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AGEING CORE-CITY AND REJUVENATED SUBURBIA: EVIDENCE FROM RIGA, 2000-2016

Ageing process is a common feature for numerous post-socialist cities in Central and Eastern Europe; whilst suburban areas have displayed a pattern of rejuvenation. Previous research has stressed that the age structure changes in population of post-socialist cities and suburbs are mostly suburbanisation-driven. The aim of the study is to explore spatial and temporal patterns of population structure in Riga and it's metropolitan area**.** The study analyses 2000 and 2011 Census, as well as 2016 Population register data to provide an overview of residential patterns and geographic trends of the most mobile age group (25–34 years) and the least mobile (65+ years). Our results show that there is residential clusterisation in Riga and its metropolitan areas leading to residential (demographic) polarisation.

Keywords: post-Soviet suburbanization, age structure, ageing, residential (demographic) polarisation, urban decline.

One of the main challenges for urban and regional development in Central Eastern Europe (CEE) are related to the consequences of demographic change [*Haase* et al. 2011; *Kabisch*, *Haase* 2011; *Kulcsak*, *Brown* 2017; *Fihel*, *Okólski* 2019]. Numerous studies have shown that demographic transition, ageing, fertility behaviour, diversified household structures have a significant implication on urban shrinkage, regional labour and housing market [*Buzar* et al. 2005; *Steinführe, Haase* 2007; *Botev* 2012; *Kurek* et al.

2017, *Kurek*, *Wojtowicz* 2018, *Kazimierczak*, *Szafrańska* 2019]. Many studies on urban shrinkage and post-socialist transition usually conclude that these aspects have complex interlinkages [Couch et al. 2012]. The concept of multiple transformations can be used as a way of explaining the post-socialist urban transition, especially temporal and spatial dynamics of demographic change and its implications on policy, planning and regional development [*Sýkora*, *Bouzarovski* 2012; *Rink* et al. 2014] Similar to other CEE countries, in Latvia suburban development has contributed to demographic differences between metropolitan and non-metropolitan regions. Current demographic trends have raised the concern that an ageing population may increase demographic polarisation at both local and regional level.

Therefore, the aim of the study was to explore spatial and temporal patterns of population structure in Riga and its metropolitan area. Our research focused on evaluating change in the age structure of territorial units of Riga metropolitan area in order to determine the areas that have been characterised by ageing or rejuvenation trends since 2000.

The study analyses 1 km^2 geocoded grid data derived from 2000 and 2011 Census, as well as 2016 Population register to provide an overview of location patterns and trends in the geographies of the most mobile (25–34) and the least mobile (65+) age groups. We utilize Hot spot analysis (Getis-Ord Gi*), in order to locate clusters of hot and cold spots, of particular age groups and to assess their spatial extent at the national and regional level by conducting an exploratory space-time data analysis [*Getis, Ord* 1992, 1996; *Goodwin, Schoby* 2014; *Gregory*, *Patuelli* 2015]. This frequently used point pattern analysis method shows where features with either high or low values cluster spatially.

Results showed evidence of a different age composition and development patterns within the capital and its metropolitan area. Urban sprawl, greenfield development; in-fill development; coastal gentrification lead to an increase of younger residents. Hotspots of youth are evident in the urban core of Riga. This can be described as a process of re-urbanization for some neighbourhoods. Other parts of Riga have witnessed an increase of elderly population, which is especially evident in the Soviet panel housing estates. From 2000 to 2016, the population of Riga decreased by 15 % [*CSB LV* 2019]. Some of them became suburbanites. However, the demographic ageing is much more evident in the peripheral parts of suburbia. Our results show that for the most mobile group, hotspots were evident not only in the

vicinity of Riga, but also in the urban core of the capital. Overall, an increased residential clusterisation in Riga and its metropolitan areas was observed leading to residential (demographic) polarisation.

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