

N. Gregory Mankiw

Macroeconomics

Sixth Edition

Chapter 8:

Economic Growth II: Technology, Empirics, and Policy

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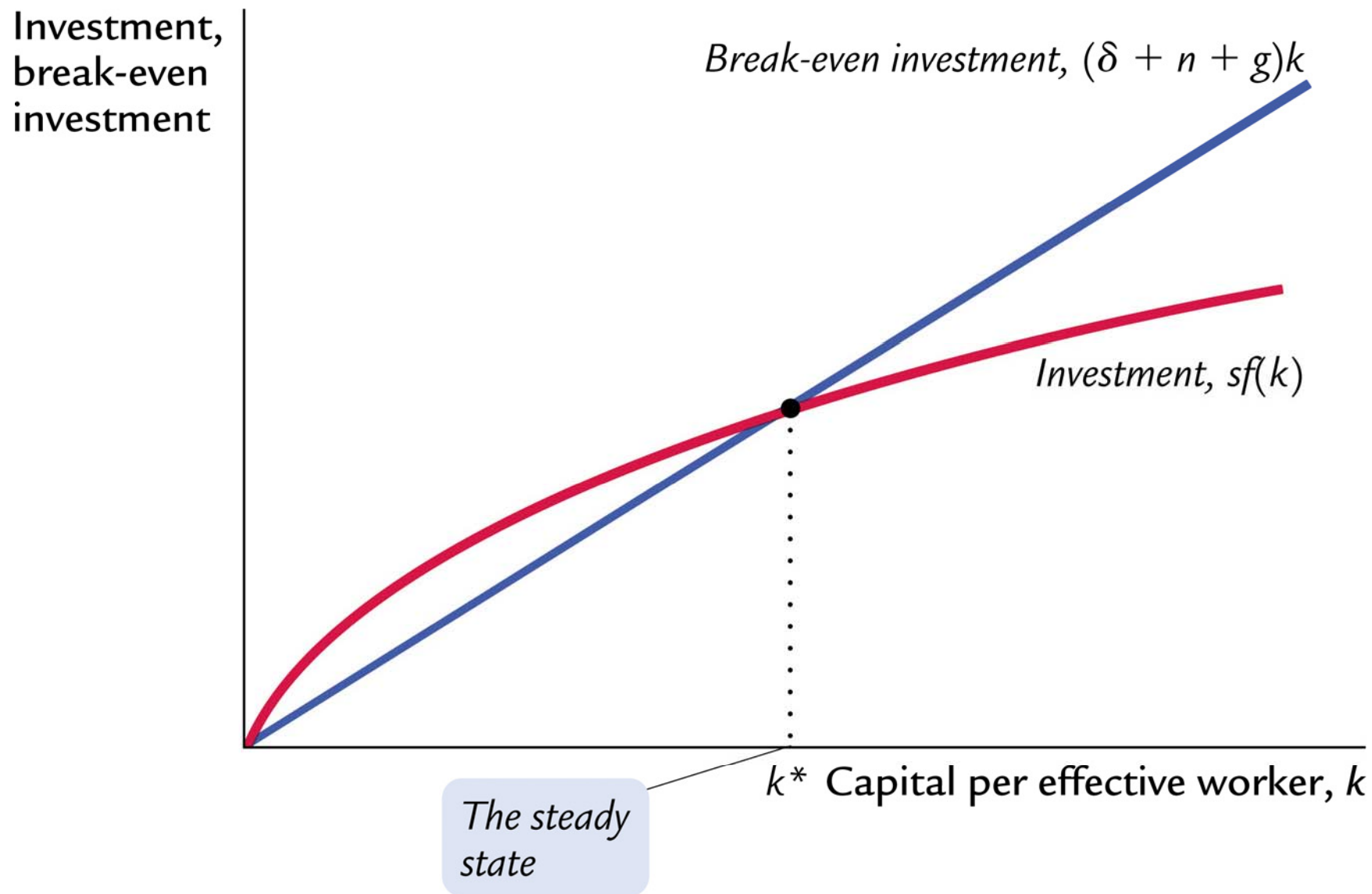


Figure 8.1 Technological Progress and the Solow Growth Model
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TABLE 8-1

Steady-State Growth Rates in the Solow Model With Technological Progress

Variable	Symbol	Steady-State Growth Rate
Capital per effective worker	$k = K/(E \times L)$	0
Output per effective worker	$y = Y/(E \times L) = f(k)$	0
Output per worker	$Y/L = y \times E$	g
Total output	$Y = y \times (E \times L)$	$n + g$

Table 8.1

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TABLE 8-2

Growth Around the World

Country	GROWTH IN OUTPUT PER PERSON (PERCENT PER YEAR)		
	1948–1972	1972–1995	1995–2004
Canada	2.9	1.8	2.4
France	4.3	1.6	1.7
West Germany	5.7	2.0	
Germany			1.2
Italy	4.9	2.3	1.5
Japan	8.2	2.6	1.2
United Kingdom	2.4	1.8	2.5
United States	2.2	1.5	2.2

Source: Angus Maddison, *Phases of Capitalist Development* (Oxford: Oxford University Press, 1982); OECD National Accounts; and World Bank: *World Development Indicators*.

Table 8.2

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TABLE 8-3

Accounting for Economic Growth in the United States

Years	Output Growth $\Delta Y/Y$	=	SOURCE OF GROWTH			Total Factor Productivity $\Delta A/A$
			Capital $\alpha \Delta K/K$	+	Labor $(1 - \alpha) \Delta L/L$	
			(average percentage increase per year)			
1948–2002	3.6		1.2		1.2	1.2
1948–1972	4.0		1.2		1.0	1.8
1972–1995	3.2		1.3		1.4	0.5
1995–2002	3.7		1.7		0.9	1.1

Source: U.S. Department of Labor. Data are for the non-farm business sector.

Table 8.3

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