

Variable Land Use and TUBA

Chris Smith

ITEA

The Issues

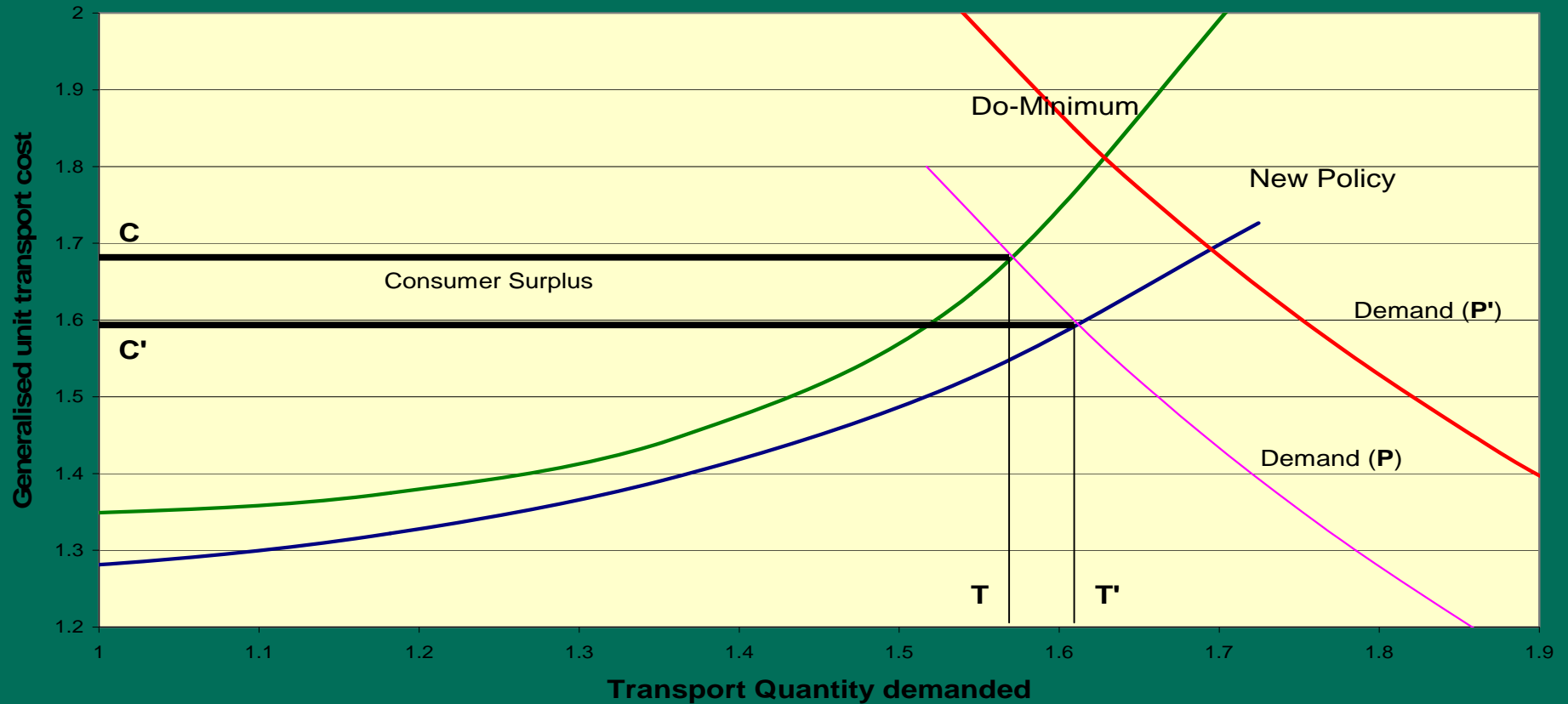
- A land use development cannot proceed without a transport scheme - exogenous land use change;
- A transport scheme has impacts on land use, modelled using a LUTI model, say - endogenous land use change;
- How do we appraise these transport schemes?
- Focus on the first issue

The Problem

- “The essence of the calculation of transport benefits, using the traditional notion of the change in consumer surplus S , is that the demand curve is **constant** with regard to the policy being evaluated. This is part of the “*ceteris paribus*” conditions that are required to make sense of the concept of integrating under the demand curve.”

The Problem Illustrated

Assessment of Benefit from New Transport Scheme or Policy



The Way Forward – Blocked!

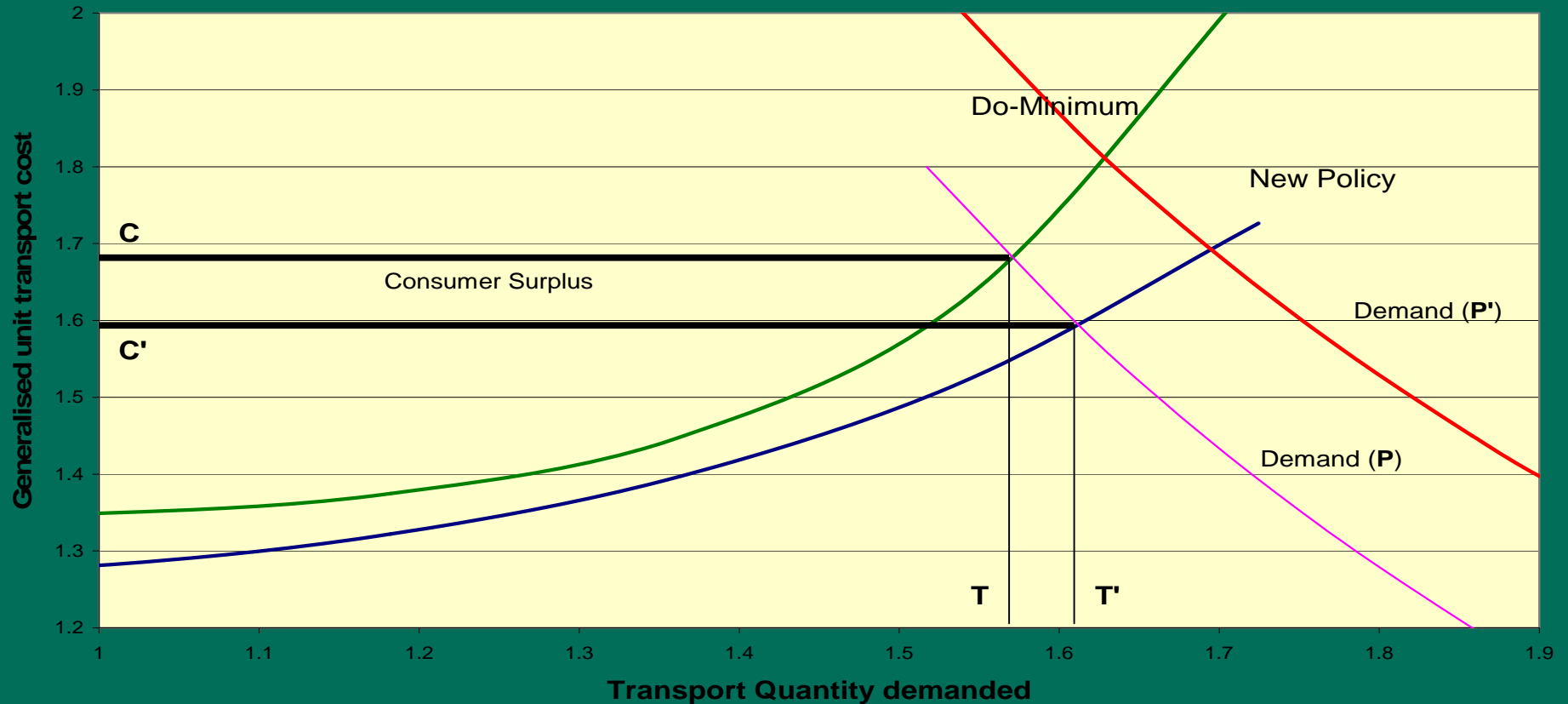
- “Nonetheless, there are no **theoretical** obstacles to extending the demand curve to have a wider scope. If we can measure the costs/benefits of changes in land use *per se*, then we can in principle extend the demand curve to the simultaneous choice of location and transport. Unfortunately ... this remains beyond the range of practical methodology.”

Our advice?

- “The base benefit calculation should therefore be carried out on the basis of the expected land-use in the absence of the (transport) scheme – in other words, **P**.” [This assumes that, without the scheme, the additional land use won’t go ahead.]
- “However, it is certainly reasonable to test the scheme in the light of the additional land-use **P'**, to see if the performance of the scheme is still adequate in the light of the changed land-use.”

The Solution(?) Illustrated

Assessment of Benefit from New Transport Scheme or Policy



The Snags

- The base benefit calculation, based on a ‘without development’ scenario, may suggest that the scheme is not viable;
- The sensitivity test benefit calculation, based on a ‘with development’ scenario, may be difficult to model and/or may suggest implausibly high benefits

What are we Doing About it?

- Planning to clarify the guidance, along the lines discussed
- Working with John Bates and others to find a better solution
- Working with DCLG to reach agreement on this issue with respect to housing developments

The Bottom Line

- Inputs to TUBA must ALWAYS be based on the SAME land use scenario for both with and without scheme cases
 - This advice applies when using LUTI models as well as in cases where land use change is exogenous

Any Questions, Comments, Suggestions?