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Abstract: Using data from the German Socio-Economic Panel, this study examines the relationship between immigrant residential segregation and immigrants' satisfaction with the neighborhood. The estimates show that immigrants living in segregated areas are less satisfied with the neighborhood. This is consistent with the hypothesis that housing discrimination rather than self-selection plays an important role in immigrant residential segregation. Our result holds true even when controlling for other influences such as household income and quality of the dwelling. It also holds true in fixed effects estimates that account for unobserved time-invariant influences.

JEL: J15, J61, R23, R30.

Keywords: Immigrant Residential Segregation, Housing Discrimination, Self-Segregation, Neighborhood Satisfaction.

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1. Introduction

Residential segregation of immigrants has been a long-standing concern in many developed countries. This also holds true for Germany where concerns about the lack of immigrant integration and fears of "parallel societies" play an important role in the policy debate. However, our knowledge of the determinants and consequences of immigrant residential segregation is far from being complete. Systematic research on immigrant residential segregation in Germany remains in its infancy while the evidence provided by international studies appears to be inconclusive. There are two largely unrelated strands of studies emphasizing two opposing types of residential sorting. One strand of research suggests that immigrants voluntarily sort themselves into ethnic enclaves as those enclaves provide specific advantages. The enclaves may provide informal information networks on job opportunities or may enable the consumption of ethnic goods. The other strand of research suggests that discrimination plays a role in immigrant concentration. Immigrants live in segregated neighborhoods not because they prefer to live in those areas but because natives restrict immigrant location choices to specific areas.

It is an open question whether self-sorting or discrimination plays the dominant role in immigrant residential segregation. We address this question by examining the relationship between residential segregation and immigrants' satisfaction with the neighborhood. If immigrants prefer to live in segregated neighborhoods, those who are able to find housing in segregated residential areas should express higher satisfaction with the neighborhood than those who fail to find housing in such areas. By contrast, if discrimination plays the dominant role, immigrants who are more or less forced to live in segregated residential areas should express lower satisfaction with the neighborhood than

those who are able to avoid such areas. Residential segregation driven by discriminatory treatment of immigrants can contribute to lower satisfaction through increased social and economic isolation. It may hamper immigrants' assimilation to the host country and may restrict access to employment opportunities and local public services such as good schools.

Using data from the German Socio-Economic Panel (SOEP), we find that immigrants living in segregated areas are less satisfied with their neighborhood. Importantly, our data allow distinguishing between two types of highly segregated residential areas, namely areas where most people are immigrants from the same country of origin as the surveyed person and areas where most people are immigrants from other countries of origin. Both types of concentrated residential areas are associated with lower satisfaction with the neighborhood. This corroborates the interpretation that discrimination rather than self-selection plays an important role in immigrant residential segregation. If self-selection would be the driving force behind immigrant segregation, we should find that specifically neighborhoods with people from the same country of origin result in higher satisfaction. Those areas might be especially attractive as immigrants can share the same language and culture. Yet, even segregated areas with immigrants from the same country of origin are associated with lower neighborhood satisfaction. Our results hold true even when controlling for other influences such as household income and quality of the dwelling. They also hold true in fixed effects estimates that account for unobserved time-invariant influences.[1]

The rest of the paper is organized as follows. Section 2 provides the background discussion. Section 3 describes data and variables. Section 4 presents the results. Section

5 concludes.

2. Background Discussion

Previous studies have identified several potential reasons for the residential segregation of immigrants. One reason for a possible self-sorting into segregated areas is that those areas may provide informal information networks on job opportunities and, hence, may improve immigrants' labor market outcomes. Empirical evidence on this hypothesis is mixed. While some studies find a positive influence of immigrant or minority segregation on labor market outcomes (Cutler et al. 2008, Damm 2009, Edin et al. 2003), other studies obtain the opposite result (Bertrand et al. 2000, Chiswick and Miller 2005, Clark and Drinkwater 2002, Collins and Margo 2000, Cutler and Glaeser 1997). Studies directly examining the role of networks provide also no clear answer as to whether or not informal information networks of immigrants are helpful in finding jobs (Battu et al. 2011, Hellerstein et al. 2011, Munshi 2003).

Yet, even if segregated neighborhoods do not improve labor market outcomes, immigrants may prefer to live in those neighborhoods. Segregated areas may allow producing and consuming ethnic goods (Chiswick and Miller 2005). Ethnic goods are specifically related to the immigrants' culture and country of origin. If there are fixed cost and economies of scale in the production and distribution of such goods, the costs of ethnic goods are lower in areas with a large community of immigrants sharing the same culture. Furthermore, to the extent immigrants in the neighborhood share the same language, the need to assimilate to the host country is reduced (Lazear 1999). Immigrants can save on the cost of acquiring full proficiency in the host country language. This hypothesis may be supported by the negative link between residential segregation and

host language proficiency found in several international studies (Chiswick and Miller 1995, Dustmann 1997, Jirjahn and Tsertsvadze 2004). However, such link would also result if immigrants are more or less forced to live in areas that contribute to social isolation. This brings us to the role of discrimination in the housing market.

Building on theories of statistical or preference-based discrimination (Aigner and Cain 1977, Becker 1957), several approaches have been developed to explain discrimination in the housing market (Galster 1992). Landlords may restrict immigrant location choices to specific areas if they are prejudiced against immigrants or their experience indicates that immigrants are on average tenants with unstable rent payments and less diligence in maintaining the dwelling in appropriate condition. Moreover, landlords may tend to exclude immigrants from native-dominated neighborhoods if the introduction of immigrants enrages native residents.

A series of empirical examinations provides evidence of discrimination in the housing market. Studies for the U.S. show that the growth of a neighborhood's immigrant share is associated with slower housing value appreciation (Saiz and Wachter 2011) and a flight of whites once the minority share in the neighborhood exceeds a critical level (Card et al. 2008). Further evidence comes from audit studies (Ondrich et al. 1999, Page 1995, Riach and Rich 2002, Yinger 1998, 1999). Testers from two different groups are matched and trained so that they make equivalent enquiries when speaking to prospective landlords. Those studies typically find that ethnic minority groups are shown and offered fewer housing units. Finally, recent field studies use written applications (Ahmed and Hammarstedt 2008 and Ahmed et al. 2010 for Sweden, Bosch et al. 2010, 2011 for Spain, Carpursor and Loges 2006 for the U.S.). Researchers create fictitious persons with

distinctive sounding ethnic names. These persons apply for vacant rental apartments via the Internet. The results of these studies point in the same direction: Persons with foreign sounding names receive substantially fewer call backs, enquiries, and showings than persons with native sounding names.

Altogether, there are two strands of studies. One strand indicates that discrimination in the housing market can play a role in immigrant residential segregation. The other strand provides some (mixed and sometimes ambiguous) evidence that also self-selection may be at work. Little attention has been paid to the question whether self-sorting or discrimination plays the dominant role.[2] Our study addresses this question by examining the relationship between residential segregation and immigrants' satisfaction with the neighborhood. Subjective indicators of satisfaction are increasingly used in econometric studies to examine hypotheses that otherwise are difficult to test (e.g., Clark et al. 2009, Cornelissen et al. 2011, Daly et al. 2011, Heywood and Green 2011). In our context, using a subjective outcome variable allows gaining insights into the causes behind immigrant residential segregation as the influence of a segregated neighborhood on immigrants' satisfaction depends on whether self-selection or discrimination dominates.

If self-selection is the dominating factor, immigrants who are able to find housing in segregated residential areas should be happier with their neighborhood than those immigrants who fail to find housing in such areas. Immigrants may be attracted to segregated areas because these areas provide informal information networks on job opportunities, enable the consumption of ethnic goods, or reduce the need to adjust to the host country. By contrast, if discrimination is the dominating factor, immigrants who are

forced to live in segregated residential areas should be less happy with their neighborhood than those immigrants who are able to avoid segregated areas. To the extent discrimination forces immigrants into segregated areas, they cannot choose the neighborhood with the ethnic composition they prefer. Specifically, a segregated neighborhood may contribute to lower satisfaction through social exclusion and isolation. Vervoort (2011) provides Dutch evidence that immigrant residential segregation decreases the chance that immigrants receive advice and support from natives. Such social exclusion may hamper assimilation to the host country even if immigrants are willing to bear the cost of acquiring proficiency in the host country language. Moreover, residential segregation driven by discrimination may restrict immigrants' access to employment opportunities and local public services such as good schools (Burgess 2005).

3. Data, Variables and Methodology

Our empirical analysis uses data from the SOEP (Wagner et al. 1993). The SOEP is a large representative longitudinal survey of private households in Germany. The survey is administered by the German Economic Institute (DIW Berlin). Infratest Sozialforschung, a professional survey and opinion institute, conducts the interviews. Based on face-to-face interviews, a nucleus of socio-economic and demographic questions is asked annually. Different 'special' topics are sampled in specific waves. The first wave of interviews started in 1984 with the collection of data in the former West Germany.

Most interestingly in our context, immigrants are oversampled in the SOEP. The initial cohort of immigrants included persons from the former guest worker countries Italy, Greece, Spain, Turkey, and Yugoslavia. During the latter half of the 1950s the German government started actively recruiting guest workers in response to a labor

shortage prompted by very high economic growth rates. In 1973 the government stopped the recruitment of further guest workers as Germany entered a period of economic recession. In the subsequent years, the inflow of immigrants from the former guest worker countries consisted mainly of family members of those guest workers who remained in Germany (family reunification).

In our empirical analysis, we use the 1986 and the 1994 wave of the SOEP as these waves contain information on both the ethnic composition of the neighborhood and the respondent's neighborhood satisfaction. The data of the two waves are pooled for our analysis. The analysis is based on the answers of the heads of household. We focus on first generation immigrants from Italy, Greece, Spain and Turkey. Immigrants from the former Yugoslavia are excluded from the analysis because of Yugoslavia's diverse ethnic and religious groups.

Table 1 provides definitions of the variables and descriptive statistics. The dependent variable is an ordered variable indicating the respondent's satisfaction with the neighborhood. It ranges from 0 low to 10 high. The key explanatory variables are constructed using two pieces of ordered information. First, interviewees are asked if foreigners live in their neighborhood. Second, those who live in residential areas with foreign neighbors are asked if they share the same country of origin with their foreign neighbors. Combining the two pieces of information yields a classification of five different types of residential areas. The first type is a residential area where most or all of the neighbors are foreigners and most or all of them are from the same country of origin as the respondent. 11 percent of respondents live in such a neighborhood. The second type is a residential area where most or all of the neighbors are foreigners and most or all

of them are from other countries of origin as the respondent. 36 percent of respondents live in this type of neighborhood. Considering the two types of residential areas together, 47 percent of immigrants in our sample live in a highly segregated neighborhood. The third and the fourth type are residential areas with some foreign neighbors. In the third type of residential area, most or all of the foreign neighbors are from the same country of origin as the respondent. In the fourth type of residential area, most or all of the foreign neighbors are from other countries of origin as the respondent. The fifth type is the reference category. In this type of residential area, all of the neighbors are German.

As emphasized, if housing discrimination plays the dominant role in immigrant residential segregation, specifically the two types of highly segregated neighborhoods should be negatively associated with immigrants' neighborhood satisfaction. By contrast, if self-segregation plays the dominant role, there should be a positive relationship between segregation and neighborhood satisfaction. This should specifically hold true for residential areas where foreign neighbors are from the same country of origin as the respondent. Respondents living in these areas can share the same language and culture with their neighbors.

In our initial specification, we control for gender, education, and country of origin to take into account that demographic characteristics of the respondent may influence the perception of the neighborhood. Furthermore, we include a dummy variable for living in an urban area. Immigrants are often concentrated in inner-city neighborhoods (Waldorf 1990). Hence, controlling for urban areas helps disentangling the effects of segregated neighborhoods from the effects of urban neighborhoods. Variables for federal states are also included to account for regional influences.

We expand the specification by including the equivalence income of the household. Households with higher levels of income can afford to live in desirable neighborhoods. Hence, there should be a positive association between income and neighborhood satisfaction (Galster and Hesser 1981, Hipp 2009). Moreover, we account for size of dwelling, year of construction, and the respondent's general satisfaction with the dwelling. Immigrants may be concentrated in residential areas with poor quality housing. As housing satisfaction can influence neighborhood satisfaction (Parkes et al. 2002), it is important to control for the quality of dwelling in order to check whether or not a possible relationship between segregation and neighborhood satisfaction is driven by the quality of the dwelling.

In a final step, we use the panel structure of our data and run a fixed effects regression. Pooled cross-sectional regressions yield unbiased estimates of neighborhood effects if immigrants in our sample are randomly assigned to neighborhoods. Such random assignment can be imagined for both self-segregation and discrimination. In case of self-segregation, each immigrant has an exogenous probability (less than 1) of finding vacant housing in a segregated neighborhood. He or she fails to find vacant housing in such a neighborhood with the complementary probability. In case of discrimination in the housing market, each immigrant is subject to discrimination with some exogenous probability (less than 1). The immigrant can avoid housing discrimination with the complementary probability. However, if there are unobserved factors influencing both the place of residence and the satisfaction with the neighborhood, cross-sectional estimates yield biased estimates of the neighborhood effects. The fixed effects model takes into account such unobserved influences.

4. Empirical Analysis

Table 2 provides the initial ordered probit estimations on the determinants of neighborhood satisfaction. All of the specifications shown in the table include a set of basic individual controls as well as controls for urban areas and federal states. Living in an urban area is negatively associated with neighborhood satisfaction. Compared to the reference group of Spanish immigrants, persons from Turkey and Italy tend to be less happy with the neighborhood they live in.

In specification (2.1), we include a simple dummy variable indicating whether or not other foreigners live in the immigrant's neighborhood. The regression shows that immigrants living in residential areas with other foreigners are less satisfied than immigrants living in areas with solely native neighbors. In specification (2.2), we distinguish between residential areas where most or all of the neighbors are foreigners and residential areas where some of the neighbors are foreigners. Both types of residential areas are negative covariates of neighborhood satisfaction with the highly segregated area having the strongest negative effect on satisfaction. In specification (2.3), we additionally take into account whether or not the immigrant shares the same country of origin with most of his or her foreign neighbors. The regression confirms that living in a highly segregated residential area with predominantly foreign neighbors has a strong negative influence on the immigrant's neighborhood satisfaction. This applies to both highly segregated areas where most of the foreign neighbors are from the same country of origin as the immigrant and highly segregated areas where most of the foreign neighbors are from other countries of origin. These findings conform to the hypothesis that discrimination rather than self-selection plays an important role in immigrant residential

segregation. If self-segregation would be the driving force, we should find that specifically segregated areas with neighbors from the same country of origin should be associated with higher neighborhood satisfaction. These residential areas might be attractive as immigrants can share the same language and culture with their neighbors. Yet, even segregated areas with immigrants from the same country of origin are associated with lower neighborhood satisfaction. Furthermore, the regression suggests that also residential areas with some foreign neighbors who are mostly from other countries of origin play a role in neighborhood satisfaction. We will return to this result when discussing the results of the expanded specification.

Table 3 provides the estimation results with the expanded set of control variables. Specification (3.1) adds the equivalence income of the household. This variable emerges with a significantly positive coefficient. In specification (3.2), we additionally include variables for the size of dwelling and the year of construction. While the dummy for Turkish immigrants loses statistical significance, all of the additional variables take significant coefficients. The size of dwelling and living in a more recently constructed property are positively associated with neighborhood satisfaction. This indicates that neighborhood satisfaction partially reflects satisfaction with the quality of the dwelling. To examine this issue in more detail, specification (3.3) adds a variable for the immigrant's housing satisfaction. The estimation confirms that housing satisfaction is a highly significant covariate of neighborhood satisfaction. Including this variable renders the coefficients on size of dwelling and year of construction insignificant. This suggests that housing satisfaction is a very comprehensive indicator of the quality of dwelling which also captures the size of dwelling and year of construction. The inclusion of this

indicator also renders the coefficients on household income and living in an area with some foreign neighbors insignificant. Most importantly in our context, the two variables for highly segregated residential areas remain significantly negative determinants of immigrants' neighborhood satisfaction even though the absolute size of the coefficients has decreased to some extent. Altogether, the negative association between residential segregation and neighborhood satisfaction is not simply due to poor quality of dwelling in segregated areas or due to low income of immigrants who cannot afford the desired neighborhood.

Finally, we run a fixed effects model to account for unobserved time-invariant influences which might be correlated with both living in a segregated area and neighborhood satisfaction. To avoid the potential inconsistency of nonlinear fixed effects approaches we apply the classical linear fixed effects model. This implies that neighborhood satisfaction is treated as a continuous variable. Thus, we first check if treating neighborhood satisfaction as a continuous variable substantially changes the estimates. Specification (3.3) of Table 3 is estimated by using OLS. The results are shown in column (4.1) of Table 4. Comparing the estimates in (4.1) with those in (3.3) shows that OLS and the ordered probit model yield qualitatively very similar results.

Next, time-invariant variables are removed from the analysis as time-demeaning the data in the fixed effects model does not allow including such variables. Furthermore we focus on a balanced panel as we have only two waves of observations and persons for whom we have only a single time period play no role in a fixed effects analysis. Column (4.2) provides OLS estimates for comparative purposes while the fixed effects estimates are shown in column (4.3). The negative relationship between living in a highly

segregated residential area and neighborhood satisfaction also holds true when taking unobserved fixed effects into account. This applies to both segregated areas where most of the foreign neighbors are from the same country of origin as the immigrant and segregated areas where most of the foreign neighbors are from other countries. The absolute size of the negative coefficients is even higher in the fixed effects regression than in the OLS estimation. Neighborhood satisfaction decreases by approximately 1 point when the immigrant lives in a highly segregated area where most of the foreign neighbors are from the same country of origin. For an immigrant who would otherwise have the average satisfaction level of 7 this implies a 14 percent decrease in neighborhood satisfaction. Satisfaction with the neighborhood decreases by 0.76 point for an immigrant living in a highly segregated area where most of the foreign neighbors are from other countries of origin. Compared to the average satisfaction level, this implies an 11 percent decrease in neighborhood satisfaction. Altogether, the estimates show a robust negative relationship between residential segregation and neighborhood satisfaction which is not only statistically but also quantitatively significant.

5. Conclusions

While immigrant residential segregation plays an important role in the policy debate in many developed countries, its causes remain a matter of controversy. On the one hand, self-selection may drive immigrant residential segregation. On the other hand, segregation may be due to discrimination in the housing market. It is an open question whether self-selection or discrimination is the dominating factor. We address this question by examining the association between residential segregation and immigrants' satisfaction with the neighborhood in West Germany. Using data from the SOEP, we find

that immigrants living in segregated residential areas report lower neighborhood satisfaction. This finding holds true even when controlling for other factors such as household income or quality of the dwelling. It also holds true in fixed effects estimates that control for unobserved time-invariant influences.

Our result is consistent with the hypothesis that discrimination rather than self-selection plays an important role in immigrant residential segregation. This fits studies which indicate that there are serious xenophobic tendencies in the German society (Bauer et al. 2000, Cornelissen and Jirjahn 2011, Gang and Rivera-Batiz 1994, Krueger and Pischke 1997). Such tendencies may result in a vicious circle. Negative attitudes toward immigrants result in housing discrimination and, hence, ethnic residential segregation. This hampers immigrants' assimilation. The lack of immigrant assimilation in turn may reinforce negative attitudes toward immigrants. Examining in more detail this vicious circle stands as important future research.

Table 1: Variable Definitions and Descriptive Statistics (N = 1515)

Variable	Definition (Mean, Std. Dev.)
Neighborhood satisfaction	Satisfaction with neighborhood coded from 0 lowest to 10 highest (7.061, 2.158).
Housing satisfaction	Satisfaction with dwelling coded from 0 lowest to 10 highest (6.496, 2.583).
Foreigners	Dummy = 1 if other foreigners live in the immigrant's neighborhood (.8568, .3504).
Some foreigners	Dummy = 1 if some neighbors are foreigners (.3875, .4873).
High share of foreigners	Dummy = 1 if most or all neighbors are foreigners (.4693, .4992).
High share of foreigners & same country of origin	Dummy = 1 if most or all neighbors are foreigners and most or all of them are from the same country of origin as the immigrant (.1069, .3091).
High share of foreigners & other countries of origin	Dummy = 1 if most or all neighbors are foreigners and most or all of them are from other countries of origin as the immigrant (.3623, .4808).
Some foreigners & same country of origin	Dummy = 1 if some neighbors are foreigners and most or all of them are from the same country of origin as the immigrant (.0548, .2276).
Some foreigners & other countries of origin	Dummy = 1 if some neighbors are foreigners and most or all of them are from other countries of origin as the immigrant (.3327, .4713).
Year of construction 1949-1971	Dummy = 1 if the property was constructed between 1949 and 1971 (.3689, .4827).
Year of construction 1972-1980	Dummy = 1 if the property was constructed between 1972 and 1980 (.1201, .3252).
Year of construction 1981-1990	Dummy = 1 if the property was constructed between 1981 and 1990 (.0205, .1416).
Intermediate education	Dummy = 1 if a completed apprenticeship training is the immigrant's highest educational attainment (.3201, .4667).
Tertiary education	Dummy = 1 if a university degree is the immigrant's highest educational attainment (.0383, .1919).
Greece	Dummy = 1 if the immigrant is from Greece (.1960, .3971).
Italy	Dummy = 1 if the immigrant is from Italy (.2554, .4363).
Turkey	Dummy = 1 if the immigrant is from Turkey (.4238, .4943).
Female	Dummy = 1 if the immigrant is a woman (.2845, .4513).
Wave 1994	Dummy = 1 if the observation is from the year 1994 (.5815, .4935).
Equivalence income/100	Real equivalence net income of the household in Euro. Household income is divided by the weighted sum of individuals living in the household (6.46, 2.895).
Size of dwelling	Dwelling area in square meter divided by the number of people living in household (23.04, 12.99).
Urban area	Dummy = 1 if the immigrant lives in an urban area (.1439, .3511).
Federal state dummies	Dummy variables to account for the eleven federal states in West Germany.

Table 2: Determinants of Neighborhood Satisfaction; Initial Estimates

	(2.1)	(2.2)	(2.3)
Foreigners	-0.368 (4.59)***	---	---
High share of foreigners	---	-0.526 (6.05)***	---
Some foreigners	---	-0.204 (2.40)**	---
High share of foreigners & same country of origin	---	---	-0.560 (4.79)***
High share of foreigners & other countries of origin	---	---	-0.514 (5.76)***
Some foreigners & same country of origin	---	---	-0.011 (0.07)
Some foreigners & other countries of origin	---	---	-0.233 (2.71)***
Female	-0.085 (1.30)	-0.078 (1.20)	-0.081 (1.25)
Intermediate education	-0.062 (1.08)	-0.070 (1.25)	-0.068 (1.18)
Tertiary education	-0.075 (0.51)	-0.091 (0.61)	-0.094 (0.63)
Turkey	-0.253 (2.83)***	-0.207 (2.31)**	-0.219 (2.43)**
Italy	-0.225 (2.37)**	-0.223 (2.30)**	-0.226 (2.33)**
Greece	-0.133 (1.33)	-0.109 (1.08)	-0.110 (1.09)
Urban area	-0.425 (5.49)***	-0.394 (5.06)***	-0.392 (5.00)***
Wave 1994	-0.050 (0.82)	-0.060 (0.98)	-0.056 (0.91)
Federal state dummies	Yes	Yes	Yes
Number of observations	1515	1515	1515
Log likelihood	-3075.614	-3060.442	-3058.688

Method: Ordered probit. The table shows the estimated coefficients. Z-statistics are in parentheses.
*** Statistically significant at the 1% level; ** at the 5% level; * at the 10% level.

Table 3: Determinants of Neighborhood Satisfaction; Expanded Specifications

	(3.1)	(3.2)	(3.3)
High share of foreigners & same country of origin	-0.541 (4.63)***	-0.473 (4.01)***	-0.262 (2.18)**
High share of foreigners & other countries of origin	-0.496 (5.55)***	-0.444 (4.88)***	-0.290 (3.19)***
Some foreigners & same country of origin	0.004 (0.03)	0.051 (0.35)	0.135 (0.93)
Some foreigners & other countries of origin	-0.227 (2.64)***	-0.195 (2.23)**	-0.031 (0.35)
Female	-0.079 (1.21)	-0.083 (1.27)	-0.060 (0.94)
Intermediate education	-0.073 (1.27)	-0.077 (1.34)	-0.075 (1.26)
Tertiary education	-0.120 (0.80)	-0.161 (1.07)	-0.082 (0.56)
Turkey	-0.179 (1.96)*	-0.153 (1.64)	-0.023 (0.24)
Italy	-0.209 (2.14)**	-0.208 (2.12)**	-0.189 (1.96)*
Greece	-0.103 (1.03)	-0.059 (0.58)	-0.035 (0.34)
Urban area	-0.389 (4.95)***	-0.362 (4.51)***	-0.306 (3.67)***
Equivalence income/100	0.026 (2.47)***	0.018 (1.69)*	0.007 (0.65)
Size of dwelling	---	0.005 (2.36)**	-0.001 (0.66)
Year of construction 1949-1971	---	0.155 (2.54)**	0.007 (0.11)
Year of construction 1972-1980	---	0.171 (1.98)**	-0.027 (0.33)
Year of construction 1981-1990	---	0.332 (1.77)*	0.173 (0.86)
Housing satisfaction	---	---	0.234 (14.31)***
Wave 1994	-0.128 (1.85)*	-0.132 (1.90)*	-0.118 (1.72)*
Federal state dummies	Yes	Yes	Yes
Number of observations	1515	1515	1515
Log likelihood	-3055.757	-3048.713	-2848.372

Method: Ordered probit. The table shows the estimated coefficients. Z-statistics are in parentheses.
*** Statistically significant at the 1% level; ** at the 5% level; * at the 10% level.

Table 4: Determinants of Neighborhood Satisfaction; OLS and Fixed Effects Estimates

	OLS Unbalanced Panel (4.1)	OLS Balanced Panel (4.2)	Fixed Effects Balanced Panel (4.3)
High share of foreigners & same country of origin	-0.426 (2.10)**	-0.488 (1.66)*	-0.998 (1.99)**
High share of foreigners & other countries of origin	-0.446 (2.92)***	-0.554 (2.56)**	-0.755 (2.13)**
Some foreigners & same country of origin	0.205 (0.85)	-0.164 (0.49)	-0.811 (1.77)*
Some foreigners & other countries of origin	0.053 (0.37)	0.051 (0.25)	0.094 (0.33)
Female	-0.099 (0.86)	---	---
Intermediate education	-0.116 (1.10)	---	---
Tertiary education	-0.170 (0.65)	---	---
Turkey	0.004 (0.02)	---	---
Italy	-0.345 (2.11)**	---	---
Greece	-0.068 (0.39)	---	---
Equivalence income/100	0.021 (1.16)	0.042 (1.42)	0.008 (0.19)
Urban area	-0.568 (3.72)***	-0.292 (1.05)	0.050 (0.13)
Housing satisfaction	0.415 (16.19)***	0.413 (9.25)***	0.380 (6.37)***
Size of dwelling	-0.003 (0.84)	-0.004 (1.01)	0.001 (0.13)
Year of construction 1949-1971	-0.032 (0.30)	0.005 (0.03)	-0.193 (0.55)
Year of construction 1972-1980	-0.060 (0.42)	-0.119 (0.57)	0.463 (0.87)
Year of construction 1981-1990	0.237 (0.74)	0.262 (0.52)	0.520 (0.38)
Wave 1994	-0.219 (1.79)*	-0.352 (1.98)**	-0.324 (1.71)*
Constant	4.556 (12.62)***	4.364 (10.43)***	4.778 (7.85)***
Federal state dummies	Yes	No	No
Number of observations	1515	576	576
Number of persons	1227	288	288
R-squared	0.308	0.289	0.221

The table shows the estimated coefficients. T-statistics are in parentheses.
*** Statistically significant at the 1% level; ** at the 5% level; * at the 10% level.

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Endnotes

[1] An exploratory examination on residential segregation and immigrants' neighborhood satisfaction in Germany has been carried out by Drever (2004). Drever hypothesizes that a negative relationship between segregation and satisfaction may be due to low-quality housing which is more prevalent in segregated residential areas. Yet, she does not test this hypothesis by including variables for the quality of dwelling in the satisfaction regression. We show that the negative relationship holds true even when controlling for quality of dwelling and satisfaction with dwelling. Moreover, we account for unobserved influences on neighborhood satisfaction and provide evidence that negative relationship holds true for different types of segregated neighborhoods. Both issues have not been addressed by Drever.

[2] A small number of U.S. studies has tackled this issue with respect to ethnic minorities. Ihlanfeldt and Scafidi (2002) examine if self-selection plays a role in residential segregation of blacks in the US. They use survey data to investigate the link between stated black preferences for segregation and the racial composition of the neighborhood blacks live in. Ihlandfeldt and Scafidi find that self-selection plays only a minor role in explaining residential segregation of blacks. Swaroop and Krysan (2011) examine the link between segregation and neighborhood satisfaction of minority members. They find mixed evidence for blacks and a negative relationship for Latinos.