2.0	1.8		
High-income OECD	28,369.5 T	27,601.9 T	31,020	30,181	2.2	1.9		

(4) Mankiw, Romer, Weil (1992, QJE)

- An early and influential exposition of economic growth empirics, using cross-country data
 - They take the neo-classical growth model – with its assumption of constant technological progress A (which can be interpreted broadly) – to the data, and assess the extent to which capital accumulation can explain recent economic growth patterns across countries.
- Technological progress is treated as a residual

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- How reasonable is it to assume that country A is uncorrelated with physical, human capital investment?
- Endogeneity may be a problem: are human and physical capital investment exogenous in reality?

(4) Deaton (2005, *REStat*)

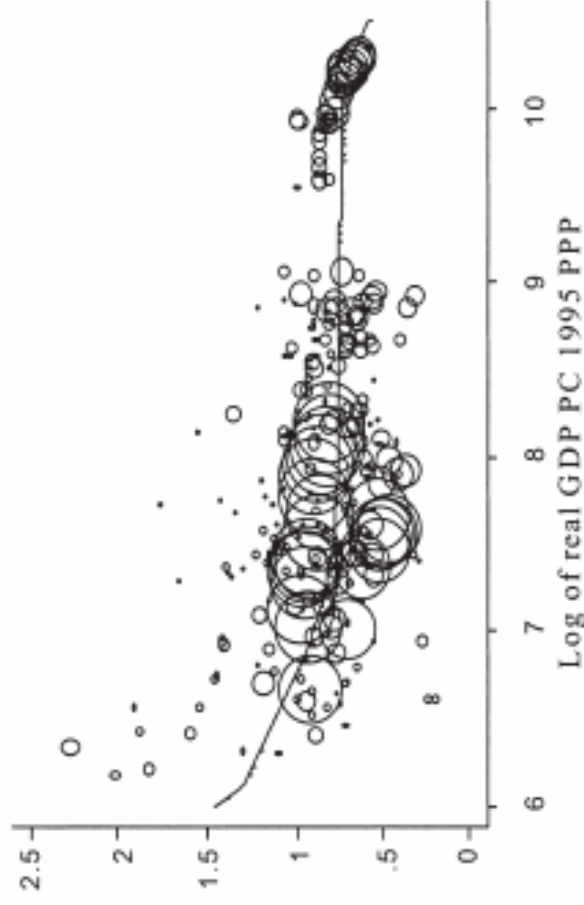
- National accounts system (NAS) data and household survey (HHS) data have yielded very different estimates regarding global income trends. Which is correct?
- This has major implications for our understanding of the impact of economic reforms in China and India
- Studying these measures also sheds light on data quality across regions

TABLE 2.—RATIOS OF SURVEY MEANS TO MEANS FROM NATIONAL I

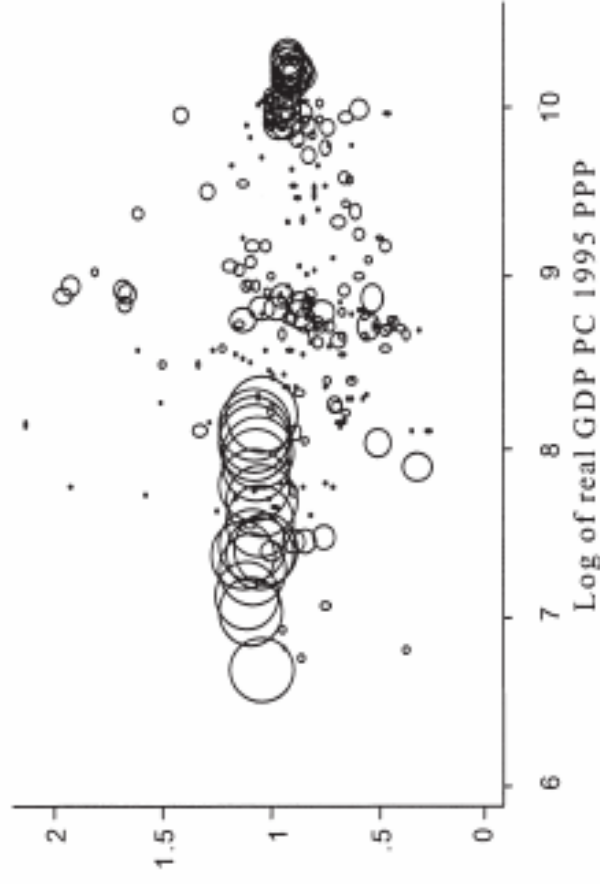
	No. of Surveys	Unweighted		
		Mean Ratio	Standard Error	Standard Deviation
<i>Consumption to Consumption</i>				
All	277	0.860	(0.029)	0.306
EAP	42	0.819	(0.069)	0.224
EECA	59	0.847	(0.038)	0.230
LAC	26	0.767	(0.094)	0.329
MENA	20	0.955	(0.104)	0.300
OECD	33	0.781	(0.052)	0.097
SA	23	0.649	(0.063)	0.122
SSA	74	1.000	(0.061)	0.415

FIGURE 1.—RATIO OF SURVEY ESTIMATES OF MEAN INCOME OR CONSUMPTION PER CAPITA TO COMPARABLE NATIONAL ACCOUNTS ESTIMATES

Consumption to consumption ratio



Income to consumption ratio



Income to GDP ratio

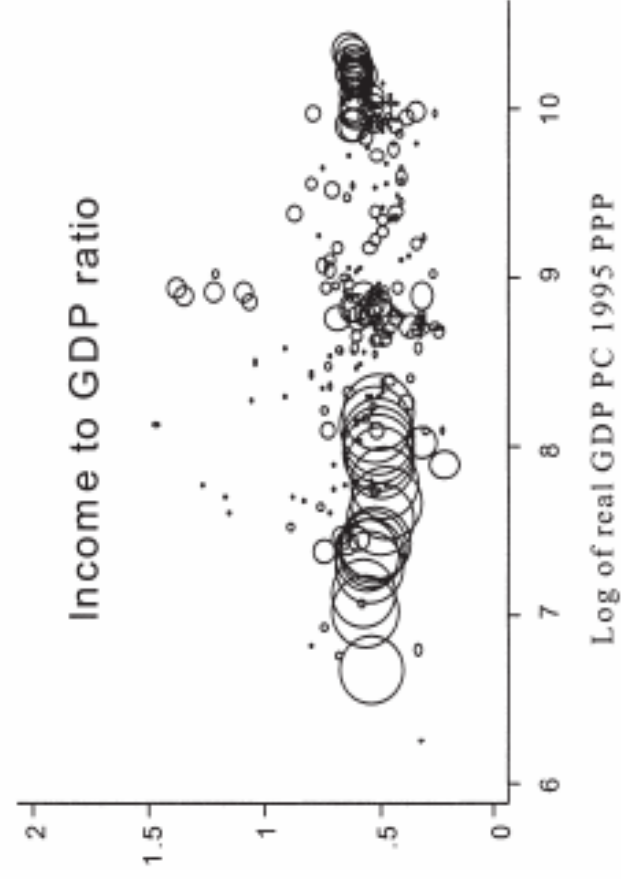


FIGURE 3.—LOGARITHMS OF POPULATION-WEIGHTED AVERAGES OF CONSUMPTION OR INCOME

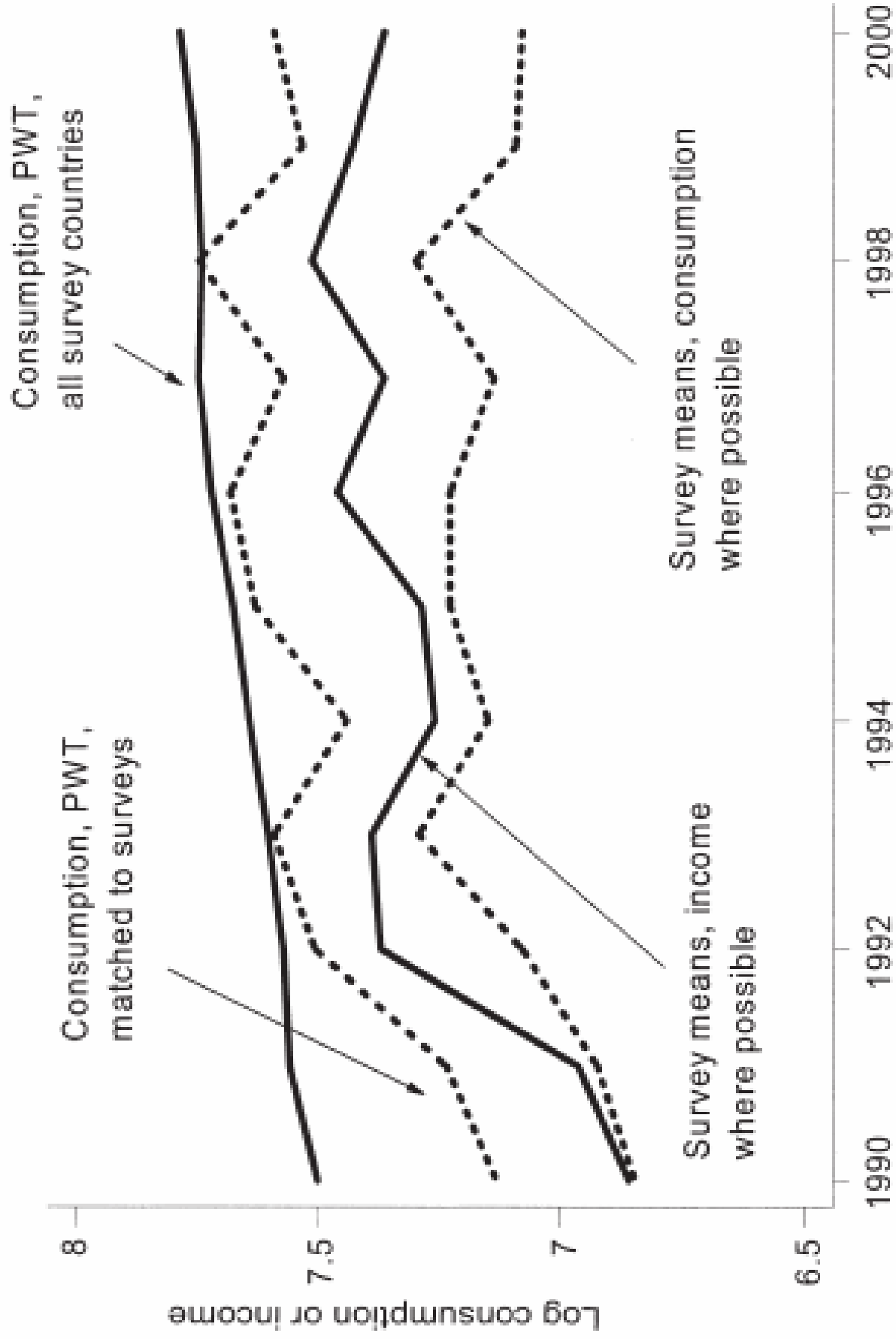


FIGURE 4.—RATIOS OF SURVEY MEANS TO NATIONAL ACCOUNTS MEANS OF CONSUMPTION AND/OR INCOME PER HEAD, INDIA AND CHINA

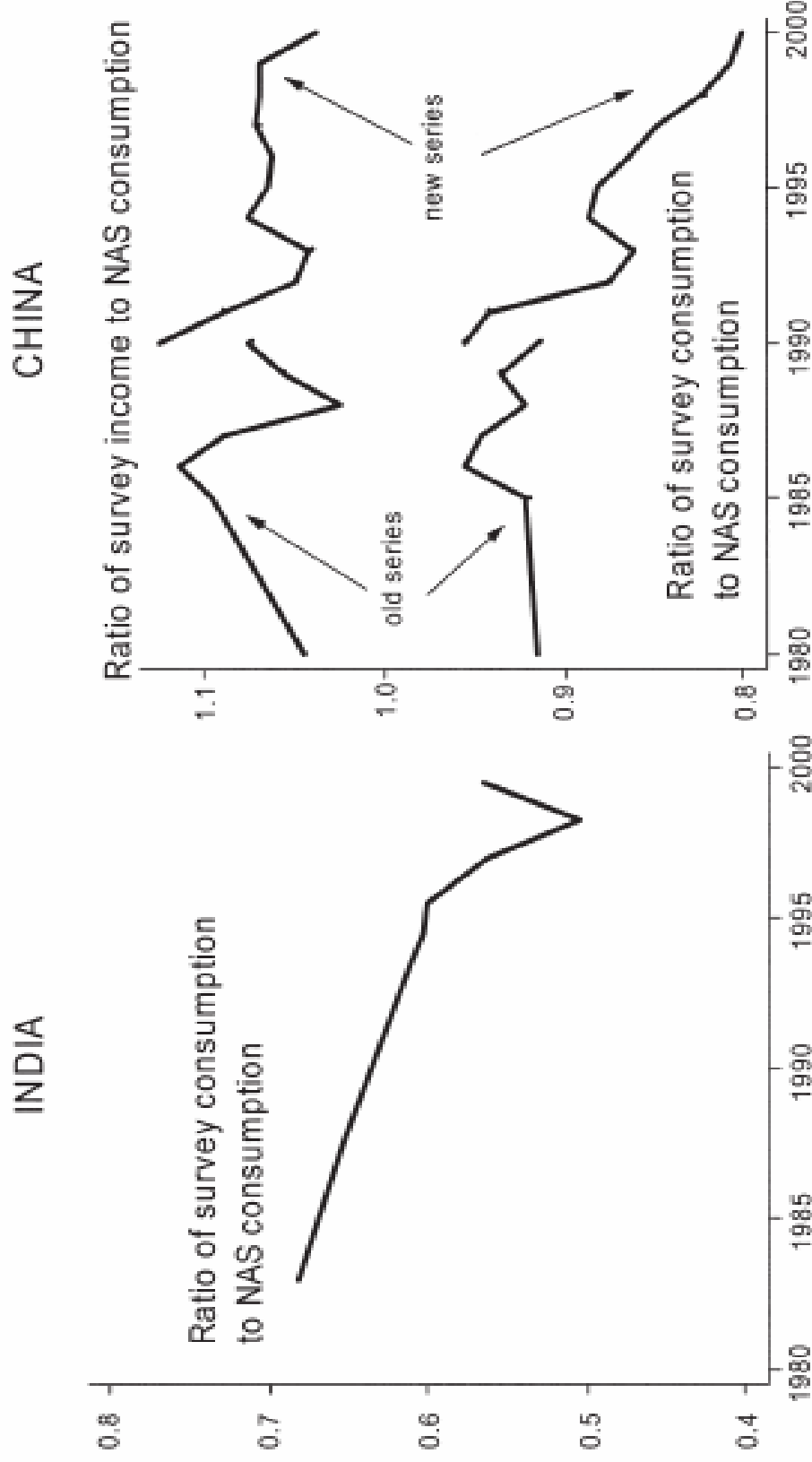
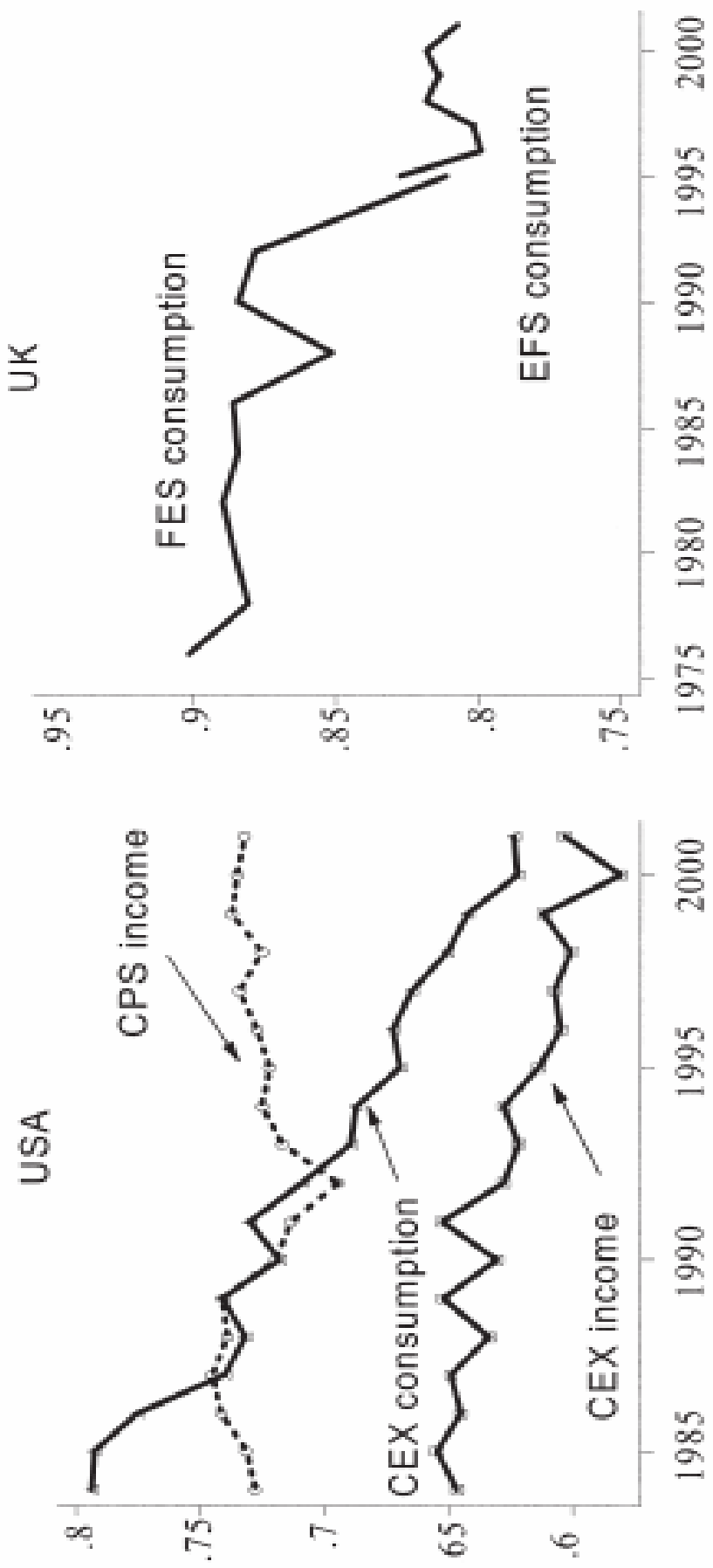


FIGURE 5.—RATIOS OF SURVEY MEANS TO NATIONAL ACCOUNTS MEANS OF CONSUMPTION AND/OR INCOME PER HEAD:
 UNITED STATES AND UNITED KINGDOM



Deaton (2005, *REStat*)

- Weaknesses of household survey (HHS) data:
 - 1) Survey non-response / non-compliance / coverage
 - 2) Surveys often (but not always) fail to include the rental value of owner-occupied housing
 - 3) Recall periods (i.e., 1 week vs. 1 month) have a major impact on reported consumption levels
 - 4) The disaggregation of survey items has an impact
 - 5) The identity of the survey respondent matters
 - 6) NGO / non-profit related consumption activities are typically missed in HH surveys but captured (at least in theory) in NSA measures

Deaton (2005, *REStat*)

- Weaknesses of national accounts system (NAS) data:
 - 1) Illegal / regulated activities (e.g., smuggling) may be systematically missed in the national accounts data
 - 2) The construction of NAS data often uses outdated and poorly measured official statistics, input-output tables, and estimated crop yields
 - 3) Household / informal sector production is missed in national accounts

(4) Levine and Renelt (1992, AER)

- Levine and Renelt examine a regression of the form:

$$Y = a + B_I I + B_M M + B_Z Z + u$$

where Y is per capita income growth, I is the vector of standard variables (as in MRW 1992), M the variable being tested for robustness, and Z are other controls

- How robust to the addition of other controls is B_M ?
- The bottom line: nearly all variables (in terms of fiscal, monetary, and trade policy, and political variables) are fragile to the addition of other controls, except for the standard investment and initial income variables

Whiteboard #1

Whiteboard #2

Whiteboard #3

Whiteboard #4

Whiteboard #5

