

Freedom of Movement Restrictions Inhibit the Social Integration of Refugees ^{*}

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Abstract

How do freedom of movement restrictions affect refugee integration? While a growing body of research studies the initial allocation of refugees, there is little causal evidence on subsequent policies that restrict residential mobility. We study a contentious law in Germany, which barred newly arrived refugees from relocating to a location different from the one they were assigned to. To identify the causal effect of the movement restriction on integration, we utilize a sharp date cutoff that governs whether refugees are affected by the policy. We demonstrate that restricting freedom of movement had pronounced negative effects on refugees' sense of belonging in Germany, while increasing identification with their home countries. In addition, the policy decreased social engagement, but had no detectable effects on contact with natives or co-ethnics. We argue that detrimental effects stem from the fact that discriminatory policies send a negative signal about the inclusiveness of the host society.

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1 Introduction

As the number of forcibly displaced people approaches one percent of the world population (Reuters 2020), the integration of refugees has become a core challenge for governments in destination countries. Frequently, these governments enact restrictions on newly arrived refugees, ranging from banning employment (Fasani, Frattini and Minale 2020) or prohibiting religious expression (Abdelgadir and Fouka 2020) to limiting residence permits (Blomqvist, Thoursie and Tyrefors 2018). The earliest experience of such restrictions is often in the form of initial spatial allocation policies, which have received considerable scholarly attention (see e.g. Bratsberg et al. 2020). Compared to allocation policies, less is known about integration policies that limit residential mobility beyond the initial allocation. However, a large number of countries including Switzerland, the Netherlands, and France either outright prohibit or penalize refugees for leaving their assigned location (UNHCR 2018).

We study the case of Germany, where a 2016 law forced the majority of refugees to remain at the location they were assigned to upon arrival in the country. While intended to facilitate integration, the effect of the newly enacted restriction on residential mobility is far from clear. Proponents of the restriction have argued that permitting refugees to relocate would result in the formation of ethnic enclaves in large urban areas, reducing incentives to assimilate (see Lazear 1999; Cutler, Glaeser and Vigdor 2008). On the other hand, ethnic networks may facilitate the labor market integration of refugees by disseminating job information and improving the job-worker match quality (see also Damm 2014).

To causally identify the effects of movement restrictions, we utilize the fact that restrictions were retroactively applied based on a sharp date cutoff. The German government only restricted the movement of refugees whose asylum applications were approved after January 1, 2016. We exploit this discontinuity for identification and compare otherwise similar refugees within a small bandwidth around the sharp date cutoff. We estimate the

causal effect of movement restrictions on indicators for contact, feelings of belonging, social integration and economic integration, measured in 2017 and 2018.

Our results show that the majority of affected refugees express the desire to move if they were permitted to do so. Yet, we find that exempted refugees are not significantly more likely to relocate in between successive survey waves. We then demonstrate that movement restrictions make refugees markedly more pessimistic about their employment prospects in Germany. Turning to measures of identity and belonging, we find pronounced negative effects of the movement restriction policy. Affected refugees feel less welcome in Germany and identify more strongly with their home countries. Relatedly, we observe that participation in a variety of social activities decreased as a result of movement restrictions. However, we do not find that restrictions affected the frequency of contact with natives, co-ethnics, or other immigrants. Finally, we do not observe negative effects on labor market integration, as employment is higher among restricted refugees. However, we emphasize that this effect may stem from the fact that employment exempts refugees from the movement ban, and therefore incentivizes them to seek employment. Taken together, our results suggest that restricting residential mobility negatively affects refugee integration, especially with respect to social engagement and feelings of belonging.

Our paper make several contributions. We present the first causal estimates of the effects of restricting residential mobility of refugees, a policy that ultimately affected more than one million refugees in Germany (Bundesamt fuer Migration 2020). In contrast to claims that movement restrictions would prevent the formation of enclaves, our findings suggest that the restrictions had little impact on the geographic distribution of refugees. At the same time, the movement restriction negatively affected social integration and feelings of belonging among refugees. Strikingly, a policy that was designed to inhibit ethnic segregation and the entrenchment of separate communities resulted in *stronger* identification with refugees' country of origin. Our findings show that restrictive integration policies can constitute a strong negative signal about the inclusiveness of the host society, a possibility that received

scant attention when the policy was first discussed in the German parliament.

Second, we contribute to a growing literature on restrictive or exclusionary policies that affect minority populations, such as restrictions on religious expression (Abdelgadir and Fouka 2020), citizenship (Avitabile, Clots-Figueras and Masella 2013) or language education (Fouka 2019). Previous research has shown that severe intrusions into individual rights, such as internment, can negatively affect the incorporation of minority populations (Komisarchik, Sen and Velez 2020). We demonstrate that even less severe intrusions, such as restricting the right to internal migration, may create a rift between the affected group and the majority population. Since we examine a ban on domestic movement, our results can shed light on the possible repercussions of a broader class of policies that restrict internal migration of minority populations, such as the Chinese *Hukou* or the Vietnamese *Ho Khau* system.

Beyond the scholarly discourse, our findings have implications for the legality of current and future restrictions on refugee movement. Assessing the legality of movement restrictions, the European Court of Justice ruled in 2016 that such restrictions are only permissible if they facilitate the integration of refugees (*CJEU C-443/14* 2016). While further research is needed, our findings cast doubt on whether the current policy fulfills the conditions outlined by the court.

2 Background

Spatial dispersion policies are typically enacted to prevent the formation of ethnic enclaves. Such policies rest on the assumption that, in the absence of restrictions, refugees would sort into residential areas with a high concentration of refugees or other immigrants. This derives from the general concept of social homophily – the observation that individuals have a preference for being around others who are similar to themselves, allowing for easier communication and cooperation (Cutler, Glaeser and Vigdor 2008).

Prior research has yielded mixed results on the effects of ethnic segregation on immigrant integration. On the one hand, as ethnic enclaves provide immigrants access to social networks and economic opportunities independent of the host country's norms and language, they might reduce incentives to assimilate (see Lazear 1999). At the same time, ethnic networks can facilitate the labor market integration of refugees by disseminating job information and improving the job-worker match quality (Damm 2014). This might be particularly beneficial for low-skilled refugees, who might otherwise have difficulties integrating into the host country's labor market (Edin, Fredriksson and Åslund 2003).

Aside from their effect on residential mobility, movement restrictions constitute an intrusion into a fundamental liberty, i.e the right to freely choose one's place residence within a country. As movement restrictions generally only apply to refugees, they send a strong negative signal about the inclusiveness of the host society. This might add to the precarious state of well-being and mental health of many refugees after fleeing from war and persecution (Fazel, Wheeler and Danesh 2005). Porte and Torney-Purta (1987) show that institutional features of the asylum process, including barriers to work and social services, can induce severe stress among refugees. Restrictive policies may compound the stressors affecting an already traumatized group.

More generally, discriminatory policies have been shown to negatively affect immigrant integration in a variety of contexts. Abdelgadir and Fouka (2020) for example show that a national headscarf ban in France reduced the secondary educational attainment of Muslim girls, increased perceptions of discrimination, and overall reduced Muslim girls' sense of belonging in French society. Likewise, prohibitions on German language instruction in US schools during WW1 stifled assimilation among the German minority and increased its sense of a separate cultural identity (Fouka 2019). Inclusionary policies such as birthright citizenship, on the other hand, appear to boost integration outcomes (Avitabile, Clots-Figueras and Masella 2013).

3 Movement restrictions in Germany

Beginning in 2015, Germany experienced an unprecedented inflow of refugees. Today, refugees constitute more than two percent of the country’s population. To facilitate the integration of refugees into German society, the government passed the wide-ranging *Integrationsgesetz* (‘integration law’) in August 2016. The law introduced mandatory movement restrictions for refugees in Germany, motivated by (i) the desire to prevent enclave formation and (ii) calls to equally distribute the costs of integrating refugees across the country.

After arriving in Germany, refugees are allocated to one of the 16 federal states. This assignment process is random – the assigned location is independent of individual characteristics. Therefore, we would not expect that certain types of refugees are more likely to be placed in, for example, urban areas. The total number of refugees a state receives is proportional to its population size and tax revenue. Within each state, refugees are then allocated to counties. With few exceptions, the number of refugees a county receives is proportional to its population size.

The August 2016 movement restriction policy requires approved refugees to reside in the state that they were initially assigned to for a period of three years. Seven large states, accounting for 73% of Germany’s population, further require that refugees must live in the specific county that they were assigned to. While there is variance in the implementation of the policy across states, we stress that the initial assignment of refugees to states is independent of the individual background characteristics of refugees.¹ The policy prevents refugees from freely choosing their *place of residence* but does not prohibit them from traveling within the country.

Nationwide, the new restrictions were applied to refugees whose asylum applications

¹In some states, the policy was applied retroactively, meaning that refugees had to return to their initial assignment location if they relocated before the law entered into force in August 2016.

were approved after January 1, 2016. Since the majority of refugees filed their asylum applications after this date, the restrictions ultimately affected more than one million refugees (Bundesamt fuer Migration 2020).

4 Empirical Strategy

4.1 Data

Our main data source is the *IAB-BAMF-SOEP Survey of Refugees in Germany* (henceforth *SOEP*), a panel of about 5,000 refugees surveyed in 2016, 2017, and 2018. In addition to basic demographics, asylum status and labor market indicators, the survey contains a wide range of items relating to the integration of refugees in Germany. Following prior work, we adopt a multidimensional conception of immigrant integration in this paper and selected a variety of items relating to the psychological, social, and economic integration of refugees (Koopmans 2013; Harder et al. 2018). Most of our outcomes are measured twice after the policy was enacted, in 2017 and 2018. We provide summary statistics on all variables in tables A.1 and A.2. In table A.3, we list the survey questions corresponding to the outcomes used in our main analysis. For data protection reasons, we currently do not have information on the county or city where refugees reside.

4.2 Identification

Refugees are subject to the movement restriction if their asylum application was approved after January 1, 2016. To estimate the causal effect of movement restrictions on integration, we compare otherwise similar refugees on both sides of the approval date cutoff. Importantly, we do not estimate the effect of relocating on integration, but rather the effect of being subject to the movement restriction.

The SOEP includes the year and month in which asylum applications were decided on. Consequently, we can compare refugees who are similar with respect to background characteristics, arrived in Germany at the same time, but whose asylum applications were approved right before or after the treatment assignment cutoff.

We use a matching design to implement our identification strategy. We first subset our sample to applications approved between November 2015 and February 2016, resulting in a two-month bandwidth around the assignment cutoff. We then match each treated unit to all control units with *exactly* the same covariate values. Our covariates are age (discretized), country of origin, gender, education, and the quarter-year of arrival in Germany. We form blocks of treated and control units close to the treatment assignment cutoff, such that within each block, all units (treatment and control) have the same covariate values. By design, covariate balance is perfect within blocks. Across blocks, the treated and control group are similarly balanced on all relevant covariates (see figure A.1). After matching, we estimate a series of OLS models with block fixed effects of the following form:

$$y_{i,j} = \alpha + \tau D_i + \sum_{j=2}^M \beta_j B_{i,j} + \epsilon_i$$

Here, $y_{i,j}$ is the outcome variable observed for individual i nested in covariate-block j . D_i is a binary indicator for the treatment assignment and equals one if a refugee’s asylum application was approved after January 1, 2016. We estimate a total of $M = 47$ (2017) or $M = 45$ (2018) block fixed effects β_j in the case of a two-month bandwidth, where $B_{i,j} = 1$ if individual i is a member of covariate-block j . The key parameter of interest is τ , the effect of the movement restrictions. We use heteroskedasticity-robust standard errors for all of our analyses.

Exemptions from the policy can be granted if refugees take up employment, vocational training, or distant tertiary education. We do not match on these variables to avoid post-treatment bias. We are hence estimating the intent-to-treat effect of the movement restric-

tion, as compliance with the policy is likely not perfect. However, noncompliance is a rare phenomenon. Only 3.2% of the refugees in our 2016 sample were in employment that made them eligible for an exemption. Therefore, we expect to slightly underestimate the complier average causal effect.

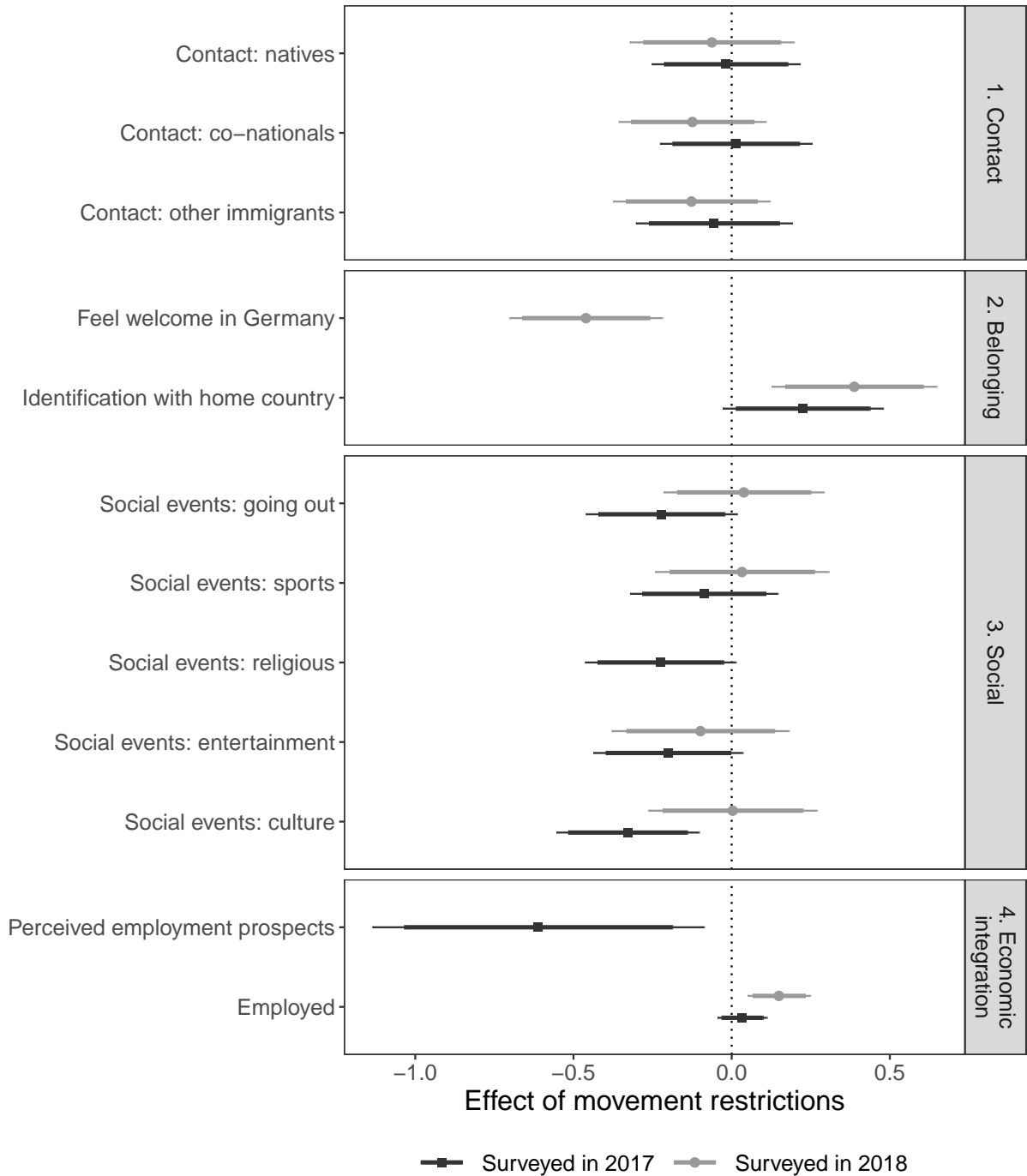
Selection into treatment or sorting around the treatment assignment cutoff is not a concern in our setup. All asylum decisions in our matched sample were made between November 2015 and February 2016, several months before the integration law was passed in August 2016. To the best of our knowledge, the possibility of a sharp date cutoff was first discussed in May 2016 (BAMS 2016). Refugees and local bureaucrats were therefore unaware of the sharp date cutoff when asylum decisions were made.

Our identification strategy requires that the exact timing of approval decisions around the January 1 cutoff is uncorrelated with unobserved individual or institutional characteristics. In section A.6, we provide evidence in support of this key identification assumption. In addition, we exploit the panel structure of the SOEP survey and conduct a placebo test using the outcomes measured in 2016, mostly before the policy was implemented (see figure A.9). Reassuringly, we do not find evidence for pre-treatment differences around the treatment assignment cutoff.

5 Results

First, we show that restrictions had little effect on observed the observed propensity to relocate. More than 60% of restricted refugees report that they would relocate within Germany if permitted. In figures A.2 and A.3 in the SI, we however demonstrate that stated intentions of refugees and observed behavior diverge. Our data does not allow us to perfectly reconstruct the movement history of refugees after their initial assignment. However, we do observe whether refugees moved between survey waves, and whether they live in urban

Figure 1: Effect of movement restrictions on integration



Note: The figure shows estimated effects movement restrictions on the outcomes listed on the left-hand side. The horizontal bars represent 90% (thick lines) / 95% (thin lines) confidence intervals. All variables are standardized except employment status, which is binary. The sample is based on a two-month bandwidth around the Jan 1, 2016 cutoff. The sample size is between 194 and 242 for all outcomes except perceived employment prospects, where it is 67. More details are given in table A.5 in the SI.

or rural areas. We find that unrestricted refugees are not significantly more likely to move than those refugees whose movement is restricted. We discuss potential reasons for this finding in section A.4 in the SI. In addition, we also show that unrestricted refugees are not significantly more likely to live in urban areas.

In Figure 1, we present the main effects of the relocation ban on integration, separately for the 2017 and 2018 survey waves.² Our first set of outcomes considers contact with natives, co-nationals and other immigrants. We observe point estimates close to zero for all outcomes, suggesting that movement restrictions had little effect on contact. Moving to the two items that measure refugees' sense of belonging in Germany, we find that the policy led to a 0.5 standard deviation decrease in the degree to which refugees feel welcome in Germany. Conversely, the strength of identification with their respective home countries increased substantially. These effects are already present in 2017 but persist into the year 2018, two years after the policy was enacted.

Regarding social integration, we observe negative effect estimates of similar magnitude across all five social engagement dimensions in 2017. These effects, however, are not observed in 2018. This may seem inconsistent with our results on contact, where we find no detectable differences between restricted and unrestricted refugees. However, it is important to note that about two thirds of the refugees are married and hence likely attend social events with their families. For this large subgroup, the decreased frequency of attending social events does not automatically translate into decreased contact with natives or other refugees. Given the small bandwidth around the date cutoff we consider in our analysis, we therefore cannot rule out effects on contact for the subgroup of unmarried refugees.

Regarding labor market integration, we first show that restricted refugees were initially much more pessimistic about their labor market prospects. However, we find no difference in employment in 2017, while employment among restricted refugees is higher in 2018 than

²Not all survey items were asked in both years. We present pooled results in figure A.10.

among unrestricted refugees. While ostensibly positive, we note that the employment result should be considered (i) in light of the incentives created by the movement restrictions and (ii) the fact that additional employment is often in low-wage occupations. Refugees were incentivized to find employment, as this exempts them from the movement restriction (see section 4.2). Locational characteristics are unlikely to drive the employment effect, as we do not find that unrestricted refugees are more likely to move.³ Second, we stress that most employed refugees end up in low-skill occupations that pay little more than the lowest level of welfare benefits. At 1,500 euros per month, the median net household income of employed refugees in our sample falls just below the national poverty line.

In addition to the main results, section A.6 in the SI contains a series of robustness checks. Most importantly, we provide evidence that faster asylum decisions do not correlate with individual integration outcomes. Our identification strategy exploits the fact that some asylum applications are accepted slightly quicker than others, which may prove problematic if acceptance speed is correlated with unobserved characteristics of the local bureaucracy or the affected refugees. Through a number of additional analyses, we validated that this is not the case. We also conduct additional checks to ensure that our results are robust across different model specification and bandwidths.

6 Conclusion

Does restricting residential mobility benefit or hinder refugee integration? In this paper, we provide causal estimates of the effect of domestic movement restrictions in the wake of the 2015 refugee influx in Germany. Utilizing a sharp date cutoff, we document that movement restrictions had negative effects on refugees' sense of belonging as well as social engagement. We find no effects on contact with natives or co-ethnics. Finally, we show that

³In a supplementary analysis, we show that the movement restrictions did not have differential impacts on refugees who live in urban compared to rural areas (see figure A.11).

restrictions initially induced pessimism about employment prospects, but then led to higher employment rates among affected refugees. Taken together, we observe that movement restrictions negatively affect integration, especially with respect to social engagement and belonging. We argue that the observed effect could stem from two related mechanisms. First, refugees may view German society as less inclusive if their rights are constrained by the movement ban, a process that has been observed for other restrictive policies (see e.g. Fouka 2019; Abdelgadir and Fouka 2020). Second, refugees may perceive that the movement ban worsens their own economic prospects, consistent with the findings reported in figure 1. As a result, refugees could be less inclined to integrate into German society.

Before moving on, we discuss two limitations of our study. First, we are only able to examine short- to medium-term effects of the movement restriction, as our outcomes are measured at most two years after the initial restriction. Second, our identification strategy requires that we analyze only refugees whose asylum applications were approved around January 1, 2016. As a result, our sample mainly consists of Syrian refugees who entered the country in the second half of 2015. Against this background, we emphasize that we identify a *local* average treatment effect that may not be representative of the average treatment effect among all refugees.

As an alternative to restricting residential mobility, we argue that governments should focus their attention on the spatial allocation of refugees upon arrival. We found no evidence that movement restrictions have a substantial impact on relocation decisions. This calls into question the necessity of movement restrictions to (i) inhibit the formation of ethnic enclaves or (ii) prevent an unequal distribution of the costs of integrating refugees. However, prior research confirms the relevance of locational characteristics (Bratsberg et al. 2020) for refugee integration. Consequently, a more efficient initial placement regime could achieve superior integration outcomes without the negative social and psychological repercussions of the current movement restrictions.

Going beyond the direct impact on refugees, our study hints at the wider consequences of restrictive integration policies. Perhaps paradoxically, our findings suggest that restricting refugee rights could spur support for populist, anti-immigration parties. As we demonstrate, restricting residential mobility decreases social integration and makes refugees feel more distant from the native community. At the same time, natives who perceive immigrants as less integrated tend to hold less favorable attitudes towards immigration (Sniderman, Hagendoorn and Prior 2004). Restrictive policies may therefore provide fuel for radical-right parties if the negative ramifications of those policies reinforce the populist notion of immigrants as ‘unwilling’ to integrate.

References

- Abdelgadir, Aala and Vasiliki Fouka. 2020. “Political Secularism and Muslim Integration in the West: Assessing the Effects of the French Headscarf Ban.” *American Political Science Review* pp. 1–17.
- Avitabile, Ciro, Irma Clots-Figueras and Paolo Masella. 2013. “The Effect of Birthright Citizenship on Parental Integration Outcomes.” *The Journal of Law and Economics* 56(3):777–810.
- BAMS. 2016. “Gesetzentwurf Der Bundesregierung: Entwurf Eines Integrationsgesetzes.”. **URL:** <http://www.bmas.de/SharedDocs/Downloads/DE/PDF-Meldungen/2016/entwurf-integrationsgesetz.pdf>
- Blomqvist, Niklas, Peter Skogman Thoursie and Bjorn Tyrefors. 2018. “Restricting Residence Permits.” p. 51. **URL:** <http://btyrefors.se/wp-content/uploads/2018/05/PUT9.pdf>
- Bratsberg, Bernt, Jeremy Ferwerda, Henning Finseraas and Andreas Kotsadam. 2020. “How Settlement Locations and Local Networks Influence Immigrant Political Integration.”

- American Journal of Political Science* p. ajps.12532.
- Bundesamt fuer Migration. 2020. Aktuelle Zahlen Zu Asyl. Technical report Nürnberg.
- CJEU C-443/14*. 2016.
- URL:** http://docs.dpaq.de/10441-c04432014_dearr.pdf
- Cutler, David M., Edward L. Glaeser and Jacob L. Vigdor. 2008. “When Are Ghettos Bad? Lessons from Immigrant Segregation in the United States.” *Journal of Urban Economics* 63(3):759–774.
- Damm, Anna Piil. 2014. “Neighborhood Quality and Labor Market Outcomes: Evidence from Quasi-Random Neighborhood Assignment of Immigrants.” *Journal of Urban Economics* 79:139–166.
- Edin, Per-Anders, Peter Fredriksson and Olof Åslund. 2003. “Ethnic Enclaves and the Economic Success of Immigrants—Evidence from a Natural Experiment.” *The Quarterly Journal of Economics* 118(1):329–357.
- Fasani, Francesco, Tommaso Frattini and Luigi Minale. 2020. “Lift the Ban? Initial Employment Restrictions and Refugee Labour Market Outcomes.”
- URL:** <http://ftp.iza.org/dp13149.pdf>
- Fazel, Mina, Jeremy Wheeler and John Danesh. 2005. “Prevalence of Serious Mental Disorder in 7000 Refugees Resettled in Western Countries: A Systematic Review.” *Lancet* 365:1309–1314.
- Fouka, Vasiliki. 2019. “Backlash: The Unintended Effects of Language Prohibition in US Schools after World War I.” *The Review of Economic Studies* .
- Harder, Niklas, Lucila Figueroa, Rachel M. Gillum, Dominik Hangartner, David D. Laitin and Jens Hainmueller. 2018. “Multidimensional Measure of Immigrant Integration.” *Proceedings of the National Academy of Sciences* 115(45):11483–11488.
- Komisarchik, Mayya, Maya Sen and Yamil Velez. 2020. “The Political Consequences of

Ethnically Targeted Incarceration: Evidence from Japanese-American Internment During WWII.”.

URL: <https://scholar.harvard.edu/msen/japanese-internment>

Koopmans, Ruud. 2013. “Multiculturalism and Immigration: A Contested Field in Cross-National Comparison.” *Annual Review of Sociology* 39(1):147–169.

Lazear, Edward P. 1999. “Culture and Language.” *Journal of Political Economy* 107(6):95–126.

Porte, Zelda and Judith Torney-Purta. 1987. “Depression and Academic Achievement among Indochinese Refugee Unaccompanied Minors in Ethnic and Nonethnic Placements.” *American Journal of Orthopsychiatry* 57(4):536–547.

Reuters. 2020. “Number of Refugees Worldwide Has Doubled in a Decade, U.N. Report Says.” *The New York Times* .

URL: <https://www.nytimes.com/2020/06/18/world/middleeast/united-nations-refugees-80-million.html>

Sniderman, Paul M., Louk Hagendoorn and Markus Prior. 2004. “Predisposing Factors and Situational Triggers: Exclusionary Reactions to Immigrant Minorities.” *The American Political Science Review* 98(1):35–49.

UNHCR. 2018. *UNHCR Resettlement Handbook and Country Chapters*. Geneva: Resettlement Service, Division of International Protection.

A Supporting Information (Online Only)

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A.1 Summary statistics and details on survey outcomes

Table A.1: Summary statistics: 2017 matched dataset (2 months bandwidth)

Variable	Year	Mean	S.D.	N	Min	Max
Covariates (binary)						
17 - 25 years old	2017	0.20	0.40	242	0	1
26 - 34 years old	2017	0.34	0.47	242	0	1
35 - 45 years old	2017	0.38	0.49	242	0	1
46 - 54 years old	2017	0.08	0.27	242	0	1
Arrival in 2nd Quarter of 2015	2017	0.03	0.17	242	0	1
Arrival in 3rd Quarter of 2014	2017	0.02	0.13	242	0	1
Arrival in 3rd Quarter of 2015	2017	0.78	0.42	242	0	1
Arrival in 4th Quarter of 2014	2017	0.01	0.09	242	0	1
Arrival in 4th Quarter of 2015	2017	0.17	0.38	242	0	1
Bachelors or equivalent level	2017	0.22	0.42	242	0	1
Eritrean	2017	0.01	0.09	242	0	1
Female	2017	0.26	0.44	242	0	1
Iraqi	2017	0.04	0.20	242	0	1
Lower secondary education	2017	0.22	0.42	242	0	1
Male	2017	0.74	0.44	242	0	1
Movement restriction treatment	2017	0.50	0.50	242	0	1
Post-secondary non-tertiary education	2017	0.01	0.09	242	0	1
Primary education	2017	0.30	0.46	242	0	1
Syrian	2017	0.95	0.22	242	0	1
Upper secondary education	2017	0.25	0.43	242	0	1
Outcomes						
Contact: co-nationals	2017	4.09	1.47	242	1	6
Contact: natives	2017	3.86	1.82	242	1	6
Contact: other immigrants	2017	2.92	1.85	242	1	6
Employed	2017	0.10	0.30	242	0	1
Identification with home country	2017	3.67	1.15	241	1	5
Perceived employment prospects	2017	82.99	20.52	67	0	100
Social events: culture	2017	1.23	0.53	241	1	4
Social events: entertainment	2017	1.42	0.77	241	1	4
Social events: going out	2017	2.48	1.11	242	1	5
Social events: religious	2017	2.10	1.22	239	1	4
Social events: sports	2017	1.59	1.02	241	1	5

Note: The table contains summary statistics for all background variables and outcomes. All covariates are binary. In the main analyses, we standardize all outcomes except employment.

Table A.2: Summary statistics: 2018 matched dataset (2 months bandwidth)

Variable	Year	Mean	S.D.	N	Min	Max
Covariates (binary)						
17 - 25 years old	2018	0.15	0.36	208	0	1
26 - 34 years old	2018	0.36	0.48	208	0	1
35 - 45 years old	2018	0.42	0.50	208	0	1
46 - 54 years old	2018	0.06	0.23	208	0	1
55 - 64 years old	2018	0.01	0.10	208	0	1
Afghan	2018	0.01	0.10	208	0	1
Arrival in 2nd Quarter of 2015	2018	0.07	0.26	208	0	1
Arrival in 3rd Quarter of 2015	2018	0.71	0.45	208	0	1
Arrival in 4th Quarter of 2015	2018	0.22	0.41	208	0	1
Bachelors or equivalent level	2018	0.24	0.43	208	0	1
Female	2018	0.26	0.44	208	0	1
Lower secondary education	2018	0.24	0.43	208	0	1
Male	2018	0.74	0.44	208	0	1
Movement restriction treatment	2018	0.52	0.50	208	0	1
Primary education	2018	0.28	0.45	208	0	1
Syrian	2018	0.99	0.10	208	0	1
Upper secondary education	2018	0.24	0.43	208	0	1
Outcomes						
Contact: co-nationals	2018	4.00	1.47	207	1	6
Contact: natives	2018	3.94	1.96	207	1	6
Contact: other immigrants	2018	2.98	1.90	207	1	6
Employed	2018	0.25	0.43	208	0	1
Feel welcome in Germany	2018	4.06	0.89	194	1	5
Identification with home country	2018	3.55	1.30	207	1	5
Social events: culture	2018	1.29	0.57	195	1	5
Social events: entertainment	2018	1.50	0.83	194	1	4
Social events: going out	2018	2.74	1.07	194	1	5
Social events: religious	2018	1.67	1.23	12	1	4
Social events: sports	2018	1.68	1.08	195	1	5

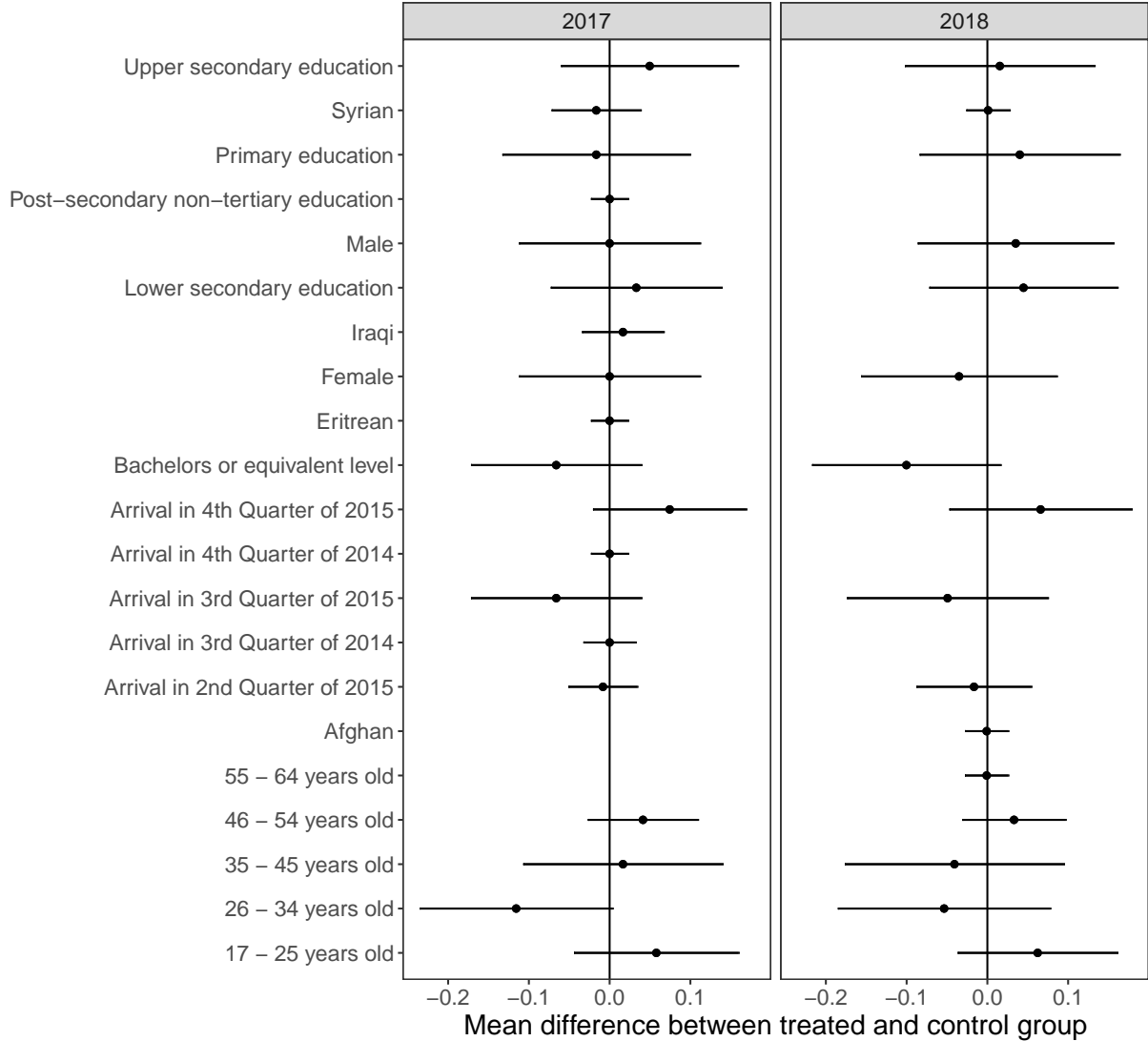
Note: The table contains summary statistics for all background variables and outcomes. All covariates are binary. In the main analyses, we standardize all outcomes except employment.

Table A.3: Survey items corresponding to outcomes

Variable	Survey Question (translated from German)	Coding
1. Contact		
Contact: natives	How often do you spend time with German people?	never [1], infrequent [2], every month [3], every week [4], several times per week [5], every day [6]
Contact: co-nationals	How often do you spend time with people from your country of origin who are not related to you?	never [1], infrequent [2], every month [3], every week [4], several times per week [5], every day [6]
Contact: other immigrants	How often do you spend time with people from other countries?	never [1], infrequent [2], every month [3], every week [4], several times per week [5], every day [6]
2. Belonging		
Feel welcome in Germany	To what degree do you feel welcome in Germany?	not at all [1], barely [2], somewhat [3], much [4], very much [5]
Identification with home country	How connected do you feel to your country of origin?	not at all [1], barely [2], in some respects [3], strongly [4], very strongly [5]
3. Social		
Social events: going out	How often do you go to eat or drink in a cafe, restaurant or bar?	never [1], infrequent [2], every month [3], every week [4], every day [5]
Social events: sports	How often do you attend sports events?	never [1], infrequent [2], every month [3], every week [4], every day [5]
Social events: religious	How often do you attend religious events?	never [1], infrequent [2], every month [3], every week [4]
Social events: entertainment	How often do you go to the cinema, pop concerts, dance events, clubs?	never [1], infrequent [2], every month [3], every week [4], every day [5]
Social events: culture	How often do you go to cultural events such as opera, classical concerts, theater, exhibitions	never [1], infrequent [2], every month [3], every week [4], every day [5]
4. Economic integration		
Perceived employment prospects	How likely is it that you will be employed in Germany at any time within the next five years?	0 - 100 % (in intervals of 10 percent each)
Employed	Are you currently employed?	Employed [1], Not employed [0] (both part-time and full-time employment are coded as one)

A.2 Pre-treatment covariate balance

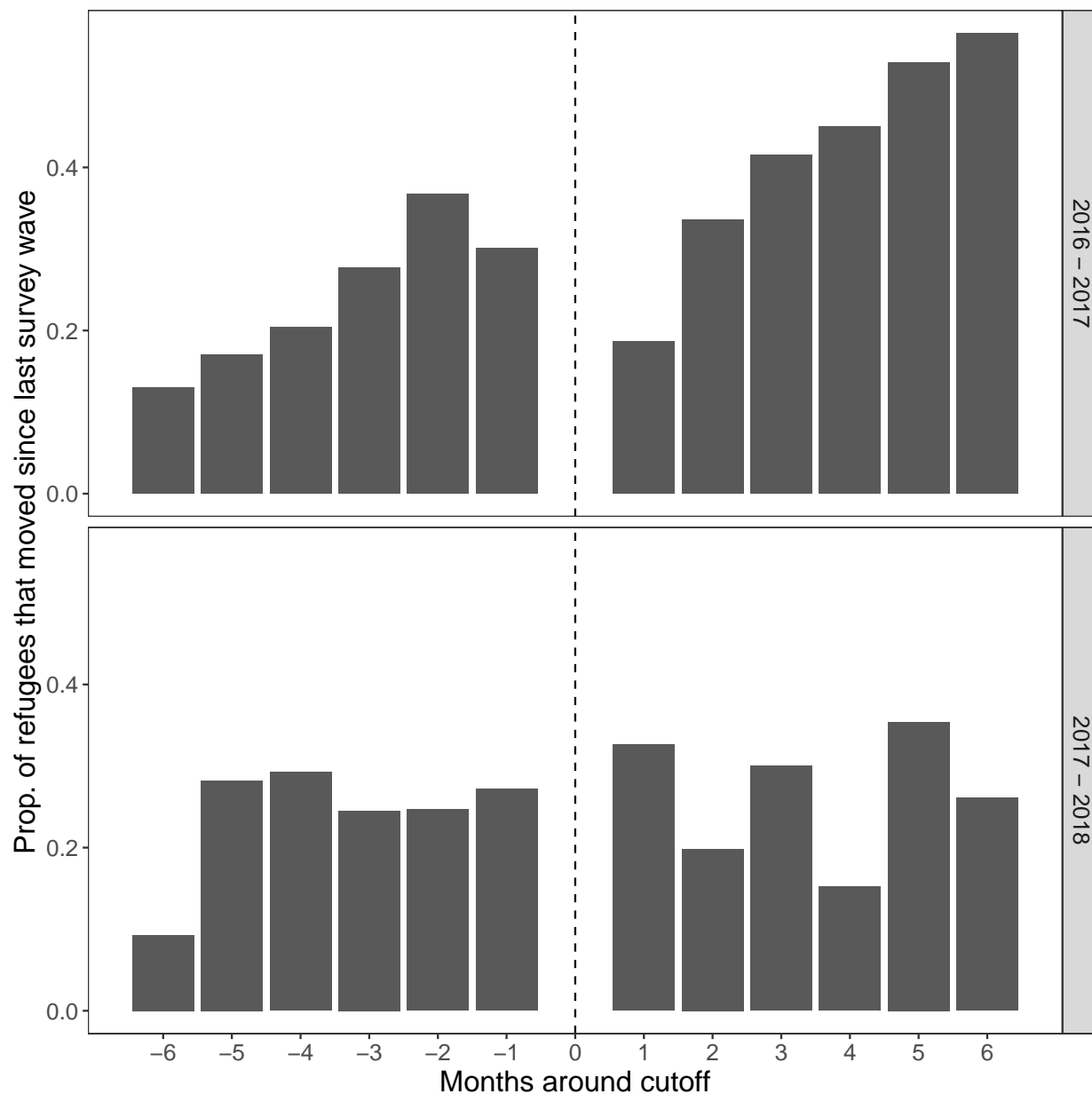
Figure A.1: Covariate balance (raw, across blocks)



Note: The figure shows the mean difference between the treated and control groups for the sample we use to estimate our main results presented in figure 1. We matched respondents within 2 months around the treatment assignment cutoff. All covariates are binary indicator variables. Some covariate-categories are not represented in the matched datasets in either year. We emphasize that covariate-balance within the covariate blocks described in section 4 is perfect by construction. Comparing the treated and control groups across blocks results in some imbalance because we match each treated unit to all available control units. Because of this, the relative size of the treated and control group can vary across blocks.

A.3 Movement within Germany conditional on asylum approval date

Figure A.2: Movement within Germany



Note: The figure show the relative frequency of refugees who changed their place of residence between the 2016/2017 and 2017/2018 survey waves, grouped by months around the January 1, 2016 cutoff. The survey item we use asks respondents whether they reside at the same address as in the previous survey wave. We are not able to distinguish between movement across or within counties in this analysis. We also do not observe the county that refugees were initially assigned to after arrival in Germany.

A.4 Effect on relocations within Germany

As reported in the main body of the paper, we do not find statistically significant differences in the propensity to move between restricted and unrestricted refugees (see figure A.3). Why do movement restriction have little impact on relocation decisions? Additional restrictions during the asylum decision process and the relatively high cost of relocating may account for this finding. All refugees are prohibited from relocating until their asylum application is approved.⁴ During the often lengthy asylum application process, refugees may have become accustomed to life at the initial assignment location, increasing the cost of relocation after they are permitted to do so. As a result, refugees may find it more convenient to remain at the location they were originally assigned to, even if they are permitted to move. This would suggest a rather low baseline propensity of refugees to move after the initial random assignment to a location. While likely not precisely equal to zero, the treatment effect of the restriction on movement is likely of small magnitude.

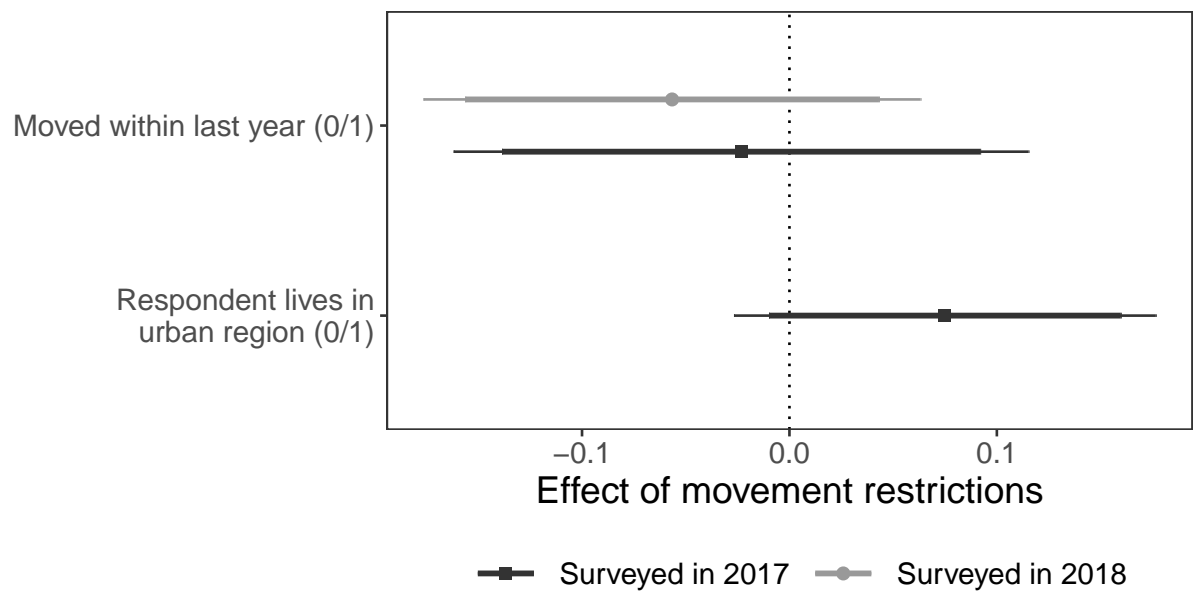
Table A.4: Duration since entry and movement restrictions

Treatment status	Year	Avg. time spent in DE (years)	Avg. time since restrictions (years)
Not restricted	2017	1.93	0.91
Restricted	2017	1.98	0.98
Not restricted	2018	3.06	2.05
Restricted	2018	3.13	2.14

Note: The table shows how long, on average, respondents have lived in Germany when the SOEP survey was conducted. In addition, the table contains the time that has passed between the August 2016, when restrictions were first applied, and the date when survey data was collected. We show both statistics conditional on respondent restriction status.

⁴Movement restrictions during the asylum application process (*‘Residenzpflicht’*) generally apply for up to three months after arrival in Germany.

Figure A.3: Effect of movement restrictions on relocating and likelihood of living in an urban region



Note: The figure shows estimated effects of being subject to movement restrictions on (i) whether respondents moved since the last survey wave and (ii) whether a respondent lives in an ‘urban’ area. Both outcomes are binary. The SOEP uses the urban/rural definition of the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR). The item on whether respondents live in urban areas was only asked in the 2017 survey wave. The horizontal bars represent 90% (thick lines) / 95% (thin lines) confidence intervals.

A.5 Detailed main results

Table A.5: Main results

Outcome	Year	Estimate	SE	P	P (RI)	N
1. Contact						
Contact: natives	2017	-0.02	0.12	0.88	0.90	242
Contact: natives	2018	-0.06	0.13	0.64	0.68	207
Contact: co-nationals	2017	0.01	0.12	0.91	0.92	242
Contact: co-nationals	2018	-0.12	0.12	0.29	0.32	207
Contact: other immigrants	2017	-0.06	0.13	0.66	0.72	242
Contact: other immigrants	2018	-0.13	0.13	0.31	0.38	207
2. Belonging						
Feel welcome in Germany	2018	-0.46	0.12	0.00	0.00	194
Identification with home country	2017	0.23	0.13	0.08	0.13	241
Identification with home country	2018	0.39	0.13	0.00	0.01	207
3. Social						
Social events: going out	2017	-0.22	0.12	0.07	0.10	242
Social events: going out	2018	0.04	0.13	0.77	0.79	194
Social events: sports	2017	-0.09	0.12	0.46	0.53	241
Social events: sports	2018	0.03	0.14	0.81	0.83	195
Social events: religious	2017	-0.22	0.12	0.06	0.10	239
Social events: entertainment	2017	-0.20	0.12	0.09	0.13	241
Social events: entertainment	2018	-0.10	0.14	0.49	0.56	194
Social events: culture	2017	-0.33	0.11	0.00	0.01	241
Social events: culture	2018	0.00	0.13	0.98	0.98	195
4. Economic integration						
Perceived employment prospects	2017	-0.61	0.26	0.02	0.08	67
Employed	2017	0.03	0.04	0.40	0.46	242
Employed	2018	0.15	0.05	0.00	0.01	208

The table shows the main results discussed in the text. All outcomes except employment are standardized.

A.6 Robustness

Our identification strategy requires that the exact timing of approval decisions around the January 1 cutoff is uncorrelated with unobserved individual or institutional characteristics. However, faster decisions may correlate with more efficient local institutions, which in turn may affect integration. In addition, individual characteristics could affect how quickly decisions are made, although we are unaware of any systematic or anecdotal evidence that this is the case. We also emphasize that 90% of refugees in our sample are Syrians, for whom asylum approval was virtually guaranteed during the study period.

We conduct two supplementary analysis to verify that asylum decision speed is not correlated with integration outcomes independent of its effect on movement restrictions. First, we use the full sample of all refugees and regress the integration outcomes on the duration between the date of arrival and the date of approval. Akin to the main specification, we compare refugees whose asylum applications were approved within four-months intervals. If faster decisions are correlated with individual or institutional characteristics, we would expect to find differences between refugees with earlier and later decisions. We estimate OLS models with block fixed effects, separately for 2017 and 2018. The blocks are defined by the base covariates as well as the application decision time in intervals of four months. As a result, we compare refugees with similar background characteristics whose asylum applications were processed at most four months apart. similar to the two-month bandwidth used in the main analysis. In figure A.12 in the SI, we demonstrate that slightly faster asylum decisions (i.e. at most four months difference) do generally not correlate with integration outcomes.

In a second step, we utilize the panel structure of the SOEP to test for pre-treatment differences between restricted and unrestricted refugees. In doing so, we re-estimate the main specification in figure 1 using outcomes measured in 2016.⁵ If approval decision timing rather

⁵We can only conduct this analysis for a subset of outcomes, as some items were only included in later waves of the survey. The movement restriction went into effect in August 2016. We consider the year 2016

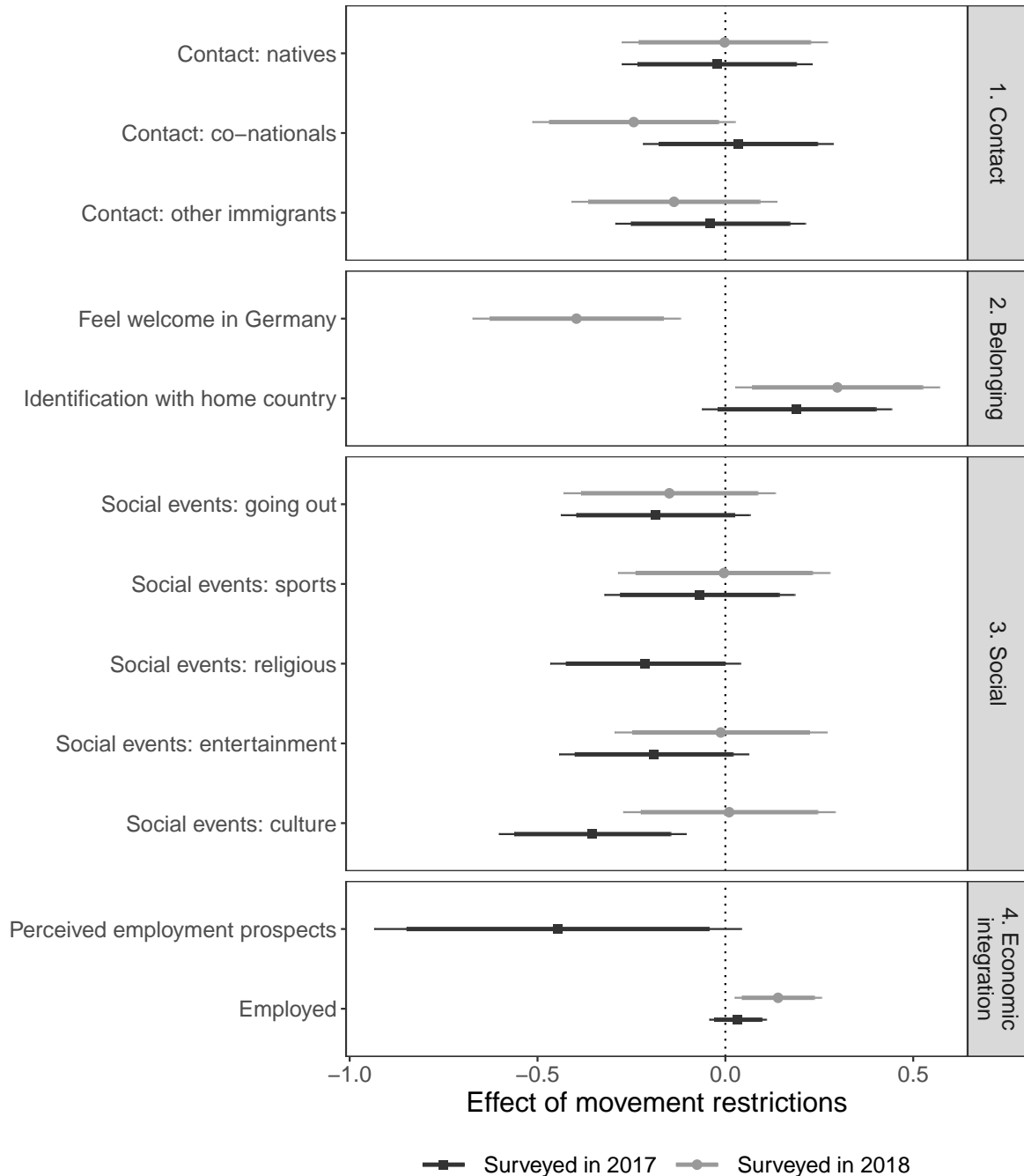
than movement restrictions affects integration, we would expect to find significant differences in this analysis. Reassuringly, we do not find significant differences between restricted and unrestricted refugees before the policy took effect (see figure A.9 in the SI). Taken together, the two supplemental analysis provide strong evidence that slightly faster asylum decisions do not directly affect integration, other than through their effect on movement restrictions.

We conduct four additional robustness checks to ensure that our results are not driven by the choice of specification, covariates or unobserved confounding. First, we present all main results without covariate block fixed effects (see figure A.4 in the SI). We find that our results remain unchanged when compared to figure 1. Second, we present the results for varying bandwidths around the January 1 cutoff, using the same matching procedure as described in section 4. In figures A.5 and A.6 in the SI, we show that our results are largely robust to varying the bandwidth. We observe that effects are generally stronger for smaller bandwidths, where the assumption of no unobserved confounding is more likely to hold. Third, we conduct randomization inference by creating 1,000 random permutations of the treatment assignment vector within covariate blocks. We then re-estimate the results presented in figure 1. In figures A.7 and A.8, we present the resulting distributions of the t-statistic for the treatment effect estimates across 1,000 permutations. We show the corresponding two-sided p-values in table A.5 in the SI. We find that the resulting p-values are similar to the ones obtained from the base specifications. Fourth, we estimated pooled models, where we do not estimate separate effects for the 2017 and 2018 survey waves. Rather, we pool both waves, adding block*year fixed effects and standard errors clustered by respondent. We again find negative effects on both belonging and social integration (see figure A.10 in the SI).

pre-treatment as most SOEP-interviews are conducted over the summer. In addition, the implementation of the law within the states was often delayed by a several months.

A.6.1 Omitting block FEs

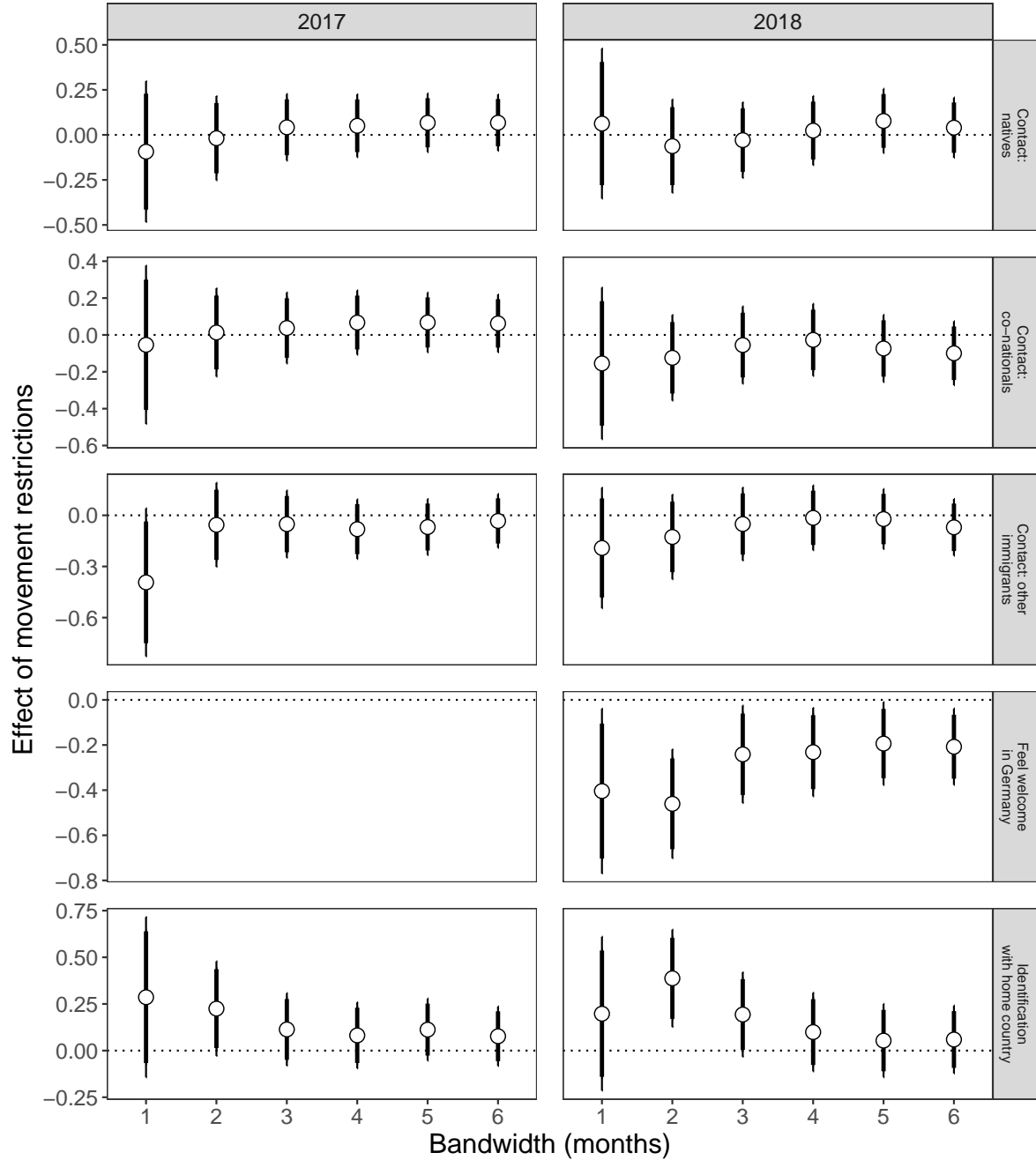
Figure A.4: Effect of movement restrictions, OLS without block FE



Note: The figure shows estimated effects of being subject to movement restrictions on the outcomes listed on the left-hand side. The horizontal bars represent 90% (thick lines) / 95% (thin lines) confidence intervals. All variables are standardized except employment status.

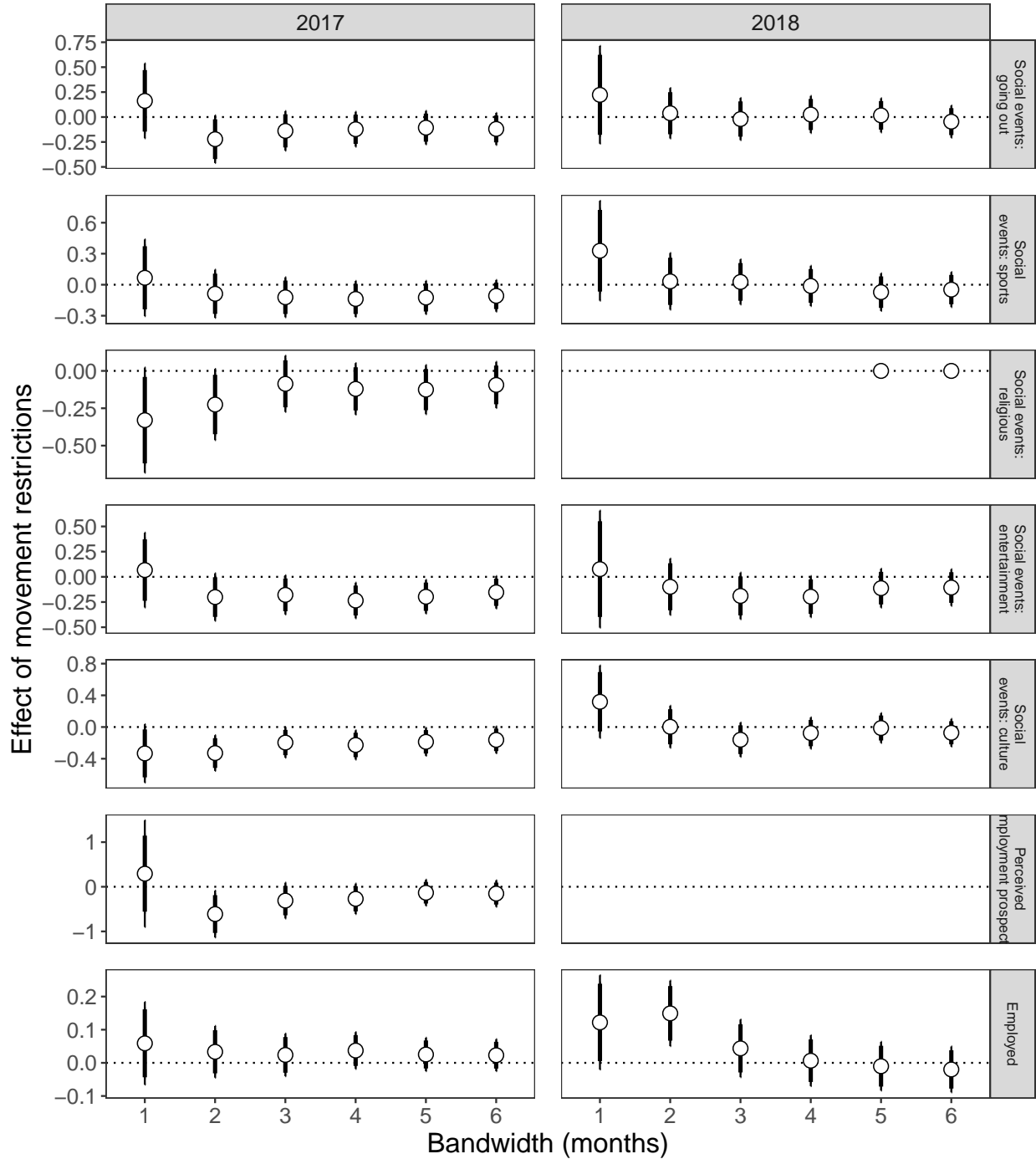
A.6.2 Bandwidth sensitivity

Figure A.5: Bandwidth sensitivity, contact and sense of belonging



Note: The figure shows estimated effects of being subject to movement restrictions, conditional on bandwidth around the asylum application date cutoff and year when the survey was conducted. The horizontal bars represent 90% (thick lines) / 95% (thin lines) confidence intervals. All models include block fixed effects. In cases where we show no estimates, fewer than 20 individuals responded to the survey question, which means we did not estimate a model for the given year-bandwidth combination.

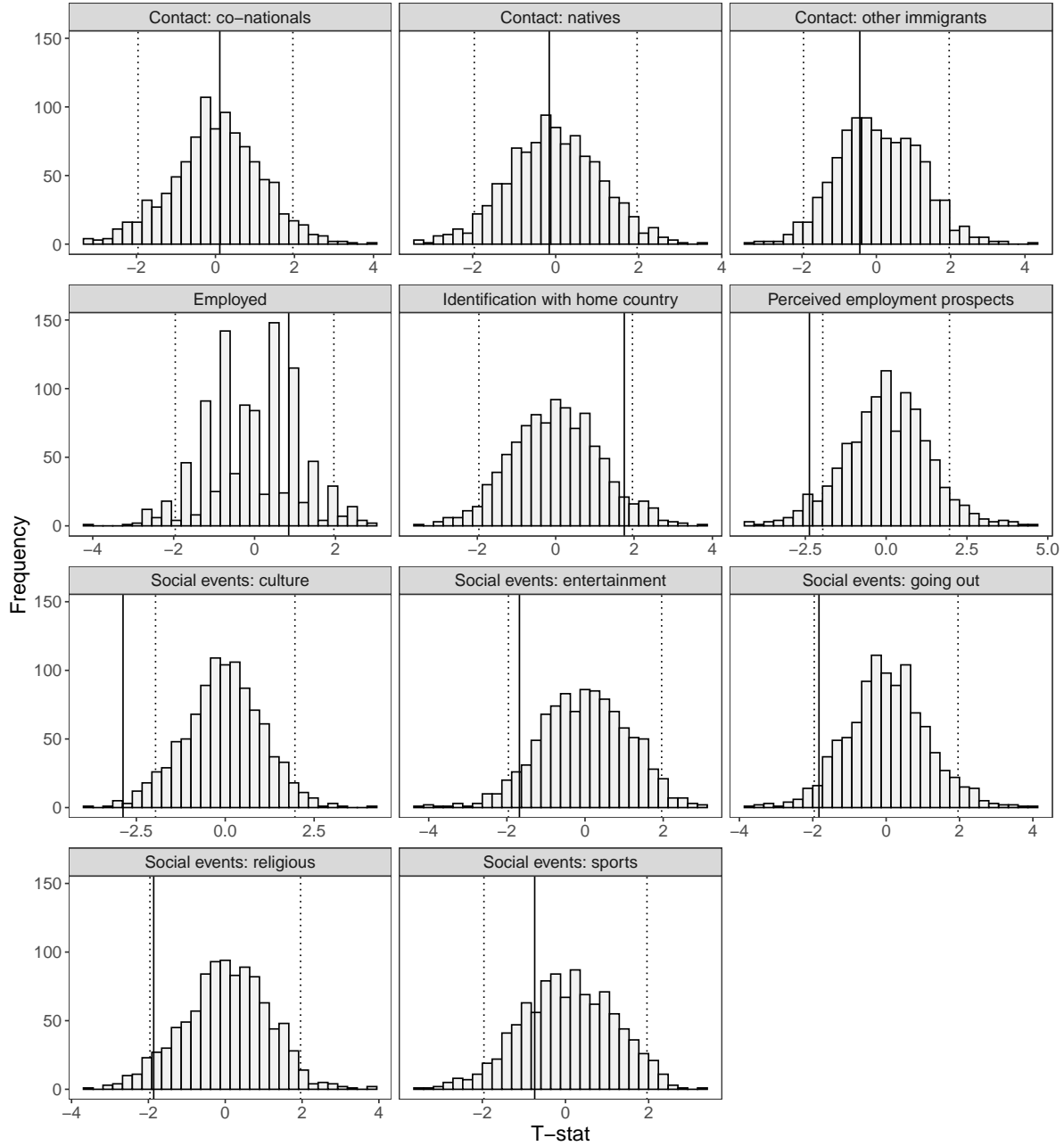
Figure A.6: Bandwidth sensitivity, social and economic integration



Note: The figure shows estimated effects of being subject to movement restrictions, conditional on bandwidth around the asylum application date cutoff and year when the survey was conducted. The horizontal bars represent 90% (thick lines) / 95% (thin lines) confidence intervals. All models include block fixed effects. In cases where we show no estimates, fewer than 20 individuals responded to the survey question, which means we did not estimate a model for the given year-bandwidth combination.

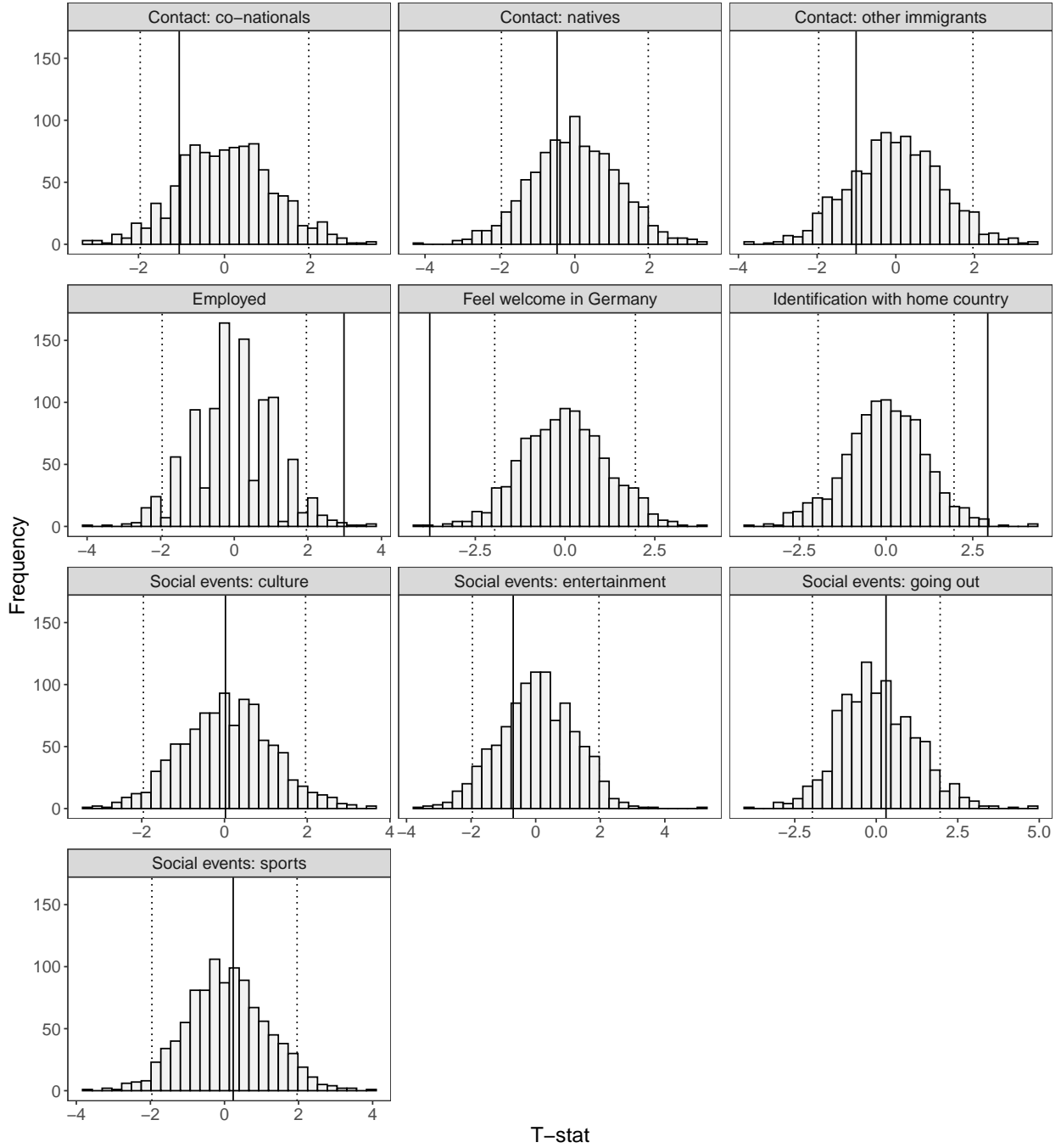
A.6.3 Randomization inference

Figure A.7: Randomization inference, 2017



Note: The histograms show the distribution of the t-statistic for the treatment effect estimate over 1,000 random permutations of the treatment assignment vector. For each outcome variable, we conduct the same regression analysis with block-fixed-effects as for our main results presented in figure 1. The outcome variables are measured in 2017.

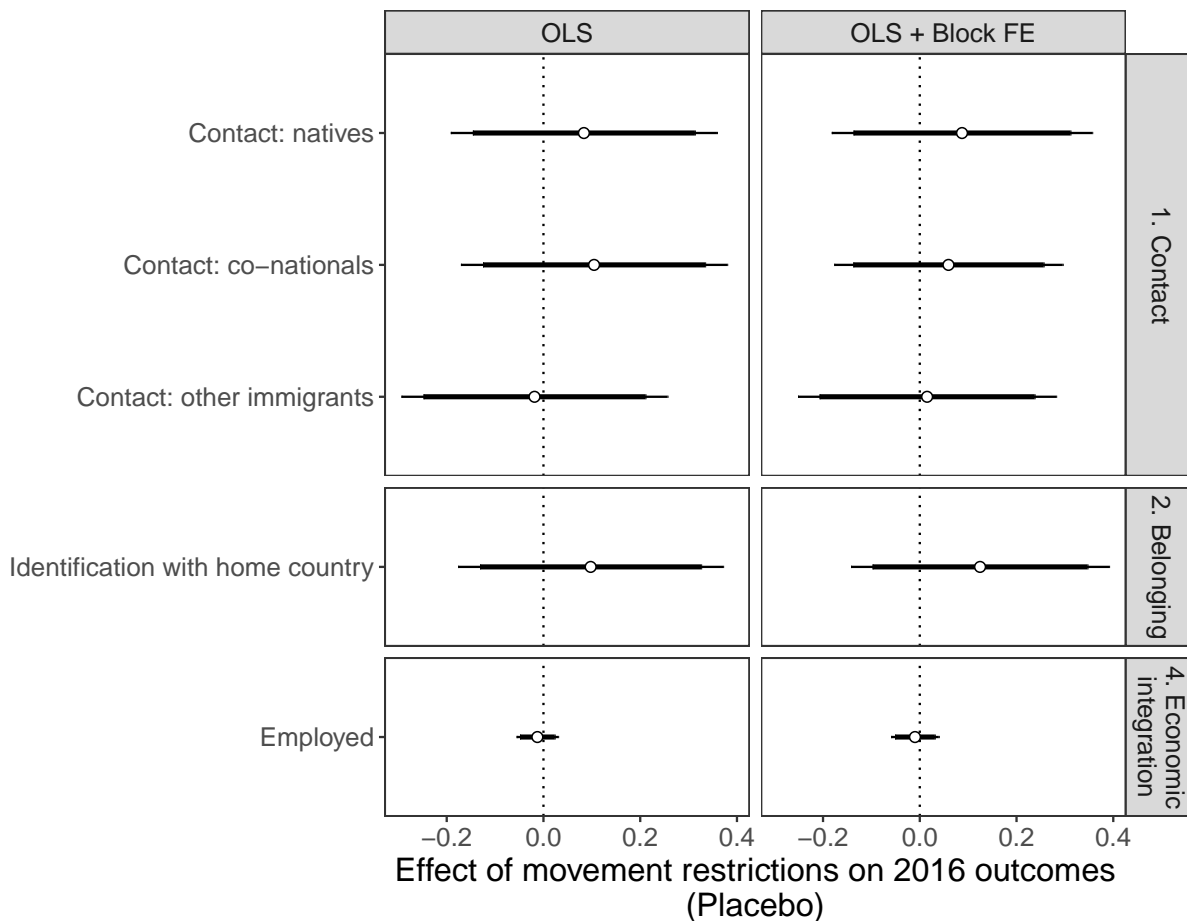
Figure A.8: Randomization inference, 2018



Note: The histograms show the distribution of the t-statistic for the treatment effect estimate over 1,000 random permutations of the treatment assignment vector. For each outcome variable, we conduct the same regression analysis with block-fixed-effects as for our main results presented in figure 1. The outcome variables are measured in 2018.

A.6.4 Effect on outcomes measured prior to treatment (placebo)

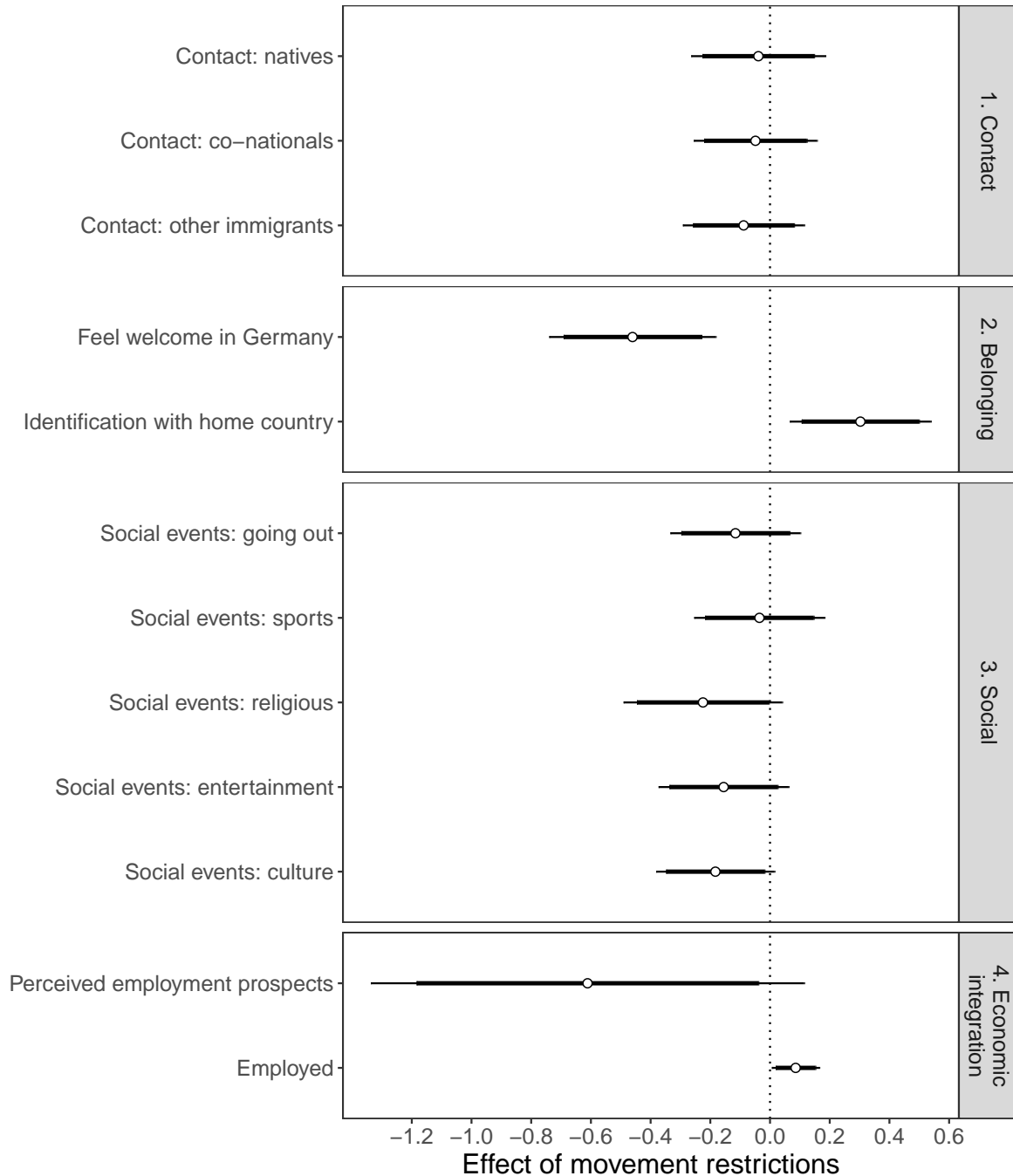
Figure A.9: Effect of movement restrictions on 2016 outcomes



Note: The figure shows estimated effects of being subject to movement restrictions on the outcomes listed on the left-hand side. The horizontal bars represent 90% (thick lines) / 95% (thin lines) confidence intervals. The left-hand side panel is a simple OLS specification, the right-hand panel includes block fixed effects. The outcomes were measured as part of the 2016 survey wave of the SOEP panel. A subset of the survey interviews was conducted after the law entered into force in August 2016. However, depending on the federal state, regulations to remain in a specific county were only passed a couple of weeks or months after August 2016. We hence consider this analysis as a test for pre-treatment differences around the assignment cutoff.

A.6.5 Pooling 2017 and 2018 survey waves

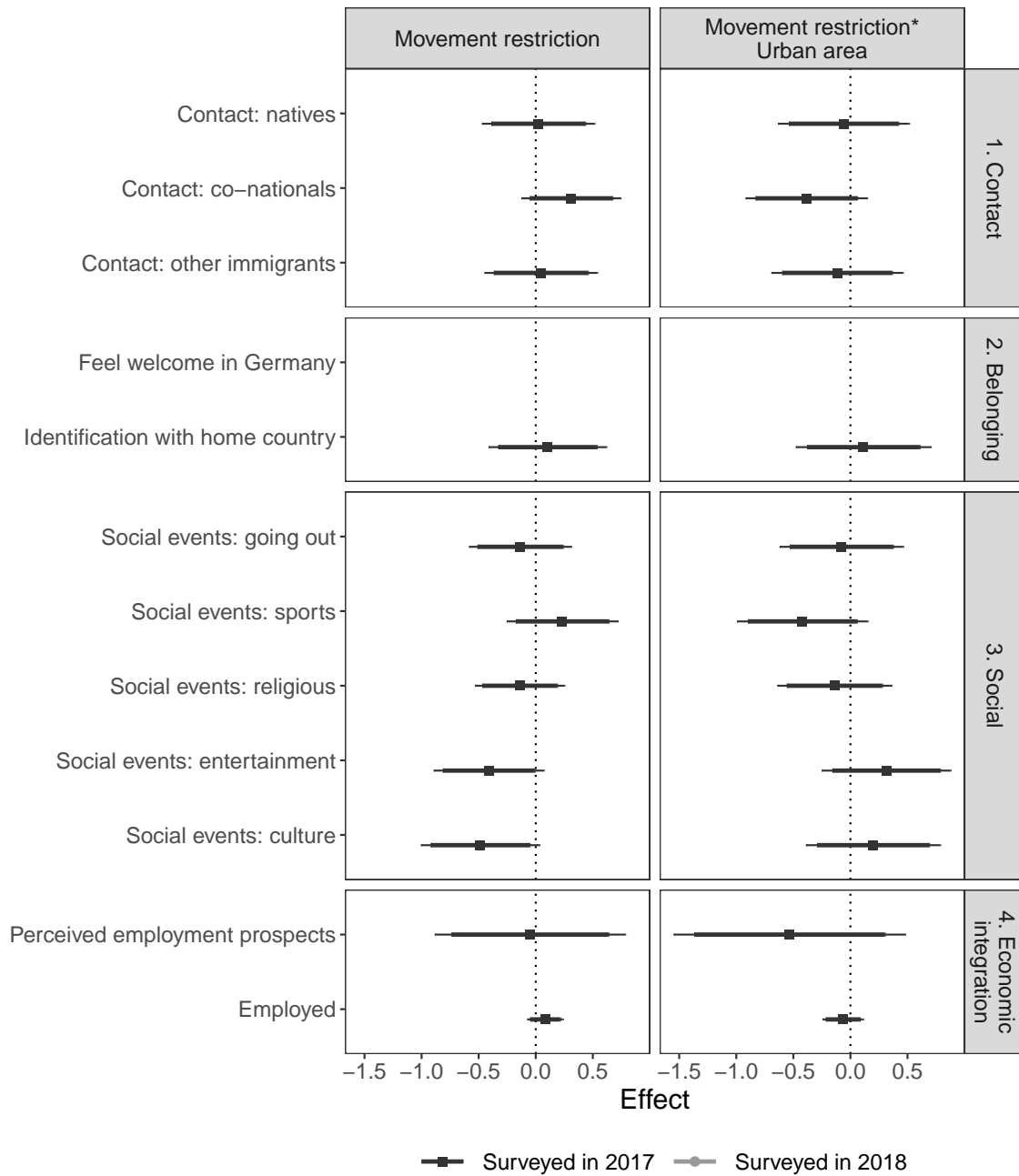
Figure A.10: Effect of movement restrictions, pooling 2017 and 2018 SOEP waves



Note: The figure shows estimated effects of being subject to movement restrictions on the outcomes listed on the left-hand side. The horizontal bars represent 90% (thick lines) / 95% (thin lines) confidence intervals. In contrast to the main model, we pool the 2017 and 2018 survey waves. All models include Block*Year fixed effects. We cluster standard errors by respondent.

A.6.6 Interacting movement restrictions with urban/rural status

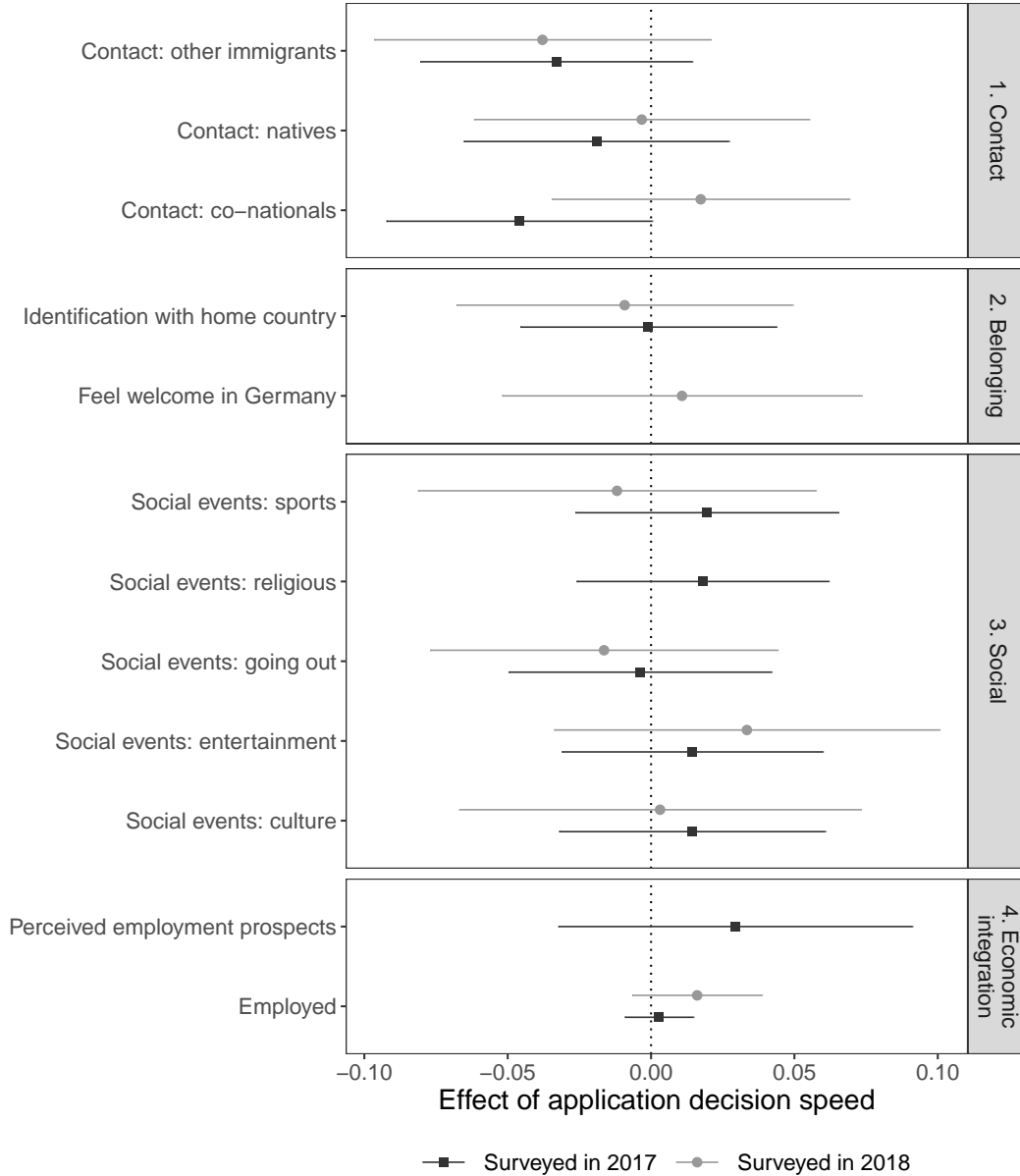
Figure A.11: Interacting movement restrictions with rural/urban status



Note: We present results from interacting movement restriction with a binary rural/urban indicator, as defined by the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR). The left-hand side panel represents the effect of movement restrictions for refugees in rural areas. The right-hand side panel is the restriction*urban interaction. The rural/urban indicator is not available in the 2018 survey wave. The horizontal bars represent 90% (thick lines) / 95% (thin lines) confidence intervals. All variables are standardized except employment status, which is binary. The sample is based on a two-month bandwidth around the Jan 1, 2016 cutoff.

A.6.7 Effect of application decision speed

Figure A.12: Effect of application decision speed



Note: The figure shows the results from OLS regressions where we regress the same outcome variables as in our main analysis on the time in months between the arrival date of a refugee and the asylum application decision date. Similar to our main analysis, the models include block fixed effects. The blocks are defined by the same covariates as for our main analysis (sex, age, education, nationality, and arrival quarter-year) *plus* the asylum application decision time in intervals of 4 months. We hence compare refugees with similar background characteristics whose asylum applications were processed within a time-window of 4 months. This corresponds to the 2-months bandwidth around the treatment assignment cutoff used for our main analysis. We exclude outcomes for which fewer than 200 observations are available within a given survey year.