6

THE ECONOMICS OF LABOR MARKETS

18

The Markets for the Factors of Production

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Figure 1a The Versatility of Supply and Demand

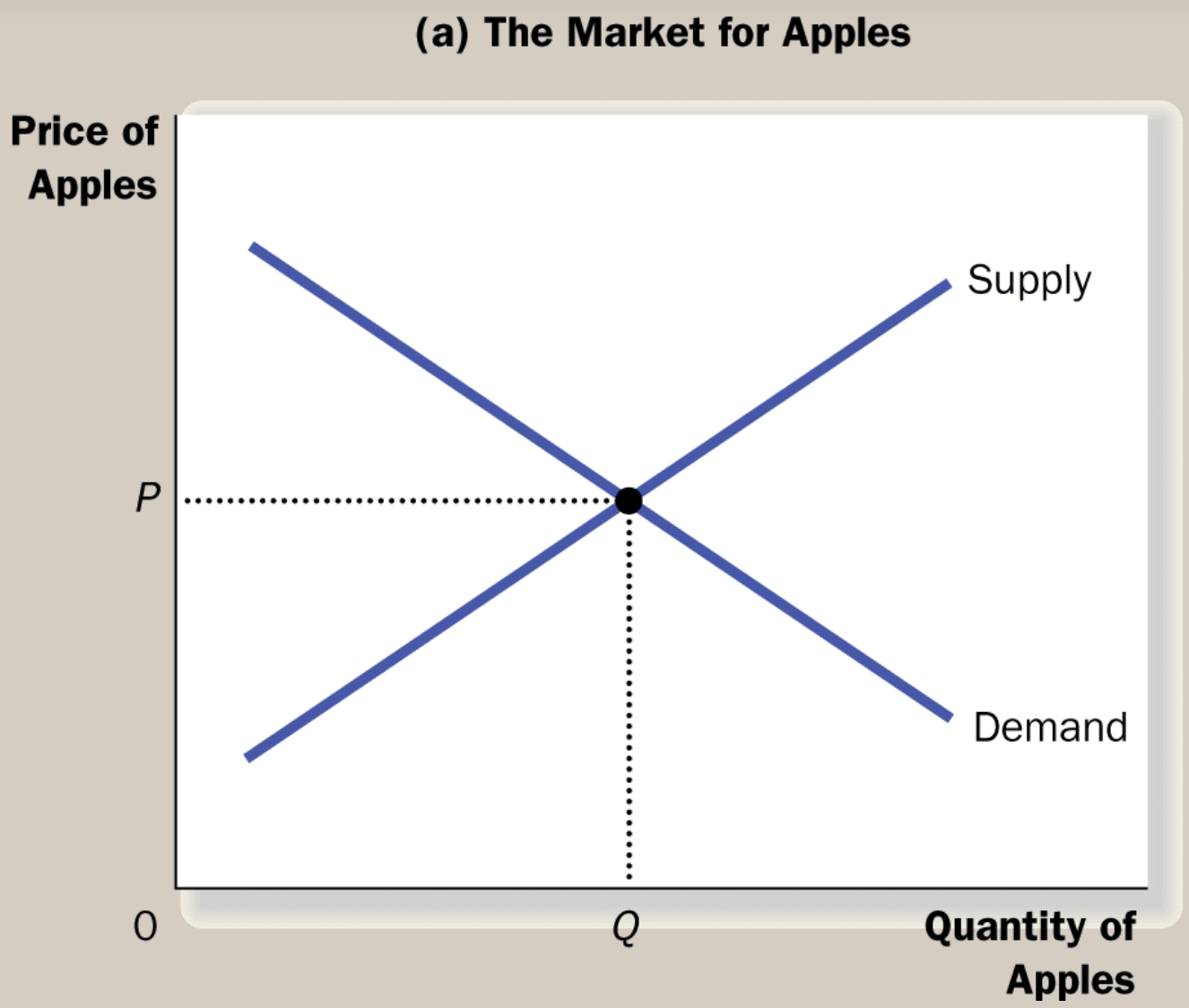

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Figure 1b The Versatility of Supply and Demand

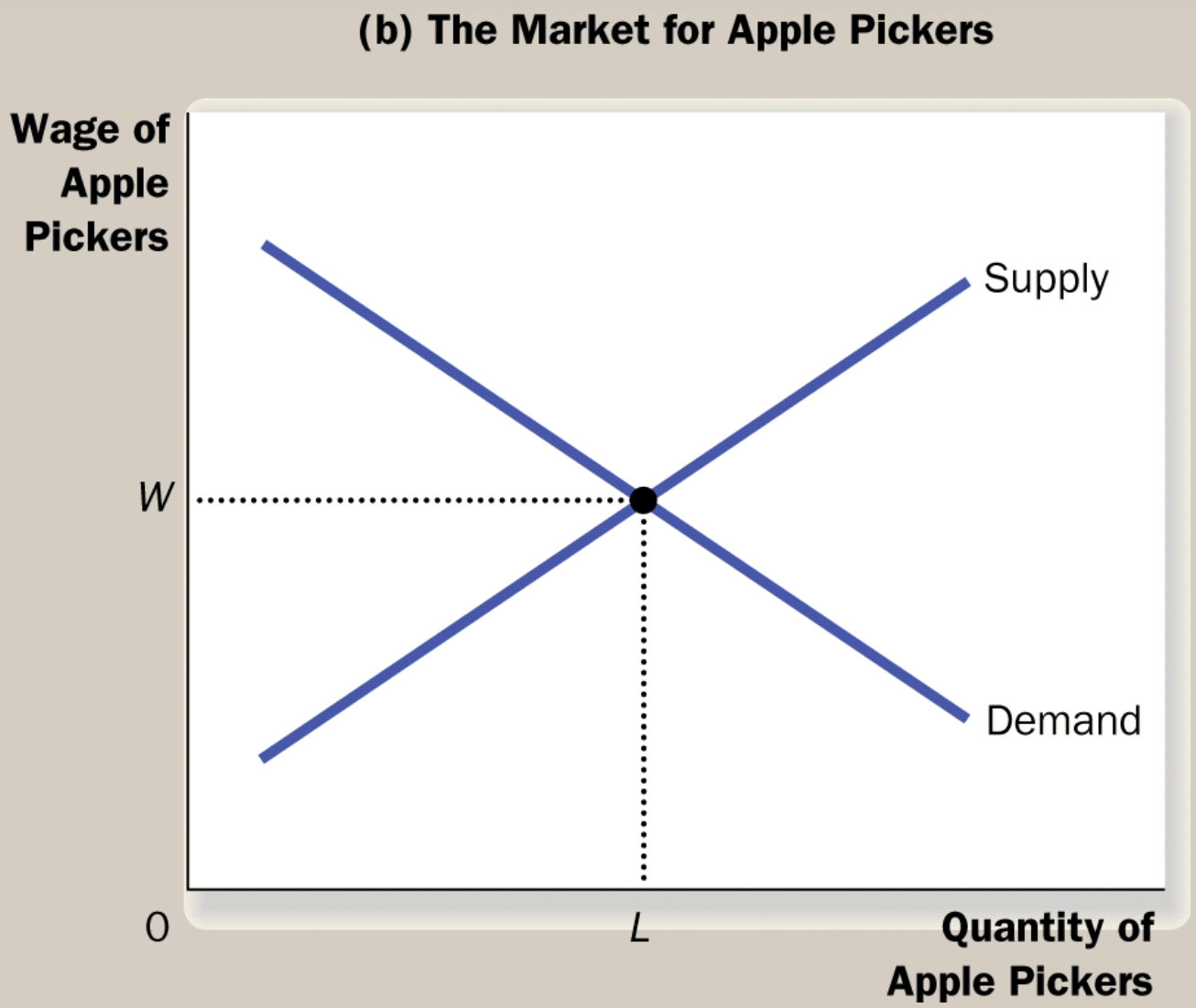

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Table 1 How the Competitive Firm Decides How Much Labor to Hire

Labor	Output	Marginal Product of Labor	Value of the Marginal Product of Labor	Wage	Marginal Profit
L (number of workers)	Q (bushels per week)	$MPL = \Delta Q/\Delta L$ (bushels per week)	$VMPL = P \times MPL$	W	$\Delta\text{Profit} = VMPL - W$
0	0				
		100	$1,000	$500	$500
1	100				
		80	800	500	300
2	180				
		60	600	500	100
3	240				
		40	400	500	−100
4	280				
		20	200	500	−300
5	300				

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Figure 2 The Production Function

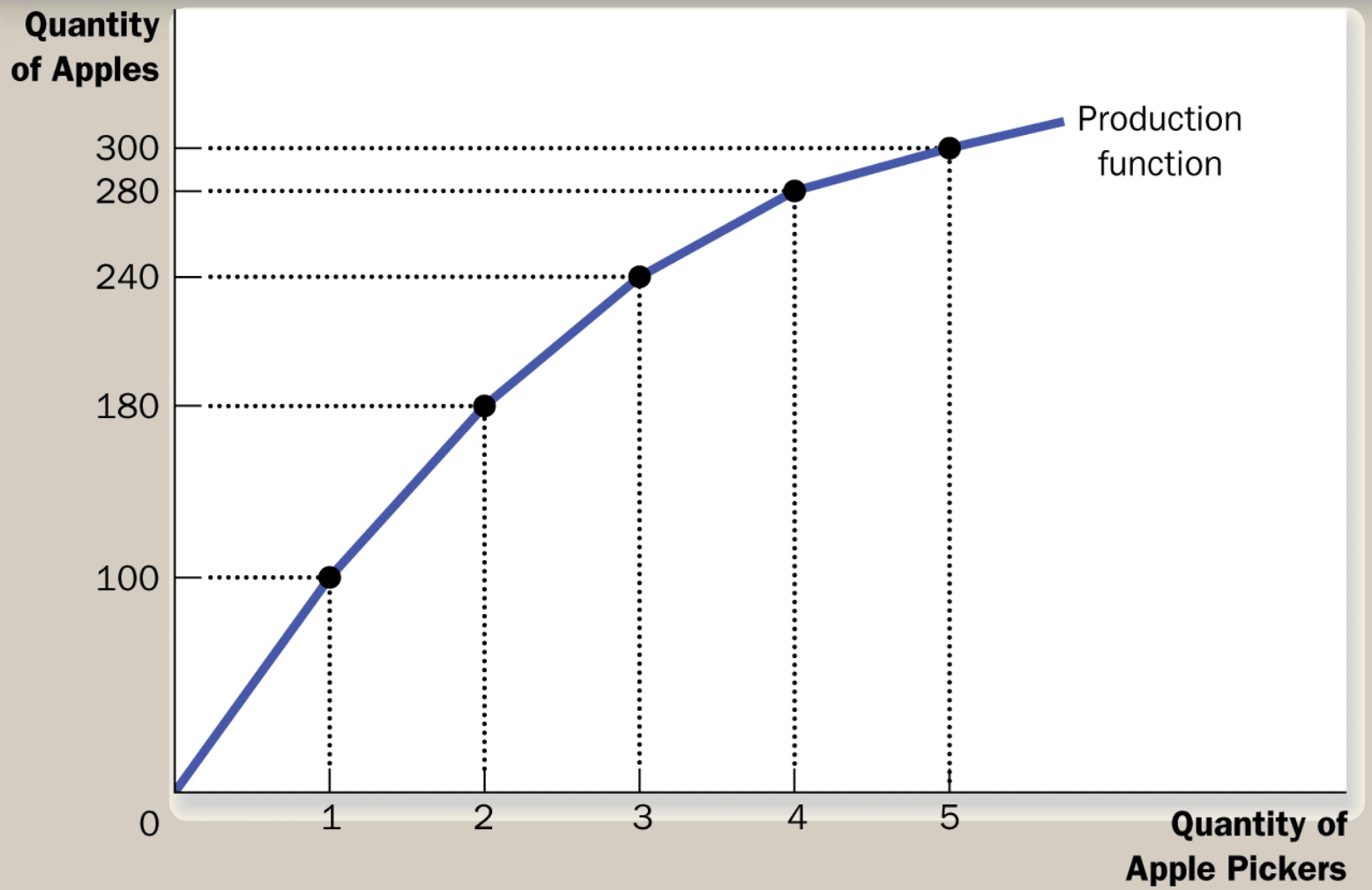

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Figure 3 The Value of the Marginal Product of Labor

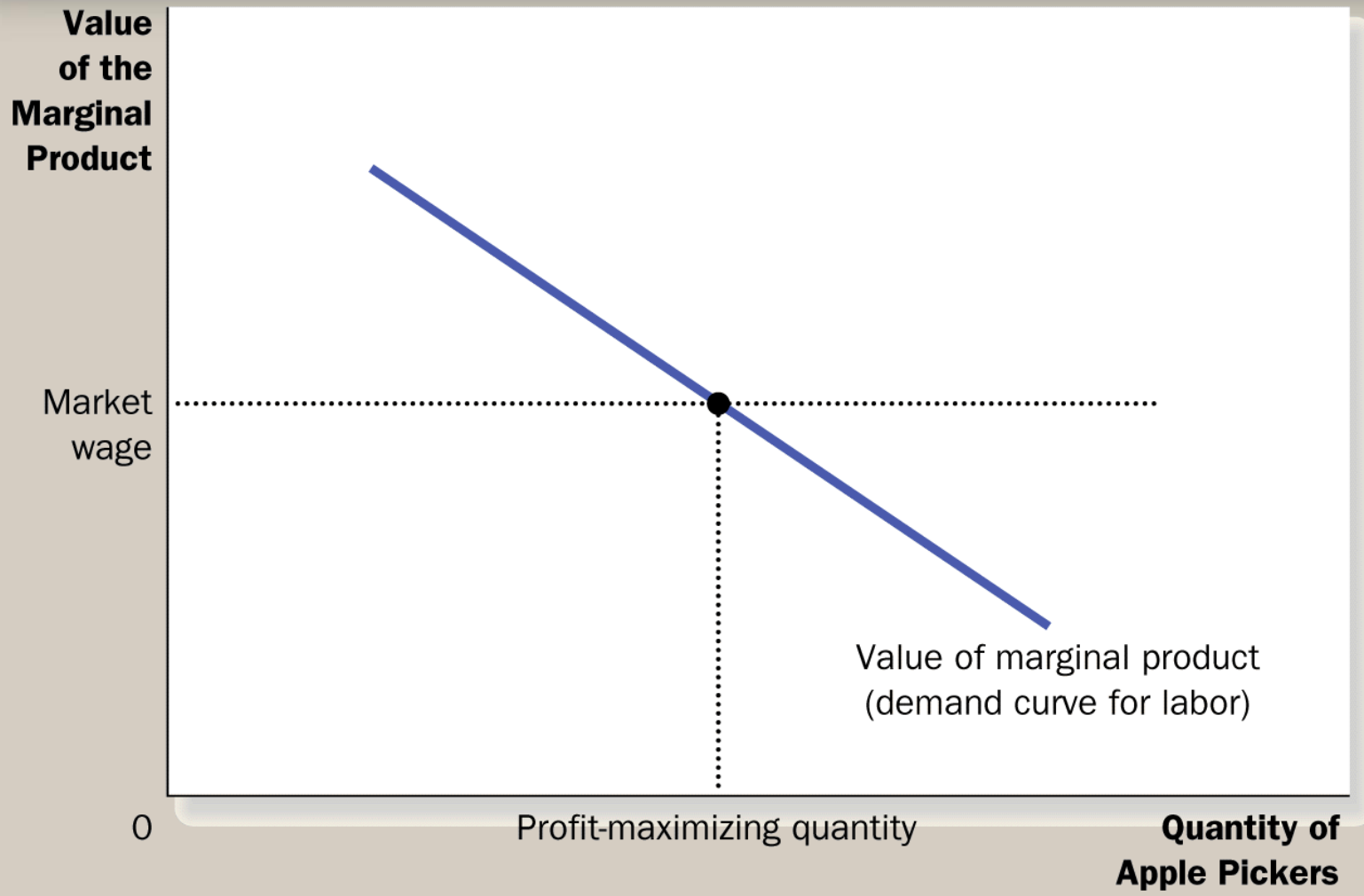

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Figure 4 Equilibrium in a Labor Market

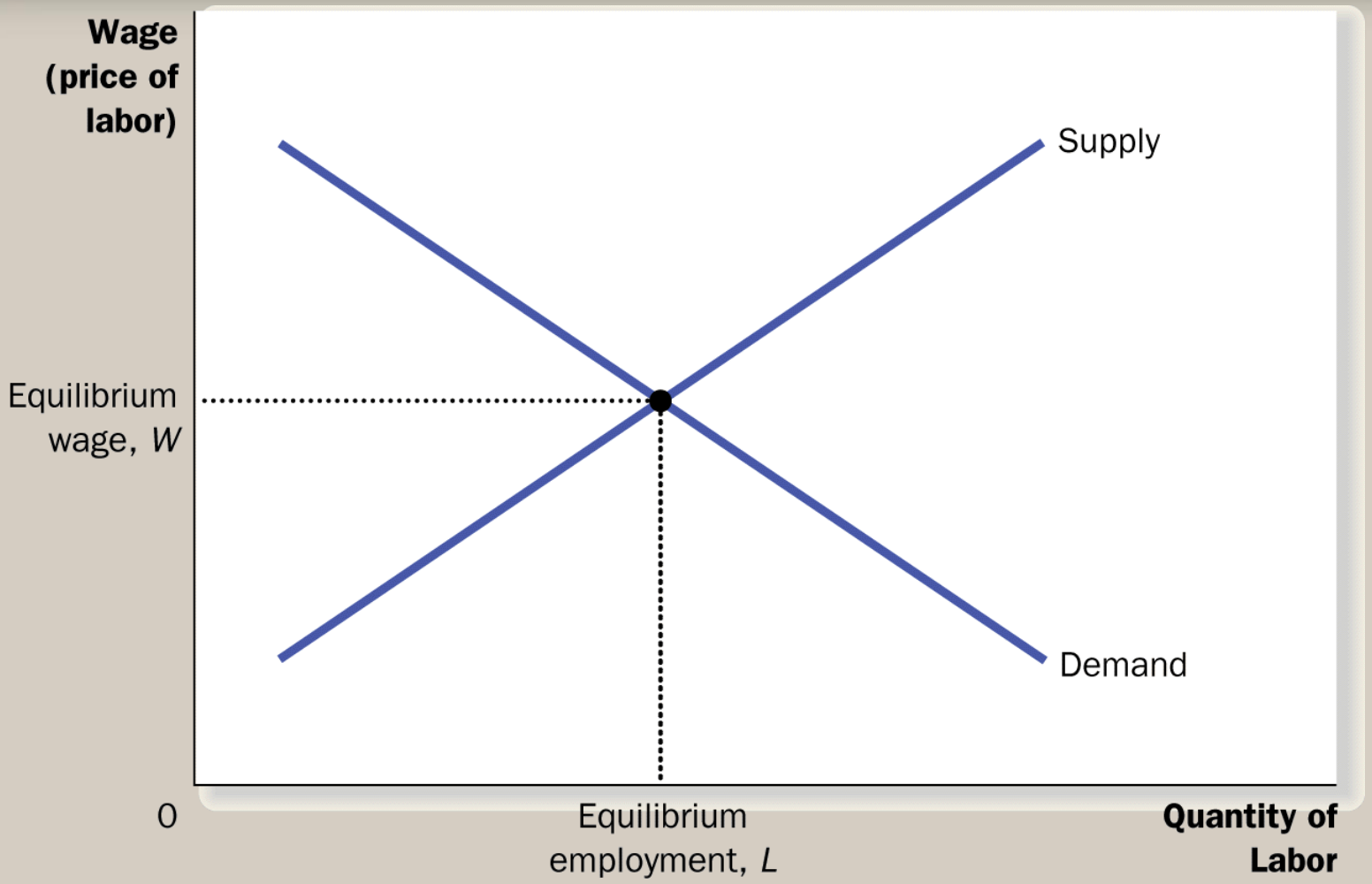

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Figure 5 A Shift in Labor Supply

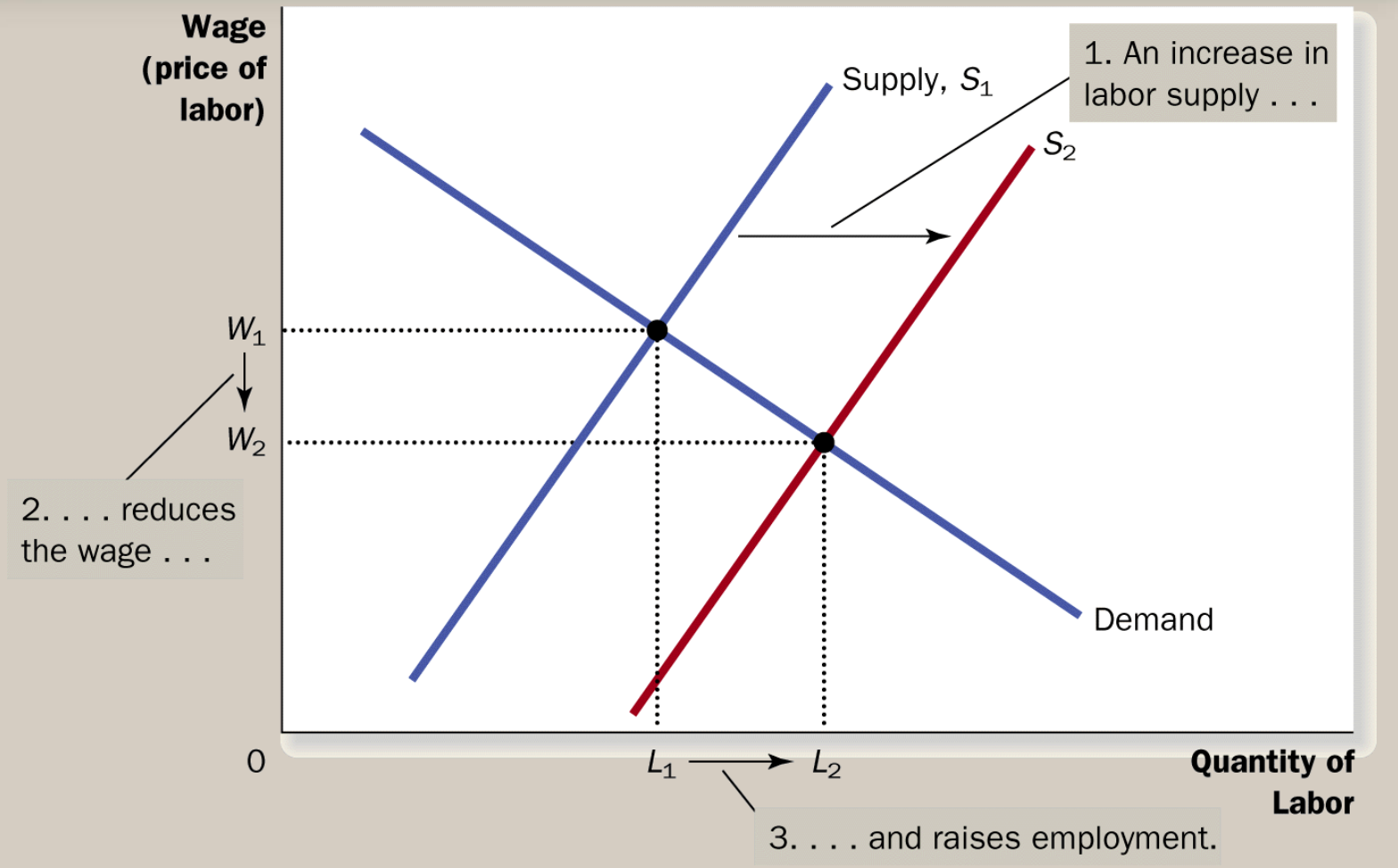

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Figure 6 A Shift in Labor Demand

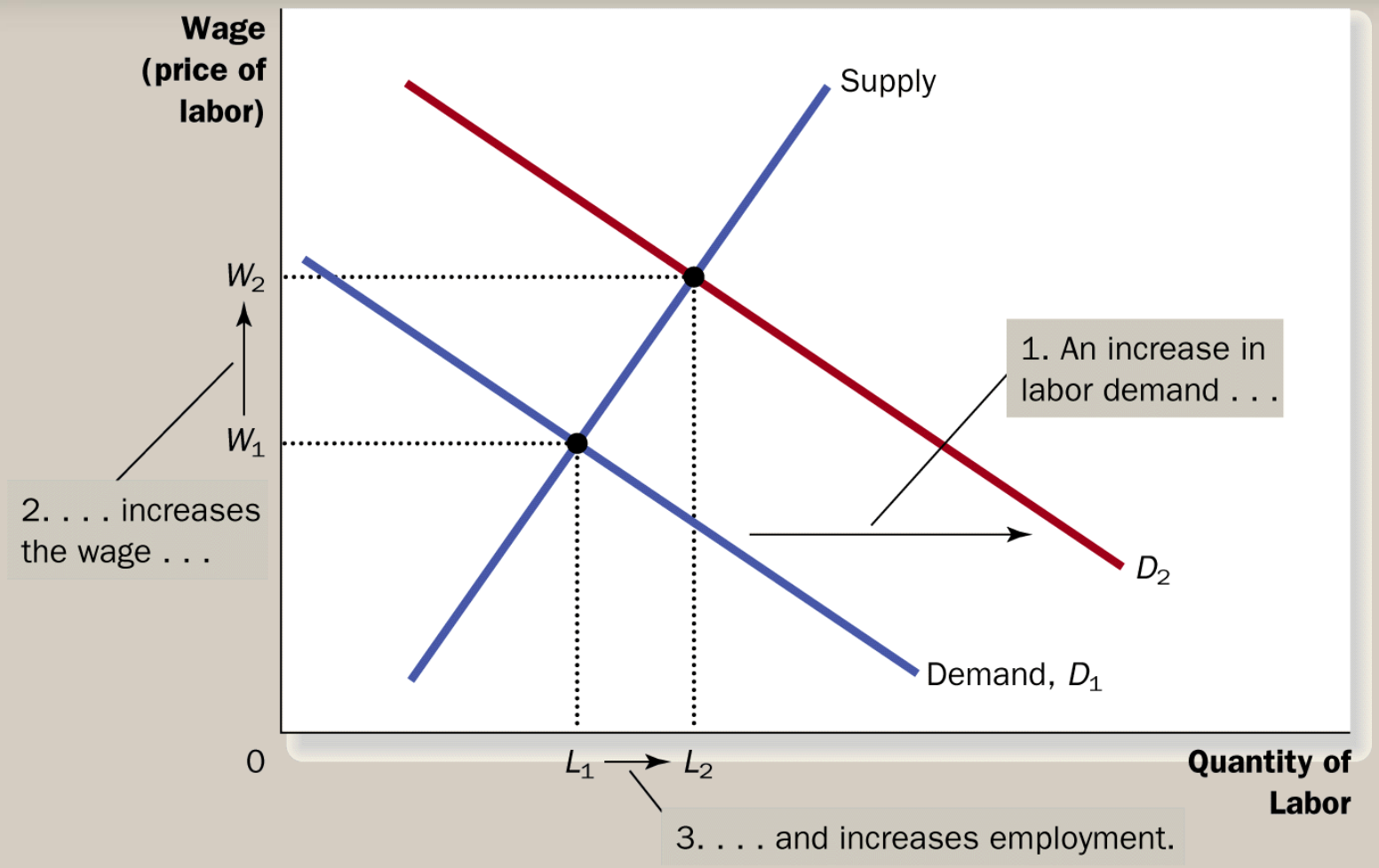

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Table 2 Productivity and Wage Growth in the United States.

Time Period	Growth Rate of Productivity	Growth Rate of Real Wages
1959–2000	2.0	2.0
1959–1973	2.9	3.0
1973–1995	1.3	1.1
1995–2000	2.6	2.9

Source: *Economic Report of the President 2002*, table B-49, p. 378. Growth in productivity is measured here as the annualized rate of change in output per hour in the nonfarm business sector. Growth in real wages is measured as the annualized change in compensation per hour in the nonfarm business sector divided by the implicit price deflator for that sector. These productivity data measure average productivity—the quantity of output divided by the quantity of labor—rather than marginal productivity, but average and marginal productivity are thought to move closely together.

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Figure 7a The Markets for Land and Capital

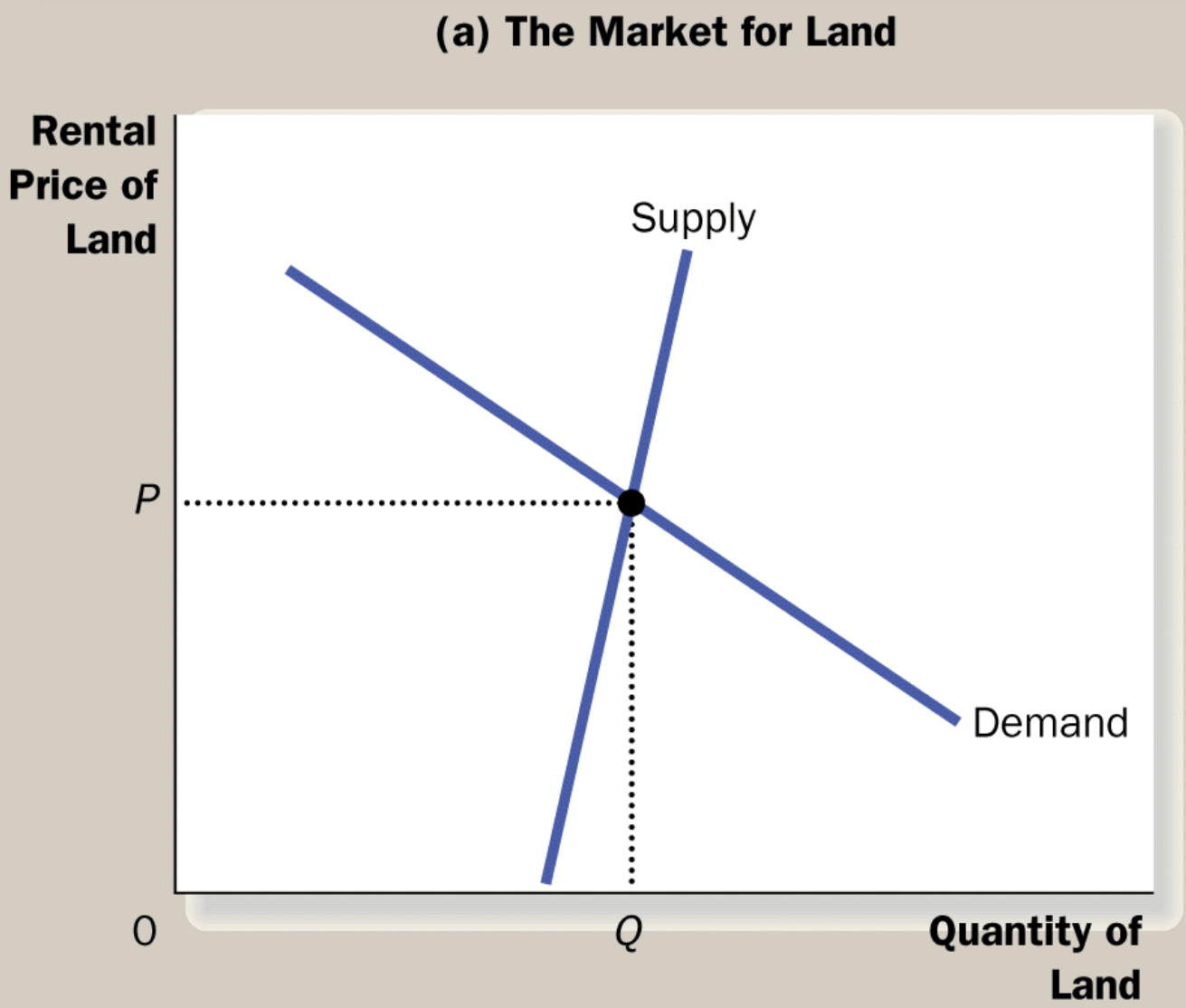

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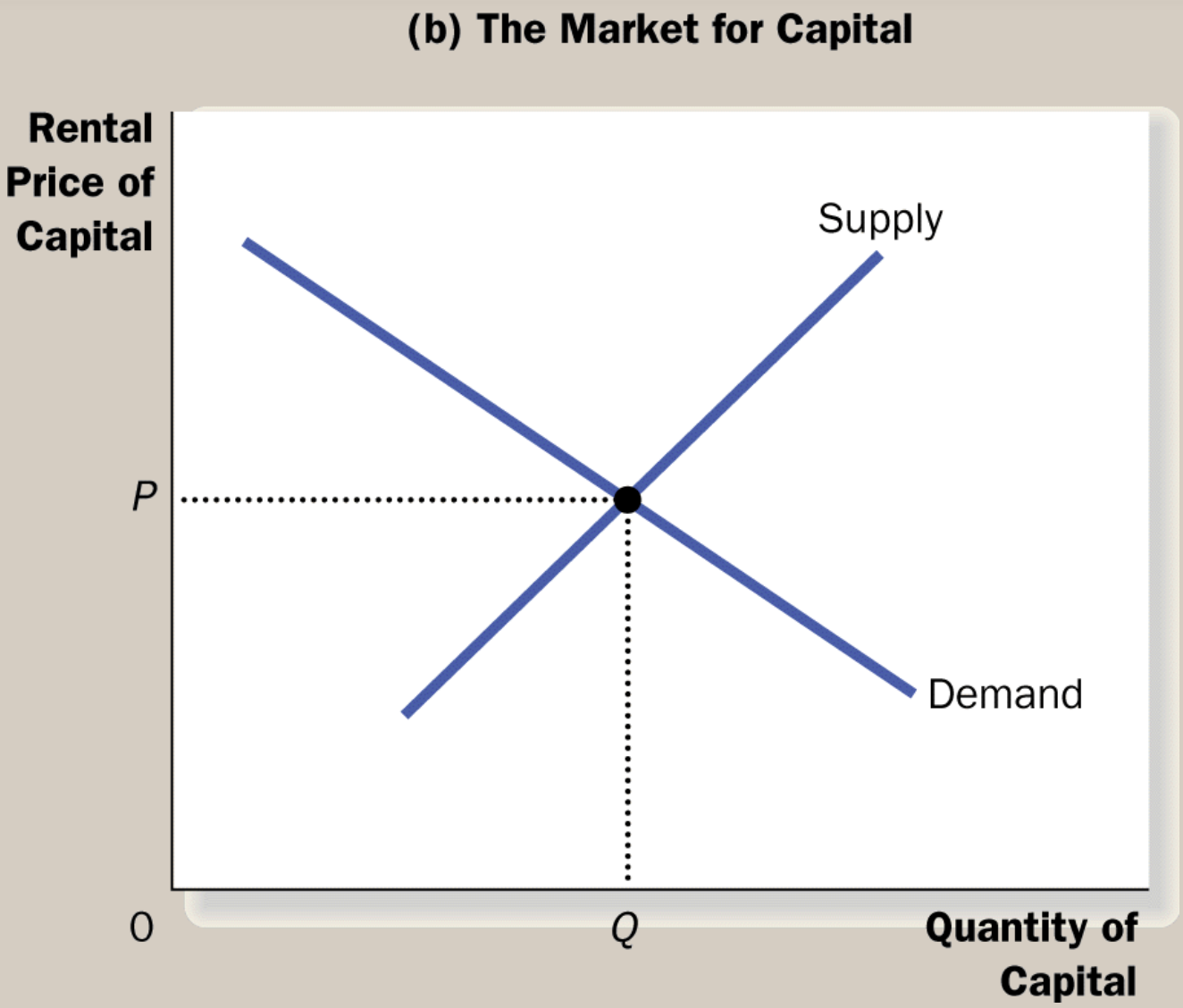
Figure 7b The Markets for Land and Capital



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