

Equity of Tolling: Myths and Realities

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SERVING THE NATION AS A LEADER IN GLOBAL
TRANSPORTATION INNOVATION SINCE 1970



Equity and Efficiency

- In the Political Arena, Equity is the (Almost) Sole Motivation
- Equity Should Not Be Judged On The Social Purpose Of The Trip
- Scholars Tend To Favor User Financing
- Efficiency And Equity Are Inextricably Related
- *Equity and Efficiency Are Not Inherently in Conflict*

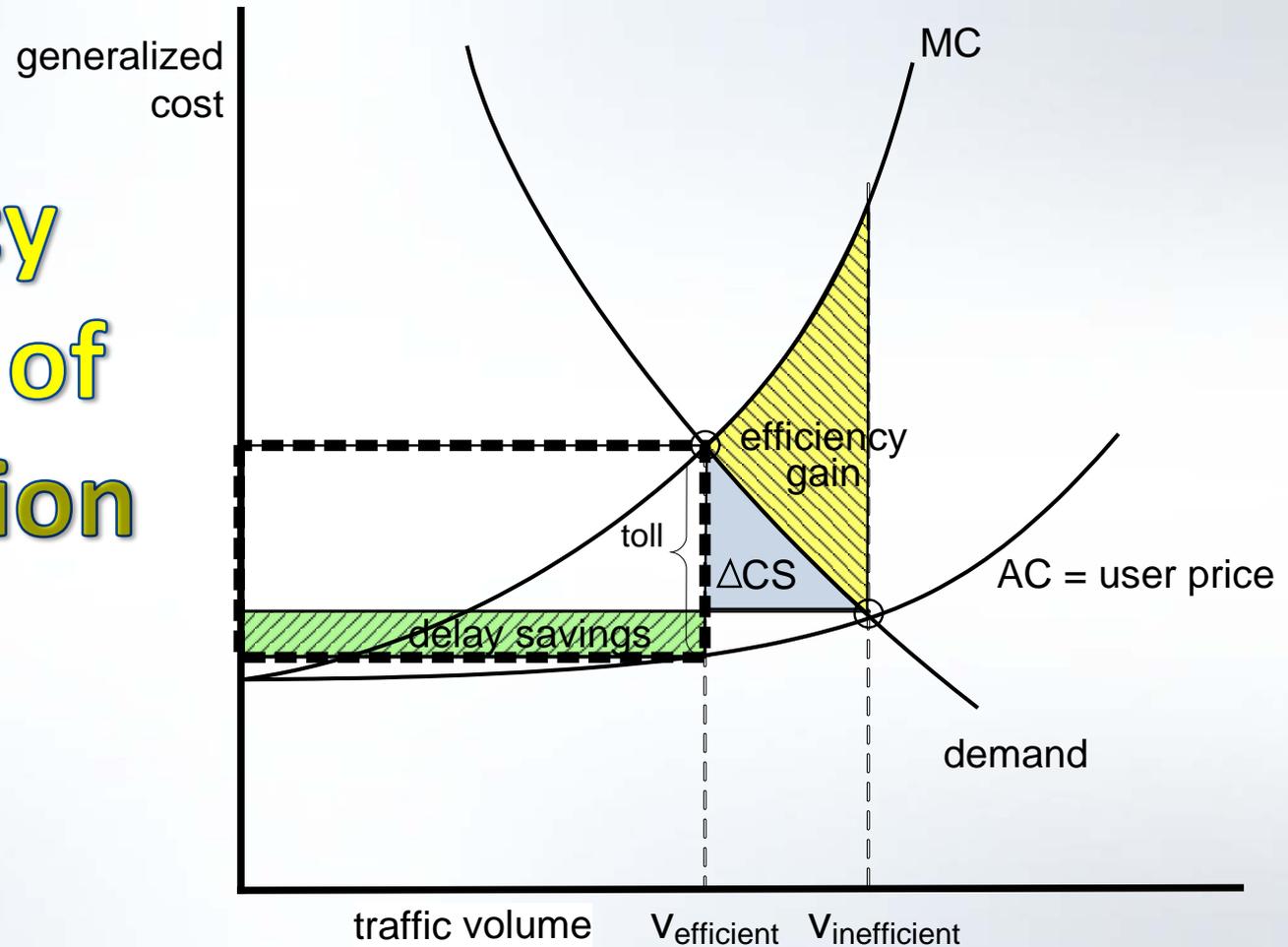


Congestion Pricing

- Two Types Of Equity Can Be Distinguished
- Increases in Income Come From Efficiency Gains
- Changing The Price Always Has Some Efficiency Consequences
- Congestion Pricing Generates Positive Net Benefits
- *Tolls Collected With Congestion Pricing Exceed Efficiency Gains By A Large Amount*



Efficiency Impacts of Congestion Pricing

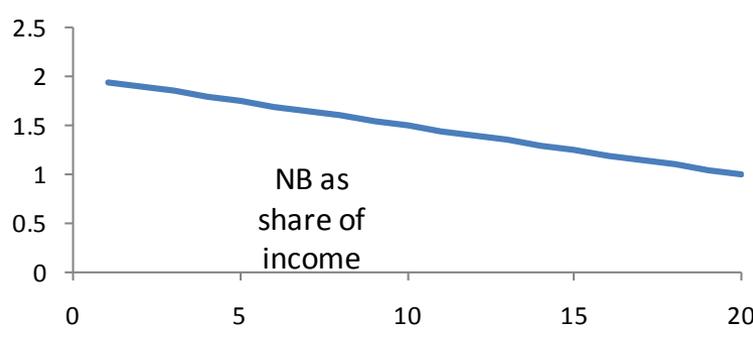
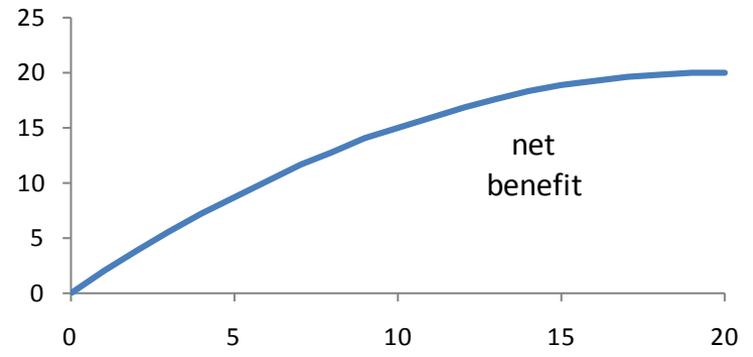
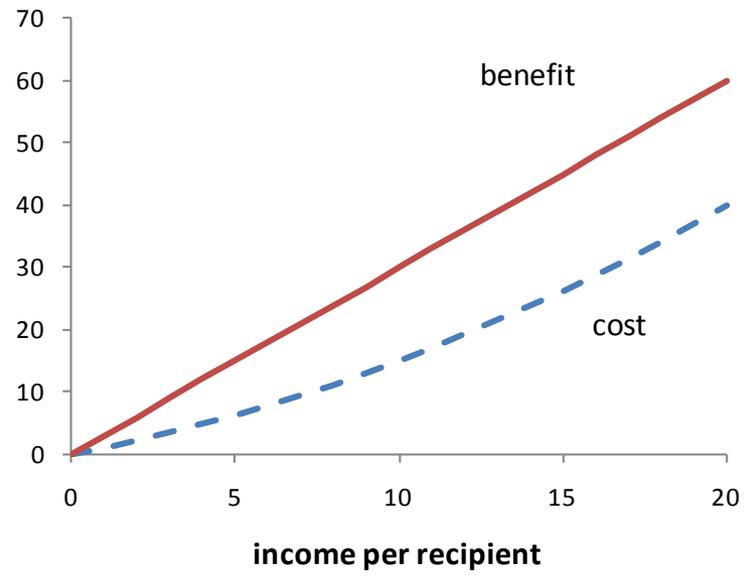


Vertical Equity

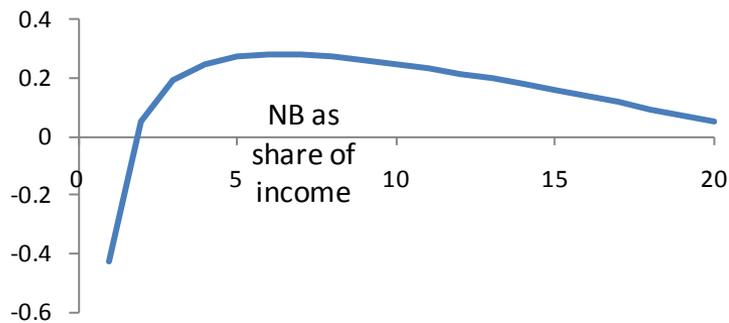
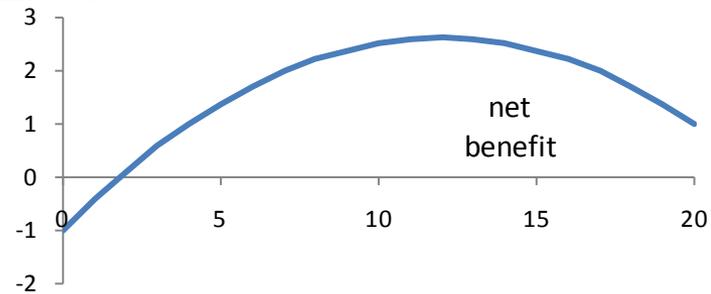
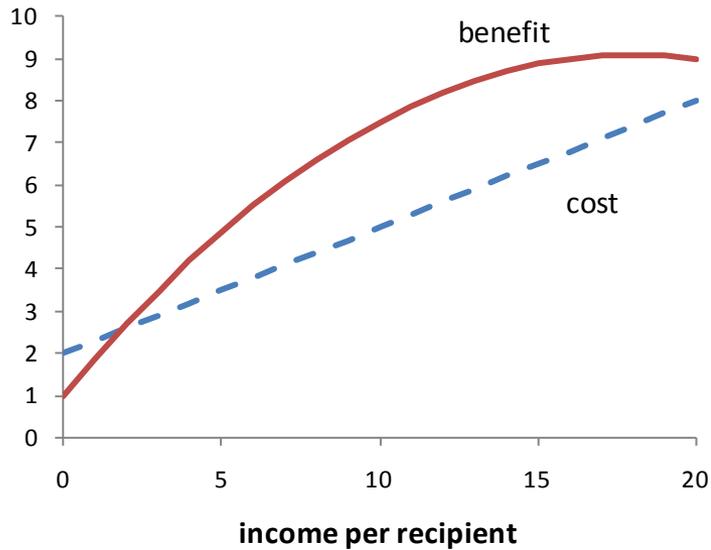
- *Equity Cannot Be Measured By The Incomes Of Toll Payers*
- Both Efficiency And Equity Analysis Can Only (Usefully) Be Done Compared To A Counterfactual
- If Everyone Has Nothing, Maximum Equity Has Been Achieved
- Travel Time Savings Tend To Worsen Vertical Equity
- *Progressive Equity Means That The Distribution Of Net Benefits Increases Proportionately Slower Than Income*



Costs, Benefits, Net Benefits, and Ratio, by Income



Distribution of Costs and Benefits by Income



Distn of Pricing Costs and Benefits

- The A Priori Distribution Is Ok As A Measure Of Cost Impact
- Viewed As A Tax, Or Solely As Cost, Pricing Is Regressive
- For An Individual, Benefits Of Time Savings Are Neutral
- In The Aggregate, Benefits Are Regressive
- For Benefits, It Is The A Posteriori Distribution That Counts



Net Benefits of Tolling

- Pricing Creates Options Not Previously Available
- Not Everyone Can Benefit From The Toll Alone, Without Recycling
- Tolling Should Be Treated As A Price Rather Than A Tax
- Normal Consumption Is Regressive
- Taxes On Consumption Tend To Be Regressive



Equity of Consumption

- Purchase Of Transportation Services Is A Normal Good
- *The 'Equity' Of A Consumption Good Is Whether It Is Taxed Or Subsidized*
- For Congestion Tolling, The Tax Cannot Be Separated From The Price
- For Consumption Goods, The A Posteriori Distribution Is The Only One That Is Relevant
- A Consumption Good Example: Luxury Yachts
- Creating A 'Right' to Peak Travel

