

Figure 1: Mankiw, Romer, Weil (1992)

TABLE I
ESTIMATION OF THE TEXTBOOK SOLOW MODEL

Dependent variable: log GDP per working-age person in 1985			
Sample:	Non-oil	Intermediate	OECD
Observations:	98	75	22
CONSTANT	5.48 (1.59)	5.36 (1.55)	7.97 (2.48)
$\ln(I/GDP)$	1.42 (0.14)	1.31 (0.17)	0.50 (0.43)
$\ln(n + g + \delta)$	-1.97 (0.56)	-2.01 (0.53)	-0.76 (0.84)
\bar{R}^2	0.59	0.59	0.01
<i>s.e.e.</i>	0.69	0.61	0.38
Restricted regression:			
CONSTANT	6.87 (0.12)	7.10 (0.15)	8.62 (0.53)
$\ln(I/GDP) - \ln(n + g + \delta)$	1.48 (0.12)	1.43 (0.14)	0.56 (0.36)
\bar{R}^2	0.59	0.59	0.06
<i>s.e.e.</i>	0.69	0.61	0.37
Test of restriction:			
<i>p</i> -value	0.38	0.26	0.79
Implied α	0.60 (0.02)	0.59 (0.02)	0.36 (0.15)

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

Figure 2: Mankiw, Romer, Weil (1992)

TABLE II
ESTIMATION OF THE AUGMENTED SOLOW MODEL

Dependent variable: log GDP per working-age person in 1985			
	Non-oil	Intermediate	OECD
Sample:			
Observations:	98	75	22
CONSTANT	6.89 (1.17)	7.81 (1.19)	8.63 (2.19)
$\ln(I/GDP)$	0.69 (0.13)	0.70 (0.15)	0.28 (0.39)
$\ln(n + g + \delta)$	-1.73 (0.41)	-1.50 (0.40)	-1.07 (0.75)
$\ln(SCHOOL)$	0.66 (0.07)	0.73 (0.10)	0.76 (0.29)
\bar{R}^2	0.78	0.77	0.24
<i>s.e.e.</i>	0.51	0.45	0.33
Restricted regression:			
CONSTANT	7.86 (0.14)	7.97 (0.15)	8.71 (0.47)
$\ln(I/GDP) - \ln(n + g + \delta)$	0.73 (0.12)	0.71 (0.14)	0.29 (0.33)
$\ln(SCHOOL) - \ln(n + g + \delta)$	0.67 (0.07)	0.74 (0.09)	0.76 (0.28)
\bar{R}^2	0.78	0.77	0.28
<i>s.e.e.</i>	0.51	0.45	0.32
Test of restriction:			
<i>p</i> -value	0.41	0.89	0.97
Implied α	0.31 (0.04)	0.29 (0.05)	0.14 (0.15)
Implied β	0.28 (0.03)	0.30 (0.04)	0.37 (0.12)

Note. Standard errors are in parentheses. 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 3: Klenow, Rodriguez-Clare (1997)

Table 1 THE ROLES OF A AND X IN 1985 PROSPERITY^a

Source ^a	$cov[\ln(Y/L), \ln(Z)]/var \ln(Y/L)$			
	$Z = \left(\frac{K_Y}{Y}\right)^{\frac{\alpha}{1-\alpha-\beta}}$	$Z = \left(\frac{H_Y}{Y}\right)^{\frac{\beta}{1-\alpha-\beta}}$	$Z = X$	$Z = A$
MRW0	.29	.49	.78	.22
MRW1	.27	.49	.76	.24
MRW2	.31	.47	.78	.22
MRW3	.29	.11	.40	.60
MRW4	.29	.04	.33	.67

^aMRW0: from MRW (uses their data appendix). MRW1: MRW0 but with K_Y/Y instead of K/Y . MRW2: MRW1 but with $L =$ worker instead of working-age population, 14 countries in/out. MRW3: MRW2 but with all enrollment rather than just secondary enrollment. MRW4: MRW3 but with (K, H, L) shares of (0.1, 0.4, 0.5), not (0.20, 0.28, 0.42), in H production.

Table 2 THE ROLES OF A AND X IN 1985 PROSPERITY

Source ^a	$cov[\ln(Y/L), \ln(Z)]/var \ln(Y/L)$			
	$Z = \left(\frac{K_Y}{Y}\right)^{\frac{\alpha}{1-\alpha-\beta}}$	$Z = \left(\frac{H_Y}{Y}\right)^{\frac{\beta}{1-\alpha-\beta}}$	$Z = X$	$Z = A$
BK1	.29	.31	.60	.40
BK2	.23	.33	.56	.44
BK3	.23	.31	.53	.47
BK4	.23	.11	.34	.66

^aBK1: uses (7), i.e. Mincer evidence. BK2: calculates years of schooling s from Barro–Lee 1985 stocks instead of 1960–1985 flows. BK3: adds average years of experience. BK4: BK3 but with (K, H, L) shares of (0, 0, 1) instead of (0.1, 0.4, 0.5) in H production.

Figure 4: Hsieh (1999)

TABLE 1—DUAL TOTAL FACTOR PRODUCTIVITY GROWTH

	Labor share	Annual growth rate of:			
		Rental price of capital	Wages	Dual TFP	Primal TFP
<i>Singapore:</i>					
Return on equity (1971–1990)	0.51	0.09	3.13	1.64	–0.69
Average lending rate (1968–1990)	0.51	1.21	2.69	1.96	–0.30
<i>E/P</i> ratio (1972–1990)	0.51	1.27	3.46	2.39	–0.68
<i>Taiwan:</i>					
Informal loan rate (1966–1990)	0.74	–0.75	5.26	3.72	2.10
Deposit rate (1966–1990)	0.74	–0.77	5.26	3.71	2.10
Secured loan rate (1966–1990)	0.74	–1.73	5.26	3.46	2.10
Treasury-bill rate (1973–1990)	0.75	–1.52	5.24	3.52	2.06
<i>Hong Kong:</i>					
Best lending rate (1966–1991)	0.63	0.29	4.04	2.65	2.30
Call-money rate (1966–1991)	0.63	–0.65	4.04	2.30	2.30
<i>E/P</i> ratio (1973–1991)	0.62	–0.42	4.18	2.41	2.18
<i>Korea:</i>					
Curb-market loan rate (1966–1990)	0.70	–4.84	4.38	1.64	1.70
Deposit rate (1966–1990)	0.70	–3.88	4.38	1.93	1.70
Discount rate (1966–1990)	0.70	–3.33	4.38	2.09	1.70

Notes: Dual TFPG is the weighted growth rate of quality-adjusted real wages and rental price of capital, where the weights are the factor shares. Primal TFPG and aggregate factor shares are calculated from Young (1995). The return on equity and earnings–price ratio in Singapore and the earnings–price ratio in Hong Kong are used as *real* interest rates. All other measures of the return to capital are used as nominal interest rates from which the *ex post* inflation rate is subtracted to obtain the real interest rate. See Hsieh (1998) for further details.

Figure 5: Barro, Sala-i-Martin (2002), chapter 10

Table 10.1
Growth Accounting for a Sample of Countries

Country	(1) Growth Rate of GDP	(2) Contribution from Capital	(3) Contribution from Labor	(4) TFP Growth Rate
Panel A: OECD Countries, 1947–73				
Canada ($\alpha = 0.44$)	0.0517	0.0254 (49%)	0.0088 (17%)	0.0175 (34%)
France^a ($\alpha = 0.40$)	0.0542	0.0225 (42%)	0.0021 (4%)	0.0296 (54%)
Germany^b ($\alpha = 0.39$)	0.0661	0.0269 (41%)	0.0018 (3%)	0.0374 (56%)
Italy^b ($\alpha = 0.39$)	0.0527	0.0180 (34%)	0.0011 (2%)	0.0337 (64%)
Japan^b ($\alpha = 0.39$)	0.0951	0.0328 (35%)	0.0221 (23%)	0.0402 (42%)
Netherlands^c ($\alpha = 0.45$)	0.0536	0.0247 (46%)	0.0042 (8%)	0.0248 (46%)
U.K.^d ($\alpha = 0.38$)	0.0373	0.0176 (47%)	0.0003 (1%)	0.0193 (52%)
U.S. ($\alpha = 0.40$)	0.0402	0.0171 (43%)	0.0095 (24%)	0.0135 (34%)
Panel B: OECD Countries, 1960–95				
Canada ($\alpha = 0.42$)	0.0369	0.0186 (51%)	0.0123 (33%)	0.0057 (16%)
France ($\alpha = 0.41$)	0.0358	0.0180 (53%)	0.0033 (10%)	0.0130 (38%)
Germany ($\alpha = 0.39$)	0.0312	0.0177 (56%)	0.0014 (4%)	0.0132 (42%)
Italy ($\alpha = 0.34$)	0.0357	0.0182 (51%)	0.0035 (9%)	0.0153 (42%)
Japan ($\alpha = 0.43$)	0.0566	0.0178 (31%)	0.0125 (22%)	0.0265 (47%)
U.K. ($\alpha = 0.37$)	0.0221	0.0124 (56%)	0.0017 (8%)	0.0080 (36%)
U.S. ($\alpha = 0.39$)	0.0318	0.0117 (37%)	0.0127 (40%)	0.0076 (24%)

Table continued

Table 10.1
(Continued)

Country	(1) Growth Rate of GDP	(2) Contribution from Capital	(3) Contribution from Labor	(4) TFP Growth Rate
Panel C: Latin American Countries, 1940–90				
Argentina ($\alpha = 0.54$)	0.0279	0.0128 (46%)	0.0097 (35%)	0.0054 (19%)
Brazil ($\alpha = 0.45$)	0.0558	0.0294 (53%)	0.0150 (27%)	0.0114 (20%)
Chile ($\alpha = 0.52$)	0.0362	0.0120 (33%)	0.0103 (28%)	0.0138 (38%)
Colombia ($\alpha = 0.63$)	0.0454	0.0219 (48%)	0.0152 (33%)	0.0084 (19%)
Mexico ($\alpha = 0.69$)	0.0522	0.0259 (50%)	0.0150 (29%)	0.0113 (22%)
Peru ($\alpha = 0.66$)	0.0323	0.0252 (78%)	0.0134 (41%)	−0.0062 (−19%)
Venezuela ($\alpha = 0.55$)	0.0443	0.0254 (57%)	0.0179 (40%)	0.0011 (2%)
Panel D: East Asian Countries, 1966–90				
Hong Kong^e ($\alpha = 0.37$)	0.073	0.030 (41%)	0.020 (28%)	0.023 (32%)
Singapore ($\alpha = 0.49$)	0.087	0.056 (65%)	0.029 (33%)	0.002 (2%)
South Korea ($\alpha = 0.30$)	0.103	0.041 (40%)	0.045 (44%)	0.017 (16%)
Taiwan ($\alpha = 0.26$)	0.094	0.032 (34%)	0.036 (39%)	0.026 (28%)

Sources: Panel A estimates for OECD countries are from Christenson, Cummings, and Jorgenson (1980). Panel B estimates for OECD countries are from Jorgenson and Yip (2001, tables 3, 5, 7, 10). Panel C estimates for Latin American countries are from Elias (1990), updated with unpublished notes from Victor Elias. (For this source only, the calculations assumed that the capital share, α , was constant over time.) Panel D estimates for East Asian countries are from Young (1995, tables V–VIII).

The average value of the capital share, α , is shown in parentheses below the name of each country. Column 1 reports the annualized growth rate of real GDP. Column 2 is the product of the capital share, α , and the growth rate of quality-adjusted capital input. The number in parentheses is the percentage of the GDP growth rate that is explained by the growth of capital input. Column 3 is the product of the labor share, $1 - \alpha$, and the growth rate of quality-adjusted labor input. The number in parentheses is the percentage of the GDP growth rate that is explained by the growth of labor input. Column 4 shows the growth rate of total factor productivity (TFP). The number in parentheses is the percentage of the GDP growth rate that is explained by TFP growth.

^a 1950–73

^b 1952–73

^c 1951–73

^d 1955–73

^e 1966–91

Figure 6: Jones (2010)

Growth Accounting for the United States (BLS)

Period	Output	TFP	Labor Comp- osition	K/L	Breakdown for capital	
	per hour				IT	Other
1948–2010	2.5	1.4	0.2	0.9	0.4	0.6
1948–1973	3.3	2.2	0.2	1.0	0.1	0.9
1973–1990	1.6	0.5	0.2	0.8	0.4	0.4
1990–1995	1.5	0.4	0.5	0.6	0.4	0.1
1995–2000	2.9	1.5	0.2	1.2	0.9	0.3
2000–2007	2.7	1.5	0.2	1.0	0.5	0.4
2007–2010	2.5	0.5	0.5	1.5	0.6	1.0