

Title: (Mis)placing optimism? Nordic population development and residential mobility post-pandemic

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Extended Abstract

Topic & theoretical focus

Urbanisation has been the dominant trend in the Nordic countries in recent decades (Syssner, 2020). The majority of population growth has been absorbed by a small number of urban municipalities, while most rural and remote municipalities have seen their populations decline (Sanchez Gassen & Heleniak, 2019; Syssner, 2020). Between 2010 and 2019, for example, half of all Nordic population growth occurred in just 32 (3%) of the region's 1135 municipalities (Randall et al., 2022).

Depopulation of rural areas is by no means a Nordic problem, it is a pressing issue for rural municipalities across Europe (Copus et al., 2021; Cotella & Brovarone, 2020). As Syssner (2020) argues, however, demographic decline has particular significance in a Nordic rural context. The region's population structure is incredibly sparse in a European context and the responsibility for delivering (and funding) most welfare services sits at the local level (Syssner, 2020). As such, when the population shrinks, challenges related to service provision and sparsity are further exacerbated while at the same time welfare budgets are diminished (Jungsberg et al., 2020).

In this context, the mobility patterns observed during the COVID-19 pandemic generated a sense of optimism regarding 'a return to (a renewed) rurality' (Cotella & Brovarone, 2020, p. 108). Anecdotal evidence from early in the pandemic suggested that people were spending more time in rural areas, either through relocation or by increased use of a second home (Bolter, 2021; Cederblad, 2021; Eriksen, 2021; Schnurr, 2020). At the same time, expectations were building about the potential for remote working arrangements to continue beyond the pandemic and become a permanent fixture of working life within the knowledge economy (Dahik et al., 2020; Green & Riley, 2021; Sostero et al., 2020). Together, these phenomena suggested that rural development potentials may, perhaps, be one silver lining to emerge from the pandemic (de Luca et al., 2020; Milder, 2020; OECD, 2021). Though expectations have tempered somewhat since 2020, unpacking the impact of the pandemic on population trends in different geographical contexts remains an important task.

Several European and Nordic studies have mapped internal migration trends during the pandemic (Correa, 2022; Serrano & Fajardo, 2023; Tønnessen, 2021; Vogiazides & Kawalerowicz, 2023). In Spain, for example, Serrano and Fajardo (2023) demonstrated that, although in migration to rural areas increased in the beginning of the pandemic, it returned to pre-pandemic levels by 2022. Interestingly, increased in migration was found to be far less intense in remote rural areas than in accessible rural areas. Similarly, González-Leonardo et al. (2022) found that, although internal migration to rural areas increased overall in Spain in 2020, the majority of gains were in rural municipalities within 40 kilometres of a core city. In the Nordic context, internal migration increased in intensity in all Nordic countries in 2020 and 2021 (Heleniak & Jokinen, 2022), with outmigration from the capital areas and other large cities a key driver (Correa, 2022; Tønnessen, 2021; Vogiazides & Kawalerowicz, 2023). Studies in Sweden and Norway suggest that the surrounding municipalities and regions were the biggest beneficiaries, with smaller numbers of migrants venturing further afield (Correa, 2022; Tønnessen, 2021; Vogiazides & Kawalerowicz, 2023). Some studies have also found that those with the ability to work remotely were more likely to out migrate from larger cities following the onset of the pandemic (Correa, 2022; Tønnessen, 2021).

Although these studies provide valuable insight into the role of municipality type, they tell us little about the way that changes observed during the pandemic fit with longer-term population development trends. A longer-term perspective on population development can provide important insight into the ways in which past conditions shape future outcomes (González-Leonardo et al., 2023). In this case, such a perspective can be helpful in determining whether changes brought about by the pandemic do, in fact, present a genuine opportunity for Nordic municipalities which have been struggling with demographic decline. This paper seeks to understand changes to internal migration

patterns observed during the pandemic in the context of longer-term population development trends in the Nordic countries. Specifically, it addresses the question:

To what extent can internal migration to Nordic municipalities during and directly following the pandemic be explained by pre-pandemic population development trajectories?

Data & methods

The research will be based on municipal-level population data provided by the Nordic statistical bureaus. The dependent variables will be **change in internal migration (%)** measured at two different points in time:

- pandemic mobility = (internal in migration 2020 + internal in migration 2021 / 2) compared with (internal in migration 2017 + internal in migration 2018 + internal in migration 2019 / 3)
- post-pandemic mobility = (internal in migration 2022 + internal in migration 2023 / 2) compared with (internal in migration 2017 + internal in migration 2018 + internal in migration 2019 / 3)

The two distinct time periods will be used in an effort to separate out changes that may be specific to the pandemic and changes that may indicate the beginning of a longer-term trend. Clearly, the “beginning” and “end” of the pandemic cannot be neatly located within a calendar year. Nonetheless, these dates are expected to be more-or-less an adequate approximation of the time periods of interest for the Nordic Region (e.g., Folkhälsomyndigheten, 2023). In migration has been selected as an indicator rather than net migration in order to avoid the inclusion of individuals who were unable to out migrate due to pandemic-related circumstances beyond their control (e.g., university students). Regression models will be used to test the effect of a number of independent variables on pandemic mobility and post-pandemic mobility. The most important of these will be **municipality type** and **population development trajectory**. Others may include country, distance from a functional urban area, and pandemic mobility (based on the calculation described above).

Municipality type will be determined based on the Urban-rural typology of Nordic municipalities developed by Penje and Vasilevskaya (2023). This typology classifies Nordic municipalities into three categories: predominantly urban, intermediate, and predominantly rural. **Population development trajectories** will be developed based on sequence analysis conducted by the author using municipal level data spanning 2000 – 2019¹. This work will be based on other similar studies carried out in a European context (e.g., González-Leonardo et al., 2023; Newsham & Rowe, 2023). The aim of sequence analysis is to identify typical pathways, in this case typical pathways that municipalities can take regarding their population development. Sequence analysis is a good tool to describe pathways, as it includes the timing of events, the duration in different states, and the ordering of events (e.g., Coulter et al., 2016; Stovel & Bolan, 2004). In this case, the different states will include mutually exclusive classes of population change, for example: high decline (<-3%), decline (-3% to -1.5%), moderate decline (-1.5% to -0.5%), stable (-0.5% to 0.5%), moderate growth (0.5%–1.5%), growth (1.5%–3%) and high growth (>3%) (González-Leonardo et al., 2023). Possible trajectories that may be identified based on these patterns may include: Strong growth, moderate growth, variable growth, stable, variable decline, moderate decline, strong decline. The interaction between municipality type and population development trajectory will also be tested.

Expected results

While it is anticipated that the data will show an overall increase in internal in-migration to rural municipalities in 2020-2021, this trend is expected to be highly selective, primarily favouring municipalities which were already faring relatively well from a demographic perspective. Further, internal in-migration rates are expected to have returned to pre-pandemic rates for the majority of municipalities in 2022-2023. Overall, the research is expected to demonstrate that optimism about the potential for more balanced population development post-pandemic was largely misplaced. On the contrary, the changes to residential mobility brought about by the pandemic may actually work to exacerbate existing divides by further increasing inequalities between rural areas which are doing well

¹ It may be necessary to base the sequence on a shorter timeframe in the case of Denmark due to data comparability issues resulting from regional and municipal reforms which occurred in 2007. This issue will be resolved prior to the submission of the amended abstract.

and those most effected by population decline. Thus, there remains an ongoing need for policy responses which support rural municipalities to deal with the challenges associated with long-term demographic decline. Further study of municipalities which emerge as exceptions to either of the expected major findings may be useful in generating knowledge that could support such policy responses.

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