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Migration-based Ethnic Diversity and Social Trust: A Multilevel Analysis of How Country, Neighbourhood and Workplace Diversity Affects Social Trust in 22 Countries

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How does ethnic diversity affect social trust? The conflict hypothesis, which predicts a negative effect, and the contact hypothesis, which predicts a positive effect, represent the main competing answers. This article argues that the 'true' answer to the question is contingent upon the social units under study and how they interact. More specifically, it is argued that diversity will have a negative effect on social trust when focusing on social units where intergroup contacts are easy to avoid (neighbourhoods broadly defined), whereas diversity will have a positive effect when focusing on social units where intergroup contacts are hard to avoid and are supported by higher authorities (e.g., workplaces). The data substantiating the argument is from the first round of the European Social Survey, covering 30,000 individuals nested within 22 countries, and is analysed by means of multilevel linear regression modeling.

Introduction

How does ethnic diversity affect social trust?[1] Scholars cannot agree on an answer. Many early studies focusing on the United States support the conflict hypothesis, which posits that ethnic diversity decreases trust in outgroups and, in the long run, social trust (e.g., Alesina & Ferrara 2002; Leigh 2006; Putnam 2007; Stolle et al. 2008). However, since later studies outside the United States often have failed to register the corresponding negative relationships, it is not clear that these findings generalise across contexts (Gesthuizen et al. 2008; Hooghe et al. 2009; Gerritzen & Lubbers 2010; Kesler & Bloemraad 2010; Lolle & Torpe 2011; Savelkoul et al. 2011; see Van der Meer and Tolsma (2011), for an overview of the research).

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Adding to the controversy, other studies argue that ethnic diversity can have a positive effect on social trust if it results in high-quality personal contacts (e.g., Stolle et al. 2008; Stolle & Harell 2013). This contact hypothesis, which was originally developed to explain tolerance and not social trust, departs from the idea that personal meetings will correct negative stereotyping and allow for the development of inclusive group identifications (Allport 1954; Gaertner et al. 1996; Blaus 1997; Pettigrew 1998; Pettigrew & Tropp 2006; Oliver & Wong 2003). In support of the contact hypothesis, several studies show that diverse friendship networks are positively associated with social trust (e.g., Stolle et al. 2008; Stolle & Harell 2013).

In this article, we suggest that the divergent empirical findings in the field are largely a function of the social unit under study. Most studies that support the conflict hypothesis deal with diversity at the level of neighbourhoods where people are exposed to diversity but can easily avoid intergroup contacts (e.g., Van der Meer & Tolsma 2011). In contrast, studies supporting the contact hypothesis have primarily focused on the diversity of individuals' personal friendship networks. As discussed below, it is fully possible that ethnic diversity affects social trust differently depending on the social unit. The first contribution of this article is its systematic exploration of diversity effects in different types of social units while taking other social units into account.

The second contribution is to bring in an additional social unit that, surprisingly, has been overlooked by researchers: workplaces. In contrast to neighbourhoods, workplaces are social units where exposure to diversity, because of structural pressures, often results in intergroup contacts regardless of personal preferences for such contacts (e.g., Estlund 2005; Mutz & Mondak 2006). Additionally, people have less choice in where they work, which potentially makes workplaces more important than neighbourhoods for integration efforts. Workplaces are relevant social units also from a methodological perspective. Studies that depart from individuals' friendship networks suffer from the problem of reversed causality, which makes for biased causal inferences. Studying workplaces helps to overcome this problem as people cannot afford to choose their workplaces to the same degree as they can choose their friends.

The article focuses throughout on the consequences of migration-based ethnic diversity. To estimate how migration-based ethnic diversity in neighbourhoods and workplaces affects individuals' social trust across country contexts, we combine aggregate-level data about ethnic diversity at the country level, with individual-level data from the 2002 European Social Survey (ESS), which covers 30,000 respondents from 22 countries.

Confirming our expectations, results show that the conflict hypothesis better predicts the results when the social units in focus are countries and neighbourhoods, whereas the contact hypothesis better predicts diversity

effects when the social unit in focus is the workplace. Moreover, accounting for the positive workplace effect amplifies the negative country- and neighbourhood-level diversity effects. Overall, our findings support the claim that ethnic diversity affects, either positively or negatively, social trust depending on the social unit being analysed.

Theoretical Considerations

The Conflict Hypothesis

Arguments that ethnic diversity is detrimental to social trust usually rely on group threat theory for substantiation (e.g., Putnam 2007; see Van der Meer and Tolsma (2011) and Dinesen and Sonderskov (2013), for overviews of the field). Group threat theory maintains that ethnic diversity evokes group conflicts over scarce material resources (Blumer 1958; Bobo & Hutchings 1996; Quillian 1995), cultural identities (Fearon & Laitin 2000; Sides & Citrin 2007) and social status (Paxton & Mughan 2006). According to theory such conflicts give rise to feelings of outgroup fear, prejudice and mistrust if the outgroup is large enough to threaten the ingroup. Problematising theoretical expectations, Dinesen and Sonderskov (2013) point out that group threat theory also predicts an increase in ingroup solidarity and trust in ethnic conflict situations. Given that social trust is the product of both outgroup and ingroup trust, it is unclear precisely how ethnic diversity will affect social trust. Ethnic diversity will be detrimental for social trust only to the extent the negative effect on outgroup trust outweighs the positive effect on increased ingroup trust. Whether this is the case is an empirical question.

Scholars have suggested alternative causal mechanisms linking diversity and trust. In particular, it is argued that the feelings of anxiety, threat and fear that come with group conflicts are likely to reduce overall levels of contact among people, with less social control and more general distrust as a result (e.g., Van der Meer & Tolsma 2011; cf. Stephan & Stephan 1985). Furthermore, Dinesen and Sonderskov (2013) suggest yet another reason for why ethnic diversity drives down social trust. Their argument departs from two facts. The first is that people, for various reasons, tend to deem outgroup members as less trustworthy than ingroup members in interactions (cf. Stephan & Stephan 1985). The second is that people have a tendency to decide the trustworthiness of abstract others by extrapolating from their interactions with others (Glanville & Paxton 2007). Together these facts illustrate that people who are frequently exposed to outgroup members over time will develop lower levels of social trust compared to people who are principally exposed to ingroup members.

The Contact Hypothesis

The contact hypothesis suggests that diversity can be beneficial for social trust if ethnically different individuals interact on a personal basis and contacts are (i) intimate, and are taken in settings where individuals (ii) are of equal status, (iii) share a superordinate goal and (iv) the setting for contacts have broad institutional support (Allport 1954; Amir 1998; Pettigrew 1998; Pettigrew & Tropp 2006). The argument is that such intergroup contacts are likely to increase outgroup trust by helping people to learn more about, and establish positive emotional ties with, the outgroup. Moreover, there is empirical evidence that interpersonal contacts can be especially effective at reducing feelings of threat and mistrust in situations where large outgroup populations have driven up threat levels (e.g., Schneider 2008). This finding is important since it counters one of the trust-undermining mechanisms that the conflict hypothesis identifies. Quality intergroup contacts are likely to have a direct, positive effect on outgroup trust. As there are few reasons to assume such contacts to have a negative effect on ingroup trust, the overall effect on social trust reasonably should be positive.[2]

Important to our argument about the differential effects of social units, it follows from the qualifications set up by the contact hypothesis that the benefits of ethnic diversity will not be realised without high-quality contacts (e.g., Uslaner 2010). Therefore, scholars stress that diversity's benefits are best identified by studying direct contact measures such as the diversity of individuals' friendship networks, or alternatively, social units where quality intergroup contacts are hard to avoid (e.g., Oliver & Wong 2003; Marschall & Stolle 2004; Pettigrew & Tropp 2006; Stolle et al. 2008).

Different Social Units, Different Effects

Given the above, diversity affects individuals' social trust through two different causal forces. On the one hand, we have the trust-undermining forces that thrive in the absence of positive, personal interethnic contacts. On the other, we have the trust-building, personal interethnic contacts that occur in integrative social units. Following this, we expect the direction of the diversity effect to vary with the type of social unit: Individuals who spend time in diverse social units where intergroup contacts are rare are only affected by the detrimental forces associated with the conflict hypothesis, whereas people who spend time in integrative, diverse social units are also affected by the trust-enhancing mechanisms associated with the contact hypothesis.

We argue that these theoretical considerations should guide studies in the field. Specifically, research designs should map diversity effects simultaneously in social units where it is easy to avoid intergroup contacts and in

social units where intergroup contacts are hard to avoid and institutionally supported. The typical two-level design with individuals in countries, individuals in residential areas and individuals in integrative social units (primarily friendship networks) may overlook the complexities of the problem in a number of ways.

First, two-level country-comparative designs may overlook that diversity affects social trust differently at different levels within countries as the country effect represents the sum of diversity effects in all social units within a country. Diversity could have one type of effect in neighbourhoods, another in schools and a third at the 'pure' country level (i.e., the effect at the country level net of all other lower-level diversity effects). Second, studies that focus on integrative social units within countries may underestimate detrimental forces of diversity that are present at the country level net of lower-level diversity effects. Precisely, universal causal factors that affect all individuals in a country will by necessity remain undetected in single-country studies. Third, under the reasonable assumption that the country-level effect is correlated with the degree of diversity within the country, country-comparative studies yield biased estimates of diversity effects. For example, the trust-building effect of integrative social units might be stronger in countries with many immigrants, which would suppress a negative country effect.

What Does the Literature Say?

When read from the perspective outlined above, what does the literature tell us? Beginning with country-level studies, early analyses tended to support the conflict hypothesis (e.g., Delhey & Newton 2005; Anderson & Paskeviciute 2006). These findings corresponded with the results from studies that focused on the probable consequences of diminished social trust, such as slow economic growth (Knack & Keefer 1997; Alesina & Ferrara 2005). However, subsequent country-level comparisons have typically found that diversity is unrelated to social trust (Gesthuizen et al. 2008; Hooghe et al. 2009; Gerritzen & Lubbers 2010; Kesler & Bloemraad 2010; Lolle & Torpe 2011; Savelkoul et al. 2011; though see Hooghe et al. (2009), who find a significant negative correlation between the size of the foreign population and social trust in some of their models). Summarising the literature, Van der Meer and Tolsma (2011) concludes against the conflict hypothesis. However, for the present purpose it is critical to note that the typical country-level study does not consider lower-level social units. Only Savelkoul et al. (2011) take a sub-national social unit into account, and their unit (NUTS-2 EU regions) has populations that count in the millions.

Turning to studies on lower-level residential social units, such as regions and neighbourhoods, where intergroup contacts are easily avoided, a different picture emerges. The typical finding here is in support of the conflict hypothesis (Van der Meer & Tolsma 2011).[3] The support is strongest in Anglo-Saxon countries (e.g., Alesina & Ferrara 2002; Knack 2002; Putnam 2007; Stolle et al. 2008). Findings from European national contexts are more mixed, with studies both confirming (e.g., Leigh 2006; Letki 2008; Lancee & Dronkers 2009; 2010; Dinesen & Sonderskov 2013) and dismissing the conflict hypothesis (e.g., Sturgis et al. 2010; Gijsberts et al. 2011). However, even when neighbourhood diversity does not drive down social trust in general, it drives down trust in neighbours (Van der Meer & Tolsma 2011).

The few studies that focus on social units, where intergroup contacts are hard to avoid, show small positive effects on institutional and social trust (Janmaat 2009; Kokkonen et al. 2010; Dinesen 2011). However, the studies are limited to young citizens in the school context and it is uncertain whether the results generalise to adults.

Studies that focus on diverse friendship networks also support the contact hypothesis (e.g., Stolle et al. 2008; Stolle & Harell 2013; but see Uslaner 2010). However, the focus on positive contacts (friendships and friendly contacts with neighbours) and the correlational nature of the studies make causal inferences problematic. Obviously, reversed causality is a concern because the results might be driven by the fact that high-trusting individuals are more likely than low-trusting individuals to contact and make friends with ethnically different others.

In the literature it is rare to study how diversity in different social units interacts to shape social trust. The only exceptions are a few studies that show that intergroup friendships can moderate the negative effect of neighbourhood diversity on social trust (e.g., Stolle et al. 2008; Stolle & Harell 2013). Although these studies indicate that diversity at different levels interacts in shaping trust outcomes, they suffer from the same problem of reversed causality discussed above.

Reflecting on the validity of findings, we cannot dismiss the possibility that divergent results reflect real world variation in diversity effects. Conceivably, the effects of ethnic diversity are contingent upon a range of factors – for example, the type of immigration policy regime (multicultural, assimilation, segregation); the type of welfare state regime (social-democratic, liberal, conservative, familistic); and the attitudes towards people with different ethnicities (degree of openness) among the native-born and immigrant populations (Castles & Miller 2003; Cornelius et al. 2004; Parsons & Smeedings 2006; Crepaz & Damron 2009).

Our argument here is that findings in the field can be modeled as a consequence of the focal social unit. Indeed, the fact that most country-level studies fail to find a negative effect of diversity, whereas studies focusing on

regions and neighbourhoods within countries typically do so, indicates that the previous research has missed important aspects of how diversity affects social trust. Reasonably, the negative effects of lower-level diversity should aggregate into a negative effect at the country level if the lower levels are excluded from the analysis. Still, this is not what the literature finds.[4]

To get a fuller picture of diversity's impact on social trust there is a need for studies that look simultaneously at social units where intergroup contacts can be easily avoided, and at integrative social units where intergroup contacts are hard to avoid (and where the problem of reversed causality is kept to a minimum). We argue here for the importance of one particular social unit of the latter type: workplaces. We will discuss why workplaces are more likely than neighbourhoods to demonstrate diversity's potential positive effect on social trust, and how their inclusion in the analysis can alter the way we perceive the relationship between diversity and social trust in other social units.

Expectations

By definition, the country level captures all intergroup exposure and contacts that take place in lower-level social units. However, a pure country-level effect of diversity still remains when controlling for the most important social units in which exposure and contacts take place. This effect is likely to capture a media exposure effect that triggers group threat mechanisms as the segregated nature of many countries often does not provide for extensive personal contact between immigrants and natives. Thus, the conflict hypothesis is likely to be better than the contact hypothesis at predicting the pure country-level diversity effect.

Neighbourhoods are smaller than countries and the 'risk' of chance encounters with immigrants is therefore higher, which is why it is likely that neighbourhood diversity will lead to a direct exposure effect that triggers group threat mechanisms. As neighbourhoods allow people to avoid more extensive forms of intergroup contact, it is not likely that these group threat mechanisms will be countered to any greater extent by intimate intergroup contacts. In addition, there are no authorities that substantially encourage intergroup meetings in neighbourhoods. Thus, it is likely that the conflict hypothesis is better at predicting neighbourhood diversity effects.

In contrast, workplaces provide an institutionalised opportunity for ethnically different individuals to interact personally. Of course, diverse workplaces expose people directly to outgroup members, and might thus trigger group threat mechanisms. However, there is also strong pressure on individuals to have contact with colleagues they are prejudiced against (Mutz & Mondak 2006). First, individuals are not free to choose work tasks and colleagues but are typically assigned to positions where they have to

interact with colleagues who they have not chosen themselves. Second, and related, employees must cooperate with their assigned colleagues to achieve their work tasks (e.g., Zetka 1992). It could be added that they do so under pressure from managers, owners and co-workers because workplace efficiency is conditioned on colleagues being able to cooperate successfully with each other. Third, the cost of opting out of assigned positions and refusing to cooperate with colleagues is high in workplaces.

There is also reason to assume that the workplace contacts that the constraints give rise to will have positive outcomes for trust in the outgroup. As noted above, workplace colleagues share super-ordinate goals (to fulfill their interdependent work tasks; e.g., Estlund 2005), and workplace contacts have broad institutional support (the backing of managers, owners and the law). Moreover, given the time spent at workplaces, contacts are frequently personal and intimate. In other words, workplace contacts fulfill three of the four conditions set up by the contact hypothesis. Equal status is the only condition that might not be fulfilled in workplaces. However, it has been shown that integration can reduce negative outgroup sentiments even in very hierarchical organisations (Pettigrew & Tropp 2006). Workplace colleagues also tend to be more similar in status and behaviour than neighbours, which may be why the equal status condition is probably more often fulfilled in workplaces than in neighbourhoods. Thus, it is likely that the positive contact effects will dwarf any initial group threat effects with time.

There is also another reason for focusing on workplaces: the fact that people cannot afford to choose their workplaces to the same extent as they can choose neighbourhoods and friends (Estlund 2005; Mutz & Mondak 2006). Selection effects related to trust in outgroups are therefore less likely to affect studies concentrating on workplaces than studies focusing on other social units.

Table 1 lists predictions from the respective hypotheses with a multilevel design. Importantly, if both hypotheses are relevant for predicting trust outcomes we should observe a negative pure country effect, a negative neighbourhood effect and a positive workplace effect. We also remain open to interactions between the different social units under study. In particular, we expect workplace diversity to moderate the hypothesised negative effects of country-level diversity and neighbourhood diversity as previous research has shown that positive personal contacts can moderate the negative effect of neighbourhood diversity on social trust (e.g., Stolle et al. 2008).

Data, Measurements and Statistical Model

Our approach is to explore comparative data that relies on standardised indicators and that cover migration-based ethnic diversity at the levels of

Table 1. Predictions of the Effects of Ethnic Diversity on Social Trust in Different Social Units

	Outgroup contacts	Conditions of the contact hypothesis	Resulting diversity	Diversity effect
Countries*	Easy to avoid	Mostly not fulfilled	Exposure, but little positive contact	Negative effect
Neighbourhoods	Easy to avoid	Mostly not fulfilled	Exposure, but little positive contact	Negative effect
Workplaces	Hard to avoid	Three out of four conditions often fulfilled	Exposure and plenty of positive contact	Positive effect

Note: *Net of neighbourhood and workplace diversity effects.

countries, neighbourhoods and workplaces. The first round of the ESS, which contains information on over 30,000 respondents from 21 European countries and Israel is one of few datasets that match these requirements.[5]

The ESS probed respondents about the (migration-based) ethnic makeup of their neighbourhood and workplace, and their friendship network. Although this self-reported data is not as reliable as register-based data, it constitutes a rich resource. The questions on self-reported neighbourhood diversity have been used extensively in research regarding how diversity and contact affect prejudice and perceived group threat (e.g., Schneider 2008; Schleuter & Wagner 2008). While the dataset has been used for exploring the effect of diversity on social trust, few previous studies have used the questions on neighbourhood and workplace diversity.

We base our measure of workplace diversity on a question that asks respondents whether they have 'no', 'a few' or 'several' colleagues who are immigrants. Previous research has shown that respondents with strong anti-immigrant attitudes tend to overestimate the number of immigrants around them (Sides & Citrin 2007). Although it is unlikely that this tendency will affect whether respondents say that they have or do not have immigrant colleagues, it could affect whether they say that they have 'a few' or 'several' colleagues. Therefore, we have recoded the answers into a dummy variable that distinguishes between those respondents who have (coded 1) and those who do not have (coded 0) immigrant colleagues (see Schneider (2008) for a similar approach). To distinguish between working people who do not have immigrant colleagues and people who do not work (and therefore do not have immigrant colleagues) we also introduce a variable that represents people who do not work (coded 1 for people who do not work, and 0 for people who work). In all models the base category thus consists of people who work but who do not have immigrant colleagues. As a robustness check we have re-run our models on a sample that only consists of the working population. The results from these models (which are presented in Appendix Table 1) confirm the findings presented in the main text.

To measure neighbourhood diversity we use a similar question, which asks the respondents how many immigrants there are in the area where they are currently living. Three answers were possible: 'almost nobody', 'some' or 'many'. Following the logic outlined above, we have recoded the answers into a dummy variable that distinguishes respondents who have (coded 1) and do not have (coded 0) immigrant neighbours.

Country diversity is measured through the use of Organisation of Economic Cooperation and Development (OECD) and United Nations Population Division (UNPD) information on the stock of foreign-born populations living in respective country (measured as a percentage of the total population) in the year 2002 (OECD 2010; UNPD 2011).[6] Given that we control for workplace- and neighbourhood-level diversity effects, the

resulting variable measures the country diversity effect net of these lower-level diversity effects. Of course, people can experience diversity outside workplaces and neighbourhoods, which is why our variable does not perfectly measure the pure country-level effect. However, given how central workplaces and neighbourhoods are to people's lives, we deem that it is likely that our variable approximates the pure country diversity effect.

While crude, our measurements of migration-based ethnic diversity are applicable across all countries in the study (we have no reason to assume that the respondents' perceptions of workplaces and neighbourhoods should differ across countries) and they illustrate a potentially important source of ethnic divide. Looking at the literature, the prime alternative indicator is probably 'visible minority' (e.g., Sturgis et al. 2010). However, what defines such a minority varies among countries, and the 'visible minority' category includes a large number of native-born individuals who share experiences with their fellow native-born residents. Furthermore, alternative indicators of ethnic diversity are simply not available in the ESS data.

Clearly, the precisions of our diversity measures vary between the social units. While country-level diversity is measured by the percentages of residing immigrants, we categorise lower-level social units by means of dummy variables. This difference should be kept in mind when interpreting the results. Though we would ideally want to have more precise and objective measurements for workplaces and neighbourhoods, we believe that only the magnitude, and not the direction, of effects would differ if such information was available. Considering this, our primary interest is with the direction, and not the magnitude, of effects. Table 2 presents summary statistics for each country's diversity measures, whereas Table 3 presents a correlation matrix for the diversity measures and social trust.

Table 3 shows that the size of the immigrant population is more highly correlated with workplace diversity than with neighbourhood diversity ($r = 0.47$ and 0.21, respectively – increasing to $r = 0.68$ and 0.38, respectively, if the outliers Israel and Luxembourg are excluded), which supports our argument that people are less free to choose where they work than where they live (assuming most people want to live and work among co-ethnics). The correlations are, however, not strong enough to warrant concerns of multicollinearity (see Appendix Table 2 for variance inflation factor statistics). As noted in Table 3, Israel and Luxembourg are extreme outliers when it comes to the relationship between the size of the immigrant population and our other diversity measurements. To test whether our results are affected by this fact we have re-run all models without the two countries (see the models in Appendix Table 3). The results from this robustness check are largely similar to those presented in the main text.

Table 2. Social Trust and Migration-based Ethnic Diversity

Country	Social trust	Immigrants in country	Immigrant neighbours	Immigrant colleagues
Austria	5.3	14.1	0.55	0.39
Belgium	5.0	11.1	0.33	0.34
Czech Republic	4.4	4.6	0.55	0.22
Denmark	6.9	6.2	0.35	0.40
Finland	6.3	2.9	0.32	0.18
France	4.9	7.6	0.66	0.37
Germany	5.1	12.8	0.56	0.31
Greece	3.4	10.3	0.82	0.11
Hungary	4.3	3	0.34	0.23
Ireland	5.8	10	0.40	0.31
Italy	4.4	3.9	0.63	0.18
Israel	4.6	32	0.49	0.33
Luxembourg	5.2	32.9	0.47	0.34
Netherlands	5.8	10.6	0.42	0.38
Norway	6.5	7.4	0.47	0.40
Poland	3.8	2	0.16	0.06
Portugal	4.3	6.7	0.51	0.26
Slovenia	4.3	8.9	0.46	0.34
Spain	4.9	8	0.59	0.20
Sweden	6.3	11.8	0.33	0.42
Switzerland	5.8	22.8	0.64	0.49
United Kingdom	5.4	8.4	0.46	0.28
Combined sample	5.1	11.3	0.47	0.29

Table 3. Correlations between Diversity Measures and Social Trust (Pearson's r)

	Social trust	Immigrants	Immigrant neighbours	Immigrant colleagues
Individual level				
Social trust	1.00			
Immigrants	0.03	1.00		
Immigrant neighbours	–0.06	0.09	1.00	
Immigrant colleagues	0.10	0.12	0.10	1.00
Country level				
Social trust	1.00			
Immigrants	0.05 (0.23)	1.00		
Immigrant neighbours	–0.32 (–0.32)	0.21 (0.38)	1.00	
Immigrant colleagues	0.63 (0.65)	0.47 (0.68)	0.02 (0.02)	1.00

Note: Figures within parentheses represents the correlation coefficients if Israel and Luxembourg are excluded from the sample.

Using three survey items that are frequently used in the literature, our measure of 'social trust' is the respondents' average response across three questions:

1. 'Would you say that most people can be trusted, or that you can't be too careful in dealing with people?'
2. 'Do you think that most people would try to take advantage of you if they got a chance, or would they try to be fair?'
3. 'Would you say that most of the time people try to be helpful, or that they are mostly looking out for themselves?'

Responses were recorded on a 0–10 scale with high scores indicating high trust. The 143 respondents who failed to answer two or more of these questions were excluded from the analysis. The three items clearly form one dimension according to a confirmatory factor analysis. Alpha scores are satisfactory (0.77 for the overall sample and range from 0.63 to 0.80 for individual countries). The resulting index ranges from 0 to 10 with a mean of 5.25, a standard deviation of 1.97 and a fairly normal distribution.

At the individual level we control for age (as measured in years), sex (0 = male, 1 = female), education (measured in years), self-reported religiousness (on a scale of 0–10, where 0 is not religious and 10 is very religious) and ideological left-right self-placement (on a scale of 0–10, where 0 is left and 10 is right). Table 4 presents summary information on the control variables.

At the country level, we use gross domestic product (GDP) per capita measured in US$1,000s (World Bank, various years) to control for the fact that economic resources potentially affect trust (Knack & Keefer 1997;

Table 4. Summation of Variables

	Observations	Mean	Standard deviation	Minimum	Maximum
Trust index	30,832	5.25	1.97	0	10
Immigrants	30,832	10.11	6.73	2	32.9
Immigrant neighbours	30,832	0.47	–	0	1
Immigrant colleagues	30,832	0.31	–	0	1
Left-right scale	30,832	5.06	2.15	0	10
Education (in years)	30,832	12.0	3.9	0	40
Age	30,832	46.5	17.9	14	110
Religiousness	30,832	4.85	2.91	0	10
Woman	30,832	0.51	–	0	1
Partner	30,832	0.63	–	0	1
Working (no immigrant colleagues)	30,832	0.42	–	0	1
Not working	30,832	0.27	–	0	1
Housework	30,832	0.12	–	0	1
Other	30,832	0.02	–	0	1
GDP per capita (in US$1,000)	30,832	24.5	6.6	9.5	44
Gini coefficient	30,832	30.6	4.2	23	39
Transparency International's corruption index	30,832	7.3	1.8	3.7	9.7

Delhey & Newton 2005; but see Knack 2002). To control for the potentially detrimental consequences that inequality may have on social trust (Knack & Keefer 1997; Uslaner 2002; Uslaner & Brown 2005) we include a Gini coefficient (World Bank, various years). Finally, we have included Transparency International's corruption index in our models to account for the potential negative effect that malfunctioning institutions may have on social trust (e.g., Lolle & Torpe 2011; Quality of Government Institute, various years). Higher scores on the index indicate lower corruption.

To check if our results are robust for the inclusion and exclusion of the various individual- and country-level variables we have re-run all models excluding all control variables one at a time. Our main results remain similar throughout the robustness checks (which are presented in Appendix Tables 4–12).

As our main interest is how people's social trust levels are affected by living with different ethnicities, and we only have measurements of migration-based diversity, we exclude all first- and second-generation immigrants from our models.

To account for the nested data structure, we use multilevel linear regression modeling for our estimates.[7] However, we are only able to account for the nesting of individuals within countries. All information regarding the neighbourhood and workplace levels is self-reported and we cannot know whether individuals come from the same or different neighbourhoods and workplaces. Formally, our statistical models estimate how trusting, *Y*, individuals, *I*, nested within countries, *j*, are, given a vector of individual-level variables, *Xij*, and a vector of country-level variables, *Zj*, and an intercept, *β0*. The models also include a random intercept, *U0j*, which represents country-specific levels of trust, as well as a random coefficient, *Vj*, which allows the effect of ethnic diversity in the workplace to vary between countries.[8] The models are structured as follows:

$$Y_{ij} = \beta_0 + \beta_1 X_{ij} + \beta_2 Z_j + \upsilon_{0j} + \nu_j \quad (1)$$

Empirical Findings

We start by replicating previous studies on the relationship between migration-based ethnic diversity and social trust by running a model that only contains information about country diversity. Model 1 in Table 5, which presents the results, shows that the percentage of immigrants is negatively associated with social trust at the 0.05 level. Nevertheless, in this two-level model (individuals nested in countries) the country-diversity effect represents the product of all types of social units within a respective country. To examine the full range of effects, we introduce our measurements of ethnic diversity in neighbourhoods and workplaces in a step-wise manner.

Table 5. Migration-driven Ethnic Diversity and Social Trust

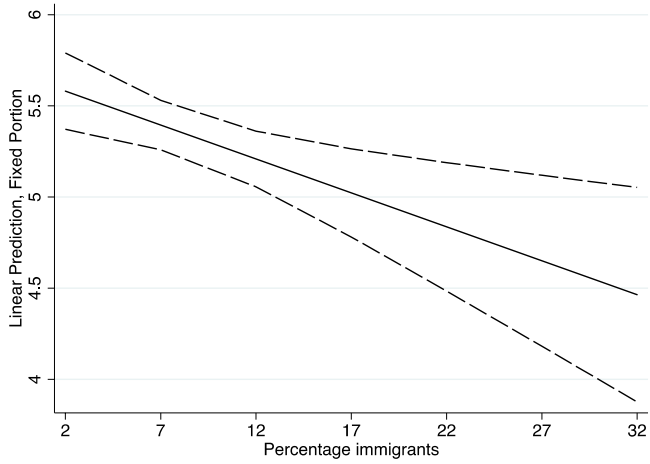
	Model 1	Model 2	Model 3	Model 4
Main variables				
Immigrants	–0.03 (0.01)*	–0.03 (0.01)*	–0.04 (0.01)***	–0.04 (0.01)***
No immigrant neighbours (ref.)				
Immigrant neighbours		–0.08 (0.02)***	–0.09 (0.02)***	–0.12 (0.03)***
No immigrant colleagues (ref.)				
Immigrant colleagues			0.13 (0.04)**	0.07 (0.05)
Not working			0.09 (0.03)***	0.09 (0.03)***
Colleagues x neighbours				0.10 (0.04)*
Individual-level control variables				
Left-right scale	–0.00 (0.00)	–0.00 (0.00)	–0.00 (0.00)	–0.00 (0.00)
Education in years	0.06 (0.00)***	0.06 (0.00)***	0.06 (0.00)***	0.06 (0.00)***
Age	0.00 (0.00)***	0.00 (0.00)***	0.00 (0.00)***	0.00 (0.00)***
Religiousness	0.03 (0.00)***	0.03 (0.00)***	0.03 (0.00)***	0.03 (0.00)***
Man (ref.)				
Woman	0.05 (0.02)**	0.05 (0.02)**	0.05 (0.02)**	0.05 (0.02)**
Has no partner (ref.)				
Has partner	0.02 (0.02)	0.01 (0.02)	0.02 (0.02)	0.03 (0.02)
Country-level control variables				
GDP per capita (in US$1,000)	0.02 (0.01)	0.02 (0.01)	0.05 (0.01)***	0.05 (0.01)***
Gini coefficient	–0.04 (0.02)*	–0.04 (0.02)*	–0.04 (0.02)*	–0.04 (0.02)*
Transparency	0.38 (0.05)***	0.37 (0.05)***	0.35 (0.05)***	0.34 (0.05)***
Constant	2.43 (0.66)***	2.47 (0.66)***	2.00 (0.64)**	2.00 (0.64)**
Random part				
(sd)Country intercepts	0.30 (0.05)***	0.30 (0.05)***	0.31 (0.06)***	0.31 (0.06)***
(sd)Colleagues			0.15 (0.04)***	0.15 (0.04)***
(sd)Residual	1.73 (0.01)***	1.73 (0.01)***	1.73 (0.01)	1.73 (0.01)***
Model information				
Countries	22	22	22	22
Individuals	30832	30832	30832	30832
Log-likelihood	–60669.19	–60661.92	–60640.87	–60638.03
AIC	121364.4	121351.8	121317.7	121314.1
Change in AIC		–12.6	–34.1	–3.6
Likelihood-ratio test that the model fits the data better than the previous model		LR Chi^2: 56.65 Prob. 0.00	LR Chi^2: 42.11 Prob. 0.00	LR Chi^2: 5.68 Prob. 0.02

Notes: Standard errors in parentheses. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

The introduction of the dummy for neighbourhood diversity in model 2 does not affect the country-level effect, which remains negative. However, neighbourhood diversity is negatively and significantly associated with trust levels. Thus, as expected, migration-based ethnic diversity in neighbourhoods seems to undermine social trust among natives.

In model 3 we introduce our dummy measuring workplace diversity and allow for the effect of it to vary across countries. Confirming our expectations, model 3 performs differently from previous models. As predicted, the dummy for workplace diversity is significantly and positively associated

Figure 1. Country-level Migration-driven Ethnic Diversity and Social Trust



Notes: The graph builds on model 3 in Table 5, and shows the predicted level of social trust and its 95 percent confidence intervals for different percentages of immigrants when all other variables are kept at the sample mean.

with trust levels. The inclusion of workplaces does not considerably change the negative effect of neighbourhood diversity. However, when accounting for the trust-building effect of workplace diversity, the negative effect of country diversity increases both in magnitude and significance (it is now significant at the 0.01 level).

Figure 1 illustrates this negative country-level effect in terms of predicted levels of trust: The difference between a country with 2 percent immigrants and a country with 33 percent immigrants is about 1.2 points on the 11-point scale. In other words, controlling for diversity in neighbourhoods and in workplaces, each additional percentage point of immigrants in a country reduces the level of trust by about 0.04 points.

Two observations follow from these findings. First, it seems correct that diversity has a positive effect in workplaces. Thus, the expectation about a complex causal pattern in which diversity effects vary across social units is warranted. Second, it seems as if the positive effect of diversity in lower-level social units hides part of the negative effect of larger social unit diversity. These results indicate that previous studies have underestimated the negative 'pure' effect of country diversity on social trust when they have not controlled for the positive effect of workplace diversity on social trust.

To investigate further how different social units interact in shaping social trust we tested the interactions of our diversity measurements. Only the interaction between neighbourhood and workplace diversity, which is shown

Table 6. Marginal Effect of Having Immigrant Colleagues and Neighbours

	People who do not have immigrant neighbours	People who have immigrant neighbours
Marginal effect of having immigrant colleagues	0.07 (0.05)	0.18 (0.05)***
	People who do not have immigrant colleagues	People who have immigrant colleagues
Marginal effect of having immigrant neighbours	–0.12 (0.03)***	–0.02 (0.04)

Notes: Standard errors in parentheses. ***$p < 0.001$.

in model 4, was found to be significant and to improve model fit. To develop the substantial meaning of this finding, the conditional marginal effects are shown in Table 6, from which we learn that neighbourhood diversity affects social trust negatively (by 0.12 points) only among those natives who do not have immigrant colleagues. Natives who work at diverse workplaces are not significantly affected by living in diverse neighbourhoods. Mirroring this, workplace diversity has a significant positive effect on social trust only among natives who live in diverse neighbourhoods.

The most reasonable interpretation of these findings is that neighbourhood diversity has a negative effect on social trust but meeting immigrants at work effectively counters that effect. Our expectation about interdependent diversity effects thus seems warranted, although interdependence is limited to neighbourhood and workplace diversity.

Selection Effects and Omitted Variable Bias

Given that we use cross-sectional data, it is reasonable to ask whether selection effects drive our results. It is reasonable to assume that high-trusting and tolerant people are more prone than low-trusting and prejudiced people to select themselves into diverse neighbourhoods and workplaces. To some extent our individual-level variables control for such tendencies. However, the ESS contains a direct question about which level of ethnic diversity respondents' would prefer in their neighbourhood, which has been used by previous studies to control directly for selection effects relating to outgroup attitudes (e.g., Dinesen & Sonderskov 2013). When we re-run our models with this question (see Appendix Table 15) the negative effect of neighbourhood diversity almost doubles (from –0.09 to –0.17), whereas the positive effect of workplace diversity is reduced somewhat (from 0.13 to 0.10). The changes in effect sizes strongly suggest that selection mechanisms are at work and are especially problematic at the neighbourhood level, where

they suppress the negative relationship between diversity and social trust. However, controlling for them does not change our main conclusions.

In view of the changing results, it is warranted to ask whether there are other omitted variables that may bias the results. We cannot rule out this possibility. Immigrants often cluster into neighbourhoods with socioeconomic problems. Assuming that the number of immigrants does not cause the problems, it is fully possible that controls for the socioeconomic composition of neighbourhoods would somewhat reduce the negative effect of neighbourhood diversity. Also, immigrants often cluster into low-paid and unskilled sectors of the labour market, which is why it is possible that controls for workplace characteristics could change the results. However, in this case, the omitted variable bias is likely to go in the opposite direction and suppress the positive effect of workplace diversity on social trust as people who work in unskilled and low-paid jobs likely are less trusting than those working in skilled and high-paid jobs. Together these potentially omitted variable biases indicate that diversity's effect on social trust may be somewhat more positive than our results suggest.

Concluding Discussion

We have argued in this article that ethnic diversity affects social trust differently depending on the social units under study and how they interact. To substantiate the argument, we have highlighted a social unit that hitherto has been overlooked by researchers concerned with diversity's effect on social trust: workplaces. In contrast to neighbourhoods, workplaces are social units where exposure to diversity, because of structural pressures, often results in intergroup contacts regardless of personal preferences for such contacts (e.g., Estlund 2005; Mutz & Mondak 2006). Additionally, workplaces fulfill most conditions that the contact hypothesis sets up.

Adding workplaces to the traditional research designs helps generate two important findings. First, both the conflict and contact hypotheses are relevant for predicting the impact of migration-based ethnic diversity on social trust, as the relationship between diversity and trust varies with the social unit under study. The conflict hypothesis better predicts diversity effects in social units where the outgroup can be avoided and few of the conditions established by the contact hypothesis are fulfilled (i.e., neighbourhoods). The contact hypothesis is more relevant for predicting diversity effects in social units where outgroup contacts are hard to avoid and where contacts are intimate and have the support of higher authorities (i.e., workplaces). We argue that these complex processes will likely be overlooked by traditional two-level designs (e.g., individuals nested within countries or individuals nested within neighbourhoods). Second, the mechanisms that the contact and conflict hypotheses suggest are interacting in shaping social

trust outcomes. This fact is illustrated by the interdependence between the neighbourhood and workplace diversity effects. It is not possible to fully understand how one type of diversity affects social trust without understanding how the other does so. Studies that fail to appreciate this also fail to fully identify the multifaceted relationship between migration-based ethnic diversity and social trust.

On a practical note, our results provide policy makers with a means to counter part of the negative effect of diversity on social trust: integrated workplaces. Whereas it is hard to come up with policy measures that intervene directly in friendship decisions, policy makers can affect workplace diversity via anti-discrimination laws and other labour market policies. Our findings suggest it is likely that such policies, if successful, will counter the negative effects of diversity, especially in diverse neighbourhoods.

While we believe that our findings are concordant with prior research in the field, there is need for replication. The data provided by the first round of the ESS is now a decade old. During this decade, ethnic diversity has increased in most nation-states. It would be interesting to see whether this change towards a more diverse Europe has been followed by a drop in social trust levels among the native-born population. However, our study has shown that in order to identify such an effect, we would need to track the corresponding changes that have taken place in the ethnic makeup of integrative social units. Unfortunately, this is currently impossible since the ESS has yet to repeat the questions regarding neighbourhood and workplace diversity. Thus, such a study has to wait for the future.

NOTES

1. By 'social trust' we mean the expectation that the generalised, abstract other can be trusted.
2. There is one possible exception to this conclusion. Pettigrew (1998) notes that part of the contact effect may depend on deprovincialisation, which has been shown to lead to a reappraisal and distancing from the ingroup (e.g., Verkuyten et al. 2010). This makes it possible that outgroup contact may reduce ingroup trust in some cases. However, Pettigrew and Tropp (2011) note that other mechanisms that are unrelated to ingroup trust, are more important for explaining the contact effect and explain why it is unlikely that any negative effect is substantially strong.
3. At least this is the case in regions and neighbourhoods. In contrast, Van der Meer and Tolsma (2011) note that there is little support for the conflict hypothesis when the social unit in focus is municipalities.
4. We admit that there could be other methodological explanations for the fact that studies fail to find a negative effect at the country level. For example, there are fewer observations, reduced variation and often increased random measurement error at the country level as compared to the neighbourhood level.
5. In total, there are slightly more than 42,000 respondents in the dataset. Of these, we drop about 5,500 respondents because they are immigrants or have immigrant parents. This leaves about 36,500 respondents. The fact that we have almost 5,700 fewer respondents in our main models is due to missing values on many variables.
6. Figures are for the year 2002, from OECD (2010), for all countries except Greece, Slovenia, Italy and Israel. The figures for Greece are from 2001. OECD (2010) does not

provide figures for Slovenia's, Italy's or Israel's immigration levels, which is why we have used their figures, for the year 2000, from the UNPD (2011).

7. We have used the *xtmixed* command in Stata12/SE for estimations. See Appendix Table 13 for Hausman tests that confirm that random effects models are to be preferred over fixed effects models. We use unweighted data. Results are substantially similar if we use the design weights provided by the ESS (see appendix 16).
8. See Appendix Table 14 for a likelihood-ratio test which demonstrates that the introduction of a random slope increases model fit.

Appendix Table 1. Working Population Only

	Model 1		Model 2		Model 3		Model 4	
Main variables								
Immigrants	–0.03	(0.01)*	–0.03	(0.01)*	–0.04	(0.01)***	–0.04	(0.01)***
No immigrant neighbours (ref.)								
Immigrant neighbours			–0.07	(0.02)**	–0.08	(0.02)***	–0.13	(0.03)***
No immigrant colleagues (ref.)								
Immigrant colleagues					0.14	(0.05)**	0.08	(0.06)
Colleagues × neighbours							0.11	(0.05)*
Individual-level control variables								
Left-right scale	–0.01	(0.01)	–0.01	(0.01)	–0.01	(0.01)	–0.01	(0.01)
Education in years	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***
Age	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
Religiousness	0.04	(0.00)***	0.04	(0.00)***	0.04	(0.00)***	0.04	(0.00)***
Man (ref.)								
Woman	0.06	(0.02)*	0.06	(0.02)*	0.06	(0.02)**	0.06	(0.02)**
Has no partner (ref.)								
Has partner	0.04	(0.02)	0.04	(0.02)	0.04	(0.02)	0.04	(0.02)
Country-level control variables								
GDP per capita (in US$1000)	0.02	(0.01)	0.02	(0.01)	0.04	(0.01)**	0.04	(0.01)**
Gini coefficient	–0.04	(0.02)*	–0.04	(0.02)*	–0.04	(0.02)**	–0.04	(0.02)**
Transparency	0.38	(0.05)***	0.37	(0.05)***	0.35	(0.05)***	0.35	(0.05)***
Constant	2.50	(0.67)***	2.54	(0.67)***	2.35	(0.64)***	2.37	(0.64)***
Random part								
(sd)Country intercepts	0.30	(0.05)***	0.30	(0.05)***	0.29	(0.05)***	0.29	(0.05)***
(sd)Colleagues					0.20	(0.04)***	0.21	(0.04)***
(sd)Residual	1.70	(0.01)***	1.70	(0.01)***	1.70	(0.01)***	1.70	(0.01)***
Model information								
Countries	22		22		22		22	
Individuals	22,591		22,591		22,591		22,591	
Log-likelihood	–44146.37		–44142.03		–44116.08		–44113.32	
AIC	88318.75		88312.06		88266.16		88262.64	
Change in AIC			–6.69		–45.9		–3.52	
Likelihood-ratio test that model is better than previous model			LR Chi^2: 8.69 Prob. 0.00		LR Chi^2: 51.90 Prob. 0.00		LR Chi^2: 5.51 Prob. 0.02	

Notes: Standard errors in parentheses. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Appendix Table 2. Variance Inflation Factors

	Model 1	Model 2	Model 3	Model 4
Main variables				
Immigrants	1.64	1.64	1.65	1.65
No immigrant neighbours (ref.)				
Immigrant neighbours		1.04	1.05	1.51
No immigrant colleagues (ref.)				
Immigrant colleagues			1.30	2.37
Not working			1.33	1.33
Colleagues × neighbours				2.69
Individual-level control variables				
Left-right scale	1.05	1.05	1.05	1.05
Education in years	1.16	1.16	1.19	1.19
Age	1.19	1.19	1.28	1.28
Religiousness	1.17	1.17	1.17	1.17
Man (ref.)				
Woman	1.03	1.03	1.04	1.04
Has no partner (ref.)				
Has partner	1.04	1.04	1.07	1.07
Country-level control variables				
GDP per capita (in US$1000)	2.72	2.75	2.75	2.75
Gini coefficient	1.40	1.40	1.40	1.40
Transparency	2.28	2.32	2.33	2.33
Mean VIF	1.47	1.44	1.43	1.63

Appendix Table 3. Models without Israel and Luxembourg

	Model 1		Model 2		Model 3		Model 4	
Main variables								
Immigrants	–0.03	(0.02)	–0.03	(0.02)	–0.04	(0.02)*	–0.04	(0.02)*
No immigrant neighbours (ref.)								
Immigrant neighbours			–0.07	(0.02)***	–0.08	(0.02)***	–0.12	(0.03)***
No immigrant colleagues (ref.)								
Immigrant colleagues					0.09	(0.03)**	0.03	(0.04)
Not working					0.06	(0.03)*	0.06	(0.03)*
Colleagues × neighbours							0.13	(0.04)**
Individual-level control variables								
Left-right scale	–0.01	(0.00)	–0.01	(0.00)	–0.01	(0.00)	–0.01	(0.00)
Education in years	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***
Age	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
Religiousness	0.04	(0.00)***	0.04	(0.00)***	0.04	(0.00)***	0.04	(0.00)***
Man (ref.)								
Woman	0.05	(0.02)**	0.05	(0.02)**	0.05	(0.02)**	0.05	(0.02)**
Has no partner (ref.)								
Has partner	0.02	(0.02)	0.01	(0.02)	0.02	(0.02)	0.02	(0.02)
Country-level control variables								
GDP per capita (in US$1000)	0.05	(0.02)**	0.05	(0.02)**	0.07	(0.02)***	0.07	(0.02)***
Gini coefficient	–0.05	(0.02)**	–0.05	(0.02)**	–0.05	(0.01)**	–0.04	(0.01)**
Transparency	0.31	(0.05)***	0.31	(0.05)***	0.29	(0.05)***	0.29	(0.05)***
Constant	2.54	(0.59)***	2.57	(0.59)***	2.15	(0.57)***	2.10	(0.56)***
Random part								
(sd)Country intercepts	0.27	(0.04)***	0.26	(0.04)***	0.26	(0.05)***	0.27	(0.05)***
(sd)Colleagues					0.09	(0.04)*	0.09	(0.04)*
(sd)Residual	1.72	(0.01)***	1.72	(0.01)***	1.72	(0.01)***	1.72	(0.01)***
Model information								
Countries	22		22		22		22	
Individuals	29,337		29,337		29,337		29,337	
Log-likelihood	–57558.01		–57552.14		–57543.37		–57539.36	
AIC	115142		115132.3		115122.7		115116.7	
Change in AIC			–9.7		–9.6		–6	
Likelihood-ratio test that model is better than previous model			LR Chi^2: 11.73 Prob. 0.00		LR Chi^2: 17.55 Prob. 0.00		LR Chi^2: 8.02 Prob. 0.00	

Notes: Standard errors in parentheses. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Appendix Table 4. Models without GDP Per Capita

	Model 1		Model 2		Model 3		Model 4	
Main variables								
Immigrants	–0.02	(0.01)*	–0.02	(0.01)*	–0.02	(0.01)*	–0.02	(0.01)*
No immigrant neighbours (ref.)								
Immigrant neighbours			–0.08	(0.02)***	–0.09	(0.02)***	–0.12	(0.03)***
No immigrant colleagues (ref.)								
Immigrant colleagues					0.13	(0.04)**	0.08	(0.05)
Not working					0.09	(0.03)***	0.09	(0.03)***
Colleagues × neighbours							0.10	(0.04)*
Individual-level control variables								
Left-right scale	–0.00	(0.00)	–0.00	(0.00)	–0.00	(0.00)	–0.00	(0.00)
Education in years	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***
Age	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
Religiousness	0.03	(0.00)***	0.03	(0.00)***	0.03	(0.00)***	0.03	(0.00)***
Man (ref.)								
Woman	0.05	(0.02)**	0.05	(0.02)**	0.05	(0.02)**	0.05	(0.02)**
Has no partner (ref.)								
Has partner	0.02	(0.02)	0.01	(0.02)	0.02	(0.02)	0.03	(0.02)
Country-level control variables								
GDP per capita								
Gini coefficient	–0.04	(0.02)*	–0.04	(0.02)*	–0.04	(0.02)*	–0.04	(0.02)*
Transparency	0.42	(0.04)***	0.41	(0.04)***	0.41	(0.04)***	0.41	(0.04)***
Constant	2.64	(0.66)***	2.68	(0.66)***	2.70	(0.67)***	2.71	(0.67)***
Random part								
(sd)Country intercepts	0.31	(0.05)***	0.31	(0.05)***	0.32	(0.05)***	0.32	(0.05)***
(sd)Colleagues					0.14	(0.04)***	0.14	(0.04)***
(sd)Residual	1.73	(0.01)***	1.73	(0.01)***	1.73	(0.01)***	1.73	(0.01)***
Model information								
Countries	22		22		22		22	
Individuals	30,832		30,832		30,832		30,832	
Log-likelihood	–60669.98		–60662.78		–60642.78		–60640.02	
AIC	121364		121351.6		121319.6		121316	
Change in AIC			–12.4		–32		–3.6	
Likelihood-ratio test that model is better than previous model			LR Chi^2: 14.38 Prob. 0.00		LR Chi^2: 40.02 Prob. 0.00		LR Chi^2: 5.51 Prob. 0.02	

Notes: Standard errors in parentheses. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Appendix Table 5. Models without Gini Coefficient

	Model 1		Model 2		Model 3		Model 4	
Main variables								
Immigrants	–0.04	(0.01)***	–0.04	(0.01)***	–0.06	(0.01)***	–0.06	(0.01)***
No immigrant neighbours (ref.)								
Immigrant neighbours			–0.08	(0.02)***	–0.09	(0.02)***	–0.12	(0.03)***
No immigrant colleagues (ref.)								
Immigrant colleagues					0.13	(0.04)**	0.07	(0.05)
Not working					0.09	(0.03)***	0.09	(0.03)***
Colleagues × neighbours							0.11	(0.04)*
Individual-level control variables								
Left-right scale	–0.00	(0.00)	–0.00	(0.00)	–0.00	(0.00)	–0.00	(0.00)
Education in years	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***
Age	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
Religiousness	0.03	(0.00)***	0.03	(0.00)***	0.03	(0.00)***	0.03	(0.00)***
Man (ref.)								
Woman	0.05	(0.02)**	0.05	(0.02)**	0.05	(0.02)**	0.05	(0.02)**
Has no partner (ref.)								
Has partner	0.02	(0.02)	0.01	(0.02)	0.02	(0.02)	0.03	(0.02)
Country-level control variables								
GDP per capita	0.02	(0.02)	0.02	(0.02)	0.06	(0.01)***	0.06	(0.01)***
Gini coefficient								
Transparency	0.40	(0.06)***	0.39	(0.06)***	0.37	(0.05)***	0.36	(0.05)***
Constant	1.00	(0.30)**	1.05	(0.30)***	0.64	(0.29)*	0.66	(0.29)*
Random part								
(sd)Country intercepts	0.33	(0.05)***	0.33	(0.05)***	0.35	(0.07)***	0.35	(0.07)***
(sd)Colleagues					0.15	(0.04)***	0.15	(0.04)***
(sd)Residual	1.73	(0.01)***	1.73	(0.01)***	1.73	(0.01)***	1.73	(0.01)***
Model information								
Countries	22		22		22		22	
Individuals	30,832		30,832		30,832		30,832	
Log-likelihood	–60671.7		–60664.39		–60643.05		–60640.14	
AIC	121367.4		121354.8		121320.1		121316.3	
Change in AIC			–12.6		–34.7		–3.7	
Likelihood-ratio test that model is better than previous model			LR Chi^2: 14.61 Prob. 0.00		LR Chi^2: 42.69 Prob. 0.00		LR Chi^2: 5.81 Prob. 0.02	

Notes: Standard errors in parentheses. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Appendix Table 6. Models without Transparency

	Model 1		Model 2		Model 3		Model 4	
Main variables								
Immigrants	–0.02	(0.02)	–0.02	(0.02)	–0.06	(0.02)***	–0.06	(0.02)***
No immigrant neighbours (ref.)								
Immigrant neighbours			–0.08	(0.02)***	–0.09	(0.02)***	–0.12	(0.03)***
No immigrant colleagues (ref.)								
Immigrant colleagues					0.12	(0.04)**	0.06	(0.05)
Not working					0.10	(0.03)***	0.10	(0.03)***
Colleagues × neighbours							0.11	(0.04)**
Individual-level control variables								
Left-right scale	–0.00	(0.00)	–0.00	(0.00)	–0.00	(0.00)	–0.00	(0.00)
Education in years	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***
Age	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
Religiousness	0.03	(0.00)***	0.03	(0.00)***	0.03	(0.00)***	0.03	(0.00)***
Man (ref.)								
Woman	0.05	(0.02)**	0.05	(0.02)**	0.05	(0.02)**	0.05	(0.02)**
Has no partner (ref.)								
Has partner	0.02	(0.02)	0.01	(0.02)	0.02	(0.02)	0.02	(0.02)
Country-level control variables								
GDP per capita	0.08	(0.02)***	0.08	(0.02)***	0.13	(0.02)***	0.14	(0.02)***
Gini coefficient	–0.06	(0.03)*	–0.06	(0.03)*	–0.05	(0.03)	–0.05	(0.03)
Transparency								
Constant	4.22	(1.13)***	4.24	(1.12)***	3.01	(1.04)**	2.80	(1.01)**
Random part								
(sd)Country intercepts	0.55	(0.08)***	0.55	(0.08)***	0.61	(0.14)***	0.62	(0.15)***
(sd)Colleagues					0.15	(0.04)***	0.15	(0.04)***
(sd)Residual	1.73	(0.01)***	1.73	(0.01)***	1.73	(0.01)***	1.73	(0.01)***
Model information								
Countries	22		22		22		22	
Individuals	30,832		30,832		30,832		30,832	
Log-likelihood	–60682.63		–60675.26		–60653.45		–60650.17	
AIC	121389.3		121376.5		121340.9		121336.3	
Change in AIC			–12.8		–35.6		4.6	
Likelihood-ratio test that model is better than previous model			LR Chi^2: 14.74 Prob. 0.00		LR Chi^2: 43.62 Prob. 0.00		LR Chi^2: 6.57 Prob. 0.01	

Notes: Standard errors in parentheses. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Appendix Table 7. Models without Left-right Scale

	Model 1		Model 2		Model 3		Model 4	
Main variables								
Immigrants	–0.02	(0.01)*	–0.02	(0.01)*	–0.04	(0.01)***	–0.04	(0.01)***
No immigrant neighbours (ref.)								
Immigrant neighbours			–0.09	(0.02)***	–0.10	(0.02)***	–0.12	(0.02)***
No immigrant colleagues (ref.)								
Immigrant colleagues					0.13	(0.04)**	0.09	(0.05)
Not working					0.09	(0.03)***	0.09	(0.03)***
Colleagues × neighbours							0.09	(0.04)*
Individual-level control variables								
Left-right scale								
Education in years	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***
Age	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
Religiousness	0.03	(0.00)***	0.03	(0.00)***	0.03	(0.00)***	0.03	(0.00)***
Man (ref.)								
Woman	0.05	(0.02)*	0.05	(0.02)*	0.05	(0.02)*	0.05	(0.02)*
Has no partner (ref.)								
Has partner	0.01	(0.02)	0.01	(0.02)	0.02	(0.02)	0.02	(0.02)
Country-level control variables								
GDP per capita (in US$1000)	0.02	(0.01)	0.02	(0.01)	0.04	(0.01)**	0.04	(0.01)**
Gini coefficient	–0.04	(0.02)*	–0.04	(0.02)*	–0.04	(0.02)*	–0.04	(0.02)*
Transparency	0.38	(0.05)***	0.38	(0.05)***	0.36	(0.05)***	0.36	(0.05)***
Constant	2.45	(0.66)***	2.48	(0.65)***	2.18	(0.63)***	2.17	(0.63)***
Random part								
(sd)Country intercepts					0.30	(0.05)***	0.30	(0.05)***
(sd)Colleagues					0.16	(0.04)***	0.16	(0.04)***
(sd)Residual	1.76	(0.01)***	1.76	(0.01)***	1.76	(0.01)***	1.76	(0.01)***
Model information								
Countries	22		22		22		22	
Individuals	34,708		34,708		34,708		34,708	
Log-likelihood	–68913.38		–68903.44		–68879.52		–68877.44	
AIC	137850.8		137832.9		137793		137790.9	
Change in AIC			–17.9		–39.9		–2.1	
Likelihood-ratio test that model is better than previous model			LR Chi^2: 19.88 Prob. 0.00		LR Chi^2: 47.84 Prob. 0.00		LR Chi^2: 4.15 Prob. 0.04	

Notes: Standard errors in parentheses. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Appendix Table 8. Models without Education (in Years)

	Model 1		Model 2		Model 3		Model 4	
Main variables								
Immigrants	–0.03	(0.01)*	–0.03	(0.01)*	–0.04	(0.01)***	–0.04	(0.01)***
No immigrant neighbours (ref.)								
Immigrant neighbours			–0.07	(0.02)**	–0.08	(0.02)***	–0.11	(0.03)***
No immigrant colleagues (ref.)								
Immigrant colleagues					0.18	(0.04)***	0.13	(0.05)**
Not working					0.04	(0.03)	0.04	(0.03)
Colleagues × neighbours							0.09	(0.04)*
Individual-level control variables								
Left-right scale	–0.00	(0.00)	–0.00	(0.00)	–0.00	(0.00)	–0.00	(0.00)
Education in years								
Age	–0.00	(0.00)	–0.00	(0.00)	0.00	(0.00)	0.00	(0.00)
Religiousness	0.03	(0.00)***	0.03	(0.00)***	0.03	(0.00)***	0.03	(0.00)***
Man (ref.)								
Woman	0.04	(0.02)*	0.04	(0.02)*	0.05	(0.02)*	0.05	(0.02)*
Has no partner (ref.)								
Has partner	0.05	(0.02)*	0.05	(0.02)*	0.05	(0.02)*	0.05	(0.02)*
Country-level control variables								
GDP per capita (in US$1000)	0.02	(0.01)	0.02	(0.01)	0.04	(0.01)**	0.04	(0.01)**
Gini coefficient	–0.05	(0.02)**	–0.05	(0.02)**	–0.05	(0.02)**	–0.05	(0.02)**
Transparency	0.37	(0.05)***	0.37	(0.05)***	0.35	(0.05)***	0.34	(0.05)***
Constant	3.58	(0.69)***	3.62	(0.69)***	3.28	(0.67)***	3.26	(0.67)***
Random part								
(sd)Country intercepts	0.31	(0.05)***	0.31	(0.05)***	0.31	(0.06)***	0.31	(0.06)***
(sd)Colleagues					0.16	(0.04)***	0.16	(0.04)***
(sd)Residual	1.74	(0.01)	1.74	(0.01)	1.74	(0.01)	1.74	(0.01)
Model information								
Countries	22		22		22		22	
Individuals	31,117		31,117		31,117		31,117	
Log-likelihood	–61521.35		–61516.14		–61484.2		–61482.19	
AIC	123066.7		123058.3		123002.4		123000.4	
Change in AIC			–8.4		–55.9		–2	
Likelihood-ratio test that model is better than previous model			LR Chi^2: 10.44 Prob. 0.00		LR Chi^2: 63.88 Prob. 0.00		LR Chi^2: 4.00 Prob. 0.04	

Notes: Standard errors in parentheses. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Appendix Table 9. Models without Age

	Model 1		Model 2		Model 3		Model 4	
Main variables								
Immigrants	–0.03	(0.01)*	–0.03	(0.01)*	–0.05	(0.01)***	–0.05	(0.01)***
No immigrant neighbours (ref.)								
Immigrant neighbours			–0.09	(0.02)***	–0.09	(0.02)***	–0.13	(0.02)***
No immigrant colleagues (ref.)								
Immigrant colleagues					0.12	(0.04)**	0.07	(0.05)
Not working					0.13	(0.03)***	0.13	(0.03)***
Colleagues × neighbours							0.10	(0.04)*
Individual-level control variables								
Left-right scale	–0.00	(0.00)	–0.00	(0.00)	–0.00	(0.00)	–0.00	(0.00)
Education in years	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***
Age								
Religiousness	0.04	(0.00)***	0.04	(0.00)***	0.04	(0.00)***	0.04	(0.00)***
Man (ref.)								
Woman	0.05	(0.02)*	0.05	(0.02)*	0.05	(0.02)*	0.05	(0.02)*
Has no partner (ref.)								
Has partner	0.04	(0.02)*	0.04	(0.02)	0.05	(0.02)*	0.05	(0.02)*
Country-level control variables								
GDP per capita	0.02	(0.01)	0.02	(0.01)	0.05	(0.01)***	0.05	(0.01)***
Gini coefficient	–0.04	(0.02)*	–0.04	(0.02)*	–0.04	(0.02)*	–0.04	(0.02)*
Transparency	0.38	(0.05)***	0.37	(0.05)***	0.35	(0.05)***	0.34	(0.05)***
Constant	2.67	(0.66)***	2.71	(0.66)***	2.20	(0.64)***	2.20	(0.64)***
Random part								
(sd)Country intercepts	0.30	(0.05)***	0.30	(0.05)***	0.32	(0.07)***	0.32	(0.07)***
(sd)Colleagues					0.15	(0.04)***	0.15	(0.04)***
(sd)Residual	1.73	(0.01)***	1.73	(0.01)***	1.73	(0.01)***	1.73	(0.01)***
Model information								
Countries	22		22		22		22	
Individuals	31,026		31,026		31,026		31,026	
Log-likelihood	–61064.68		–61055.62		–61030.49		–61027.71	
AIC	122153.4		122137.2		122095		122091.4	
Change in AIC			–16.2		–42.2		–3.6	
Likelihood-ratio test that model is better than previous model			LR Chi^2: 18.12 Prob. 0.00		LR Chi^2: 50.26 Prob. 0.00		LR Chi^2: 5.58 Prob. 0.02	

Notes: Standard errors in parentheses. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Appendix Table 10. Models without Religiousness

	Model 1		Model 2		Model 3		Model 4	
Main variables								
Immigrants	–0.03	(0.01)**	–0.03	(0.01)**	–0.04	(0.01)***	–0.04	(0.01)***
No immigrant neighbours (ref.)								
Immigrant neighbours			–0.08	(0.02)***	–0.09	(0.02)***	–0.13	(0.03)***
No immigrant colleagues (ref.)								
Immigrant colleagues					0.12	(0.04)**	0.06	(0.05)
Not working					0.09	(0.03)***	0.09	(0.03)***
Colleagues × neighbours							0.11	(0.04)*
Individual-level control variables								
Left-right scale	0.01	(0.00)	0.01	(0.00)	0.00	(0.00)	0.00	(0.00)
Education in years	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***
Age	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
Religiousness								
Man (ref.)								
Woman	0.08	(0.02)***	0.09	(0.02)***	0.09	(0.02)***	0.09	(0.02)***
Has no partner (ref.)								
Has partner	0.02	(0.02)	0.02	(0.02)	0.03	(0.02)	0.03	(0.02)
Country-level control variables								
GDP per capita	0.02	(0.01)	0.02	(0.01)	0.04	(0.01)*	0.04	(0.01)**
Gini coefficient	–0.03	(0.02)*	–0.03	(0.02)*	–0.03	(0.02)	–0.03	(0.02)
Transparency	0.37	(0.05)***	0.37	(0.05)***	0.35	(0.05)***	0.35	(0.05)***
Constant	2.32	(0.65)***	2.36	(0.65)***	2.06	(0.65)**	2.05	(0.64)**
Random part								
(sd)Country intercepts	0.29	(0.05)***	0.29	(0.05)***	0.29	(0.05)***	0.29	(0.05)***
(sd)Colleagues					0.14	(0.04)***	0.14	(0.04)***
(sd)Residual	1.73	(0.01)***	1.73	(0.01)***	1.73	(0.01)***	1.73	(0.01)***
Model information								
Countries	22		22		22		22	
Individuals	30,949		30,949		30,949		30,949	
Log-likelihood	–60946.27		–60938.46		–60920.12		–60916.94	
AIC	121916.5		121902.9		121874.2		121869.9	
Change in AIC			–13.6		–28.7		–4.3	
Likelihood-ratio test that model is better than previous model			LR Chi^2: 15.63 Prob. 0.00		LR Chi^2: 36.68 Prob. 0.00		LR Chi^2: 6.37 Prob. 0.01	

Notes: Standard errors in parentheses. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Appendix Table 11. Models without Gender

	Model 1		Model 2		Model 3		Model 4	
Main variables								
Immigrants	–0.03	(0.01)*	–0.03	(0.01)*	–0.04	(0.01)***	–0.04	(0.01)***
No immigrant neighbours (ref.)								
Immigrant neighbours			–0.08	(0.02)***	–0.09	(0.02)***	–0.12	(0.03)***
No immigrant colleagues (ref.)								
Immigrant colleagues					0.13	(0.04)**	0.07	(0.05)
Not working					0.09	(0.03)***	0.10	(0.03)***
Colleagues × neighbours							0.11	(0.04)*
Individual-level control variables								
Left-right scale	–0.00	(0.00)	–0.00	(0.00)	–0.00	(0.00)	–0.00	(0.00)
Education in years	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***
Age	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
Religiousness	0.04	(0.00)***	0.04	(0.00)***	0.04	(0.00)***	0.04	(0.00)***
Man (ref.)								
Woman								
Has no partner (ref.)								
Has partner	0.02	(0.02)	0.01	(0.02)	0.02	(0.02)	0.02	(0.02)
Country-level control variables								
GDP per capita	0.02	(0.01)	0.02	(0.01)	0.05	(0.01)***	0.05	(0.01)***
Gini coefficient	–0.04	(0.02)*	–0.04	(0.02)*	–0.04	(0.02)*	–0.04	(0.02)*
Transparency	0.38	(0.05)***	0.37	(0.05)***	0.35	(0.05)***	0.34	(0.05)***
Constant	2.52	(0.66)***	2.56	(0.66)***	2.06	(0.63)**	2.05	(0.63)**
Random part								
(sd)Country intercepts	0.30	(0.05)***	0.30	(0.05)***	0.31	(0.06)***	0.31	(0.06)***
(sd)Colleagues					0.15	(0.04)***	0.15	(0.04)***
(sd)Residual	1.73	(0.01)***	1.73	(0.01)***	1.73	(0.01)***	1.73	(0.01)***
Model information								
Countries	22		22		22		22	
Individuals	30,842		30,842		30,842		30,842	
Log-likelihood	–60696.53		–60689.44		–60668.15		–60665.26	
AIC	121417.1		121404.9		121370.3		121366.5	
Change in AIC			–12.2		–34.6		–3.8	
Likelihood-ratio test that model is better than previous model			LR Chi^2: 14.18 Prob. 0.00		LR Chi^2: 42.57 Prob. 0.00		LR Chi^2: 5.79 Prob. 0.02	

Notes: Standard errors in parentheses. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Appendix Table 12. Models without Relationship

	Model 1		Model 2		Model 3		Model 4	
Main variables								
Immigrants	–0.03	(0.01)*	–0.03	(0.01)*	–0.04	(0.01)***	–0.05	(0.01)***
No immigrant neighbours (ref.)								
Immigrant neighbours			–0.08	(0.02)***	–0.09	(0.02)***	–0.12	(0.02)***
No immigrant colleagues (ref.)								
Immigrant colleagues					0.12	(0.04)**	0.07	(0.05)
Not working					0.08	(0.03)**	0.08	(0.03)**
Colleagues × neighbours							0.10	(0.04)*
Individual-level control variables								
Left-right scale	–0.00	(0.00)	–0.00	(0.00)	–0.00	(0.00)	–0.00	(0.00)
Education in years	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***
Age	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
Religiousness	0.03	(0.00)***	0.03	(0.00)***	0.03	(0.00)***	0.03	(0.00)***
Man (ref.)								
Woman	0.05	(0.02)*	0.05	(0.02)*	0.05	(0.02)*	0.05	(0.02)*
Has no partner (ref.)								
Has partner								
Country-level control variables								
GDP per capita	0.02	(0.01)	0.02	(0.01)	0.05	(0.01)***	0.05	(0.01)***
Gini coefficient	–0.04	(0.02)*	–0.04	(0.02)*	–0.04	(0.02)*	–0.04	(0.02)*
Transparency	0.38	(0.05)***	0.37	(0.05)***	0.35	(0.05)***	0.34	(0.05)***
Constant	2.44	(0.65)***	2.47	(0.65)***	1.96	(0.62)**	1.96	(0.62)**
Random part								
(sd)Country intercepts	0.29	(0.05)***	0.29	(0.05)***	0.31	(0.07)***	0.31	(0.07)***
(sd)Colleagues					0.15	(0.04)***	0.15	(0.04)***
(sd)Residual	1.73	(0.01)***	1.73	(0.01)***	1.73	(0.01)***	1.73	(0.01)***
Model information								
Countries	22		22		22		22	
Individuals	31,056		31,056		31,056		31,056	
Log-likelihood	–61134.91		–61127.04		–61106.69		–61104.29	
AIC	122293.8		122280.1		122247.4		122244.6	
Change in AIC								
Likelihood-ratio test that model is better than previous model			LR Chi^2: 15.73 Prob. 0.00		LR Chi^2: 40.69 Prob. 0.00		LR Chi^2: 4.81 Prob. 0.03	

Notes: Standard errors in parentheses. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Appendix Table 13. Hausman Test of Fixed versus Random Effects (GLS Estimator)

	Model 1 (FE)		Model 1 (RE)		Model 2 (FE)		Model 2 (RE)		Model 3 (FE)		Model 3 (RE)		Model 4 (FE)		Model 4 (RE)	
Main variables																
No immigrant neighbours (ref.)																
Immigrant neighbours					−0.08	(0.02)***	−0.08	(0.02)***	−0.09	(0.02)***	−0.09	(0.02)***	−0.12	(0.03)***	−0.12	(0.03)***
No immigrant colleagues (ref.)																
Immigrant colleagues									0.12	(0.02)***	0.12	(0.02)***	0.07	(0.03)*	0.07	(0.03)*
Not working									0.10	(0.03)***	0.10	(0.03)***	0.10	(0.03)***	0.10	(0.03)***
Colleagues × neighbours													0.10	(0.04)*	0.10	(0.04)*
Individual-level control variables																
Left-right scale	−0.00	(0.00)	−0.00	(0.00)	−0.00	(0.00)	−0.00	(0.00)	−0.00	(0.00)	−0.00	(0.00)	−0.00	(0.00)	−0.00	(0.00)
Education in years	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***	0.06	(0.00)***
Age	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
Religiousness	0.03	(0.00)***	0.03	(0.00)***	0.03	(0.00)***	0.03	(0.00)***	0.03	(0.00)***	0.03	(0.00)***	0.03	(0.00)***	0.03	(0.00)***
Man (ref.)																
Woman	0.05	(0.02)**	0.05	(0.02)**	0.05	(0.02)**	0.05	(0.02)**	0.05	(0.02)**	0.05	(0.02)**	0.05	(0.02)**	0.05	(0.02)**
Has no partner (ref.)																
Has partner	0.02	(0.02)	0.02	(0.02)	0.01	(0.02)	0.01	(0.02)	0.02	(0.02)	0.02	(0.02)	0.02	(0.02)	0.02	(0.02)
Constant	4.09	(0.06)***	4.01	(0.17)***	4.14	(0.07)***	4.06	(0.18)***	4.08	(0.07)***	4.00	(0.15)***	4.09	(0.07)***	4.02	(0.16)***
Model information																
Countries	22		22		22		22		22		22		22		22	
Individuals	30,832		30,832		30,832		30,832		30,832		30,832		30,832		30,832	
Hausman test FE v. RE			$Chi^2 = 9.84$				$Chi^2 = 5.77$				$Chi^2 = 12.91$				$Chi^2 = 10.92$	
			Prob > $Chi^2 = 0.13$				Prob > $Chi^2 = 0.57$				Prob > $Chi^2 = 0.17$				Prob > $Chi^2 = 0.36$	

Notes: Standard errors in parentheses. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Appendix Table 14. Likelihood-ratio Test of Random versus Fixed Slope (Immigrant Colleagues)

	Model 1 (Fixed)		Model 1 (Random)	
Main variables				
Immigrants	–0.03	(0.01)*	–0.04	(0.01)***
No immigrant neighbours (ref.)				
Immigrant neighbours	–0.09	(0.02)***	–0.09	(0.02)***
No immigrant colleagues (ref.)				
Immigrant colleagues	0.12	(0.02)***	0.13	(0.04)**
Not working	0.10	(0.03)***	0.09	(0.03)***
Individual-level control variables				
Left-right scale	–0.00	(0.00)	–0.00	(0.00)
Education in years	0.06	(0.00)***	0.06	(0.00)***
Age	0.00	(0.00)***	0.00	(0.00)***
Religiousness	0.03	(0.00)***	0.03	(0.00)***
Man (ref.)				
Woman	0.05	(0.02)**	0.05	(0.02)**
Has no partner (ref.)				
Has partner	0.02	(0.02)	0.02	(0.02)
Country-level control variables				
GDP per capita (in US$1000)	0.02	(0.01)	0.05	(0.01)***
Gini coefficient	–0.04	(0.02)*	–0.04	(0.02)*
Transparency	0.37	(0.05)***	0.35	(0.05)***
Constant	2.43	(0.67)***	2.00	(0.64)**
Random part				
(sd)Country intercepts	0.30	(0.05)***	0.31	(0.06)***
(sd)Colleagues			0.15	(0.04)***
(sd)Residual	1.73	(0.01)***	1.73	(0.01)***
Model information				
Countries	22		22	
Individuals	30,832		30,832	
Log-likelihood	–60648.47		–60640.87	
AIC	121328.9		121317.7	
Change in AIC			–11.2	
Likelihood-ratio test that model is better than previous model			LR Chi^2: 15.20 Prob. 0.00	

Notes: Standard errors in parentheses. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Appendix Table 15. Models with Controls for Selection Effects

	Model 1		Model 2		Model 3		Model 4	
Main variables								
Immigrants	−0.05	(0.01)***	−0.04	(0.01)***	−0.05	(0.01)***	−0.04	(0.01)***
No immigrant neighbours (ref.)								
Immigrant neighbours	−0.17	(0.02)***	−0.16	(0.02)***	−0.21	(0.03)***	−0.20	(0.03)***
No immigrant colleagues (ref.)								
Immigrant colleagues	0.10	(0.04)*	0.08	(0.04)*	0.04	(0.05)	0.03	(0.04)
Not working	0.09	(0.03)***	0.09	(0.03)**	0.09	(0.03)***	0.09	(0.03)**
Colleagues × neighbours					0.12	(0.04)**	0.11	(0.04)*
Individual-level control variables								
Left-right scale	0.01	(0.00)	0.01	(0.00)*	0.01	(0.00)	0.01	(0.00)*
Education in years	0.05	(0.00)***	0.05	(0.00)***	0.05	(0.00)***	0.05	(0.00)***
Age	0.00	(0.00)***	0.01	(0.00)***	0.00	(0.00)***	0.01	(0.00)***
Religiousness	0.03	(0.00)***	0.04	(0.00)***	0.03	(0.00)***	0.04	(0.00)***
Man (ref.)								
Woman	0.05	(0.02)*	0.04	(0.02)*	0.05	(0.02)*	0.04	(0.02)*
Has no partner (ref.)								
Has partner	0.02	(0.02)	0.02	(0.02)	0.02	(0.02)	0.02	(0.02)
Country-level control variables								
GDP per capita (in US$1000)	0.05	(0.01)***	0.04	(0.01)**	0.06	(0.01)***	0.05	(0.01)***
Gini coefficient	−0.04	(0.02)*	−0.04	(0.02)*	−0.04	(0.02)*	−0.04	(0.02)*
Transparency	0.32	(0.05)***	0.33	(0.05)***	0.31	(0.05)***	0.32	(0.05)***
Selection controls								
Would not mind having immigrant neighbours (ref.)								
Would mind having immigrant neighbours	−0.42	(0.02)***	−0.34	(0.02)***	−0.42	(0.02)***	−0.34	(0.02)***
Would mind having immigrant boss (1–10)			−0.04	(0.00)***			−0.04	(0.00)***
Constant	2.38	(0.62)***	2.63	(0.63)***	2.37	(0.61)***	2.62	(0.62)***
Random part								
(sd)Country intercepts	0.32	(0.07)***	0.31	(0.06)***	0.32	(0.08)***	0.31	(0.07)***
(sd)Colleagues	0.14	(0.04)***	0.13	(0.04)***	0.14	(0.04)***	0.13	(0.04)***
(sd)Residual	1.71	(0.01)***	1.70	(0.01)***	1.71	(0.01)***	1.70	(0.01)***
Model information								
Countries	22		22		22		22	
Individuals	30,351		29,856		30,351		29,856	

Notes: Standard errors in parentheses. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Appendix Table 16. Weighted Models

	Model 1		Model 2		Model 3		Model 4	
Main variables								
Immigrants	–0.02	(0.01)	–0.02	(0.01)	–0.03	(0.01)*	–0.03	(0.01)*
No immigrant neighbours (ref.)								
Immigrant neighbours			–0.08	(0.03)**	–0.09	(0.03)**	–0.11	(0.03)***
No immigrant colleagues (ref.)								
Immigrant colleagues					0.10	(0.04)*	0.06	(0.06)
Not working					0.08	(0.03)*	0.08	(0.03)*
Colleagues × neighbours							0.08	(0.04)*
Individual-level control variables								
Left-right scale	–0.00	(0.01)	–0.01	(0.01)	–0.01	(0.01)	–0.01	(0.01)
Education in years	0.06	(0.01)***	0.06	(0.01)***	0.06	(0.01)***	0.06	(0.01)***
Age	0.00	(0.00)**	0.00	(0.00)**	0.00	(0.00)**	0.00	(0.00)**
Religiousness	0.04	(0.01)***	0.04	(0.01)***	0.04	(0.01)***	0.04	(0.01)***
Man (ref.)								
Woman	0.06	(0.03)	0.06	(0.03)	0.06	(0.03)	0.06	(0.03)
Has no partner (ref.)								
Has partner	0.01	(0.03)	0.01	(0.03)	0.01	(0.03)	0.01	(0.03)
Country-level control variables								
GDP per capita (in US$1000)	0.01	(0.02)	0.01	(0.02)	0.02	(0.02)	0.02	(0.02)
Gini coefficient	–0.04	(0.02)*	–0.04	(0.02)*	–0.03	(0.02)*	–0.03	(0.02)*
Transparency	0.39	(0.06)***	0.38	(0.06)***	0.38	(0.06)***	0.38	(0.06)***
Constant	2.42	(0.72)***	2.46	(0.72)***	2.26	(0.73)**	2.25	(0.73)**
Random part								
(sd)Country intercepts	0.31	(0.04)***	0.31	(0.04)***	0.30	(0.04)***	0.30	(0.04)***
(sd)Colleagues					0.11	(0.05)*	0.11	(0.05)*
(sd)Residual	1.71	(0.04)***	1.71	(0.04)***	1.71	(0.04)***	1.71	(0.04)***
Model information								
Countries	22		22		22		22	
Individuals	30,832		30,832		30,832		30,832	
Log-likelihood	–53955.06		–53948.43		–53938.47		–53936.75	
AIC	107936.1		107924.9		107912.9		107911.5	
Change in AIC			–11.2		–12		–1.4	

Notes: Standard errors in parentheses. *p< 0.05; **p < 0.01; ***p < 0.001.

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