

Sustainable Urban Development as a Dynamic Economic System

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Abstract:

Over the decades ahead, urban areas will become the predominant living environment for the majority of people across the world. This development poses substantial challenges for decision makers in order to ensure that urban centers maintain or become livable places, both in terms of economic opportunities and environmental quality. By combining the tools of economic geography, optimal control of nonlinear dynamic systems, and behavioral economics this project thus addresses the issue of urban economic development (UED) by analyzing the effect of management decisions on a dynamic system of two mutually dependent main UED-indicators, namely residential density and the level of environmental pollution. With this truly innovative approach, we intend to broaden the understanding of how UED works today, how it can affect people and environment in the future, and how it can be steered by decision makers not only in an effective but also in an efficient way.