

Peeters (D.), Caruso (G.), Cavailhès (J.), Thomas (I.), Frankhauser (P.), Vuidel (G.) (2015) Emergence of leapfrogging from residential choice with endogenous green space: analytical results, *Journal of Regional Science*, vol. 55(3), 491-512.

Abstract. Leapfrog development is a typical form of sprawl. This paper aims at analyzing the existence, size, and persistence of leapfrogging in a dynamic urban economic model with endogenous green amenities. We analyze whether incoming households choose to settle at the fringe of the city or to jump further away depending on their preferences and the structure of the city. We first provide an analytical treatment of the conditions and characteristics under which a first leapfrog occurs and show how the optimal choice is affected by the size of the city, income, commuting costs, as well as the size of the area where green amenities are considered. We then study how further leapfrogging and multiple urban rings may appear and be maintained in the long-run equilibrium, and how infill processes take place through time.