Residential Segregation of Non-European Migrants:
East and West Europe Compared Using Individualized Neighborhood Method

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Rationale for a comparative paper

How does residential segregation of non-European immigrants differ between West and East Europe?

Northwest (West) Europe:
- ResSegr project (Residential segregation in five European countries - A comparative study using individualized scalable neighbourhoods; JPI Urban Europe; 2014-2017)
- Novel method of segregation measurement (bespoke neighbourhoods)

Eastern Europe:
- Replication study in Czechia (Residential segregation and mobility of foreign citizens, CSF, 2019-2021)
- Newly available geo-coded individual level data on citizenship (source: The Alien Police)

Table 1 Factors of segregation in Europe

	Northwest Europe - NWE (Belgium, Denmark, Norway, Netherlands and Sweden)	Eastern Europe - CZE (Czechia)
Similar	• Moderate social stratification • Welfare state and urban commons • Secular society • Immigration country	• Moderate social stratification • Welfare state and urban commons (communist legacy) • Secular society (very atheist) • Immigration country
Different	• High income gap (between minority and majority) • High GDP per capita • Social housing for immigrants • Long immigration history • Economic migration + refugees (Middle East, Africa, Asia)	• Low income gap (between minority and majority) • 1/3 of GDP per capita of NWE • Municipal housing NOT for immigrants • Short immigration history • Economic migration (Vietnam, former Soviet Union countries)

Data and methods

- As in ResSegr project (Andersson et al. 2018a, 2018b; Rogne et al. 2019)
- Non-European migrants = outside of EU 28 and EFTA countries
- Data: population grid, 100 x 100 metres
- NWE: migrants as those born outside a given country
- CZE: migrants as citizens of other countries (mostly 1st gen migrants)
- EquiPop software – individualised neighbourhood method (MAUP)
- K-nearest / bespoke neighbourhoods: k=200, k=1600, k=12800, k=51200
- Segregation measurement: neighbourhood concentration, neighbourhood representation, dissimilarity index

Table 2 Migrant proportion of populations of selected European countries as of 1 January 2018.
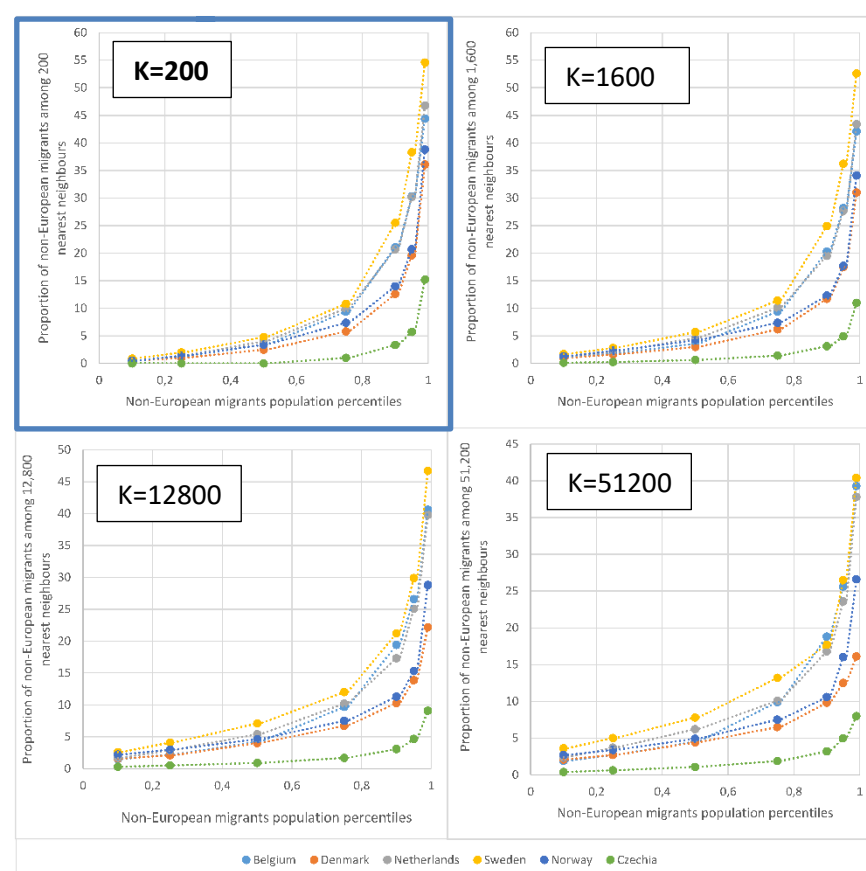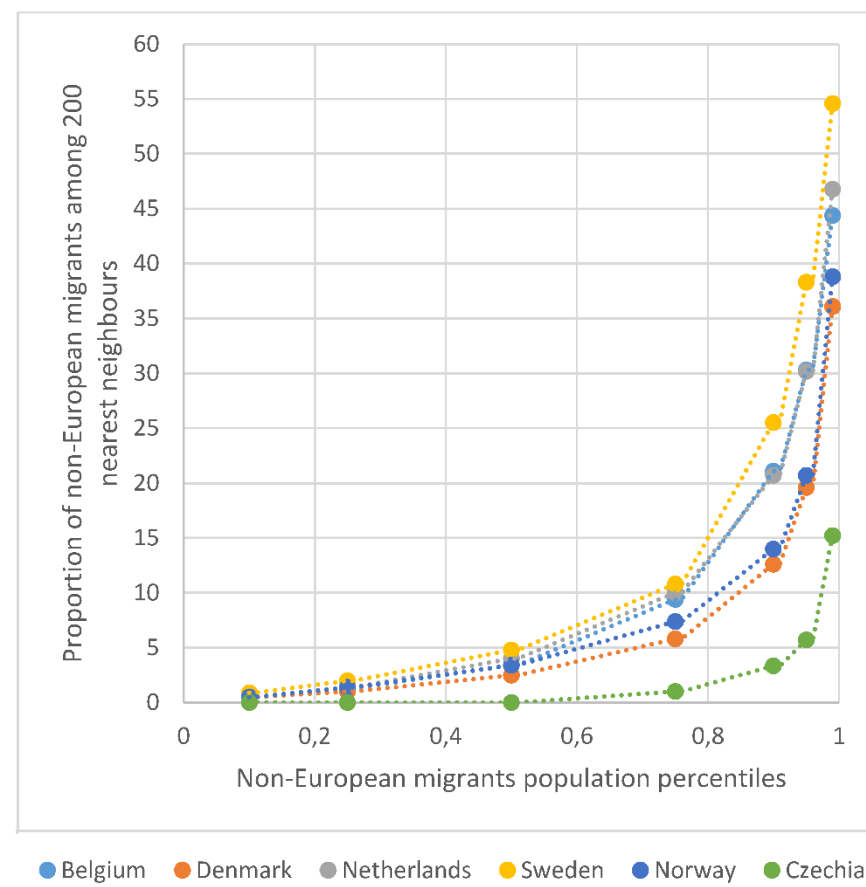
	Non-European foreign-born (%)	Non-European foreign citizens (%)
Belgium	9.0	4.1
Denmark	7.8	4.9
Netherlands	9.3	2.6
Norway	8.8	4.0
Sweden	13.1	5.4
Czechia	2.6	2.8

Source: Eurostat, statistical offices of individual countries

Neighbourhood concentration

Concentration is defined as the proportion of the given neighbourhood's population that consists of non-European migrants. The concentration of migrants expresses the probability that a randomly selected individual will belong to the selected minority population.

Fig. 1 Concentration of non-European migrants in selected Northwest European countries and Czechia (k=200)

● Belgium ● Denmark ● Netherlands ● Sweden ● Norway ● Czechia

Source: Andersson et al. (2018b), Rogne et al. (2019), own calculation

Neighbourhood representation

Representation is defined as the proportion of the total non-European migrant population that lives in the given neighbourhood. Representation of migrants reflects the probability that a randomly selected individual of the migrant population will live in the given neighbourhood.

Table 3 Percentage of population bins where non-European migrants are under- or over-represented.
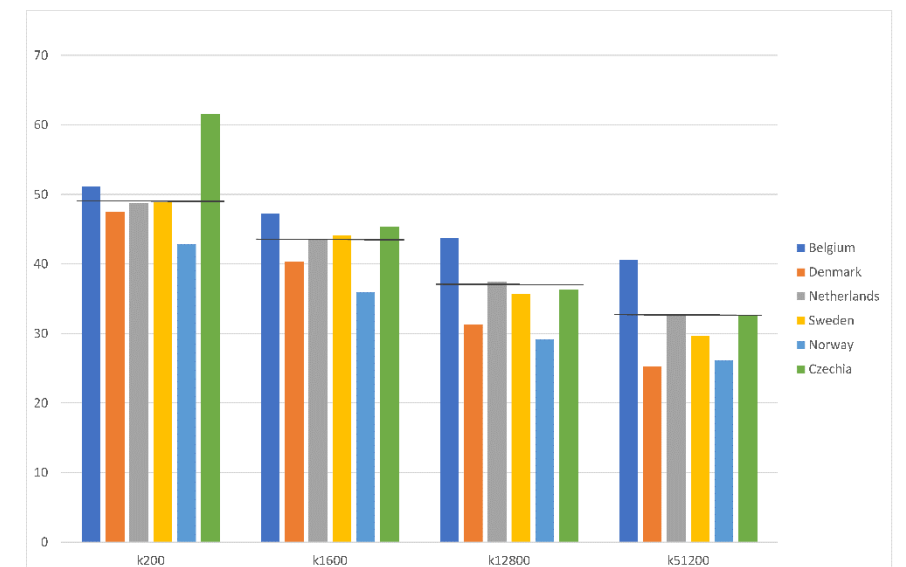
k		Under-representation		Over-representation	
		Strong	Moderate	Moderate	Strong
		<0.2%	0.2–0.5%	1–5 %	>5%
Czechia	200	50	16	20	4
	1,600	25	25	26	2
	12,800	10	28	32	1
	51,200	6	26	34	0
Northwest Europe (range of values)	200	18–25	30	27–33	3–4
	1,600	5–13	28–32	28–32	2–3
	12,800	0–9	25–35	30–33	1–3
	51,200	0–5	25–36	33+	0–2

Source: Andersson et al. (2018b), Rogne et al. (2019), own calculation

Dissimilarity index

The index of dissimilarity for individualised neighbourhoods was computed as an aggregated measure of segregation. Thus, segregation can be directly compared across scales and countries in Europe.

Fig. 2 Dissimilarity index in selected European countries for different sizes (*k*) of individualised neighbourhoods.

■ Belgium ■ Denmark ■ Netherlands ■ Sweden ■ Norway ■ Czechia

Note: Horizontal line indicates the average dissimilarity value for Northwest European countries.

Source: Andersson et al. (2018b), Rogne et al. (2019), own calculation

Discussion & Conclusion

First comparison of West and East Europe based on multi-scalar measurement and detailed population grid data.

- Lower concentration of non-Europeans in East/Czechia than West Europe at all scales, absence of large migrant-dense neighbourhoods in Czechia
- Greater over-representation and smaller under-representation of non-European migrants in West Europe than Czechia, high share of neighbourhoods without migrants in rural areas
- Similar levels of segregation measured by Dissimilarity index when measured with individualised neighbourhood method

Different paths between countries leading to similar outcomes in segregation of non-European migrants?

- Northwest Europe: strong housing policy and rich welfare state attract and direct non-European immigration and its spatial concentration, including refugee migration
- East Europe/Czechia: limited access to social housing for immigrants, weaker welfare state, sufficient economic opportunities for non-European immigrants only in some regions of Czechia

Context matters for residential segregation

- Absence of zoning legacies – a lack of block-level segregation
- Different histories (or their absence) matter: colonial legacies, refugee integration policy, communist legacy
- Segregation is multi-dimensional: by race, class, ethnicity, nationality, citizenship, language, religion

References

Andersson, E. K., Lyngstad, T. H., & Sleutjes, B. (2018a). Comparing Patterns of Segregation in North-Western Europe: A Multiscalar Approach. *European Journal of Population*, 34, 151–168.

Andersson, E. K., Malmberg, B., Costa, R., Sleutjes, B., Stonawski, M. J., & de Valk, H. A. G. (2018b). A Comparative Study of Segregation Patterns in Belgium, Denmark, the Netherlands and Sweden: Neighbourhood Concentration and Representation of Non-European Migrants. *European Journal of Population*, 34, 251–275.

Rogne, A. F., Andersson, E. K., Malmberg, B., & Lyngstad, T. H. (2019). Neighbourhood Concentration and Representation of Non-European Migrants: New Results from Norway. *European Journal of Population*, 36, 71-83.

Östh, J. (2014). Introducing the EquiPop software. An application for the calculation of k-nearest neighbour contexts/neighbourhoods. Uppsala: Uppsala University. https://equipop.kultgeog.uu.se/Tutorial/Introducing%20EquiPop.pdf. Accessed 1 September 2020.

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