European Investment Bank
Luxembourg, 12 June 2008

Infrastructure and economic geography:

Overview of theory and evidence

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Introduction

Essay provides an overview of the *role of infrastructure in affecting economic geography* in the light of both theoretical and empirical findings.

Today's presentation highlights:

- Two 'lessons'
- Two 'policy implications'

Lesson # 1

As simple as it may sound, the single most important lesson is that:

- *Infrastructural improvements affect the geographical distribution of economic activities*.

In particular, the overall effect of infrastructural improvements can be anticipated only by understanding the *future microeconomic reactions* of:

- People in terms of residential and commuting choices
- Firms in terms of location, fragmentation and organization of their production processes

Lesson # 1 (cont.)

This casts a shadow on traditional *cost-benefit analysis* as this usually does not try to assess the impact of infrastructure projects on those microeconomic decisions.

Infrastructure affects economic geography in various (and sometimes unexpected) ways:

- *Inter-regional infrastructure* affects *both* inter-regional and intra-regional location (e.g. differential access to new transport networks such as TENs)
- *intra-regional infrastructure* affects *both* intra-regional and inter-regional location (e.g. infrastructural changes in a certain region may also alter the internal geography of connected regions)

Lesson # 1 (cont.)

The reason is the '*network character*' of the space economy itself, which implies that the attractiveness of locating in a certain site depends on its '*market potential*', i.e.

- Its market size and production cost advantages
- Its centrality with respect to alternative sites (no matter whether they belong to its same region/country or not).

Lesson # 1 (cont.)

The market potential is a rather successful tool to predict the reallocations of economic activities triggered by infrastructural investments.

This is true even in the case of its most unexpected implications such as:

- The '*straw effect*': transport improvements between 'centre' and 'periphery' may increase geographical divergence
- The '*shadow effect*': transport improvements between two 'peripheries' may increase geographical divergence by favouring the 'core'

Lesson # 2

A second important lesson is, therefore, that:

- *Infrastructure investment generates externalities that may diffuse quite far*.

In the case of inter-regional infrastructure, earnings rise in regions receiving new national highways and fall in adjacent regions

That may be true even for localised infrastructure projects as the benefits that a region obtains from improved own intra-regional infrastructure come at the expense of competing regions

Policy implication # 1

- *Effective infrastructural projects require knowledge on their impacts on the microeconomic decisions that determine the spatial distribution of economic activities*.

These impacts depend crucially on the specific details of the projects and the specific sources of agglomeration economies they affect.

Policy implication # 2

- *Regions need to coordinate not only inter-regional infrastructure projects but also intra-regional ones to avoid beggar-thy-neighbour and self-defeating outcomes.*

The theoretical framework discussed in the present essay can be effectively used to evaluate and forecast the effects of specific transport policies on the spatial distribution of economic activities.

Thank you for your attention

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