

Hotelling Model in a Network with Uncertainty in Costs of Production

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Resumo/Abstract:

We develop a theoretical framework to study the location-price competition in a Hotelling-type network game, extending the Hotelling model with uncertainty in the linear transportation costs, from a line (city) to a network (town). We show the existence of a pure Nash equilibrium price if, and only if, some explicit conditions on the production costs and on the network structure hold. Furthermore, we prove that the local optimal localization of the firms are at the cross-roads of the town. Acknowledgements: This work is financed by National Funds through the FCT - Fundao para a Cincia e a Tecnologia (Portuguese Foundation for Science and Technology) within project "Dynamics, optimization and modelling/PTDC/MAT-NAN/6890/2014.