Econ 137
Urban Economics

Lecture Notes VI

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Questions for Lecture Notes VI

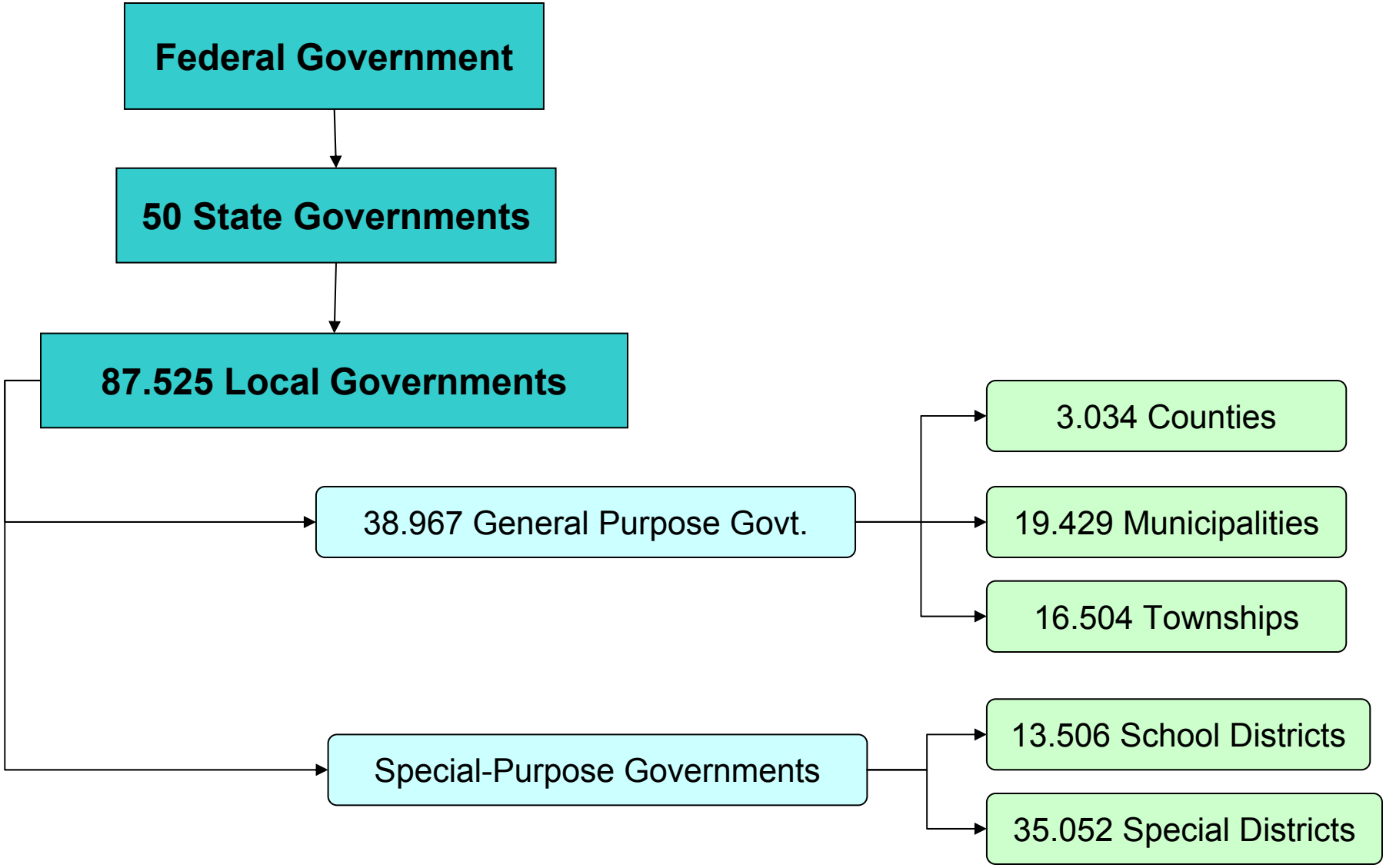
- Which are the functions of local governments?
- How local governments finance their activities?
- Which are the effects of intergovernmental grants and property taxes on the welfare of societies?

Local Governments - Facts

- More than 87,000 in the US.

- In expenditure terms, municipalities and school districts are the most important (1/3 of total expenditure by LG each), followed by counties (1/4 of total expenditure by LG)

Local Governments - Facts



Local Governments - Facts

TABLE 15–2 Expenditures Per Capita for Local Government, 2002

	Local Government	Municipalities
Education	$1,537	$125
Police protection	196	129
Governmental administration	188	76
Hospitals	179	35
Highways	157	78
Interest on general debt	156	56
Public welfare	141	35
Sewerage	107	66
Health	104	21
Housing and community development	99	44
Fire protection	92	63
Parks and recreation	89	55
Correction	65	11
Solid waste management	58	34
Natural resources	19	1
Protective inspection and regulation	13	9
Parking facilities	4	4
Transit subsidies	1	1
Total	3,206	843

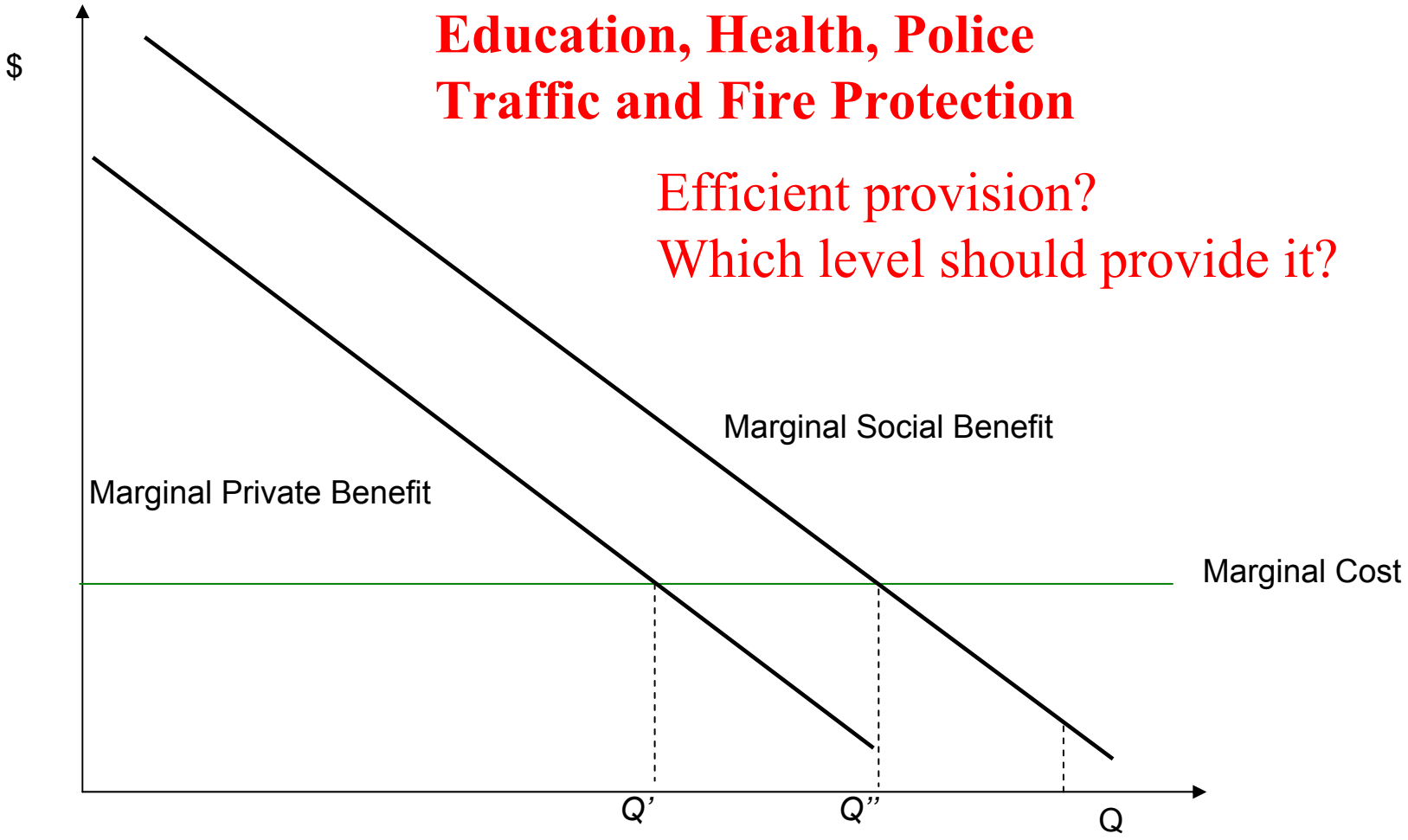
Source: U.S. Bureau of the Census, *2002 Census of Governments.*

Local Governments - Functions

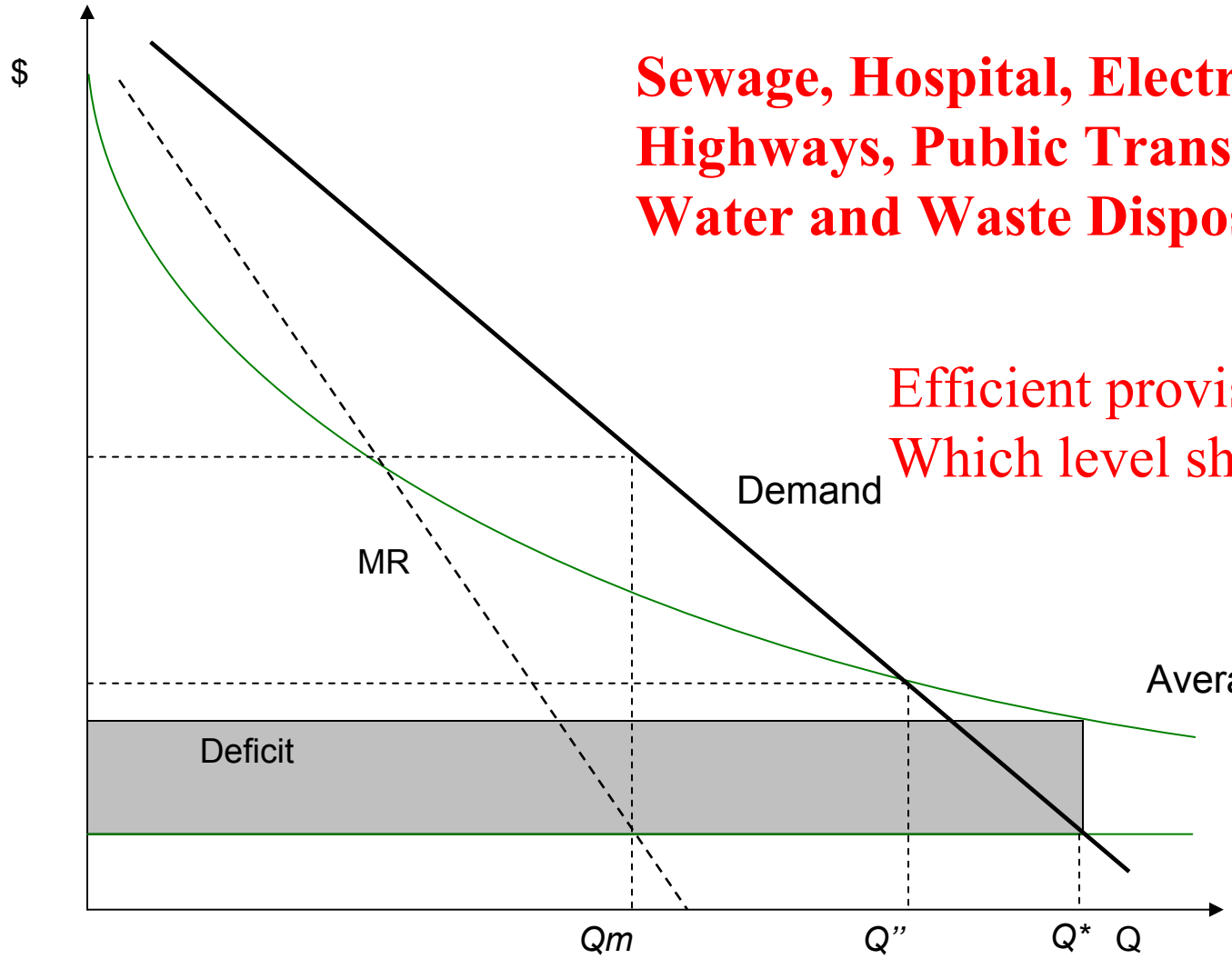
- Not efficient that LGs dedicate to stabilization or income redistribution.

- LGs should work on resource allocation
  - **Internalization of externalities** (Education, Health, Police, Fire protection, etc)
  - **Regulation of natural monopolies** (Sewage, Hospital, Electricity, Highways, etc)
  - **Provision of local public goods** (Parks, Transport System, Garbage Collection, etc)

Local Governments - Externalities



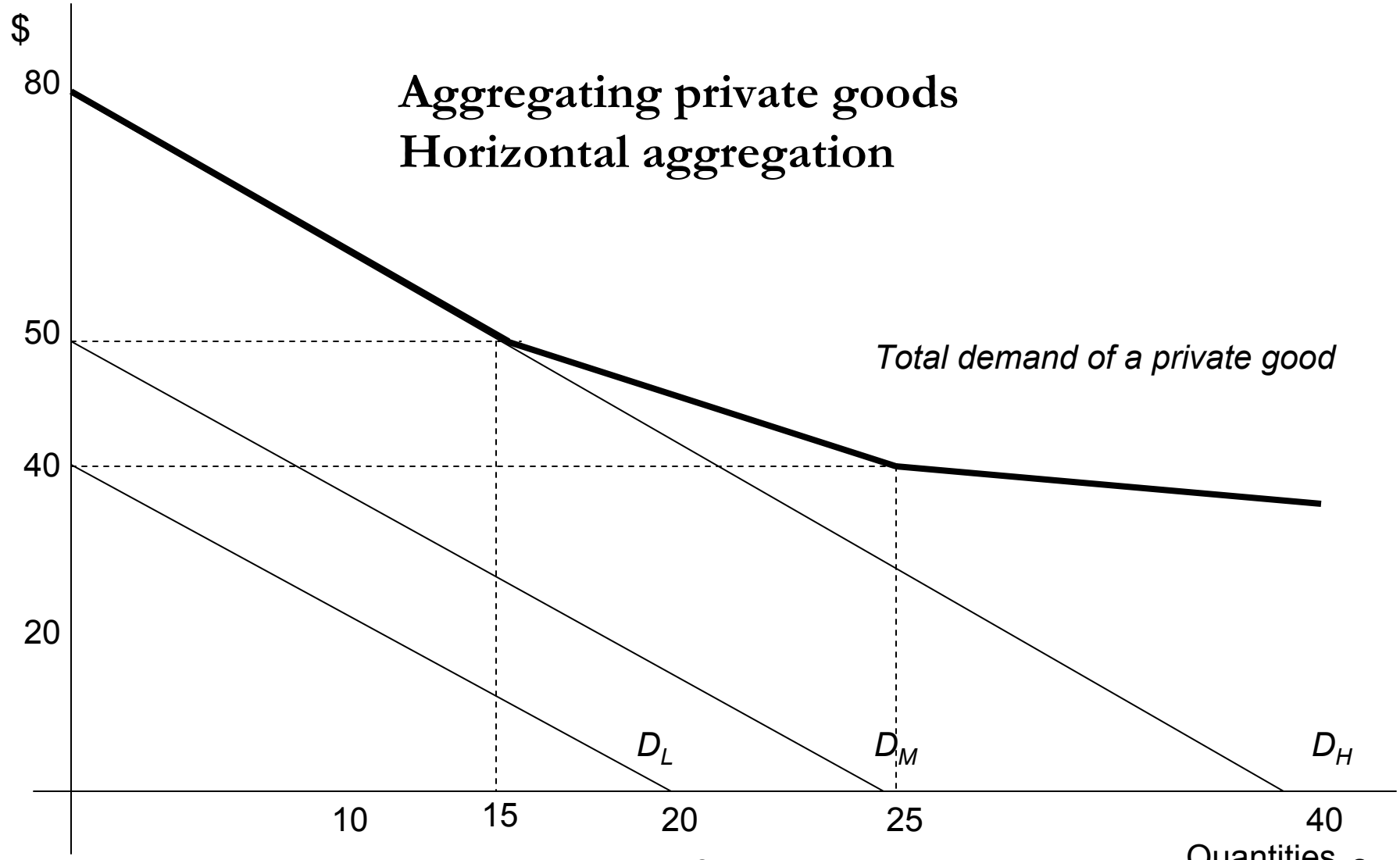
Local Governments – Natural Monopolies



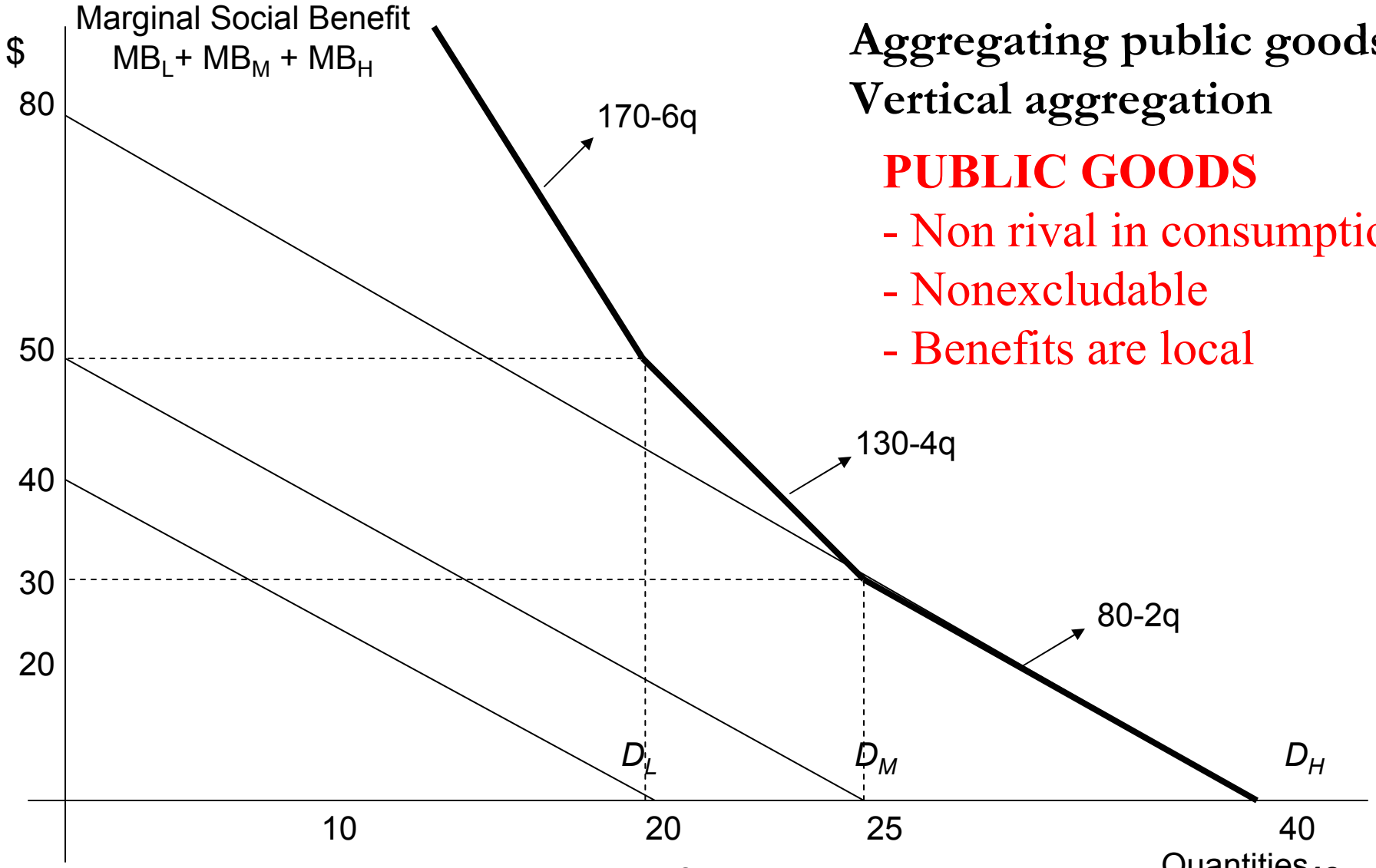
Sewage, Hospital, Electricity
Highways, Public Transportation,
Water and Waste Disposal Systems,

Efficient provision?
Which level should provide it?

Local Governments – Local Public Goods



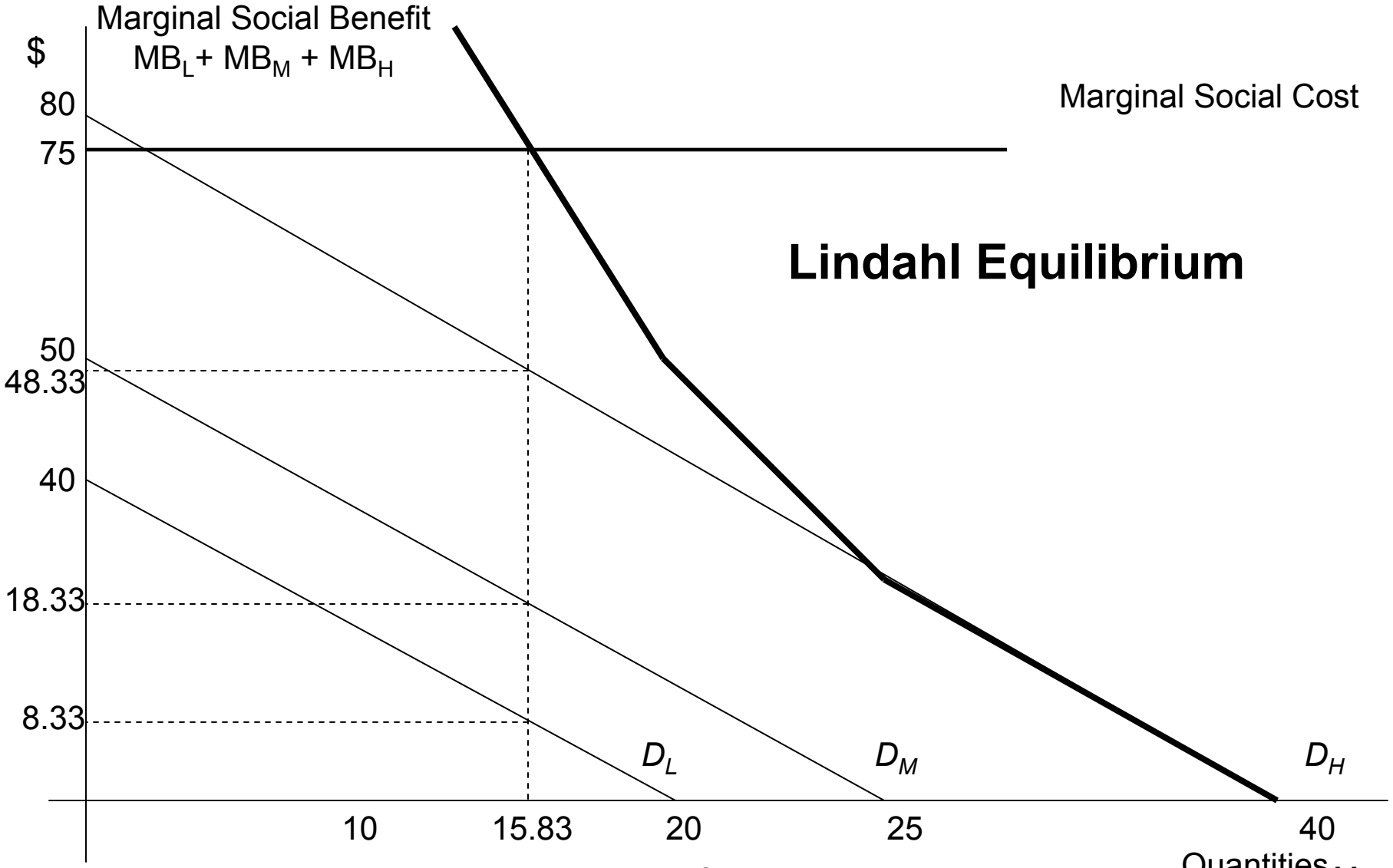
Local Governments – Local Public Goods



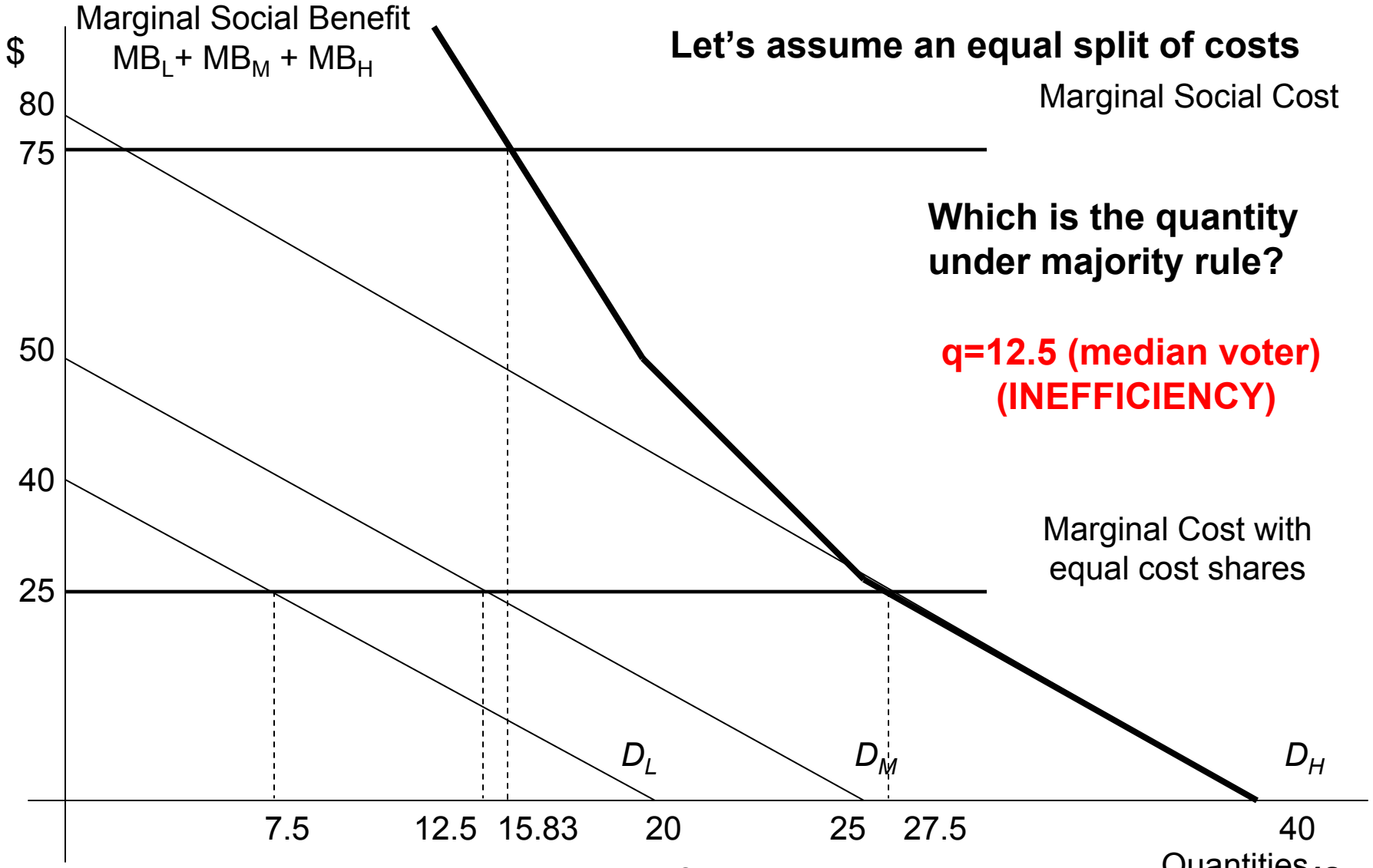
Aggregating public goods
Vertical aggregation

PUBLIC GOODS
- Non rival in consumption
- Nonexcludable
- Benefits are local

Local Governments – Local Public Goods



Local Governments – Local Public Goods



Local Governments – Some elasticities

Based on median voter results and using data on different city election outcomes

TABLE 15–4 Income and Price Elasticities of Demand for Local Public Goods

Public Good or Service	Price Elasticity	Income Elasticity
Total expenditures	−0.23 to −0.56	0.34 to 0.89
Education	−0.07 to −0.51	0.24 to 0.85
Parks and recreation	−0.19 to −0.92	0.99 to 1.32
Public safety (police and fire)	−0.19 to −1.0	0.52 to 0.71
Public works	−0.92 to −1.0	0.79

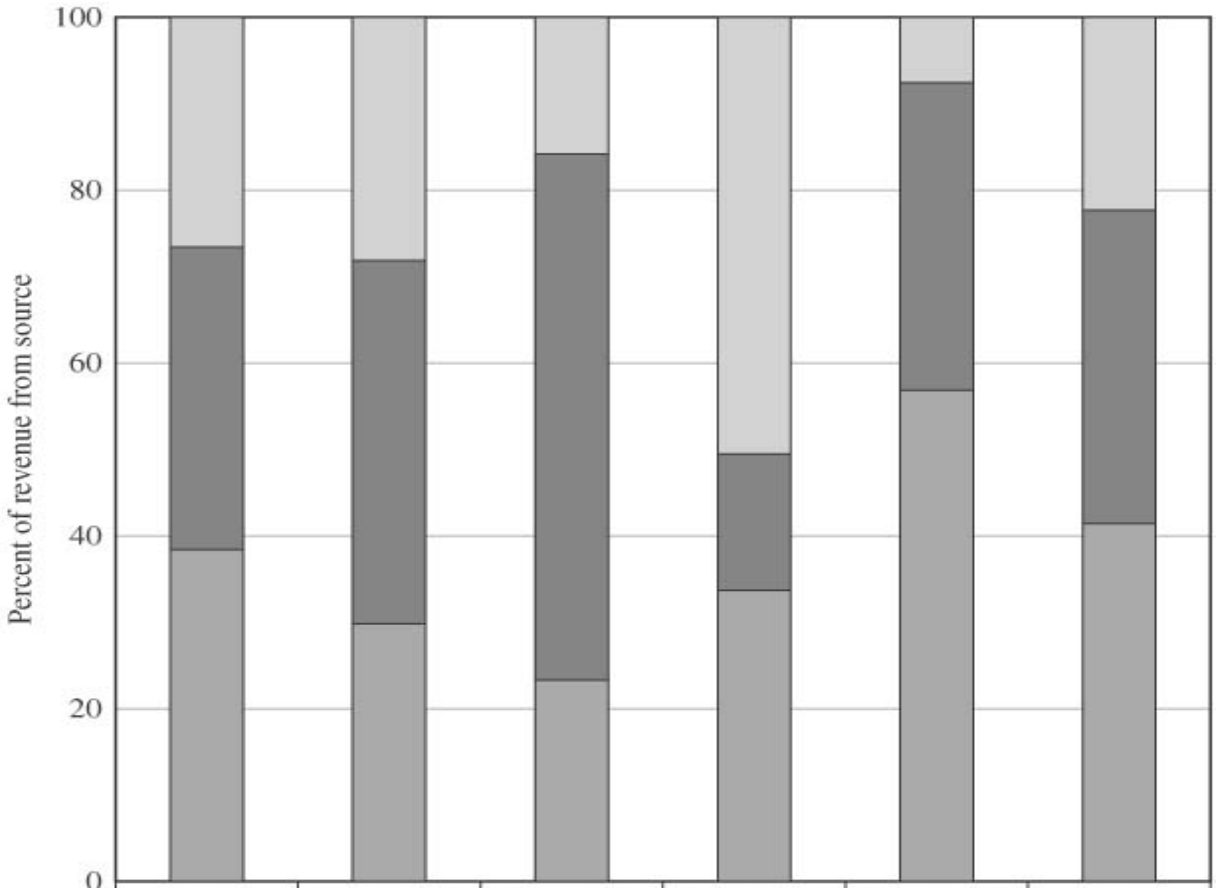
Source: Robert Inman, "The Fiscal Performance of Local Governments," in *Current Issues in Urban Economics*, eds. Peter Mieszkowski and Mahlon Straszheim (Baltimore: Johns Hopkins University Press, 1979).

Summary Ch. 15 O'Sullivan

- There are almost 85000 local governments in the United States, including municipalities, school districts, counties and special districts.
- In the federal system, the national government is responsible for stabilization and redistribution policies, while local governments are involved in resource allocation. Local governments are responsible for some goods subject to relatively large scale economies (water, sewage, transit), other goods that generate externalities (education) , and local public goods (parks, public safety, and education).
- The inefficiencies resulting from majority rule could be eliminated by the use of the Lindahl system of taxation (tax equal to the marginal benefit of the local public good).
- There are trade-offs associated with the public goods at the local level: local provision accommodates diversity in demand but may generate spillovers and not fully exploit scale economies.
- The median-voter model predicts that the government will adopt the preferred budget of the median voter (the voter that splits voters into equal halves, with one-half preferring smaller budgets and the other half preferring larger budgets).

Local Government Revenues

FIGURE 16–1 Revenue Shares of Local Government

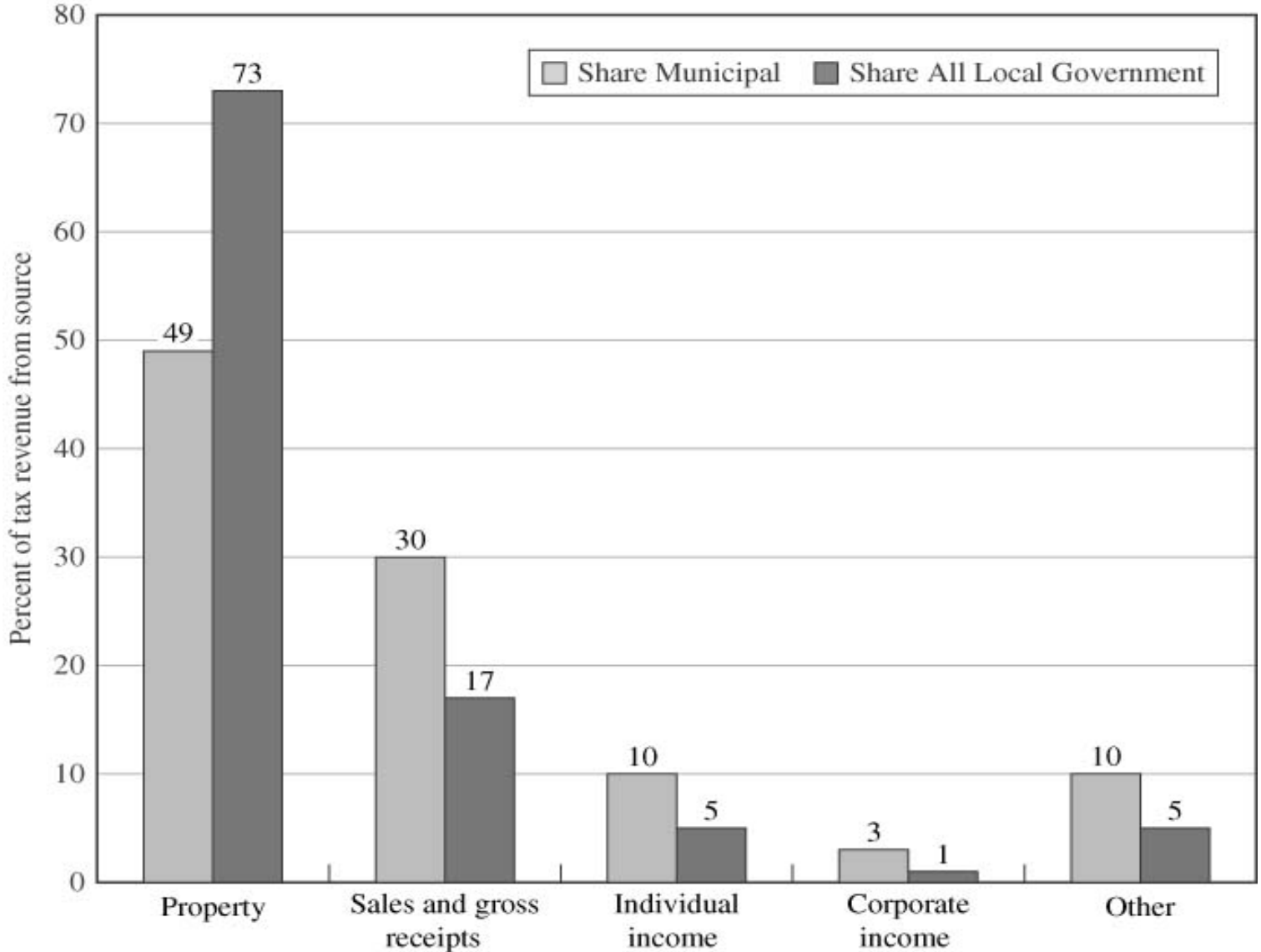


	County	Municipal	Township	Special Dist.	School Dist.	Total
Charges and miscellaneous	27	28	16	51	8	22
Taxes	35	42	61	16	36	36
Intergovernmental grants	38	30	23	34	57	41

Source: U.S. Bureau of Census, *Census of Governments 2002.*

Local Government Revenues

FIGURE 16–2 Revenues from Different Taxes



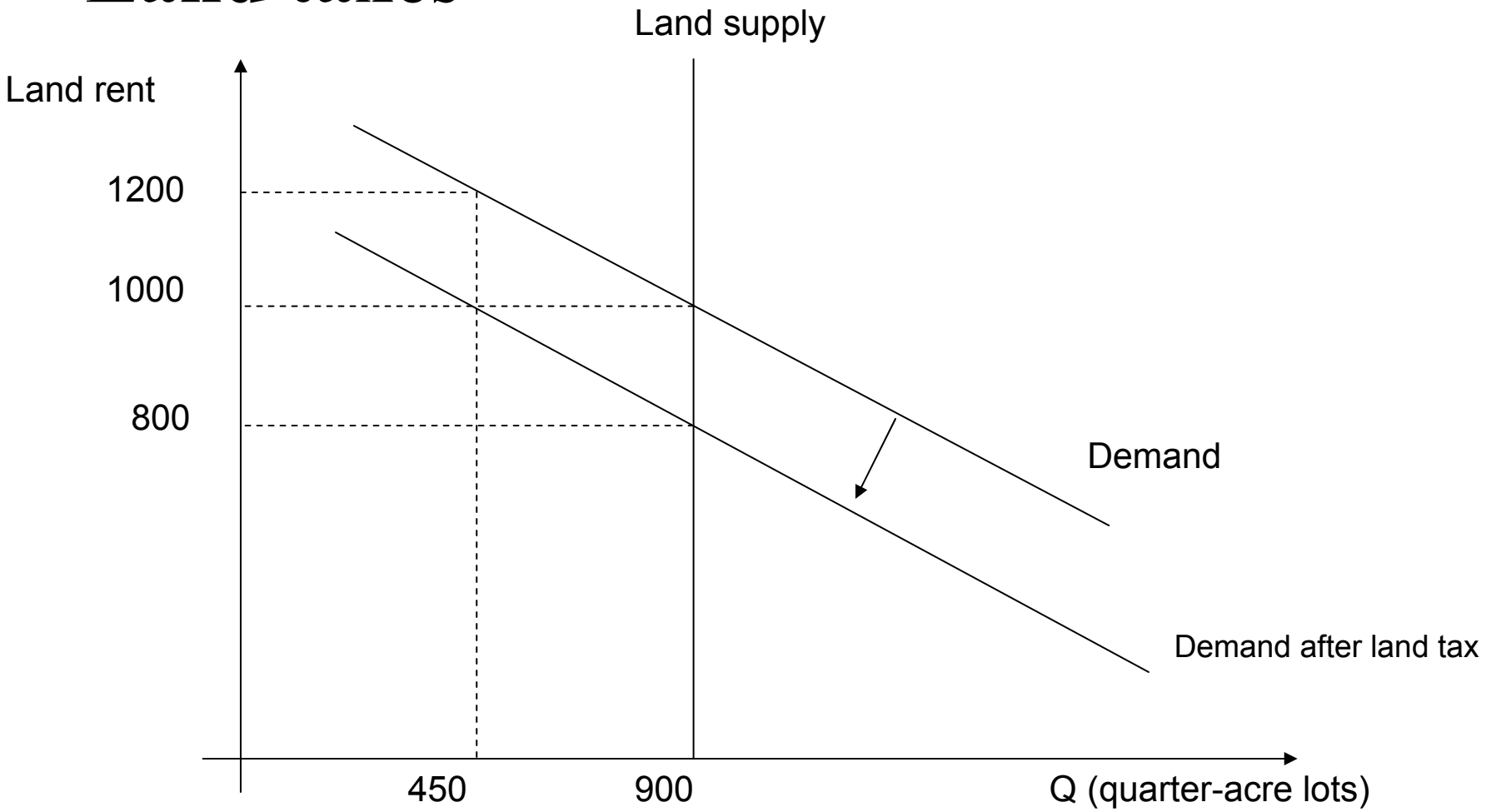
Property taxes

- Who pays property tax?
  - Residential, Commercial and Industrial

Property Value = Value of the land+ Value of structures

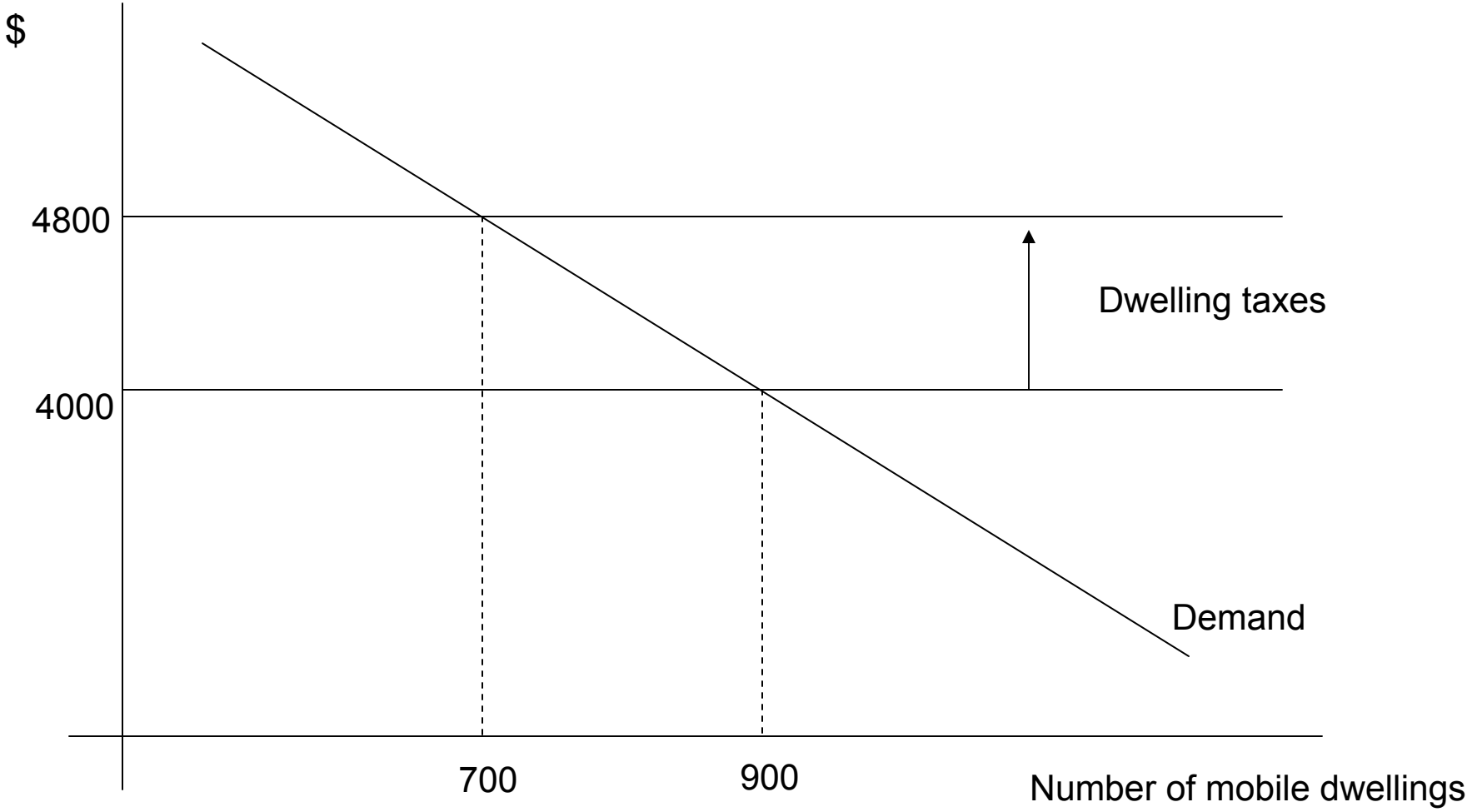
  - TAXVILLE
    - Land used only for rental housing
    - Identical dwellings [900 identical housing units]
    - Housing inputs [land + structures]
    - Capital mobility of dwellings [only in the long run]
    - Housing firms rent land per acre at $1,000 and the dwelling at $4,000
    - Unit property tax of $200 per quarter-acre lot and $800 per dwelling

Land taxes



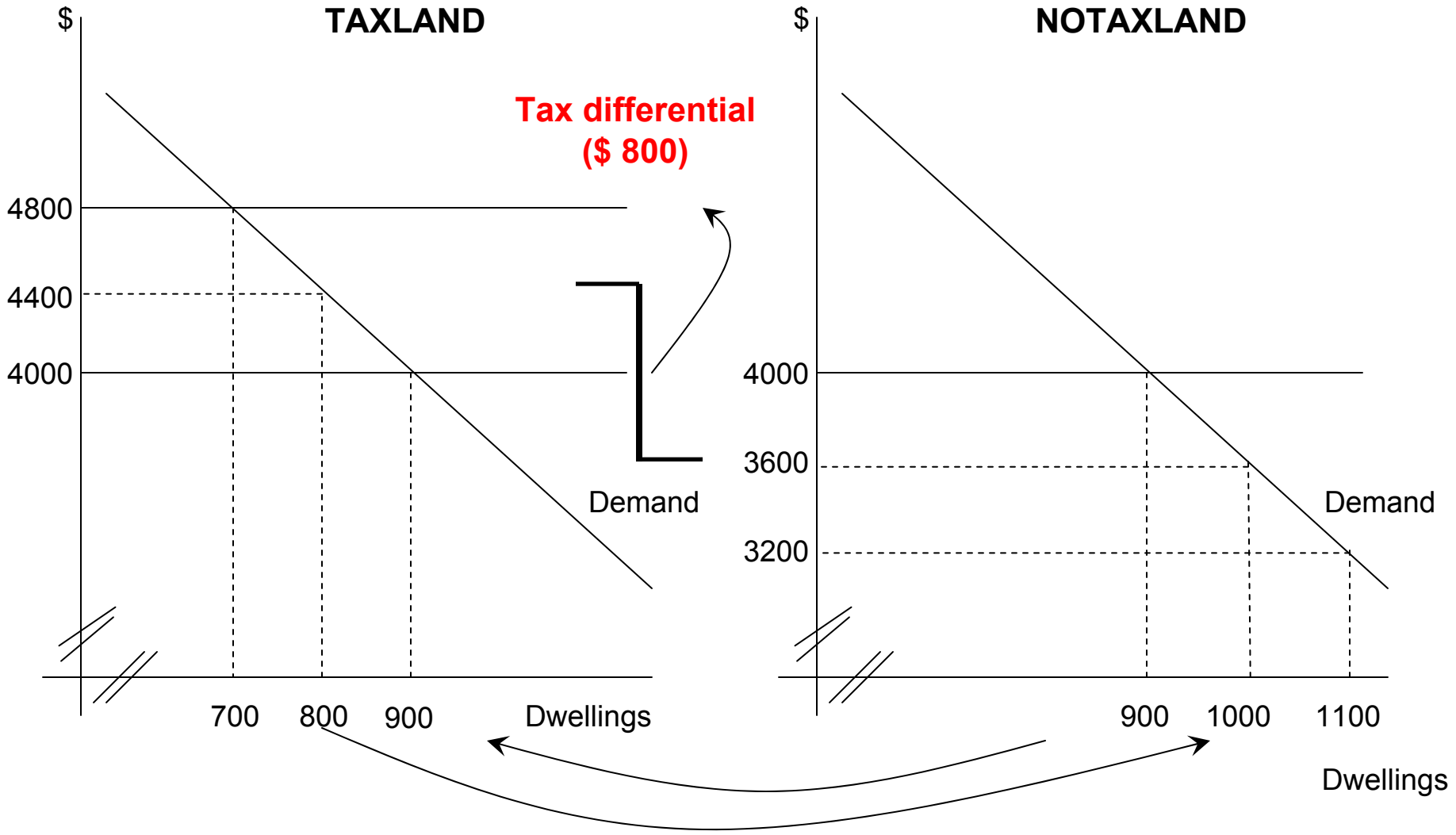
The whole land tax is paid by the landowner (since supply is fixed)

Structure taxes – Partial Equilibrium



The whole dwelling tax is paid by consumers (since supply is completely flexible)

Structure taxes – General Equilibrium



The dwelling tax is paid by capital owners in both cities

Property taxes

- What about consumers?
  - Land tax is entirely supported by landowners, hence consumers still pay ($ 1,000)
  - Dwellings cost now $ 4,400 in TaxLand (because dwelling owners pass the whole tax to consumers).
  - Dwellings cost now $ 3,600 in NOTaxLand (this is the rent of dwellings in equilibrium after taxes).
  - Consumers pay $5,400 in Taxland.
  - Consumers have an incentive to move to Notaxland depending on the price of land there.

Property taxes imposed by a small city

- Welfare effects in the taxing city
  - Immobile HH: Consumers pay higher dwelling rent.
  - Mobile HH: Landowners receive lower land rent.
- Welfare effects in a nontaxing city
  - Immobile HH: Consumers pay lower dwelling rent.
  - Mobile HH: Landowners receive higher land rent.
- National Welfare effect
  - Property owners (capitalist): receive lower net rental income.
  - Immobile HH:
    - Fixed supply of dwelling: zero-sum changes in land rent
    - Variable supply of dwelling: positive-sum changes in dwelling rent.
  - Mobile HH:
    - Fixed supply of dwelling: zero-sum changes in land rent
    - Variable supply of dwelling: negative-sum changes in dwelling rent.

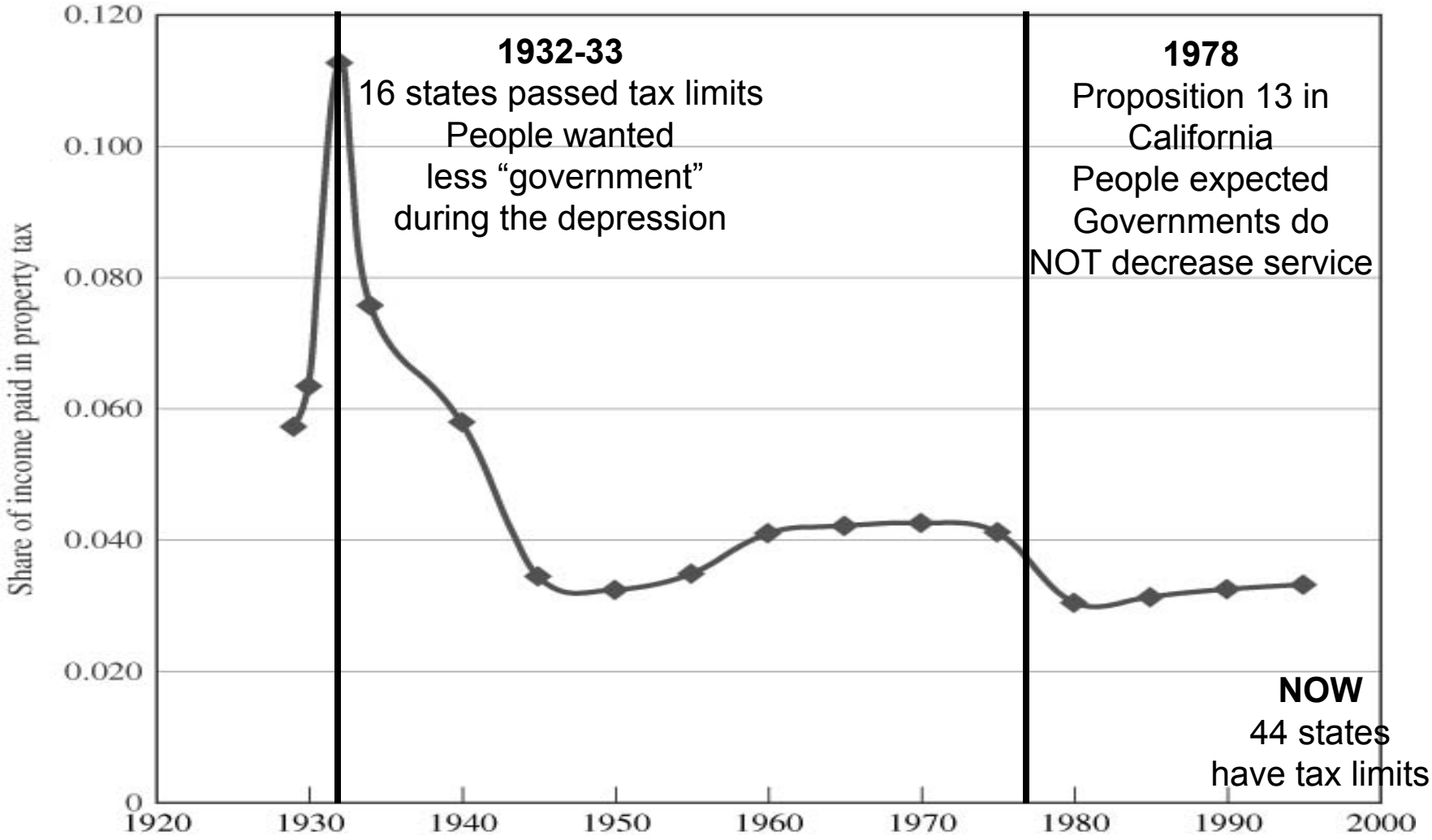
Property taxes imposed by all cities

- Welfare effects in the taxing cities
  - Fixed supply of dwelling: Housing consumers and landowners unaffected by the change.
  - Variable supply of dwellings: Dwelling rent increases and land rent decreases.

- National welfare effect
  - Property owners receive lower net rental income.
  - Fixed supply of dwelling: Property owners pay the entire tax.
  - Variable supply of dwellings: Tax shared by property owners, consumers, and landowners.

Tax revolts and property taxes

FIGURE 16–6 Property Tax Revenue as a Share of Income

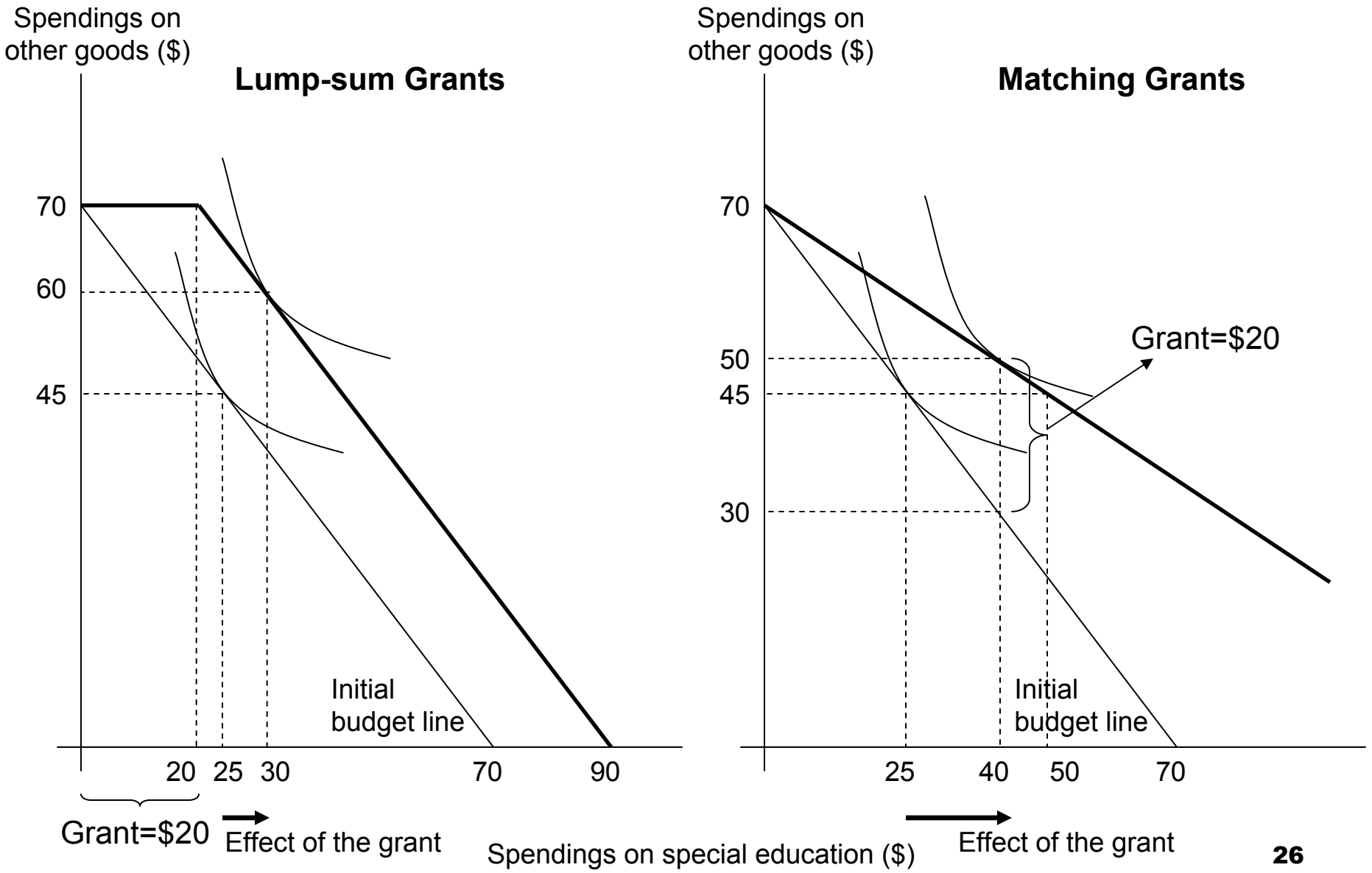


Source: Arthur O'Sullivan, "Limits on Local Property Taxation." Chapter 7 in *Property Taxation and Local Government Finance*, ed. Wallace E. Oates (Cambridge MA: Lincoln Institute, 2001).

Intergovernmental Grants

- These are important to internalize inter-jurisdictional spillovers
- And to fill mismatches between local revenues and expenditures
- Lump-sum grants and Matching grants

Intergovernmental Grants



Summary Ch. 16 O'Sullivan

- The supply of land is fixed, so the land portion of the property tax is borne exclusively by landowners.
- Under a general equilibrium model, the structure portion of the property tax, if structures are fixed at the regional level, the tax is borne by capital owners throughout the region.
- If consumers are mobile across cities, landowners in the untaxed city gain at the expense of landowners in the taxing city.
- A matching grant decreases the opportunity cost of spending on the targeted good, so it provides a greater stimulus than a lump-sum grant.

Questions for Lecture Notes VI

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- How local governments finance their activities?
- Which are the effects of intergovernmental grants and property taxes on the welfare of societies?

Practice Exercises - Lecture Notes VI

- O'Sullivan
  - Chapter 15: Exercises 1, 2 and 3.
  - Chapter 16: All exercises.