

Rozwój gospodarczy, historia i granice

„IV Rozbiór” Polski jako kwasi-naturalny eksperyment

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Dlaczego niektóre kraje są bogate a inne biedne?

- ▶ Czynniki rozwoju (proximate causes) „innovacje, akumulacja kapitału ludzkiego, kapitału fizycznego, korzyści skali”

„The factors we have listed (innovation, economies of scale, education, capital accumulation, etc.) are not causes of growth; they *are* growth (italics in original)”
North and Thomas (1973, p. 2)

- ▶ Determinanty rozwoju („deep” causes):
 - ▶ Instytucje
 - ▶ Kultura
 - ▶ Kapitał ludzki
 - ▶ Geografia

Ramy koncepcyjne

- ▶ **Instytucje:** „zasady gry” w społeczeństwie lub stworzone przez ludzi ograniczenia, które kształtują ludzkie interakcje” North, D (1990)
 - ▶ Mogą być formalne lub nieformalne
- ▶ **Kultura:**
 - ▶ normy, zasady, konwencje przekazywane przez społeczności z pokolenia na pokolenie Guiso, Sapienza and Zingales (2006)
 - ▶ Heurystyczne podejmowanie decyzji lub „rules of thumb” zasady skrótowego działania, ułatwiające podejmowanie decyzji w warunkach niepewności. Nunn 2012
- ▶ Kapitał ludzki:
- ▶ Geografia:

Literatura

► Instytucje:

- Acemoglu , Johnson, Robinson (2001) (2002) (2005), Engerman & Sokoloff(1997), (2002) La Porta et al.(1997,1998); kolonizacja
- Dell (2010) system Mita w Peru
- Grosjean P. (2011) rozwój systemu finansowego

► Kultura:

- Guiso Sapienza Zingales (2007), hipoteza Putnama
- Nunn Nathan (2009) niewolnictwo a zaufanie społeczne
- Becker et al. (2014) - imperium Habsburskie
- Grosfeld & Zhuravskaya (2014) - zabory w Polsce - nie znajdują różnicy w rozwoju, ani preferencjach wyborczych

► Kapitał ludzki: Glaeser et al. (2004), Huillery (2008), Bukowski (2014), Becker & Woessmann (2009)

- Geografia

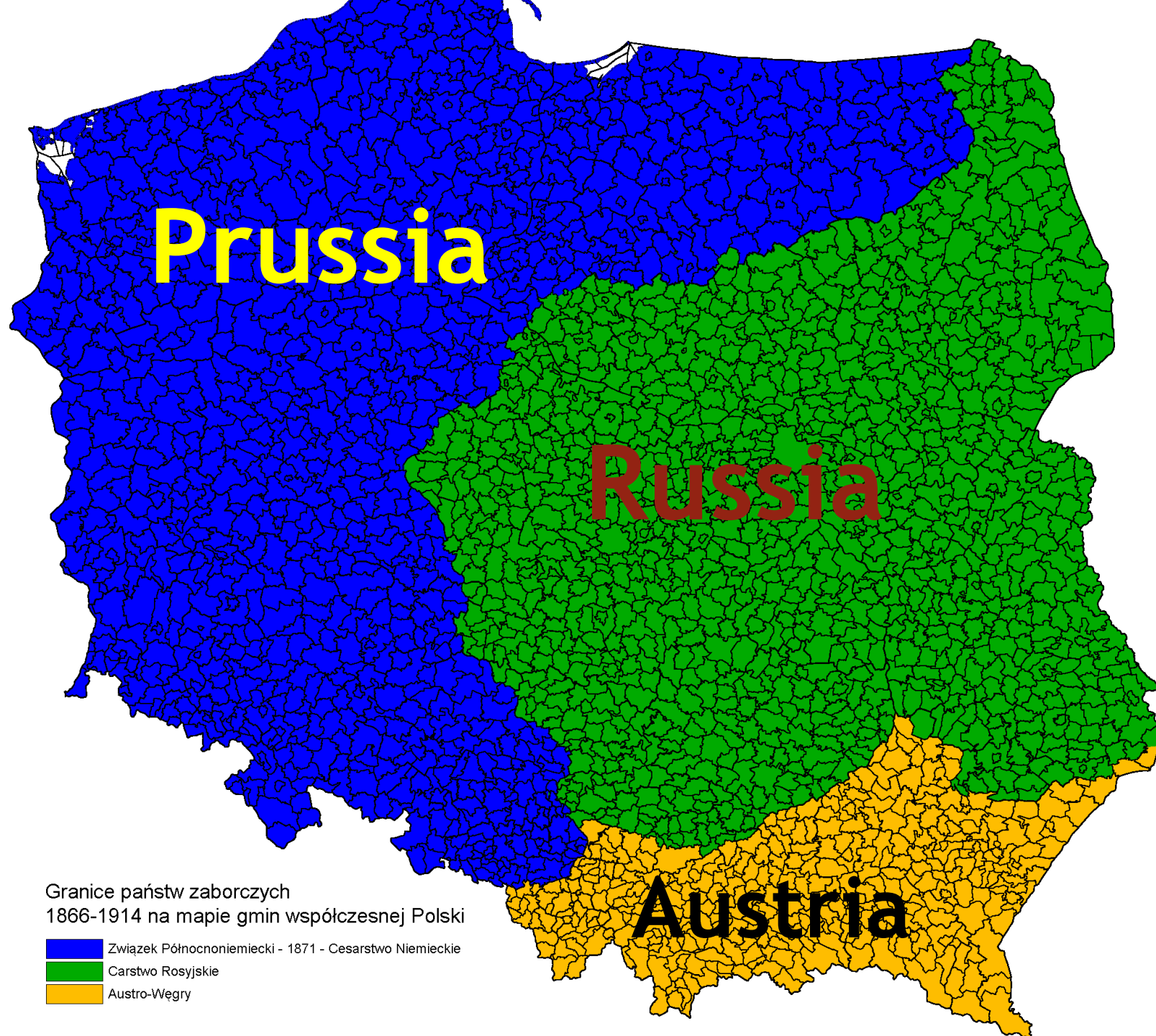
Identyfikacja - idealny eksperyment

- ▶ Wybierz kraj
- ▶ Podziel go na 3 części
- ▶ Poddaj działaniu różnych socjo-ekonomicznych czynników
 - ▶ Rewolucja przemysłowa, kształtowanie nowoczesnych społeczeństw.
- ▶ Połącz 3 części w jedno państwo
- ▶ Po 100 latach sprawdź czy są różnice w rozwoju

19th century partitions (1815-1918)



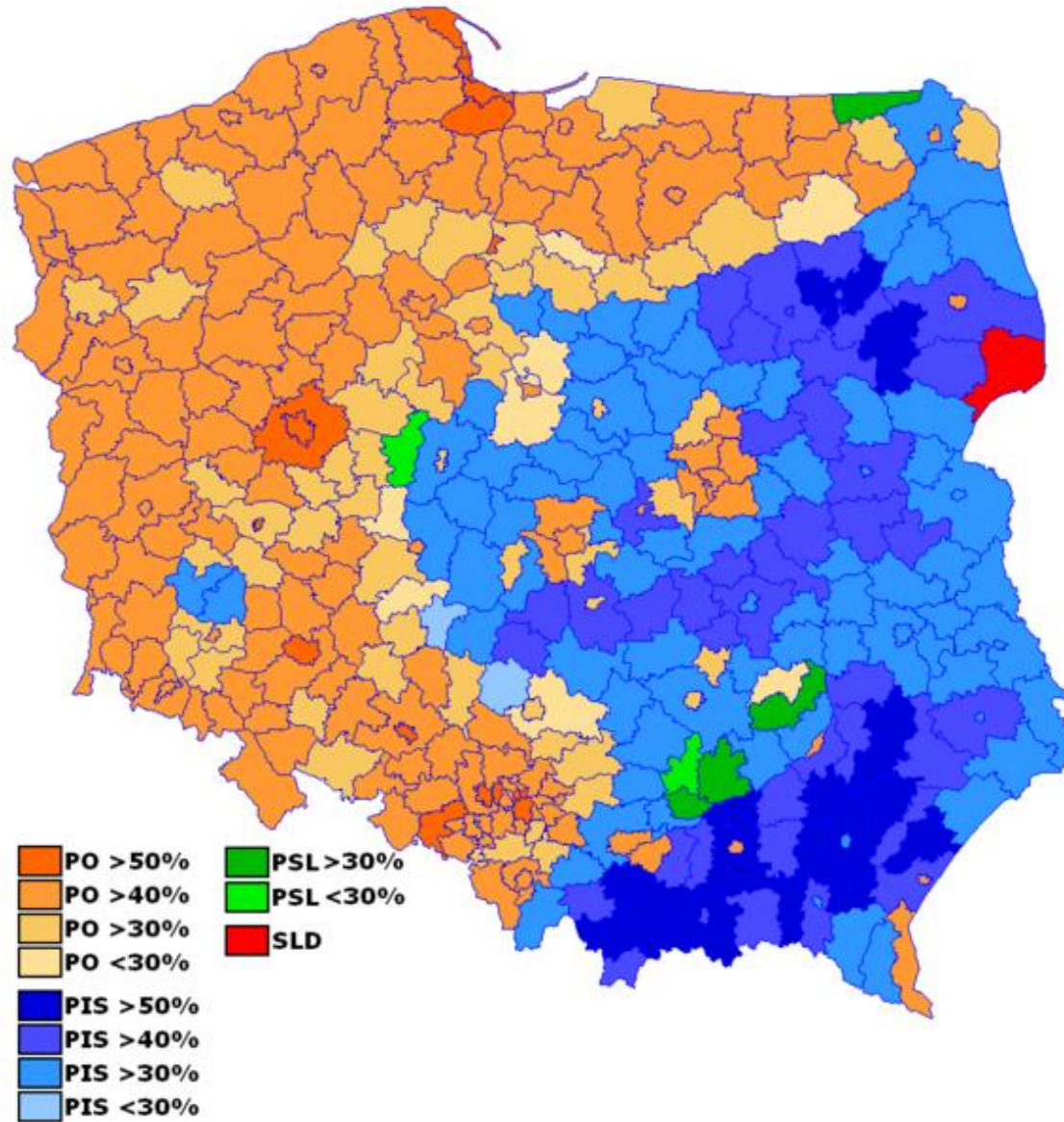
Source: Humboldt.edu <http://users.humboldt.edu/ogayle/hist111/WWI.html>



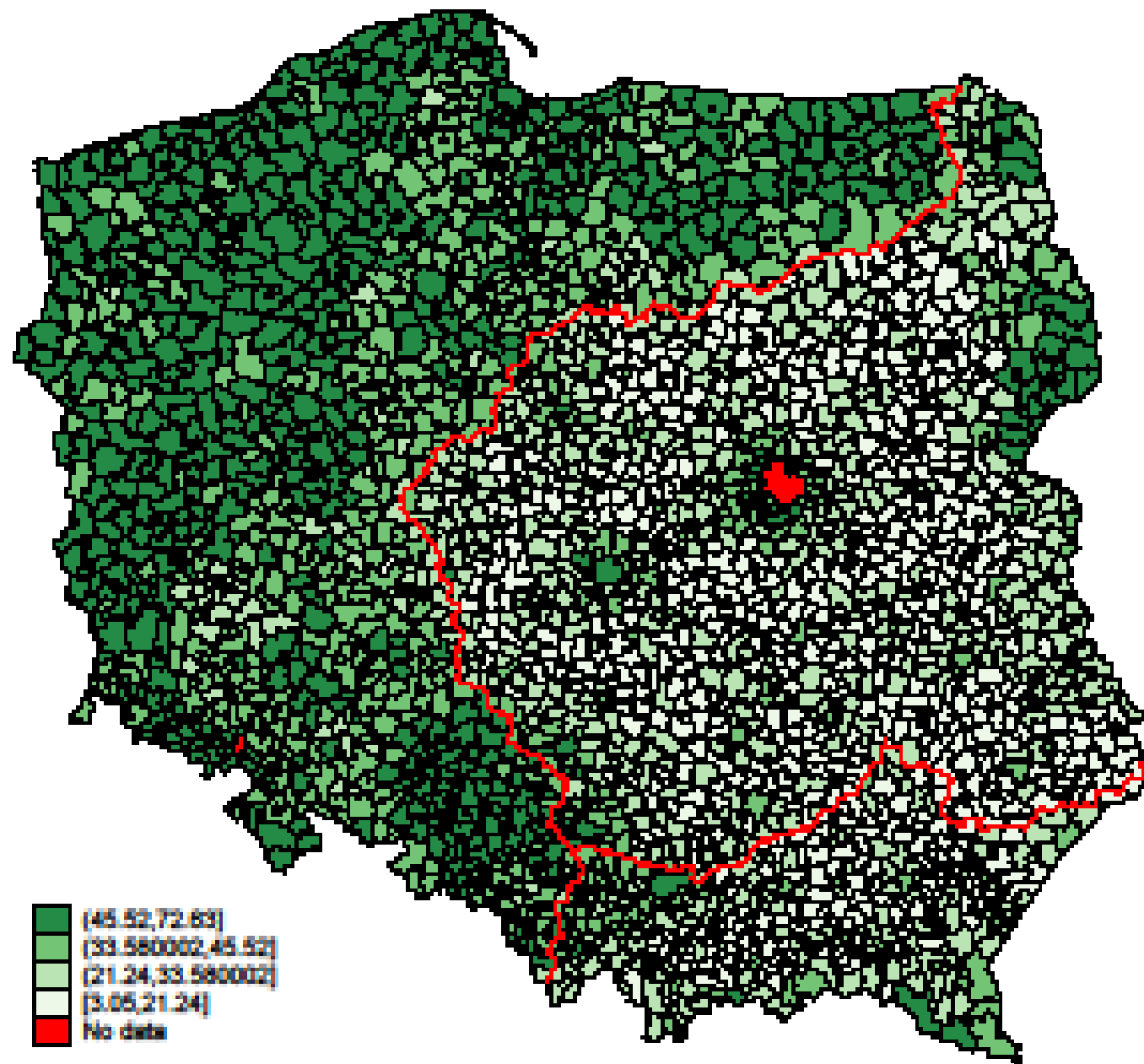
Granice państw zaborczych
1866-1914 na mapie gmin współczesnej Polski

- Związek Północnoniemiecki - 1871 - Cesarstwo Niemieckie
- Carstwo Rosyjskie
- Austro-Węgry

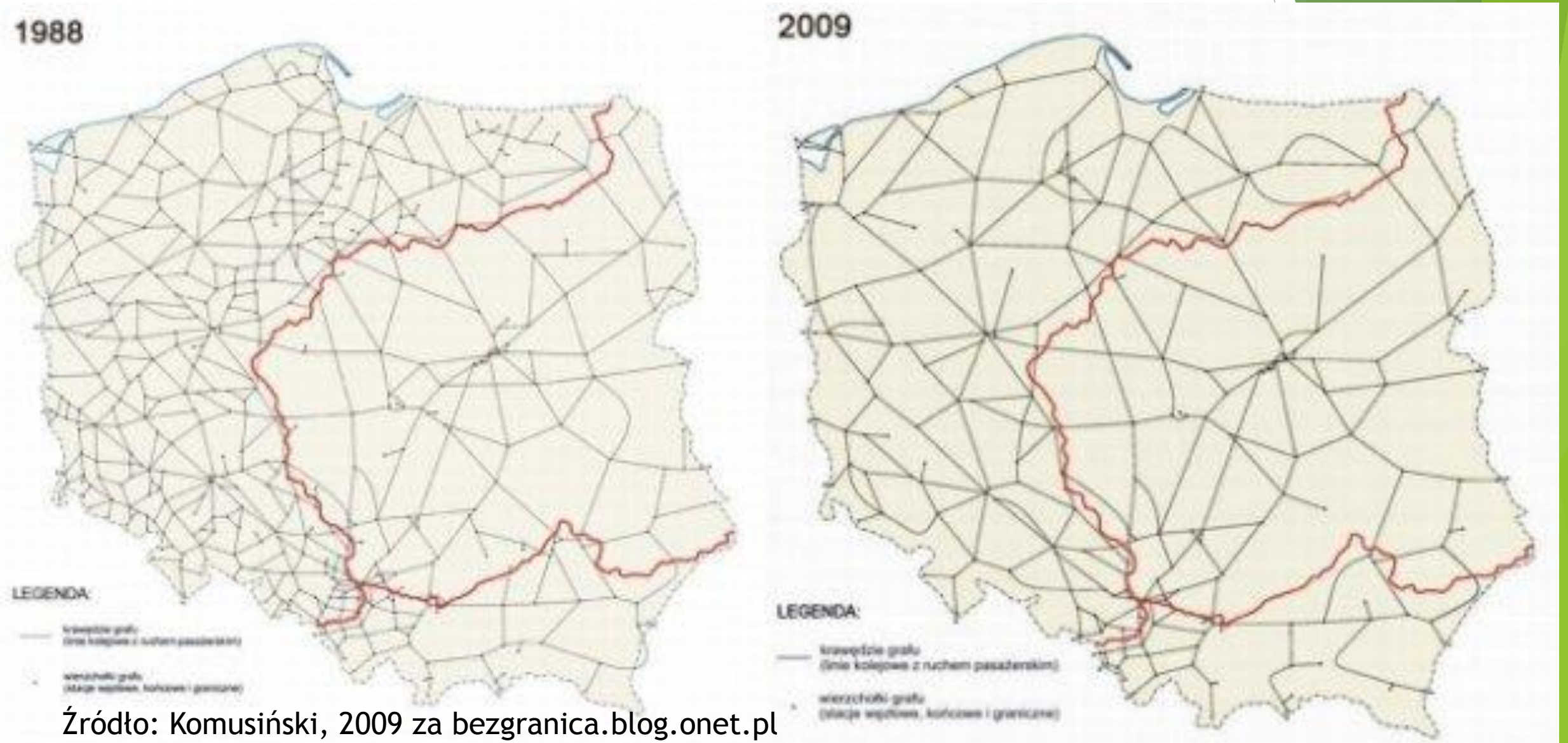
General elections 2011



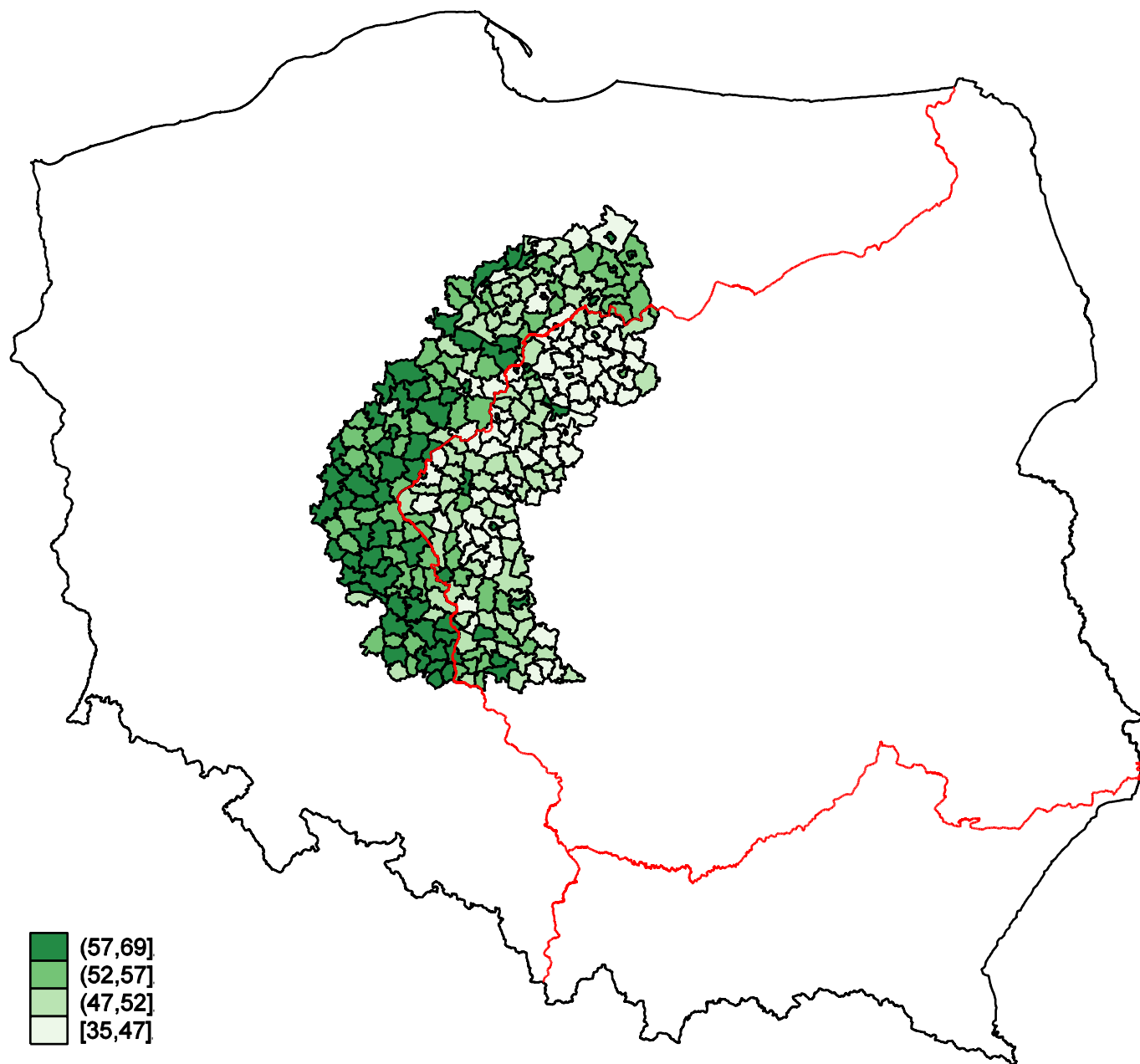
Presidential elections Komorowski 2010



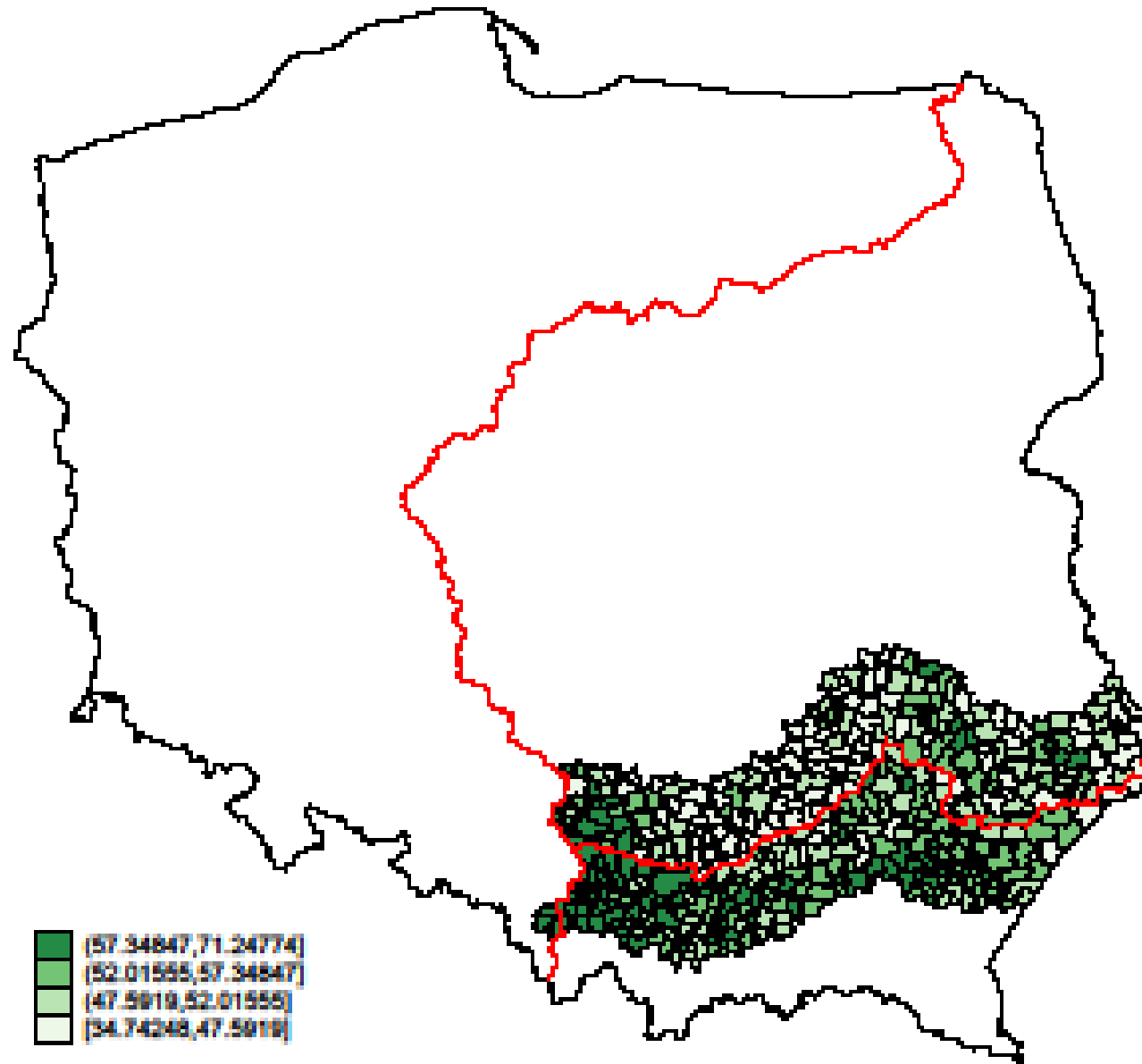
Railways in Poland 1988 and 2009



Voter turnout in 2003 within 50 km



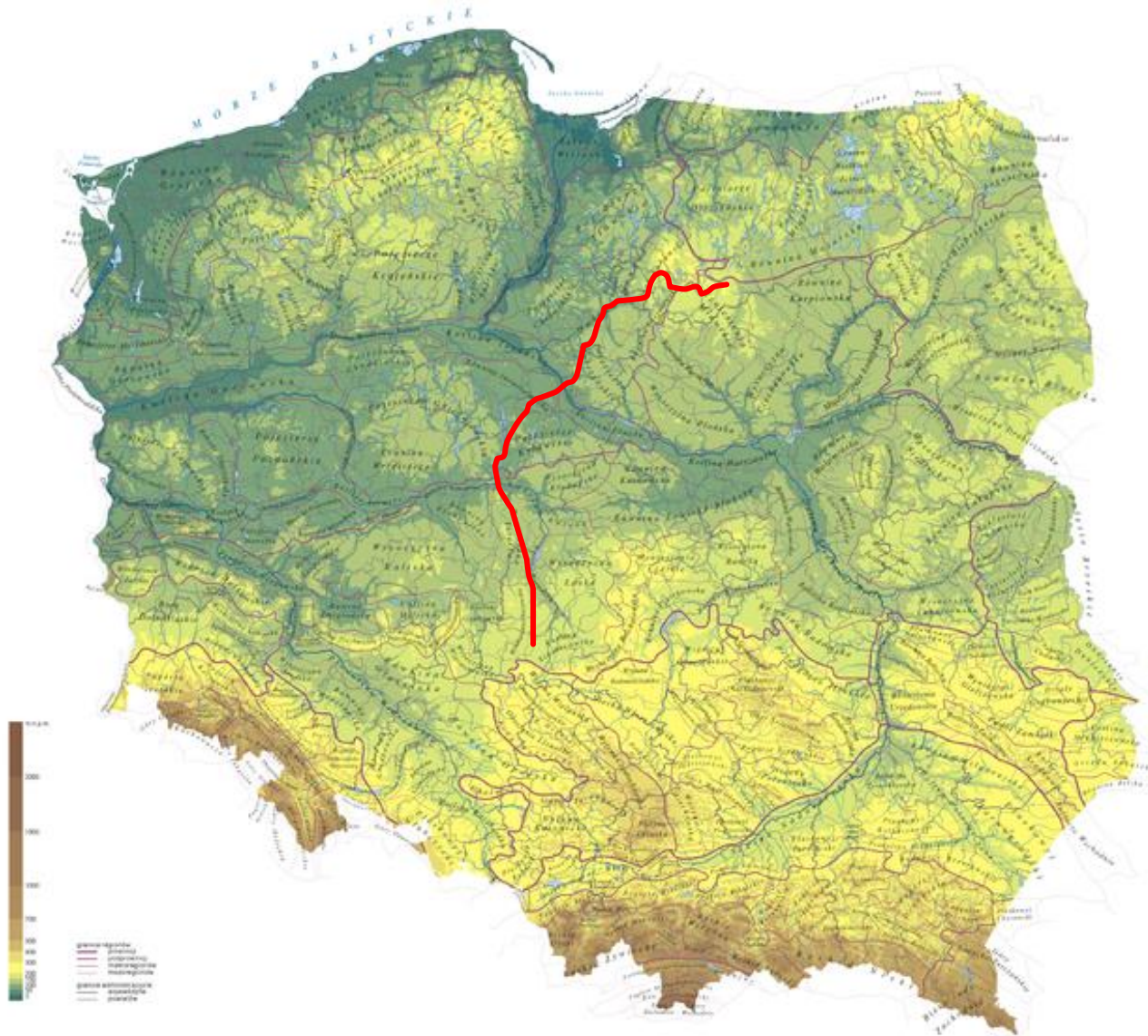
Voter turnout in 2003 within 50 km



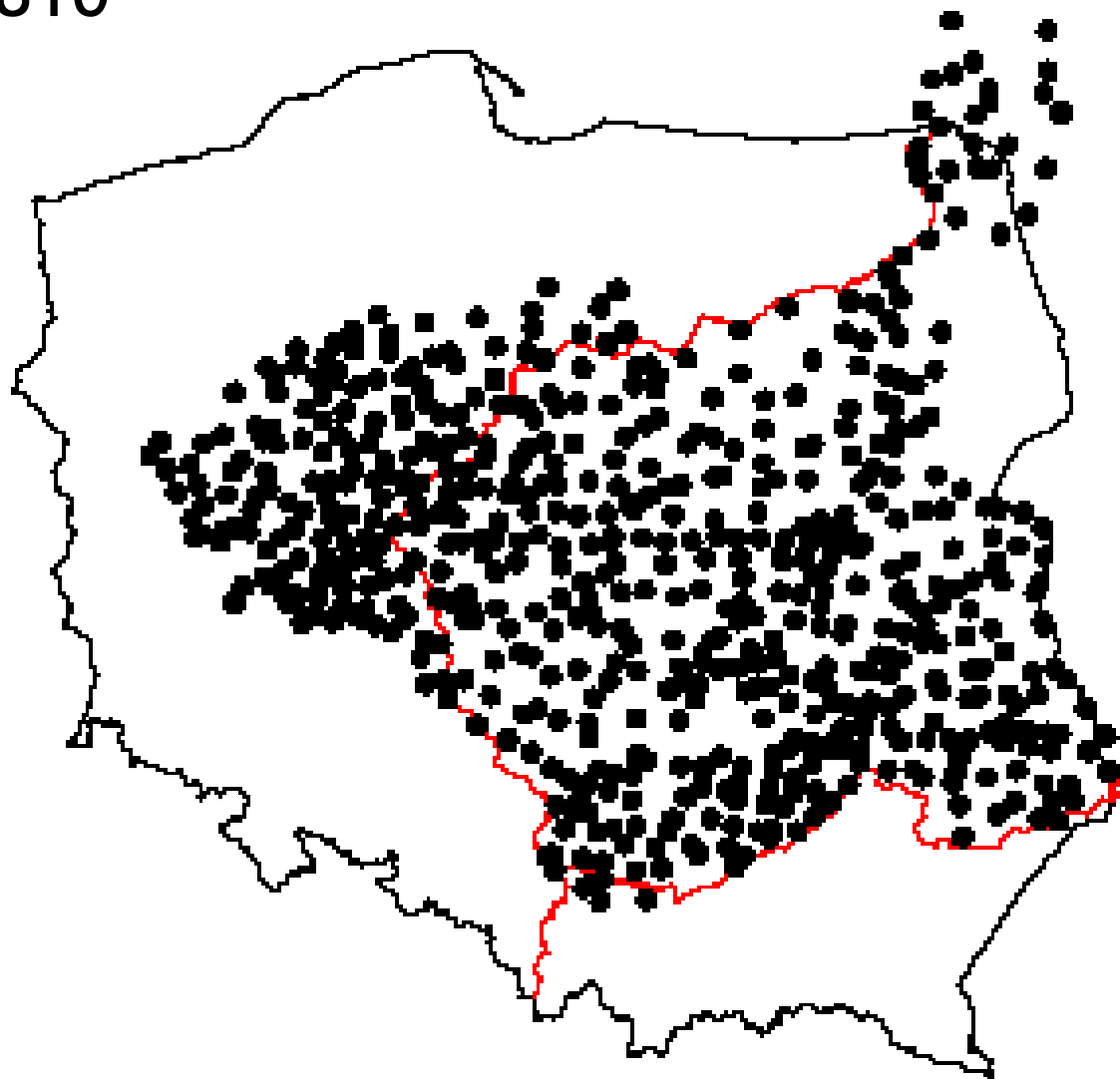
Potencjalne problemy

- ▶ Geografia: granice wzdłuż naturalnych barier geograficznych
- ▶ Historia - istniały różnice na granicy przed 1815
- ▶ Selekcja - nielosowe migracje

Geografia

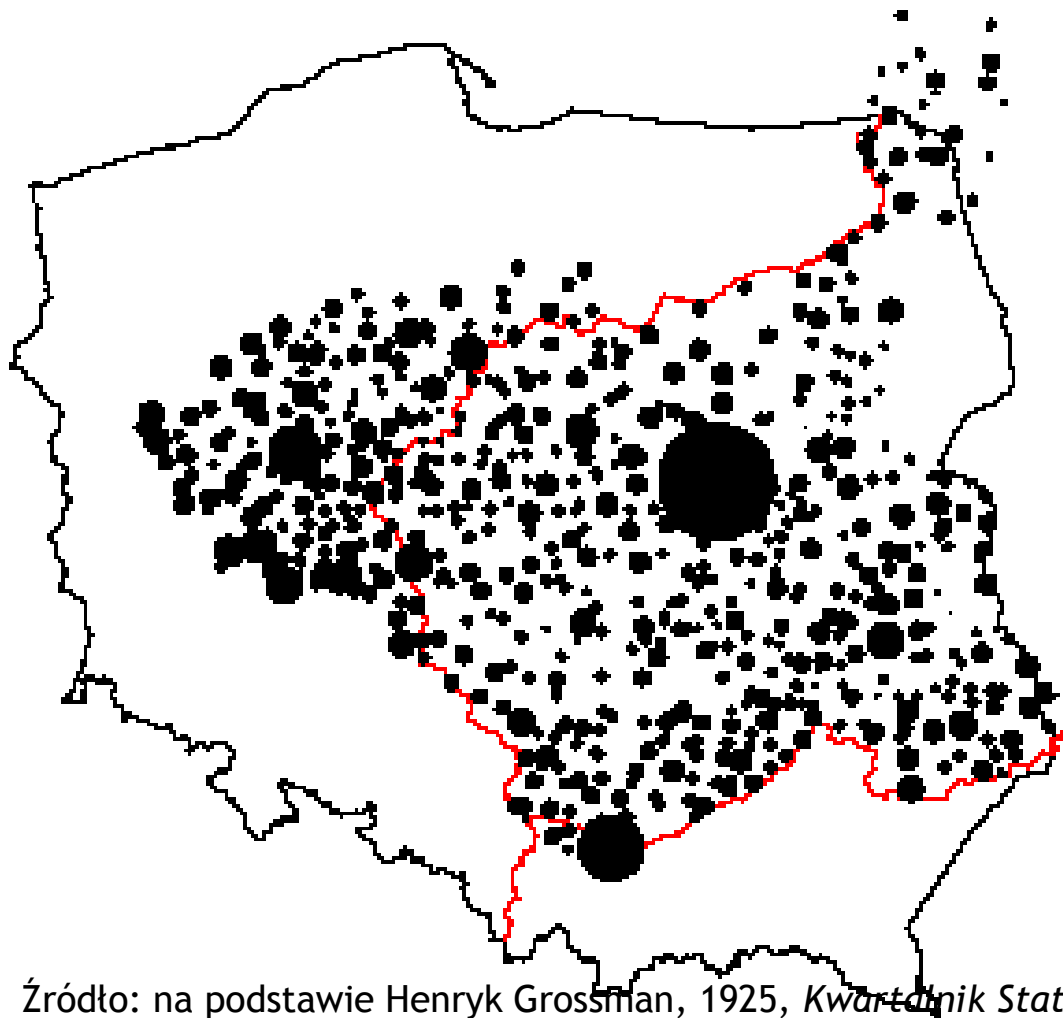


Lokalizacja miast w spisie powszechnym 1810



Źródło: na podstawie Henryk Grossman, 1925, *Kwartalnik Statystyczny*, Tom 3

Ludność miast 1810



Źródło: na podstawie Henryk Grossman, 1925, *Kwartalnik Statystyczny*, Tom 3

Ludność miast, 40km

	(1)	(2)	(3)	(4)	(5)
	pop1808	pop1810	jews1808	chris1808	hh1810
VARIABLES	population1808	population1810	jews1808	christians1808	hh1810
Prussia	24.31	30.00	-137.55	182.83	30.98
	(226.71)	(210.71)	(84.20)	(178.27)	(25.35)
Constant	1,096.13***	1,089.75***	334.62***	771.51***	143.79***
	(170.38)	(157.63)	(62.19)	(133.98)	(18.96)
Observations	108	109	99	108	109

Placebo 50km od granicy

	(1)	(2)	(3)	(4)	(5)	(6)
	pop1808Prus	pop1810Prus	jews1808Prus	pop1808Rus	pop1810Rus	jews1808Rus
VARIABLES	population1808	population1810	jews1808	population1808	population1810	jews1808
placPrus	341.93 (282.23)	52.32 (242.61)	90.43 (84.57)			
placRus				24.61 (153.43)	47.67 (141.21)	-26.09 (88.62)
Constant	1,022.82*** (200.83)	1,121.51*** (172.58)	167.29*** (59.80)	1,091.56*** (114.17)	1,037.86*** (105.49)	376.06*** (65.20)
Observations	79	83	70	121	129	109

Model:

$$y_{it} = \alpha + \beta prussia_i + u_{it}$$

Where y:

1. Cultural indicators:
 - Udział w referendach[pp] 2003, 1997, 1996;
 - Udział tak dla EU [pp]
 - Wybory prezydenckie 2010,2005,2000
2. Institutional indicators: średnia powierzchnia gospodarstw indywidualnych, liczba gospodarstw w spisie rolnym, średnia długość trwania procesu, wyniki na testach gimnazjalnych i szóstoklasistów.
3. Income indicators; udział PIT, dochody własne gmin, udział CIT (per capita) and wielkość podatku rolnego.
4. Prussia - dummy = 1 if place belonged to Prussia
= 0 if to Russia
i - commune

Cultural indicators

VARIABLES	(1) Turnout2003 part_pp_03	(2) Turnout1997 part_pp_97	(3) YesEU yes_share_03	(4) Tusk DTusk
Prussia	6.61*** (0.64)	6.04*** (0.74)	6.43*** (1.18)	8.79*** (0.86)
Constant	48.77*** (0.45)	32.95*** (0.53)	61.35*** (0.84)	19.44*** (0.61)
Observations	297	296	297	297
Austria	7.13*** (0.65)	12.63*** (0.80)	7.95*** (1.27)	6.03*** (0.93)
Constant	48.73*** (0.46)	36.18*** (0.57)	59.56*** (0.89)	17.57*** (0.65)
Observations	405	402	405	405

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Turnout 2003	Turnout 1997	Yes EU 2003	Komorowski 2010	Kaczynski 2005	Tusk 2005	Kwasniewski 2000
<i>Panel A: Prussia vs. Russia</i>							
Prussia	6.6***	6.0***	6.4***	13.7***	-0.4	8.8***	5.0***
	(0.64)	(0.74)	(1.18)	(0.88)	(0.57)	(0.86)	(0.71)
Constant	48.8***	32.9***	61.4***	26.4***	25.4***	19.4***	59.0***
	(0.45)	(0.53)	(0.84)	(0.62)	(0.41)	(0.61)	(0.50)
Observations	297	296	297	297	297	297	297
<i>Panel B: Austria vs. Russia</i>							
Austria	7.1***	12.6***	8.0***	2.8**	18.8***	6.0***	-10.3***
	(0.65)	(0.80)	(1.27)	(0.98)	(0.94)	(0.93)	(1.31)
Constant	48.7***	36.2***	59.6***	22.4***	29.3***	17.6***	48.7***
	(0.46)	(0.57)	(0.89)	(0.69)	(0.66)	(0.65)	(0.92)
Observations	405	402	405	405	405	405	404

Institutional indicators

VARIABLES	(1) FarmArea	(2) hh	(3) LitigationTime	(4) LitigationShare	(5) test6th	(6) Math9th	(7) Polish9th
Prussia	5.78*** (0.64)	-214.59*** (43.24)	0.50*** (0.08)	0.01 (0.02)	-0.46 (0.66)	-1.13** (0.56)	-1.21** (0.48)
Constant	7.57*** (0.45)	873.28*** (30.62)	3.39*** (0.06)	0.23*** (0.02)	74.97*** (0.47)	46.65*** (0.39)	59.66*** (0.34)
Observations	297	297	296	296	297	297	297
Austria	-2.03*** (0.22)	263.19*** (73.38)	-0.57*** (0.11)	-0.03 (0.03)	3.68*** (0.62)	3.82*** (0.49)	1.56*** (0.42)
Constant	4.74*** (0.15)	1,332.92*** (51.69)	4.01*** (0.08)	0.32*** (0.02)	74.97*** (0.44)	45.21*** (0.35)	60.75*** (0.30)
Observations	405	405	405	405	405	405	405

Development indicators (*per capita*)

	(1)	(2)	(3)	(4)
VARIABLES	PIT sharepit	OwnRevenue ownrevenuepc	CIT sharecit	RuralTax agriculture_tax
Prussia	76.86*** (8.52)	153.65*** (15.85)	8.64*** (2.03)	255,039.66*** (22,834.62)
Constant	245.87*** (9.53)	455.51*** (27.47)	9.51*** (2.24)	347,094.86*** (15,664.42)
Observations	1,188	3,267	544	1,088
Austria	57.47*** (9.05)	70.14*** (12.40)	0.84 (3.63)	-110,492.90*** (22,310.76)
Constant	243.63*** (10.10)	408.75*** (21.46)	18.46*** (3.97)	578,893.68*** (14,996.53)
Observations	1,620	4,455	664	1,328

Placebo 25 km into Russia, Prussia and Austria

Culture	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Turnout2003 part_pp_03	YesEU yes_share_03	Tusk DTusk	Turnout2003 part_pp_03	YesEU yes_share_03	TuskPlacebo DTusk
placPrussia	-0.06 (0.85)	1.73 (1.12)	2.18** (1.09)			
placRussia				1.63** (0.71)	3.15** (1.42)	2.55*** (0.90)
Constant	55.34*** (0.61)	73.60*** (0.80)	32.86*** (0.78)	48.16*** (0.52)	61.04*** (1.05)	19.30*** (0.66)
Observations	326	326	326	318	318	318
placAustr	2.20*** (0.22)	-1.36*** (0.40)	0.24 (0.41)			
placRusAus				1.05*** (0.29)	4.36*** (0.61)	2.13*** (0.38)
Constant	55.90*** (0.16)	71.28*** (0.29)	26.83*** (0.30)	48.15*** (0.21)	57.14*** (0.46)	16.39*** (0.28)
Observations	3,000	3,000	3,000	2,448	2,448	2,448

Placebo 25 km into Russia, Prussia and Austria

Institutions	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	FarmSize	hh	LitigationTime	LitigationShare	FarmSize	hh	LitigationTime	LitigationShare
placPrus	0.06 (0.89)	147.14*** (51.35)	0.07 (0.17)	0.05 (0.05)				
placRus					0.31 (0.48)	-72.20 (53.35)	0.06 (0.14)	0.05 (0.03)
Constant	10.73*** (0.64)	609.09*** (36.53)	4.27*** (0.12)	0.38*** (0.04)	7.68*** (0.36)	987.22** * (39.46)	3.89*** (0.10)	0.26*** (0.02)
Obs	326	326	326	326	318	318	317	317
placAustr	0.09 (0.10)	113.04*** (32.72)	0.54*** (0.06)	0.13*** (0.02)				
placRusAus					-0.87*** (0.09)	96.81*** (23.65)	-0.40*** (0.04)	-0.01 (0.01)
Constant	2.97*** (0.07)	1,337.60* ** (23.87)	3.59*** (0.04)	0.31*** (0.01)	5.22*** (0.07)	1,279.30* ** (17.60)	4.23*** (0.03)	0.32*** (0.01)
Obs	3,000	3,000	3,000	3,000	2,448	2,448	2,448	2,448

Placebo 25 km into Russia, Prussia and Austria

Development

VARIABLE S	(1) sharepit	(2) ownrevenuepc	(3) agriculture_tax	(4) sharepit	(5) ownrevenuepc	(6) agriculture_tax
placPrus	2.71 (11.41)	-20.75 (16.81)	90,144.87*** (16,621.52)			
placRus				15.57 (9.56)	-4.74 (15.67)	-54,392.30*** (10,313.03)
Constant	372.53*** (12.79)	666.09*** (29.14)	495,670.78*** (18,627.81)	268.47*** (10.86)	492.84*** (27.26)	368,305.34*** (11,715.60)
Observations	1,304	3,586	2,602	1,272	3,498	2,544

VARIABLES	(1) sharepit	(2) ownrevenuepc	(3) agriculture_tax	(4) sharepit	(5) ownrevenuepc	(6) agriculture_tax
placAustr	-0.81 (14.52)	-9.43 (20.80)	-11,603.64 (14,916.69)			
placRusAus				54.91*** (12.51)	146.33*** (18.02)	-6,645.38 (19,525.10)
Constant	361.84*** (16.42)	578.54*** (36.15)	415,354.82*** (16,867.37)	216.34*** (14.23)	339.67*** (31.33)	592,723.58*** (22,220.89)
Observations	1,000	2,750	1,994	816	2,244	1,632

Tusk, presidential elections 2005, narrowing bandwidth

VARIABLES	(1) 50km Tusk	(2) 40 km Tusk	(3) 30km Tusk	(4) 20km Tusk	(5) 10km Tusk
Prussia	8.79*** (0.86)	7.34*** (0.93)	7.03*** (1.04)	6.96*** (1.24)	5.22*** (1.79)
Constant	19.44*** (0.61)	20.06*** (0.65)	19.94*** (0.72)	20.13*** (0.85)	20.88*** (1.20)
Observations	297	246	192	136	75

VARIABLE S	(1) 50km Tusk	(2) 40 km Tusk	(3) 30km Tusk	(4) 20km Tusk	(5) 10km Tusk
Austria	6.03*** (0.27)	5.67*** (0.30)	5.01*** (0.36)	5.18*** (0.45)	3.13*** (0.60)
Constant	17.57*** (0.19)	17.95*** (0.21)	18.56*** (0.25)	18.59*** (0.30)	19.14*** (0.40)
Observations	4,860	3,960	3,024	1,992	1,068

Turnout 2003, narrowing bandwidth

	(1)	(2)	(3)	(4)	(5)
VARIABLES	50 km Turnout	40 km Turnout	30 km Turnout	20 km Turnout	10 km Turnout
Prussia	6.61*** (0.64)	5.95*** (0.71)	5.72*** (0.80)	5.15*** (0.95)	4.17*** (1.27)
Constant	48.77*** (0.45)	49.14*** (0.50)	49.33*** (0.55)	49.81*** (0.65)	50.59*** (0.85)
Observations	297	246	192	136	75

	(1)	(2)	(3)	(4)	(5)
VARIABLES	50 km Turnout	40 km Turnout	30 km Turnout	20 km Turnout	10 km Turnout
Austria	7.13*** (0.19)	6.46*** (0.21)	5.50*** (0.25)	5.56*** (0.30)	4.91*** (0.43)
Constant	48.73*** (0.13)	49.15*** (0.15)	49.46*** (0.17)	48.59*** (0.20)	48.41*** (0.29)
Observations	4,860	3,960	3,024	1,992	1,068

Farm size, narrowing bandwidth

VARIABLES	(1) 50 km Farm	(2) 40 km Farm	(3) 30 km Farm	(4) 20 km Farm	(5) 10 km Farm
Prussia	5.78*** (0.64)	6.04*** (0.72)	5.37*** (0.80)	4.54*** (0.97)	5.27*** (1.58)
Constant	7.57*** (0.45)	7.42*** (0.50)	7.56*** (0.55)	7.47*** (0.67)	7.59*** (1.06)
Observations	297	246	192	136	75

VARIABLES	(1) 50 km Farm	(2) 40 km Farm	(3) 30 km Farm	(4) 20 km Farm	(5) 10 km Farm
Austria	-2.03*** (0.06)	-1.78*** (0.07)	-1.49*** (0.08)	-1.22*** (0.11)	-0.34* (0.18)
Constant	4.74*** (0.04)	4.57*** (0.05)	4.38*** (0.06)	4.40*** (0.08)	4.26*** (0.12)
Observations	4,860	3,960	3,024	1,992	1,068

Own Revenue, narrowing bandwidth

VARIABLES	(1) 50km OwnRev	(2) 40km OwnRev	(3) 30km OwnRev	(4) 20km OwnRev	(5) 10km OwnRev
Prussia	153.65*** (15.85)	167.69*** (15.49)	178.24*** (18.53)	175.14*** (23.93)	178.14*** (38.72)
Constant	455.51*** (27.47)	434.31*** (26.79)	431.94*** (31.95)	446.21*** (41.19)	450.30*** (66.29)
Observations	3,267	2,706	2,112	1,496	825

VARIABLES	(1) 50km OwnRev	(2) 40km OwnRev	(3) 30km OwnRev	(4) 20km OwnRev	(5) 10km OwnRev
Austria	70.14*** (12.40)	53.32*** (14.30)	15.54 (17.16)	8.65 (23.41)	-22.12 (37.24)
Constant	408.75*** (21.46)	425.84*** (24.75)	448.90*** (29.60)	462.77*** (40.06)	482.87*** (63.42)
Observations	4,455	3,630	2,772	1,826	979

PIT narrowing bandwidth

VARIABLES	(1) 50km PIT	(2) 40km PIT	(3) 30km PIT	(4) 20km PIT	(5) 10km PIT
Prussia	405.05*** (14.20)	429.77*** (16.77)	459.65*** (20.86)	506.13*** (34.99)	731.85*** (78.14)
Constant	317.19*** (11.55)	326.60*** (13.28)	337.36*** (15.88)	338.39*** (21.19)	355.94*** (30.20)
Observations	1,012	816	628	404	208

VARIABLES	(1) 50km PIT	(2) 40km PIT	(3) 30km PIT	(4) 20km PIT	(5) 10km PIT
Austria	57.47*** (9.05)	46.82*** (10.11)	32.67*** (12.34)	25.58 (16.11)	-8.21 (24.14)
Constant	315.52*** (10.10)	324.96*** (11.28)	334.34*** (13.68)	337.44*** (17.61)	354.34*** (26.19)
Observations	1,620	1,320	1,008	664	356

Agricultural tax, narrowing the bandwidth

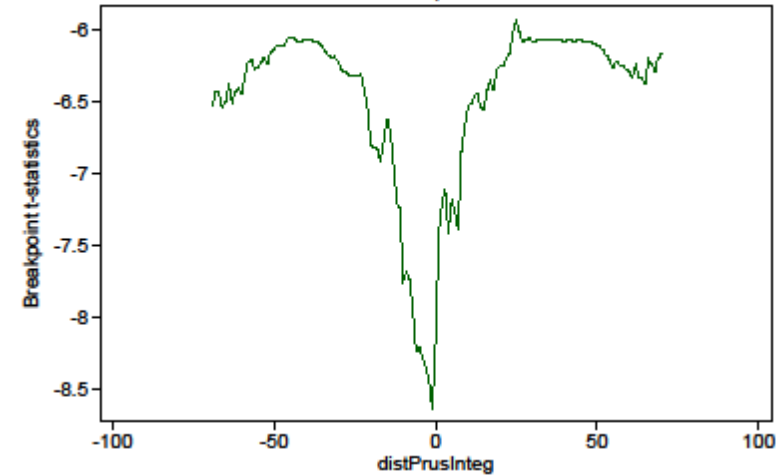
VARIABLES	(1) 50km AgrTaX	(2) 40km AgrTaX	(3) 30km AgrTaX	(4) 20km AgrTaX	(5) 10km AgrTaX
Prussia	302,314.49*** (14,835.54)	290,729.24*** (15,961.99)	261,528.98*** (17,996.78)	255,039.66*** (22,168.08)	193,171.12*** (26,900.01)
Constant	518,854.31*** (22,261.54)	510,765.03*** (23,897.22)	514,287.04*** (26,851.59)	514,991.45*** (32,988.99)	472,897.45*** (39,791.01)
Observations	2,376	1,968	1,536	1,088	600

VARIABLES	(1) 50km AgrTaX	(2) 40km AgrTaX	(3) 30km AgrTaX	(4) 20km AgrTaX	(5) 10km AgrTaX
Austria	-140,655.55*** (12,555.53)	-128,416.21*** (14,391.80)	-128,532.80*** (17,307.67)	-110,492.90*** (21,587.91)	-90,264.84*** (31,687.83)
Constant	729,514.95*** (18,817.39)	735,657.70*** (21,557.37)	744,251.44*** (25,830.81)	752,492.19*** (31,914.72)	760,151.71*** (46,587.26)
Observations	3,240	2,640	2,016	1,328	712

Zivot Andrews Test Prussia Russia

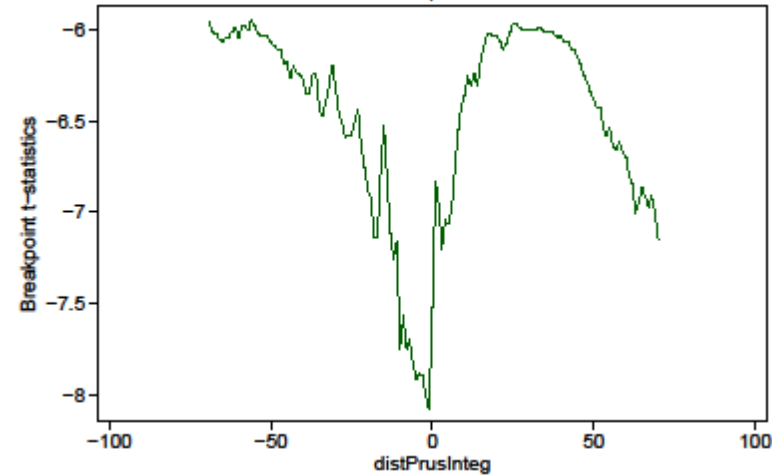
Zivot-Andrews test for part_pp_03, -69-70

Min breakpoint at -1



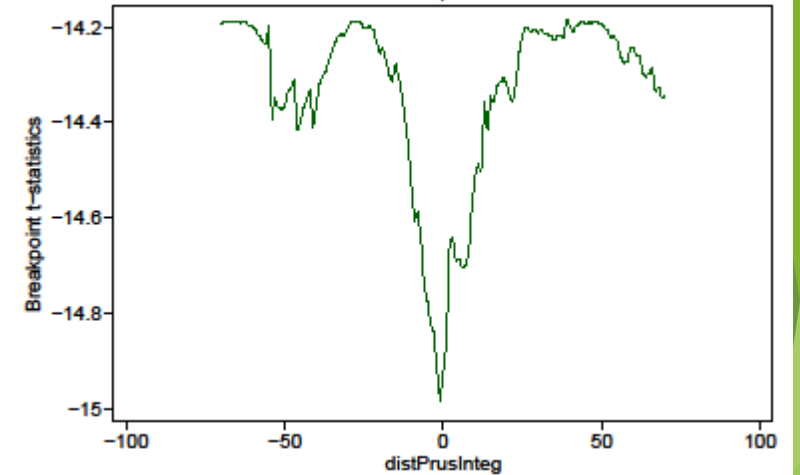
Zivot-Andrews test for yes_share_03, -69-70

Min breakpoint at -1



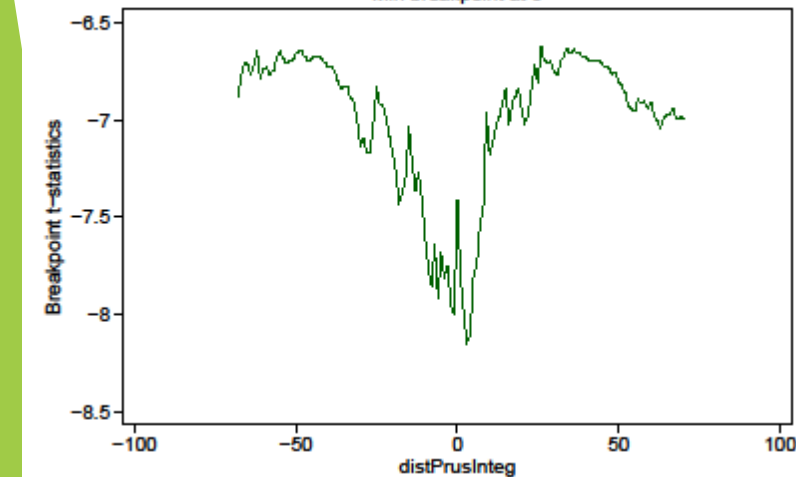
Zivot-Andrews test for ownrevenuepc2012, -70-70

Min breakpoint at -1



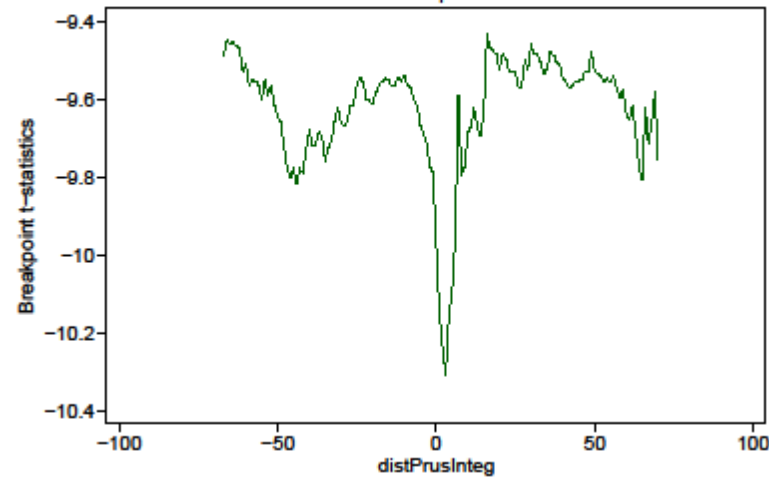
Zivot-Andrews test for LitigationTime, -68-70

Min breakpoint at 3



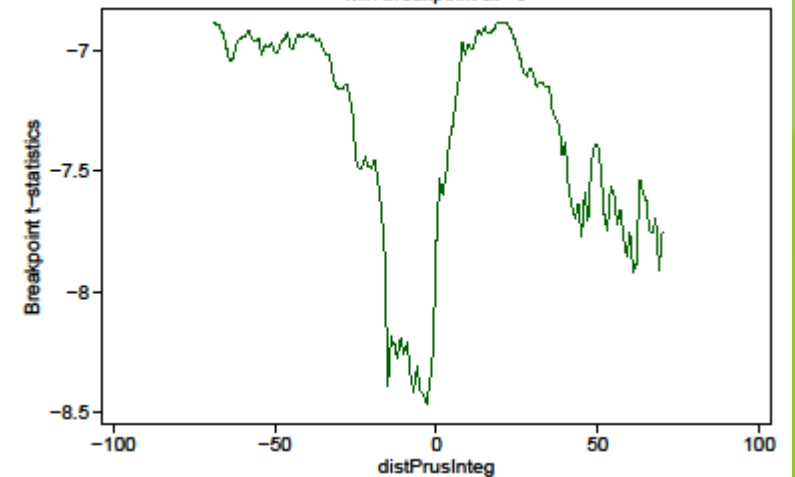
Zivot-Andrews test for FarmArea_2010, -67-70

Min breakpoint at 3



Zivot-Andrews test for hh, -69-70

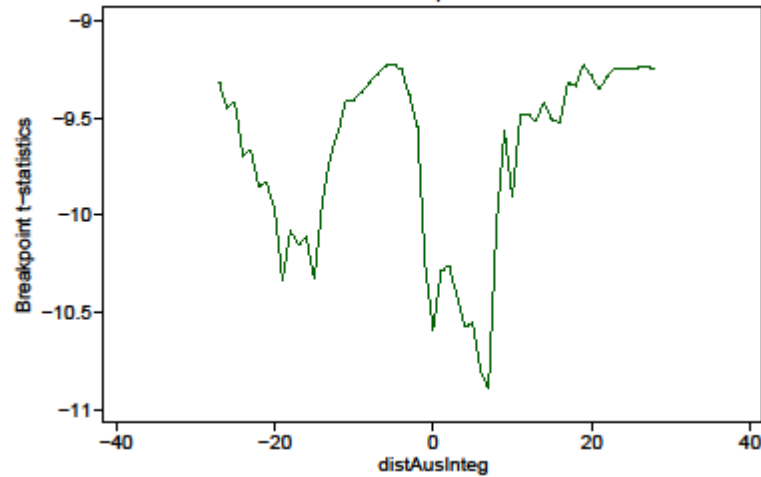
Min breakpoint at -3



Zivot Andrews Test Austria-Russia

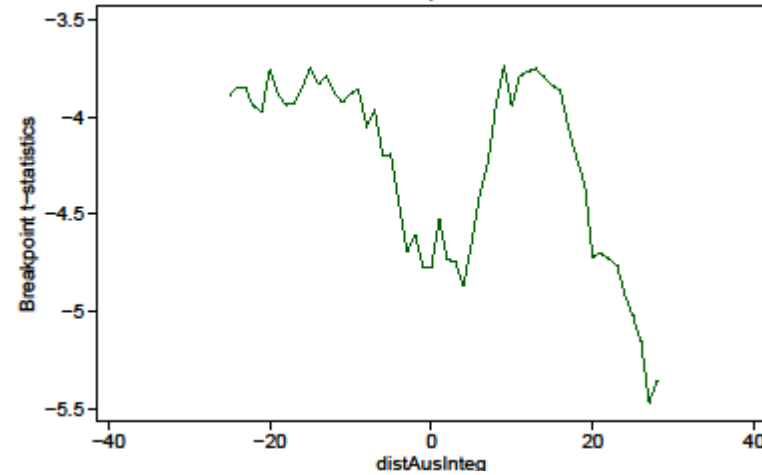
Zivot-Andrews test for part_pp_03, -27-28

Min breakpoint at 7



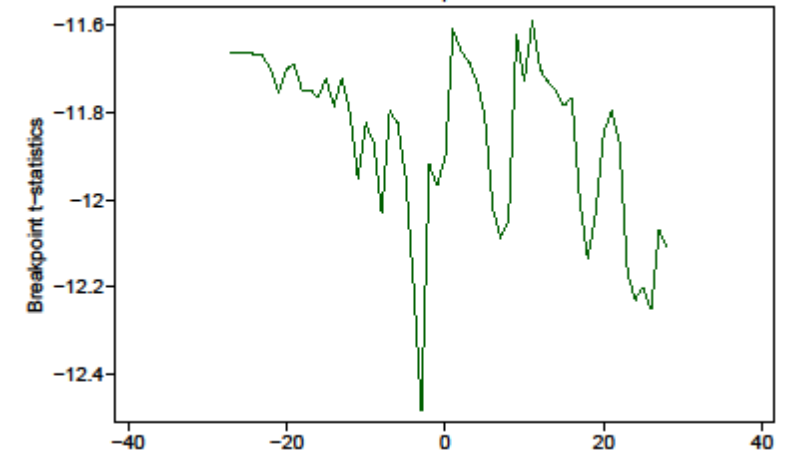
Zivot-Andrews test for yes_share_03, -25-28

Min breakpoint at 27



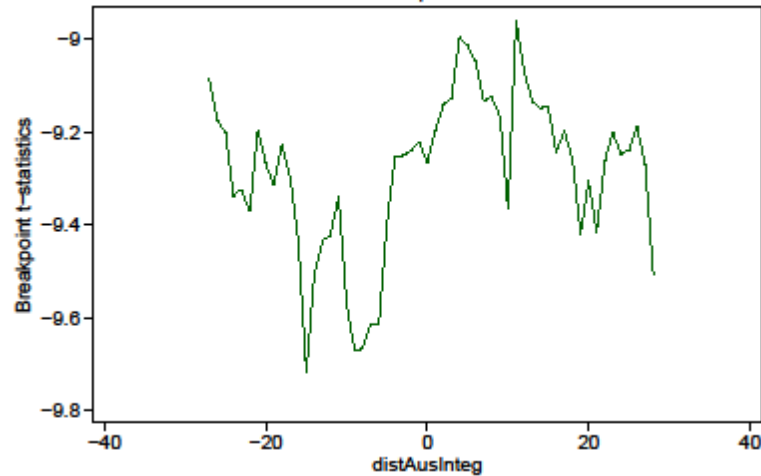
Zivot-Andrews test for ownrevenuepc2012, -27-28

Min breakpoint at -3



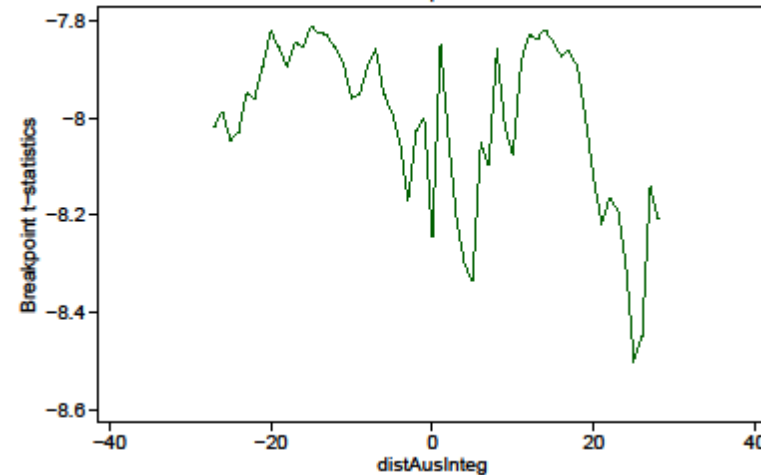
Zivot-Andrews test for LitigationTime, -27-28

Min breakpoint at -15



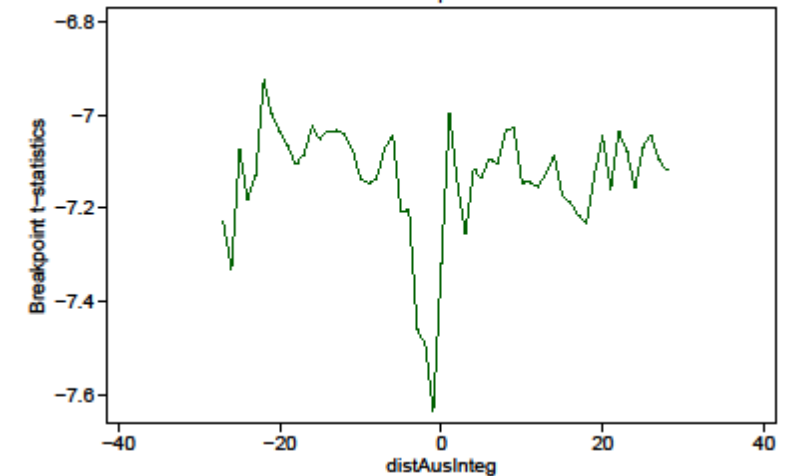
Zivot-Andrews test for FarmArea_2010, -27-28

Min breakpoint at 25



Zivot-Andrews test for g_Math_2012, -27-28

Min breakpoint at -1



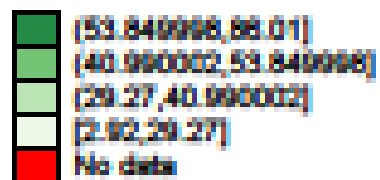
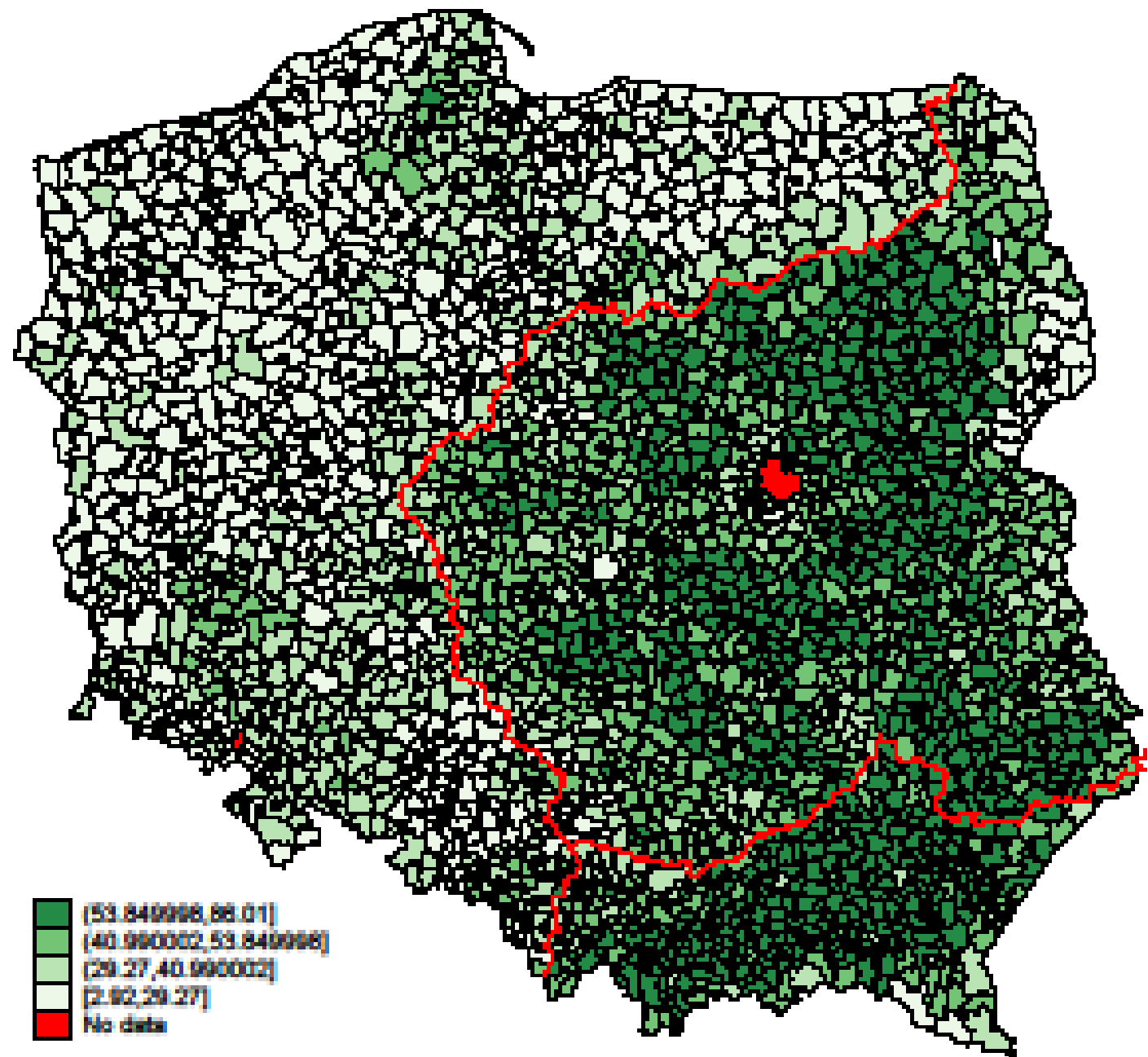
Podsumowanie i wnioski

- ▶ XIX wiek ma znaczenie dla rozwoju gospodarczego dziś:
 - ▶ brak wcześniejszych różnic na granicy
- ▶ Channel of persistence:
 - ▶ Instytucje formalne -> zmiany reżimów, dziś to samo prawo, konstytucja etc. (działalność sądów) ale różnica w wielkości działki agrarnej
 - ▶ Kultura/ normy - wyraźna różnica w zachowaniu oraz preferencjach
 - ▶ Kapitał ludzki - brak różnic na granicy Prusko-Rosyjskiej, różnica na Austriacko-Rosyjskiej (Bukowski 2014)
 - ▶ Geografia-

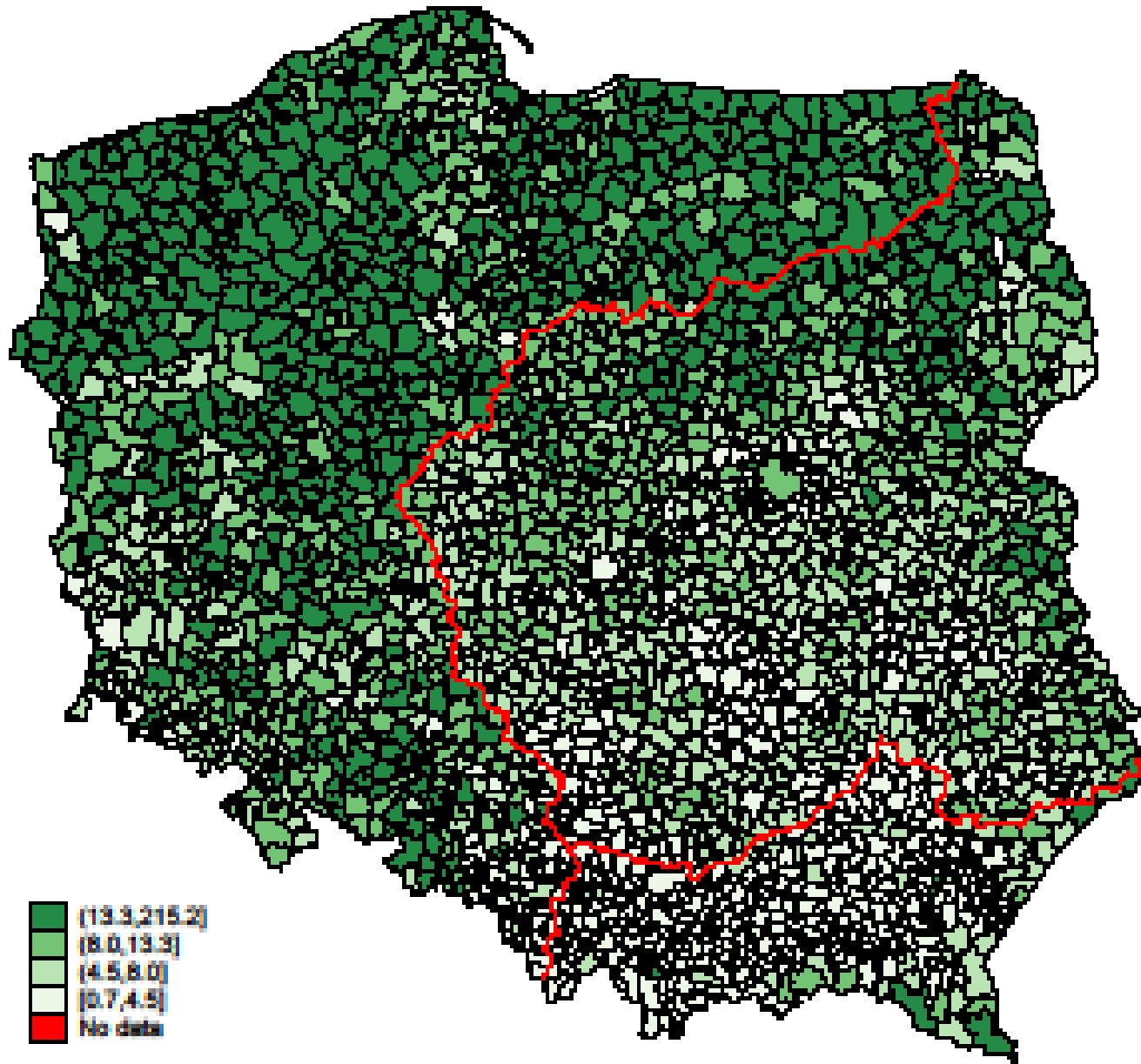
Appendix



Presidential elections Kaczynski 2005



average farm area 2010



Poland A and B



Źródło: Rysunek
Jerzego Zaruby z 1950
roku
zatytułowany *Fundame
nty*
[w:] M. Kallas, *Historia
ustroju Polski X-XX w.*,
Warszawa 2001, il. 80

Illiteracy in Poland 1931

