



# Including Infrastructure Systems in a New Economic Geography Model

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# Motivation

Infrastructure investments effect on regional economic balance

Include infrastructure into economic models

Spatiality in economic model is essential – several scales

# Infrastructure Roles

Economic agents rely on infrastructure

Reduces dependence on local endowments

Increases dependence on network

Infrastructure key component in economic model

# Infrastructure Impacts

Four important impacts on agents have been identified

-Agglomeration



-Connectivity



-Energy Cost

£££

-Information Exchange



# Economic Model

Suitable candidate is New Economic Geography (NEG)

Regions that are interconnected that trade

Three key levels in structure: local, regional, and national

Further development is NEG with growth

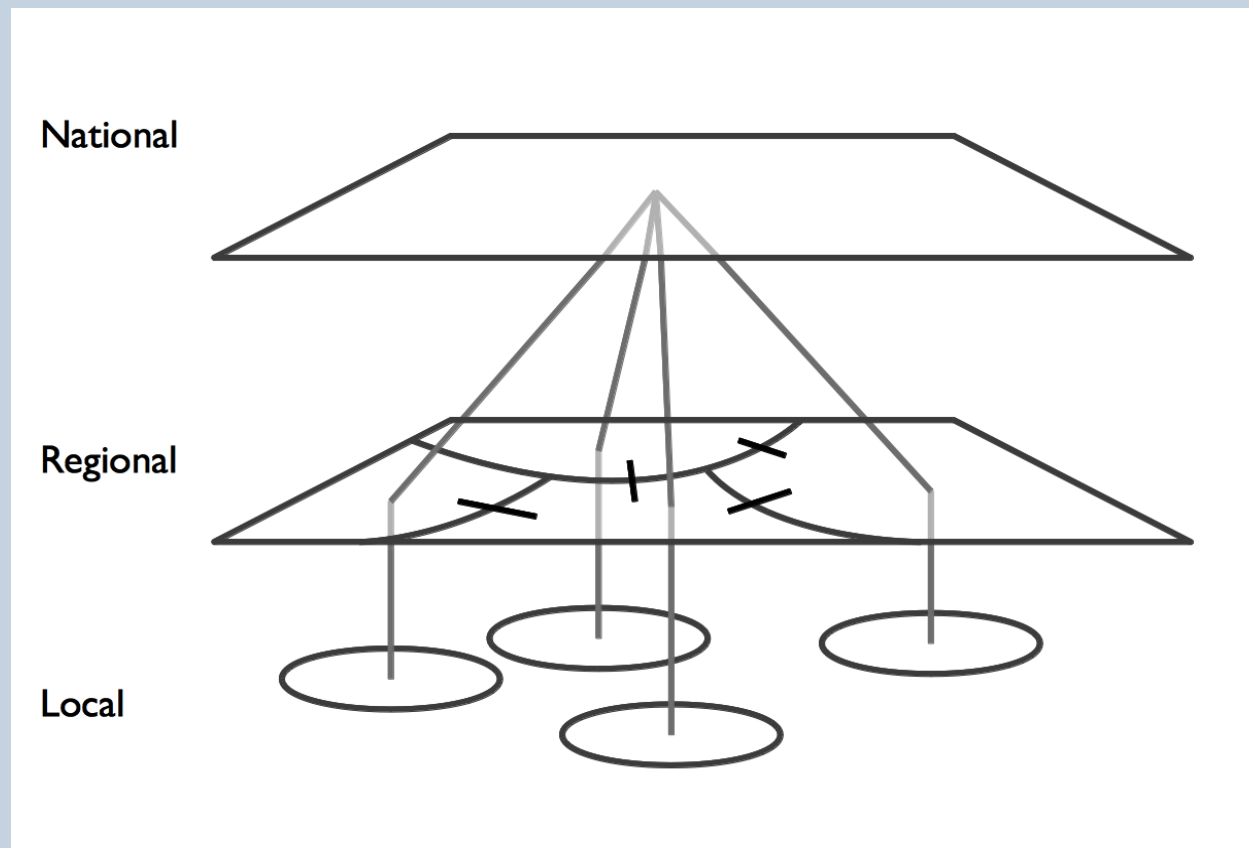


# Model Extension

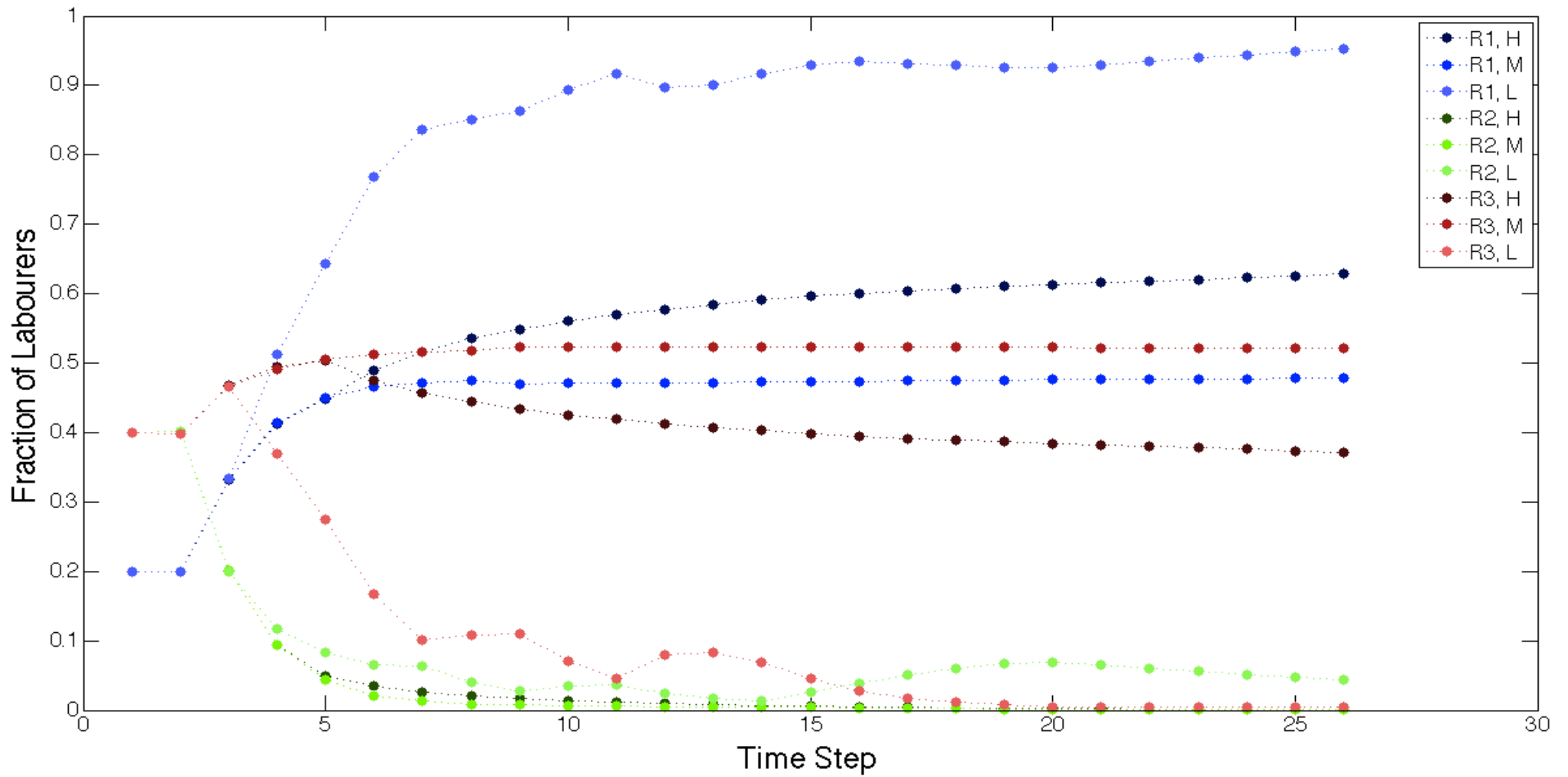
<b>Aspect</b>	<b>Old</b>	<b>New</b>
Inputs	Labour	Labour, Capital
PF	Linear	Cobb-Douglas
Mobility	One sector	Two sectors
Infrastructure	None	3 levels
Others	None	TFP, human capital

# Infrastructure Hierarchy

We need to match our three level economic structure with a three level infrastructure hierarchy.

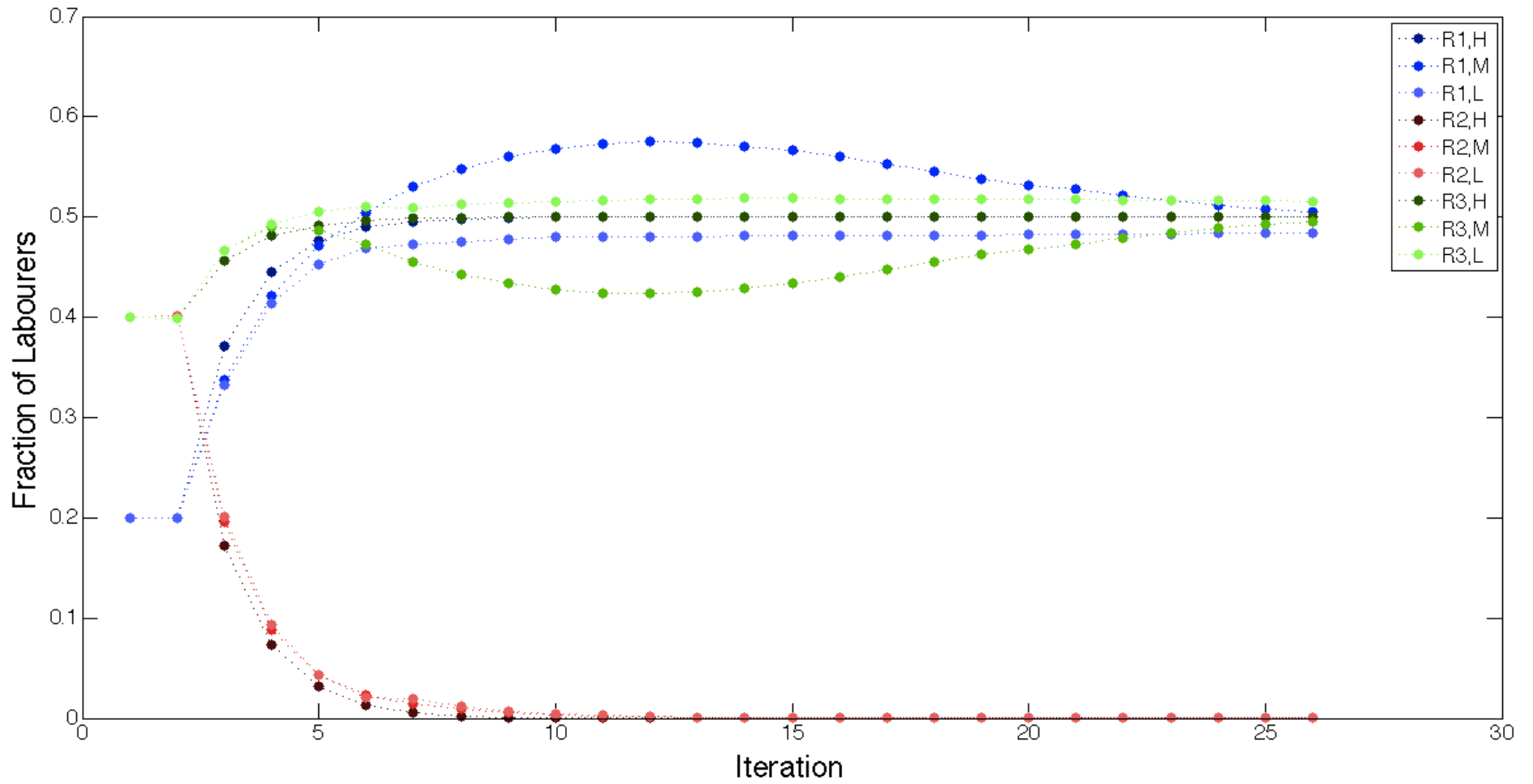


# Initial Results





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## Further Work

Include investment opportunities and growth mechanism

Make the infrastructure network representation more sophisticated

Look into the physical vs service layer of the network

# Questions?

