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A Comment on “Long-Term Effects of Equal Sharing: Evidence from Inheritance Rules for Land”

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A comment on "Long-Term Effects of Equal Sharing: Evidence from Inheritance Rules for Land"*

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Abstract

Bartels, Jäger and Obergruber (2024) examine how division rules for the inheritance of agricultural land affected distributional outcomes in 19$^{\text{th}}$ century and contemporary Germany. The authors use a regression discontinuity design to show that equal-division counties—those in which inheritance of property and land were split equally among heirs—had significantly lower concentration of land holdings in historical Germany and that these areas have higher incomes and wealth today relative to neighboring counterparts that operated under rules where no division of inheritance took place. We computationally reproduce all results present in their manuscript using the replication package the authors provide. While we uncover one minor coding error that affects their calculations of HAC standard errors, it has no effect on the study's results. We also provide two additional tests of the authors identifying assumption: a standard test of continuity of the density of the running variable as well as falsification tests which alter which units are assigned treatment. Both tests support the authors' identifying assumptions.

KEYWORDS: Replication, Reproducibility

JEL CODES: D3, N33, O1

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1 Introduction

Bartels, Jäger and Obergruber (2024), henceforth BJO, investigate how inheritance rules for agricultural landholdings in Germany impact farm size and economic outcomes. As early as the Middle Ages, the inheritance of agricultural landholdings at the village level was done on the basis of either equal division among heirs (*Realteilung*) or unequal division (*Anerbenrecht*). Equal division rules stated that bequests of agricultural land and other property were to be distributed equally among all heirs in affected villages, while under unequal rules landholdings were passed down to a single descendant (often the deceased's firstborn son). BJO examine how German counties with equal division rules in the Middle Ages differed from those without in both 19$^{\text{th}}$ century and modern Germany.

To tease out the causal effects of these rules governing inheritance, BJO use a spatial regression discontinuity (RD) design to estimate the effects of equal division inheritance rules on outcomes in 19$^{\text{th}}$ century and modern Germany. Their RD approach compares equal-division (treated) counties with bordering counties that operated under unequal division rules (control). The main identifying assumption requires that potential outcomes conditional on treatment (i.e., whether a county had equal-division inheritance rules) are continuous at the border between unequal and equal division regions (see BJO Figure 1b) for counties within 35 kilometers of one of these borders.

The authors find that these equal division rules had substantial effects on both agricultural holdings in the 19$^{\text{th}}$ century as well as incomes and wealth in modern Germany. BJO find that several measures of landholding inequality in 1895 (GINI coefficients, average farm size, and share of small farms) were significantly lower in equal-division counties at the 1% level. The authors show that for modern Germany, these treated counties have significantly higher household income and output per capita ($p < 0.01$) in 2013.

In the present report prepared for the Institute for Replication (Brodeur *et* al. 2024), we investigate whether their analytical results are computationally reproducible and test identifying assumptions using McCrary (2008) and falsification tests. In terms of reproducibility, we acknowledge that the original study was successfully reproduced by the data editor's team at the Economic Journal. We successfully reproduced BJO's main Tables and Figures using their code as-written modulo some syntactical changes.

We uncovered one minor overarching coding error: the Conley (1999) standard errors reported in all tables are calculated using an equal-weights regression specification as opposed to the population-weighted one the authors employ in generating their point estimates and asymptotic errors. However, this does not substantially affect their results. Appendix Tables 1 through 6 verify this below in our writeup.

2 Computational Reproducibility

We used the replication package the authors provide on Zenodo (Bartels, Jäger and Obergruber (2024), available here). Code that aggregates the individual series of historical and modern data into the estimating samples are provided at the headers of the table and figure construction files. These initial programs also effectively serve as their data cleaning scripts as most of their "raw" data are quite clean and available as .dta files. We successfully computationally reproduced all main results (*i.e.*, Tables 1 through 6 and Figures 2 through 8) from the raw data the authors provide. See Table 1 for details. One caveat to this is we have no way of directly varying BJO's process for encoding villages (and in turn, counties) as having had inheritance governed by *Realteilung* rules.

All four scripts provided by the authors runs smoothly after setting directories according to the *readme* file. We are able to quantitatively reproduce all results (point estimates) in the main text Tables and Figures along with the associated cluster-robust standard errors when applicable. We also verify that the results are qualitatively similar when higher-order polynomials in the running variable (distance to the border) are included.

We uncover two minor coding errors. The first appears throughout in terms of how the Conley (1999) standard errors allowing for heteroskedasticity and spatial autocorrelation (HAC) are calculated. When utilizing the *ols_spatial_HAC* command (which implements HAC-robust errors) the authors do not weight county-level observations by their populations. This is inconsistent with their description of the weighting schemes in their code for producing their point estimates and associated (cluster-robust) standard errors. Appendix Tables A1 through A6 recreate these tables with corrected spatial-autocorrelation robust standard errors. Correcting this small error has virtually no effect on any of the confidence intervals or inference BJO perform.

Additionally, there are two minor issues with how the regression discontinuity plots are implemented. First, all RD plots (generated using the *rdrobust* STATA command, (Calonico et al. 2017)) are based on regression specifications using a triangular kernel for local-polynomial estimation. This could be made more consistent with the OLS estimates in Tables 1 through 6 (which these graphs are intended to visualize) by instead using a uniform kernel for consistency with the OLS estimates which assign equal weight (prior to the population weighting) to all counties within the 35 kilometer buffer from the borders (see Calonico et al. (2017) for details). Figures 1 and 2 show versions of Figure 3a and 3b in BJO using a uniform kernel estimator as opposed to the default triangular one. All results are qualitatively quite similar.

Second, in BJO's tests of the identifying assumptions of smooth covariates at the border between treated and untreated regions displayed in Figure 4a, all data points are spuriously double counted. This occurs because BJO's historical dataset covers two years' worth of data for 1,100 regions (in contrast, the modern data, on which tests in Figures 4b and 4c are performed, only contain one years' worth of data and do not suffer from this problem). This leads the authors to double-count each individual county when running the test for a discontinuity around the borders between treated and control counties. Figures 3 and 4 show versions corrected for double counting; the former maintains the author's choice of a triangular kernel while the latter implements a uniform kernel for consistency with the OLS and RD specifications the authors estimate in their tables. Qualitative differences remain quite minimal between the alternative specifications here and those provided by the authors.

3 Robustness

We now turn our attention to additional robustness checks of BJO's identifying assumptions for their RD design. The decision to conduct these two robustness checks was taken after reading the paper but prior to accessing the replication package provided by the authors.

3.1 Test of Continuity of Running Variables

BJO test their identifying assumption by examining whether outcomes predicted by covariates *excluding* distance from the borders between equal and unequal provisions are similar. This procedure is displayed in their Figure 4. This in effect tests whether weighted averages of covariates within distance bins across counties of interest are similar across bins. This is one of a general set of testable assumptions in RD designs, namely that the conditional distributions of all covariates should be continuous in the running variable around the cutoff (Lee 2008).[1] A standard falsification test first proposed by McCrary (2008) is one that examines manipulation of the running variable around the cutoff; if the RD assumptions hold, we should not observe a discontinuity in the density of counties around the threshold of zero distance.

Figures 5 and 6 show graphical results of these manipulation tests when performed at the 35 kilometer symmetrical bandwidth that BJO use in their main specifications. We fail to reject the null of no continuity in the running variable in either their historical ($p = 0.50$, N effective = 406) and modern ($p = 0.29$, N effective = 208) samples, bolstering BJO's identifying assumptions. We note they do perform standard versions of these tests in their Appendix Table 7 (tests of discontinuity in other covariates at the border) and control for the covariates which are discontinuous in their main specification.

[1] In the case of Figure 4, this runs a falsification test for the conditional distribution of a random variable that is a weighted sum of county-level covariates with weights equal to the OLS coefficients in a regression of these covariates on treatment, 2013 income, or 2013 GDP per capita.

3.2 Placebo Tests

We conduct a series of placebo tests by shifting the border between the two inheritance regimes either deeper into the treated area or further into the control area by 10, 20, 30, 40, and 50 kilometers. For each shifted border, we redefine the treatment status and the running variable accordingly, while maintaining the same sample window of ±35 km around the placebo border. These placebo borders are entirely artificial and should not capture any actual treatment effect if the original border is indeed the source of discontinuity.

Tables 2 and 3 show the reproduced results with the same specification as BJO Table 2 Panel D, while using the artificial borders into and away from the treated area for the regression discontinuity design, respectively. Across all placebo specifications, the estimated effects of "Equal Division" are generally small and statistically insignificant. Only the original border yields consistently positive and statistically significant effects across the set of outcomes BJO consider. At artificial borders, the coefficients are often close to zero and occasionally negative, with significance appearing only sporadically and without a systematic pattern. For example, while the placebo at +40 km into the treated area shows a statistically significant effect on taxable income, this is not replicated in nearby shifts or other outcomes suggesting it is a false positive.

These robustness checks confirm that the discontinuity in long-term outcomes is uniquely aligned with the historical institutional divide and not an artifact of general spatial trends or local shocks. The results reinforce the main finding that counties historically governed by the equal division inheritance rule experienced persistently higher economic performance over the long run.

4 Conclusion

We find that all main results in Bartels, Jäger and Obergruber (2024) can be reproduced using the reproduction package provided by the authors. Correcting two small errors in their code leads to de-minimis differences in certain standard errors and figures which do not affect their findings in either a quantitative or qualitative manner.

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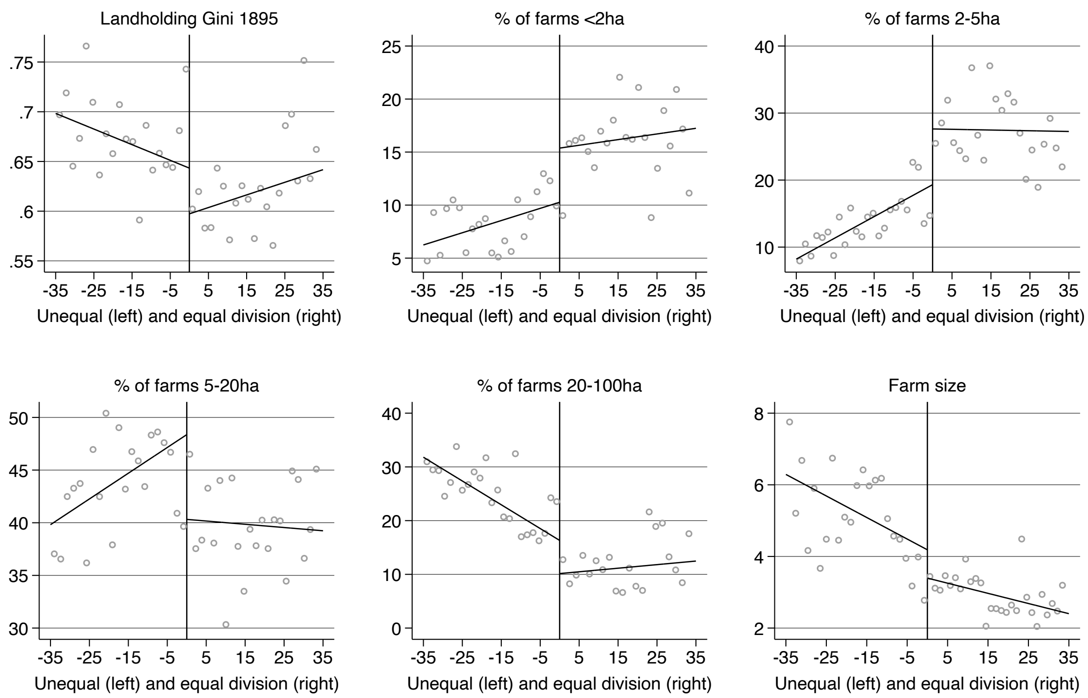
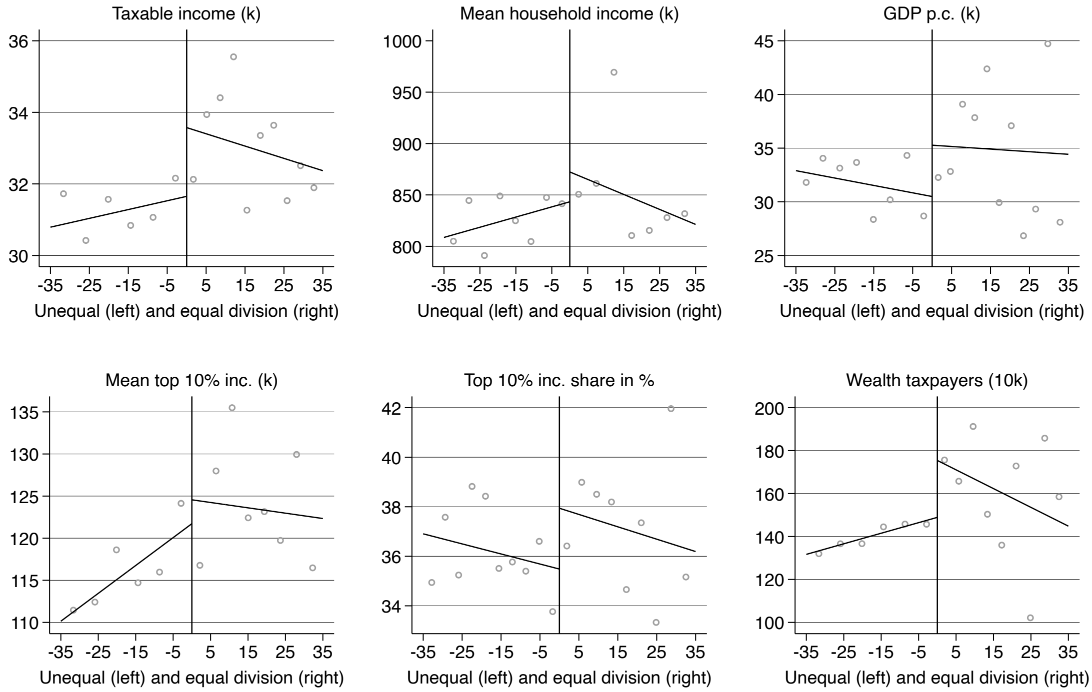
5 Figures

Figure 1: BJO Figure 3a, Uniform Kernel



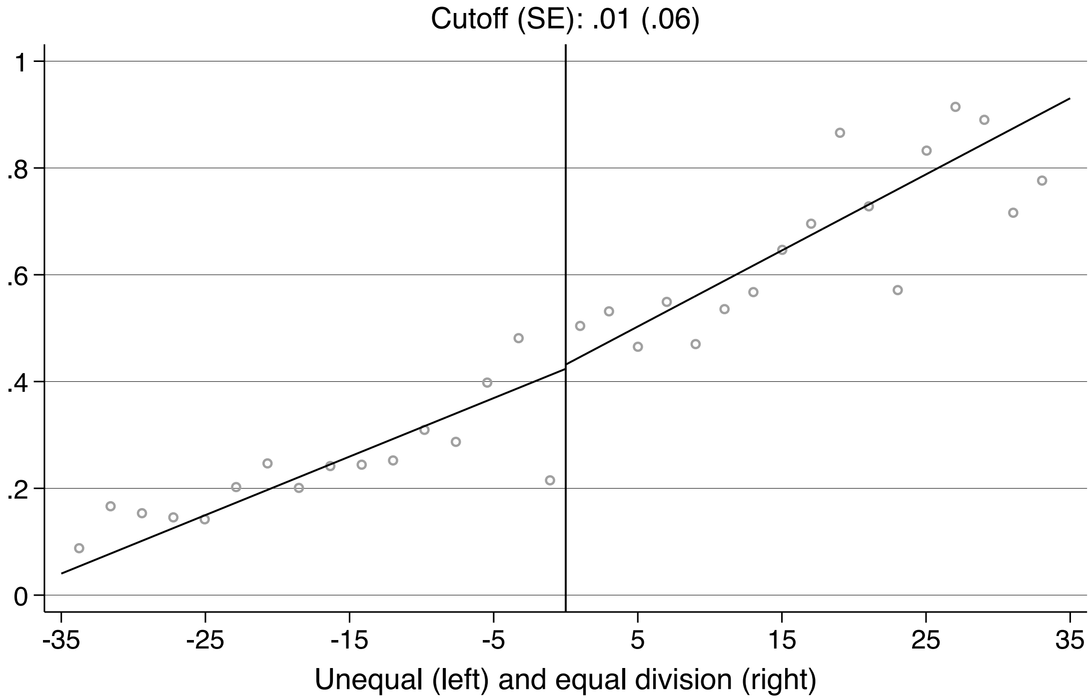
Notes: This figure recreates Bartels, Jäger and Obergruber (2024) Figure 3a using the *rdrobust* command with uniform kernel weighting (Calonico et al. 2017).

Figure 2: BJO Figure 3b, Uniform Kernel



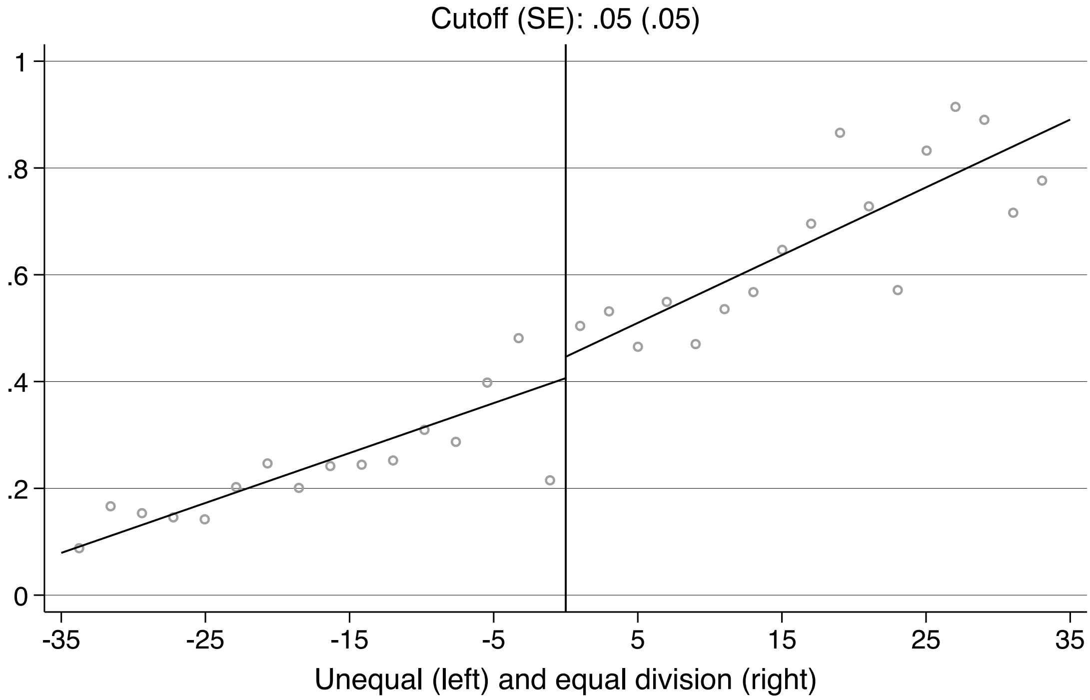
Notes: This figure recreates Bartels, Jäger and Obergruber (2024) Figure 3b using the *rdrobust* command with uniform kernel weighting (Calonico et al. 2017).

Figure 3: BJO Figure 4a, Removing Spurious Duplicates



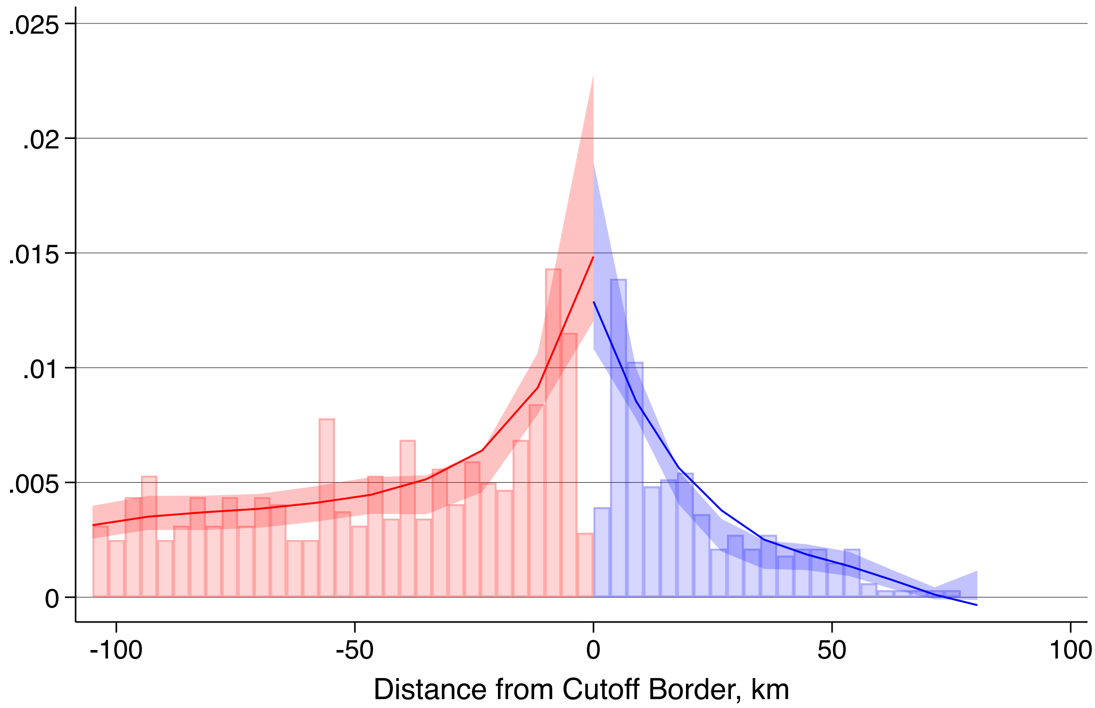
Notes: This Figure recreates Bartels, Jäger and Obergruber (2024) Figure 4a using the *rdrobust* command with duplicate observations removed using triangular kernel weighting (Calonico et al. 2017).

Figure 4: BJO Figure 4a, Uniform Kernel



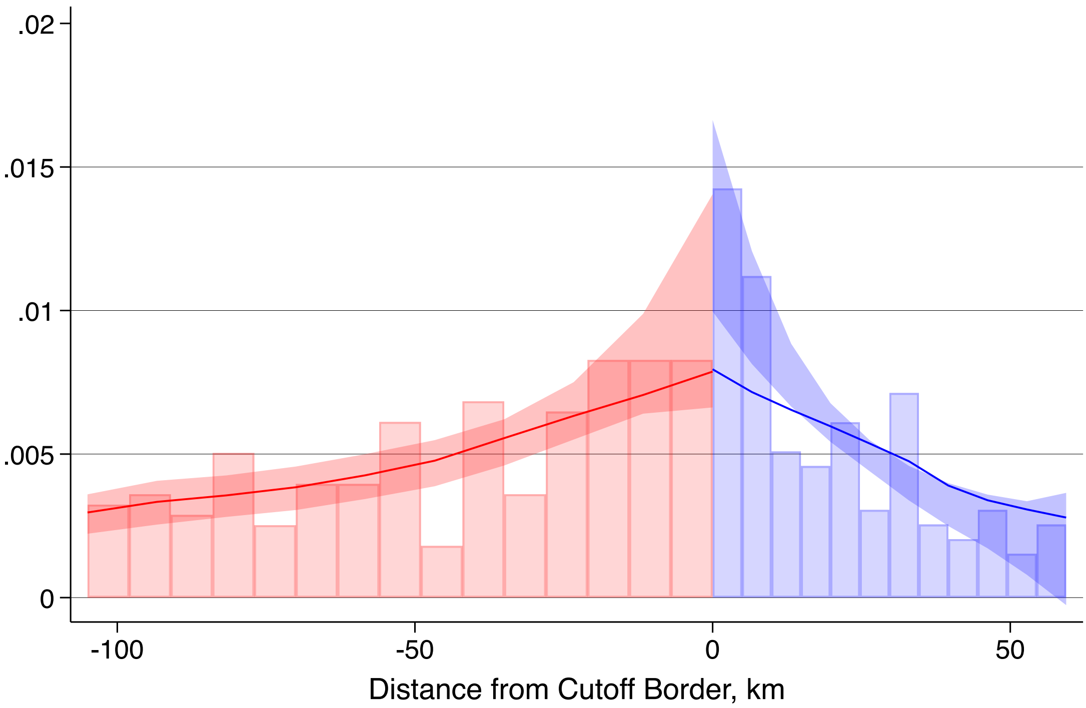
Notes: This Figure recreates Bartels, Jäger and Obergruber (2024) Figure 4a using the *rdrobust* with duplicate observations removed using uniform kernel weighting (Calonico et al. 2017).

Figure 5: Manipulation Test for Historical Counties



Notes: This Figure shows the graphical results of a manipulation test of the running variable (distance to the border between unequal and equal-division counties in BJO's historical sample using the *rddensity* command (Cattaneo et al. 2018).

Figure 6: Manipulation Test for Modern Counties



Notes: This Figure shows the graphical results of a manipulation test of the running variable (distance to the border between unequal and equal-division counties in BJO's modern sample using the *rddensity* command (Cattaneo et al. 2018).

6 Tables

Table 1: Replication Package Contents and Reproducibility

Replication Package Item	Fully	Partial	No
Raw data provided	✓		
Analysis data provided	✓		
Cleaning code provided	✓		
Analysis code provided	✓		
Reproducible from raw data	✓		
Reproducible from analysis data	✓		

Notes: This table summarizes the replication package contents contained in Bartels, Jäger and Obergruber (2024).

Table 2: Placebo Estimates with Varying Offset Distances Toward Treated Area

	Log Household Income	Log Taxable Income	Log Median Income	Log GDP per Capita
Panel A: Shifted Border (10 km into Treated Area)				
Equal Division	-0.029	-0.018	-0.063*	-0.170
	(0.050)	(0.031)	(0.037)	(0.135)
Panel B: Shifted Border (20 km into Treated Area)				
Equal Division	0.019	0.009	0.005	0.005
	(0.054)	(0.049)	(0.032)	(0.144)
Panel C: Shifted Border (30 km into Treated Area)				
Equal Division	-0.011	-0.039	0.050	0.185
	(0.031)	(0.028)	(0.059)	(0.202)
Panel D: Shifted Border (40 km into Treated Area)				
Equal Division	0.168	0.199*	0.093	0.142
	(0.120)	(0.106)	(0.091)	(0.157)
Panel E: Shifted Border (50 km into Treated Area)				
Equal Division	-0.137	-0.194**	-0.066	-0.057
	(0.165)	(0.080)	(0.091)	(0.424)

Notes: This table reports the effect of *Equal Division* on the outcomes listed in the column headers, using placebo borders shifted into the treated area by 10, 20, 30, 40, or 50 kilometers. The unit of observation is a county. All regressions follow the specification of Panel D in BJO Table 2, including longitude, latitude, geographic and cultural controls, and an interaction between treatment and the running variable to allow for slope heterogeneity. The sample is restricted to counties within 35 km of each placebo border. Regressions are weighted by population. Stars denote significance at the ***[1%] **[5%] *[10%] level.

Table 3: Placebo Estimates with Varying Offset Distances Toward Control Area

	Log Household Income	Log Taxable Income	Log Median Income	Log GDP per Capita
Panel A: Shifted Border (10 km away from Treated Area)				
Equal Division	-0.030	-0.015	0.018	0.054
	(0.022)	(0.030)	(0.022)	(0.063)
Panel B: Shifted Border (20 km away from Treated Area)				
Equal Division	0.040	0.039	-0.022	0.028
	(0.030)	(0.032)	(0.018)	(0.074)
Panel C: Shifted Border (30 km away from Treated Area)				
Equal Division	0.012	-0.007	-0.023	-0.012
	(0.039)	(0.037)	(0.024)	(0.060)
Panel D: Shifted Border (40 km away from Treated Area)				
Equal Division	0.029	0.015	0.006	-0.087
	(0.023)	(0.026)	(0.029)	(0.095)
Panel E: Shifted Border (50 km away from Treated Area)				
Equal Division	-0.019	-0.050	0.025	-0.009
	(0.037)	(0.034)	(0.042)	(0.131)

Notes: This table reports the effect of *Equal Division* on the outcomes listed in the column headers, using placebo borders shifted away from the treated area by 10, 20, 30, 40, or 50 kilometers. The unit of observation is a county. All regressions follow the specification of Panel D in BJO Table 2, including longitude, latitude, geographic and cultural controls, and an interaction between treatment and the running variable to allow for slope heterogeneity. The sample is restricted to counties within 35 km of each placebo border. Regressions are weighted by population. Stars denote significance at the ***[1%] **[5%] *[10%] level.

7 Appendix Tables

Table A1: Equal Division and Landholding Inequality 1895 (BJO Table 1)

	Landholding Gini 1895		% of Farms in Size Category				Farm Size	Number of Farms
	(1) Linear RD Poly.	(2) Quad. RD Poly.	(3) <2 ha	(4) 2-5 ha	(5) 5-20 ha	(6) 20-100 ha	(7) in ha	(8) per 1000 inhabitants
Panel A. OLS								
Equal Division	-0.0382**	-0.0321**	8.683***	14.99***	4.576**	-18.47***	-3.724***	17.47***
	[0.0169]	[0.0143]	[0.964]	[1.581]	[2.324]	[1.646]	[0.293]	[4.985]
Observations	931	931	930	930	930	929	927	931
Panel B. With Controls								
Equal Division	-0.0537***	-0.0549***	6.080***	11.42***	-3.498*	-13.01***	-1.440***	15.34***
	[0.0120]	[0.0103]	[0.969]	[1.589]	[2.048]	[1.436]	[0.240]	[5.204]
Observations	931	931	930	930	930	929	927	931
Panel C. Distance to Border								
Equal Division	-0.0410***	-0.0497***	5.911***	10.03***	-6.025***	-10.18***	-1.285***	11.01**
	[0.0106]	[0.00891]	[1.003]	[1.582]	[1.855]	[1.492]	[0.194]	[4.917]
Observations	397	397	394	394	394	393	391	397
Panel D. Distance to Border × Equal Division								
Equal Division	-0.0351***	-0.0382***	4.114***	7.491***	-5.348**	-5.436***	-0.715***	13.41**
	[0.0136]	[0.0114]	[1.220]	[1.920]	[2.302]	[1.583]	[0.207]	[6.288]
Observations	397	397	394	394	394	393	391	397
mean outcome	0.716	0.716	8.242	13.34	33.84	27.08	5.997	127.7
SD outcome	0.123	0.123	7.031	10.69	15.04	16.06	3.318	45.65

Notes: Replication of Table 1 in Bartels, Jäger and Obergruber (2024) with corrected weights when re-estimating their estimating equation (1). Conley (1999) standard errors allowing for spatial autocorrelation, corrected for the population-based weighting scheme BJO use in their specifications with clustered standard errors, are shown in brackets. Stars denote significance at the ***[1%] **[5%] *[10%] level.

Table A2: Equal Division and Income Measures 2013 (BJO Table 2)

	(1) Log Household Income	(2) Log Taxable Income	(3) Log Median Income	(4) Log GDP p.c.
Panel A. OLS				
Equal Division	0.0636***	0.0698***	0.0478***	0.123***
	[0.0182]	[0.0196]	[0.0157]	[0.0449]
Observations	397	374	397	397
Panel B. With Controls				
Equal Division	0.0617***	0.0637***	0.0446***	0.144***
	[0.0128]	[0.0144]	[0.0145]	[0.0356]
Observations	397	374	397	397
Panel C. Distance to Border				
Equal Division	0.0572***	0.0663***	0.0438***	0.143***
	[0.0115]	[0.00855]	[0.0129]	[0.0448]
Observations	198	178	198	198
Panel D. Distance to Border × Equal Division				
Equal Division	0.0463***	0.0492***	0.0317*	0.112*
	[0.0115]	[0.00791]	[0.0163]	[0.0675]
Observations	198	178	198	198
Mean Outcome	6.719	3.461	7.956	3.447
SD Outcome	0.115	0.146	0.162	0.336

Notes: Replication of Table 2 in Bartels, Jäger and Obergruber (2024) with corrected weights when re-estimating their estimating equation (1). Conley (1999) standard errors allowing for spatial autocorrelation, corrected for the population-based weighting scheme BJO use in their specifications with clustered standard errors, are shown in brackets. Stars denote significance at the ***[1%] **[5%] *[10%] level.

Table A3: Equal Division and Education, Industry Structure and Productivity 2013 (BJO Table 3)

	(1) Top 10% Share (%)	(2) Top 1% Share (%)	(3) Log Mean Income Top 10%	(4) Log Mean Income Top 1%	(5) Share With Inc<10k Euro	(6) Share With Inc<20k Euro	(7) Wealth Taxpayers per 10k	(8) Millionaires per 10k
Panel A. OLS								
Equal Division	2.144***	0.773*	0.0969***	0.0928*	-1.199	-1.276	32.65***	6.072***
	[0.638]	[0.397]	[0.0313]	[0.0487]	[1.013]	[0.974]	[9.664]	[1.591]
Observations	395	395	395	395	395	395	319	319
Panel B. With Controls								
Equal Division	2.071***	1.141***	0.0954***	0.131***	-1.235*	-1.331**	35.16***	7.504***
	[0.561]	[0.331]	[0.0223]	[0.0355]	[0.643]	[0.641]	[7.896]	[1.313]
Observations	395	395	395	395	395	395	319	319
Panel C. Distance to Border								
Equal Division	1.656**	1.158***	0.0861***	0.135***	-1.443**	-1.525**	30.97***	6.403***
	[0.699]	[0.391]	[0.0155]	[0.0295]	[0.606]	[0.592]	[8.881]	[1.362]
Observations	196	196	196	196	196	196	172	172
Panel D. Distance to Border × Equal Division								
Equal Division	2.102**	1.518**	0.0744***	0.137***	-0.422	-0.610	16.21*	4.466***
	[1.003]	[0.593]	[0.0108]	[0.0365]	[0.922]	[0.874]	[8.531]	[1.680]
Observations	196	196	196	196	196	196	172	172
Mean Outcome	37.37	10.98	11.69	12.76	36.71	50.90	150.4	22.14
SD Outcome	5.034	2.613	0.224	0.306	7.239	8.051	54.17	10.12

Notes: Replication of Table 3 in Bartels, Jäger and Obergruber (2024) with corrected weights when re-estimating their estimating equation (1). Conley (1999) standard errors allowing for spatial autocorrelation, corrected for the population-based weighting scheme BJO use in their specifications with clustered standard errors, are shown in brackets. Stars denote significance at the ***[1%] **[5%] *[10%] level.

Table A4: Equal Division and Inequality Measures 2013 and 1995 (BJO Table 4)

	Education		Employment					Firms	
	(1) College Degree	(2) Vocational Training	(3) Agric.	(4) Manuf.	(5) Trade and Services	(6) Creative Ind.	(7) Lab. prod.	(8) Per Pop	(9) Size
Panel A. OLS									
Equal Division	3.136***	-4.150***	-0.201**	-5.075***	5.286***	1.142***	4.725***	0.00141**	-0.604*
	[0.691]	[0.802]	[0.0872]	[1.457]	[1.472]	[0.328]	[1.363]	[0.000699]	[0.331]
Observations	397	397	397	397	397	397	395	380	380
Panel B. With Controls									
Equal Division	2.789***	-2.759***	-0.397**	-2.902**	3.300**	1.187***	3.698***	0.00205***	-0.907***
	[0.687]	[0.661]	[0.154]	[1.339]	[1.335]	[0.350]	[1.088]	[0.000586]	[0.325]
Observations	397	397	397	397	397	397	395	380	380
Panel C. Distance to Border									
Equal Division	2.388***	-2.371***	-0.326**	-1.539	1.870	1.088***	3.317***	0.00195***	-0.706**
	[0.655]	[0.611]	[0.130]	[1.641]	[1.672]	[0.351]	[1.024]	[0.000643]	[0.352]
Observations	198	198	198	198	198	198	196	183	183
Panel D. Distance to Border × Equal Division									
Equal Division	1.866*	-1.183	-0.328**	-0.0733	0.433	0.934*	1.744	0.00148*	-0.550
	[0.960]	[0.880]	[0.156]	[2.018]	[2.054]	[0.486]	[1.403]	[0.000835]	[0.467]
Observations	198	198	198	198	198	198	196	183	183
Mean Outcome	11.19	64.51	1.052	32.40	66.55	2.645	47.22	0.0261	14.41
SD Outcome	4.873	6.396	1.260	10.49	10.66	2.090	8.504	0.00355	1.983

Notes: Replication of Table 4 in Bartels, Jäger and Obergruber (2024) with corrected weights when re-estimating their estimating equation (1). Conley (1999) standard errors allowing for spatial autocorrelation, corrected for the population-based weighting scheme BJO use in their specifications with clustered standard errors, are shown in brackets. Stars denote significance at the ***[1%] **[5%] *[10%] level.

Table A5: Equal Division and Innovation 1877 to 1914 (BJO Table 5)

	Employment in Innovative Manufacturing				Patents		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	in % of Total Pop.		in % of Manufacturing Pop.		Dummy	Log Patents	Log Patents w/ Zero
Panel A. OLS							
Equal Division	2.125*	4.783**	3.048*	7.180**	0.0837	0.646***	0.739**
	[1.102]	[1.919]	[1.710]	[3.013]	[0.0631]	[0.220]	[0.292]
Equal Division × Farm Size		-1.261***		-1.411**			
		[0.358]		[0.548]			
Observations	900	896	900	896	899	499	899
Panel B. With Controls							
Equal Division	2.388**	5.441***	3.371**	7.627***	0.138*	0.561***	0.888***
	[0.991]	[1.759]	[1.610]	[2.718]	[0.0816]	[0.208]	[0.332]
Equal Division × Farm Size		-1.215***		-1.302**			
		[0.352]		[0.517]			
Observations	893	893	893	893	899	499	899
Panel C. Distance to Border							
Equal Division	2.434***	3.933**	3.141**	4.699*	0.105**	0.472**	0.623***
	[0.863]	[1.727]	[1.437]	[2.729]	[0.0515]	[0.190]	[0.184]
Equal Division × Farm Size		-0.849**		-0.746			
		[0.379]		[0.562]			
Observations	388	388	388	388	390	228	390
Panel D. Distance to Border × Equal Division							
Equal Division	1.268	3.789**	0.897	3.381	0.168**	0.529*	0.644**
	[1.078]	[1.749]	[1.881]	[2.948]	[0.0720]	[0.299]	[0.279]
Equal Division × Farm Size		-0.852**		-0.774			
		[0.384]		[0.576]			
Observations	388	388	388	388	390	228	390
Mean Outcome	6.874	6.865	16.177	16.168	0.669	1.979	1.994
SD Outcome	5.664	5.666	8.639	8.645	0.471	1.542	1.886

Notes: Replication of Table 5 in Bartels, Jäger and Obergruber (2024) with corrected weights when re-estimating their estimating equation (1). Conley (1999) standard errors allowing for spatial autocorrelation, corrected for the population-based weighting scheme BJO use in their specifications with clustered standard errors, are shown in brackets. Stars denote significance at the ***[1%] **[5%] *[10%] level.

Table A6: Equal Division and Sectoral Employment 1895 and 1907 and Distance to Coal (BJO Table 6)

	Employment 1895						Employment 1907					
	(1) Agric.	(2) Agric.	(3) Manuf.	(4) Manuf.	(5) Trade/Serv.	(6) Trade/Serv.	(7) Agric.	(8) Agric.	(9) Manuf.	(10) Manuf.	(11) Trade/Serv.	(12) Trade/Serv.
Panel A. OLS												
Equal Division	-2.489	-2.326	0.304	-0.0455	0.165	-0.0188	-3.998	-3.929	1.130	0.601	0.277	0.0738
	[2.048]	[2.557]	[1.388]	[1.737]	[0.185]	[0.191]	[2.683]	[3.281]	[1.434]	[1.749]	[0.231]	[0.253]
Observations	889	889	889	889	889	889	900	900	900	900	900	900
Panel B. With Controls												
Equal Division	-1.363	-2.938	0.710	1.063	0.177	0.219	-2.518	-4.532**	1.700*	2.156*	0.247	0.345
	[1.256]	[1.878]	[0.881]	[1.384]	[0.130]	[0.185]	[1.585]	[2.227]	[0.907]	[1.304]	[0.153]	[0.232]
Observations	886	886	886	886	886	886	897	897	897	897	897	897
Panel C. Distance to Border												
Equal Division	-2.109**	-2.513*	1.577**	1.048	0.273*	0.370**	-3.294**	-4.348**	2.465***	1.967**	0.292*	0.443*
	[1.017]	[1.359]	[0.737]	[0.978]	[0.141]	[0.185]	[1.395]	[1.804]	[0.804]	[0.968]	[0.154]	[0.229]
Observations	382	382	382	382	382	382	390	390	390	390	390	390
Panel D. Distance to Border × Equal Division												
Equal Division	-1.729	-2.181	2.031**	1.501	0.111	0.205	-3.503*	-4.055*	3.434***	2.772**	0.00949	0.133
	[1.372]	[1.771]	[0.974]	[1.146]	[0.237]	[0.312]	[1.845]	[2.308]	[1.173]	[1.237]	[0.306]	[0.396]
Observations	382	382	382	382	382	382	390	390	390	390	390	390
Mean Outcome	19.190	19.190	14.560	14.560	3.428	3.428	20.359	20.359	16.471	16.471	4.208	4.208
SD Outcome	8.941	8.941	6.783	6.783	2.174	2.174	11.893	11.893	7.376	7.376	2.721	2.721

Notes: Replication of Table 6 in Bartels, Jäger and Obergruber (2024) with corrected weights when re-estimating their estimating equation (1). Conley (1999) standard errors allowing for spatial autocorrelation, corrected for the population-based weighting scheme BJO use in their specifications with clustered standard errors, are shown in brackets. Stars denote significance at the ***[1%] **[5%] *[10%] level.