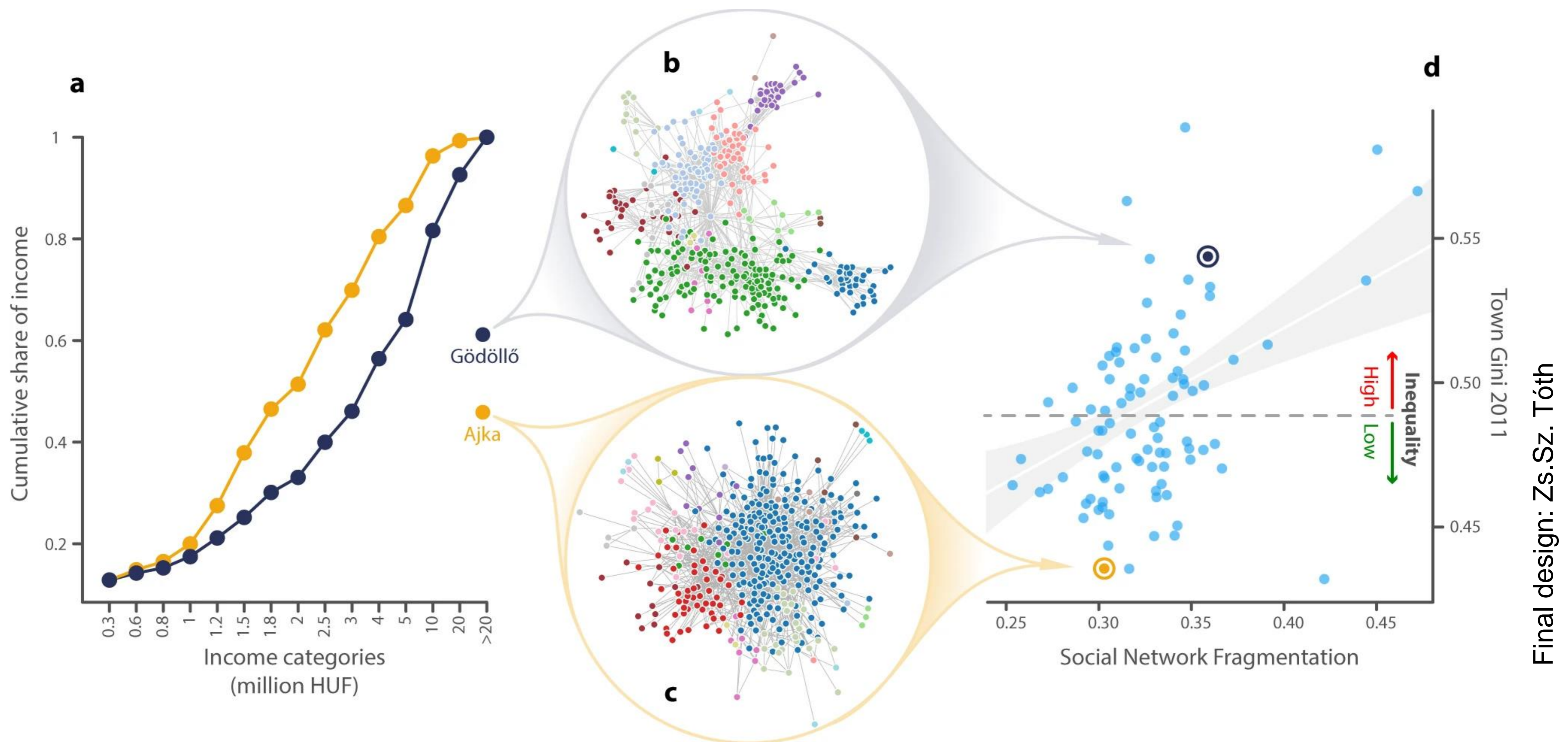


INEQUALITY AND URBAN TOPOLOGY

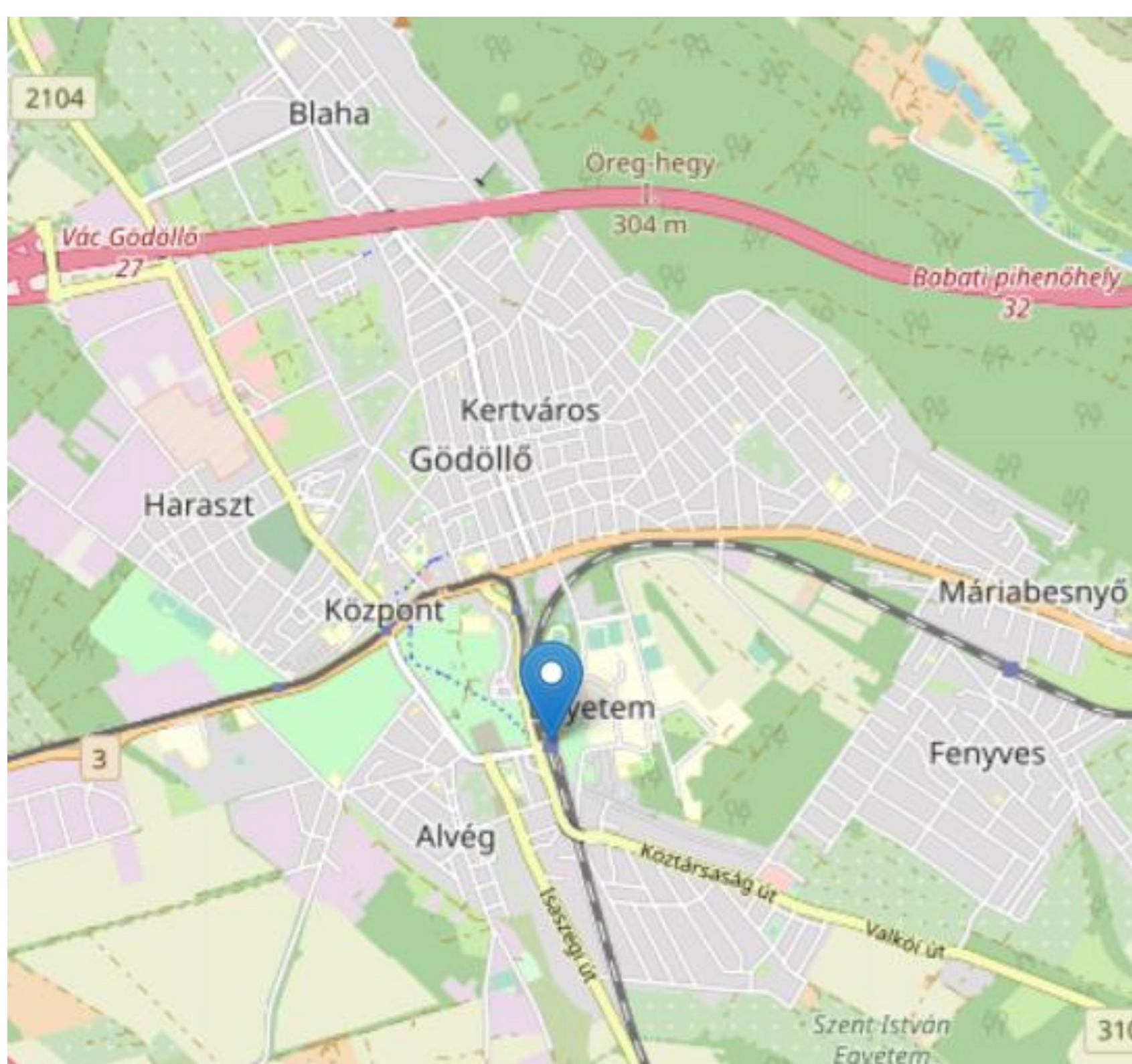
G. Tóth(a), J. Wachs(b), R. Di Clemente(c), A. Jakobi(d), B. Ságvári(a), J. Kertész(e), B. Lengyel(a)

(a)Centre for Econ. and Regional Studies Budapest, (b)WU Vienna, (c)Univ. Exeter, (d)Eötvös Univ. (e)CEU

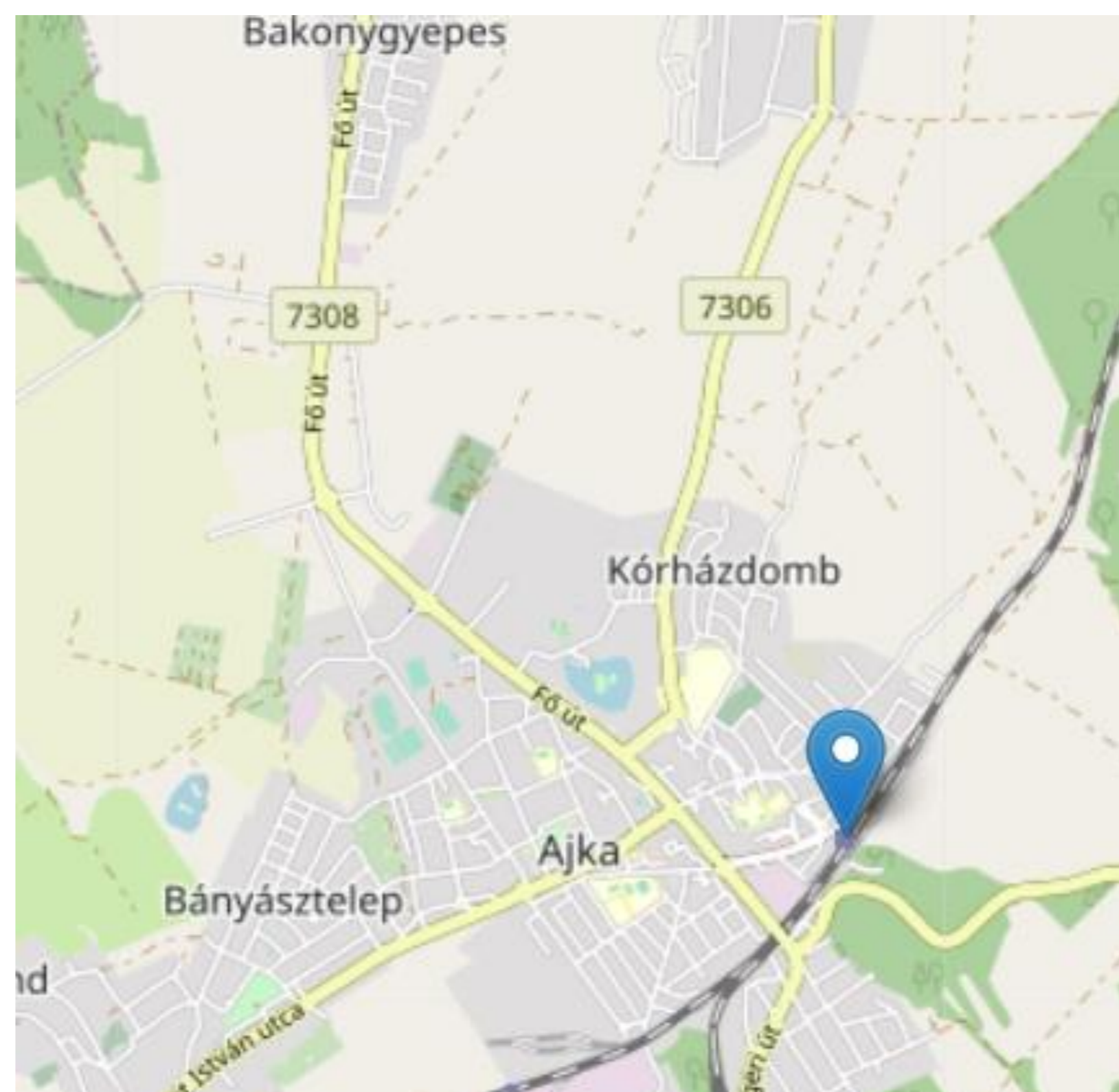


Final design: Zs.Sz. Tóth

Income inequality correlates with network fragmentation in towns and the latter is enhanced by topological hindrances like rivers, mountains and rail tracks. To test this hypothesis, we used data from the Hungarian online social network iWiW, the Hungarian Central Statistical Office and OpenStreetMap. a) Inequality characterized by the cumulative income distribution for a city with relatively low (high) level of inequality from which the Gini coefficient can be calculated: Ajka (Gödöllő); b) social network structure of Gödöllő; c) Ajka; d) larger Gini (i.e., inequality) goes with larger network fragmentation.



Gödöllő



Ajka

OpenStreetMap

Using a two-stage model, we have shown that urban geography features have statistically significant relationships with income inequality via social network fragmentation.

Nature Communications **12**, Article number: 1143 (2021)

Funding: OTKA K129124 (BS, JK, ÁJ, BL) Newton Intern'l Fellowship, NF170505 (RDC), SF Ireland No. 17/SPR/5324 (GT)

