Online Appendix: Tipping and the Effects of Segregation

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APPENDIX FOR ONLINE PUBLICATION ONLY

Appendix A – The Structural Break Method

This method is similar to that of identifying breaks in time series data, and consists of estimating the following regression

$$Dn_{s,m,t} = \alpha_m + d_m \mathbf{1}[i_{s,m,t-10} > i^*_{m,t-10}] + \varepsilon_{s,m,t}, \qquad \text{for } 0 \leq i_{s,m,t-10} \leq I$$

where $Dn_{s,m,t} = \frac{N_{s,m,t} - N_{s,m,t-10}}{P_{s,m,t-10}}$ and represents the change in the native population in neighborhood *s* in metropolitan area *m* between *t-10* and *t*, and $d_m \mathbf{1}[i_{s,m,t-10} > i^*_{m,t-10}]$ is an indicator variable that takes the value of one if the immigrant share in the neighborhood exceeds the tipping point of the metropolitan area.

To obtain estimates of the tipping points in the metropolitan areas, $i^*_{m,t-10}$, we restrict the tipping points to be in the interval *[0, 50%]* and choose the values that maximizes R^2 of the above equation, separately for each metropolitan area. According to Card et al. (2008), this method works well for identifying tipping points in large cities, but performs less well in small cities due to a tendency to identify tipping points that reflects clear outliers. Given the average size of the metropolitan areas in Sweden it is therefore inappropriate to rely on this strategy for the purpose of identifying the tipping points.

Table A-1: Foreign-born by country of birth

Country	1950	1960	1970	1980	1990	2000	2010	2010
Panel A: Largest source countries 2015								
Finland	44,821	101,307	235,453	251,342	217,636	195,447	169,521	156,045
Iraq	5	16	108	631	9,818	49,372	121,761	131,888
Syria	0	6	100	1,606	5,874	4,162	20,758	98,216
Poland	7,832	6,347	10,851	19,967	35,631	40,123	70,253	85,517
Iran	110	115	411	3,348	40,048	51,101	62,120	69,067
Yugoslavia	171	1,532	33,779	37,982	43,346	71,972	70,819	67,190
Somalia	0	0	16	100	1,441	13,082	37,846	60,623
Bosnia and Herzegovina	0	0	0	0	0	51,526	56,183	57,705
Germany	21,652	37,580	41,793	38,974	37,558	38,155	48,158	49,586
Turkey	87	202	3,768	14,357	25,528	31,894	42,527	46,373
Panel B: Largest source countries 1950								
Finland	44,821	101,307	235,453	251,342	217,636	195,447	169,521	156,045
Norway	31,312	37,253	44,681	42,863	52,744	42,464	43,430	42,047
Estonia	25,062	*	18,513	15,331	11,971	10,253	10,010	10,303
Denmark	22,801	35,112	39,152	43,501	43,931	38,190	45,584	41,870
Germany	21,652	37,580	41,793	38,974	37,558	38,155	48,158	49,586
United States	10,713	10,874	12,646	11,980	13,001	14,413	17,179	19,515
Poland	7,832	6,347	10,851	19,967	35,631	40,123	70,253	85,517
Latvia	4,423	*	3,244	2,664	2,025	2,305	4,686	7,026
Czechoslovakia	3,548	3,562	7,392	7,529	8,432	7,304	5,970	5,293
Austria	2,665	5,809	7,927	6,995	6,530	6,021	5,829	5,772
Panel C: Source countries by continents								
The nordic countries	99,080	174,043	320,913	341,253	319,082	279,631	263,227	245,633
EU25 (excluding the nordic countries)	75,631	75,138”	137,251	148,459	164,961	172,599	274,247”’	331,026
Europe (excluding EU25 and the nordic countries)	1,766	4,048	43,104	57,292	81,885	189,766	215,975”’	238,565
Africa	355	596	4,149	10,025	27,343	55,138	114,853	178,624
North America	11,334	11,665	15,629	14,484	19,087	24,312	31,263	35,780
South America	412	679	2,300	17,206	44,230	50,853	63,725	68,571
Asia	905	1,476	5,949	30,351	124,447	220,677	410,083	565,050
Oceania	93	211	558	962	1,866	2,981	4,529	5,245
Unknown	137	162	488	97	73	257	818	1,148
Panel D: Non-Western foreign-born								
Non-Western	48,904	30,070	130,804	201,373	380,945	623,042	991,482	1,285,961
Panel E: Total immigration								
Total Foreign-born	197,810	229,879	537,585	626,953	790,445	1,003,798	1,384,929	1,676,264
Percent Foreign-born	2.8	3.1	6.7	7.5	9.2	11.3	14.7	17.0
Total Population	7,041,829	7,495,129	8,076,903	8,317,235	8,590,630	8,882,792	9,415,570	9,851,017

Notes: * Included in the calculation of Soviet Union immigrants; ’ Including Estonia, Latvia and Lithuania; ” Excluding Estonia, Latvia and Lithuania; ”’Calculation based on EU28. Source: Authors’ calculations based on data from Statistics Sweden (2015).

Table A-2: Neighborhood crossovers

Year of tipping	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Neighborhoods	156	16	9	8	9	5	6	4	4	1

Notes: The tables shows the number of neighborhoods in which the share of non-Western immigrants increased from being below the candidate tipping point in 1990 to being above the treshold for each year between 1991 and 1999. The table further shows the number of neighborhoods that had immigrant shares above the identified tipping pooint in 1990. The sample used is the 1/3 sample not used for identifying the location of the tipping points.

Table A-3: Donut-style regression discontinuity models for changes in native population around candidate tipping points

	Change in native population				
	0.10 Donut Hole (i)	0.3 Donut Hole (ii)	0.5 Donut Hole (iii)	1.00 Donut Hole (iv)	2.00 Donut Hole (v)
Beyond TP	-0.095**	-0.093**	-0.096**	-0.104**	-0.109**
	(0.039)	(0.042)	(0.042)	(0.046)	(0.049)
Observations	517	514	511	501	488

Notes: The unit of observation is a neighborhood as identified by the SAMS code. Results are obtained from estimating equation (2). Across the columns, neighborhoods with base year immigrant shares +/- 0.05 (i), 0.15 (ii), 0.25 (iii), 0.50 (iv) and 1.00 (v) of the identified tipping point are excluded from the estimation. Years of treatment has been instrumented by whether the neighborhood was above or below the tipping point in the base year. All specifications include a quartic polynomial in the difference between the neighborhood's minority share and the estimated tipping point. Standard errors are clustered on one percent bins of the running variable. The sample used for estimation is the 1/3 sample not used for identifying the tipping points. Demographic controls are years of schooling, income and gender, all measured in the base year. The regressions are weighted by the size of the neighborhoods. All specifications include metropolitan area fixed effects. *** indicates significance at the 1% level, ** indicates significance at the 5% level and * indicates significance at the 10% level.

Table A-4: Regression discontinuity models for population changes around candidate tipping points, Western immigrants

	Native Growth	Western Immigrant Growth	Non-Western Immigrant Growth
Beyond TP	-0.027	-0.002	-0.003
	(0.060)	(0.007)	(0.027)
Observations	520	520	520

Notes: The unit of observation is a neighborhood as identified by the SAMS code. The results are obtained from estimating new tipping points based on fraction Western immigrants using equation (1), and then using these new candidate thresholds to estimate equation (2). All specifications include a quartic polynomial in the difference between the neighborhood's minority share and the estimated tipping point. Standard errors are clustered on one percent bins of the running variable. The sample used for estimation is the 1/3 sample not used for identifying the location of the tipping points. Demographic controls are years of schooling, income and gender, all measured in the base year. The regressions are weighted by the size of the neighborhoods. All specifications include metropolitan area fixed effects. *** indicates significance at the 1% level, ** indicates significance at the 5% level and * indicates significance at the 10% level.

Table A-5: Sensitivity analysis on the change in native population growth around the candidate tipping point

	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)
Beyond TP	-0.088**	-0.092**	-0.109***	-0.091**	-0.091**	-0.089*	-0.091**	-0.091**	-0.082***
	(0.029)	(0.040)	(0.039)	(0.041)	(0.039)	(0.048)	(0.042)	(0.039)	(0.036)
Polynomial	Linear	Quadratic	Cubic	Quartic	Quartic	Quintic	Quartic	Quartic	Quartic
Baseline Controls	x	x	x		x	x	x	x	x
Fully Interacted							x		
Additional Controls								x	
Control for Population Density									x
Observations	520	520	520	520	520	520	520	520	520
R-squared	0.287	0.287	0.302	0.233	0.305	0.305	0.305	0.334	0.313

Notes: The unit of observation is a neighborhood as identified by the SAMS code. The results are obtained from estimating equation (2). Dependent variable is change in native population between 1990 and 2000. Standard errors are clustered on one percent bins of the running variable. The sample used for estimation is the 1/3 sample not used for identifying the location of the tipping points. Baseline controls are years of schooling, income and gender, all measured in the base year. Additional controls are years since migration, number of children in household and social welfare recipient status. The regressions are weighted by the size of the neighborhoods. All specifications include metropolitan area fixed effects. *** indicates significance at the 1% level, ** indicates significance at the 5% level and * indicates significance at the 10% level.

Table A-6: Regression discontinuity models for changes in residential population composition around candidate tipping points, local linear regression

	Native Growth	Immigrant Growth	Population Growth
Beyond TP	-0.112**	0.005	-0.107*
	(0.050)	(0.021)	(0.057)
R-squared	0.190	0.301	0.080
Observations	433	433	433

Notes: The unit of observation is a neighborhood as identified by the SAMS code. The bandwidth has been chosen using the cross-validation method proposed by Ludwig and Miller (2005). $h = 11.58483$. The sample used for estimation is the 1/3 sample not used for identifying the location of the tipping points. Demographic controls are years of schooling, income and gender, all measured in the base year. The regressions are weighted by the size of the neighborhoods. All specifications include metropolitan area fixed effects. *** indicates significance at the 1% level, ** indicates significance at the 5% level and * indicates significance at the 10% level.

Table A-7: Selective migration

		Educational Level		Income Level		Gender		Excluding
	Baseline	High	Low	High	Low	Men	Women	Outliers
Panel A: Young Cohort								
Control to Treatment	-0.053***	-0.034***	-0.071***	-0.040***	-0.070***	-0.049***	-0.052***	-0.048***
	(0.008)	(0.006)	(0.010)	(0.009)	(0.007)	(0.003)	(0.003)	(0.010)
Treatment to Control	0.283***	0.308***	0.264***	0.332***	0.258***	0.279***	0.248***	0.276***
	(0.020)	(0.030)	(0.019)	(0.021)	(0.022)	(0.023)	(0.011)	(0.021)
Observations	62,525	29,687	32,838	15,649	15,559	32,030	30,495	60,930
Panel B: Middle Cohort								
Control to Treatment	-0.010***	-0.073***	-0.120***	-0.088***	-0.114***	-0.096***	-0.115***	-0.085***
	(0.020)	(0.017)	(0.024)	(0.025)	(0.017)	(0.020)	(0.007)	(0.024)
Treatment to Control	0.264***	0.301***	0.240***	0.363***	0.218***	0.259***	0.258***	0.259***
	(0.014)	(0.016)	(0.015)	(0.026)	(0.016)	(0.015)	(0.009)	(0.014)
Observations	56,637	26,826	29,811	14,148	14,149	29,079	27,558	55,256
Panel C: Old Cohort								
Control to Treatment	-0.059***	-0.042***	-0.070***	-0.043***	-0.071***	-0.062***	-0.054***	-0.051***
	(0.009)	(0.006)	(0.012)	(0.012)	(0.010)	(0.009)	(0.003)	(0.010)
Treatment to Control	0.304***	0.393***	0.260***	0.392***	0.274***	0.313***	0.242***	0.299***
	(0.028)	(0.034)	(0.021)	(0.032)	(0.031)	(0.031)	(0.029)	(0.030)
Observations	92,798	36,437	56,361	23,195	23,183	47,314	45,484	91,221

Notes: The unit of observation is an individual that resided in one of the 520 neighborhoods not used to estimate the location of the tipping points. The results are obtained from estimating equation (3). All specifications include a quartic polynomial in the difference between the neighborhood's minority share and the estimated tipping point. Standard errors are clustered on one percent bins of the running variable. Demographic controls are gender, mother's education, father's education, parental income and binaries for whether this information was not available for the individual, all measured in the base year. For the Old Cohort, parental education and income have been replaced with own education and income. All models include birth year and metropolitan area fixed effects. Immigrants refer to individuals born in, or that have at least one parent born in, a non-Western country. Column (2) and (3) stratify the sample based on whether the individual has at least one parent with post-secondary education for the young and middle cohorts, and based on whether the individual has or does not have post-secondary education for the old cohort. Columns (4) and (5) stratify the sample based on whether the individual's parental income is in the bottom or top quartile of the income distribution for the youth and middle cohorts, and based on whether the individual is in the bottom or the top quartile of the income distribution for the old cohort. Columns (6) and (7) statify the sample based on gender. Column (8) exclude individuals from neighborhoods in the right-tail of the immigrant share distribution. *** indicates significance at the 1% level, ** indicates significance at the 5% level and * indicates significance at the 10% level.

Table A-8: The reduced-form effect of neighborhood composition on cognitive and non-cognitive military test scores

	Cognative	Non-cognative
Panel A: Immigrants		
i. 1973-1983		
Beyond TP	0.008	-0.070
	(0.198)	(0.196)
i. 1973-1980		
Beyond TP	-0.070	-0.169
	(0.242)	(0.212)
Panel B: Natives		
i. 1973-1983		
Beyond TP	-0.048	0.128
	(0.066)	(0.083)
i. 1973-1980		
Beyond TP	-0.017	0.183*
	(0.061)	(0.097)

Notes: The unit of observation is an individual that was started school 1973-1983 (Row 1) or 1973-1980 (Row 2) and resided in one of the 520 neighborhoods included in our analysis in the base year. The results are obtained from estimating equation (3). All specifications include a quartic polynomial in the difference between the neighborhood's minority share and the estimated tipping point. Standard errors are clustered on one percent bins of the running variable. Demographic controls are gender, mother's education, father's education, parental income and indicators for whether this information was not available for the individual. All models include birth year and metropolitan area fixed effects. Immigrants refer to individuals born in, or that have at least one parent born in, a non-Western country. *** indicates significance at the 1% level, ** indicates significance at the 5% level and * indicates significance at the 10% level.

Table A-9: Fraction of individuals that maintain treatment status over time

	All		Natives		Immigrants	
Year	Control	Treatment	Control	Treatment	Control	Treatment
1991	0.85	0.82	0.85	0.79	0.85	0.87
1992	0.79	0.73	0.79	0.70	0.77	0.78
1993	0.74	0.64	0.74	0.62	0.70	0.70
1994	0.68	0.58	0.68	0.55	0.64	0.64
1995	0.64	0.53	0.64	0.50	0.61	0.59
1996	0.59	0.49	0.59	0.46	0.56	0.54
1997	0.56	0.45	0.56	0.42	0.54	0.51
1998	0.52	0.41	0.52	0.39	0.50	0.47
1999	0.49	0.39	0.49	0.36	0.48	0.45
2000	0.48	0.37	0.47	0.35	0.47	0.43

Notes: The unit of observation is an individual that resided in one of the 520 neighborhoods included in our analysis in the base year. The Treatment columns depict the fraction of individuals that resided in a neighborhood with an immigrant share above the candidate threshold in the base year and remained in a neighborhood with an immigrant share above the threshold in year t. The Control columns depict the fraction of individuals that resided in a neighborhood with an immigrant share below the candidate threshold in the base year and remained in a neighborhood with an immigrant share below the threshold in year t.

Table A-10: Neighborhood population density

	All	Stockholm	Gothenburg	Malmo
Mean	4074.34	2437.36	5595.21	5326.58
S.D.	4535.89	2992.11	5390.15	4414.88

Notes: Authors' own calculations based on information on land size from Jan Amcoff and data from IFAU. See Amcoff (2012) for detailed information on how the density measure was constructed.

Table A-11: Tipping behavior of neighboring neighborhoods

	Mean	Standard Deviation	No Tipped Neighbors	All Neighbors Tipped	Number of Tipped Neighborhoods
All	0.62	0.35	0.12	0.25	459
Stockholm	0.43	0.29	0.17	0.08	166
Gothenburg	0.75	0.34	0.09	0.53	208
Malmo	0.65	0.31	0.09	0.24	85

Notes: Authors' own calculations using Statistic Sweden's SAMS Atlas. In a first step, neighborhoods with immigrant shares above the threshold in the base year are identified. In a second step, the SAMS Atlas is used to obtain the names of the neighborhoods surrounding the tipped neighborhoods. Finally,data from IFAU is used to identify the fraction of these neighborhoods that have tipped.

Table A-12: The reduced form effect of neighborhood composition on short-term labor market outcomes

	Self-Employment Income	Employment Income	Government-Funded Benefits
Panel A: Immigrants			
i. Intensive Margin			
Beyond TP	-0.220	0.026	0.015
	(0.171)	(0.045)	(0.068)
Observations	1803	16007	6704
ii. Extensive Margin			
Beyond TP	0.009	0.018	-0.007
	(0.006)	(0.020)	(0.014)
Observations	23253	23253	23253
Panel B: Natives			
i. Intensive Margin			
Beyond TP	-0.136	0.007	-0.020
	(0.127)	(0.023)	(0.054)
Observations	6315	81268	25528
i. Extensive Margin			
Beyond TP	0.006	-0.003	-0.017**
	(0.009)	(0.011)	(0.008)
Observations	93953	93953	93953

Notes: The unit of observation is an individual born between 1948 and 1958 that resided in one of the 520 neighborhoods included in our analysis that were not used to estimate the location of the tipping point . The results are obtained from estimating equation (3). All specifications include a quartic polynomial in the difference between the neighborhood's minority share and the estimated tipping point. Standard errors are clustered on one percent bins of the running variable. Demographic controls are gender, years of schooling, income and indicators for whether this information was not available for the individual. All models include birth year and metropolitan area fixed effects. All dependent variables are measured in 2000. All controls are measured in 1990. Immigrants refer to individuals born in, or that have at least one parent born in, a non-Western country. *** indicates significance at the 1% level, ** indicates significance at the 5% level and * indicates significance at the 10% level.

Table A-13: Descriptive statistics of neighborhoods included/excluded from analysis

	Included	Excluded
Fraction Natives	0.81(0.14)	0.82(0.21)
Fraction Females	0.49 (0.03)	0.43 (0.17)
Age	39.33 (2.97)	41.02 (6.19)
Years Since Migration	17.26 (3.92)	17.90 (8.12)
Fraction With University Education	0.10 (0.08)	0.08 (0.12)
Employment Income (000s SEK)	165.52 (46.81)	138.78 (70.34)
Fraction on Social Welfare	0.07 (0.09)	0.07 (0.16)
Native Growth Rate	0.09 (0.30)	2.48 (17.12)
Immigrant Growth Rate	0.07 (0.12)	0.91 (7.02)
Total Growth Rate	0.15 (0.33)	3.39 (23.80)

Notes: Authors' own calculations using population-wide registry data from IFAU. Values represent unweighted means, and standard deviations are provided in brackets. Salary refers to income from primary occupation, and includes zeros.

Table A-14: The effect of tipping on neighborhood environment

	Economic Activity Index	Sociodemographic Index
Neighborhood Analysis		
All	-0.073	-0.339***
	(0.056)	(0.101)
Individual-level Analysis		
All	-0.101	-0.260***
	(0.117)	(0.088)
Natives	-0.074	-0.239***
	(0.121)	(0.082)
Immigrants	-0.107	-0.273**
	(0.119)	(0.112)
Stayers	-0.209	-0.303***
	(0.150)	(0.109)
Leavers	0.031	-0.157**
	(0.086)	(0.083*)

Notes: The unit of observation is an individual that resided in one of the 520 neighborhoods not used to estimate the location of the tipping points. The neighborhood analysis results are obtained from estimating equation (2), while the individual level analysis results are obtained from estimating equation (3). All specifications include a quartic polynomial in the difference between the neighborhood's minority share and the estimated tipping point. Standard errors are clustered on one percent bins of the running variable. Demographic controls are gender, mother's education, father's education, parental income and binaries for whether this information was not available for the individual, all measured in the base year. For the Old Cohort, parental education and income have been replaced with own education and income. All models include birth year and metropolitan area fixed effects. Immigrants refer to individuals born in, or that have at least one parent born in, a non-Western country. The Economic Activity Index is based on three labor market variables (average employment income, average education, and fraction employed) while the Sociodemographic Index is based on four sociodemographic variables (gender balance, age profile, fraction immigrants and fraction on social security benefits). For each of these indices, we use unity-based normalization to bring the values of each of the individual variables into the range [0,1], take their sum, and then standardize the index to have a mean of zero and a standard deviation of one.*** indicates significance at the 1% level, ** indicates significance at the 5% level and * indicates significance at the 10% level.

Table A-15: The reduced form effect of neighborhood composition on immigrants, sensitivity table

	9th grade GPA	9th grade Swedish	High School GDP	Years of schooling	Empl. Sample	Empl. Income
Panel A: Young Cohort						
Population Density	0.880	1.410	0.319	0.021	0.013	0.231
	(1.677)	(1.959)	(1.574)	(0.097)	(0.019)	(0.230)
Excl. Neighborhoods with 100% Tipped Neighbors	0.749	1.148	0.251	0.034	0.017	0.275
	(1.438)	(1.829)	(1.527)	(0.094)	(0.019)	(0.232)
Excluding Outliers	-2.194	1.111	0.056	-0.015	0.002	0.059
	(1.612)	(1.823)	(1.661)	(0.098)	(0.023)	(0.285)
Panel B: Middle Cohort						
Population Density	-0.353	-0.458	-0.396	0.153	0.003	0.080
	(1.220)	(2.039)	(1.950)	(0.149)	(0.020)	(0.251)
Excl. Neighborhoods with 100% Tipped Neighbors	-0.181	-0.530	-0.553	0.154	0.005	0.105
	(1.108)	(2.077)	(1.818)	(0.162)	(0.019)	(0.237)
Excluding Outliers	-1.247	0.041	-0.288	0.199	0.000	0.045
	(1.300)	(2.109)	(2.117)	(0.161)	(0.019)	(0.241)
Panel C: Old Cohort						
Population Density					0.011	0.111
					(0.026)	(0.331)
Excl. Neighborhoods with 100% Tipped Neighbors					0.020	0.232
					(0.028)	(0.353)
Excluding Outliers					0.009	0.125
					(0.029)	(0.376)

Notes: The unit of observation is an individual that resided in one of the 520 neighborhoods included in our analysis in the base year. The results are obtained from estimating equation (3). All specifications include a quartic polynomial in the difference between the neighborhood's minority share and the estimated tipping point. Standard errors are clustered on one percent bins of the running variable. Demographic controls are gender, mother's education, father's education, parental income and binaries for whether this information was not available for the individual, all measured in the base year. For the Old Cohort, parental education and income have been replaced with own education and income. All models include birth year and metropolitan area fixed effects. Immigrants refer to individuals born in, or that have at least one parent born in, a non-Western country. *** indicates significance at the 1% level, ** indicates significance at the 5% level and * indicates significance at the 10% level.

Table A-16: The reduced form effect of neighborhood composition on natives, sensitivity table

	9th grade GPA	9th grade Swedish	High school GDP	Years of schooling	Empl. Sample	Empl. Income
Panel A: Young Cohort						
Population Density	-2.087**	-1.530**	-1.233**	-0.078	-0.005	-0.081
	(0.938)	(0.748)	(0.536)	(0.050)	(0.008)	(0.100)
Excl. Neighborhoods with 100% Tipped Neighbors	-2.086*	-1.696*	-1.127*	-0.063	0.001	0.013
	(1.134)	(0.942)	(0.586)	(0.054)	(0.007)	(0.096)
Excluding Outliers	-1.905	-1.694*	-1.181*	0.037	0.001	-0.004
	(1.145)	(0.992)	(0.692)	(0.058)	(0.008)	(0.105)
Panel B: Middle Cohort						
Population Density	-1.402*	-1.912**	-0.034	-0.039	0.001	-0.005
	(0.724)	(0.828)	(0.756)	(0.056)	(0.007)	(0.088)
Excl. Neighborhoods with 100% Tipped Neighbors	-1.209	-2.001**	-0.046	-0.020	0.002	0.015
	(0.732)	(0.867)	(0.771)	(0.059)	(0.007)	(0.092)
Excluding Outliers	-0.947	-1.677*	0.390	0.009	-0.001	0.008
	(0.681)	(0.901)	(0.893)	(0.060)	(0.007)	(0.101)
Panel C: Old Cohort						
Population Density					-0.010	-0.151
					(0.012)	(0.163)
Excl. Neighborhoods with 100% Tipped Neighbors					-0.002	-0.044
					(0.012)	(0.168)
Excluding Outliers					-0.010	-0.120
					(0.012)	(0.168)

Notes: The unit of observation is an individual that resided in one of the 520 neighborhoods not used for identifying the location of the tipping points. The results are obtained from estimating equation (3). All specifications include a quartic polynomial in the difference between the neighborhood's minority share and the estimated tipping point. Standard errors are clustered on one percent bins of the running variable. Demographic controls are gender, mother's education, father's education, parental income and binaries for whether this information was not available for the individual, all measured in the base year. For the Old Cohort, parental education and income have been replaced with own education and income. All models include birth year and metropolitan area fixed effects. All models include birth year and municipality fixed effects. Natives refer to individuals not born in, and that do not have a parent born in, a non-Western country. *** indicates significance at the 1% level, ** indicates significance at the 5% level and * indicates significance at the 10% level.

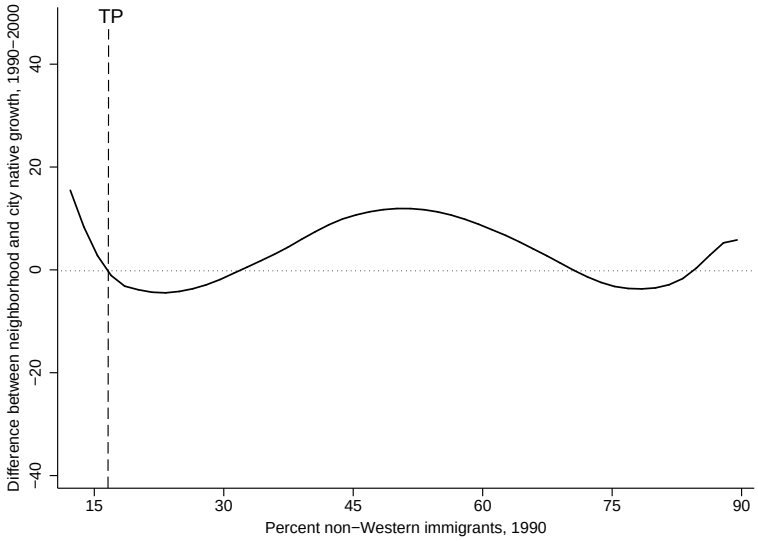
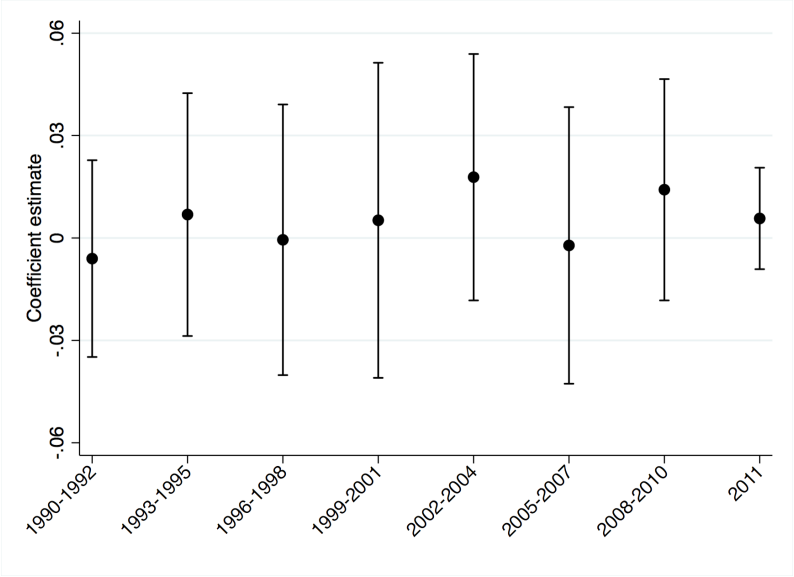
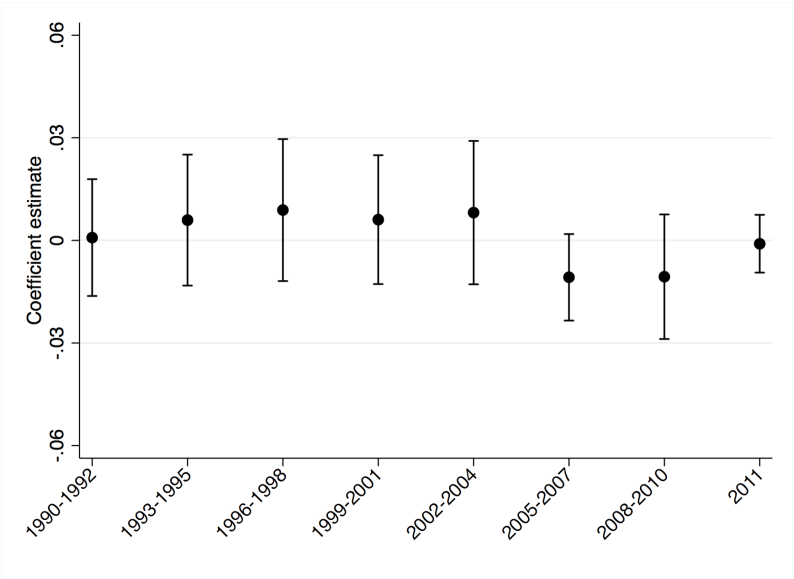


Figure A-1: Illustration of the search method for identifying the tipping point

Notes: The figure demonstrates how the location of the tipping point is derived from equation (1) for a hypothetical city. The solid line depicts the growth function of neighborhood native population modelled as a fourth-order polynominal. The horizontal line shows where the dependent variable of equation (1) is equal to zero. The proposed tipping point is located at the intersection of this line and the growth function, denoted by the dashed vertical line. As illustrated in the Figure, and discussed in the text, there can be more than one root, and in such cases we follow Card et al. (2008) and pick the root associated with the most negative slope.



(a) Immigrants



(b) Natives

Figure A-2: Time heterogeneity in treatment effects

Notes: The unit of observation is an individual born between 1948 and 1958 (Old Cohort) that resided in one of the 520 neighborhoods included in our analysis in the base year not used to identify the location of the tipping points. The figure depicts the point estimates obtained from estimating equation (4) seperateley on three year averages of employment income, stratified by nativity status. All specifications include a quartic polynomial in the difference between the neighborhood's minority share and the estimated tipping point. Standard errors are clustered on one percent bins of the running variable. Demographic controls are gender, educational attainment, income and binaries for whether this information was not available for the individual, all measured in the base year. All models include birth year and municipality fixed effects. Natives refer to individuals not born in, and do not have a parent born in, a non-Western country. The bars depict the 95% confidence intervals associated with each point estimate.

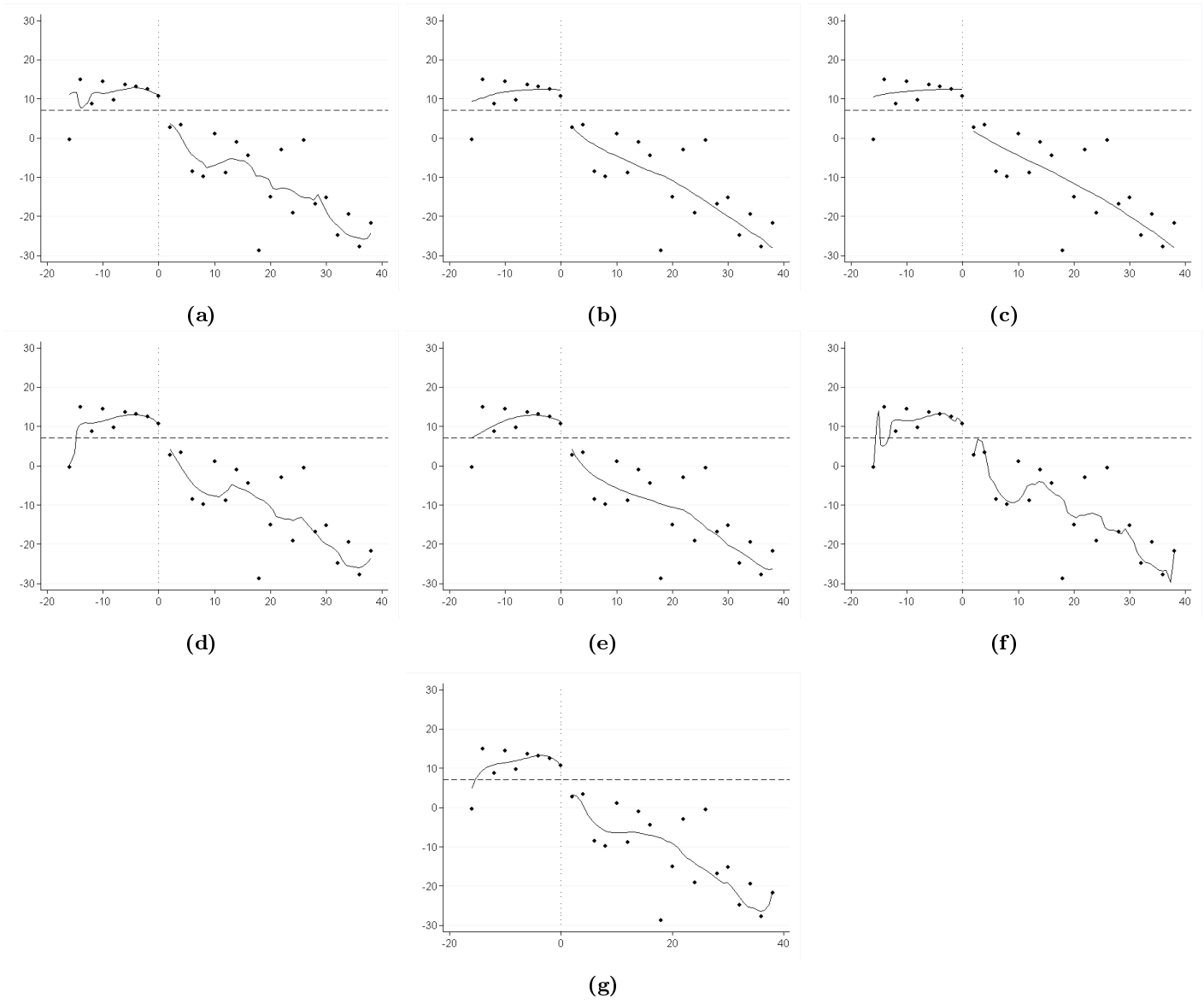


Figure A-3: Discontinuity in native population change around candidate tipping point, alternative bandwidths and degrees of smoothing

Notes: Dots show mean change in neighborhood native population growth between 1990 and 2000, grouping neighborhoods into 2% bins by the deviation in immigrant share from the estimated tipping point in the base year. The vertical lines depict the estimated tipping points (normalized to zero). The solid lines represent regressions fitted separately on either side of the tipping point weighted by the size of the neighborhoods and the fraction of the decade that the neighborhood spent above the tipping point, using an Epanechnikov kernel. Only the 1/3 of the sample not used for identifying the location of the tipping points is used for these visual depictions.