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# Quantifying Wider Economic Impacts of agglomeration for transport appraisal: Existing evidence and future directions

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### ABSTRACT

This paper is concerned with the Wider Economic Impacts (WEIs) of transport improvements that arise via scale economies of agglomeration. It reviews the background theory and empirical evidence on agglomeration, explains the link between transport and agglomeration, and describes a three step procedure to appraise agglomeration impacts in a number of different settings. It includes new analytical work on measures of agglomeration and reports agglomeration-productivity elasticity estimates for the UK not previously published in the academic literature. The paper concludes with a set of recommendations for future empirical work on agglomeration and transport appraisal.

### 1. Introduction

Cost Benefit Analysis (CBA) uses concepts from economic theory to measure the change in net 'social-welfare' arising from transport improvements. An increase in social welfare occurs when the benefits that accrue to society are greater than the costs. In CBA, benefits and costs are calculated in monetary values, largely by approximating change in consumers' surplus. Summary measures of value for money are then produced such as the net present value of the scheme and the benefit cost ratio (BCR). CBA forms a key component of ex-ante project ap-

specialists in the field, and we report agglomeration-productivity elasticity estimates for the UK that have not previously published in the literature. We also comment on priorities for future research.

The paper is structured as follows. Section 2 briefly reviews the background theory and empirical evidence on agglomeration. Section 3 explains the link between transport and agglomeration and outlines a three step procedure to appraise agglomeration impacts within CBA. These three steps are then discussed in detail in sections 4, 5 and 6. The final section of the paper presents recommendations for future work.