Figure 1: Mankiw, Romer, Weil (1992)

TABLE III

TESTS FOR UNCONDITIONAL CONVERGENCE

Dependent variable: log difference GDP per working-age person 1960–1985			
Sample:	Non-oil	Intermediate	OECD
Observations:	98	75	22
CONSTANT	−0.266	0.587	3.69
	(0.380)	(0.433)	(0.68)
ln(Y60)	0.0943	−0.00423	−0.341
	(0.0496)	(0.05484)	(0.079)
$\overline{R}^2$	0.03	−0.01	0.46
s.e.e.	0.44	0.41	0.18
Implied λ	−0.00360	0.00017	0.0167
	(0.00219)	(0.00218)	(0.0023)

Note. Standard errors are in parentheses. Y60 is GDP per working-age person in 1960.

TABLE IV

TESTS FOR CONDITIONAL CONVERGENCE

Dependent variable: log difference GDP per working-age person 1960–1985			
Sample:	Non-oil	Intermediate	OECD
Observations:	98	75	22
CONSTANT	1.93	2.23	2.19
	(0.83)	(0.86)	(1.17)
ln(Y60)	−0.141	−0.228	−0.351
	(0.052)	(0.057)	(0.066)
ln(I/GDP)	0.647	0.644	0.392
	(0.087)	(0.104)	(0.176)
$\ln(n + g + \delta)$	−0.299	−0.464	−0.753
	(0.304)	(0.307)	(0.341)
$\bar{R}^2$	0.38	0.35	0.62
s.e.e.	0.35	0.33	0.15
Implied λ	0.00606	0.0104	0.0173
	(0.00182)	(0.0019)	(0.0019)

Note. Standard errors are in parentheses. Y60 is GDP per working-age person in 1960. The investment and population growth rates are averages for the period 1960–1985. $(g + \delta)$ is assumed to be 0.05.

TABLE V

TESTS FOR CONDITIONAL CONVERGENCE

Dependent variable: log difference GDP per working-age person 1960–1985			
Sample:	Non-oil	Intermediate	OECD
Observations:	98	75	22
CONSTANT	3.04	3.69	2.81
	(0.83)	(0.91)	(1.19)
ln(Y60)	−0.289	−0.366	−0.398
	(0.062)	(0.067)	(0.070)
ln(I/GDP)	0.524	0.538	0.335
	(0.087)	(0.102)	(0.174)
$\ln(n + g + \delta)$	−0.505	−0.551	−0.844
	(0.288)	(0.288)	(0.334)
ln(SCHOOL)	0.233	0.271	0.223
	(0.060)	(0.081)	(0.144)
$\bar{R}^2$	0.46	0.43	0.65
s.e.e.	0.33	0.30	0.15
Implied λ	0.0137	0.0182	0.0203
	(0.0019)	(0.0020)	(0.0020)

Note. Standard errors are in parentheses. Y60 is GDP per working-age person in 1960. The investment and population growth rates are averages for the period 1960–1985. $(g + \delta)$ is assumed to be 0.05. SCHOOL is the average percentage of the working-age population in secondary school for the period 1960–1985.

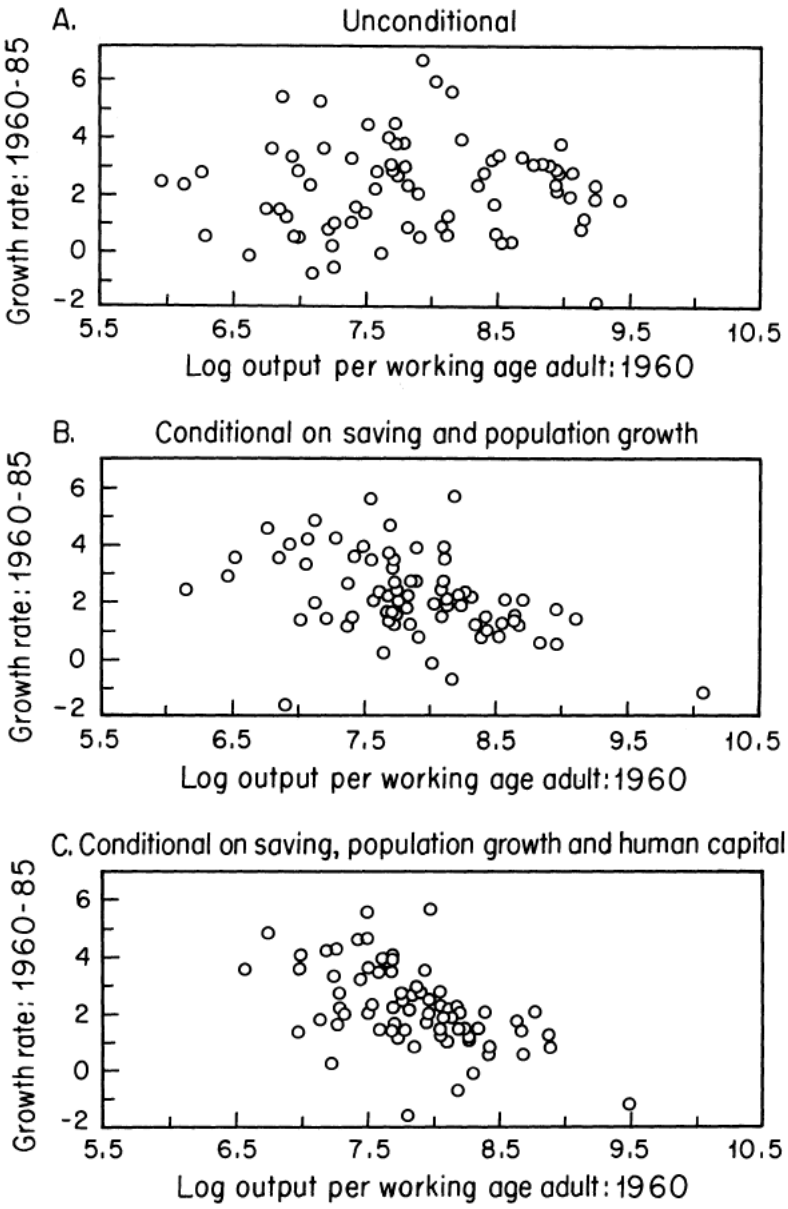


FIGURE I
Unconditional versus Conditional Convergence

Figure 2: Jones (2011)

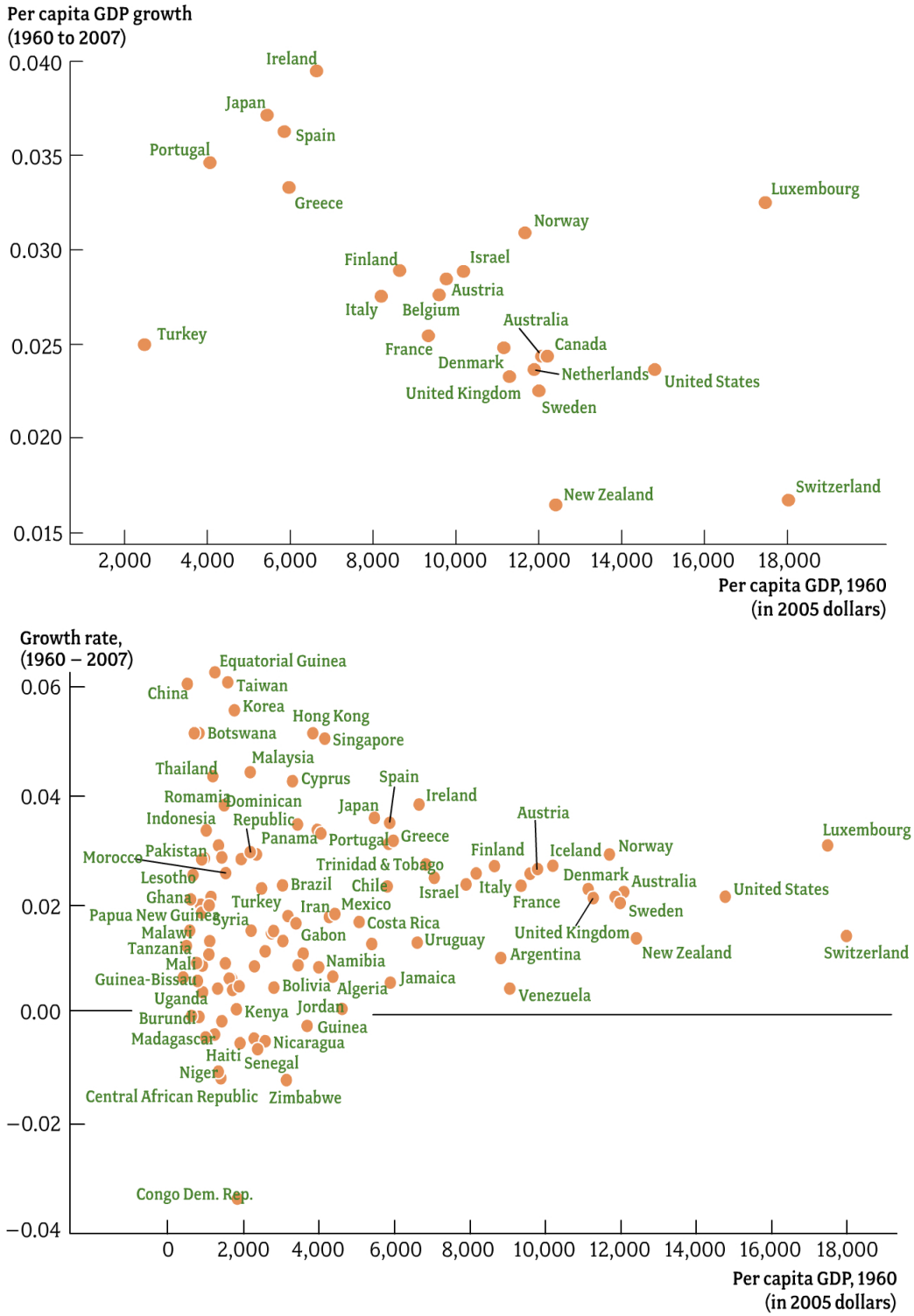


Figure 3: Islam (1995)

TABLE III

MINIMUM DISTANCE ESTIMATION WITH CORRELATED EFFECTS: DEPENDENT VARIABLE IS y_{it}

Sample	NONOIL	INTER	OECD
γ	0.8050	0.8117	0.7155
	(0.0306)	(0.0284)	(0.0098)
β	0.1530	0.1389	0.1203
	(0.0274)	(0.0243)	(0.0264)
Implied λ	0.0434	0.0417	0.0670
	(0.0076)	(0.0070)	(0.0026)
Implied α	0.4397	0.4245	0.2972
	(0.0614)	(0.0524)	(0.0433)

Figures in parentheses are asymptotic standard errors.

TABLE IV

LSDV ESTIMATION WITH FIXED EFFECTS: DEPENDENT VARIABLE IS y_{it}

Sample: No. of obs.	NONOIL 480	INTER 370	OECD 110
Unrestricted			
$y_{i,t-1}$	0.7762	0.7935	0.5864
	(0.0353)	(0.0388)	(0.0532)
$\ln(s)$	0.1595	0.1709	0.1215
	(0.0237)	(0.0256)	(0.0586)
$\ln(n+g+\delta)$	−0.4092	−0.2466	−0.0698
	(0.1024)	(0.1007)	(0.1007)
R^2	0.7404	0.8254	0.9659
Implied λ	0.0507	0.0462	0.1067
	(0.0091)	(0.0098)	(0.0181)
Restricted			
$y_{i,t-1}$	0.7919	0.7954	0.6294
	(0.0349)	(0.0387)	(0.0495)
$\ln(s) - \ln(n+g+\delta)$	0.1634	0.1726	0.0954
	(0.0238)	(0.0254)	(0.0581)
R^2	0.7368	0.8251	0.9642
Implied λ	0.0467	0.0458	0.0926
	(0.0088)	(0.0097)	(0.0157)
Implied α	0.4398	0.4575	0.2047
	(0.0545)	(0.0575)	(0.1042)
Wald test for restriction:			
p-value	0.70	0.90	0.90

Figures in the parentheses are standard errors, and the goodness of fit measures are with respect to the within regression.

Figure 4: Barro, Sala-i-Martin (2003)

Table 12.3
Basic Cross-Country Growth Regressions

(1) Explanatory Variable	(2) Coefficient	(3) Coefficient for Low-Income Sample	(4) Coefficient for High-Income Sample	(5) p Value[a]	(6) Coefficient with Data at 5-Year Intervals
Log of per capita GDP	−0.0248 (0.0029)	−0.0207 (0.0052)	−0.0318 (0.0049)	0.12	−0.0237 (0.0029)
Male upper-level schooling	0.0036 (0.0016)	0.0056 (0.0045)	0.0020 (0.0016)	0.44	0.0023 (0.0015)
1/(life expectancy at age 1)	−5.04 (0.86)	−5.13 (1.18)	−1.28 (1.44)	0.040	−4.91 (0.90)
Log of total fertility rate	−0.0118 (0.0050)	−0.0209 (0.0120)	−0.0211 (0.0054)	0.99	−0.0160 (0.0048)
Government consumption ratio	−0.062 (0.023)	−0.102 (0.031)	−0.000 (0.031)	0.021	−0.066 (0.021)
Rule of law	0.0185 (0.0059)	0.0237 (0.0099)	0.0223 (0.0063)	0.90	0.0174 (0.0062)
Democracy	0.079 (0.028)	0.044 (0.049)	0.105 (0.038)	0.32[b]	0.032 (0.017)
Democracy squared	−0.074 (0.025)	−0.054 (0.052)	−0.080 (0.031)	0.67	−0.028 (0.016)
Openness ratio	0.0054 (0.0048)	0.0169 (0.0113)	0.0061 (0.0046)	0.38	0.0094 (0.0043)
Change in terms of trade	0.130 (0.053)	0.181 (0.076)	0.036 (0.070)	0.16	0.029 (0.021)
Investment ratio	0.083 (0.024)	0.109 (0.035)	0.077 (0.027)	0.46	0.058 (0.022)
Inflation rate	−0.019 (0.010)	−0.019 (0.012)	−0.019 (0.009)	0.99	−0.031 (0.007)
Constant	0.296 (0.034)	0.294 (0.052)	0.295 (0.052)	0.99[c]	0.306 (0.035)
Dummy, 1975–85	−0.0078 (0.0026)	−0.0078 (0.0038)	−0.0066 (0.0032)	0.81	[d]
Dummy, 1985–95	−0.0128 (0.0034)	−0.0194 (0.0051)	−0.0052 (0.0040)	0.031	
Number of observations	72, 86, 83	26, 38, 33	46, 48, 50		72, 79, 86, 84 79, 80, 60
R-squared	.60, .49, .51	.78, .53, .65	.56, .56, .40		.40, .26, .27, .31, .46, .19, .04

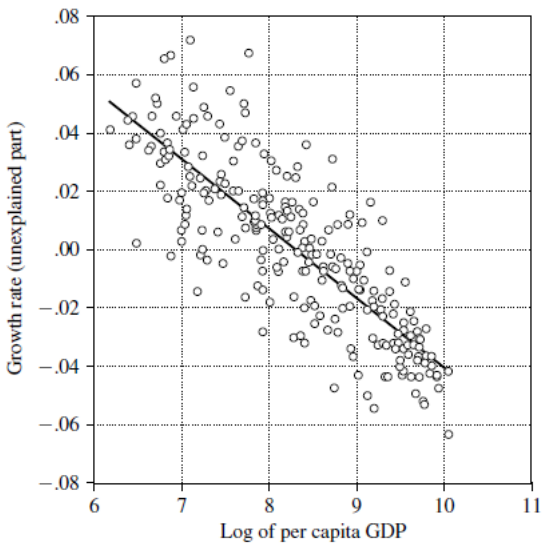
Notes: Estimation is by three-stage least squares. In column 2 the dependent variables are the growth rates of per capita GDP for 1965–75, 1975–85, and 1985–95. Instruments are the values in 1960, 1970, and 1980 of the log of per capita GDP, the life-expectancy variable, and the fertility variable; averages for 1960–64, 1970–74, and 1980–84 of the government consumption variable and the investment ratio; values in 1965, 1975, and 1985 of the schooling variable and the democracy variables; the openness and terms-of-trade variables (growth rates over 1965–75, 1975–85, and 1985–95, interacted with the corresponding averages of the ratio of exports plus imports to GDP); and dummies for Spanish or Portuguese colonies and other colonies (aside from Britain and France). The variances of the error terms are allowed to be correlated over the time periods and to have different variances for each period. Columns 3 and 4 separate the samples into countries with levels of per capita GDP below and above the median (for 1960, 1970, and 1980). Column 6 uses equations for economic growth for seven five-year periods, 1965–70, . . . , 1995–2000.

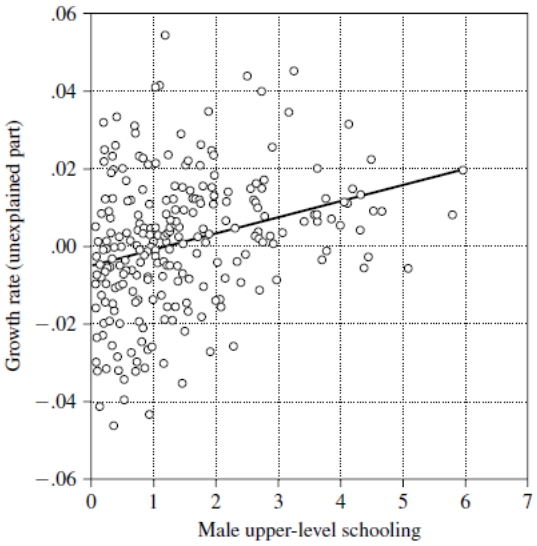
[a]The p values refer to the hypothesis that the coefficients are the same for the two income groups.

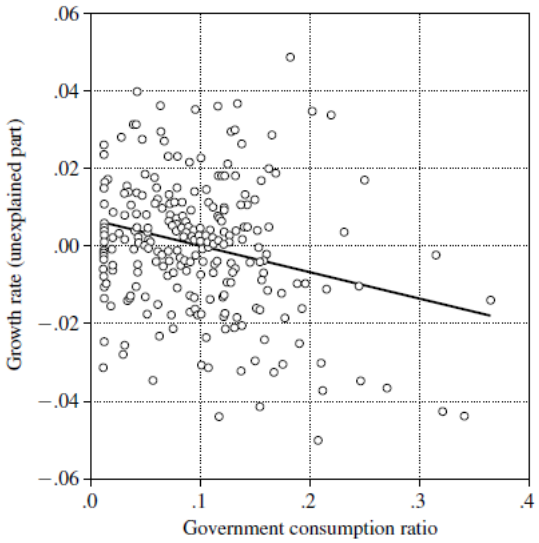
[b]The p value for democracy and democracy-squared jointly is 0.022.

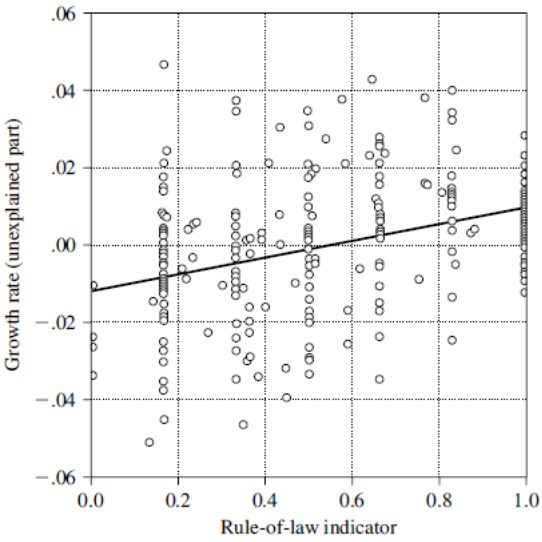
[c]The p value for the constant and two time dummies jointly is 0.10.

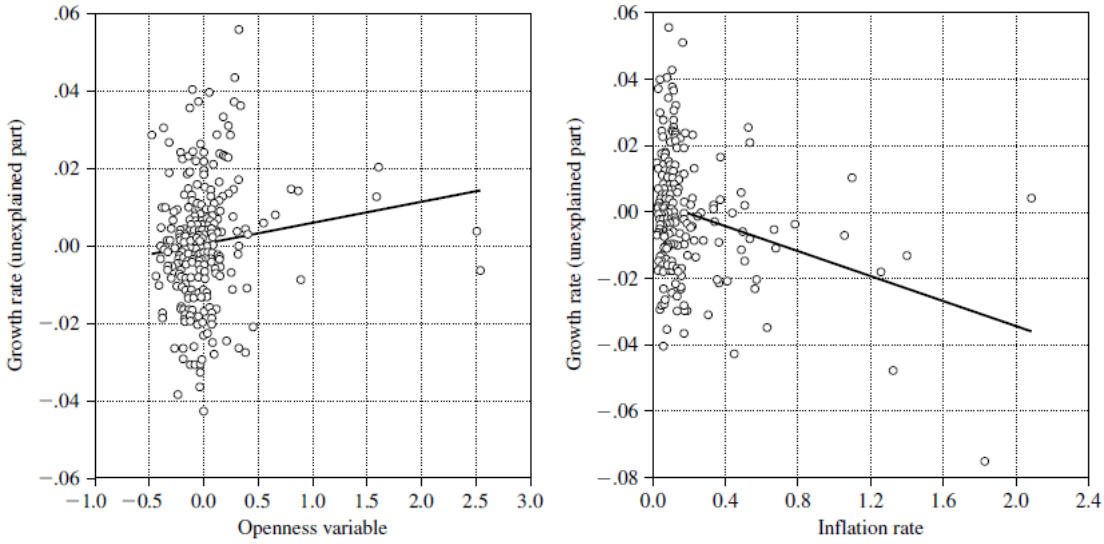
[d]The time dummies at the 5-year intervals are −0.0014 (0.0040) for 1970–75, −0.0000 (0.0040) for 1975–80, −0.0180 (0.0040) for 1980–85, −0.0112 (0.0037) for 1985–90, −0.0184 (0.0045) for 1990–95, and −0.0165 (0.0042) for 1995–2000.


Growth rate (unexplained part)
.08
.06
.04
.02
.00
−.02
−.04
−.06
−.08
6
7
8
9
10
11
Log of per capita GDP


Growth rate (unexplained part)
.06
.04
.02
.00
−.02
−.04
−.06
0
1
2
3
4
5
6
7
Male upper-level schooling


Growth rate (unexplained part)
.06
.04
.02
.00
−.02
−.04
−.06
.0
.1
.2
.3
.4
Government consumption ratio


Growth rate (unexplained part)
.06
.04
.02
.00
−.02
−.04
−.06
0.0
0.2
0.4
0.6
0.8
1.0
Rule-of-law indicator


.06
.04
.02
.00
−.02
−.04
−.06
Growth rate (unexplained part)
−1.0 −0.5 0.0 0.5 1.0 1.5 2.0 2.5 3.0
Openness variable
.06
.04
.02
.00
−.02
−.04
−.06
−.08
Growth rate (unexplained part)
0.0 0.4 0.8 1.2 1.6 2.0 2.4
Inflation rate