

Taxing Land

Goal: Be able to explain circumstances in which taxation would not lead to economic inefficiency.

Related takeaway: Paying for environmental amenities.

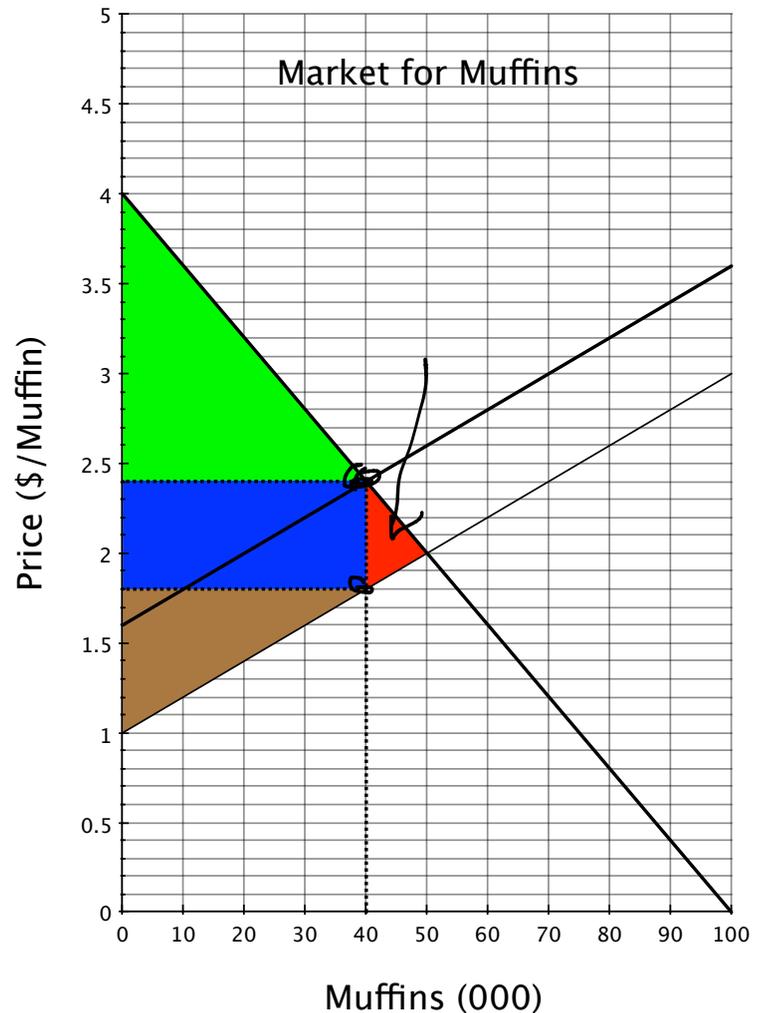
Taxing products with sloped demand and supply leads to inefficiency:

a wedge between value and opportunity cost

between willingness to pay the minimum needed to provide for the last (marginal) unit sold

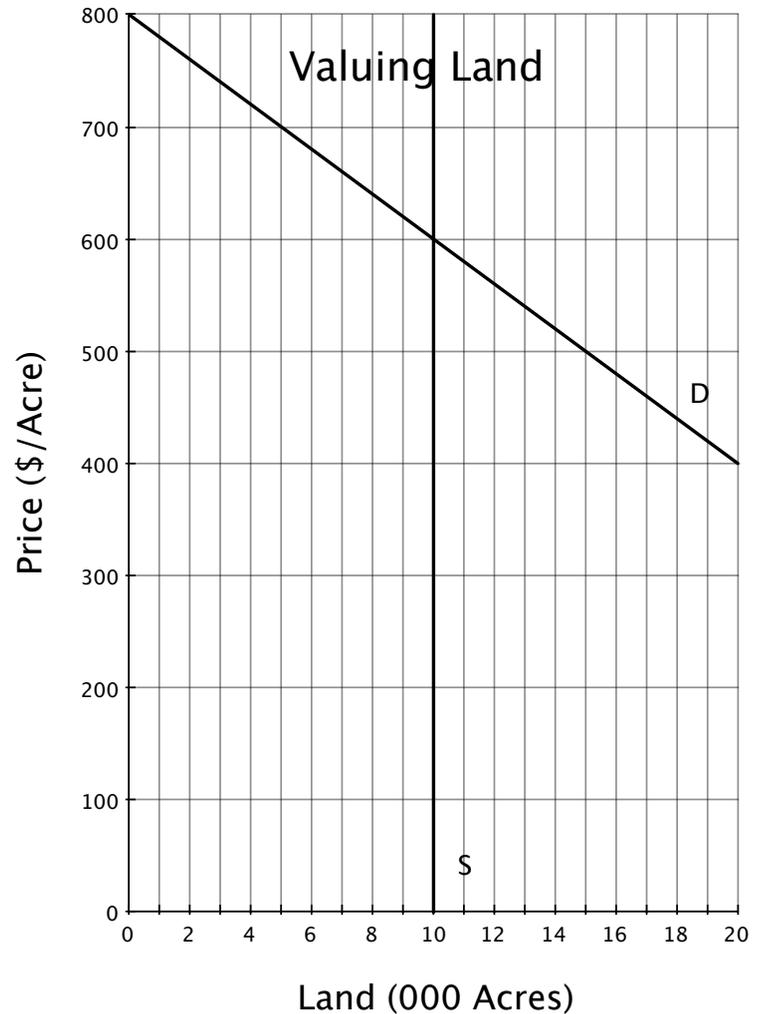
between marginal social benefit and marginal social cost

that economists call dead weight loss

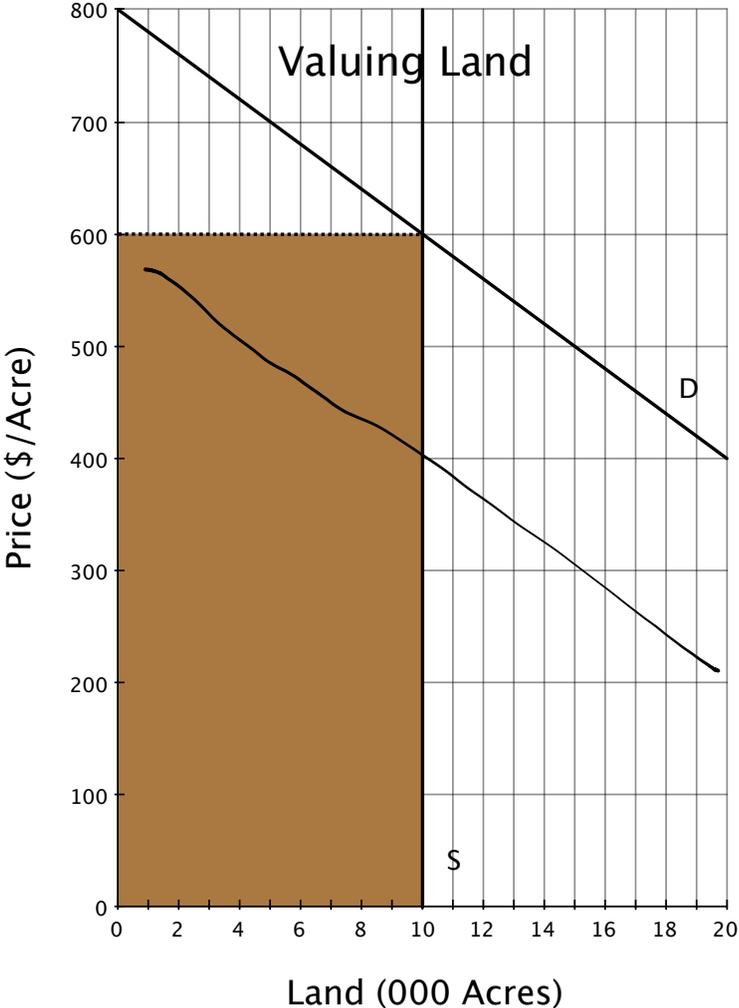


But, consider the market for land.

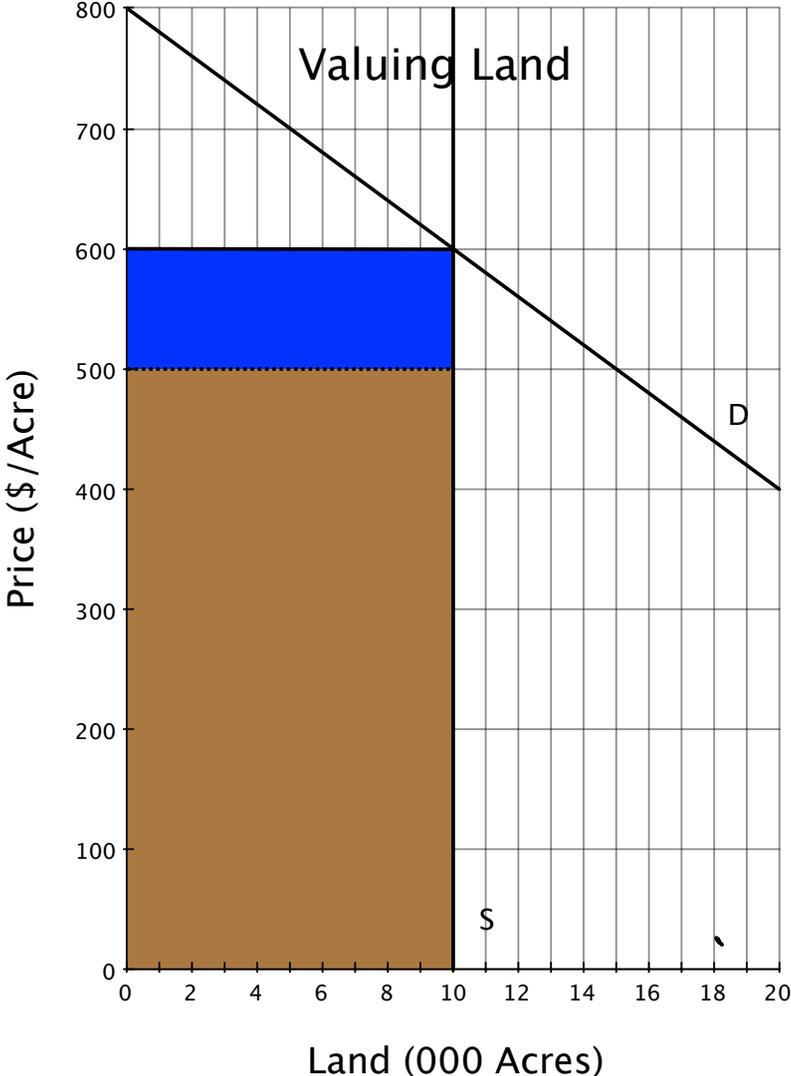
Assume that a community has 10,000 acres of land available for use and that the demand for land (measured in the annual rental equivalent)



Fluctuations in demand alter the price and the economic rent, but have no effect on the amount of land in use.

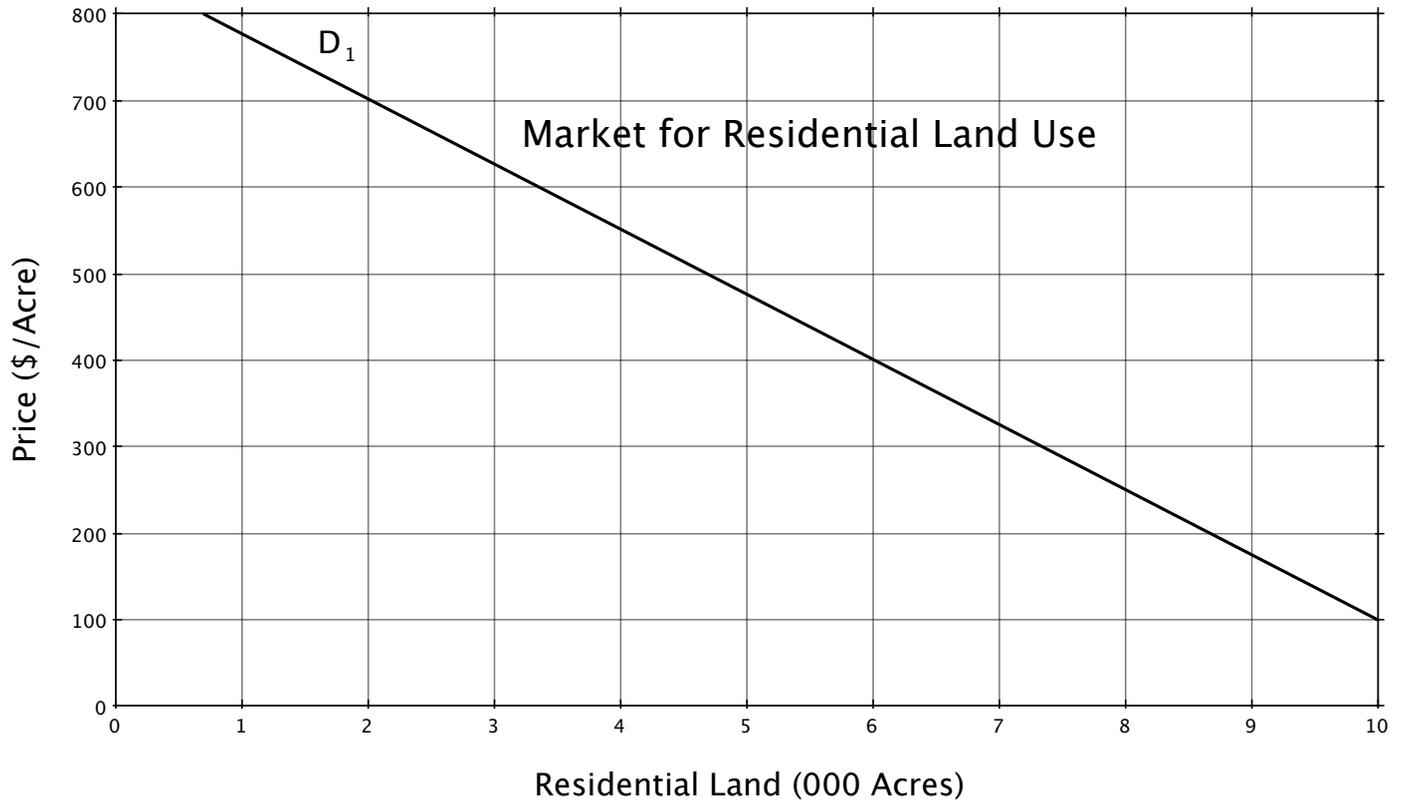


Taxing a good with vertical supply transfers **economic rent** to **tax revenue** without altering the quantity exchanged generating no **DWL**.

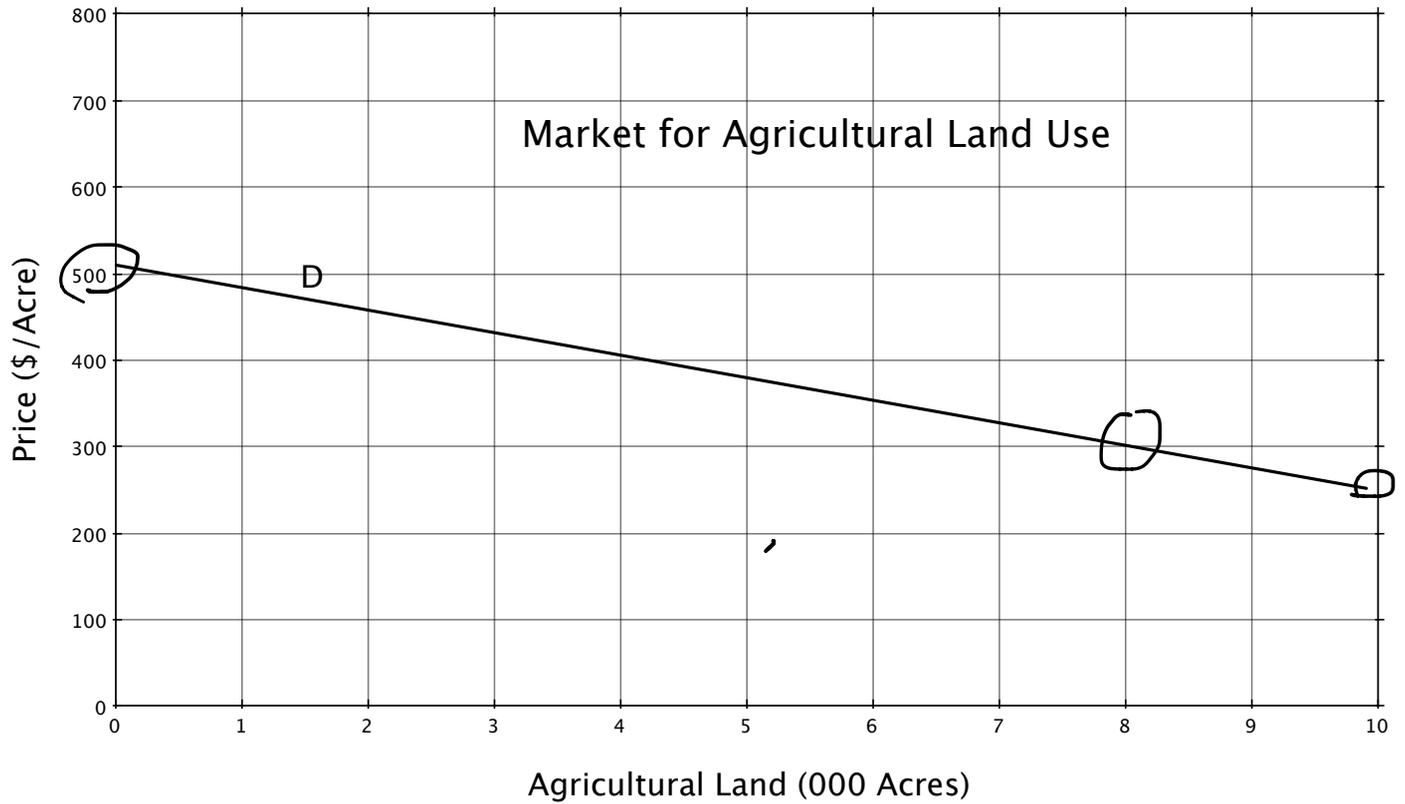


Market Allocation of Land Use

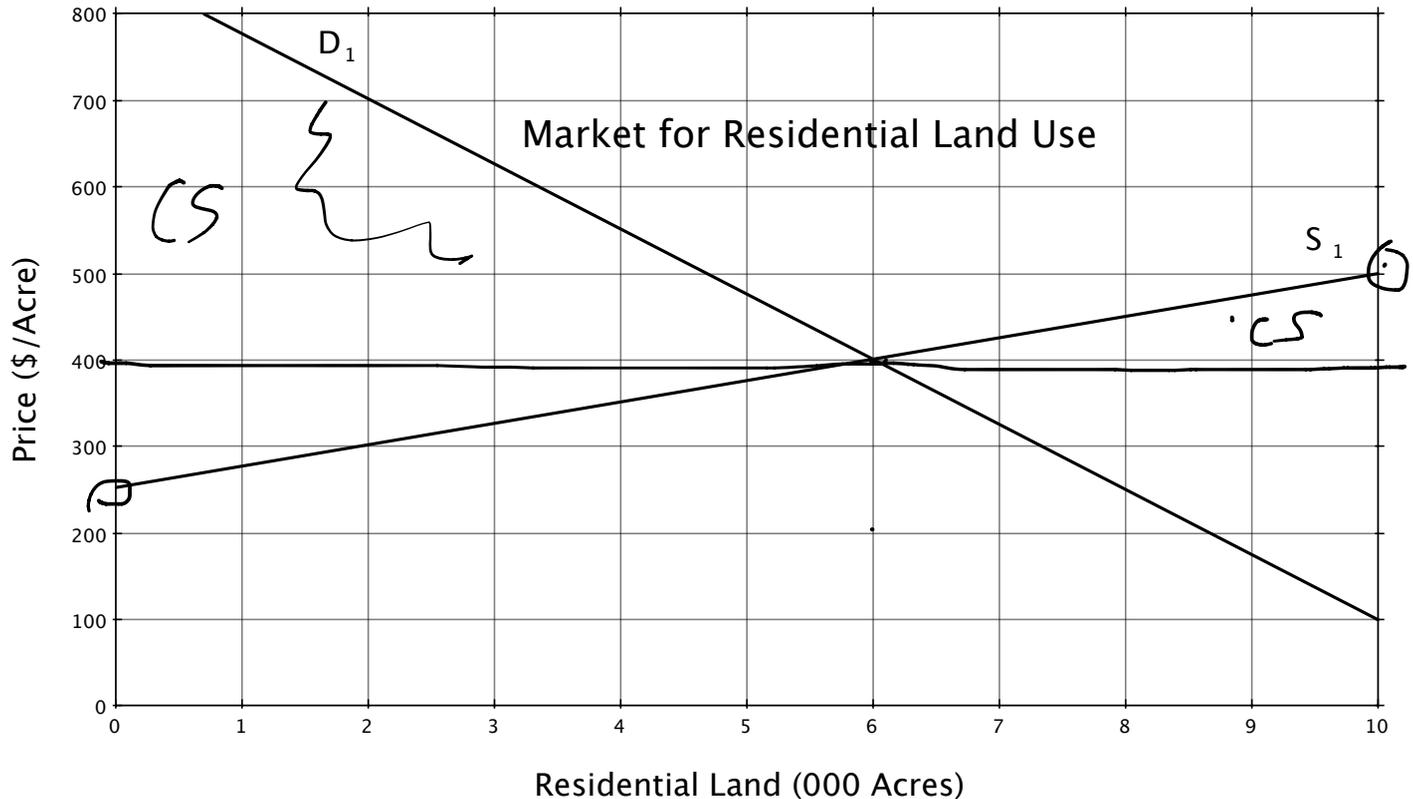
Suppose that there are two competing uses for land in our community: residential



and agricultural



The demand for agricultural land is the supply of residential land.



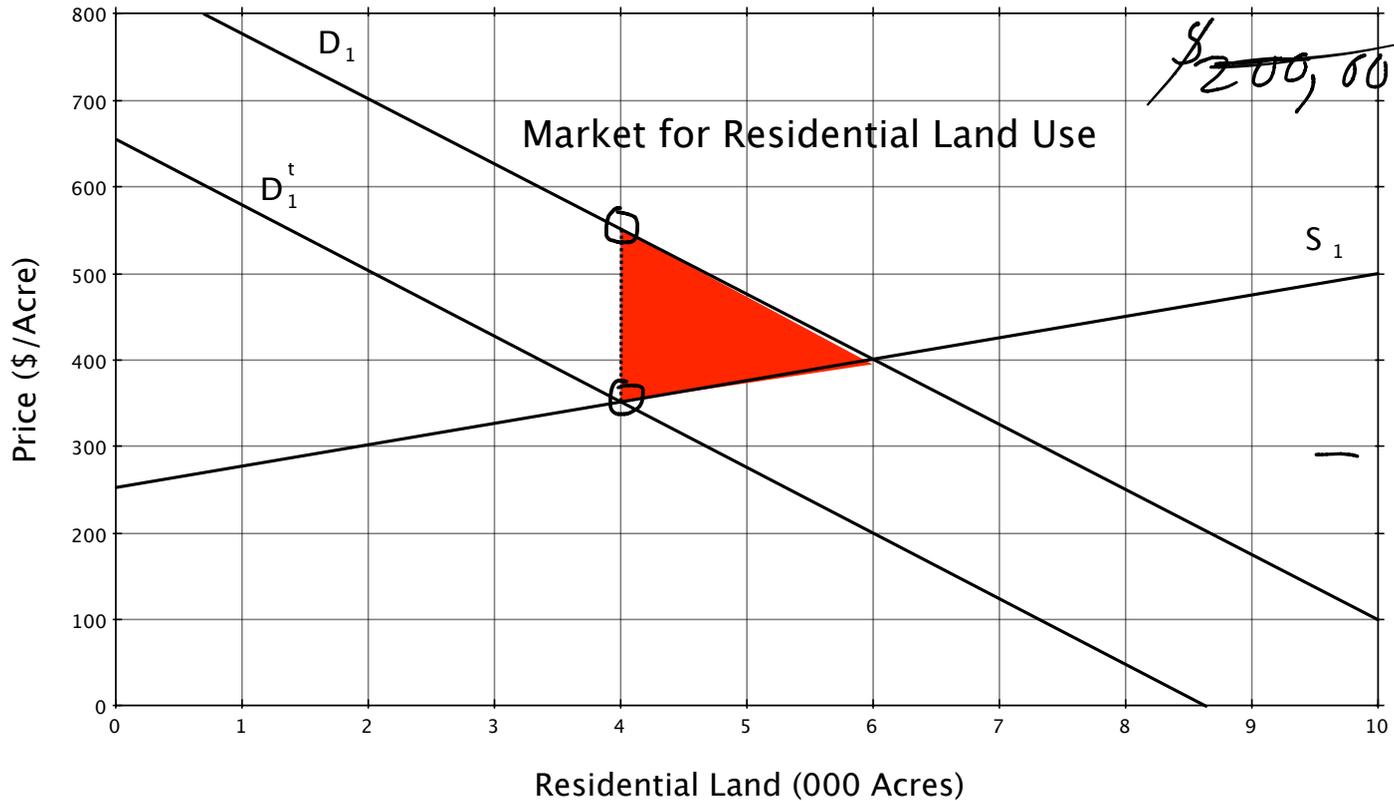
Interaction of demand and supply determines price and quantity.
What happens if voters impose a \$200 property tax?

On residential uses.

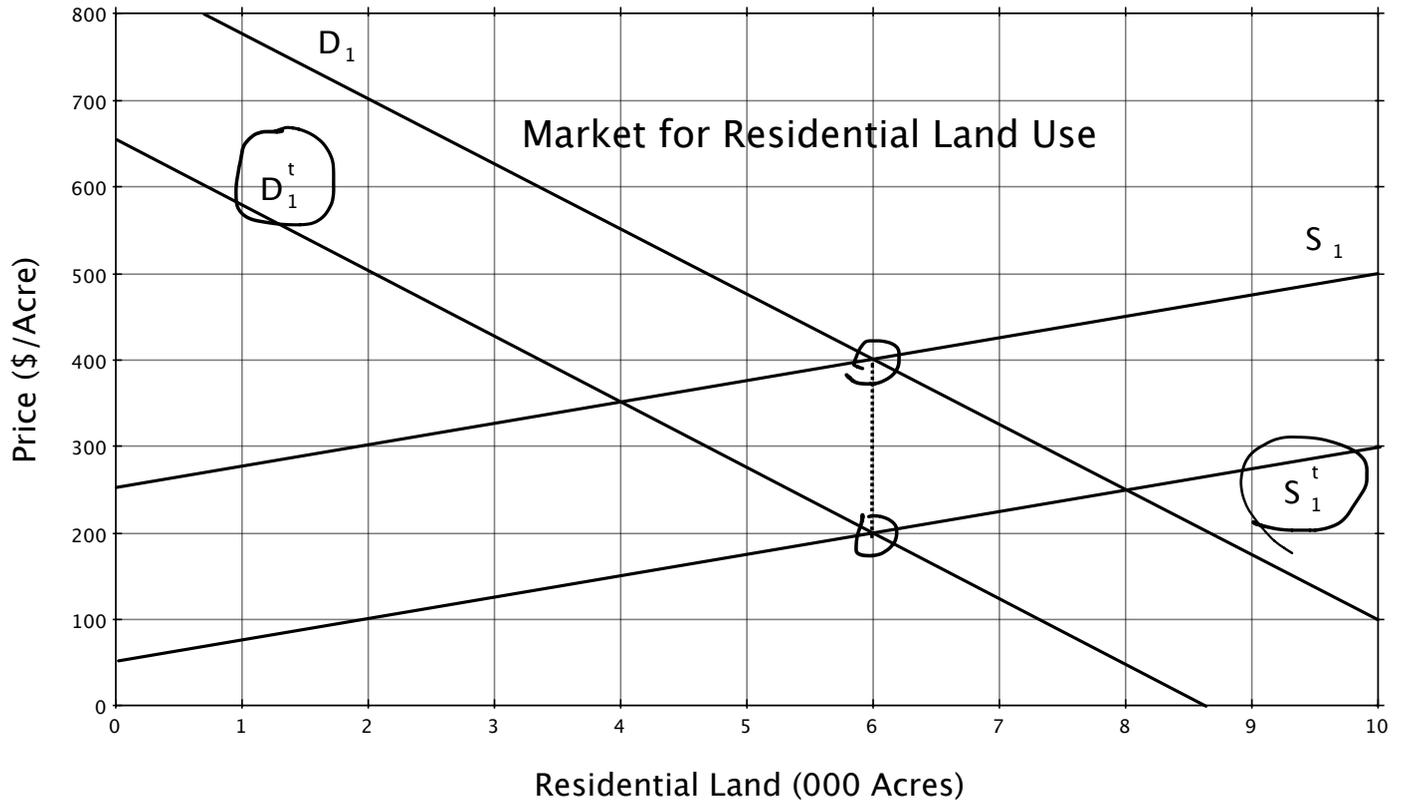
Inefficiency with residential property tax

$$\frac{1}{2} \left(\frac{550 - 350}{200} \right) (6 - 4) = 20,000$$

~~\$200,000~~

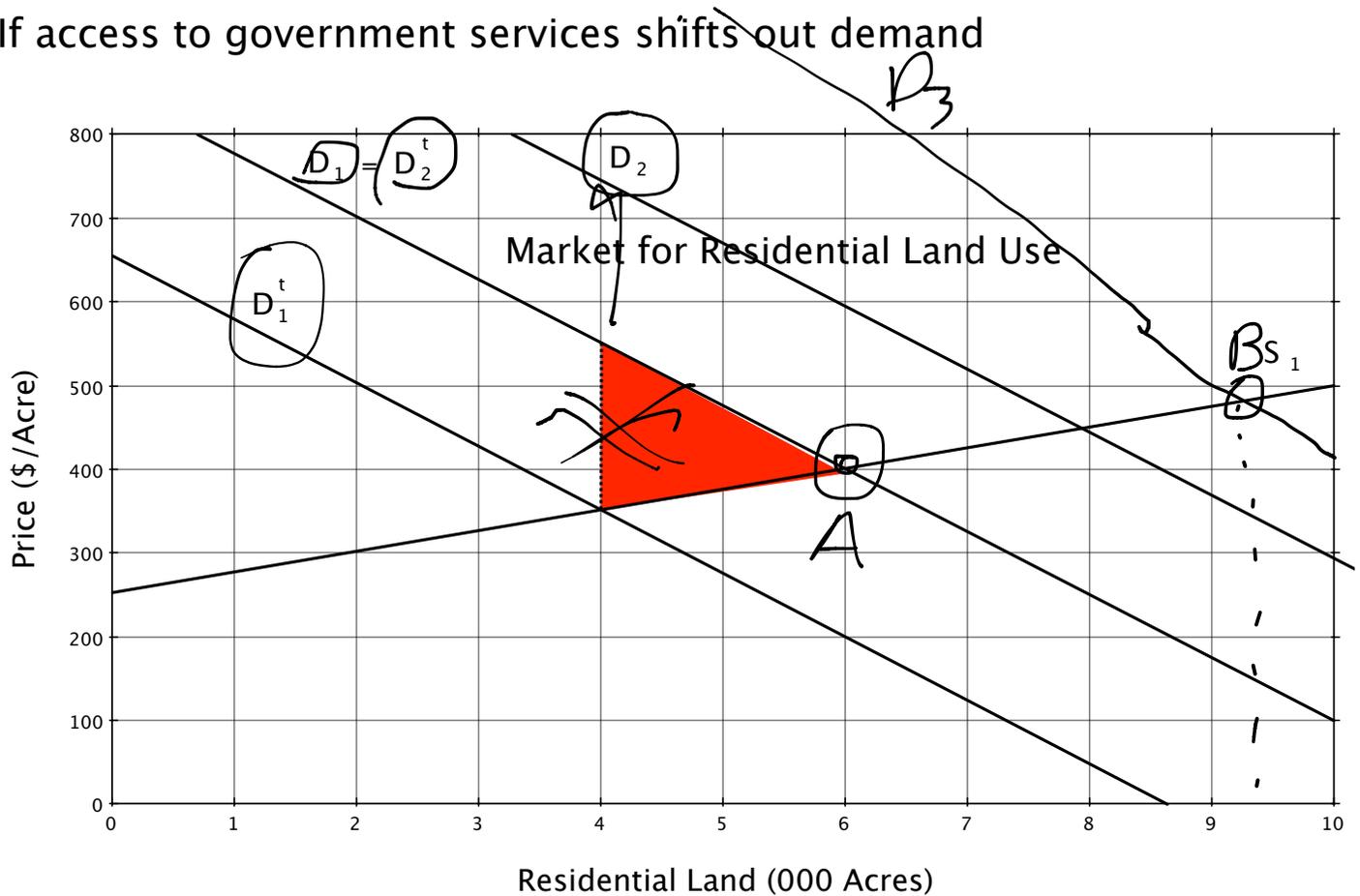


Imposing the same tax on all uses eliminates the inefficiency, but lowers land values by the size of the tax.



Is that fair?

If access to government services shifts out demand



According to

Taylor, L.O., X. Liu and T. Hamil (2012, April 2). Amenity Values of Proximity to National Wildlife Refuges. Final Report to Jim Caudill and Kevin Kilcullen, U.S. Fish and Wildlife Service, and Peter Grigelis, U.S. Department of the Interior, Office of Policy Analysis (mimeo). Retrieved from <http://www.guidrynews.com/12May/15212Wildlife.pdf> .

the amenity value of living within half a mile of a national wildlife refuge like Tinicum Marsh (which the 360 students visited several weeks ago) adds 5% to the residential property values.

Use a suitable diagram to illustrate an explanation of the efficiency effects of imposing a 2% property tax on residential properties located near Tinicum Marsh.