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## **Population dynamics and ethnic geographies in urban areas: How do migration and natural change impact population composition and segregation?**

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### ***Framework***

Segregation in urban areas has been a long-standing key issue in social research. Despite the relatively low segregation levels in European cities (Iceland, 2014; Musterd, 2005), recent research illustrates how the urban social and spatial structure in developed Western countries has changed over the past few decades (e.g. Arapoglou & Sayas, 2009; Marcińczak, Musterd, van Ham, & Tammaru, 2015; Pratschke & Morlicchio, 2012; Swyngedouw & Baeten, 2001). The continuous and increasing international immigration into the European Union (EU) during the 20<sup>th</sup> century has resulted in a multi-ethnic society that faces enormous political, economic and social challenges (OECD, 2014; de la Rica, Glitz, & Ortega, 2014). The increasing public concern regarding the integration of these (new) migrant communities into the host society has given ‘immigration’ a prominent position on the political agenda (Friedrichs, Galster, & Musterd, 2003; Mateos, 2011). Specific settlement patterns and residential behaviour of international immigrants – often with a lower level of human capital – contribute greatly to the persistence of spatial disparities in terms of socioeconomic and ethnic characteristics (Bogaert et al., 2004; De Corte et al., 2003; Devogelaer, 2004; Grippa et al., 2015).

Migration, however, is not an isolated process but coexists with other demographic components such as natural population change, including both mortality and fertility processes (Bailey, 2012; Finney & Simpson, 2009; Stillwell & Duke-Williams, 2006). Due to the younger age structure of most of the ethnic minority groups, the process of natural population change potentially becomes of great importance in urban areas with a considerable (and growing) share of foreign-born with relatively young age structures. As such, natural increase is likely to become the main source of population change for diverse urban neighbourhoods (e.g. Johnson

& Lichter, 2008). Conversely, the increasing assimilation of ethnic minority members could counterbalance this argument as their residential behaviour (Catney, 2015), fertility (Andersson, 2004; Mayer & Riphahn, 1999) and health behaviour (Vandenheede, Willaert, De Grande, Simoens, & Vanroelen, 2015) over time converges towards the native population.

Urban areas are highly suitable for investigating population dynamics and patterns of segregation, since spatial and social unevenness is mostly observed in cities and migration rates are highest (Bolt, 2009; Musterd, 2005; van Kempen & Özükren, 1998; Whisler, Waldorf, Mulligan, & Plane, 2008). The differential spatial mobility among ethnic minority groups is supportive to the decision to focus our analyses on urban areas (Bolt & Kempen, 2010; Simpson & Finney, 2009; Stillwell & Duke-Williams, 2006).

### ***Aim***

Selective migration is put forward as a major contributor to the composition and distribution of the population and hence the fragmentation of urban areas. However, examining the composition of the population in specific spatial units essentially requires an account of all new entries and exits. As such, this study aims to simultaneously account for internal and international migration and natural population change, i.e. births and deaths, when probing the (changing) population composition and levels of ethnic segregation. Understanding the components of population dynamics of urban areas is important for development of theories of urban change in the context of super-diversity; for providing a more nuanced perspective on segregation debates; and for informing policy-makers of the processes that underlie changing populations as an evidence base for more appropriate interventions.

### ***Data and methods***

This research draws on a link between the 1991 and 2001 Belgian censuses. Both the censuses are individually coupled to information from the National Population Register by Statistics Belgium. The database is exhaustive, anonymous and comprises of a very rich set of variables, allowing for a detailed breakdown of ethnic background and migrant generations without losing any statistical power. The uniqueness of the data on a nationwide scale offers the possibility of identifying individual behaviour for each record in the population as well as determining overall population dynamics.

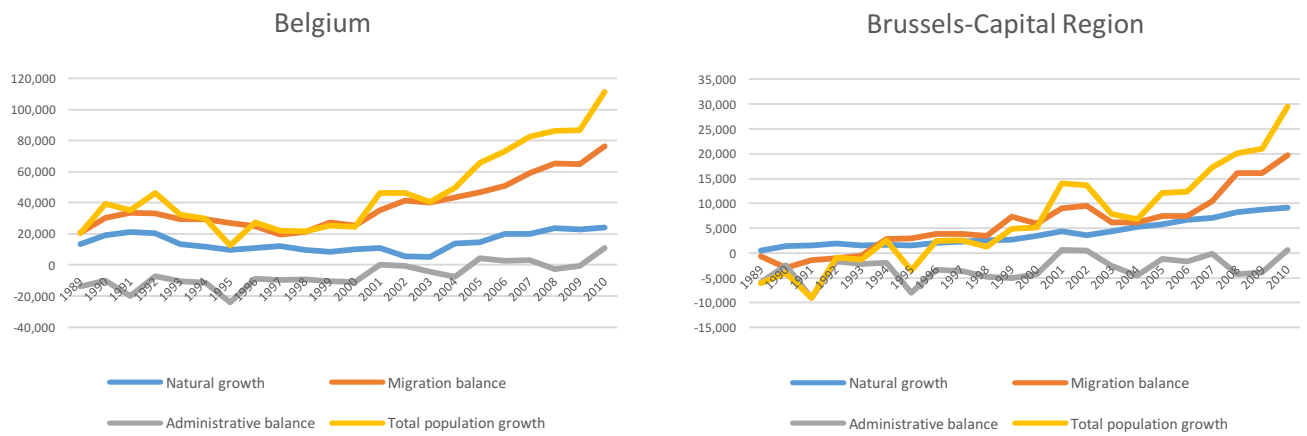
The analyses focus on the metropolitan urban regions in Belgium, i.e. Brussels, Antwerp,

Ghent, Liège and Charleroi. The ethnic composition of the population in 1991 and 2001 is compared for different urban areas, municipalities and/or neighbourhoods. Spatial segregation in municipalities and neighbourhoods in 1991 and 2001 is measured using traditional segregation indices, such as the index of dissimilarity, the P\* index, the spatial proximity index, etc. These indices elucidate the degree of unevenness or separation for specific groups and allow tracing of the evolution of the geographical mosaic during the observation period. Observed changes are then explored, with reference to internal movements, international migration and natural population change. Decomposition techniques are applied in order to determine the contribution of each of the population dynamics to the observed population change.

### ***Expectations***

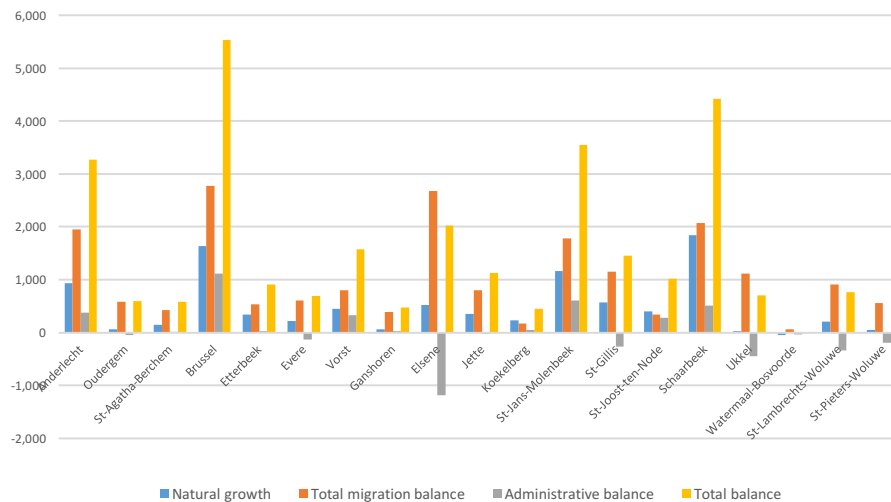
Given their specific migration history – former labour recruitment of lower educated migrants during the 1960's and 1970's –, the existence of a reversed social gradient in reproductive and health behaviour (Gadeyne, 2006; Skirbekk, 2008; Vandenheede et al., 2015) and the continuous marriage migration, we expect natural increase among Turkish, Moroccan and to a lesser extent Spanish and Italian migrants to contribute more to population change than is the case for other migrant groups in Belgian urban areas. In addition to this, based on the distinct international immigration to Brussels compared to other Belgian cities and different historic migration settlement patterns, it is hypothesized that the relative contribution of natural population growth and migration to changing composition and geography of the urban population differs between the urban regions (Figure 1). Furthermore, it is expected that considerable variability in the contribution of the different components is observed within urban areas, considering smaller spatial units (e.g. municipalities, statistical sectors) (Figure 2).

Figure 1. Total population growth, in Belgium and in the Brussels-Capital Region, 1989-2010



Source: National Register, author's computations

Figure 2. Population growth in the Brussels-Capital Region, by municipality, 1/1/2010



Source: National Register, author's computations

### Bibliographical references

(OECD) (2014). Is Migration Really Increasing? *Migration Policy Debates*, (May), 1-4. Retrieved from <http://www.oecd.org/berlin/Is-migration-really-increasing.pdf>

Andersson, G. (2004). Childbearing after Migration: Fertility Patterns of Foreign-Born Women in Sweden. *The International Migration Review*, 38(2), 747-774.

- Arapoglou, V. P., & Sayas, J. (2009). New Facets of Urban Segregation in Southern Europe: Gender, Migration and Social Class Change in Athens. *European Urban and Regional Studies*, 16(4), 345-362.  
<http://doi.org/10.1177/0969776409340187>
- Bailey, N. (2012). How spatial segregation changes over time: sorting out the sorting processes. *Environment and Planning A*, 44, 705-722.  
<http://doi.org/10.1068/a44330>
- Bogaert, H., Decrop, J., Thomas, I., Verhetsel, A., Devogelaer, D., Fautré, S., ... Maréchal, L. (2004). *Over steden, stedelijke structuren en stadsgewesten - Villes viables en Belgique*. Brussel.
- Bolt, G. (2009). Combating residential segregation of ethnic minorities in European cities. *Journal of Housing and the Built Environment*, 24(4), 397-405. <http://doi.org/10.1007/s10901-009-9163-z>
- Bolt, G., & Kempen, R. Van. (2010). Ethnic Segregation and Residential Mobility: Relocations of Minority Ethnic Groups in the Netherlands. *Journal of Ethnic and Migration Studies*, 36(2), 333-354.  
<http://doi.org/10.1080/13691830903387451>
- Catney, G. (2015). The Changing Geographies of Ethnic Diversity in England and Wales, 1991-2011. *Population, Space and Place*, n/a-n/a.  
<http://doi.org/10.1002/psp.1954>
- De Corte, S., Raymaekers, P., Thaens, K., Vandekerckhove, B., Debruyne, T., Bauwens, E., & De Lannoy, W. (2003). *Onderzoek naar de samenhang tussen migratiestromen en het ontstaan en de persistentie van achtergestelde buurten. Eindrapport. Ministerie van de Vlaamse Gemeenschap, AORHM, afdeling Woonbeleid*. Brussel. Retrieved from  
<https://hiva.kuleuven.be/resources/pdf/anderepublicaties/R1129.pdf>
- de la Rica, S., Glitz, A., & Ortega, F. (2014). Immigration in Europe: Trends, Policies and Empirical Evidence. *Handbook of the Economics of International Migration*, v1B, (7778), 1303-1362.  
<http://doi.org/10.1016/B978-0-444-53768-3.00024-2>
- Devogelaer, D. (2004). *Interne migraties in België: Wie, waarom en naar welke gemeente? En waarom niet naar steden?* (No. 8-04). Brussels.
- Finney, N., & Simpson, L. (2009). Population dynamics: The roles of natural change and migration in producing the ethnic mosaic. *Journal of Ethnic and Migration Studies*, 35(9), 1479-1496.  
<http://doi.org/10.1080/13691830903125935>
- Friedrichs, J., Galster, G., & Musterd, S. (2003). Neighbourhood effects on

social opportunities: the European and American research and policy context. *Housing Studies*, 18(6), 797-806.  
<http://doi.org/10.1080/0267303032000156291>

Gadeyne, S. (2006). *The ultimate inequality: Socio-economic differences in all-cause and cause-specific mortality in Belgium in the first part of the 1990s*. NIDI/CBGS-Publications.

Grippa, T., Marissal, P., May, X., Wertz, I., Loopmans, M., & Van Hamme, G. (2015). *Studie: Dynamiek van de buurten in moeilijkheden in de Belgische stadsgewesten*. Brussels.

Iceland, J. (2014). *Residential Segregation: A Transatlantic Analysis*. Washington DC.

Johnson, K. M., & Lichter, D. T. (2008). Natural Increase : A New Source of Population Growth in Emerging Hispanic Destinations in the United States. *Population and Development Review*, 34(June (2)), 327-346.

Marcińczak, S., Musterd, S., van Ham, M., & Tammaru, T. (2015). Inequality and rising levels of socio-economic segregation. Lessons from a pan-European comparative study. In T. Tammaru, M. van Ham, S. Marcińczak, & S. Musterd (Eds.), *Socio-Economic Segregation in European Capital Cities - East Meets West* (1st ed.). London: Routledge.  
<http://doi.org/10.4324/9781315758879>

Mateos, P. (2011). Uncertain segregation: the challenge of defining and measuring ethnicity in segregation studies. *Built Environment*, 37(2), 226-238. <http://dx.doi.org/0.2148/benv.37.2.226>

Mayer, J., & Riphahn, R. T. (1999). *Fertility Assimilation of Immigrants: Evidence from Count Data Models* (No. IZA DP No. 52). Leibniz.

Musterd, S. (2005). Social and ethnic segregation in Europe: Levels, causes, and effects. *Journal of Urban Affairs*, 27(3), 331-348. <http://doi/10.1111/j.0735-2166.2005.00239.x>

Pratschke, J., & Morlicchio, E. (2012). Social Polarisation, the Labour Market and Economic Restructuring in Europe: An Urban Perspective. *Urban Studies*, 49(November), 1891-1907.  
<http://doi.org/10.1177/0042098012444885>

Simpson, L., & Finney, N. (2009). Spatial patterns of internal migration: Evidence for ethnic groups in Britain. *Population, Space and Place*, 15, 37-56. <http://doi.org/10.1002/psp>

Skirbekk, V. (2008). Fertility trends by social status. *Demographic*

*Research*, 18, 145-180. <http://doi.org/10.4054/DemRes.2008.18.5>

Stillwell, J., & Duke-Williams, O. (2006). Ethnic population distribution, immigration and internal migration in Britain. What evidence of linkage at the district scale. In *British Society for Population Studies Annual Conference*, 1-29.

Swyngedouw, E., & Baeten, G. (2001). Scaling the City: The Political Economy of “Glocal” Development—Brussels’ Conundrum. *European Planning Studies*, 9(7), 827-849.  
<http://doi.org/10.1080/0965431012007979>

van Kempen, R., & Özüekren, a. S. (1998). Ethnic Segregation in Cities: New Forms and Explanations in a Dynamic World. *Urban Studies*, 35(10), 1631-1656. <http://doi.org/10.1080/0042098984088>

Vandenheede, H., Willaert, D., De Grande, H., Simoens, S., & Vanroelen, C. (2015). Mortality in adult immigrants in the 2000s in Belgium: a test of the “healthy-migrant” and the “migration-as-rapid-health-transition” hypotheses. *Tropical Medicine & International Health*, 20(12), 1832-1845. <http://doi.org/10.1111/tmi.12610>

Whisler, R. L., Waldorf, B. S., Mulligan, G. F., & Plane, D. A. (2008). Quality of life and the migration of the college-educated: A life-course approach. *Growth and Change*, 39(1), 58-94.  
<http://doi.org/10.1111/j.1468-2257.2007.00405.x>