

ENGLISH ABSTRACTS

SPECIAL SECTION: Regionalism in the Strategic Spatial Plan 2050 –
Alternative Approaches to Creating Affinity Areas in Regional Planning

Commuting Areas in Israel

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ABSTRACT

This paper presents a definition of Commuting Zones in Israel. Using anonymized mobile-phone mobility data, we identify spatial economic regions based on actual travel flows between 1,270 traffic analysis zones. The analysis applies the Leiden community-detection algorithm from network science to construct 18 commuting zones covering the entire country. We compare the proposed classification to existing administrative divisions and to the traditional hierarchical clustering methodology used internationally for commuting zones delineation. The results show that the proposed commuting zones better capture patterns of commuting and regional economic activity, exhibiting higher stability, stronger internal connectivity, and greater explanatory power for wage dynamics and travel behavior. The findings suggest that commuting zones provide a more accurate framework for regional policy analysis, transportation planning, and empirical economic research in Israel.

Keywords: commuting zones, travel flows, mobile phone data, regional policy.

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