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# At the intersection of urbanisation and counterurbanisation in rural space: Microurbanisation in Northern Iceland

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Abstract

Micropolitan centers and other regional towns have frequently been conceptualised as drivers

of economic growth in rural regions, providing an ideal balance between rural and urban

amenities. However, they have also been described as "sponges" that suck the population

from more rural communities in the region, perhaps only to be squeezed again into the

micropolitan bucket of urbanisation. In this paper, we map long-term urbanisation and

microurbanisation in Iceland and evaluate the role of micropolitan Akureyri in Northern

Iceland in rural migration dynamics. We find the Icelandic rural population to be highly mobile

with about nine out of ten residents in different types of communities having lived elsewhere

for at least a year, and between a quarter and one-third having lived in the Reykjavík capital

area. Positive net in-migration to Akureyri from more rural regions corresponds exactly to

negative out-migration towards the Reykjavík capital area and the steady long-term

population growth of Akureyri can, thus, be attributed exclusively to natural fertility. However,

micropolitan Akureyri does not appear to exacerbate rural out-migration in Northern Iceland.

Residents of smaller communities in the north are not more likely to move than other rural

residents – they are simply more likely to move to micropolitan Akureyri rather than the

Reykjavík capital area.

Keywords:

Counterurbanization; Microurbanisation; Micropolitan; Migration; Urbanization

1

#### Introduction

The academic division between urban studies and rural studies tends to divert attention away from intermediate types of settlements. As Gans (2009) has noted the term 'urban' is often used as a shorthand for very big and crowded cities, and urban scholars tend to focus on the spectacular metropolis and global city rather than smaller urban centers. Conversely, rural scholars tend to focus on smaller towns, villages, and farming communities rather than more urban centers in non-metropolitan areas. Urban centers outside major cities may, thus, to some extent have been academically marginalised as 'too rural for urban studies' and 'too urban for rural studies'.

Nevertheless, scholarly interest has grown recently in different scales of urbanisation in rural regions. Larger towns and smaller cities, or *micropolitan centers*, may contribute to the retention of rural populations by providing local alternatives to out-migration, as well as replenishing the regional population by attracting counterurban migrants from larger cities seeking a balance between urban and rural amenities (e.g. Brown et al., 2004; Carson et al., 2018; Chai and Seto, 2019; Gkartzios et al., 2017; Li et al., 2020; Vias 2012). From the perspective of regional development, however, it is unclear to what extent micropolitan centers support rural regions as drivers of regional growth or undermine them by drawing people, jobs and services out of the rural hinterlands (Argent et al., 2008; Carson and Carson 2021; Copus 2018).

In this paper, we will examine in detail the effects of micropolitan growth on the demographic development of smaller towns, villages, and farming communities in Iceland. First, we employ historical data to map urbanisation and microurbanisation in Iceland over a period of 140 years. Second, we use mobility tables to outline migration patterns of urbanisation and counterurbanisation over the past decades with an emphasis on the

potential effect of micropolitan Akureyri in Northern Iceland on the volume and net outcome of migration. Third, we use survey data to estimate the share of stayers, in-migrants and return migrants in farming communities, villages, towns and regional centers within and beyond the gravitational sphere of the northern micropolitan center. Fourth, we use survey data to test the potentially moderating and mediating effects of Akureyri on migration intentions and potential migration destinations of respondents in different types of communities in Northern Iceland and in other rural regions. Finally, we consider the extent to which the concept of microurbanisation contributes to a better understanding of regional development in sparsely populated areas.

Microurbanisation: The intersection of urbanisation and counterurbanisation?

Ravenstein's (1885) seminal discussion of the laws of migration viewed urbanisation as the outcome of migration up the urban hierarchy from the 'most remote corner of the kingdom' to the greatest cities of commerce and industry. Following Ravenstein, the contemporary literature frequently conceptualises rural-to-urban migration as a stepping-stone process of moving from farm to village, from village to town, from town to city and from city to the global megapolis (e.g. Champion, 2019; Howe et al., 2014; Rees and Lomax, 2019). In the Icelandic context, economists Hall, Jonsson and Agnarsson (2002) somewhat poetically mused "...that small urban centers in the countryside are only small pools formed during rain as people migrate from the farms, but then dry up when it stops raining and the farms have become depopulated. In the end there is only one lake – or perhaps a few – where the entire nation resides" (pp. 23–24).

However, as Ravenstein (1885) also noted, "... with each main stream or current of migrants there runs a counter-current, ... strong in some cases, weak in others, and literally compensatory in a few instances" (p. 187). The massive contemporary literature on

counterurbanisation has explored in detail the processes, patterns and motivations of such movement down the urban hierarchy (Halfacree 2008; Mitchell, 2004, 2019), lateral and 'messy' patterns of migration in rural areas (Stockdale, 2016), and 'how well the counterurbanisation story travels' from its English origins to other countries, such as Norway (Grimsrud, 2011), Sweden (Eimermann et al., 2012), the Czech Republic (Šimon, 2014), Greece (Gkartzios et al., 2017), and beyond Europe to, for example, China (Li et al., 2020), Zambia (Crankshaw and Borel-Saladin, 2019) and South Africa (Geyer and Geyer, 2017).

The most spectacular image of counterurbanisation may be the somewhat mythical antiurban back-to-lander or 'radical ruralite', leaving modernity behind to farm the land in homewoven clothes with simple tools built by hand in the shed. While such truly conscientious
objectors to modernity may in fact be a very small minority of counter-urbanites (Halfacree,
2008; Mitchell, 2004, 2019), many rural and remote regions have experienced a non-trivial
inflow of relatively affluent lifestyle migrants in search of healthier, more tranquil
surroundings, bohemian lifestyles and supposedly close-knit and supportive communities
(Benson and O'Reilly, 2009; Carson et al., 2018; Eimermann and Singleton, 2021; Mitchell,
2019). Mainstream counterurbanisation nevertheless tends to favor urban centers in rural
spaces rather than very rural and remote communities (Gkartzios et al., 2017; Grimsrud, 2011;
Geyer and Geyer 2017; Halfacree, 2008; Sandow and Lundholm, 2020).

Processes of both urbanisation and counterurbanisation have contributed to decentralisation and the growth of vast 'exurban' or 'periurban' regions beyond cities and their immediately adjacent suburbs (Mitchell, 2019). Within the rural studies literarature, such exurban regions are frequently viewed as insufficiently rural for their growth to be considered properly 'counterurban' (Grimsrud, 2011), while urban scholars frequently view them with some disdain as the subjugated "urban hinterlands" of the triumphant city or "urban sprawl"

that causes traffic congestion and reduces the efficience of urban-based service delivery (lizuka et al., 2017; Mazumdar et al., 2018; Sharifi, 2016).

Beyond the immediate gravitational spheres of larger cities, endogenous population growth has in many cases contributed to the growth of urban centers in rural regions (Crankshaw and Borel-Saladin, 2019; Smailes et al., 2019) in a process alternatively referred to as 'rural urbanisation', 'urbanisation from below' or 'in situ urbanisation' (Li et al., 2020). However, the importance of natural fertility for population growth notwithstanding, urban centers in rural regions often become magnets for both rural-to-urban migrants seeking more urban amenities and metropolitan urban-to-rural migrants seeking more rural amenities (Brown et al., 2004; Carson and Carson, 2021; Elliot and Perry, 1996; Gkartzios et al., 2017; Vias, 2012). In a sense, such urban centers are at the intersection of urbanisation and counterurbanisation, or perhaps more appropriately a manifestation of *microurbanisation*.

In the United States, 'micropolitan areas' are defined as urban centers with 10–50 thousand inhabitants and a population density of at least 1,000 people per square mile (Vias, 2012). As an intermediary category between more densely populated metropolitan areas and rural, low-density areas, such micropolitan areas cover about 25% of the US mainland and include about one in ten inhabitants of the country (Oliver and Thomas, 2014). Some micropolitan areas are at the edge of the gravitational field of larger cities while others may be quite far removed (Weber et al., 2017). Such micropolitan areas have been found to contribute to regional growth as hubs of economic activity, public and private services, transportation and public life (Davidsson & Rickman, 2012; Oliver and Thomas, 2014).

In the European context, there is a long history of EU regional policy approaches to urbanrural relationships, "from early growth pole concepts and 'polycentric development' through to a more recent focus upon urban-rural cooperation, [although] this intervention has been characterised by a lack of clarity in terms of theoretical basis and intervention logic" (Copus, Dax and de Lima, 2015, 240-1). In more remote, rural regions the pursuit of polycentricity might have been interpreted as building up 'regional capitals' and smaller 'county towns' through enhanced service infrastructure and competitive marketing, but essentially this was less a policy and more a set of metaphors for national and regional governments to interpret or ignore as they wished (Hall and Tewdwr-Jones, 2020). Both the EU and OECD (2013) have called for strengthening of rural-urban linkages and cooperation, however vaguely manifested in practice. In many European countries, sometimes within the framework of national spatial plans, there has been a commitment to strengthening of urban centers in predominantly rural areas (e.g. Althingi, 2018; Project Ireland, 2019; Future Wales, 2021; Scotland's Third National Planning Framework, 2014; Northern Ireland's Regional Development Strategy, 2010). In Northern Europe, such urban centers for instance include small cities with 60-90 thousand inhabitants such as Tromsø in Norway, Umeå in Sweden and Inverness in Scotland, and their smaller cousins with 16–20 thousand inhabitants such as Sligo in Ireland, Bangor in Wales and Akureyri in Northern Iceland. In contrast, towns in Britain have been neglected by central government over many years (Maclennan and McCauley, 2017), and there has been an explicit abandonment of regional policy after 2010 (Hall and Tewdwr-Jones, 2020). Policies which weaken rural hinterlands at the expense of urban centres in both Europe and the US include centralisation of services and school closures, while sharing power through innovative territorial governance structures may be a successful means of promoting rural-urban cooperation (Brown and Shucksmith, 2017).

Urban centers can clearly provide a wide range of goods and services to residents of surrounding rural areas and may become important drivers of regional growth. As such, they may improve regional statistics on economic and demographic development in the ledgers of

regional development agencies. In a purely bureaucratic sense, urbanising the rural by nurturing micropolitan centers may, thus, be a sensible, successful approach to rural development that also aligns perfectly with the vision of the urban future of humanity. However, it is less clear if larger urban centers have a positive or negative impact on economic and demographic development elsewhere in the region (Argent et al., 2008; Carson, Åberg et al., 2020). On one hand, the jobs, goods and services offered in such centers might reduce long-distance migration from nearby smaller communities, in particular among those drawn by urban occupations and urban amenities. On the other hand, the same factors might undermine nearby local economies and increase short-distance migration from smaller communities to the larger urban center, and perhaps later stepwise migration to more distant cities (Howe et al., 2014). In other words, micropolitan centers might alternatively counteract or amplify large-scale processes of urbanisation.

### Iceland as a case

With 3.5 inhabitants per km², Iceland has one of the lowest population densities of any country in the world and by far the lowest population density of any European country. In the Icelandic context, the capital of Reykjavík is considered a *borg* (city) with 131 thousand inhabitants in the municipality and 233 thousand in the whole Reykjavík capital area. Thus, Reykjavík does not make it onto the UN list of cities with more than 300 thousand inhabitants (United Nations, 2021). However, the very generous Icelandic definition of "urban" or *þéttbýli* as any settlement with more than 200 inhabitants places the country near the top of the UN list as being 94% urban, compared to an urban proportion of, for example, 92% in Japan, 59% in China and 37% in Bangladesh (United Nations, 2014).

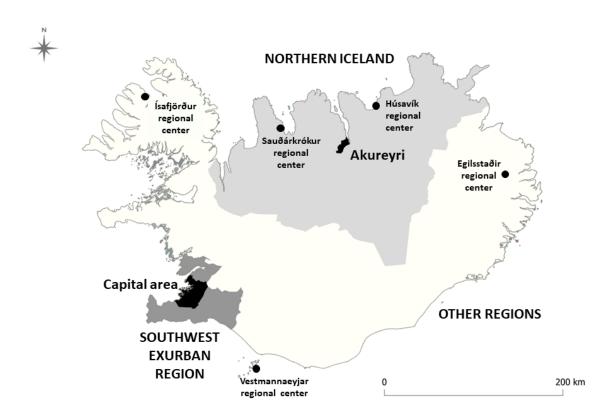


Figure 1

Akureyri and other towns and villages in Northern Iceland (created by authors)

Figure 1 shows the regions of Iceland relevant to the current study. The Reykjavík capital area is the only metropolitan area in Iceland with two-thirds of the national population. It is surrounded by exurban regions towards the west, northeast and southeast. Together, the Reykjavík capital area and the three southwest exurban regions include about 85% of the national population of Iceland.

The Akureyri area is the only micropolitan area in Iceland with a population of roughly twenty thousand inhabitants in the urban centre and immediate vicinity. Akureyri is about 400 km from Reykjavík by road, but there are also several commercial flights each day between Akureyri and the capital. Akureyri has most of the services generally found in micropolitan centers in the US (Brown et al., 2004), including bus services, several museums, hotels, a national depository library and a general hospital. It also has several of the less frequent micropolitan services, such as an international airport, a small university, and a commercial

TV station. It furthermore has a shopping mall, two movie theatres and a large number of cafés, bars and restaurants that cater to the local population and a growing number of domestic and international tourists.

Figure 1 also shows the regional centers beyond the southwest exurban regions. Four of these centers (Ísafjörður, Sauðárkrókur, Húsavík and Egilsstaðir) have 2-3 thousand inhabitants each and serve as centers of public and commercial services for geographically large but sparsely populated regions of farming communities and fishing towns and villages. The fifth center of Vestmannaeyjar has a population of more than 4,000 inhabitants, but primarily provides services for the residents of the 17 km² island located 13 km south of the mainland.

With one city and adjacent exurban regions in the southwest, one micropolitan area in the north and the remaining population living in farming communities, villages and towns spread around a coastline of about 5,000 km, Iceland provides ideal settings for the study of urbanisation, counterurbanisation and microurbanisation. The rural regions of Iceland are demographically rather similar with widely scattered family farms, small fishing villages and several regional centers with 2–3 thousand inhabitants each. The rural region of Northern Iceland however differs from the other rural regions in one crucial respect; the micropolitan center of Akureyri with about 19 thousand inhabitants in the geographical center of Northern Iceland. This provides an opportunity to examine similarities and differences in rural regions affected by a micropolitan area and other rural regions.

#### Data and methods

The study draws on several sources of data, including both publically available registration data for the period 1881–2020 and customised migration tables for the period 1986–2017, as

well as three surveys focusing on migration experiences and migration expectations in different types of communities conducted in 2018, 2019 and 2020.

Data on the long-term population trends in urban and rural Iceland 1881–2020 were obtained from Statistics Iceland's (2021a) historical database. It covers both the population of sparsely populated farming communities and the population of the 128 towns and villages that have ever existed outside the capital area, including 31 villages abandoned or reclassified as sparsely populated areas as a result of sustained population loss in the 20<sup>th</sup> century.

Statistics Iceland (2021b) also provides tables on in-migration, out-migration and net-migration between different regions of Iceland and with other countries. However, these publically available data were not sufficient for the purposes of the current study for two reasons. First, they do not distinguish the exurban regions northeast and southeast of the Reykjavík capital area from the more rural regions of West Iceland (Vesturland) and South Iceland (Suðurland). Second, the micropolitan center of Akureyri is not distinguished from the more rural region of Northeast Iceland (Norðurland eystra). Additional tables for the period 1986–2017 were obtained from Statistics Iceland where the exurban regions and Akureyri were defined as separate categories from the regions of West, South and Northeast Iceland.

A set of three surveys based on comparative survey instruments were used to estimate the residential histories and migration intentions of 16,826 residents in different regions of the country. These included a survey of residents of towns and villages with less than 2,000 inhabitants conducted in Spring 2018, a survey of residents of farming communities in Spring 2019 and a survey of residents of micropolitan Akureyri and the regional centers outside the exurban regions in Autumn 2020. The first two surveys were population surveys where a letter of invitation was sent via mail to all households in the relevant communities and everyone 18 years or older was invited to participate in an online survey. The third survey was an online

quota survey conducted by a professional survey company that yielded a fixed number of responses from each targeted community.

The responses to each survey were weighted to reflect the composition of the different populations. However, as in earlier surveys in Iceland, the immigrant population was severely underrepresented in all three surveys. Although the proportion of immigrants in non-metropolitan Iceland is estimated to be about 14% (Statistics Iceland, 2021c), questionnaires in Icelandic, English and Polish only yielded data where 1–4% of the respondents had grown up abroad. As this small group could not be meaningfully analysed, it was excluded from the data. Our survey data, thus, only includes respondents born in Iceland.

In analysing the survey data, stayers were defined as those who had never lived for more than a year outside their current community of residence. Return migrants were defined as those who were born in the current community of residence but had lived elsewhere for at least a year, while in-migrants were defined as those who had grown up elsewhere. Intended migrants were defined as those who indicated that they would probably or definitely move away from their current community of residence within the next 2-3 years.

Urbanisation and microurbanisation in Iceland

From the settlement period in the 9<sup>th</sup> century towards the end of the 19<sup>th</sup> century, Iceland was a predominantly rural society based on subsistence farming. Prior to the establishment of Reykjavík in 1751, the trading posts of Danish merchants were only operated over the summer months, but by 1786 year-round residence had been established in small villages in all regions of the island (Karlsson, 2000). By 1880, Reykjavík and neighboring villages had grown to more than three thousand inhabitants and more than five thousand people lived in about 40 other hamlets and villages. The majority of the population of 73 thousand people, however, lived on family farms along the five thousand km coastline.

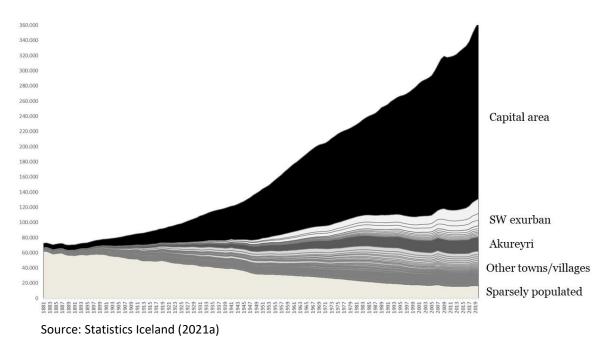


Figure 2
Population development in Iceland, 1881–2020

Figure 2 shows the rapid population growth and urbanisation 1881–2020. In this period, the national population grew fivefold to 364 thousand inhabitants and the population of the current Reykjavík capital area grew fortyfold to 233 thousand inhabitants and two-thirds of the national population in 2020. The combined population of all other towns and villages also increased to 114 thousand, but the population of the sparsely populated farming areas declined from 62 thousand inhabitants and 85% of the total population in 1881 to less than 17 thousand and 5% of the total population in 2020.

Population decline in the rural farming communities in the early 20<sup>th</sup> century can be traced to several factors, including technological advances that diminished the need for farm labor and the abandonment of more isolated and less hospitable farmland as new employment opportunities emerged in urban settlements (Karlsson, 2000). In addition to the growth of manufacturing, commerce and services in the Reykjavík capital area, the industrialisation of the fishing industry supported both urbanisation in the southwest and microurbanisation as scores of fishing villages mushroomed around the coast.

By the late 1980s, the combined population of almost a hundred fishing towns and villages was approaching 90 thousand inhabitants. The gradual introduction of individual transferable fishing quotas (ITQs) in 1983–1990 represented a free-market solution to both overfishing threatening the sustainability of the fishing stocks and overinvestment in fishing vessels and fish processing plants (Gunnlaugsson and Saevaldsson, 2016). The concentration of fishing rights in fewer and larger companies in fewer and larger towns, as well as declining labor needs due to technological advancements in a highly profitable industry, in turn led to precipitous population decline in many smaller fishing villages in the following decades (Chambers et al., 2017; Kokorsch and Benediktsson, 2018).

Around the turn of the 21st century, international immigration swelled in all regions of the country, leading to an increase in the proportion of foreign nationals from 3% in 2001 to 14% in 2020 (Statistics Iceland, 2021c). While there are some regional variations in the distribution of immigrants, the proportion of immigrants in the Reykjavík capital area is at the national average. In the early 21st century, the exurban regions within commuting distance from the Reykjavík capital area also experienced substantial positive net migration while long-distance internal migration between the capital area and more distant regions declined and approached parity in net migration (Garðarsdóttir et al., 2020).

While national population growth over the past 140 years has to a large extent been manifested in the rapid growth of the metropolitan Reykjavík capital area, the population of other regions has also almost doubled. Urban centers in the rural regions grew 23-fold in this period and their relative share of the non-metropolitan population expanded from 7% in 1881 to 87% in 2020. In contrast, the population of farming communities declined in both relative terms and absolute numbers. In the next section, we will examine this process of microurbanisation in more detail in Northern Iceland where micropolitan Akureyri is located.

#### Microurbanisation in Northern Iceland

As shown in Figure 3, the national trend of urbanisation was replicated on a smaller scale in Northern Iceland in the period 1881–2020. Akureyri, the largest urban center in the region, thus grew from about 500 inhabitants in 1881 to about 19 thousand in 2020. The combined population of other towns and villages in the north grew from about 600 in 1881 to more than 15 thousand in the late 1980s but then declined to just over thirteen thousand in 2020. The population in sparsely populated areas in Northern Iceland declined from about nineteen thousand (94% of the regional population) in 1881 to about six thousand (15% of the regional population) in 2020.

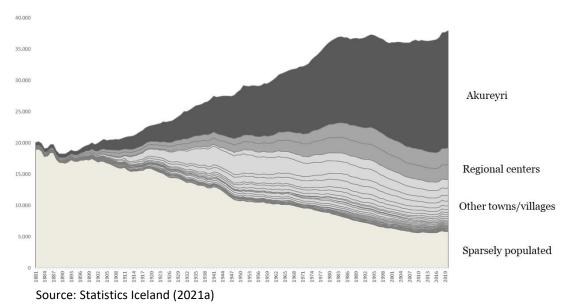


Figure 3
Population development in Northern Iceland, 1881–2020

In the past few years, the population decline in the farming communities and the smaller towns and villages appears to have stopped and there has even been a slight population increase in these communities. However, it is too soon to determine if this signals a long-term reversal of trends or simply short-term fluctuations.

The population development of Northern Iceland differs from the national trajectory in one important respect. After almost a century of sustained growth, the population of the north

plateaued in 1981 and remained stable at about 37–38 thousand for the next forty years. In this period, micropolitan Akureyri, however, grew by 40% and increased its share of the northern population from just over a third in 1981 to about half of Northern Iceland in 2020.

It is not entirely clear to what extent the growth of Akureyri supported or undermined other communities in Northern Iceland. Access to financial, human and social capital and the provision of goods, services and job opportunities in micropolitan Akureyri may well have helped retain and replenish the population in regional centers, towns, villages and farming communities throughout Northern Iceland. Akureyri may also have helped maintain the regional population of the north by absorbing out-migrants who otherwise would have moved to the Reykjavík capital area or abroad. However, there is a somewhat darker possibility that Akureyri has acted as a regional sponge (Argent et al., 2008), sucking people and activities from towns, villages, and farming communities in the north. Furthermore, Akureyri may have acted as an escalator of urbanisation, drawing people from more rural communities and sending people up the urban hierarchy to the Reykjavík capital area or abroad.

In the next section, we will examine the sources of population growth in Akureyri in more detail by mapping patterns of in-migration and out-migration in relation to the Reykjavík capital area, the southwest exurban regions, other communities in Northern Iceland, other rural communities, and other countries.

Migration patterns in Akureyri

Table 1 shows annual in-migration, out-migration, total migration, and net migration per 1,000 inhabitants in Akureyri 1986–2017. In this period, a total of 34 thousand moves from Akureyri and about 34 thousand moves to Akureyri were recorded (raw numbers not shown).

#### Table 1

In-migration, out-migration, total and net migration per 1,000 inhabitants for Akureyri, annual averages 1986–2017

	In-migration	Out-migration	Volume	Net migration
Capital area	20.9	28.3	49.2	-7.3
Exurban regions	3.4	3.9	7.4	-0.5
Northern Iceland	22.2	16.0	38.2	6.2
Other rural	7.9	6.1	13.8	1.8
Abroad	11.9	12.1	24.0	-0.2
Total	66.4	66.4	132.6	0.0

Source: Statistics Iceland (2021b)

Somewhat remarkably, total net migration is thus almost exactly zero with a total gain of only 24 individuals due to net migration in the 32-year period. In other words, the population growth in Akureyri from 13,761 in 1986 to 18,542 in 2017 (increase of 35% or 4,781 individuals) can be attributed exclusively to natural population growth.

Akureyri on average gained 8.0 per 1,000 inhabitants each year from more rural areas in the period 1986-2017, mostly from the rural north (+6.2), but also other rural regions (+1.8). However, Akureyri also lost 8.0 per 1,000 inhabitants each year to the Reykjavík capital area (-7.3), the southwest exurban areas (-0.5) and other countries (-0.2) in the period 1986-2017. It should be noted that although international migration has been a major source of population growth in Iceland in recent decades, it has a relatively minor net effect in Akureyri. With a slight deficit in the first half of the period and a slight gain from abroad in the second half, Akureyri suffered an annual population loss of only 0.2 per 1,000 inhabitants to net international migration in the period 1986–2017.

These findings show that the number of in-migrants to Akureyri from more rural communities matches exactly the number of out-migrants to more urban communities. However, it is not clear if Akureyri simply mediates the flow of migration from rural communities to the metropolitan Reykjavík capital area or if it also influences the volume and net outcome of such flows. In the next section, we will address this question by

comparing annual migration volumes and net migration in Northern Iceland and other rural regions of the country. Furthermore, it is not clear to what extent the perfect balance in net migration reflects a replacement of urban-bound out-migrants by rural-origin in-migrants or simply the flow of indiduals from rural areas through the regional micropolis towards the national metropolis within the period under study. In the following two sections, we will draw on survey data to map individual migration histories and future intentions across micropolitan, microurban and rural communities in Iceland.

Migration patterns in rural Iceland

Table 2 shows the annual migration volume and net migration per 1,000 inhabitants in rural Northern Iceland and elsewhere in rural Iceland 1986–2017. Overall, the migration volume (sum of in-migration and out-migration) is 17% lower in Northern Iceland than in other rural regions (131.7 compared to 159.3 per 1,000 inhabitants).

Table 2
Migration flows per 1,000 inhabitants in rural Iceland, annual averages 1986–2017
MIGRATION VOLUME<sup>1)</sup>
NET MIGRATION<sup>2)</sup>

	Northern Iceland	Other rural	All rural	Northern Iceland	Other rural	All rural	
Capital area	48.4	72.8	64.3	-8.0	-11.3	-10.2	
Akureyri	30.2	5.9	14.4	-4.9	-0.8	-2.2	
Other domestic	30.0	38.3	35.4	-1.5	-3.4	-2.8	
Abroad	23.0	42.4	35.6	2.6	4.6	3.9	
Sum	131.7	159.3	149.7	-11.8	-10.9	-11.2	

<sup>1)</sup> The sum of out-migration and in-migration 2) Out-migration subtracted from in-migration

Source: Statistics Iceland (2021b)

Furthermore, there are substantial differences in migration flows between Northern Iceland and other rural regions of the country. The higher volume of migration between rural Northern Iceland and micropolitan Akureyri is, thus, offset by a much lower volume between rural Northern Iceland and the capital area, other communities in Iceland or other countries. The volume between Northern Iceland and the capital area is 24% lower than the

corresponding volume of migration to and from other rural regions, and the migration volume between Northern Iceland and other countries 46% lower.

Table 2 also shows annual net migration per 1,000 inhabitants in rural Northern Iceland and elsewhere in rural Iceland 1986–2017. Overall, the annual net migration rate in Northern Iceland is similar to other rural regions in the country (-11.8 compared to -10.9 per 1,000 inhabitants). However, while other rural areas mostly lose population to the capital area, Akureyri claims almost half the population lost in rural Northern Iceland.

These findings suggest that despite the flow of migration through the micropolitan center, the existence of such a center may neither increase the overall migration volume nor contribute to more negative rates of net migration. On the contrary, the micropolitan center seems to contribute to population retention in the region by providing an alternative destination to the Reykjavík capital area or other countries.

It should be emphasised that these figures are based on the number of migration events in the period 1986–2017 and not the individuals behind these events. It is not possible to determine to what extent individual rural migrants literally flow through the micropolitan center on their way to the city or take the place of local Akureyri out-migrants moving up the urban hierarchy. Furthermore, at one extreme these numbers could primarily reflect the migration behavior of a relatively small group of hypermobile individuals, while at the other extreme all residents could have left and been replaced by in-migrants. We will examine this issue of population turnover more closely in the next section based on recent survey data.

(Im)mobility across micropolitan, microurban and rural communities

Table 3 shows patterns of (im)mobility in different types of settlements in non-metropolitan Iceland based on the surveys conducted in 2019–2020. As noted earlier, these data do unfortunately not include the immigrant population. Overall, the populations under study are

quite mobile with only a small proportion of adults never having lived elsewhere. In other words, the churn of in-migration and out-migration has led to a situation where most non-immigrants are either return migrants or adult in-migrants who grew up elsewhere.

Table 3
Prior mobility of the non-immigrant population in rural regions of Iceland

	STA Always stayed	AYERS Mostly stayed	RETO Another country	URN MIO Capital area	GRANTS Domestic other	IN-MIC Capital area	GRANTS Domestic other	SUM
Akureyri (N: 1,069)	11%	10%	11%	12%	6%	7%	42%	99%
Regional centers	10%	9%	10%	17%	6%	10%	38%	100%
Northern (N: 758)	11%	8%	11%	14%	7%	8%	41%	100%
Other (N. 1,174) X <sup>2</sup> : 59.9(6), p. < .001	9%	10%	10%	20%	5%	13%	33%	100%
Towns and villages	13%	15%	8%	20%	8%	13%	24%	101%
Northern (N: 1,722)	13%	15%	8%	20%	11%	10%	23%	100%
Other (N: 3,637) X <sup>2</sup> : 46.6(6), p. < .001	13%	16%	7%	21%	6%	14%	24%	101%
Farming communitie	s 13%	13%	6%	14%	10%	16%	29%	101%
Northern (N: 780)	16%	12%	7%	12%	13%	9%	31%	100%
Other (N: 1,123) X <sup>2</sup> : 59.5(6), p. < .001	11%	13%	5%	15%	8%	20%	28%	100%

Source: Surveys conducted in 2018 (Towns and villages), 2019 (Farming communities) and 2020 (Akureyri, Regional centers)

For example, about 19% of all survey respondents in the regional centers can be considered 'stayers' as they had never lived elsewhere (10%) or had lived elsewhere for a year or less (9%). Similarly, 33% can be considered 'return migrants' as they grew up in the community but have lived in another country (10%), in the capital area but not abroad (17%) or elsewhere in Iceland but neither abroad nor in the capital area (6%). Finally, 48% of the respondents in the regional centers can be considered 'in-migrants' from the capital area (10%) or other parts of Iceland (38%). The Chi-square test of statistical significance shows that prior migration experiences differ significantly (p. < .001) between regional centers in Northern Iceland and regional centers in other rural regions of the country.

Using a strict definition of having literally never lived elsewhere, *stayers* represent only 10–13% of all respondents in the different types of communities. In other words, almost 9 out of ten non-immigrant residents have at some point moved to these communities, either as return migrants or in-migrants. According to a more liberal definition of having grown up in the community and never lived elsewhere for more than a year, the proportion of stayers is 19–21% in the larger communities (Akureyri and the regional centers) and 26–28% in the smaller communities (other towns, villages and farming communities).

The proportion of respondents who grew up in these communities is also smaller than might have been expected. Only about half the respondents in Akureyri, the regional centers and the farming communities grew up there and the same was true for about two-thirds of the respondents in the smaller towns and villages. In Akureyri, this group of locals is roughly equally divided between those who had never lived elsewhere, had left for a year or less, had lived for at least a year abroad and those who had lived for at least a year in the capital area, with a smaller residual who had lived elsewhere in Iceland. In the other communities, return migrants from the capital area were the largest single group of return migrants.

The relative importance of urbanisation and counter-urbanisation in the composition of the non-immigrant population of these communities depends on how return migrants are defined. In the strict sense of residents who grew up in the capital area and now live in these communities, counterurbanisation accounts for 7% of the non-immigrant population in Akureyri, 10% in the regional centers, 13% in the other towns and villages and 16% in the farming communities. According to this strict definition, the group of counter-urban migrants from the capital area is roughly the size of the group of stayers that have never lived elsewhere. However, if return migration from the capital area is also considered counter-

urban migration, the proportion is about 19% in the non-immigrant population in Akureyri and 27–33% in the other communities.

Table 3 shows statistically significant but substantively inconsistent differences in prior mobility between communities in Northern Iceland and other rural regions of the country. The proportion of stayers according to either the strict or the liberal definition is similar in the north and elsewhere, with the exception that the proportion of stayers in northern farming communities is higher than in the other communities. The proportion of respondents who grew up in the regional centers is lower in the the north than elsewhere, but in other towns, villages, and farming communities this proportion is significantly higher in the north.

In contrast, counter-urban migration appears to matter consistently less in the north than elsewhere. Both the proportion of respondents raised in the capital area and the proportion of respondents who have lived for at least a year in either the capital area or abroad is significantly lower in regional centers, towns, villages, and farming communities in the north than elsewhere in rural Iceland (p. < .001 in all cases). However, as the surveys do not distinguish between migration from Akureyri and other domestic in-migration, it is possible that migration down the urban hierarchy from Akureyri accounts for the higher percentage of domestic in-migrants and return migration in regional centers, towns, villages and farming communities in Northern Iceland.

The churn of in-migration and out-migration reflected in the official statistics in the previous section thus seems to have profoundly affected all types of non-metropolitan communities in Iceland. However, rather than migrants simply moving up the urban hierarchy in an orderly, stepwise fashion, our results suggest that all types of non-metropolitan communities in Iceland are characterised by a complex constellation of in-migrants and return migrants moving up, down and parallel in the urban hierarchy.

In the next sections, we turn our attention to future migration intentions in the rural regions with an emphasis on differences between Northern Iceland and other rural regions.

Migration intentions in rural regions of Iceland

Table 4 shows the proportion of respondents who intend to move from their current community within the next 2–3 years. The results suggest an association between community size and migration intentions. Non-immigrant respondents in micropolitan Akureyri are significantly less likely to intend to leave than their counterparts in the regional centers (p. < .01), other towns and villages (p < .001) or farming communities (p. < .05). The rural towns and villages however have by far the highest rate of migration intentions within the next 2–3 years (p. < .001 in all instances).

Respondents in the regional centers in Northern Iceland have significantly less migration intentions than their counterparts in other rural regional centers (p < .01) and are in fact similar to Akureyri residents in this respect. Such regional differences in migration intentions between the north and other regions are, however, not found in other towns and villages or sparsely populated farming communities.

Overall, these findings suggest that despite population losses to Akureyri shown above in official statistics, residents of smaller communities in Northern Iceland have no greater migration intentions than residents of comparable communities in other parts for the country. Furthermore, residents of the northern regional centers appear to be less likely than residents of other regional centers to have made such plans. We next turn our attention to the destination of such intended out-migration.

Table 4
Migration intentions of the non-immigrant population in rural regions of Iceland

	Expect to move
	within 2-3 years
Akureyri	6%
Regional centres	9%
Northern regional centres	7%
Other rural regional centres X <sup>2</sup> : 4.8(1), p. <.01	10%
Rural towns and villages	14%
Northern towns and villages	13%
Other rural towns and villages X <sup>2</sup> : 3.3(1), p. > .05	15%
Farming communities	8%
Northern farming communities	9%
Other farming communities X <sup>2</sup> : 0.7(1), p. > .05	8%

Source: Surveys conducted in 2018 (Towns and villages), 2019 (Farming communities) and 2020 (Akureyri, Regional centers)

Intended migration destinations

Table 5 shows the results of a multinomial logistic regression model (for details see Pampel, 2020) of intended migration to various destinations among respondents in Northern Iceland outside Akureyri compared to respondents in other rural regions. The outcome variable *Destinations* has six categories of intending to move within the next 2-3 years. The table shows the odds ratios of intending to move to (1) the Capital area, (2) within the respondent's current region, (3) another region in Iceland, (4) abroad, or (5) being unsure about the destination. Not expecting to leave within the next 2-3 years are the omitted pivot in the model.

The model allows us to estimate the probability of an individual i intending to move to each of  $k_{1-5}$  destinations against the probability of staying in the current location  $k_0$  as

$$ln\frac{Pr(y_i = k_{1-5})}{Pr(y_i = k_0)} = \beta_{m,k} \cdot x_i$$

where  $\beta_{m,k}$  is the set of regression coefficients ( $\beta_{1-10}$ ) associated with outcome  $k_{1-5}$  and  $x_i$  is the set of explanatory variables associated with observation i.

For the purposes of the current study, differences in migration intentions and intended migration destinations between communities in Northern Iceland and other rural regions are

of primary concern. Other covariates in the model are included to control for potential differences in migration destinations due to the composition of the Northern Iceland population compared to other rural regions, including gender, age, university education, marital status, and children in the household, as well as prior migration experiences and residence in different types of communities. It should be noted that our objective is not to offer a comprehensive account of all potential predictors of migration intentions and intended destinations, and we do not include a wide range of potential predictors such as occupation, type of education, income, home ownership, membership in voluntary associations, residence of adult children and grandchildren, levels of place attachment and place identity, or gossip and toxic social relations to name only a few of the covariates uncovered in prior research.

The results of the multinomial regression analysis are shown as the inverse logs of the multinomial logistic regression coefficients which can be interpreted as the odds ratios of a particular outcome compared to the omitted contrast outcome for each predictor. Coefficients higher than one thus indicate a positive association between a covariate and a specific outcome while coefficients lower than one indicate a negative association.

Controlling for other factors in the model, respondents in Northern Iceland are more likely to intend to move within their region than respondents in other rural regions by a factor of 1.56 and less likely to intend to move to the capital area by a factor of .66 and other regions of the country by a factor of 0.79. Their odds of migrating abroad or being unsure about their destination are, however, not significantly different from respondents in other rural regions.

Table 5
Multinomial logistic regression model of intended migration destinations in different types of communities (Odds Ratios).

	Capital area	Within region	Another region	Abroad	Unsure
Intercept		•			
$\beta_0(s.e)$	-2.54(.28)	-4.57(.42)	-3.29(.31)	-2.63(.33)	3.91(.41)
Background					
Female	1.04	1.08	.94	.82	1.47*
$\beta_1(s.e)$	.04(.14)	.08(.18)	06(.13)	20(.16)	.38(.18)
Over 40 years old	.63***	.75*	.50***	.34***	.37***
$\beta_2(s.e)$	47(.15)	29(.18)	69(.13)	-1.08(.17)	99(.18)
University education	.98	1.30	1.48***	1.03	.89
β <sub>3</sub> (s.e)	02(.15)	.26(.18)	.39(.13)	.03(.18)	12(.18)
Married or cohabiting	.61**	.40***	.34***	.37***	.35***
$\beta_4(s.e)$	49(.15)	91(.20)	-1.07(.14)	-1.01(.18)	-1.04(.18)
Children under 18	1.06	1.73***	.81	.56***	.40***
β <sub>5</sub> (s.e)	.06(.15)	.55(.18)	22(.14)	57(.18)	93(.20)
Prior experiences					
Stayers (contrast)	1.00	1.00	1.00	1.00	1.00
Return migrants	.99	.98	1.09	1.30	2.19**
$\beta_6(s.e)$	01(.23)	02(.30)	.09(.21)	.26(.26)	.78(.33)
In-migrants	1.35	1.44	1.19	1.31	2.82***
β <sub>7</sub> (s.e)	.30(.22)	.37(.29)	.18(.21)	.27(.27)	1.04(.33)
Type of community					
Regional center (contrast)	1.00	1.00	1.00	1.00	1.00
Towns and villages	.71*	2.24**	3.81***	1.47	2.20***
$\beta_8(s.e)$	34(.15)	.81(.27)	1.34(.23)	.39(.21)	.80(.25)
Farming communities	.30***	1.42	1.08	.50*	.58
$\beta_9$ (s.e)	-1.21(.25)	.35(.32)	.08(.28)	69(.29)	55(.33)
Region					
Other rural regions (contrast)	1.00	1.00	1.00	1.00	1.00
Northern Iceland	.66***	1.56**	.79*	.92	1.20
$\beta_{10}(s.e)$	42(.13)	.45(.16)	24(.12)	09(.15)	.18(.16)
N: 8,563	χ²: 505.9(5	0), p. < .001			

Source: Surveys conducted in 2018 (Towns and villages), 2019 (Farming communities) and 2020 (Regional centers)

In addition to the main issue of differences between Northern Iceland and other rural regions, the model also provides several other findings of interest. For instance, there is no significant gender difference in specific migration destinations, but female respondents are significantly more likely than male respondents (OR: 1.47) to intend to leave without a specific destination in mind. Older respondents are less likely to intend to move to any destination (OR: 0.34–0.75), but they are particularly less likely to intend to move abroad (OR: 0.34) or to intend to move without a specific destination (OR: 0.37). Married or cohabiting respondents

are also less likely to intend to move to any destination (OR: 0.34 - 0.61), while those with children are signficantly more likely to intend to move within the region (OR: 0.73) and less likely to intend to move abroad (.56) or not have a specific destination (.40).

Neither return migrants nor in-migrants differ signficantly from stayers (those who have never lived elsewhere) in terms of migration destinations, but both return migrants (OR: 2.19) and in-migrants (2.82) are more likely than stayers to intend to leave without having a specific destination in mind. Compared to residents in the regional centers, respondents in other towns and villages are also significantly less likely to intend to move to the Reykjavík capital area (OR: .71) but significantly more likely to intend to move within the region (OR: 2.24), to other rural regions (OR: 3.81), or to have non-specific migration intentions (OR: 2.20). Those living in farming communities or other sparsely populated areas are also much less likely to intend to move to the capital area (OR: .30) or abroad (OR: .50).

Overall, the results of the multinomial logistic regression support the conclusions drawn from official statistics by demonstrating that net of personal background, type of community and prior migration experiences, rural residents in Northern Iceland are substantially more likely to intend to move within the region and substantially less likely to intend to move to the capital area or another region within Iceland than their counterparts in other rural regions in Iceland. The micropolitan center of Akureyri, thus, seems neither to sponge nor help maintain the population of the more rural hinterlands, but rather contributes to the microurbanisation of Northern Iceland, retaining rural out-migrants that otherwise would likely have moved to the Reykjavík capital area.

## Discussion

In this paper, we used the concept of microurbanisation to help 'refocus the telescope of rural studies' (Marsden, 2006) on small-scale urbanisation in non-metropolitan areas. Even though

popular culture and mass media alike tend to portray urbanisation as the inextricable force pulling humanity into a gigantic metropolitan black hole, the complex gravitational pulls of urbanisation and centrifugal pushes of counterurbanisation continue to defy the long-awaited demise of the rural. In fact, the wild dance of the Aurora Borealis across the rural night sky might be a more apt celestial metaphor for the complex social, economic, political, and cultural factors influencing rural and regional development and the multitude and messiness of rural migration flows aptly described by our late co-author Aileen Stockdale (2016).

Non-metropolitan regions have their own microurban hierarchies that cannot be reduced to stepping-stones between 'the rural' exemplified by isolated family farms and 'the urban' exemplified by the global megalopolis. Microurban settlements differ widely in terms of size, composition, geographical location, and structural relations in the urban hierarchy and offer different combinations of urban and rural amenities. Located at the intersection of urbanisation and counterurbanisation, micropolitan centers with 10-50 thousand inhabitants offer their own unique combination of amenities that appeal to many people across the urbanrural spectrum in different countries of the world (Brown et al., 2004; Geyer and Geyer, 2017; Gkartzios et al., 2017; Vias, 2012). As a somewhat idyllic caricature, micropolitan centres can be places where the groceries store carries hot peppers and cilantro, the local café serves a decent latte, the secondary school offers an elective in the rise and fall of the Roman empire and the local restaurant is suitible for a romantic anniversary dinner, but where housing is also relatively affordable, the kids walk home from school to an unlocked front door, the kingpin of the local crime syndicate is a drug-dealing tenth grader who also works at the icecream shop, the local arts dealer offers to drop framed artwork at your house on her way home and three cars in a row at a stop sign are considered serious traffic congestion.

In many developing countries, the growth of micropolitan centers in rural regions has been contributed to 'urbanisation from below' or 'in situ urbanisation' (Li et al., 2020) where natural fertility enables population growth despite strong flows of out-migration and even stronger population growth in metropolitan areas (Crankshaw and Borel-Saladin, 2019; Smailes et al., 2019). Many developed countries, in contrast, suffer from natural population decline and, as Argent et al. (2008) have pointed out, growing regional centres in declining rural areas are frequently portrayed as 'sponges' that soak up the population of the surrounding areas. Argent and colleagues, however, find such effects to be relatively minor in the Australian context, and Carson et al. (2019) somewhat similarly find that the relative demographic stability of municipal centers in northern Sweden is due to lower levels of out-migration and more refugee in-migration rather than the displacement of residents from declining, more rural communities. Comparing the population trajectories of 12 small cities and adjacent rural regions in Australia, Europe and North America, Carson and Carson (2021) found each city and region to have unique growth pattern properties.

In an unexpected nod to Ravenstein's (1885) contention that currents of urbanisation may in few instances be 'literally compensatory', we find that 32 thousand moves from Akureyri and the 32 thousand moves to Akureyri yielded a total net-migration gain of only 24 individuals in the period 1986–2017. In other words, natural population growth fully accounts for the growth of Akureyri because the strong currents of in-migration and out-migration were balanced almost completely in this period. Furthermore, the negative out-migration from Akureyri to the Reykjavík capital area was almost exactly balanced by positive in-migration from more rural regions. This might seem consistent with the image of micropolitan centers as 'sponges' that draw population from the adjacent rural regions (Argent et al., 2008). However, we do not find evidence of the micropolitan center exacerbating out-migration from

other areas in Northern Iceland. Residents of smaller communities in the north are not more likely to move than other rural residents – they are simply more likely to move to micropolitan Akureyri rather than the Reykjavík capital area. The counterstream from Akureyri to more rural communities is also non-negligible, with both actual migration and migration intentions for instance surpassing emigration to other countries by a third.

A substantial number of residents in all types of communities had lived in the Reykjavík capital area for at least a year, but interestingly the lowest percentage of such counter-urban migrants was found in micropolitan Akureyri. This may seem to run contrary to the notion that micropolitan centers may be particularly attractive to urban migrants seeking to escape "... the crime, congestion and pollution of many major cities, or the sprawl, blandness and long commutes of suburbia" (Vias, 2012, p. 26). However, the low relative share of counter-urban migrants in Akureyri compared to more rural communities is actually due to the demographic composition of Akureyri. About two in five residents in Akureyri are, thus, in-migrants from more rural communities, while one in five had moved from the Reykjavík capital area. In other words, urbanisation seems to account for two-thirds of the micropolitan in-migrant population while counter-urbanisation accounts for one-third.

Our analysis of microurbanisation has focused on demographic trends and migration patterns, largely ignoring the individual-level motivations for (im)mobility, such as educational aspirations, employment opportunities, family considerations and perceptions of quality of life (Benson and O'Reilly, 2009; Sandow and Lundholm, 2020; Stockdale, 2016). We have also largely ignored the global and country-specific structures and structural changes that may channel migration flows. In the Icelandic context, rural migration flows have for instance been affected by neoliberal fisheries management, industry mergers, regional agglomeration and technological innvotion in the fishing industry (Chambers et al., 2017; Gunnlaugsson and

Saevaldsson, 2016; Kokorsch and Benediktsson, 2018), the uneven geographies of welfare and austerity in the wake of the 2008 economic meltdown (Huijbens and Thorsteinsson, 2017; Gústafsdóttir et al., 2017), the explosive growth in tourism and the transformation from rural extraction to rural attraction (Cunningham et al., 2012; Lund and Johannesson, 2014), improvements in road infrastructure (Bjarnason, 2014, 2021; Keeling, 2020) and the growth of regional universities and distance education (Bjarnason and Edvardsson 2017; Bjarnason and Thorarinsdottir, 2018; Edvardsson, 2014). Future research should explore the association of both individual motivations and social structural processes with microurbanisation.

Iceland is a somewhat unique case with one metropolitan area and one micropolitan area and a widely spread rural poplation living in towns, villages and farming communities across a geographically clearly defined nation-state. In many ways, this provides an ideal setting for the study of similarities and differences in urbanisation, counterurbanisation and microurbanisation. Future research should explore to what extent these findings can be generalised to more complex urban hierarchies with more fuzzy geographical, cultural and political borders with neighboring countries.

It should also be noted that the Covid-19 pandemic may have affected both our survey results and the future mediating and moderating role of micropolitican centers in migration flows. The first two surveys among residents of towns and villages (2018) and farming communities (2019) were conducted prior to the pandemic, while the survey of residents of micropolitan Akureyri and the regional centers outside the exurban regions was conducted in Autumn 2020, about 10 months after the first recorded infection in Iceland. Although a full-scale lockdown was never imposed, working from home became much more prevalent, jobs were lost in the sharp economic downturn, and various social and economic problems emerged. The short-term effects of this social and economic upheaval on self-reported

migration intentions in the third survey are unknown, and the long-term effects on actual migration patterns remain to be seen.

Finally, there are some implications for policy from this research. The introduction to this paper described how the academic division between 'urban studies' and 'rural studies' diverts researchers' attention away from smaller urban settlements and regional centres in non-metropolitan areas, and similar neglect occurs in many countries in relation to policy, as noted above. Thus, Powe et al. (2007, 156) conclude that in England "having an 'intermediary' position in terms of many aspects of government policy, being neither truly rural nor truly urban, is unlikely to help them raise funding for regeneration and social support or to be included within rural-proofing exercises." Maclennan and McCauley (2019, 11) go so far as to argue that "the Brexit vote outcome reflected a failure to effectively manage the UK's towns."

Of particular importance for policy development are this study's findings, first, that regional micropolitan growth need not be at the expense of its hinterland; and second, that non-metropolitan regions have their own complex microurban hierarchies which cannot be reduced to a simplistic narrative of stepping-stones towards bigger cities. These suggest a refocusing of policies towards investment in such microurban centres in non-metropolitan regions, especially in services and innovations which reach into and benefit their hinterlands, as well as contributing towards national wellbeing. This would accord with the EU concepts of polycentricity and urban-rural partnerships as applied to more rural regions, but to be effective this would need to go beyond vague metaphors (Hall and Tewdwr-Jones, 2020). The potential role of the state and other social actors in achieving this should be a priority subject for further research.

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