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## **Diversity in Motion: The Role of Immigrant Human Capital in Danish Second-Tier Towns and Rural Areas**

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### **Abstract:**

The recent outbreak of COVID-19 and the rise of remote working has created an “urban exodus” narrative in the public, and causing optimism in rural regions for reversing negative population development (Marsh, 2020). Before the pandemic, the migration from urban to rural areas was motivated by social relations and economic concerns (Andersen et al., 2022; Sandow, Lundholm, 2020; Hansen, Aner, 2017; Remoundou et al., 2016). During the pandemic, remote working possibilities became a popular work form. This can change motivations for the migration preferences in future and II-tier towns and rural areas can become the popular destination.

In this paper, we explore counterurban migration patterns in Denmark with a focus on the human capital immigration and their economic impact in II-tier towns and III-tier rural areas. While applying human capital theories to analyze the attributes associated with individuals in their working age, such as education, socioeconomic status, wages, and occupations we aim to understand at what extent different attributes of human capital have significant role in the value creation in the destination towns and villages. The primary objectives are to explore the long-term impact on II-tier towns and rural economies through studying the diversification and segmentation of immigrant human capital.

We use Danish micro register data and geographical data to study counterurban migrants moving from large cities and central municipalities to smaller-cities and villages, while applying the Javakhishvili-Larsen & Hansen’s (2023) definition and methodology to identify typologies in Danish urban geography.

The article also builds on extensive research supporting the role of human capital in economic growth and seeks to define human capital beyond formal education, including age, job skills, socioeconomic characteristics, and more (Mitze & Javakhishvili-Larsen, 2020; Naveed, Javakhishvili-Larsen & Schmidt, 2016; Storper and Scott, 2009). While existing studies have explored the impact of specialization or diversification of economic activities on regional and urban economic growth (Noseleit & Söllner, 2010; Ejdemo & Ortqvist, 2021; Dennett & Wilson, 2013; Punia & Singh, 2012), there has been a notable gap in the exploration of the added value stemming from the attributes of immigrant human capital in locales beyond major cities and central municipalities.

To address this gap, the study introduces the Regional Entropy Index (REI) Model, which measures the geographical diversification of human capital attributes. It assesses the degree to which different tiers of localities receive differentiated inter-regional human capital immigrants. Methodologically, the study also employs pooled Ordinary Least Squares (OLS) and Year Fixed Effect (FE) models

for this analysis. Preliminary results, analyzed at different tiers, indicate significant correlations between the entropy of various human capital attributes and the average wage of the destination municipality. For instance, we observe that in the II-tier towns and III-tier rural areas the counterurban immigrants' attributes, such as, age-entropy, wage-entropy and occupation-entropy show positive and robust correlations with average wage level in the destination municipalities, thus indicating towards diversification of these attributes of immigrants to the II-tier towns and III-tier rural areas. On the other hand, the education-entropy exhibits negative and robust correlation with the average wage level, thus indicating towards segmented education attributes of immigrant human capital.

This paper contributes to the understanding of the economic impact of migration patterns in Denmark and provides valuable insights for policymakers and researchers interested in the relationship between human capital, migration, and regional economic development, especially, to planning practitioners in the II-tier and III-tier towns, who tackle the economic and demographic challenges in their localities. But most importantly, this study contributes by providing new research methods (i.e., adopting Regional Entropy model) for studying human capital impact on the local economies outside of the large and main cities. It also challenges the understanding of what human capital is and raises the question of whether measuring the formal education attainment level as an attribute of human capital is prudent for analysing human capital outside of the big cities and central municipalities.

**Keywords:** Counterurbanisation, Migration, Human Capital, Regional Entropy, Value Creation, Urban/Rural

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