



The effect of public transport quality on car ownership – a source of wider benefits?

Johan Holmgren

Molde University College – Specialized University in Logistics, Norway



Aim:

Estimate the **effect of public transport supply on car ownership** and demonstrate how the presence of such a connection **affects the full benefits of improving the public transport system.**



Wider benefits

Wider in relation to what?

CBA?

*CBA is a policy instrument that quantifies in monetary terms the value of **all consequences** of a policy **to all members of society**. (Boardman et al 2014, p. 2)*



Most common:

Wider benefits = **productivity effects due to agglomeration**
caused by investments in transport infrastructure

Sharing

Matching

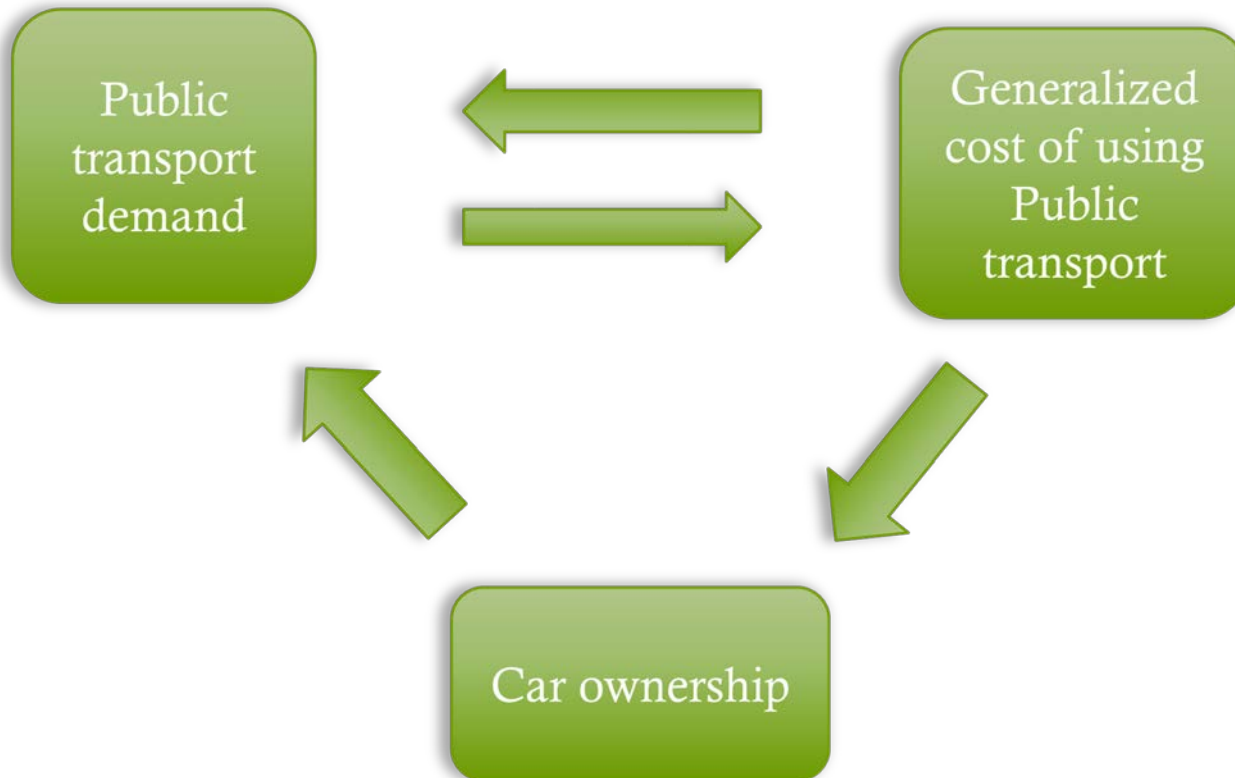
Learning

Examples of effects on secondary markets



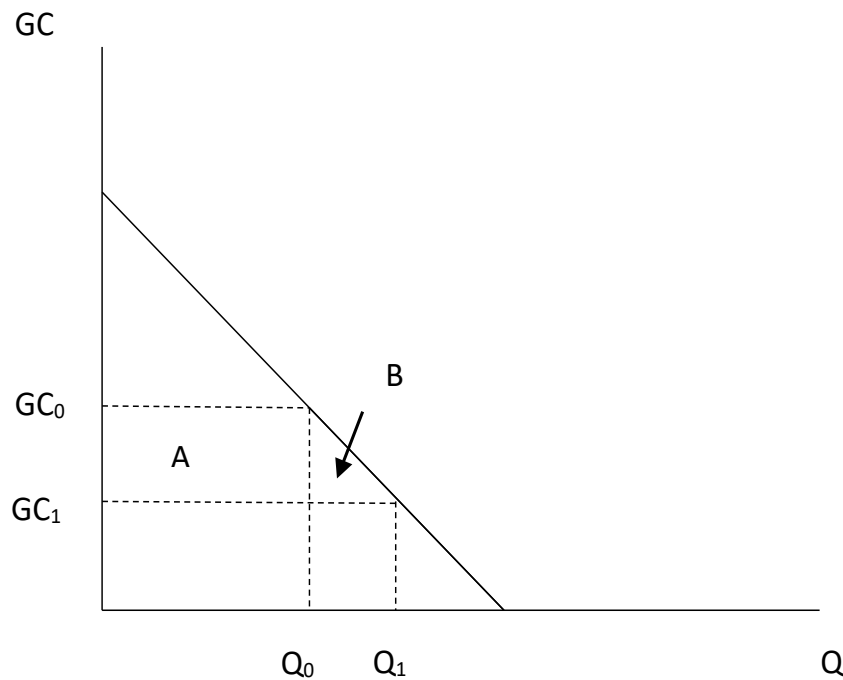
In this case:

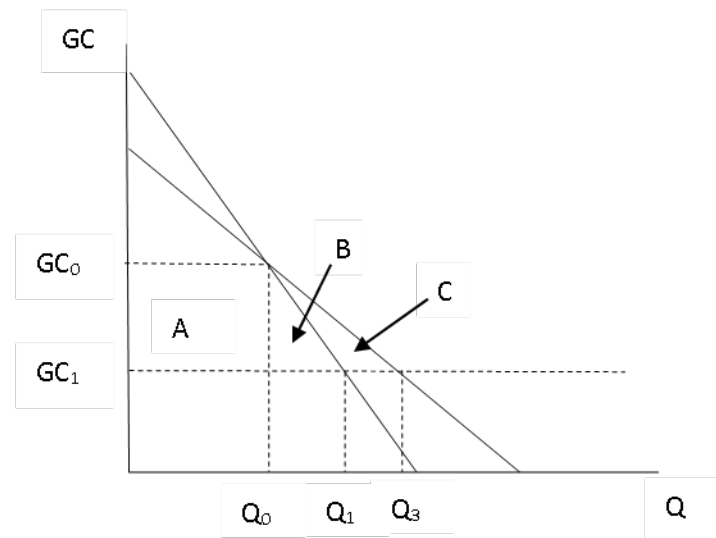
Wider benefits from the primary market due to higher demand responsiveness





Benefits to consumers of improving the system





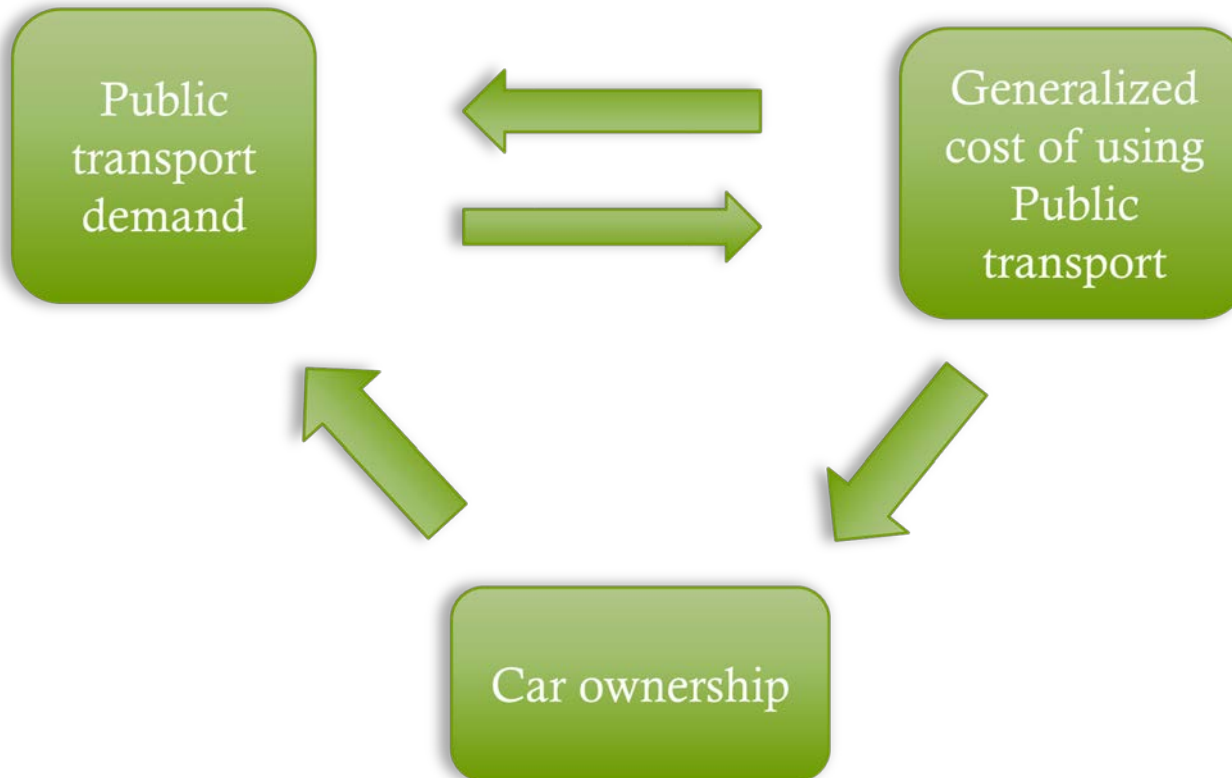


Empirical illustration

Demand elasticities with and without adjustment

data is yearly data from 21 Swedish counties from 1986 to 2015

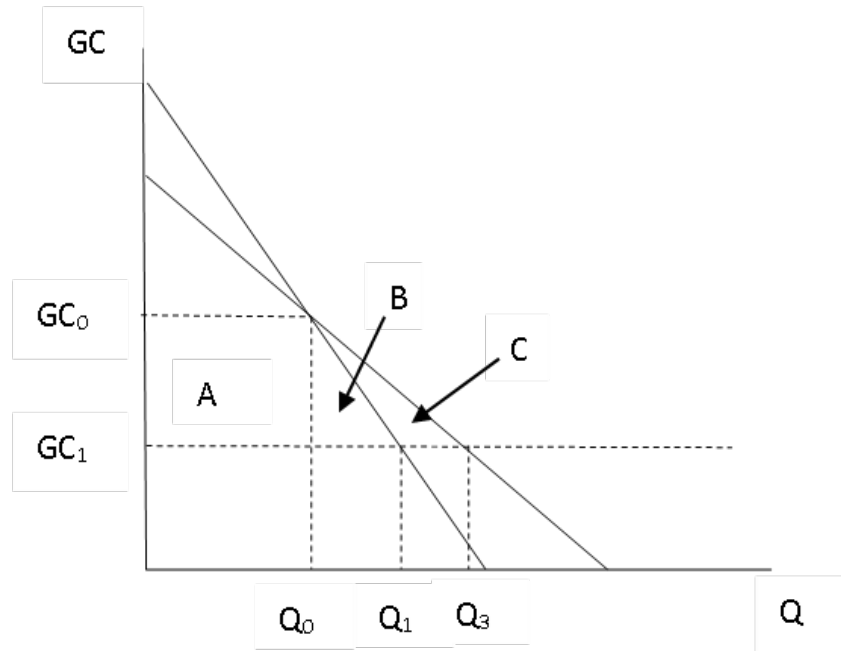
Elasticities with respect to	SR	LR
Fare	-0.256	-0.356
Income	0.612	0.127
Price petrol	0.076	0.134
Population	0.092	0.128
Vehicle kilometres	0.256	County specific





Differences in benefits when using model with full adjustment

Scenario	Difference in benefits
1) No CPF no Price change	10 %
2) No CPF Price change	39 %
3) CPF no Price change	11 %
4) CPF price change	990 %





Differences in benefits when using model with full adjustment

Scenario	Difference in benefits
1) No CPF no Price change	10 %
2) No CPF Price change	39 %
3) CPF no Price change	11 %
4) CPF price change	990 %



Molde University College
Specialized University in Logistics

Thank you for listening!

Questions?

Contact:

Johan.holmgren@himolde.no



Molde University College
Specialized University in Logistics