

Economic conditions and native-immigrant asymmetries in generalized social trust

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Abstract

Previous research suggests that individual-level factors such as socio-economic disadvantage and discrimination account for lower levels of generalized social trust of immigrants when compared to natives. This study examines how individual and contextual economic conditions impact such trust gaps. We argue that—beyond objective economic circumstances—evaluations of economic opportunities matter for immigrants’ integration, and for their social trust. Using data from the European Social Survey 2012 and 2016, merged with regional economic conditions, results from two-way fixed effects multilevel models show that gaps in social trust are wider in regions where the state of the economy is predominantly evaluated as being prosperous. Additional tests show that, in those regions, immigrants report higher levels of discrimination and lower levels of satisfaction with social life. This study adds the important finding to the literature on social inequality and immigrant integration that favorable economic conditions may, paradoxically, increase native-immigrant trust asymmetries.

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1. Introduction

Generalized social trust can be defined as a perception that (unknown) others will behave in a reliable and just manner, rather than being selfish or acting against one's interests (Delhey and Newton 2005). Social trust is seen as conducive to cooperation, and is associated at the societal level with various positive effects, such as economic growth and democratic development (Nannestad 2008). The development of social trust is based on individual attributes, as well as on social experiences (Brandt et al. 2015; Glanville, Andersson and Paxton 2013). In Western societies, immigrants typically have lower levels of social trust than the native population because, on average, they have lower socio-economic status, are less well integrated into the social networks of the receiving society, and are more prone to discrimination (Dinesen and Hooghe 2010; De Vroome et al. 2013). This suggests that pervasive trust gaps exist between immigrants and natives, and we seek to identify the conditions that influence these gaps.

Specifically, this study examines how economic conditions affect asymmetries in generalized social trust between natives and immigrants in European societies. Apart from fleeing political persecution and family reunification, a main motivation for immigration is dissatisfaction with individual economic circumstances, or seeking a better life. Given the substantial link between individual economic resources and social trust, better opportunities for employment and status improvement in the receiving society should therefore lead to aligning trust levels. In other words, viable economic conditions can improve the socio-economic status of immigrants, which in turn increases their level of trust and should therefore narrow trust gaps between natives and immigrants (Alba and Nee 1997; De Vroome et al. 2013). In contrast to this assimilationist perspective, favorable economic opportunities may also lead to increasing trust asymmetries through, for example, amplifying perceptions of group-related inequalities in resource

accumulation. This argument relates to a flourishing literature on non-linear integration trajectories of immigrants in Western societies, which is the focus of works on the “integration paradox” (De Vroome et al. 2014; Verkuyten 2016). That is, better integrated immigrants experience greater deprivation and dissatisfaction with their social status within the receiving society (compared to those who are less well integrated) because they more frequently feel exposed to maltreatment or have higher aspirations toward status improvement which are hampered due to lack of opportunity or discrimination.

Our focus on social trust asymmetries between natives and immigrants (rather than on absolute levels) is motivated through immigrant integration being a relational process of adapting preferences and norms to those of the receiving societies (Dinesen and Hooghe 2010; Röder and Mühlau 2014; Reeskens and van Oorschot 2015). Investigating economic foundations of group-related differences in trust contributes to a growing literature that discusses social trust as a product of experiential factors and social context, rather than as a socialized trait (Dinesen 2013; Brandt et al. 2015; Glanville et al. 2013; Ziller 2017; Ziller et al. 2019). The study’s scope complements the international literature on social inequality, immigration attitudes, and integration outcomes of immigrants and ethnic minorities that has been focused on segregation (Smith et al. 2016), symbolic boundaries (Wimmer 2013), and regional-level factors (Heizmann 2015; Schlueter and Wagner 2008; Ziller 2015). Moreover, when studying contextual determinants of group-related trust differences, it is often unclear whether it is objective or perceptual indicators that are more relevant for the development of attitudes (Campbell 2012). We thus include perceptual indicators of denizens’ evaluations of economic conditions alongside objective indicators. We expect the perceptual indicators to be related to objective conditions, but also that—over and above these partial relationships—they will capture perceptions of economic opportunities that are closely related to aspirations or norms of being economically successful.

We suggest that objective conditions function as indicators of opportunity, thus decreasing trust gaps, while perceptual indicators of economic circumstances are related to widening trust gaps through norm-setting mechanisms related to the abovementioned integration paradox.

We test our arguments using two recent waves of the European Social Survey (2012 and 2016), merged with regional data on economic conditions and aggregated perception indicators from Eurobarometer surveys in European regions. Results from (region and time) fixed effects multilevel models show that social trust gaps between immigrants and natives become wider in regions where the state of the economy is evaluated as being positive. This relationship is net of time-constant regional and national differences as well as over-time changes in economic conditions and immigration. Results from supplementary analyses suggest that the found relationship is due to a heightened sense of ethnic discrimination and decreasing satisfaction with social life. This suggests that immigrants become more sensitive towards perceptions of ethnic discrimination in regions with a shared positive economic outlook.

2. Socio-economic integration and social trust

The distribution of social trust within societies varies widely, as it depends on socio-economic factors such as education, income, and membership of an ethnic group (Alesina and La Ferrara 2002; Delhey and Newton 2003; Smith 2010). People with extensive resources are more willing to take risks, given that they are better equipped to compensate for the potential negative consequences occurring should their trust be broken. Moreover, people who have a high socio-economic status typically possess more extensive social networks than people with a lower status (Lin 1999). Social interactions are important for social trust, as they enable people to learn about

other people's goals and motivations (Glanville, Andersson and Paxton 2013). This makes the social world more predictable, and promotes the formation of a common identity, in turn also promoting generalized social trust (Braithwaite 1998; Hardin 2002).

Classic assimilation theories (Gordon 1964; Alba and Nee 1997; Esser 2004) maintain that access to employment and education is an important step in the integration process and stimulates further progress, including social integration and national identification. For example, immigrants' socio-economic mobility provides opportunities for "equal status contacts across ethnic lines in workplaces and neighborhoods" (Alba and Nee 1997, 831). Lower levels of social trust of immigrants and ethnic minorities have therefore been explained particularly with group-related differences in socio-economic resources (De Vroome et al. 2013). Similarly, Abascal and Baldassarri (2015) argue that lower levels of trust of ethnic minorities are due to economic inequalities and patterns of residential segregation along ethnic lines. Even if immigrants have lower average levels of trust (compared to natives), improvements in social status over the individual life-course should foster their social trust. According to this perspective, immigrants who successfully obtain educational qualifications and find employment in the receiving society should come to experience greater social trust than do those who are less successful in this regard.

Contradicting the classic assimilation argument, recent studies find empirical evidence of non-linear integration trajectories, meaning that immigrants who are better socio-economically integrated identify less strongly with the receiving societies (De Vroome et al. 2014; but see Careja and Schmidt-Catran 2018). That the structural integration of immigrants fosters critical views and perceptions of deprivation, rather than a feeling of closeness, is at the heart of the debate on the integration paradox (Verkuyten 2016). Two main arguments have been invoked in

this regard. According to the exposure argument, more highly-integrated immigrants have higher rates of social contact with natives (compared to those who are less well integrated), and thus a higher propensity of having negative, or discriminatory, experiences. In addition to first-hand experiences, immigrants who are highly educated may be better able to recognize discriminatory behavior on the part of their fellow denizens or of public institutions. A second argument as to why better integration facilitates perceived deprivation or discrimination is that immigrants may change their aspirations during the integration process, which in turn heightens their sensitivity to any lack of respect and manifestations of unequal treatment. In a similar vein, Schaeffer (2018) examines unfulfilled social mobility aspirations of immigrant descendants, and finds that they develop high levels of perceived discrimination, especially if they are not able to replicate their parents' social status or if they have particularly high aspirations when it comes to status.

The approaches reviewed suggest that progress in the socio-economic integration of immigrants may yield unintended consequences in terms of perceived discrimination and disappointed status aspirations. With regard to social trust, Ziller (2017) finds wider trust gaps between natives and immigrants in countries with strong institutional fairness, thus representing a color-blind approach to equal treatment. As an underlying mechanism, institutional fairness appears to promote egalitarian norms, which in turn magnify the extent to which (perceived) ethnic discrimination impedes social trust. In a similar way, the socio-economic integration of immigrants in Western societies may thus also amplify immigrants' aspirations to achieve economic success. This in turn heightens their sensitivity to unequal treatment, and ultimately leads to their social trust not being improved by economic gains, or even leads to eroding levels of social trust.

3. The role of objective and perceptual economic conditions

3.1. An assimilationist perspective

Being economically successful is important for people's feeling of belonging to a society, and this is relevant for natives and immigrants alike (Spörlein and van Tubergen 2014). Brandt et al. (2015) find in a panel study that an increase in income is systematically linked to an increase in social trust. In contrast, unemployment and material deprivation dramatically reduce people's well-being and social inclusion (Cattell 2001; Heizmann and Böhnke 2019; McKee-Ryan et al. 2005). Henry (2009) finds evidence that low social status is related to perceptions of stigma and discrimination. Laurence (2015) shows that involuntary job loss leads to a long-term decline in social trust. Focusing on the individual-level economic success of immigrants in Europe, unemployment and income poverty constitute major risks of economic deprivation and social disintegration. A reason for the critical role of economic integration is that this process is intertwined with processes of language acquisition and social integration (Esser 2004).¹ Against this background, and in line with classic integration theories, employment status (being employed versus unemployed), and income, should be strongly related to immigrants' social trust.

Individual-level mechanisms linking economic opportunity and social trust, better jobs with greater responsibility, and higher incomes, are expected to lead to increasingly aligning social positions between immigrants and natives. Over and above this, better economic positioning may

¹ Previous research has also examined how immigrants' social capital—conceptualized as intra- and interethnic contacts—affect their socio-economic positions (e.g., De Vroome and Van Tubergen 2010, Heizmann and Böhnke 2016). While such a relationship is plausible, the interest in our study lies in the link between economic contexts and social trust. To minimize concerns of endogeneity, we apply a longitudinal approach and focus on generalized social trust as an attitudinal measure rather than on structural indicators of social connectivity.

facilitate immigrants' social inclusion (Alba and Nee 1997), which in turn should reveal itself in increasing rates of satisfaction with social life.

At the aggregate level, contextual economic conditions such as levels of unemployment and economic growth are expected to shape the social trust of residents beyond individual employment and income. This argument is rooted in a long-standing debate on contextual effects according to which characteristics of context affect individual attitudes and behaviors. In general, the social mechanisms through which context impacts individual outcomes refer to opportunities and constraints (e.g., due to policy regulations, infrastructure, or public service provision; Campbell 2012), direct or indirect social interactions (Huckfeldt et al. 2005), and the perception of social norms (Stavrova et al. 2011). Applied to the present study, regional changes in unemployment and economic wealth can thus be expected to affect immigrants' social trust beyond personal characteristics in various ways. Economic prosperity equips people with improved economic opportunities, and should foster social trust, whereas economic decline induces stress and economic dissatisfaction, which negatively affects social trust (Uslaner and Brown 2005). Focusing on group-related trust gaps across regions and time, we expect to find narrower (or wider, respectively) trust asymmetries between immigrants and natives in contexts of economic prosperity (or decline, respectively). Again, this relationship is expected to be mediated by improvements in immigrants' economic status and social inclusion.

3.2. Group-specific differences in utilizing economic opportunities

Over and above objective economic conditions, people differ in the way in which they utilize economic opportunities, which in turn may shape their individual social trust. How well

individuals capitalize on economic opportunities (or conversely how adversely they are affected by economic downturns) is contingent upon their skill level and ability (Ng and Feldman 2009), social networks (Hogan and Shelton 1998), personality factors and ambition (Barrick and Mount 1991; Crant et al. 2016), as well as unequal treatment based on group membership (Bertrand and Mullainathan 2004; Zschirnt and Ruedin 2016). For example, Verwiebe et al. (2016) find that fear of discrimination disposes graduates of immigrant descent to apply for jobs below their qualification level. Chong and Kim (2006) find that the link between improving economic status and better integration is negatively contingent upon discrimination. Given that (particularly non-Western) immigrants possess lower average levels of education, as well as having fewer social networks, facing language barriers, and being at greater risk of being discriminated against, it also can be expected that economic integration in terms of employment and income is less conducive to their social trust (compared to natives).

In addition to objective socio-economic status, people constantly make comparisons with their social environment. With reference to economic circumstances, individuals adapt to current income levels and strive to improve their current socio-economic position (Frederick and Loewenstein 1999). Economic research on the link between previous income, aspirations, and life satisfaction demonstrates that a higher income leads to higher aspirations, and that unfulfilled aspirations (i.e., the difference between the current and an aspired-for standard of living) are negatively related to individuals' well-being and life satisfaction (Clark et al. 2015; Stutzer 2004). Not only do previous income levels matter for individuals' aspirations, but average income levels in the neighborhood or community where people live also systematically affect levels of economic aspirations and residents' well-being (Luttmer 2005). In particular, higher earnings of neighbors are associated with lower levels of self-reported happiness, and this

relationship is net of individuals' personal income and neighborhood characteristics (e.g., higher rents) and not driven by possible processes of self-selection.

Given that resources and opportunities are evaluated relative to others, social comparisons in contexts of favorable economic circumstances (e.g., in contexts of high economic growth) may facilitate mismatches between (rising) aspirations and anticipated or actual outcomes in terms of socio-economic status. Immigrants can be seen as a group that is particularly prone to respond with failed aspirations for the following reasons—first, gaps between aspirations and actual status are greater for individuals with a low socio-economic status than they are for high-status individuals. Because immigrants, on average, hold socio-economic positions below the population average, aspiration gaps and perceptions of deprivation should be of greater relevance for these groups. Second, immigrants and ethnic minorities are much more prone to experience discrimination (compared to natives), which prevents them from fulfilling their expectations. Third, immigrants might be particularly receptive for the aspirational climate in which they live because immigrant or ethnic-minority parents already possess higher educational aspirations for their children than natives do (holding parental education constant) (Schaeffer 2018; Spera et al. 2009).

As a consequence of aspiration gaps, not only should the well-being of immigrants be negatively affected by a strong aspirational climate—here defined as the aggregated perception of favorable economic conditions, controlled for actual economic conditions and individual-level perceptions, but this also applies to their general views of the receiving society. Drawing from insights provided by research on the integration paradox, we expect greater economic opportunities to lead to greater aspirations, which (if disappointed) increases perceptions of discrimination as a social mechanism. Depending on whether perceived discrimination is job-related or social, we

should also observe decreasing job-related satisfaction and/or decreasing satisfaction with immigrants' social life, which ultimately erodes generalized social trust.² According to this narrative, we expect that—notwithstanding individuals' objective social-economic status—immigrants' subjective status evaluations, or the aspirational social climate (indicated by favorable aggregated economic evaluations), are positively associated with widening social trust gaps. To specify individual-level foundations of how economic conditions are processed by immigrants, we employ data on immigrants and investigate the role of perceived ethnic discrimination, satisfaction with job-related outcomes, and satisfaction with social life. This makes it possible to disentangle potential intermediary mechanisms that connect economic conditions and the social trust of immigrants.

4. Data and methods

4.1. Data and variables

We test our hypotheses using survey data from the European Social Survey (ESS) and the Immigrant Citizens Survey (ICS; Huddleston and Tjaden 2012), both combined with macro-level data. The ESS data is a high-quality dataset that can be used for regional comparative analysis, and is available as repeated survey waves. Specifically, we use two waves from 2012 (ESS Round 6) and 2016 (ESS Round 8) that match available indicators of regional economic perceptions (see below). Using more than one wave allows for longitudinal data structure at the

² Previous works demonstrate that generalized social trust is shaped by particular events and experiences. Such spill-over effects, for example, refer to institutional settings or informal social interactions that may well generalize and thus affect social trust (e.g., Freitag and Traunmüller 2009; Glanville et al. 2013).

regional level (region-years) which enables testing on how over-time changes in regional economic conditions relate to changes in generalized social trust (via a two-way fixed effects specification that is discussed in the Methods section). The empirical analysis is based on regions with a minimum of 20 foreign-born immigrants per region, while different specifications (e.g., 5, 10, or 30 per region) lead to comparable results, as reported in the tables below. The sample comprises 52 sub-national regions (104 region-years) from the immigrant destination countries Belgium, Germany, Spain, France, Ireland, Italy, the Netherlands, Portugal, Sweden, and the UK. Generalized social trust serves as a dependent variable which is measured by a mean index of the variables “most people can be trusted,” “most people try to be fair,” and “most people are helpful” (measured on 11-point scales; Cronbach’s alpha = 0.73). As a grouping indicator, respondents’ immigrant status is measured using dummy variables on being born in a foreign country (1 = foreign-born). As objective indicators of individuals’ economic circumstances, we use respondents’ household income (measured in percentiles of the sampled country income distribution; 1 to 10 = highest percentile), and employment status (0 = unemployed, 1 = employed). At the individual level, subjective perception of socio-economic status is measured with an item on how respondents feel about their current income situation (4-point scale from 0 = “very difficult on present income,” to 3 = “living comfortably on current income”).

As regional measures of economic conditions, we use regional GDP per capita (2012 and 2015, divided by 10,000) and unemployment rates (2012 and 2015), obtained from Eurostat’s database on European regions. As a perceptual indicator of regional economic assessment, we use aggregated survey data from Flash Eurobarometer studies 356 (2012) and 427 (2015) on public opinion in the regions of the European Union (European Commission 2014; 2016). The item we use states “How would you judge the current situation of the economy in your region?” with an

answer scale ranging from 1 “very bad” to 4 “very good” (recoded). Means per year and region serve as indicators, and the aggregation is based on approximately 300 respondents per region-year, thus facilitating the reliability of the aggregation procedure (Schunck 2016).

As control variables, we include the basic socio-demographic factors gender (dummy variable = 1 if female), age, and education in years. Since we expect social integration to be linked to both socio-economic status and social trust, we control for differences in social activity (“How often do you meet friends, relatives, or colleagues?”) by using three dummy variables (Once a month or less, more than once a month but less than once a week, and once a week or more). Moreover, we include dummy variables indicating urbanization of living areas that may be related to both economic opportunity and social trust. Satisfaction with the national economy (“On the whole, how satisfied are you with the present state of the economy in [country]?” on a rising scale of 0 to 10 = extremely satisfied) serves to control for compositional differences in general economic evaluations. At the regional level, regional proportions of foreign-born immigrants in 2012 and 2015 (aggregated from the European Union Labor Force Surveys; Eurostat 2016) serve as an additional control variable in the main models.

In a supplementary analysis carried out on immigrants only, we use perceived ethnic discrimination (dummy variable = 1 if discriminated based on ethnicity, race, nationality, or language) and length of residence (four dummy variables: less than two years, more than two and less than 10 years, more than 10 and less than 20 years, more than 20 years) as additional predictors. Moreover, perceived discrimination is also used as an outcome variable to determine its relevance as an intermediary factor linking economic conditions and social trust.

In addition, we employ the ICS dataset conducted in 2012 in 15 European cities (Antwerp, Brussels, Liège, Lyon, Paris, Berlin, Stuttgart, Budapest, Milan, Naples, Faro, Lisbon, Setubal,

Barcelona, and Madrid), which contains data on integration outcomes of foreign-born immigrants from non-EU countries (with and without citizenship). As outcomes, we focus on immigrants' satisfaction with their current job situation, and with their social life (both measured on an ascending scale from 0 to 10). These measures represent individual foundations of social trust that potentially mediate the impact of economic conditions and are embedded in a large-scale survey on immigrants sampled at municipality level. It is however important to note that this additional analysis only serves as a supplement to the ESS study in which items on generalized social trust are available.

The abovementioned macro variables (GDP per capita divided by 10,000, unemployment rates, perceptions of economic conditions, and proportions of immigrants) are merged to the ICS survey data, and we incorporate age in years, gender, education in years, employment situation (dummy variable, 1 = employed), respondents' feeling about their current income situation (0 = "very difficult on present income," to 3 = "living comfortably on current income"), citizenship status (dummy variable, 1 = citizen), length of residence in years, language skills (dummy variable, 1 = respondent speaks the language of the receiving country), and dummy variables on region of origin (Eastern Europe, North Africa, Sub-Saharan Africa, Middle East and Turkey, Latin America, Asia, and US, Canada, and Australia) as individual-level covariates. Country dummy variables control for time-constant country-level differences such as historical trajectories and legal or institutional characteristics.

Variable descriptives are presented in the online appendix.

4.2. Methods

The empirical analysis using ESS data employs multilevel regression models in which respondents are nested within region-years. As the main specification, economic conditions are interacted with the grouping variable of being foreign-born. The estimates of these (cross-level) interactions show the extent to which economic conditions are related to group-based differences in trust between natives and immigrants (i.e., trust asymmetries). The models include a random intercept at the country-year level, a country-year random slope for immigration background, control variables, and regions as well as time-fixed effects. Region fixed effects control for unobserved time-constant differences across regions (and hence also countries) that could otherwise serve to bias empirical results. In particular, they control for time-constant factors such as historical trajectories, political culture, and institutional factors. This means that an estimate of economic context variables is based on comparisons of over-time variation within regions. Time fixed effects additionally absorb over-time changes in the dependent variable common to all regions (e.g., due to trending).

In additional specifications, we focus on immigrant respondents' social trust and perceived ethnic discrimination, using ESS data and analogous empirical models as described above. For models using ICS data, we employ multilevel regressions with a municipality random intercept and country fixed effects. Since the number of observations at the municipality level is low, we use restricted maximum likelihood estimation, which takes into account the limited number of degrees of freedom at the higher level (Elff et al. 2019).

5. Results

The empirical results of the main models are presented in Table 1. Model 1 shows average effects of individual and regional predictor variables. People who were born in a foreign country have systematically lower levels of generalized social trust than natives do. With regard to indicators of individual socio-economic status, we find that income is positively and statistically significantly related to social trust, while respondents' employment status is positively but non-significantly related. For regional structural conditions, changes in GDP per capita are strongly positively related to social trust. Unemployment rates are negatively, yet statistically non-significantly, related to trust. The findings from the structural indicators largely resemble patterns found in the literature on generalized social trust (e.g., Alesina and La Ferrara 2002; Delhey and Newton 2005).

For the subjective indicators, individual-level perception of current income is positively and statistically significantly related to social trust. Contextual evaluations of the regional economy, however, are negatively and statistically significantly associated with social trust. While the zero-order correlation between regional economic evaluations and regional trust is positive in a cross-sectional perspective (see online appendix), accounting for time-constant differences between regions, using region fixed effects and controlling for changes in objective economic conditions leads to a negative and statistically significant relationship.³ Controlled for objective economic conditions, changes in regional economic evaluations reflect socially-shared perceptions of opportunities in terms of labor market opportunities and economic success that arguably enhance

³ For example, over-time changes in unemployment rates are substantially negatively related to over-time changes in regional economic evaluations (see correlation matrix in the online appendix).

residents' aspirations to be economically successful, which in turn negatively affect social trust. For the control variables, being female, older, or socially active, having higher levels of education, living in large cities (compared to suburbs or small cities), and having a favorable evaluation of the national economy, predict higher levels of generalized social trust. Changes in regional immigration are positively, but not statistically significantly, related to social trust for the current set of European regions. This finding runs contrary to the literature on larger sets of European regions and longer time series (e.g., Ziller 2015; Ziller et al. 2019).

Model 2 tests interactions between being foreign-born and individual socio-economic status. The negative and statistically significant interaction with employment status suggests that for immigrants, being employed is less conducive to developing trust than it is for natives. While being employed is positively related to trust for natives, it is only unsystematically related for immigrants. With regard to income, we find no statistically significant interaction with immigrant status. Similarly, (changes in) regional economic wealth or unemployment yield no significant interaction with the grouping variable being foreign-born.

Model 3 includes interactions between being foreign-born and the perceptual indicators. We find a negative and statistically significant interaction with individual evaluation of current income. The conditional relationship is depicted in Figure 1, showing that trust asymmetries between natives and immigrants are particularly pronounced for individuals who evaluate their personal income situation as being positive. In addition, socially-shared evaluations matter for group-related trust asymmetries, as indicated by a negative and statistically significant interaction term. These findings imply that immigrants respond with rather decreasing social trust in contexts where, on average, people hold a predominantly positive perception of economic conditions. The conditional relationship is depicted in Figure 2, which shows that, under favorable contextual

economic evaluations, immigrants express lower levels of generalized social trust compared to natives. In other words, the social trust gap between natives and immigrants widens in contexts where socially-shared evaluations of the regional economy are predominantly positive.

Model 4 includes all specified interaction terms in one model. The substantial findings on the interactions involving employment status become statistically non-significant under this specification. For findings on perceptual indicators, the interactions remain intact in terms of statistical significance and magnitude of the coefficient estimate. The estimate even increases in size when controlling for the conditional role of objective indicators.

In supplementary analyses of potential mechanisms, we focus on immigrants only, and first examine the question of how economic conditions relate to immigrants' social trust and perceived discrimination. Table 2 presents the corresponding multilevel regression results. The results from Model 5 show that perceived discrimination is strongly negatively related to immigrants' social trust. Similar to the main models, income, evaluation of income, and GDP per capita are positively and significantly associated with social trust. However, the relationship between evaluation of income and social trust is weaker than in the full sample. This suggests that immigrants are less able than are natives to convert economic status into social trust.

Average evaluations of the regional economy are strongly positively linked to social trust, yet only marginal significant in terms of statistical testing ($B = -0.86$, $p = 0.06$). The reason is that perceived discrimination partly absorbs the predictive capacity of this variable. Without including discrimination in the model, contextual evaluations are statistically significantly related to social trust in the immigrant sample ($B = -0.95$, $p = 0.04$). Similar to the main models, the control variables age, education, social activity, and economic satisfaction are statistically significantly related to social trust, while factors such as length of residence are less relevant.

The extent to which, in turn, ethnic discrimination is related to economic conditions is tested in Model 6. To begin with, regional economic wealth is negatively and significantly related to perceived discrimination, while further objective indicators such as income and employment status yield no systematic association. Individual-level evaluations of personal income (and satisfaction with the national economy) are negatively and significantly related to discrimination. However, an increase in average evaluations of the regional economy is positively linked to perceived discrimination. Combining the evidence from Models 5 and 6, perceived discrimination appears as a relevant individual-level foundation for how shared perceptions of economic conditions relate to immigrants' social trust.

Second, we use ICS data on immigrants only as an additional specification, and present the corresponding results in Table 3. Model 7 tests how economic conditions relate to immigrants' satisfaction with their job situation. While the personal employment situation and evaluation of income are statistically significant predictors, we find no systematic evidence that macro-economic conditions are related to individual satisfaction with the current job situation. Model 8 tests immigrants' satisfaction with social life as an outcome variable. In addition to the relevance of several socio-demographic variables (e.g., gender and citizenship), we find that a favorable evaluation of personal income predicts a higher level of satisfaction. With regard to macro-economic conditions, we find a negative and statistically significant relationship between contextual evaluations of the economy and satisfaction with social life. In other words, immigrants who live in cities with positive socially-shared views on the economic situation express a lower level of satisfaction with their social life (compared to those who live in cities with less favorable views). Taken together, the findings from the ICS dataset underline that the paradoxical finding (based on ESS data) that favorably-assessed economic conditions increase

group-specific social trust asymmetries is due to processes of (perceived) exclusion and discrimination, rather than to job-specific characteristics.

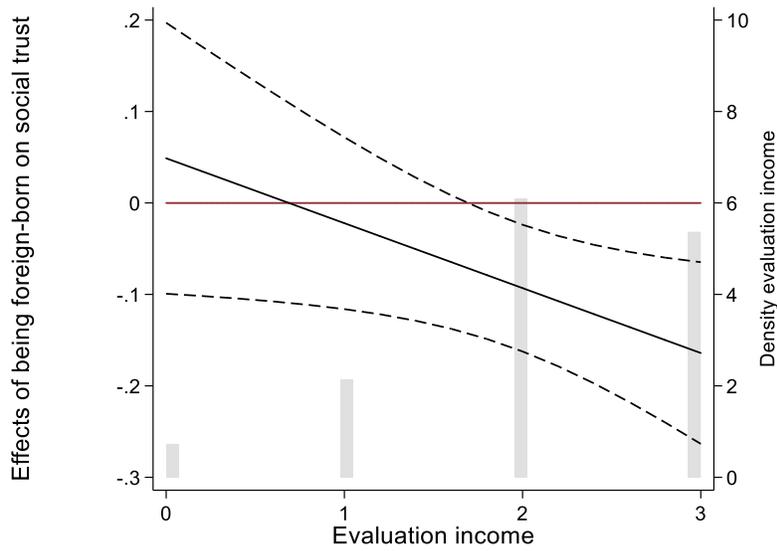
Table 1: Main models (ESS data, 2012-2016; all respondents)

	M1		M2		M3		M4	
	B	SE	B	SE	B	SE	B	SE
Intercept	-4.128	(2.638)	-4.167	(2.632)	-4.258	(2.612)	-4.290	(2.611)
Foreign-born	-0.102**	(0.037)	0.173	(0.193)	0.608**	(0.211)	1.276**	(0.377)
Female	0.097**	(0.020)	0.097**	(0.020)	0.097**	(0.020)	0.097**	(0.020)
Age	0.009**	(0.001)	0.009**	(0.001)	0.009**	(0.001)	0.009**	(0.001)
Education in years	0.049**	(0.003)	0.049**	(0.003)	0.049**	(0.003)	0.049**	(0.003)
Social activity (ref. less than once a month)								
More than once a month, less than once a week	0.263**	(0.030)	0.263**	(0.030)	0.263**	(0.030)	0.262**	(0.030)
Once a week or more	0.432**	(0.030)	0.432**	(0.030)	0.432**	(0.030)	0.431**	(0.030)
Urbanization of living area (ref. big city)								
Suburbs	-0.161**	(0.036)	-0.161**	(0.036)	-0.161**	(0.036)	-0.163**	(0.036)
Small city	-0.125**	(0.032)	-0.126**	(0.032)	-0.125**	(0.032)	-0.126**	(0.032)
Village	-0.050	(0.033)	-0.051	(0.033)	-0.051	(0.033)	-0.051	(0.033)
Countryside	-0.002	(0.047)	-0.003	(0.047)	-0.002	(0.047)	-0.001	(0.047)
Income	0.031**	(0.005)	0.031**	(0.005)	0.031**	(0.005)	0.029**	(0.005)
Employed	0.011	(0.039)	0.053	(0.043)	0.015	(0.039)	0.046	(0.043)
Evaluation of income	0.189**	(0.015)	0.189**	(0.015)	0.200**	(0.016)	0.201**	(0.016)
Satisfaction with national economy	0.192**	(0.005)	0.192**	(0.005)	0.192**	(0.005)	0.192**	(0.005)
<i>Macro-level predictors</i>								
Regional GDP/c	0.998**	(0.344)	1.011**	(0.343)	1.018**	(0.340)	1.023**	(0.340)
Regional unemployment	-0.007	(0.030)	-0.007	(0.030)	-0.007	(0.030)	-0.006	(0.030)
Av. evaluation of regional economy	-0.627**	(0.185)	-0.633**	(0.185)	-0.625**	(0.184)	-0.619**	(0.184)
Regional proportions of immigrants	0.037	(0.028)	0.036	(0.028)	0.036	(0.028)	0.036	(0.028)
Foreign-born × Income			0.001	(0.011)			0.017	(0.013)
Foreign-born × Employed			-0.212*	(0.096)			-0.162	(0.097)
Foreign-born × Regional GDP/c			-0.039	(0.041)			-0.014	(0.040)
Foreign-born × Regional unemployment			0.004	(0.006)			-0.015	(0.008)
Foreign-born × Evaluation income					-0.071*	(0.034)	-0.085*	(0.041)
Foreign-born × Av. evaluation regional economy					-0.222**	(0.082)	-0.372**	(0.121)
Region fixed effects	<i>Yes</i>		<i>Yes</i>		<i>Yes</i>		<i>Yes</i>	
Time fixed effects	<i>Yes</i>		<i>Yes</i>		<i>Yes</i>		<i>Yes</i>	
<i>Random effects</i>								
Random slope: foreign-born	0.156**	(0.052)	0.140**	(0.056)	0.119**	(0.052)	0.108**	(0.055)
Random intercept region	0.073**	(0.016)	0.073**	(0.016)	0.072**	(0.015)	0.072**	(0.015)
Residual	1.544**	(0.007)	1.544**	(0.007)	1.544**	(0.007)	1.544**	(0.007)
N(region-years)	104		104		104		104	
N(respondents)	25036		25036		25036		25036	

Note: Dependent variable = generalized social trust. Standard errors in parentheses, * $p < 0.05$,

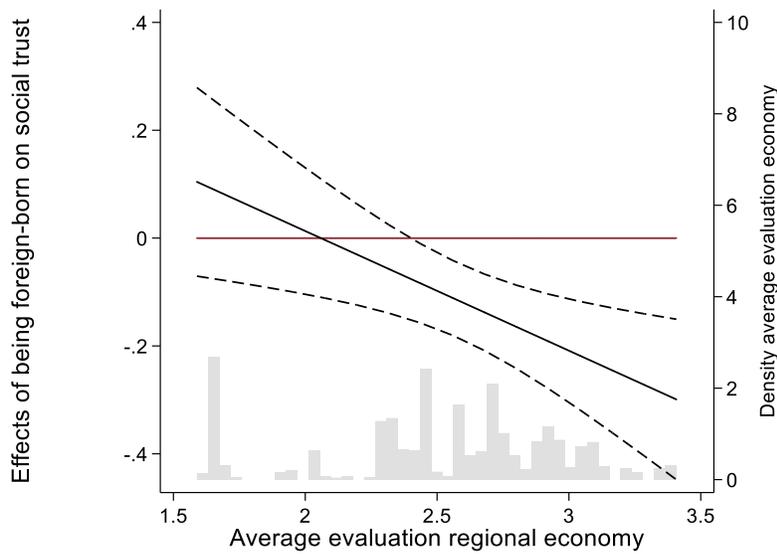
** $p < 0.01$ (two-tailed tests).

Figure 1: Interaction foreign-born \times evaluation income



Note: Dashed lines represent 95 percent confidence intervals.

Figure 2: Interaction foreign-born \times average evaluation regional economy



Note: Dashed lines represent 95 percent confidence intervals.

Table 2: Models on individual-level foundations (ESS data, 2012-2016; immigrants only)

	M5 (DV: Social trust)		M6 (DV: Discrimination)	
	B	SE	B	SE
Intercept	-10.684	(5.946)	0.753	(0.787)
Length of residence (ref: less than two years)				
More than two and less than 10 years	-0.096	(0.131)	0.039	(0.023)
More than 10 and less than 20 years	-0.176	(0.131)	0.014	(0.022)
More than 20 years	-0.259	(0.137)	0.004	(0.025)
Perceived discrimination	-0.587**	(0.093)		
Female	0.058	(0.059)	-0.009	(0.011)
Age	0.011**	(0.002)	-0.002**	(0.001)
Education in years	0.039**	(0.007)	0.000	(0.002)
Social activity (ref. less than once a month)				
More than once a month, less than once a week	0.257**	(0.082)	0.005	(0.013)
Once a week or more	0.420**	(0.083)	0.005	(0.020)
Urbanization of living area (ref. big city)				
Suburbs	-0.175	(0.096)	0.008	(0.021)
Small city	-0.146	(0.085)	-0.012	(0.018)
Village	-0.034	(0.100)	-0.036	(0.021)
Countryside	-0.068	(0.155)	-0.010	(0.025)
Income	0.047**	(0.013)	-0.005	(0.003)
Employed	-0.134	(0.093)	-0.011	(0.020)
Evaluation of income	0.123**	(0.043)	-0.023**	(0.009)
Satisfaction with national economy	0.197**	(0.015)	-0.011**	(0.004)
<i>Macro-level predictors</i>				
Regional GDP/c	2.290**	(0.722)	-0.278*	(0.115)
Regional unemployment	0.052	(0.080)	0.012	(0.012)
Av. evaluation regional economy	-0.858	(0.460)	0.147*	(0.070)
Regional proportions of immigrants	0.020	(0.063)	0.016	(0.014)
<i>Random effects</i>				
Random intercept region	0.000**	(0.000)	0.000	(0.000)
Residual	1.624**	(0.020)	0.311**	(0.015)
Region fixed effects	<i>Yes</i>		<i>Yes</i>	
Time fixed effects	<i>Yes</i>		<i>Yes</i>	
N(region-years)	104		104	
N(respondents)	3140		3140	

Note: DV = Dependent variable. Standard errors in parentheses. Model 6 is based on multilevel linear probability models with robust standard errors. * $p < 0.05$, ** $p < 0.01$ (two-tailed tests).

Table 3: Models on individual-level foundations (ICS data, 2012; immigrants only)

	M7 (DV: Satisfaction job situation)		M8 (DV: Satisfaction social situation)	
	B	SE	B	SE
Intercept	3.685**	(0.629)	6.090**	(0.417)
Length of residence in years	0.015**	(0.005)	0.017**	(0.003)
Female	-0.025	(0.069)	-0.233**	(0.051)
Age	0.004	(0.004)	-0.026**	(0.002)
Education in years	0.004	(0.008)	-0.013**	(0.006)
Citizenship	0.256**	(0.085)	0.281**	(0.064)
Language skills	0.289	(0.162)	0.224	(0.120)
Evaluation of income	0.779**	(0.043)	0.411**	(0.031)
Employed	2.121**	(0.139)	0.098	(0.071)
Region of origin (ref. Eastern Europe)				
North Africa	-0.254	(0.147)	-0.004	(0.108)
Sub-Saharan Africa	-0.274	(0.141)	-0.011	(0.104)
Middle East + Turkey	-0.338*	(0.136)	0.037	(0.100)
Latin America	0.043	(0.134)	0.296**	(0.104)
Asia	-0.085	(0.119)	-0.243**	(0.090)
US, Canada, Australia	0.253	(0.321)	0.415	(0.227)
<i>Macro-level predictors</i>				
Regional GDP/c	-0.184	(0.224)	-0.046	(0.178)
Regional unemployment	-0.047	(0.036)	-0.055	(0.029)
Av. evaluation regional economy	0.192	(0.436)	-0.738*	(0.356)
Proportion of immigrants	0.933	(1.178)	-0.043	(0.792)
<i>Random effects</i>				
Random intercept municipality	0.170**	(0.094)	0.145**	(0.076)
Residual	2.303**	(0.024)	2.120**	(0.018)
Country fixed effects	<i>Yes</i>		<i>Yes</i>	
N(municipality)	15		15	
N(respondents)	4736		7102	

Note: Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$ (two-tailed tests).

6. Conclusion

This study examines the role of economic conditions for trust asymmetries between natives and immigrants in Europe. Employing arguments related to accounts of immigrant assimilation, a favorable economic situation promotes perceived and actual opportunities for status improvement of immigrants, facilitates their socio-economic integration, and leads to narrowing social trust gaps. In contrast, research on unfulfilled status aspirations and the integration paradox (Verkuyten 2016) states that a favorable economic situation stimulates immigrants' aspirations to

be economically successful, and falling short of this aspiration due to a lack of opportunity or discrimination increases immigrants' relative deprivation as well as reduces their trust.

The results of the empirical analyses provide evidence in favor of the integration paradox argument, and point to the central role of perceived discrimination as an underlying mechanism. The central finding is that changes in regional evaluations in the economic context predict widening trust gaps. We show in supplementary analysis that, in regions of prosperous economic evaluations, immigrants express higher levels of perceived ethnic discrimination and lower satisfaction with their social life—both likely explanations of why native-immigrant trust asymmetries are more pronounced in these regions. Over and above this, objective economic conditions such as changes in unemployment or economic growth are not systematically related to group-related trust gaps, and may rather serve as explanations of why differences in regional economic evaluations occur. The extent to which objective and perceptual indicators relate to each other should be determined in future research using multilevel mediation models that are beyond the scope of the present study.

The present study provides a comprehensive examination of how economic conditions relate to social trust, and finds support for a narrative that is more complex and less linear than a resource-based perspective of socio-economic differences between natives and immigrants (De Vroome et al. 2013). The findings resonate with studies from the German and Dutch context, focused on the relationship between education and perceived discrimination (Steinmann 2019; Verkuyten 2016). Our findings at the same time extend previous research by focusing on the role of economic conditions and social trust as a dimension of social integration.

However, there remain several avenues for future research. The present empirical design did not enable us to distinguish between discrimination that is perceived and that which actually occurs.

While it is plausible that only noticed (and thus perceived) discrimination becomes socially relevant, future research should elaborate on this perspective by using specific indicators on perceived and experienced discrimination, preferably using experimental research designs. Moreover, discrimination may not always hinder an active approach to life, but may also facilitate civic engagement and trust in particular groups, rather than in people in general (Oskooii 2018). In order to further specify underlying mechanisms linking economic conditions and social trust, subsequent studies should take into account indicators of perceived aspirations, relative deprivation, as well as trust in various groups. Another way forward for future research is to determine the extent to which economic conditions are relevant for the social trust of descendants of immigrants and of members of ethnic minorities (van Maaren and van de Rijt 2018).

With regard to practical implications, our study suggests that discriminatory practices in the labor market hamper immigrants' social trust, and should give rise to an extension of existing anti-discrimination policies beyond color-blind equal treatment (Ziller 2017). Moreover, a potential pathway of avoiding perceived deprivation of immigrants is to develop measures in order to realistically manage expectations and aspirations by performance-related feedback in educational and occupational institutions. In this vein, information campaigns for incoming immigrants and employers about causes and consequences of unequal treatment in the labor market and social settings might reduce the risk of discriminatory experiences.

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Online Appendix to

Economic conditions and native-immigrant asymmetries in generalized social trust

Table A1: Variable descriptives ESS study (all respondents)

Variable	Obs	Mean	Std.Dev.	Min	Max
Social trust	25036	5.473	1.744	0	10
Foreign-born	25036	0.126	0.332	0	1
Female	25036	0.515	0.5	0	1
Age	25036	49.889	17.912	15	101
Education years	25036	13.308	4.336	0	54
Social activity (less than once a month)	25036	0.159	0.366	0	1
More than once a month, less than once a week	25036	0.377	0.485	0	1
Once a week or more	25036	0.464	0.499	0	1
Urbanization of living area (big city)	25036	0.172	0.377	0	1
Suburbs	25036	0.153	0.36	0	1
Small city	25036	0.313	0.464	0	1
Village	25036	0.286	0.452	0	1
Countryside	25036	0.077	0.267	0	1
Income	25036	5.289	2.816	1	10
Employed	25036	0.921	0.269	0	1
Evaluation of income	25036	2.124	0.844	0	3
Satisfaction with national economy	25036	4.622	2.431	0	10
Regional GDP/c	25036	3.189	0.801	1.65	5.76
Regional unemployment	25036	10.354	6.374	2.9	34.8
Av. evaluation regional economy	25036	2.518	0.452	1.589	3.407
Regional proportions of immigrants	25036	14.622	6.979	2.51	49.53

Table A2: Variable descriptives ESS study (immigrants only)

Variable	Obs	Mean	Std.Dev.	Min	Max
Social trust	3140	5.382	1.798	0	10
Perceived discrimination	3140	0.122	0.327	0	1
Length of residence (less than two years)	3140	0.065	0.247	0	1
More than two and less than 10 years	3140	0.234	0.423	0	1
More than 10 and less than 20 years	3140	0.258	0.437	0	1
More than 20 years	3140	0.443	0.497	0	1
Female	3140	0.511	0.5	0	1
Age	3140	45.117	15.334	15	96
Education years	3140	13.902	4.486	0	38
Social activity (less than once a month)	3140	0.198	0.398	0	1
More than once a month, less than once a week	3140	0.394	0.489	0	1
Once a week or more	3140	0.408	0.492	0	1
Urbanization of living area (big city)	3140	0.277	0.448	0	1
Suburbs	3140	0.171	0.377	0	1
Small city	3140	0.331	0.471	0	1
Village	3140	0.17	0.375	0	1
Countryside	3140	0.051	0.219	0	1
Income	3140	4.828	2.766	1	10
Employed	3140	0.871	0.335	0	1
Evaluation of income	3140	1.922	0.897	0	3
Satisfaction with national economy	3140	5.065	2.422	0	10
Regional GDP/c	3140	3.464	0.906	1.65	5.76
Regional unemployment	3140	10.627	5.981	2.9	34.8
Av. evaluation regional economy	3140	2.528	0.446	1.589	3.407
Regional proportions of immigrants	3140	17.752	9.79	2.51	49.53

Table A3: Variable descriptives ICS study (immigrants only)

Variable	Obs	Mean	Std.Dev.	Min	Max
Satisfaction with social life	7102	7.667	2.218	0	10
Satisfaction with job	4736	7.025	2.491	0	10
Age	7102	38.67	13.283	15	93
Female	7102	0.511	0.5	0	1
Education in years	7102	10.989	4.492	0	18
Employed	7102	0.83	0.376	0	1
Evaluation of income	7102	1.693	0.893	0	3
Citizenship	7102	0.316	0.465	0	1
Length of residence in years	7102	14.503	11.733	0	90
Language skills	7102	0.949	0.22	0	1
Region of origin (ref. Eastern Europe)	7102	0.218	0.413	0	1
North Africa	7102	0.145	0.352	0	1
Sub-Saharan Africa	7102	0.159	0.366	0	1
Middle East + Turkey	7102	0.114	0.318	0	1
Latin America	7102	0.196	0.397	0	1
Asia	7102	0.155	0.362	0	1
US, Canada, Australia	7102	0.013	0.115	0	1
Regional unemployment	7102	12.412	5.671	3.3	22.5
Regional GDP/c	7102	3.228	0.941	1.74	5.76
Av. evaluation regional economy	7102	2.232	0.449	1.39	3.201
Regional proportions of immigrants	7102	15.038	10.013	3.41	48.06

Table A4: Zero-order correlations of hypotheses-relevant variables (ESS Data)

Individual-level variables (pooled ESS waves)

	(1)	(2)	(3)	(4)
(1) Social trust	1			
(2) Income	0.19*	1		
(3) Being unemployed	0.09*	0.22*	1	
(4) Positive evaluation income situation	0.32*	0.24*	0.13*	1

Regional-level variables (pooled ESS waves)

	(1)	(2)	(3)	(4)
(1) Regional social trust	1			
(2) Regional GDP/capita	0.28*	1		
(3) Regional unemployment rates	-0.49*	-0.33*	1	
(4) Regional economic evaluations	0.68*	0.48*	-0.78*	1

Regional-level variables (over-time changes, difference scores 2016-2012)

	(1)	(2)	(3)	(4)
(1) Change in regional social trust	1			
(2) Change in regional GDP/capita	0.33*	1		
(3) Change in regional unemployment rates	-0.05	-0.48*	1	
(4) Change in regional economic evaluations	-0.15	0.25	-0.60*	1

Note: * $p < 0.05$; $n = 52$. For regional-level variables, social trust has been aggregated to region (or region-year) means.