Shaping the future of the Business Index North area.

(01)

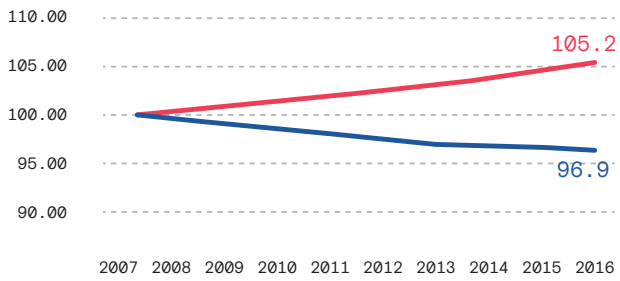
People and the North

Density of population in the BIN area, 2016

Number of citizens per 1 km²

Population development in the BIN area incl. Russia

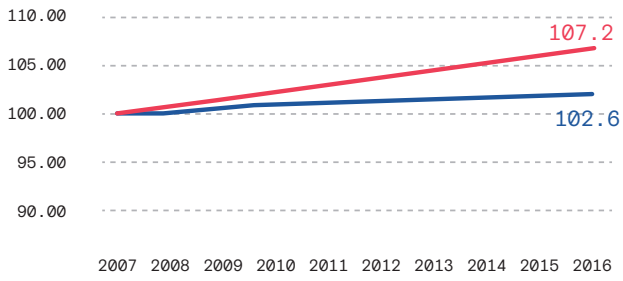
Index 2007=100, 2007 - 2016



BIN area incl. Russia
Norway, Sweden, Finland and the Northwestern Federal District in total

Population development in the BIN area excl. Russia

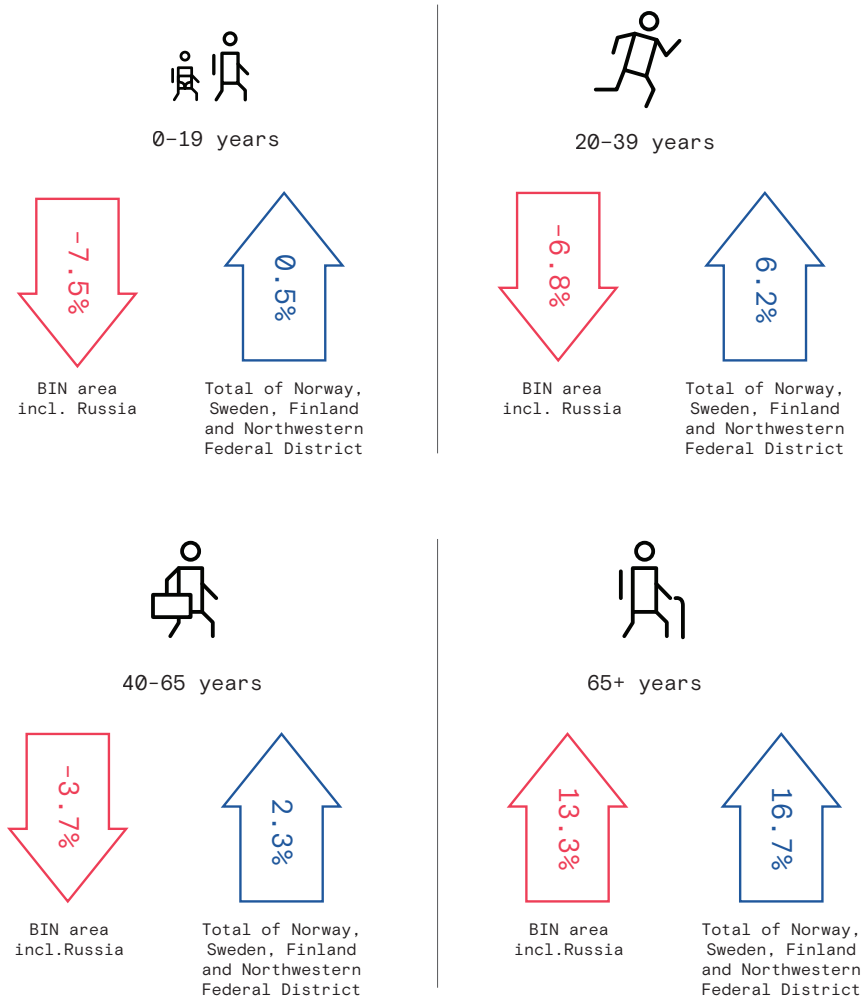
Index 2007=100, 2007 - 2016



BIN area excl. Russia
Norway, Sweden and Finland in total

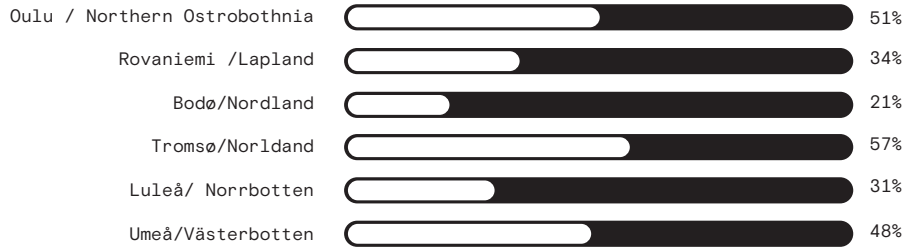
BIN area population development

Index=2007, 2007-2016



Urbanization in the North

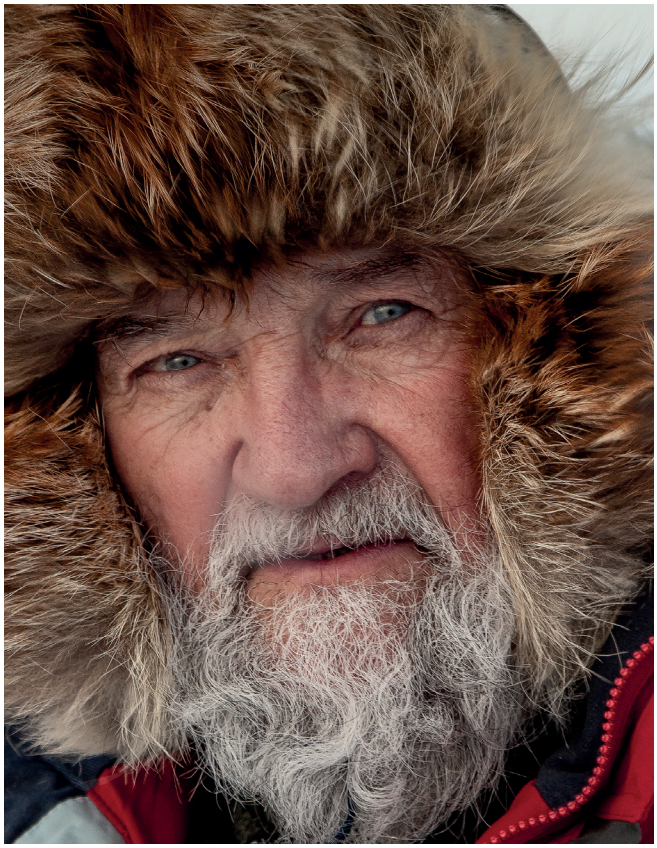
2016



Section (01)

People and the North

People in the north shape the future development of the BIN area. For the first time this report includes the Arkhangelsk [1] and Murmansk regions in northwest Russia and regions in northern Norway, Sweden and Finland. In 2016, the BIN area was home to 3.6 million people, of whom 1.9 million lived in the Arkhangelsk and Murmansk regions.



Scientist Igor Melnikov;
photo: Valery Vasilevsky

Global trends of *urbanization* and *population ageing* affect the Arctic and the BIN area. Demographic trends are highly diverse in all four countries. Finland has one of the fastest ageing populations in Europe with an expanding share of baby-boomers (people born 1945-1950) in population structure. Russia has a declining population due to post 1990s socioeconomic transformations with high mortality rates. Life expectancy at birth in Russia is also lower than in the rest of the BIN area. The populations of Sweden and Norway have both low birth rates and low death rates and long life expectancy, combined with higher immigration. Including Russia in this BIN report affects the results and this should be kept in mind when interpreting the findings. Analyses at the levels of region and municipality serve to reveal differences within each country.

The BIN area including Russia experienced a population decline of 3.1% from 2007-2016. At the same time in Norway, Sweden, Finland and the Northwestern Federal District in Russia population continued to grow 5.2% in the period 2007-2016. The biggest decrease in population is observed in the Russian BIN regions, Nordic part of BIN experienced population growth below corresponding countries' average. We use total dependency ratio [2] as an indication of the potential social support requirements resulting from changes in population age structure. In the BIN area, the total dependency ratio rose by 7 percentage points during the period 2007-2016.

The current demographic situation requires systemic re-thinking of BIN area policymaking, but at the same time attention needs to be paid to disparities at the regional and municipal levels. Historical changes in the life of society due to having fewer children, postponing the birth of the first child and the demographic profiles and policies of each individual country affect the present demographic situation in the BIN area. The findings provide implications for policy-makers and business.

Findings for 2007-2016:

TRENDS

- Simultaneous population ageing and population decline in the BIN area including Russia, with significant differences across countries.
- BIN area population decrease due to negative net migration with significant differences between countries.
- Growth occurred in only one third of all municipalities (excl. Russia).
- Population decline in the BIN area due to negative domestic migration.
- Population growth in the Norwegian BIN regions and Swedish Västerbotten due to increased migration from abroad.

URBANISATION

- Growth in population occurs in the cities and their urban areas.
- In 2016, 35% of all BIN area population excluding Russia live in six major cities (Tromsø, Bodø, Luleå, Umeå, Oulu and Rovaniemi), an increase of 2% during the period 2007-2016.

AGEING

- Dependency ratio grew on average by 7 percentage points.
- The share of young people aged 15-19 decreased by 4.1 percentage points.

[1] Without Nenets Autonomous Okrug (NAO), later in the text Arkhangelsk region (without NAO).

[2] Total dependency ratio is the ratio of dependents--people younger than 15 or older than 64--to the working-age population-(15- 64).

Figure 1

BIN area — Norway, Sweden, Finland and the Northwestern Federal District in total

Population development in the BIN area incl. Russia

Index=2007, 2007-2016

Figure 1 shows the population development in the BIN area including the Russian regions of Arkhangelsk and Murmansk. On the Federal level, these two regions are the part of the Northwestern Federal District (NWFD) in Russia, which includes Saint Petersburg and had a population of 13.8 million in 2016. In 2016, the respective populations of the Russian regions of Arkhangelsk and Murmansk were 1.13 million and 762 thousand.

The population of the BIN area including the Russian regions decreased by 3.1% (144,379 people) in the period 2007-2016. The total population of Norway, Sweden, Finland and the NWFD increased by 5.2% during the period 2007-2016. The trend indicates that collectively the most northern regions of Norway, Sweden, Finland and Russia have a declining population. The population of northern Norway, Sweden and Finland grew from 1.6 million to 1.67 million during the period 2007-2016. The demographic situation in the Arkhangelsk and Murmansk regions is alarming. The population in the Murmansk region declined from 820 thousand in 2007 to 760 thousand in 2016, and in the Arkhangelsk region (without NAO) from 1.22 million to 1.13 million.

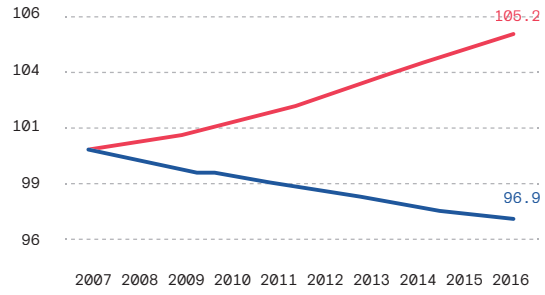


Figure 2

BIN area — Norway, Sweden, Finland in total

Population development in the BIN area excl. Russia

Index 2007=100, 2007-2016

Figure 2 shows population development excluding Russian regions. Population in the BIN area grew by 2.6% from 2007 to 2016. The growth rate in the BIN area, however, is much lower than the average population growth of 7% in Finland, Norway, and Sweden in the period 2007-2016.

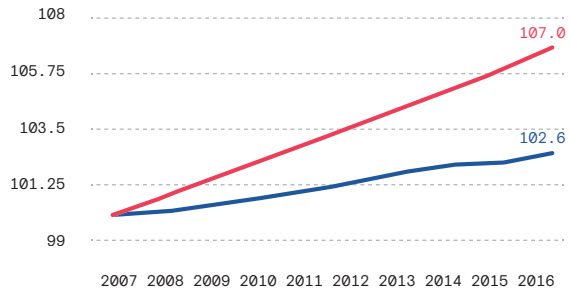


Figure 3

Change per year — Accumulated change

Population change by year and accumulated population change in the BIN area incl. Russia

2007-2016

Figure 3 shows population change in absolute numbers. In total, the population of the BIN area decreased by 144,379. The negative trend continued in the period 2007-2016, the sharpest decline being in 2007 (30,381 people). In order to understand the forces driving population decline, we consider the trends in live births, deaths and migration flows.

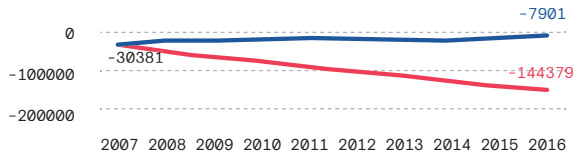


Figure 4.1 4.2

BIN area — Norway, Sweden, Finland and the Northwestern Federal District in total

Figure 4.1 and 4.2 Live births and deaths indices

Index 2007 = 100, 2007-2016

Expressed as indices both live births (7.1 points) and deaths (8.2 points) fell in the BIN area during 2007-2016 (Figure 4.1, 4.2). To see what caused negative population growth in the BIN area we decompose it to excess of births over deaths and the balance of migration. The BIN area had an excess of births of 3,484 during the period 2007-2016, while collectively in Norway, Sweden, Finland and Northwestern Federal District births outnumbered deaths by over 30,000 in 2016.

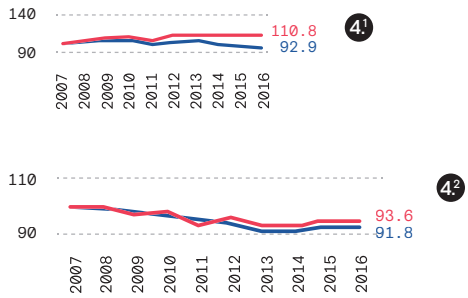
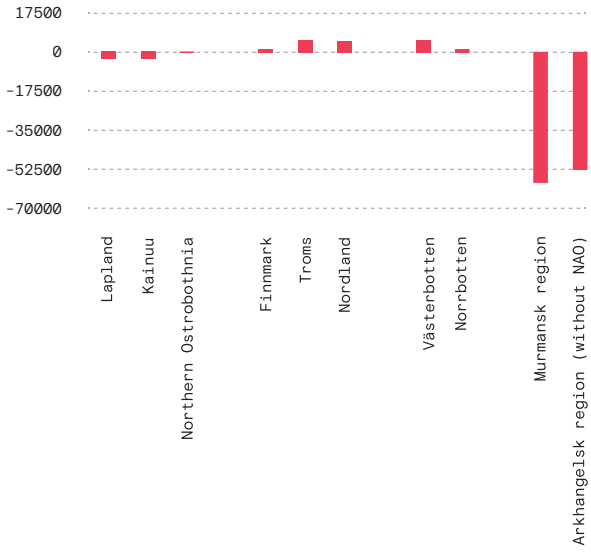


Figure 5

Accumulated net migration

2007-2016

Figure 5 shows the change in population due to net migration that includes both immigration from abroad, emigration abroad and domestic migration flows [3]. Population loss due to negative net migration affected the Murmansk and Arkhangelsk (without NAO) regions most of all during the period 2006-2017, followed by Lapland and Kainuu regions.



3. No data on domestic migration flows is available for Russia.

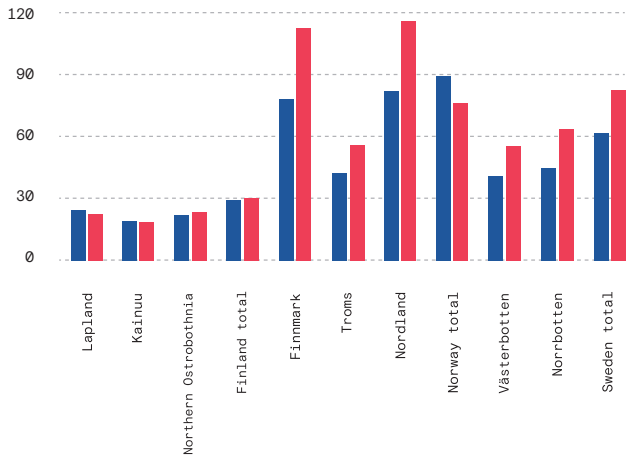
Figure 6.1 6.2 2007 2016

Immigration from abroad per 1,000 population

2007-2016

Figure 6.1 shows that the pattern of immigration from abroad is very diverse across countries and BIN regions with the highest immigration in the Norwegian BIN regions, followed by Sweden and low levels of immigration per 1,000 population in Finland. The Norwegian regions of Nordland and Finnmark saw increased immigration from abroad reaching 120 per 1,000 population in 2016, while the Swedish regions of Västerbotten and Norrbotten have higher immigration rates per 1,000 population than the Finnish BIN regions that saw no growth in immigration from abroad.

6.1



Net domestic migration per 1,000 population

2007-2016

Figure 6.2 illustrates how many people per 1,000 are leaving BIN regions for other domestic regions. All BIN regions have experienced population decline due to country internal migration. In Norway, Troms and Nordland reduced negative domestic migration by one third from 2007 to 2014. Swedish Västerbotten saw a decline in net domestic migration from 54 in 2007 to 8 in 2016 people per 1000 population. In the further analysis, it would be of interest to track migration flows within the BIN regions of Norway, Sweden, Finland and Russia.

6.2

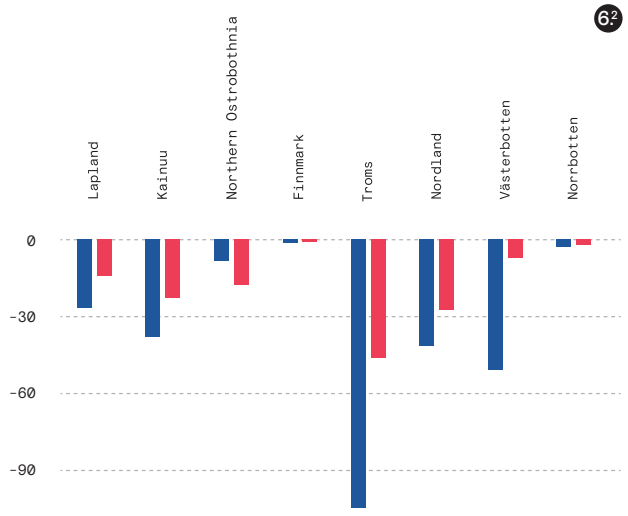
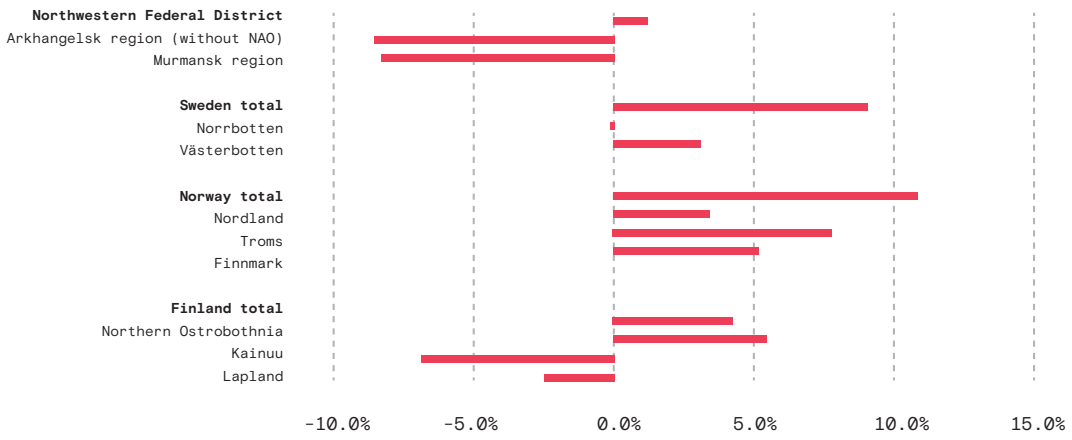


Figure 7

Population development at the BIN regional level, %

2007-2016

Population development on the county regional level varied across countries (see Figure 7). The highest population loss is observed in the Arkhangelsk (-7.7%) and Murmansk (-7.5%) regions, while the Northwest Federal District in Russia had a growth of 1.4%. Population decline in these regions started from 1990 and the negative trend continues to date. Factors affecting population loss are migration outflows. In the absence of Soviet state subsidies, people have less monetary advantage of moving to the Murmansk and Arkhangelsk regions. The heritage in the Murmansk and Arkhangelsk regions of single-industry towns [4] explains population decline and fewer employment opportunities. In Sweden, the Norrbotten and Västerbotten regions both lagged behind Sweden's 8.8% growth. Västerbotten saw a growth of 3.2% and the Norrbotten population remained the same during the period 2007-2016. The population growth is concentrated around the cities of Umeå and Luleå. In Norway, Troms region saw a population growth of 7.1%, followed by Finnmark 5.2% and Norland 3.3%. Positive net migration that includes both domestic migration and migration from broad (Figure 5) explains population growth in northern Norwegian counties. Still, all three northernmost regions lag behind Norway's total growth of 11.0%. The population growth in Troms region is due to its attractive university and hospital, its fishery sector and favourable housing market. In Finland, Kainuu saw a decrease in population of 6.8% during the period 2007-2016, followed by Lapland with a decline in population of 2.3%. Northern Ostrobothnia experienced a population growth of 5.4%, compared to the national average of 3.8%. Population growth in Northern Ostrobothnia is due to a large university and a fertility rate above the national average (1.91) in 2016.



[4] A single-industry town is a town whose economy is dominated by a single industry or company. The Murmansk and Arkhanglesk regions had seven single-industry towns each in 2017.

Positive and negative population growth in municipalities (excl. Russia), %

2007 -2016

Out of 173 municipalities, only 62 (35%) had positive population growth. Cumulative negative population growth during the period 2007-2016 is apparent in 29 municipalities. Cities have continued to attract people. Out of the total population of the Norwegian, Swedish and Finnish BIN area 33% lived in the major cities [5], in 2016 this number grew to 35%. The highest growth occurred in the municipalities surrounding Oulu urban area, e.g., Liminka, Kempele (growth more than 10% in the period 2007-2016). In Norway, the cities of Tromsø and Bodø and the towns of Alta, Nesseby and Hammerfest all experienced a growth exceeding 10%. In Sweden, population growth in the major cities of Luleå and Umeå was in the range 5-10% (an annual growth rate higher than 0.5%). These findings confirm that population growth concentrated around major cities providing education, job opportunities, quality housing and cultural experiences. High quality health care is a pull factor attracting migration to urban areas. The importance of cities and urban planning will be a primary concern for the future development of the BIN area. Equally important will be strategies for the development of municipalities with decreasing population, which is two thirds of all municipalities in the BIN area in Norway, Sweden and Finland.

People live ever closer together and therefore prefer living in the cities (and their urban areas) without commuting. In Northern Ostrobothnia 45% of population was concentrated in Oulu, in 2016 this number rose to 51%. Cities provide economies of scale, efficient infrastructure and services through density and concentration in transportation, communications, power, human interactions, water and sanitation services. They attract highly skilled workforce that enable specialization in knowledge, skills, and management capabilities[6]. See table on bottom right.

1	**Lapland**	
↑	5-10%	Kittilä, Rovaniemi
↑	0-5%	Kolari
↓	-10%	Pelkosenniemi, Ranua, Simo, Tervola, Kemijärvi, Ylitornio, Pello, Savukoski, Posio, Salla
2	**Kainuu**	
↓	-10%	Kuhmo, Paltamo, Ristijärvi, Suomussalmi, Puolanka, Hyrynsalmi
3	**Northern Ostrobothnia**	
↑	+10%	Liminka, Kempele, Oulu, Ylivieska, Lumijoki, Tyrnävä
↑	0-5%	Hailuoto, Kalajoki, Muhos
↓	-10%	Pyhäntä, Pudasjärvi, Taivalkoski, Pyhäjärvi, Kärsämäki, Siikalatva, Vaala
4	**Finnmark**	
↑	+10%	Hammerfest, Alta, Nesseby
↑	5-10%	Gamvik, Båtsfjord, Sør-Varanger
↑	0-5%	Hasvik, Nordkapp, Lebesby, Vadsø
↓	-10%	Loppa
5	**Troms**	
↑	+10%	Tromsø
↑	5-10%	Nordreisa, Sørreisa, Skånland, Lavangen
↑	0-5%	Bardu, Salagen, Målselv, Balsfjord, Lenvik
↓	-10%	Lyngen
6	**Nordland**	
↑	+10%	Bodø
↑	5-10%	Vestvågøy, Brønnøy, Vågan, Herøy, Sortland, Vevelstad, Leirfjord
↑	0-5%	Værøy, Vefsn, Hadsel, Hemnes, Lurøy, Narvik, Nesna, Fauske, Hamarøy, Alstahaug, Træna, Evenes. Øksnes, Rana
↓	-10%	Røst
7	**Västerbotten**	
↑	5-10%	Umeå
↑	0-5%	Vännäs, Skellefteå
↓	-10%	Åsele
8	**Norrbotten**	
↑	5-10%	Luleå
↑	0-5%	Piteå, Boden, Kiruna
↓	-10%	Övertorneå, Överkalix

[5] Oulu,, Rovaniemi and Kajaani in Finland, Tromsø and Bodø in Norway and Luleå and Umeå in Sweden (meeting OECD criteria with population larger than 50,000 inhabitants).

[6] The Economic Role of Cities, UN-HABITAT.

City	2007	2016
Oulu / Northern Ostrobothnia	45%	51%
Rovaniemi/Lapland	32%	34%
Bodø/Nordland	20%	21%
Tromsø/Norlland	50%	57%
Luleå/ Norrbotten	29%	31%
Umeå/Västerbotten	43%	48%

(cities that meet 50,000 thresholds).

Figure 8

Children (0-14 years) Young people (15 - 19 years)

Share of young and children in the BIN area

2007-2016

Figure 8 shows the changing age structure of the population in the BIN area. The share of children grew by 1.1 percentage points from 16.1% in 2007 to 17.2%. The share of young people aged 15-19 declined by 4.1 percentage points, reaching 18.3% in 2016. The shrinking cohort of 15 to19-year-olds means fewer entrants to education institutions, fewer young families and fewer active working age people in the future population structure.

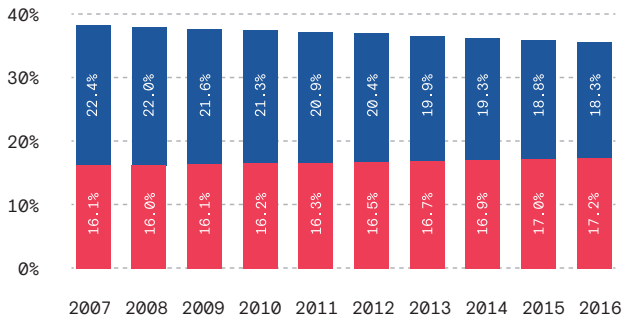


Figure 9

BIN area incl Russia Norway, Sweden, Finland and the Northwestern Federal District in total

Population development in age group 0-19 (BIN area incl. Russia)

Index 2007=100, 2007-2016

A steady loss of population in the age group 0-19, including children (0-14) and young people (15-19) continued during the period 2007-2016, see Figure 9. Altogether population in the age group 0-19 shrank by 7.5% (114,000 people) in the BIN area including Russia, while in the total of Norway, Sweden, Finland and the NWFD there was a small growth of 0.5%

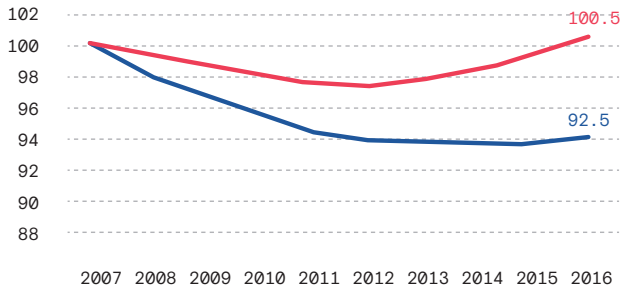


Figure 10

Population development in age group 0-19 at the BIN regional level, %

2007-2016

Figure 10 illustrates population development in the age group 0-19 at the BIN regional level. All BIN regions apart from Northern Ostrobothnia saw a decline in the population aged 0-19. Kainuu (-6.9%) and Lapland (-12.0%) were among the biggest losers of children and young people in the north. Negative population growth in the age group 0-19 was observed in the Arkhangelsk and Murmansk regions, -9.9% and -8.35 respectively. In Sweden, Norrbotten saw a decline of 9.1% in the age group 0-19.

In Norway Nordland and Finnmark both approached the 8% mark in the loss of children and young people. The only positive trends were in Sweden (5.1%) and Norway (3.3%) with increases in the young population on a country level. We observe that the rate of decline in the young population is more marked in the north. The trend is elated to the decreasing share of 15 to 19-year-olds (see Figure 9). The changing demographic composition of the BIN area with declining young population and a growing older generation will have long-lasting effects on the economy of the BIN area.

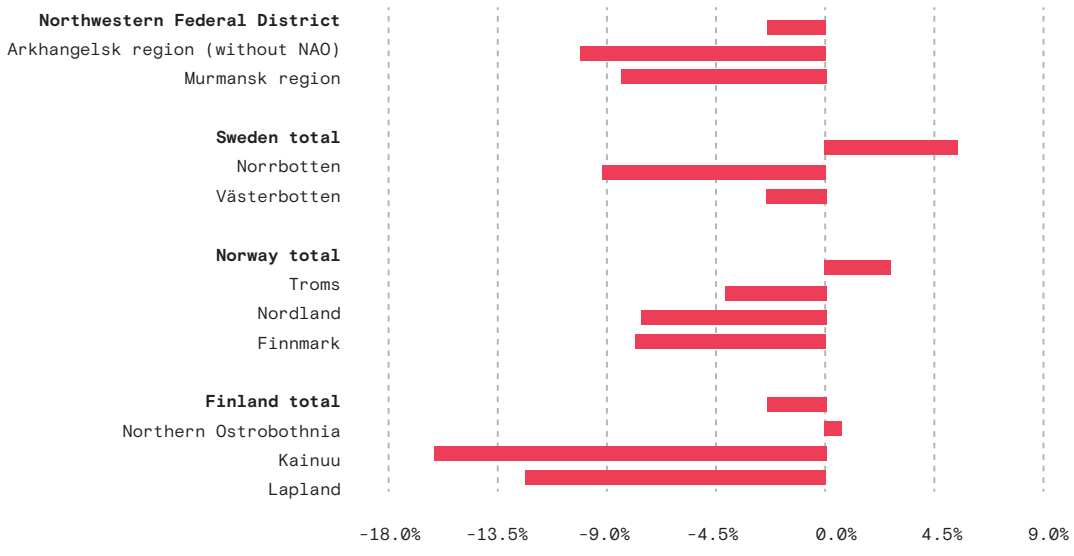


Figure 11

Population development in age groups 20-39 and 40-64 years (BIN area incl. Russia)

Index 2007=100, 2007-2016

Figure 11 demonstrates population development in age groups 20-39 and 40-64 years. Population in age group 20-39 is classified as early adulthood when people complete their education and make the transition into work and parenthood. The BIN area saw a 6.8% population decline in age group 20-39 from 2007 to 2016, while Norway, Sweden, Finland and NWFD saw a growth of 6.2%. Population in age group 40-64 is known as middle adulthood, during which people achieve personal and economic independence. The decline in this age group was 3.7% in the BIN area as opposed to a growth of 2.3% in Norway, Sweden, Finland and NWFD. Overall, the BIN area is losing population in both age groups 20-39 and 40-64 years and the decline in the age group 20-39 is more pronounced.

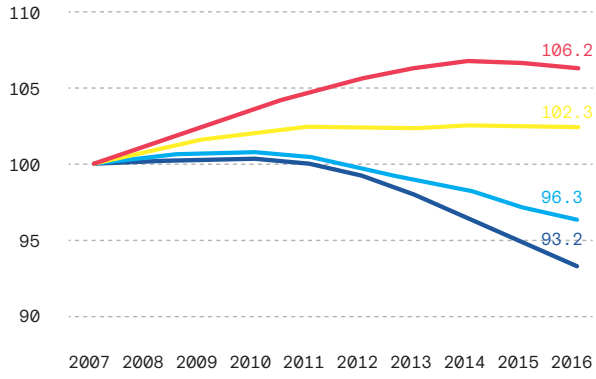


Figure 12

40-64 20-39

Population development in age group 20-39 and 40-64 years at the BIN regional level, %

2007-2016

Figure 12 breaks down population development in age groups 20-39 years and 40-64 at the BIN regional level. Population in age group 20-39 years grew in Swedish and Norwegian BIN regions but at a rate much lower than the country average. In Kainuu population aged 20-39 declined by 4.4%. The sharpest decrease in population aged 20-39 happened in the Arkhangelsk (-14.1%) and Murmansk (-13.9%) regions. Weak employment opportunities, legacies of single-industry towns and living conditions contribute to shrinking 20-39 year-olds in Arkhangelsk (without NAO) and Murmansk regions. Overall, population in age group 40-65 increased only in Troms (4.7%), Nordland (1.1%) and Finnmark (5.9%), but was still below the national country's total of 9.9%. Swedish and Russian BIN regions saw a decrease in the range of 2.4-8.7%. In Finland, Kainuu (-16.2%) and Lapland (-13.2) were the net losers of population in age group 40-65 due to an increase in the share of baby-boomers (born 1945-50). In Finland, until the 1970s fertility rates decreased more rapidly than in Norway and Sweden, where the baby-boom generation was spread over a longer period of time, e.g. Norway (those born 1945-1955) and Sweden with a baby boom during the 1940s and the second peak in the 1960s.

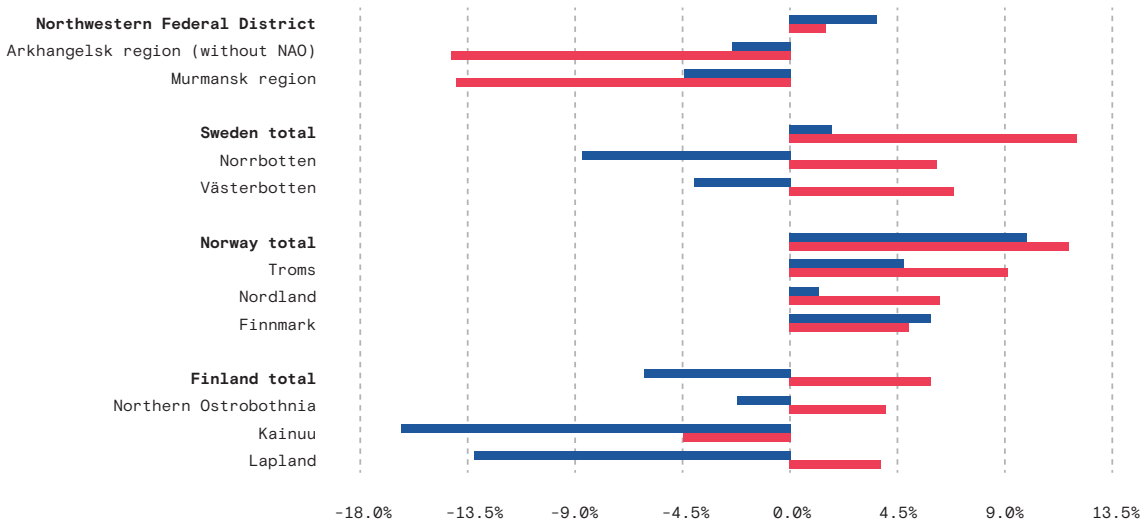


Figure 13

BIN area

Norway, Sweden, Finland and the Northwestern Federal District in total

Population development in age group 65 + (incl.Russia)

Index 2007 = 100, 2007–2016

Figure 13 shows growth in age group 65+ during the period 2007-2016. The BIN area saw a growth in age group 65+ of 13.3%, while in Norway, Sweden, Finland and Northwestern Federal District (NWFD) age group 65+ grew by 16.7%. Increasing population in the age group 65+ reflects the demographic transition of the developed countries. In developed countries advanced public health care, high level of women participating in the workforce, with both mortality and fertility being low contribute to demographic transition. We observe that in the BIN area and in total of Norway, Sweden, Finland and Northwestern Federal District the age structure becomes old.

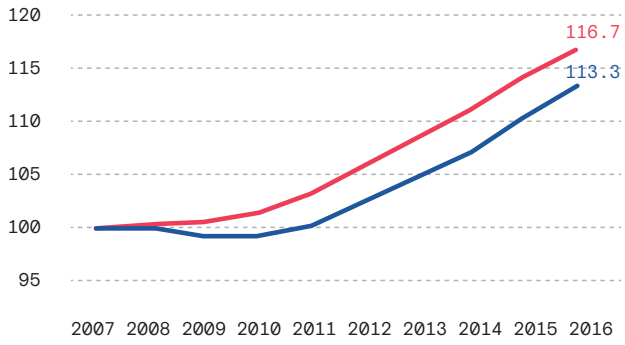


Figure 14

Population development in age group 65+ years at the BIN regional level, %

2007-2016

Figure 14 shows differences in population development in population aged 65+ on the regional level. Norway, Sweden, Finland all have higher life expectancy than Russia. In Russia, lower life expectancy at birth than in the Scandinavian BIN explains the negative and low growth numbers. We observe that the Swedish BIN regions, Finnish Kainuu, and Lapland have a growth in population aged 65+ which is below the overall country levels. These findings are linked to the loss of working population aged 40-64 in the BIN area.

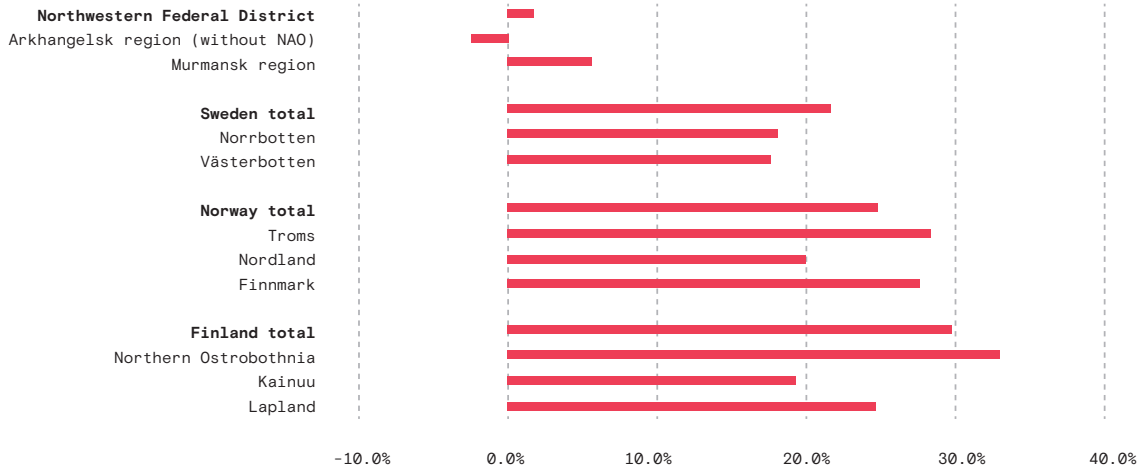


Figure 15

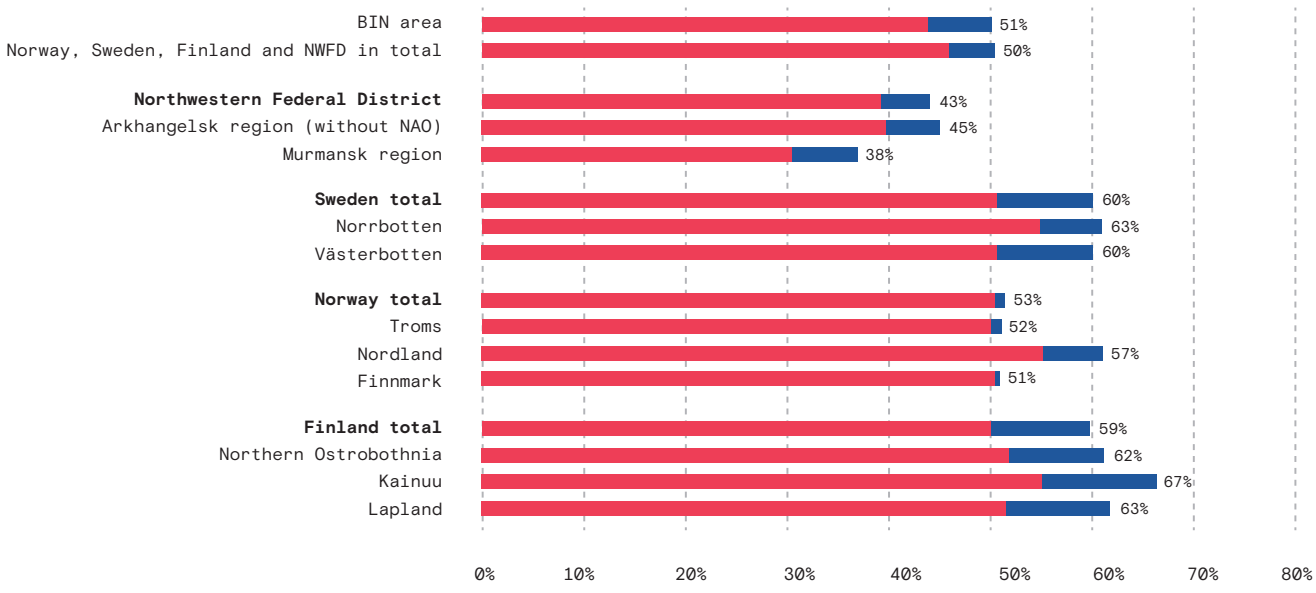
Total age dependency, %

2007-2016

Figure 15 shows the change in total age dependency in the BIN area at the regional level during the period 2007-2016. Dependency ratios provide a gross estimate of the pressure on the productive population. It provides an indication of a society's caregiving burden by estimating the potential supply of caregivers and the potential demand for care (number of care recipients).

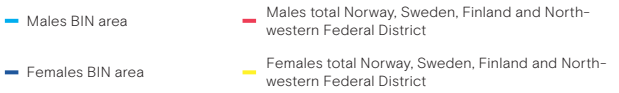
The total dependency ratio for the BIN area was 43 in 2007, indicating that every 100 people aged 15 to 64 were supporting 43 young people and older people combined. This number rose by 7 percentage points, reaching 50% in 2016. The average masks variations across countries and regions. For instance, in Finnish BIN regions, total age dependency rose at its highest in the range of 9-12 percentage points, reaching 67% in Kainuu in 2016, compare to the world average of 54 in 2016 [7]. Swedish Norrbotten and Västerbotten saw growth of 8-9%, with total age dependency equaling 60-63%. In six out of ten BIN regions total age dependency is higher than the national average.

Old age dependency increased by 4.5% from 19.7% in 2006 to 24.2%, young age dependency increased by 2.9% from 22.9% in 2006 to 25.8% in 2016. The composition of the dependency ratio with a more pronouonced shift towards old age dependency in the BIN area has implications for financing pension and health care systems tailored to elderly care.



7. World Bank estimate.

Figure 16



Population development by gender

Index 2007=100, 2007–2016

Figure 16 shows that both female and male population decreased in the BIN area compared to that in Norway, Sweden, and Finland with a growth of 6.2% and 4.3% respectively. In the BIN area female population decreased by 1.6% more than male population.

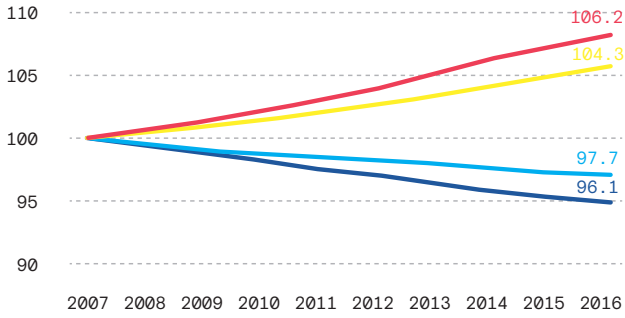
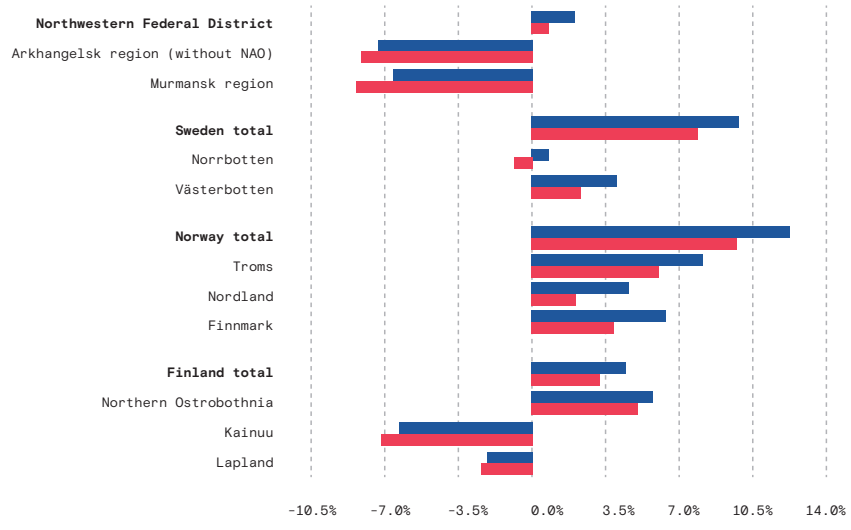


Figure 17

Female and male population development at the BIN regional level, %

2007–2016

Figure 17 illustrates cross-border differences in female and male population development. The Arkhangelsk without NAO (-8.1%) and Murmansk (-8.3%) regions had the biggest decreases in female population during 2007-2016, followed by Kainuu (-7.1%). In the Norwegian and Swedish regions growth of female population lagged on average 2% behind the growth in male population. The most equal growth is seen in Northern Ostrobothnia, where female population grew by 5.1%, while male population grew by 5.7%.



Challenges and findings

Recommendations

For Policy

A. How to stop the decline in population in the BIN area?

B. How to address challenges of growing urbanization and abandonment of rural territories in the BIN area?

C. How to attract young families and females to the BIN area?

D. What shall be done to make BIN area attractive for people in the age group 20-39 and 40-64 years?

E. How to fund ever-growing demand for elderly care when the youth and the most active population 20-64 is declining so rapidly in the BIN area?

There are no straightforward answers to these questions. Challenges shall be addressed using a systemic and holistic approach. Education, work, living conditions, quality of life, earnings potential and infrastructure including transport and digital infrastructure are all pieces of the larger policy that shall be developed to address the issues of declining population in the BIN area. The Regions in the BIN area can learn from each and see what policies work.

For businesses

A. Participate in business and government dialogue on the role of the private sector in providing public services

B. Contribute to digital infrastructure development

C. Develop solutions for elderly care and telemedicine

D. Develop financial solutions for elderly care

E. Provide entry-level jobs for recent graduates

F. Provide cultural services in the cities