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Article

Migrants in Germany: Separate and Unequal

Weekly Report

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Weekly Report

Migrants in Germany: Separate and Unequal

Migrants of non-Western origin often live among themselves. This residential segregation is, however, not necessarily caused by a lacking will to integrate. It rather seems to a large part explainable with the socio-economic differences between population groups. The key to successful integration of migrants into the German society thus lies in the alleviation of inequalities in respect to education, income and German language skills.

The integration of migrant populations into German society is subject to recurring debate and frequent controversies. One often-stated narrative is that poorly integrated migrants tend to live in residentially and socially isolated parallel societies (“Parallelwelten”), oftentimes so-called “soziale Brennpunkte”. Many blame a lack of effort to integrate among both migrants and natives. If this is found to be true, it can cause severe rifts in society and endanger the portrayal of Germany as a classical immigration country. Still, only little research has been conducted to assess residential segregation and find the social dynamics which may lead to such outcomes.

We try to answer two questions: 1. Is there residential segregation of migrant groups in Germany? 2. If segregation exists, how can this be explained? For this purpose we use data from the German Socio-Economic Panel Study (SOEP) which contains information on a wide variety of socio-economic characteristics for a representative sample of German households and individuals¹. Additional data on the household level is provided by the microm Micromarketing and Consult GmbH.² This dataset has been matched with the SOEP since 2004 and includes information on the immediate residential environment of most households contained in the SOEP.³ Among many variables primarily intended for consumer marketing purposes, it also gives the statistical share of various migrant backgrounds for the household heads in

¹ Wagner, G., Goebel, J., Krause, P., Pischner, R., Sieber, I. (2008): Das Sozio-oekonomische Panel (SOEP): Multidisziplinäres Haushaltspanel und Kohortenstudie für Deutschland – Eine Einführung (für neue Datennutzer) mit einem Ausblick (für erfahrene Anwender). *ASTA Wirtschafts- und Sozialstatistisches Archiv*, 2(4), 301-328.

² Goebel, J., Spieß, C. K., Witte, N. R. J., Gerstenberg, S. (2007): Die Verknüpfung des SOEP mit MICROM-Indikatoren: Der MICROM-SOEP-Datensatz, *Data Documentation* 26.

³ The address and specific location of participating SOEP households remain fully anonymous for DIW Berlin and all researchers. An analysis of this matched data is only possible within the premises of the SOEP Research Data Center (RDC) due to data protection regulations.

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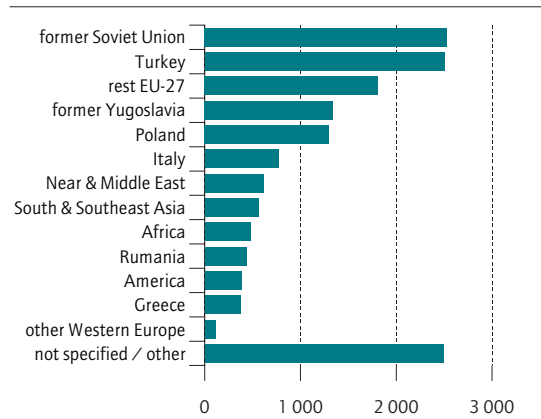
JEL Classification:
R00, J15, I32

Keywords:
Segregation, Migration,
Poverty

Figure 1

Primary migrant origins in Germany in 2009

in thousands



Source: Statistisches Bundesamt: Bevölkerung mit Migrationshintergrund. Ergebnisse des Mikrozensus 2009. Fachserie 1, Reihe 2.2., 2009.

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The former Soviet Union and Turkey are the primary regions of origin.

each household’s neighbourhood segment. Such a segment consists of the most proximate households and contains a minimum of 5 and an average of 8 neighbouring households. The combination of socio-economic indicators contained in the SOEP and neighbourhood indicators provided by microm makes feasible an analysis of residential segregation of migrant groups in Germany on a small geographical scale.

Former Soviet Union, Turkey, former Yugoslavia, Poland and Italy are the primary origins of migrants

Migration and the resulting issues of social inequality and integration are fairly recent phenomena in post-World War II Germany. There have been two major waves of foreign migrants⁴. The first was the massive recruitment of guest workers from 1955 until 1973 to support economic growth (in other words, the “Wirtschaftswunder”) and the subsequent immigration of family members. The second was the more recent inflow from Eastern Europe due to the collapse of the Soviet Union, the associated German re-unification, and the crisis in former Yugoslavia.

⁴ For a detailed history of migration to German, see: Muenz, R., Seifert, W. and Ulrich, R. (1999): *Zuwanderung nach Deutschland: Strukturen, Wirkungen, Perspektiven*. Frankfurt a. M.: Campus Verlag.

Guest workers were primarily recruited on the basis of bilateral agreements with countries in Southern Europe and elsewhere around the Mediterranean. Already in 1964, the number of guest workers exceeded one million. From 1971 on, more and more family members of guest workers immigrated.

The second migration wave has been characterized by a higher proportion of refugees and asylum seekers due to tensions in the former Yugoslavia and southeast Turkey. Also, newly established legal opportunities attracted more guest workers from Eastern Europe. As a result of this influx, Germany has become a multi-ethnic society. As presented by Figure 1, the primary origins of migrants residing in Germany in 2009 were the former Soviet Union, Turkey, former Yugoslavia, Poland and Italy.

In 2009, 19.2 percent of all people residing in Germany had a migration background of some kind⁵. Slightly more than half (54%) of them were in the possession of the German nationality. Furthermore, about a third of all people with a migrant background were born in Germany, thus representing second or third generation migrants. As a result, migrants constitute a substantial portion of German society and classical distinctions between “Germans” and “Foreigners” have, at least statistically, lost explanatory power⁶.

Segregation is not necessarily caused by discrimination

The notion of residential segregation describes the phenomenon that population groups tend to live in separate areas or neighbourhoods. The usual interpretation of segregation is that it is caused by some kind of discrimination. Firstly, discrimination can be institutionalized in the form of laws. Famous examples for such de jure segregation are the former Apartheid regime in South Africa and the Jewish ghettos during the Third Reich. Such laws do not exist in Germany anymore. Secondly, individuals themselves could discriminate. For example, members of minority groups could prefer to live in neighbourhoods with a high share of their own group. Further causes for such de facto segregation can be discriminatory behaviour in the housing mar-

⁵ Statistisches Bundesamt - Bevölkerung mit Migrationshintergrund - Ergebnisse des Mikrozensus 2009 - Fachserie 1 Reihe 2.2 – 2009.

⁶ In the following, the term migrants refers to individuals with any kind of migration background, independent of place of birth or nationality. For a more complete definition, refer to: Frick, J. R., Söhn, J. (2005): *Das Sozio-oekonomische Panel (SOEP) als Grundlage von Analysen zur Bildungslage von Personen mit Migrationshintergrund*. In: BMBF (Hrsg.): *Bildungsreform Band 14. Migrationshintergrund von Kindern und Jugendlichen: Wege zur Weiterentwicklung der amtlichen Statistik*. Berlin, 81–90.

Box 1

Dynamic Models of Segregation

In 1969, Nobel Prize laureate Thomas Schelling developed two models of residential segregation. The first uses a checkerboard to assess the dynamics which cause segregation between two population groups.¹ Starting with an initial random distribution such as that shown in Figure a, individual behaviour is simulated.

The main assumption is that an individual moves to an empty slot if more than half of his immediate neighbours belong to the opposite group. After playing this game, a strong pattern of segregation results (Figure b). Surprisingly, even when all individuals are open to integration and just do not want to be outnumbered by foreigners more than 2:1, segregation appears. Also, stronger segregation occurs as the difference in size between the population groups increases. The Schelling model is an example of a situation in which the general outcome (segregation) can deviate from the individual preferences (integration). In his second model, Schelling shows, that, under the assumption of more and less tolerant members of the majority, the influx of some minority members can result in the whole neighbourhood tipping from one ethnic mixture to another.

¹ Schelling, T. (1969). Models of Segregation. American Economic Review, 59(2), 488-493.

Figure a

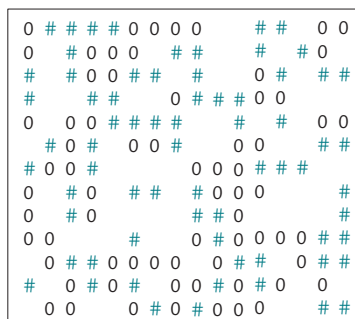
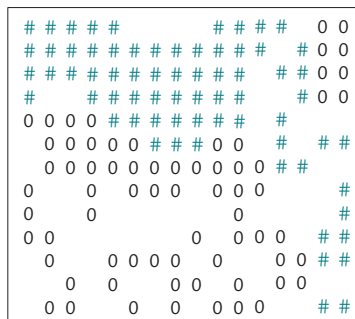


Figure b



Source: Schelling, T. (1971), Dynamic Models of Segregation, 155 and 157.

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ket on behalf of real estate agents or loan-granting institutions.

However, residential segregation can also occur in the absence of discriminatory behaviour. Where people live may be a result not of their immigration status but rather socio-economic characteristics such as educational attainment and income. Such segregation of status groups could result in segregation of migrant groups if there are status differentials between the natives and migrants groups and among different types of migrants.

Segregation is a multidimensional phenomenon

There are various measures in differing dimensions of residential segregation⁷. Most common is the Index of Dissimilarity which measures the evenness with which two population groups are distributed

⁷ For a complete discussion on popular measures of residential segregation refer to: Massey, D.S. and Denton, N.A. (1988). The Dimensions of Residential Segregation, Social Forces, 67(2), 281-315.

over neighbourhoods. Another dimension of residential segregation is that of exposure, which refers to the likelihood of interaction with members of a group as the result of residential proximity. The three other dimensions of residential segregation are concentration, centralization and clustering. While these five dimensions are related, they address the issue of segregation from different perspectives. In the following, we focus on the exposure to one's own group to measure residential isolation. This results directly from the available data which contains information on the immediate residential environment of each individual.

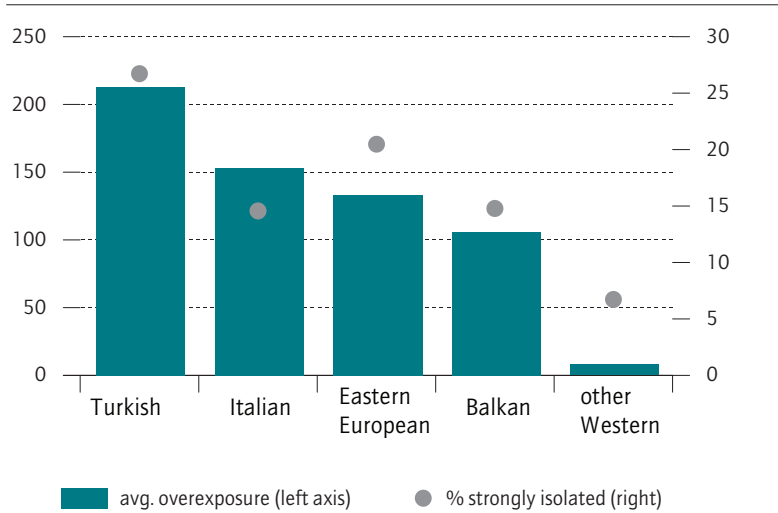
In our analysis we apply the grouping of migrant populations according to the data provided by microm Micromarketing-Systeme and Consult GmbH.⁸ Using this data, it is possible to assess the residential

⁸ Population groups identified in the microm data are: German, Sub-Saharan African, South/East/Southeast Asian, Balkan, Greek, Italian, Spanish/Portuguese (including Latin American), East European, Non-European Islamic, Turkish and Other. Please note that the results are only based on those individuals for whom data was contained in the 2008 wave of SOEP (namely only those over 16 years old). Also, individuals with a migrant background which could not be unambiguously identified are not included.

Figure 2

Residential segregation of migrants in Germany by origin in 2008

In percent



The degree of segregation is calculated as the deviation in percent from the situation of complete integration. „Strongly segregated“ are persons in whose neighbourhood the share of own-group members exceeds the fourfold of the average. East Europe also includes Poland; the group “Other western” includes Austria, France, Belgium, the Netherlands, Luxembourg, Denmark, the UK, Sweden, Finland, the USA, Switzerland, Australia, Canada and Ireland.

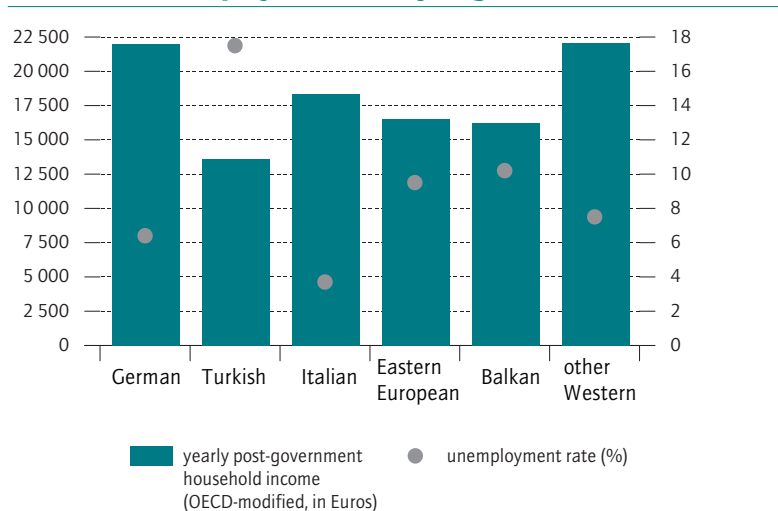
Source: SOEP v26; microm; calculations by DIW Berlin.

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Residential Segregation is especially strong for large migrant groups.

Figure 3

Income and unemployment rate by origin in 2008



Net household income including transfers, person-weighted according to OECD-modified equivalence scale. East Europe also includes Poland; the group “Other western” includes Austria, France, Belgium, the Netherlands, Luxembourg, Denmark, the UK, Sweden, Finland, the USA, Switzerland, Australia, Canada and Ireland.

Source: SOEP v26; calculations by DIW Berlin.

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Most migrant groups have a significantly lower average income than the German majority.

situation of the primary migrant groups and their descendents in Germany in the year 2008.

Especially Turkish and Eastern European migrants tend to live in strongly segregated neighbourhoods

In our analysis, we look at each individual’s immediate neighbours. An individual faces segregation if the fraction of neighbourhood heads with the same migrant background is drastically higher than expected under complete integration. Results from this exercise presented in Figure 2 show that in 2008 there was significant residential segregation in Germany. For example, a Turkish migrant in Germany is surrounded by 213 percent more Turkish households than an average person living in Germany. He thus faces a neighbourhood fraction of Turkish households which is over three times as high as in a situation of complete integration.

Some migrant groups seem to be more segregated than others. We find that in the group of non-Italian Western migrants only 6.7 percent face strong residential isolation, which is defined as an own-group neighbourhood share more than four times the average for the total population. The share is much higher for migrants of Turkish (26.7 percent) or Eastern European (20.5 percent) descent.

When comparing migrants of the first immigration wave, who have been in Germany for longer, with more recent migrants, we find no evidence that these are better integrated. Additionally, residential segregation seems to be persistent over generations of migrants, equally affecting second and higher generation migrants.

Non-Western migrants have a lower socio-economic status

We also find strong differences in socio-economic characteristics between population groups. Here, not only the differences between migrants and Germans are striking, but also those between non-Western (and Italian) migrants and Western (except for Italian) migrants. Non-Western migrants on average tend to perform more poorly on almost all such measures (Figures 3 and 4). They earn significantly lower incomes,⁹ mostly (except for Italians) face

⁹ In order to account for household size and economies of scale yearly household income (in Euros) is divided by the number of persons in that household where the household head counts as 1, each additional person aged 14 and above counts as 0.5, and each child as 0.3. This OECD-modified equivalence scale has first been proposed by Hagenaars et al. (1994).

higher unemployment rates, are seldom privately insured, and have lower educational attainment.

Not in the sphere of classical socio-economic status indicators but nevertheless relevant to the issue of segregation, they also use German less often as daily language than their Western counterparts. Figure 4 presents a compilation of three such indicators of social status scaled so that German values equal 100.

Again, individuals with a Turkish background seem to have the lowest socio-economic status on average.¹⁰ With 31 percent they have the lowest rate of individuals speaking mostly or only German at home (Figure 4, right axis). The particularly low income per household head is caused by two effects: Individuals with a Turkish background on average earn less than their German peers and Turkish households consist of a higher number of persons (Figure 5, right axis). With 3.9 members the average Turkish household is not only far larger than the average German household (2.3) but also larger than average migrant households of different origin (2.5-2.9).

Migrant households not only differ from German ones in their average size. Figure 5 (left axis) shows that they also differ with respect to other housing characteristics. The home ownership rate is much lower among migrants and they tend to live in one- or two-family homes less frequently. Again, Western migrants are most similar to native Germans. For example, while over half of German families own the house they live in, this is only the case for less than a fifth of migrants with Turkish roots.

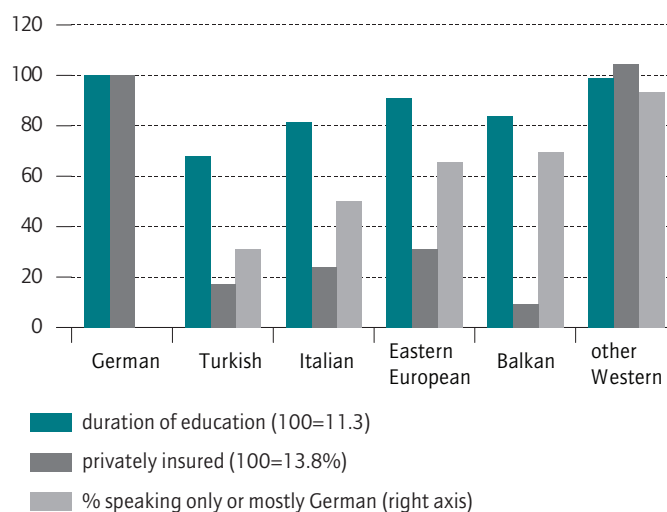
Segregation seems for a large part to be caused by social stratification

We have made two empirical observations so far. Firstly, there is substantial residential segregation of non-Western and Italian migrants in Germany. Secondly, those groups which face stronger segregation seem to be characterized by lower average social status. An exception to this is the group of Italian migrants which seems to be well-integrated into the labour market.

Furthermore, we find that incomes and educational attainments of individuals are strongly linked with those of their neighbours. This can be inferred from

¹⁰ One should be cautious that averages do not sufficiently describe the properties of complete groups. Thus, maybe not all people with Turkish background are worse off. There might just as well be a higher fraction with low status while the rest is doing well.

Figure 4
Differences in socio-economic status by origin in 2008
Scaled, Germany = 100



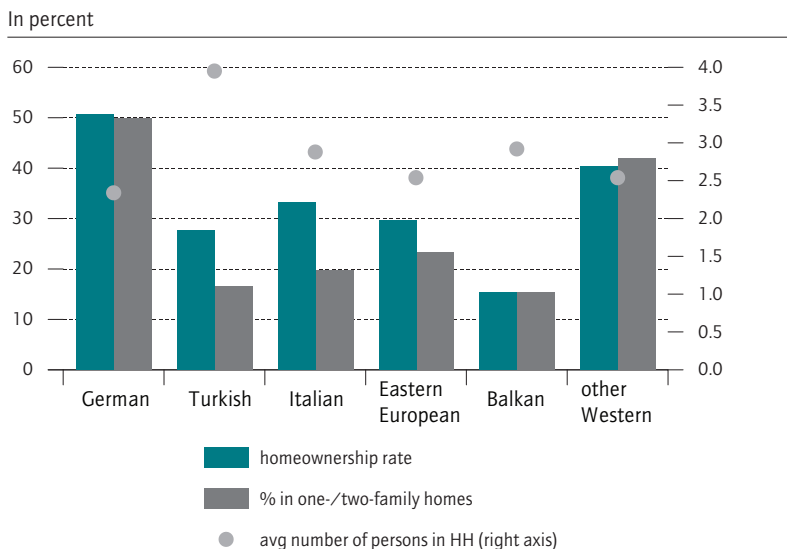
East Europe also includes Poland; the group "Other western" includes Austria, France, Belgium, the Netherlands, Luxembourg, Denmark, the UK, Sweden, Finland, the USA, Switzerland, Australia, Canada and Ireland.

Source: SOEP v26; calculations by DIW Berlin.

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Also in respect to language skills and education there are significant differences by origin.

Figure 5
Housing characteristics and household sizes by origin in 2008
In percent



East Europe also includes Poland; the group "Other western" includes Austria, France, Belgium, the Netherlands, Luxembourg, Denmark, the UK, Sweden, Finland, the USA, Switzerland, Australia, Canada and Ireland.

Source: SOEP v26; calculations by DIW Berlin.

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The homeownership rate is significantly lower among migrants.

Table 1

Linking individual socio-economic status with that of the immediate neighbours

	Non-migrants	migrants
Post-government income¹	Purchasing power of average household in neighborhood²	
Below 11,303 EUR	35 466	34 148
11,303 – 14,347 EUR	36 752	35 800
14,348 – 16,983 EUR	37 059	37 043
16,984 – 19,861 EUR	38 192	39 455
19,862 – 23,618 EUR	39 770	36 343
23,619 – 29,942 EUR	40 941	40 112
Above 29,942 EUR	45 085	45 189
Education	Avg. number of academics in neighbourhood segment	
No High school degree	4.6	4.5
high school degree	6.0	6.1
Observations	15 249	2 754

1 yearly post-government income adjusted to OECD-modified equivalence scale.

2 the data uses the definition of "street segments" to define neighbourhoods which are larger than the microm neighbourhood segments.

All summary statistics in this table exhibit high statistical significance.

Quellen: SOEP+microm, own calculations.

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Persons with higher incomes also have neighbours who earn more - independent of migrant status.

Table 1 which presents evidence that an individual with higher education and/or higher income most likely faces neighbours with higher income and/or education as well. This is true regardless of migrant status. It thus seems plausible to conclude that socio-economic status affects residential decisions.

Finally, migrants with a higher income tend to live in neighbourhoods with smaller migrant populations. In our data, the proportion of household heads with a migration background in the neighbourhood segment drops from 14 to 6 percent between migrants in the lowest and the highest income groups.¹¹ This could be the result of sorting due to income differentials in the sense that disproportionately few migrants can afford to live in these neighbourhoods. In sum, if individuals choose a place to live where the prospective neighbours possess similar socio-economic status, the social inequalities presented above have some degree of segregation as their logical outcome. Hence, segregation in Germany might be caused by social stratification rather than discrimination.¹²

11 Income groups are divided in septiles.

12 A more worrying interpretation could be that higher shares of migrant residents render certain neighbourhoods less desirable for the majority group. A similar dynamic has been found to be active in the United States. In the year 1999, an influential study found that after the abolishment of institutionalized discrimination, racial segregation was maintained by Whites being willing to pay more in order to live separate from racial minorities. Cutler, D. M., Glaeser, E. L. Vigdor, J. L. (1999): The Rise and Decline of the American Ghetto. *Journal of Political Economy*,

Assuming that it is indeed social status which determines the outcomes of residential decisions, we assess its power to explain the perceived levels of segregation. We follow a procedure first applied in 2004 for the study of racial segregation in the United States.¹³ First, we assess the connection between the various indicators of socio-economic status and the tendency to live in a segregated neighbourhood. Then, we compare current levels of segregation, as measured by own-group overexposure, with those predicted if the German majority were to be subject to the sorting effects associated with specific migrant groups. Detailed information about the methodology applied is found in Box 2.

Between 38 and 84 percent of residential segregation of non-Western migrant groups can be explained by differences in socio-economic status. Figure 6 is to be read as follows: If the German population were, for example, to have an Eastern European migration background, they would experience an own-group overexposure of 50 percent. This is substantially lower than the own-group overexposure the average Eastern European migrant experiences (133 percent). The drop of 62 percent is entirely due to the difference in socio-economic status between the Eastern European migrants and the German majority.

Similarly, the differences in the socio-economic characteristics explain a drop of Turkish own-group overexposure from 213 percent to 35 percent. This is a reduction of 84 percent. For the migrants stemming from Italy or the Balkan this number is smaller, with 41 percent (from 153 to 91 percent) and 38 percent (from 106 to 66 percent) reductions respectively. In sum, socio-economic characteristics explain sizeable portions of residential segregation experienced by all four of the principal migrant groups.

The finding that up to 84 percent of residential segregation can be explained by differences in socio-economic status has to be interpreted with caution. Firstly, the identification of definitive causal relationships is difficult. Reverse causation is possible in the sense that living in neighbourhoods with a higher share of migrants has a damaging effect on

107(3), 455-505. Strikingly, a survey carried out by the Kriminologisches Forschungsinstitut Niedersachsen e.V. (KFN) in 2010 shows, that certain population groups are less popular as neighbours than others. Among both German and non-German students living in Germany neighbours with a Turkish background are the least popular. Meanwhile, German neighbours are relatively popular among all population groups. Baier, D., Pfeiffer, C., Rabold, S.: *Kinder und Jugendliche in Deutschland: Gewalterfahrungen, Integration, Medienkonsum: Zweiter Bericht zum gemeinsamen Forschungsprojekt des Bundesministeriums des Innern und des KFN (KFN-Forschungsbericht Nr. 109)*, Hannover.

13 Bayer, P., McMillan, R. and Rueben, K.S. (2004). What drives racial segregation? New evidence using Census microdata. *Journal of Urban Economics*, 56, 514-535.

Box 2
Empirical Framework

To assess the link between residential segregation and socio-economic characteristics, we use a simple OLS regression of the form:

$$y_i = \alpha + \sum_k \beta_k X_i^k + \varepsilon_i$$

Here, y_i stands for the share of own-group household heads in the individual i 's neighbourhood segment, α is the intercept, β_k are the coefficients for the k socio-economic characteristics X_i^k , and ε_i is the individual error term. This regression is run separately for the members of the different population groups. Independent variables include dummies for income septiles, educational

attainment in the form of a high school degree dummy, an indicator if German is the primary language used, and town size.

Building on the procedure applied by Bayer et al. (2004), we then generate fitted values for the German majority. In this way we simulate how much segregation each migrant group would face if they were to obtain the German distribution of socio-economic characteristics. The corresponding drop in segregation levels is then entirely due to the difference in socio-economic characteristics while the remaining levels of segregation are either caused by unobserved characteristics or the migrant background itself.

socio-economic status. While such effects surely play a role in some cases, they seem unlikely to account for a major part of the link between socio-economic status and segregation. If they did, effects should be stronger for migrants of the second or

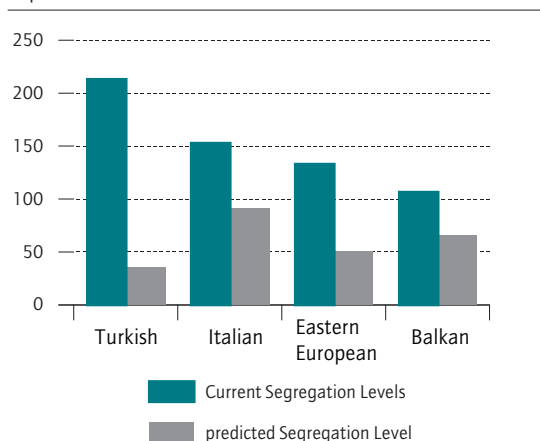
third generation which grew up in Germany. This is not the case.

Secondly, one should be cautious to conclude a segregated society only based on separate living. The type and location of school or job, membership in clubs, or who one frequently meets are important factors influencing an individual's life reality. It is possible that a migrant lives in a neighbourhood with an especially high concentration of migrants and is still in frequent social interaction with Germans at his soccer club or favourite bar. Life in modern urban areas is multilayered and, thus, cannot be sufficiently described only by location of residence.¹⁴ However, an individual's residential environment is a first indicator of her social circumstances since interaction with neighbours is simply more likely. This is especially the case for school attendance which is often bound to residential location and seems to play an important role in the integration of migrants into German society.

Figure 6

Actual and predicted degree of segregation under assumed abolition of socio-economic differences by origin in 2008

In percent



For the method of prediction see Box 2. East Europe also includes Poland.

Source: SOEP v26; microm; calculations by DIW Berlin.

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Socio-economic differences rather than origin seem to define the ethnic mix in neighbourhoods.

Conclusions

Our findings show that it is not necessarily lacking will to integrate which results in residential segregation of migrant groups in Germany, but that much of it can be explained by differences in socio-economic status. It seems that the key to successful integration of migrants into German society lies in the abolition

¹⁴ Marcuse, P. and van Kempen, R. (2000). *Globalizing Cities: A new spatial order?* Oxford: Blackwell Publishing.

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of inequalities with respect to education, income and use of the German language. Education seems to be the baseline here.

These findings do not disprove, however, that there might be discriminatory behaviour among both migrants and natives. Prejudices often arise due to a lack of knowledge and oversimplification. It is thus essential to foster the cooperation and understanding between population groups. Again, cooperative education could serve as a potential solution. In psychology and sociology, it is often stated that interaction between groups is the most effective way to reduce prejudices. It thus seems that existing prejudices in both directions can be partly ascribed to residential segregation of migrants and the strong divergence in attendance rates to the three school forms in Germany.

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