Ethnic segregation in Germany ☆

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HIGHLIGHTS

- Both workplace and residential ethnic segregation are pervasive in Germany.
- Low-educated workers are more segregated than high-educated workers across workplaces.
- Ethnic segregation between different minority groups is substantial.
- Ethnic segregation at the workplace declines with time in the labour market.
- Higher ethnic workplace segregation is associated with lower income and employment.

ARTICLE INFO

ABSTRACT

This paper provides a comprehensive description of the nature and extent of ethnic segregation in Germany. Using matched employer–employee data for the universe of German workers over the period 1975 to 2008, I show that there is substantial ethnic segregation across both workplaces and residential locations and that the extent of segregation has been relatively stable over the last 30 years. Workplace segregation is particularly pronounced in agriculture and mining, construction, and the service sector, and among low-educated workers. Ethnic minority workers are segregated not only from native workers but also from workers of other ethnic groups, although less so if they share a common language. From a dynamic perspective, for given cohorts of workers, the results show a clear pattern of assimilation, reminiscent of typical wage assimilation profiles, with immigrants being increasingly less likely to work in segregated workplaces with time spent in the host country.

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1. Introduction

With foreign-born individuals making up at least 10% of the resident population in most developed countries (see OECD, 2011), the economic integration of these immigrant populations has become a main concern for policy makers. In providing empirical analysis on this issue, economists have primarily focused on the earnings position of immigrants relative to the native population as the key indicator of their economic situation.[1] In comparison and with few exceptions, segregation,

in particular across workplaces, has received relatively little attention, despite being an intuitive measure of an immigrant's degree of integration in his or her host country.

In this paper, I use two widely-applied segregation measures, the index of dissimilarity and the index of co-worker/co-resident segregation, to analyse the extent of ethnic segregation in Germany. The analysis comprises both workplace segregation and residential segregation, and documents the current situation as well as key trends over the last three decades, using administrative data that cover the universe of workers in the German labour market over the period 1975 to 2008. Most of the reported segregation indices are adjusted to account for the common issues of random segregation and segregation due to differences in ethnic group characteristics. This paper is the first of such analysis for Germany, and one of the very few studies that is able to comprehensively study workplace segregation.

There are four main findings. First, there is substantial ethnic segregation between immigrants and Germans across both workplaces and residential locations. The extent of this segregation has been relatively stable over the last three decades and is particularly pronounced in

[1] For an overview of the literature studying immigrants' earnings assimilation, see Dustmann and Glitz (2011).

agriculture and mining, construction, and the low-skill service sector. Second, low-educated workers are significantly more segregated than high-educated workers across workplaces but not residential locations. Third, immigrants are typically as segregated from immigrants of other nationalities as they are from native Germans. However, if two nationality groups speak the same language, they are more likely to work together in the same establishments. Fourth, ethnic workplace segregation and aggregate labour market outcomes are strongly negatively correlated, and although workplace segregation declines with time in the labour market, it never disappears entirely for a given immigrant arrival cohort. On the contrary, for more recent immigrant cohorts, the speed of assimilation in terms of workplace segregation has decreased significantly, a pattern that is also reflected in their wage assimilation profiles.

This paper adds to the wider economic literature on ethnic segregation. Most of this literature has focused on residential segregation (e.g. Iceland et al., 2002; Cutler et al., 2008a for the United States, Clark and Drinkwater, 2002, for England and Wales, and Musterd, 2005; Semyonov and Glikman, 2009, for a number of European countries), with early studies providing some evidence that segregation is associated with significantly poorer economic outcomes of ethnic minority groups (see e.g. Chiswick and Miller, 1995, who focus on immigrants, and Cutler and Glaeser, 1997, who focus on Blacks). More recent work, however, has challenged this view, arguing that these findings are due to the non-random sorting of individuals into areas and that residential segregation leads to an increase in employment probabilities and wages of minorities (see Edin et al., 2003; Damm, 2009).[2] Rather than focusing on residential segregation, Carrington and Troske (1998), Hellerstein and Neumark (2003, 2008) and Hellerstein et al. (2007) study in detail the extent and main patterns of establishment level segregation of minority groups in the United States, applying a similar methodology as the present study. Andersson et al. (2010) further complement this work by using a regression-based approach to quantify the role of different employer and employee characteristics in explaining observed patterns of workplace segregation in the United States. Åslund and Skans (2010) provide the most closely related analysis in the European context by studying workplace segregation in Sweden, although based on a different segregation measure.[3] While most of the quantitative results of the latter two studies cannot be directly compared to those of the present analysis due to their methodological differences, I provide qualitative comparisons of the main conclusions wherever possible. Overall, the key patterns identified in the existing literature, both regarding the overall extent of ethnic segregation and its main determinants, also prevail in the German context.

There are a number of theories that provide an explanation for ethnic segregation, most prominently those related to networks, consumption and productivity spillovers and discrimination. Networks may lead to a concentration of members of the same ethnic group in the same residential areas or, through the use of job referrals, the same workplaces as long as they are disproportionately based on ethnic similarity. There is ample sociological evidence for this type of homophily (e.g. McPherson et al., 2001). According to the German SOEP, 61.7% of immigrants name as their first befriended person another immigrant, compared to only 4.9% of German individuals. More importantly, out of those 61.7% of immigrant friends, 91.7% originate from the same country of origin as the respondent.[4] In addition, 42.7% of new jobs started

by immigrants over the period 1990 to 2001 were found through acquaintances, friends and relatives, a magnitude consistent with that reported for other developed economies (see Ioannides and Loury, 2004; Pellizzari, 2010, or Topa, 2011). Thus, the exchange of information about job (and residential) opportunities within an ethnically defined network may give rise to patterns of segregation. A second possible mechanism is consumption externalities and productivity spillovers. Individuals sharing a common language and cultural background may value each other's company and face lower transaction and communication costs (Lazear, 1999), making them more productive in the workplace. As a result, individuals of the same ethnicity will tend to move into the same neighbourhoods and workplaces, and employers will prefer hiring workers with the same ethnic background. A third well-known mechanism that could lead to segregation is discrimination (see Becker, 1957). For example, if employers or landlords experience disutility from hiring or renting out to ethnic minority individuals, they will discriminate against them when making their corresponding decisions, which in turn leads to ethnically segregated workplaces and neighbourhoods. All three theories make similar empirical predictions regarding segregation patterns and it is typically difficult to distinguish between the three. While the main purpose of this paper is not to identify the main mechanism behind the observed patterns in Germany nor to assess the causal effect of segregation on labour market outcomes,[5] some of the evidence put forward can lend support or be viewed as evidence against a particular segregation mechanism.

The structure of the paper is as follows. In the next section, I provide an overview of the main immigrant groups in Germany and describe the data. In Section 3, I present the two measures of segregation used in the analysis and how these can be adjusted to take account of random segregation and differences in observable characteristics across ethnic groups. In Section 4, I discuss in detail the empirical results. Section 5 concludes.

2. Background and data

The current immigrant population in Germany essentially reflects two large immigration waves. The first wave started in the mid-1950s when, as a result of strong economic growth in (West-) Germany and a lack of available manpower, Germany started to actively recruit foreign workers abroad, predominantly in Turkey, Yugoslavia, Italy, Greece, Spain and Portugal. Following the recession in 1973/1974, this active recruitment of immigrants was abandoned. However, subsequent immigration of family members continued. The second and more recent immigration wave to Germany was triggered by the collapse of the former Soviet Union and the political changes in Eastern Europe in the late 1980s and early 1990s. The main immigrant groups of this period were, on the one hand, ethnic German immigrants (so-called *Aussiedler*), mostly from Poland and the former Soviet Union, and, on the other hand, refugees from the wars in former Yugoslavia.[6]

The data I use in the empirical analysis to describe the extent of these immigrant groups' segregation come from social security records that extend over more than three decades, from 1975 to 2008. These records comprise every man and woman covered by the social security system, observed at the 30th of June in each year.[7] The data contain unique worker and establishment identifiers, as well as an unusually wide array of background characteristics, such as education,[8] occupation,

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[2] In line with these findings, Munshi (2003) provides evidence that Mexicans who belong to a larger network in the United States are more likely to be employed and hold a higher paying non-agricultural job. Similarly, Cutler et al. (2008b) show that there are beneficial effects of segregation for immigrants in the United States, in particular for groups with high human capital levels.

[3] For recent analyses that explicitly study the link between residential segregation and workplace segregation, see Strömgren et al. (2014) for Sweden and Hellerstein et al. (2011) for the United States. For an analysis of workplace segregation in Switzerland, see Müller and Ramirez (2009).

[4] Similar figures hold for the second and third befriended persons. All figures are based on pooled observations from the 1996 and 2001 waves of the German SOEP.

[5] These issues are analysed in detail by Dustmann et al. (2011), who argue that referral-based job search networks are likely to be an important explanation for the clustering of ethnic minority workers across establishments.

[6] For more detailed information on the different migration waves and their historical background, see Bauer et al. (2005).

[7] Not included are civil servants, the self-employed, and military personnel. In 2001, 77.2% of all workers in the German economy were covered by social security and are hence recorded in the data (Bundesagentur für Arbeit, 2004).

[8] To improve the consistency of the education variable in the data, I apply the imputation algorithm suggested by Fitzenberger et al. (2006).