

# Urban Equilibrium with Incomplete Information of Disaster Risk

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## Abstract

I analyzed the relationship of the diffusion rate of disaster risk information, equilibrium urban land use, and social welfare. Disaster risk doesn't have an influence on land use under the low information rate of diffusion, and household finds an optimum location equally in safety areas and dangerous areas. When the information rate of diffusion exceeds the rate of the safety area occupies in a city, it spreads through a reflection to the land value of the risk. As a result, much household finds an optimum location in a safe area and the net equivalent value becomes positive. The above result suggests a possibility that the lower rate of safety area will be able to improve social welfare by spreading risk information.