

Title: *Mapping the desirability of Scotland's rural, remote, and island regions: what role of place-based assets and public services? A mixed spatial analysis and choice experimental approach*

Session Type: Ordinary session

Theme: G10 – Socio-Spatial Inequalities and Polarisation: Segregation, Migration, Gender, Discrimination and Social Exclusion

Authors and affiliation: Dr Jonathan Hopkins (Senior research scientist)¹, Dr Simone Piras (Senior research scientist)¹

¹ Social, Economic & Geographical Sciences Department, The James Hutton Institute, Scotland, UK

Abstract: Many rural territories across Europe are experiencing vicious circles of depopulation and declining public services, despite possessing valuable economic and environmental assets. Among European countries, Scotland is noteworthy for its high population concentration, counterbalanced by many sparsely populated rural, remote, and island (RRI) regions. Consequently, the Scottish Government's 2021 National Population Strategy (NPS) made the promotion of a more evenly distributed population a key goal, and the subsequent Action Plan to Address Depopulation (2024) has acknowledged the place-based complexity of demographic challenges. Achieving a more balanced population would require the voluntary relocation of residents from urban to RRI areas, but from a foundational economy perspective, activating this virtuous circle requires an increased accessibility of keystone services. We contribute to this debate by assessing the changing desirability of Scotland's territory and evaluating the correlation between desirability and local outcomes. We adopt a novel approach merging original datasets of place characteristics calculated from open sources and results of choice experiments from a sample of 1,007 respondents representative of the Scottish population. The spatial dataset contains information on attributes of places (operationalised as 5km wide hexagons) including population levels; the locations of schools, healthcare facilities and grocery shops; the quality of digital connectivity and of the natural environment; and the urban-rural nature of the locality. The choice experiment used the same attributes to derive preferences and willingness-to-accept coefficients which, once multiplied by the characteristics of each place, provide a proxy for the "utility" that people derive from moving there or, equally, for their monetary willingness to accept. The diversity of our sample allows us to map desirability across different socio-demographic groups, including retired people and young families. Changing place characteristics over time (2019-c.2025) allow us to determine how desirability has changed, and thus which areas have experienced decline or improvement. Willingness-to-accept values provide a tangible figure of the compensation one would require, in terms of a higher salary, to move to a less desirable place, or the income one would forego to move to a more desirable place. Finally, the discrepancy between actual population dynamics and desirability provides an indication of local constraints to relocation, primarily in terms of housing availability – a key factor in rural Scotland. Our analysis can support the design of efficient incentives – in terms of service provision – to move towards the goal of the NPS, mimicking the "20-minute neighbourhood" concept for RRI areas.

Keywords: spatial data; discrete choice experiment; willingness-to-accept; service accessibility; place attractiveness

JEL codes: C15 – Statistical Simulation Methods: General; R12 – Size and Spatial Distributions of Regional Economic Activity; R23 – Regional Migration • Regional Labor Markets • Population • Neighbourhood Characteristics; Y91 – Pictures and Maps