

# ERC Starting Grant

***EINITE***

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## Economic Inequality in preindustrial Europe, 1300-1800



8 June 2016

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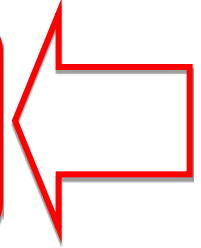
# Our initial objectives

1 What is the long-term relationship between economic growth and inequality?

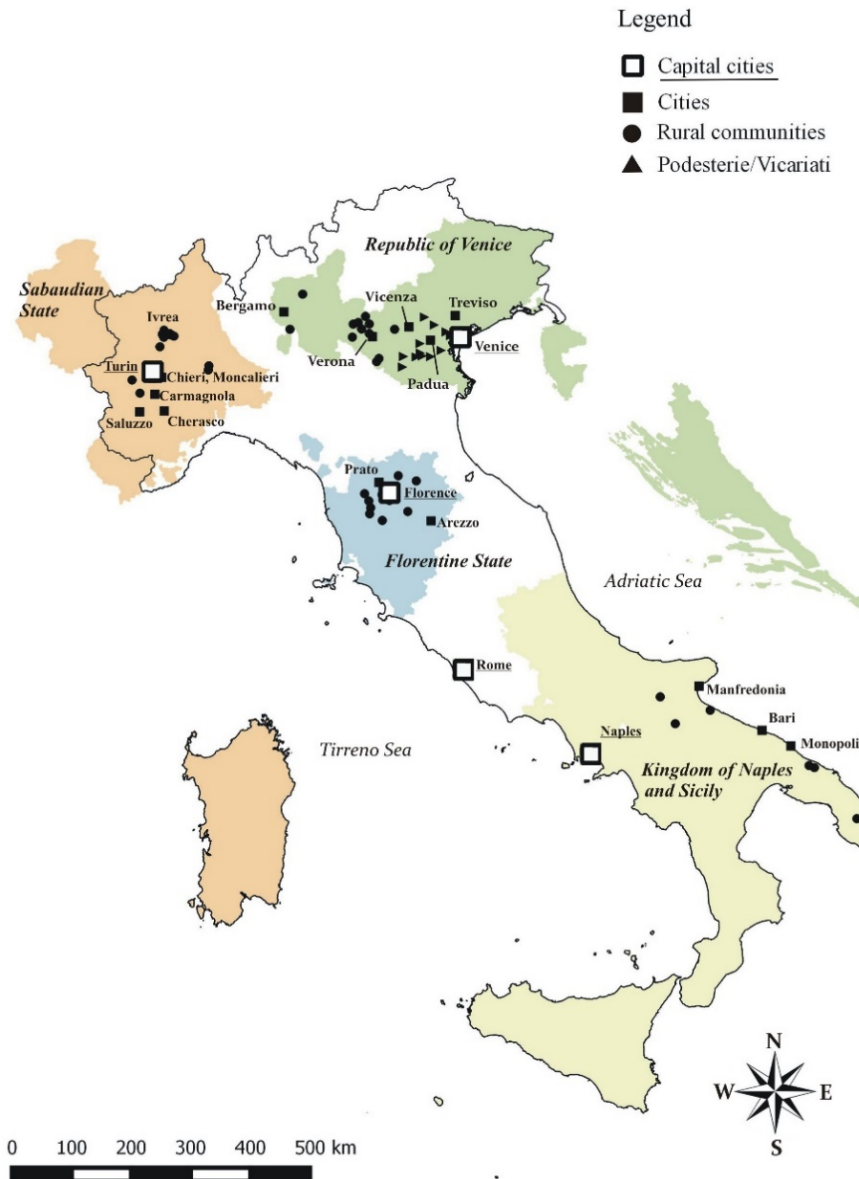
2 What were the effects of plagues and other severe mortality crises on property structures?

3 What is the underlying relationship between immigration and urban inequality?

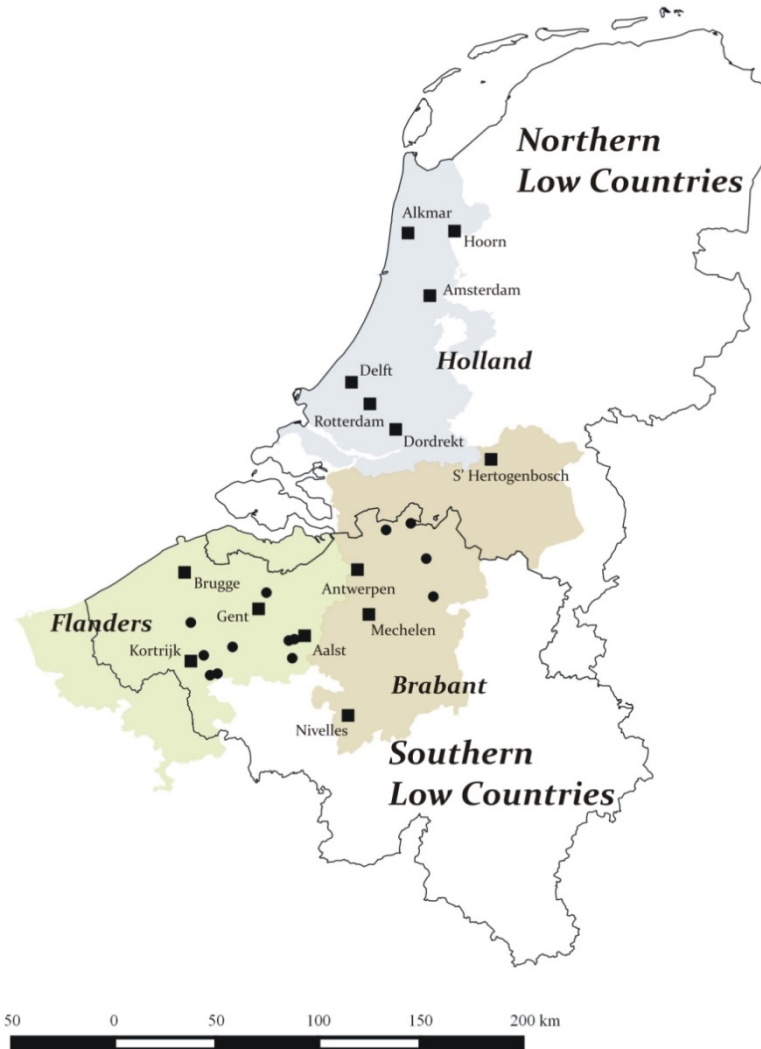
4 How was economic inequality perceived in the past, and how did its perception change over time?



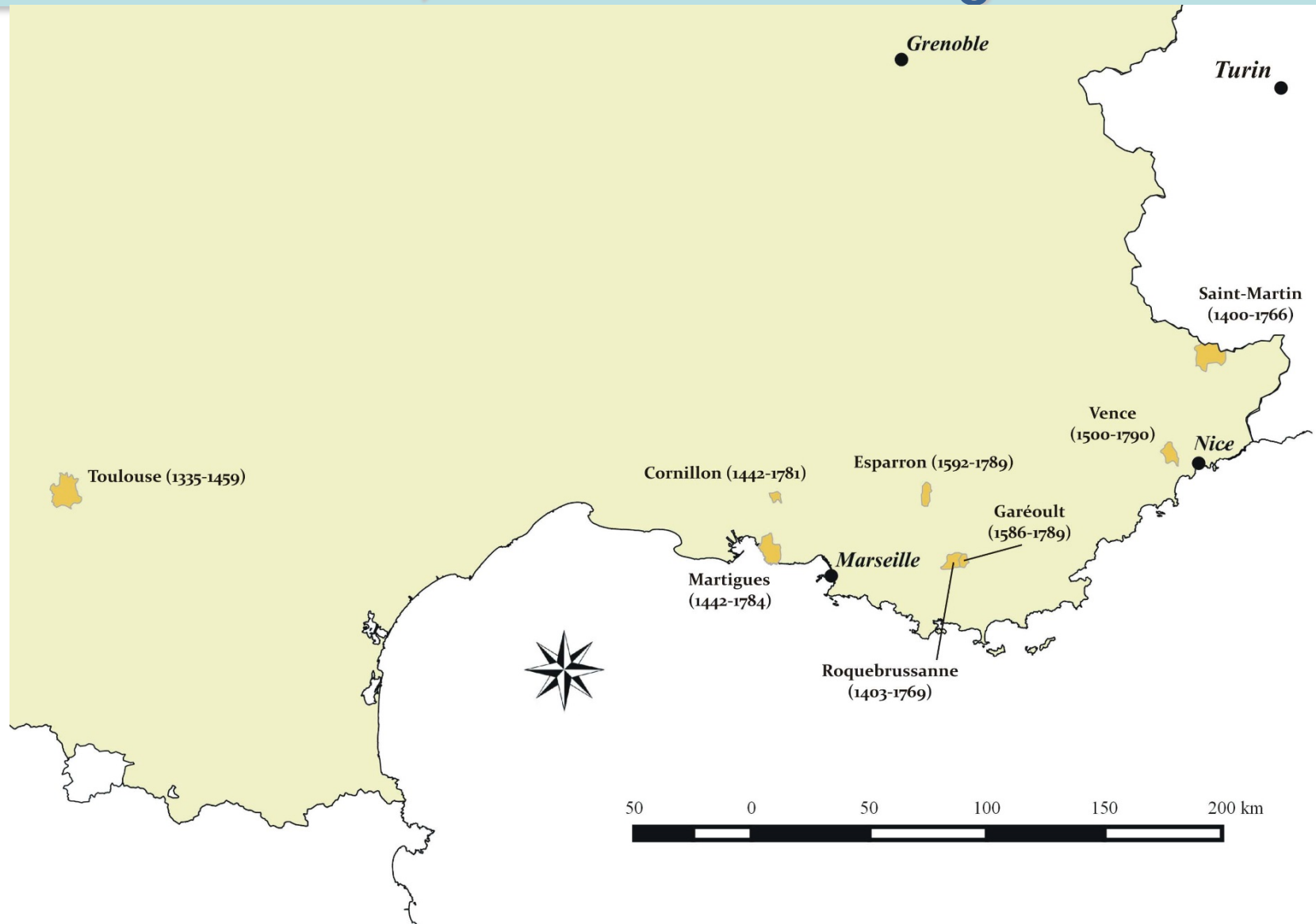
# The areas covered by EINITE: Italy...



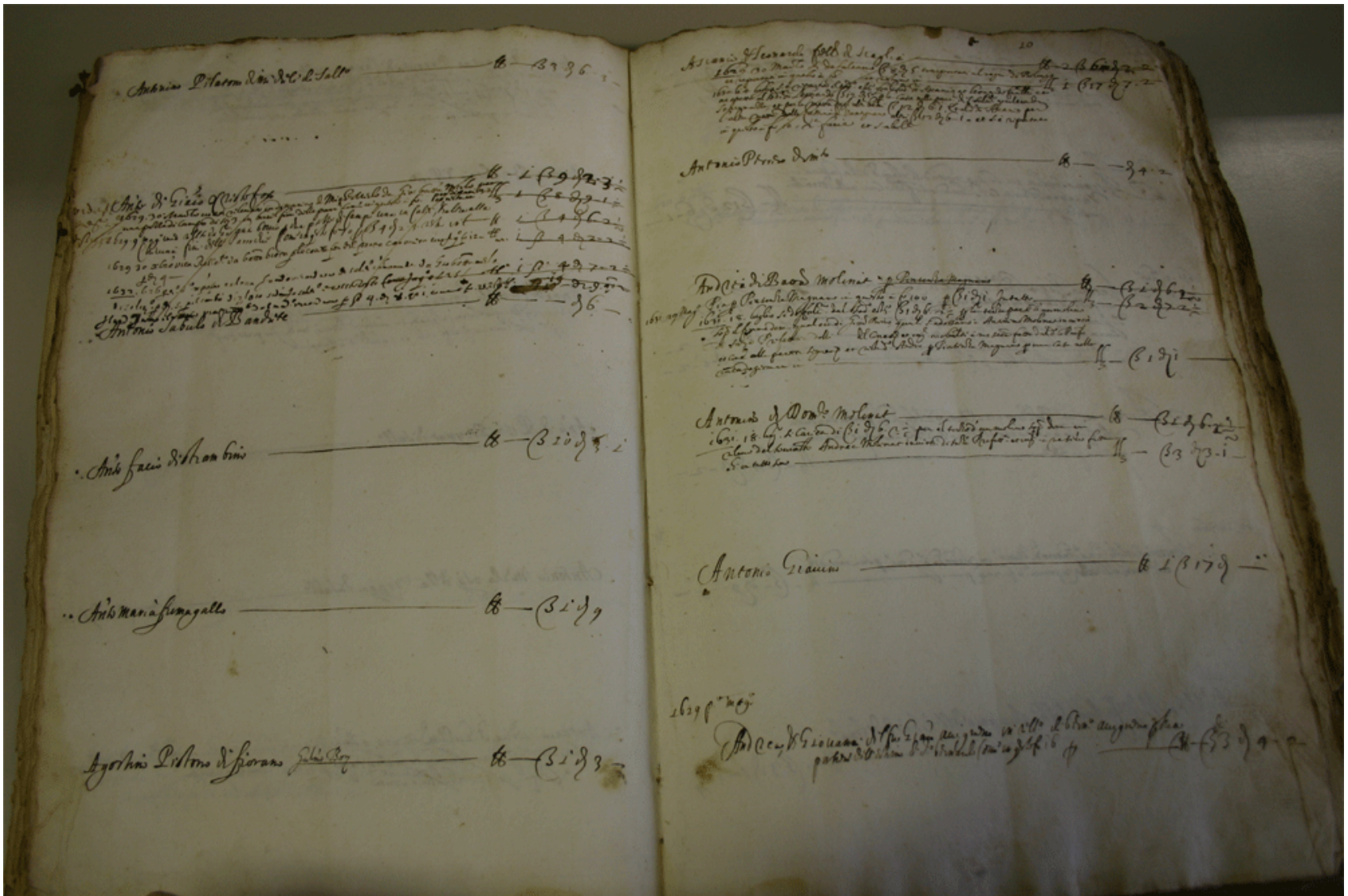
# ...the Low Countries...



# ...and other European areas, in particular south France, Catalonia and England



# The (more or less) common archival sources used: the *estimi* or property tax records



# The EINITE database: community-level files (ex. Carmagnola 1461)...

Num.	Foglio	Quartiere/vicinia/ parrocchia	Lista separata	Titolo/Mi serabile	Donne/ecll esiastici/ec c. ( d , e , en , f o c )	TOT espresso nella minore denominazione (includere formula)	Lire	Soldi	Denar i	Note
199	53	Burgus Gardesane				144	0	12	0	
200	53v	Burgus Gardesane				330,5	1	7	6,5	
201	53v	Burgus Gardesane				461	0	35	41	
202	54	Burgus Gardesane				138	0	11	6	
203	57		Titulus forensium		f	108	0	9	0	di Ceresole
204	57		Titulus forensium		f	66	0	5	6	di Sommariva Bosco
205	57		Titulus forensium		f	84	0	7	0	di Sommariva Bosco
206	57v		Titulus forensium		f	54	0	4	6	di Sommariva Bosco
207	57v		Titulus forensium		f	126	0	10	6	di Sommariva Bosco
208	57v		Titulus forensium		f	36	0	3	0	di Sommariva Bosco
209	57v		Titulus forensium		f	135	0	11	3	di Montaldo
210	57v		Titulus forensium		f	78	0	6	6	di Monteacuto
211	58		Titulus forensium		f	621	2	11	9	di Monteacuto
212	58		Titulus forensium		f	351	1	9	3	di Montaldo
213	58v		Titulus forensium		f	993	4	2	9	di Santo Stefano
214	58v		Titulus forensium		f	693	2	17	9	di Santo Stefano
215	59		Titulus forensium		f	90	0	7	6	di Monteacuto
216	59		Titulus forensium	dominus	f	4836	20	3	0	Antonio de Ponte dei signori di Lombiano
217	59v		Titulus forensium		f	54	0	4	6	di Sommariva Bosco
218	59v		Titulus forensium		f	324	1	7	0	di Sommariva Bosco
219	59v		Titulus forensium		f	108	0	9	0	di Montaldo
220	59v		Titulus forensium		f	18	0	1	6	di Sommariva Bosco
221	60		Titulus forensium		f	312	1	6	0	di Sommariva Bosco
222	60		Titulus forensium		f	168	0	14	0	di Carignano
223	60		Titulus forensium		f	108	0	9	0	di Cornigliano
224	60		Titulus forensium		f	90	0	7	6	di Magliano Ludovico e
225	60v		Titulus forensium	signore	f	0	0	0	0	Bongiovanni de Costis. Tutte le parti della non
226	61		Titulus forensium	signore	f	1920	8	0	0	Giovanni Rotarii
227	61v		Titulus forensium		f	330	1	7	6	di Costigliole
228	61v		Titulus forensium		f	65	0	5	5	
229	63	Burgus Monete				28	0	2	4	
230	63	Burgus Monete				60	0	5	0	

# ... and the «synthetic» database. From inequality measures...

	Year (ref)	Year (act)	Gini index	Ther. index	Q1	Q2	Q3	Q4	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	Top5	Top1	N.Cases	Missing Data
Bollengo e Borgofranco	1600	1629	0,72	1,049	1,4	5,36	12,63	80,61	0,31	0,6	1,34	1,82	2,69	4,07	5,15	8,37	14,49	61,16	41,87	12,18	106	0
Bollengo e Borgofranco	1650	1649	0,734	1,177	1,55	4,94	12,26	81,25	0,33	0,78	1,24	1,73	2,41	3,6	5,58	7,84	12,43	64,06	49,98	12,79	135	0
Carmagnola	1450	1461	0,567	0,587	3,49	9,89	19,7	66,92	0,9	1,52	2,45	3,52	4,99	6,4	8,13	11,61	17,28	43,2	28,31	10,47	506	14
Carmagnola	1500	1491	0,599	0,719	2,86	8,6	19,29	69,25	0,67	1,29	2,08	3,1	4,33	5,96	8,16	11,33	17,45	45,64	31,79	14,14	1055	2
Carmagnola	1600	1579	0,616	0,761	2,4	8,46	18,58	70,57	0,43	1,11	2	3,04	4,28	5,73	7,86	10,93	17,01	47,61	33,71	14,06	2125	4
Carmagnola	1750	1734	0,764	1,513	1,03	3,9	10,97	84,09	0,19	0,48	0,85	1,41	2,02	3,12	4,63	7,33	13,86	66,13	51,76	26,69	1664	7
Cherasco	1350	1347-1354	0,630	0,762	2,10	7,57	18,27	72,07	0,35	1,00	1,69	2,69	3,94	5,45	7,76	11,19	17,92	48,01	33,01	12,44	708	0
Cherasco	1400	1395-1415	0,546	0,541	3,86	10,63	20,51	65,00	0,85	1,78	2,83	3,94	5,09	6,80	8,54	11,49	16,97	41,72	27,41	7,97	509	0
Cherasco	1450	1447-1450	0,521	0,563	3,70	11,21	22,84	62,25	0,76	1,74	2,65	3,88	5,89	7,53	9,59	12,73	19,13	36,10	21,74	6,02	228	0
Cherasco	1550	1530-1548	0,627	0,827	3,31	7,74	16,28	72,67	0,80	1,51	2,16	2,86	3,71	4,90	6,89	10,11	16,41	50,63	35,98	15,91	668	0
Cherasco	1600	1589	0,682	0,916	1,78	5,86	14,92	77,44	0,37	0,82	1,31	2,04	3,10	4,37	6,26	9,51	17,15	55,06	38,54	13,06	764	0
Cherasco	1650	1648	0,755	1,243	1,26	3,82	10,62	84,30	0,27	0,59	0,92	1,34	1,97	2,82	4,46	7,76	15,51	64,36	48,52	19,96	1168	0
Cherasco	1700	1711	0,795	1,459	0,93	3,03	8,62	87,42	0,16	0,45	0,72	1,05	1,59	2,37	3,66	5,95	12,31	71,75	56,31	21,61	1603	0
Chieri	1300	1311	0,715	1,183	2,26	5,14	12,22	80,37	0,77	0,81	1,47	1,88	2,47	3,54	5,2	7,95	14,6	61,31	47,43	22,26	2655	53
Chieri	1450	1437	0,669	1,004	2,56	7,12	14,88	75,43	0,53	1,18	1,9	2,59	3,47	4,57	6,27	9,05	14,03	56,4	44,08	19,59	1212	6
Chieri	1500	1514	0,744	1,289	1,43	4,81	11,56	82,19	0,26	0,68	1,13	1,73	2,45	3,4	4,86	7,52	13,09	64,88	51,73	22,88	2146	5
Chieri	1600	1582	0,76	1,462	1,1	4,49	11,52	82,89	0,1	0,53	1,07	1,6	2,29	3,37	4,9	7,33	12,84	65,9	54,47	30,03	2441	7
Chieri	1700	1707	0,847	1,781	0,45	2,08	5,56	91,91	0,06	0,21	0,44	0,74	1,08	1,52	2,38	3,97	9,96	79,65	63,7	28,43	1290	9
Cumiana	1500	1496	0,538	0,505	3,75	10,39	21,67	64,19	0,79	1,72	2,82	3,84	4,96	6,59	9,15	13,2	19	37,92	24,74	7,97	372	7
Cumiana	1550	1558	0,572	0,648	2,92	9,72	21,04	66,32	0,52	1,38	2,33	3,53	4,88	6,8	8,81	11,97	17,88	41,89	29,77	13,17	533	0
Cumiana	1600	1614	0,6	0,659	1,93	8,53	20,72	68,82	0,25	0,89	1,87	2,99	4,46	6,26	8,73	12,92	18,86	47,78	29,13	10,48	482	3
Cumiana	1650	1664	0,588	0,854	3,38	9,91	19,47	67,24	0,51	1,69	2,64	3,76	4,68	6,11	8,38	10,82	15,61	45,79	36,13	21,22	364	0
Cumiana	1700	1694	0,579	0,715	3,11	10,2	19,8	66,84	0,56	1,48	2,69	3,79	4,83	6,29	8,36	11,29	16,18	44,53	32,12	16,58	511	6
Cumiana	1750	1749	0,675	1,187	2,12	7,13	15,5	75,25	0,32	0,99	1,81	2,56	3,58	4,95	6,5	9,03	14,92	55,35	44,18	28,47	788	24

Bollengo e Borgofranco
Bollengo e Borgofranco
Carmagnola
Carmagnola
Carmagnola
Carmagnola
Cherasco
Cherasco
Cherasco
Cherasco

Gini index
0,72
0,734
0,567
0,599
0,616
0,764
0,630
0,546
0,521
0,627

D9	D10	Top5	Top1	N.Cases
14,49	61,16	41,87	12,18	106
12,43	64,06	49,98	12,79	135
17,28	43,2	28,31	10,47	506
17,45	45,64	31,79	14,14	1055
17,01	47,61	33,71	14,06	2125
13,86	66,13	51,76	26,69	1664
17,92	48,01	33,01	12,44	708
16,97	41,72	27,41	7,97	509
19,13	36,10	21,74	6,02	228
16,41	50,63	35,98	15,91	668



# ... to a broad range of other variables

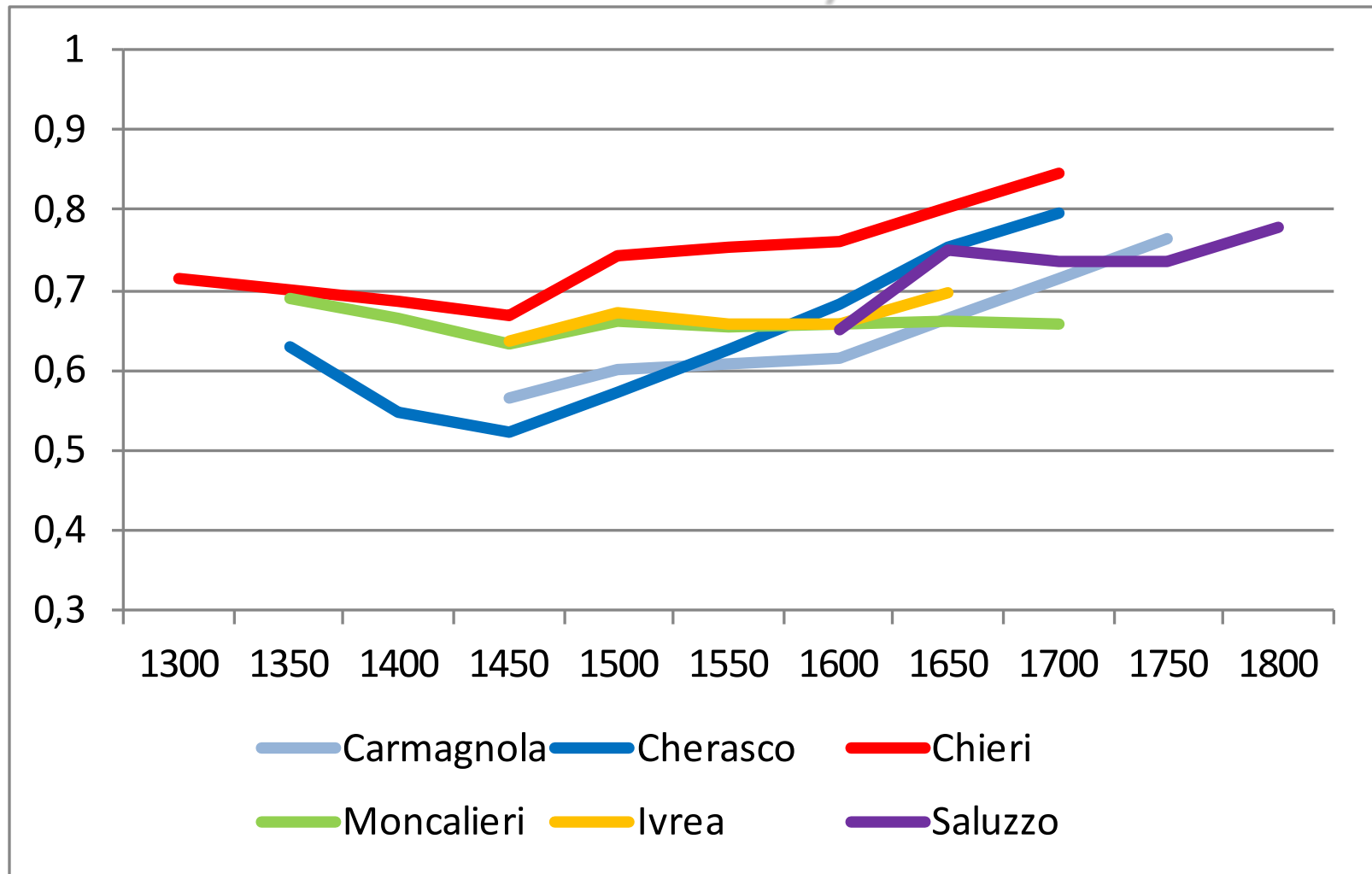
Archival References	Content	Property less included	Longitude	Latitude	On the coast	River	Juridical status of civitas	Court	Bishop	Bishopric	Contado	State	Current Province	Current Region	Current State	Monte di pietà	Mezzadria classica	Hereditary System	Population
Bollengo e Borgofranco	Real estate	No																	
Bollengo e Borgofranco	Real estate	No																	
Carmagnola	Carmagnola Historic	Real estate	No	07°43'8"7" / 44°50'52"4"	No	Yes (Po)	No	No	No	Saluzzo; Torino (f)	Marchesa	Torino	Piemonte	Italia	Yes (from n.a.)	n.a.	egalitaria	7,205 (1612); 8,856 (1734); 11,933 (1774)	
Carmagnola	Carmagnola Historic	Real estate	No	07°43'8"7" / 44°50'52"4"	No	Yes (Po)	No	No	No	Saluzzo; Torino (f)	Marchesa	Torino	Piemonte	Italia	Yes (from n.a.)	n.a.	egalitaria	7,205 (1612); 8,856 (1734); 11,933 (1774)	
Carmagnola	Carmagnola Historic	Real estate	No	07°43'8"7" / 44°50'52"4"	No	Yes (Po)	No	No	No	Saluzzo; Torino (f)	Marchesa	Torino	Piemonte	Italia	Yes (from n.a.)	n.a.	egalitaria	7,205 (1612); 8,856 (1734); 11,933 (1774)	
Carmagnola	Carmagnola Historic	Real estate	No	07°43'8"7" / 44°50'52"4"	No	Yes (Po)	No	No	No	Saluzzo; Torino (f)	Marchesa	Torino	Piemonte	Italia	Yes (from n.a.)	n.a.	egalitaria	7,205 (1612); 8,856 (1734); 11,933 (1774)	
Cherasco	Cherasco Historic	Immobili	No	7°52'00"E 44°39'00"	No	No	Yes (from th)	No	No	Asti (unti Alba and	Dal 1366 f	Cuneo	Piemonte	Italia	Yes (from 1619)	Di norma	3,570 (1377); 3,997 (1612); 7,658 (1734);		
Cherasco	Cherasco Historic	Real estate	No	7°52'00"E 44°39'00"	No	No	Yes (from th)	No	No	Asti (unti Alba and	Dal 1366 f	Cuneo	Piemonte	Italia	Yes (from 1619)	Di norma	3,570 (1377); 3,997 (1612); 7,658 (1734);		
Cherasco	Cherasco Historic	Real estate	No	7°52'00"E 44°39'00"	No	No	Yes (from th)	No	No	Asti (unti Alba and	Dal 1366 f	Cuneo	Piemonte	Italia	Yes (from 1619)	Di norma	3,570 (1377); 3,997 (1612); 7,658 (1734);		
Cherasco	Cherasco Historic	Immobili	No	7°52'00"E 44°39'00"	No	No	Yes (from th)	No	No	Asti (unti Alba and	Dal 1366 f	Cuneo	Piemonte	Italia	Yes (from 1619)	Di norma	3,570 (1377); 3,997 (1612); 7,658 (1734);		
Cherasco	Cherasco Historic	Real estate	No	7°52'00"E 44°39'00"	No	No	Yes (from th)	No	No	Asti (unti Alba and	Dal 1366 f	Cuneo	Piemonte	Italia	Yes (from 1619)	Di norma	3,570 (1377); 3,997 (1612); 7,658 (1734);		
Cherasco	Cherasco Historic	Real estate	No	7°52'00"E 44°39'00"	No	No	Yes (from th)	No	No	Asti (unti Alba and	Dal 1366 f	Cuneo	Piemonte	Italia	Yes (from 1619)	Di norma	3,570 (1377); 3,997 (1612); 7,658 (1734);		
Cherasco	Cherasco Historic	Real estate	No	7°52'00"E 44°39'00"	No	No	Yes (from th)	No	No	Asti (unti Alba and	Dal 1366 f	Cuneo	Piemonte	Italia	Yes (from 1619)	Di norma	3,570 (1377); 3,997 (1612); 7,658 (1734);		
Chieri	Chieri Historical A	Immobili	No	07°49'24" / 45°0'53"6"	No	No	Yes	No	No	Torino	Dal XIV se	Torino	Piemonte	Italia	Yes	n.a.	egalitaria	6,700 (1377); 9,511 (1571); 10,710 (1612)	
Chieri	Chieri Historical A	Real estate	No	07°49'24" / 45°0'53"6"	No	No	Yes	No	No	Torino	Dal XIV se	Torino	Piemonte	Italia	Yes	n.a.	egalitaria	6,700 (1377); 9,511 (1571); 10,710 (1612)	
Chieri	Chieri Historical A	Real estate	No	07°49'24" / 45°0'53"6"	No	No	Yes	No	No	Torino	Dal XIV se	Torino	Piemonte	Italia	Yes	n.a.	egalitaria	6,700 (1377); 9,511 (1571); 10,710 (1612)	
Chieri	Chieri Historical A	Real estate	No	07°49'24" / 45°0'53"6"	No	No	Yes	No	No	Torino	Dal XIV se	Torino	Piemonte	Italia	Yes	n.a.	egalitaria	6,700 (1377); 9,511 (1571); 10,710 (1612)	
Chieri	Chieri Historical A	Real estate	No	07°49'24" / 45°0'53"6"	No	No	Yes	No	No	Torino	Dal XIV se	Torino	Piemonte	Italia	Yes	n.a.	egalitaria	6,700 (1377); 9,511 (1571); 10,710 (1612)	
Cumiana	Cumiana Historic	Real estate	No	07°22'40" / 07°22'40"	No	No	No	No	No	Torino (u Pinerolo	Stati saba	Torino	Piemonte	Italia	No	n.a.	egalitaria	730 (1377); 1,175 (1560); 1,647 (1571); 1,	
Cumiana	Cumiana Historic	Real estate	No	07°22'40" / 07°22'40"	No	No	No	No	No	Torino (u Pinerolo	Stati saba	Torino	Piemonte	Italia	No	n.a.	egalitaria	730 (1377); 1,175 (1560); 1,647 (1571); 1,	
Cumiana	Cumiana Historic	Real estate	No	07°22'40" / 07°22'40"	No	No	No	No	No	Torino (u Pinerolo	Stati saba	Torino	Piemonte	Italia	No	n.a.	egalitaria	730 (1377); 1,175 (1560); 1,647 (1571); 1,	
Cumiana	Cumiana Historic	Real estate	No	07°22'40" / 07°22'40"	No	No	No	No	No	Torino (u Pinerolo	Stati saba	Torino	Piemonte	Italia	No	n.a.	egalitaria	730 (1377); 1,175 (1560); 1,647 (1571); 1,	
Cumiana	Cumiana Historic	Real estate	No	07°22'40" / 07°22'40"	No	No	No	No	No	Torino (u Pinerolo	Stati saba	Torino	Piemonte	Italia	No	n.a.	egalitaria	730 (1377); 1,175 (1560); 1,647 (1571); 1,	
Cumiana	Cumiana Historic	Real estate	No	07°22'40" / 07°22'40"	No	No	No	No	No	Torino (u Pinerolo	Stati saba	Torino	Piemonte	Italia	No	n.a.	egalitaria	730 (1377); 1,175 (1560); 1,647 (1571); 1,	

- Bollengo e Borgofranco
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- Carmagnola
- Carmagnola
- Carmagnola
- Carmagnola
- Cherasco
- Cherasco
- Cherasco
- Cherasco

Archival References	Content	Property less included
	Real estate	No
	Real estate	No
Carmagnola Historic	Real estate	No
Carmagnola Historic	Real estate	No
Carmagnola Historic	Real estate	No
Carmagnola Historic	Real estate	No
Cherasco Historic	Immobili	No

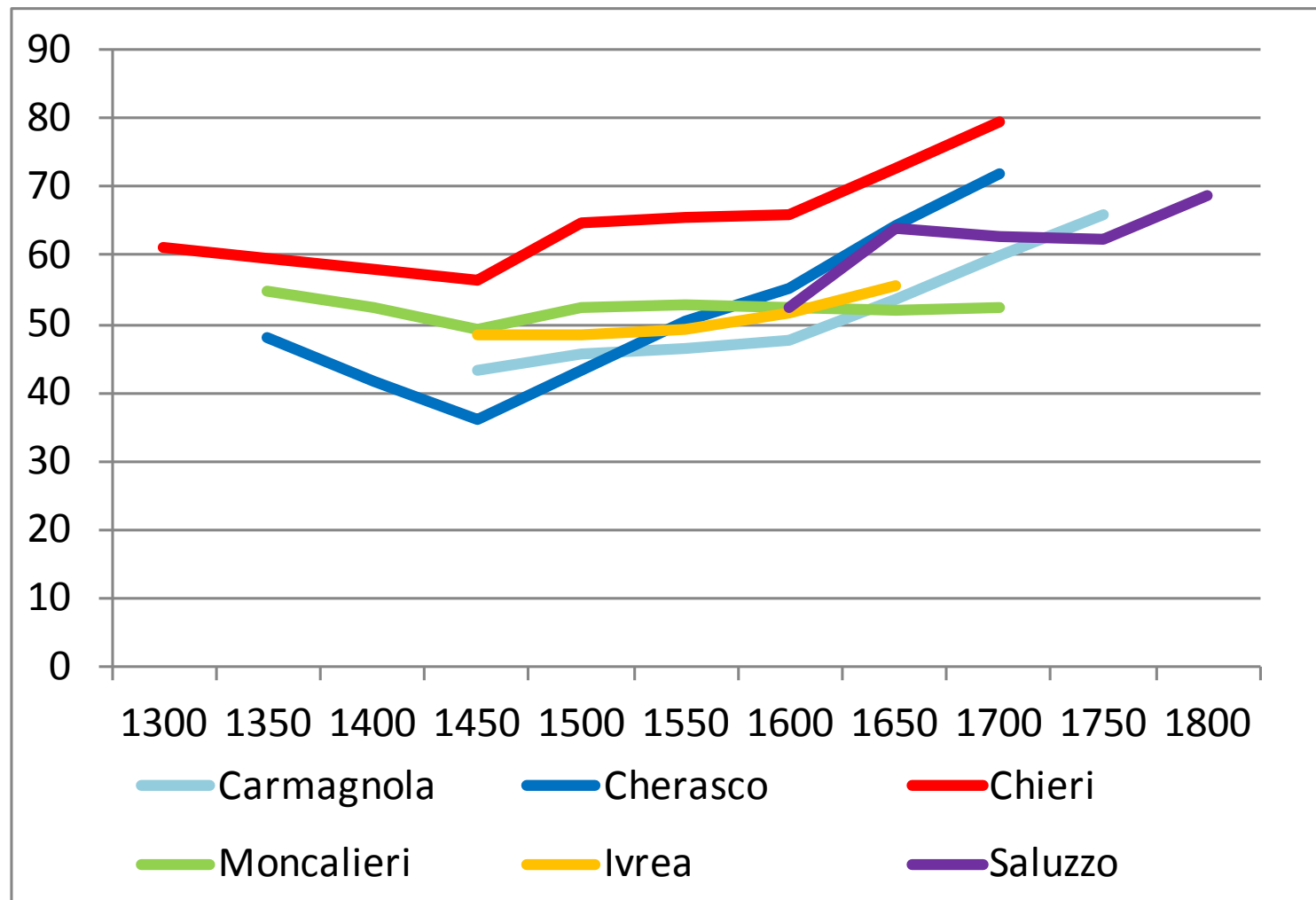
Hereditary System	Population
egalitaria	7,205 (1612); 8,856 (1734); 11,933 (1774)
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egalitaria	7,205 (1612); 8,856 (1734); 11,933 (1774)
egalitaria	7,205 (1612); 8,856 (1734); 11,933 (1774)
Di norma	3,570 (1377); 3,997 (1612); 7,658 (1734); 8,63

# The case of Piedmont (wealth inequality, Gini indexes)



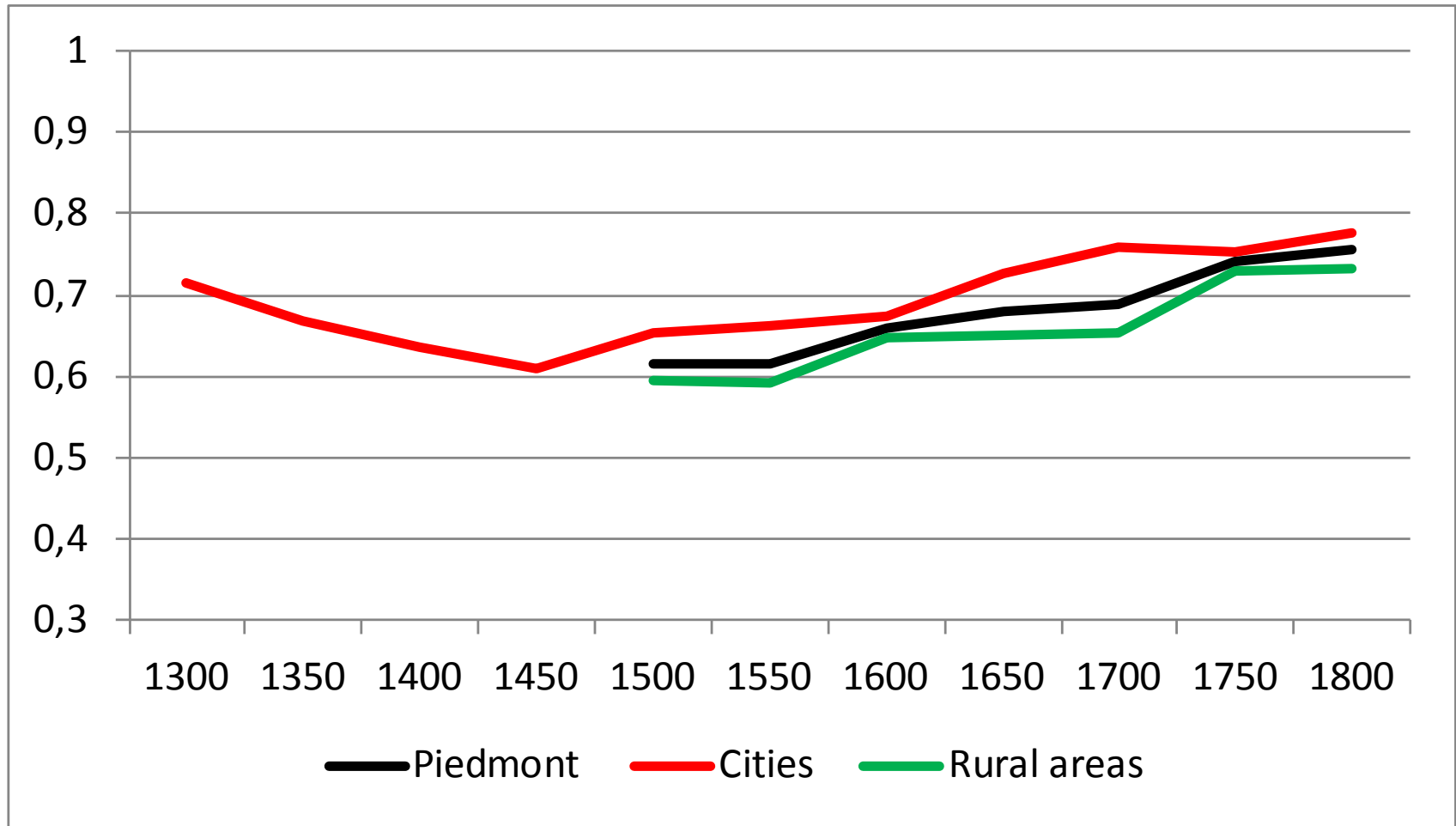
Source: Alfani, "Economic inequality in northwestern Italy: A long-term view (fourteenth to eighteenth centuries)", *Journal of Economic History*, 2015

# Share of wealth of the top 10% (Piedmont)



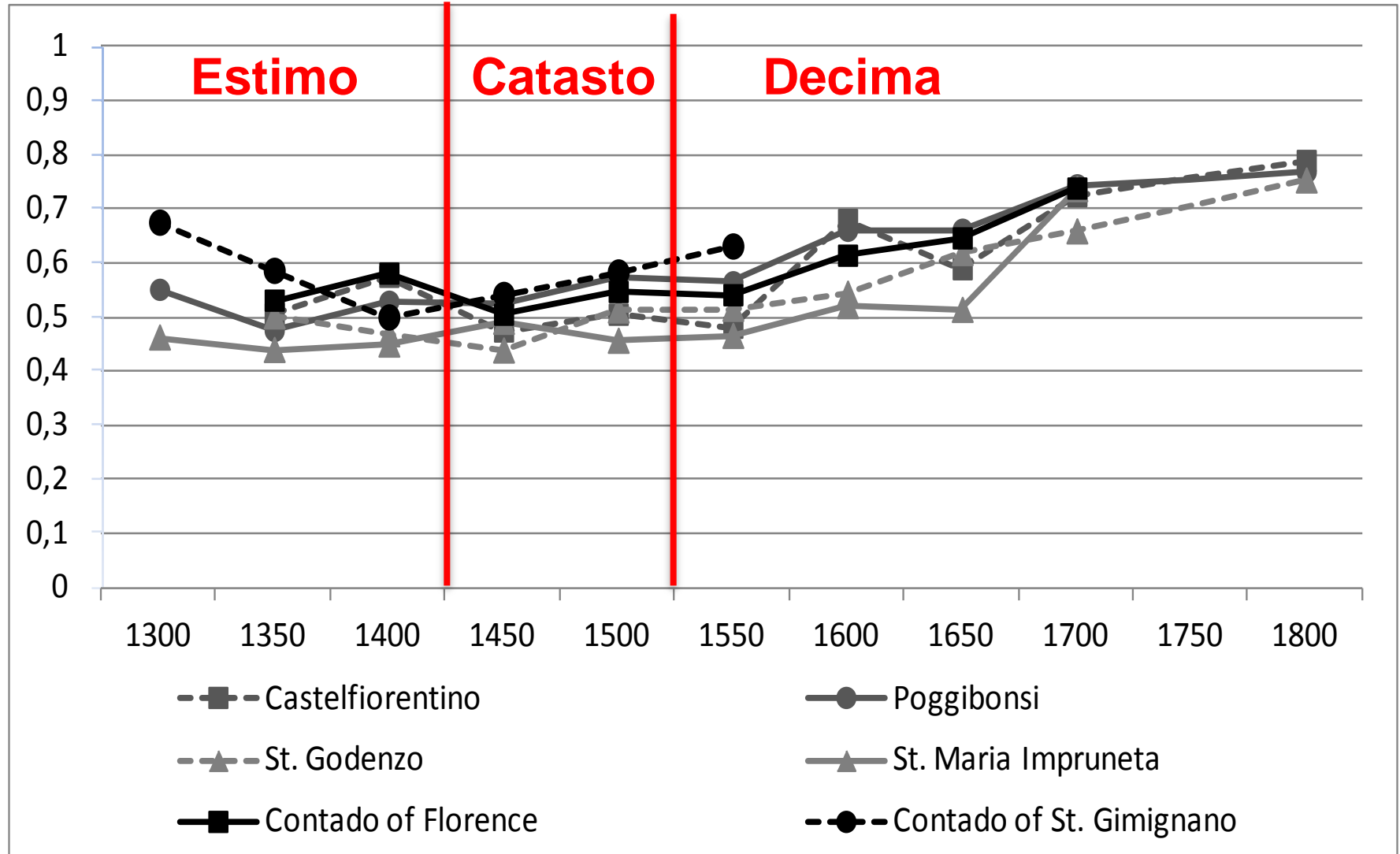
Source: Alfani, "Economic inequality in northwestern Italy: A long-term view (fourteenth to eighteenth centuries)", *Journal of Economic History*, 2015

# A new method to aggregate local time series in order to produce «regional» time series (introduced in Alfani 2015)

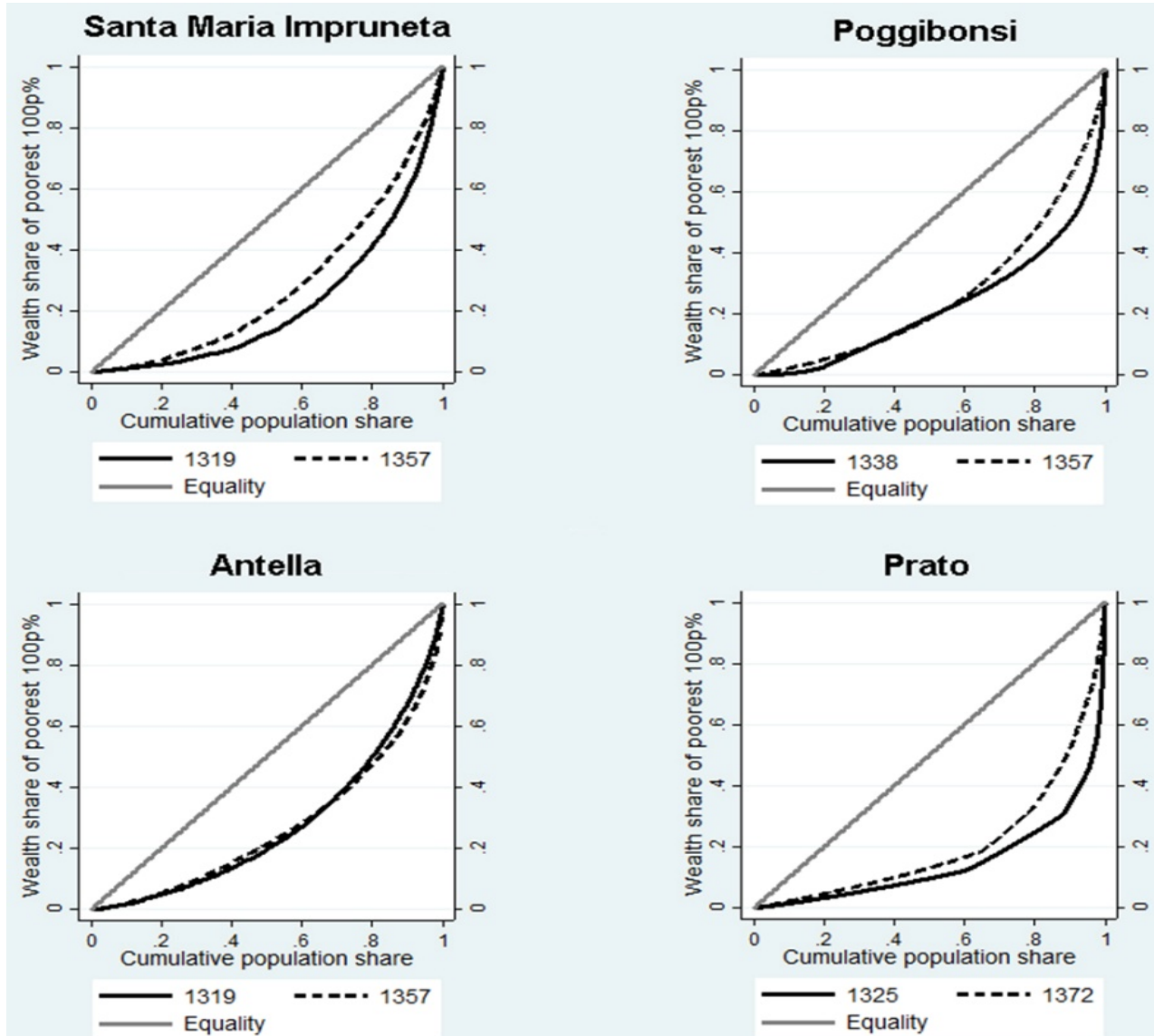


Source: Alfani, “Economic inequality in northwestern Italy: A long-term view (fourteenth to eighteenth centuries)”, *Journal of Economic History*, 2015

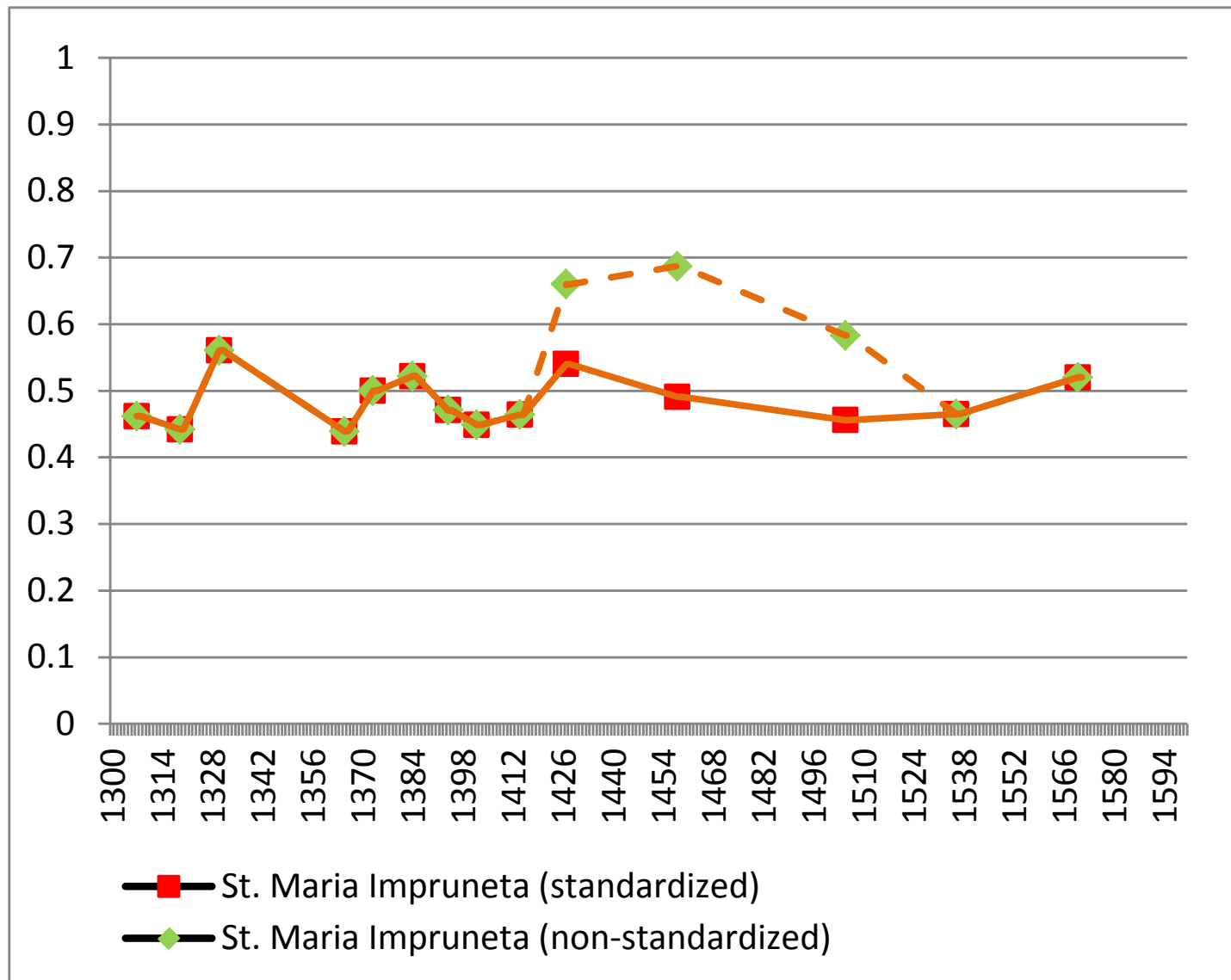
# Economic inequality in the Florentine *contado*, 1300-1800 (Gini indexes)



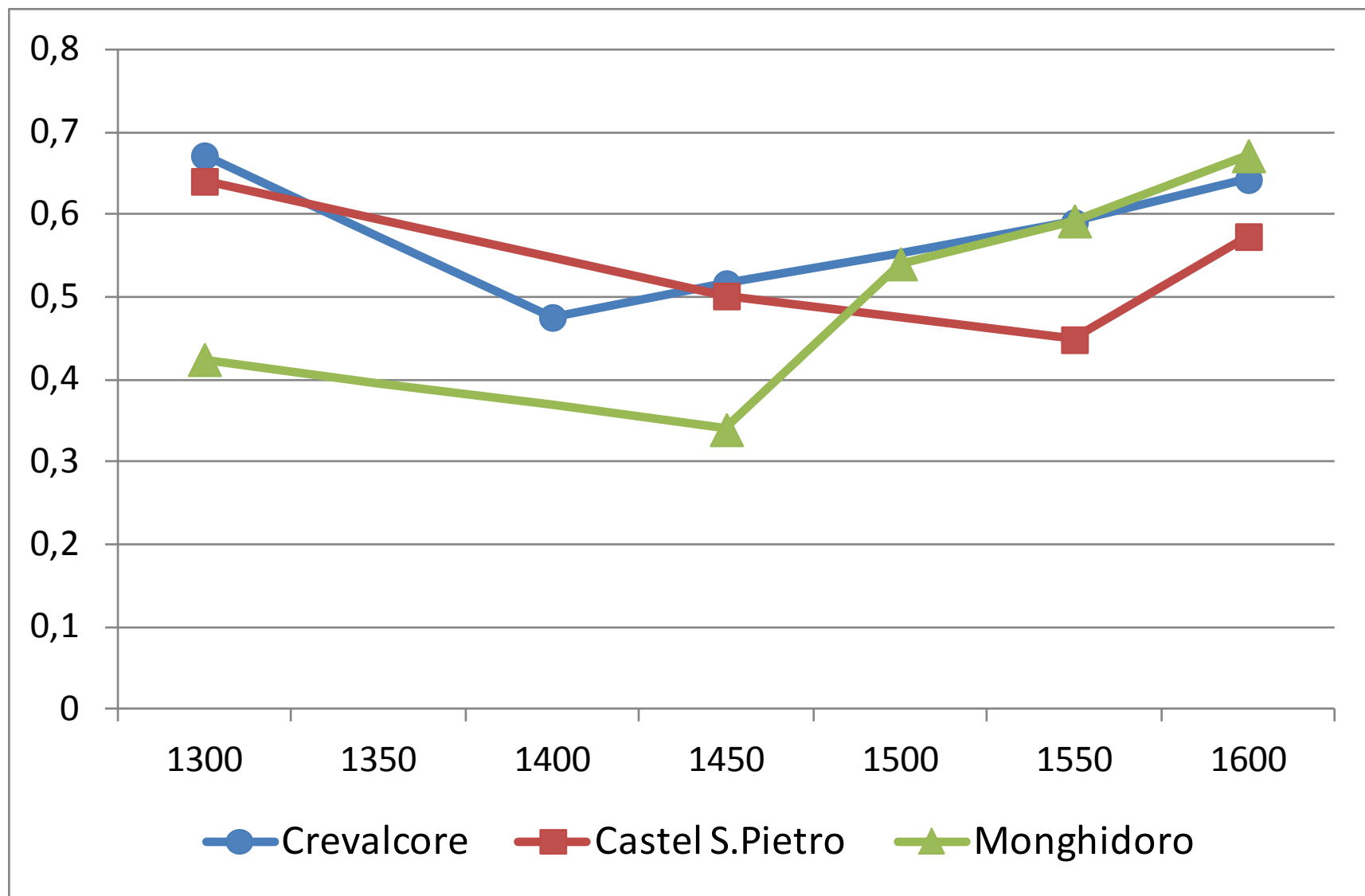
# The impact of the Black Death in Tuscany: Lorenz Curves



# Why was Herlihy wrong? He was not comparing like with like...

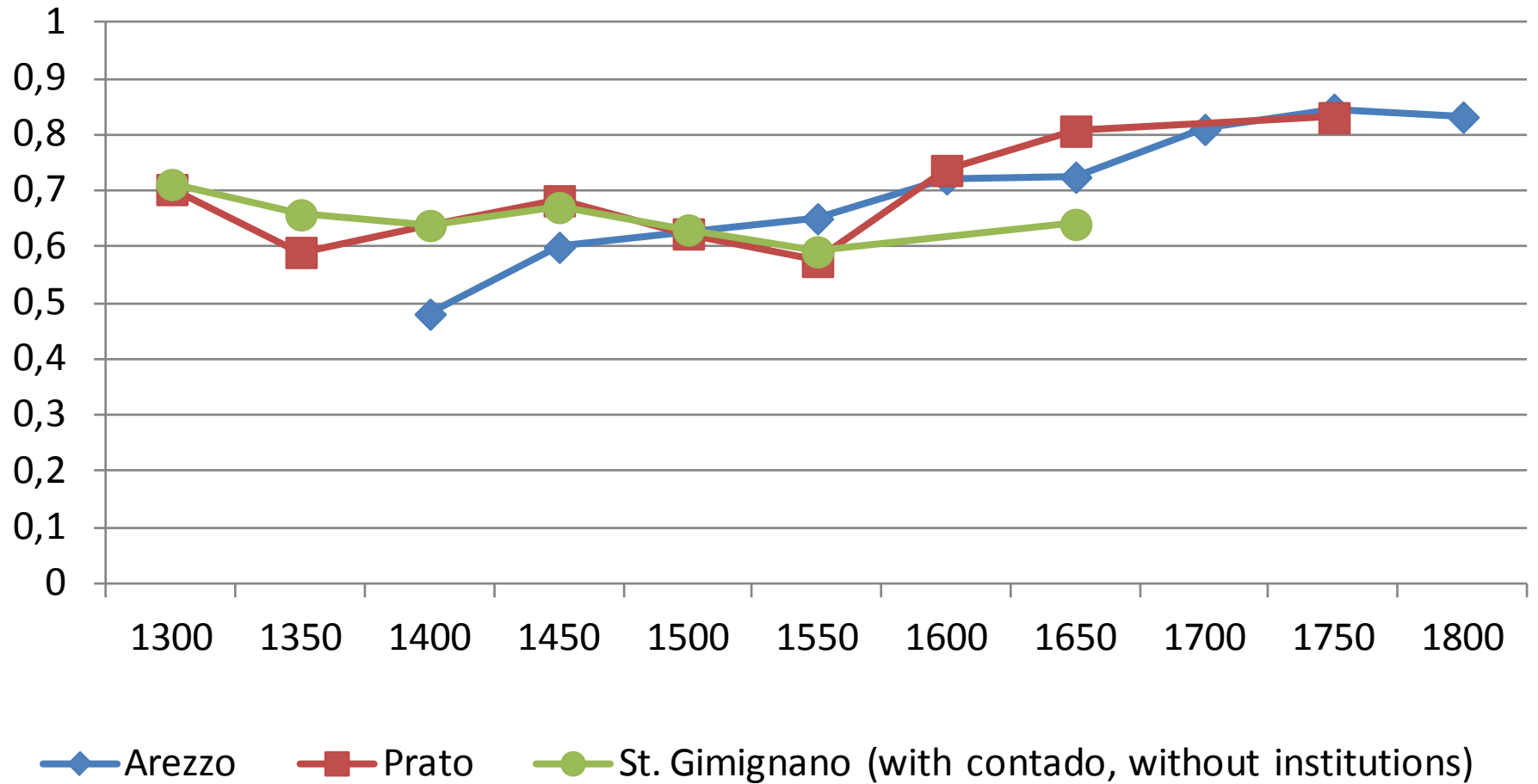


# The impact of the Black Death in the region Emilia-Romagna





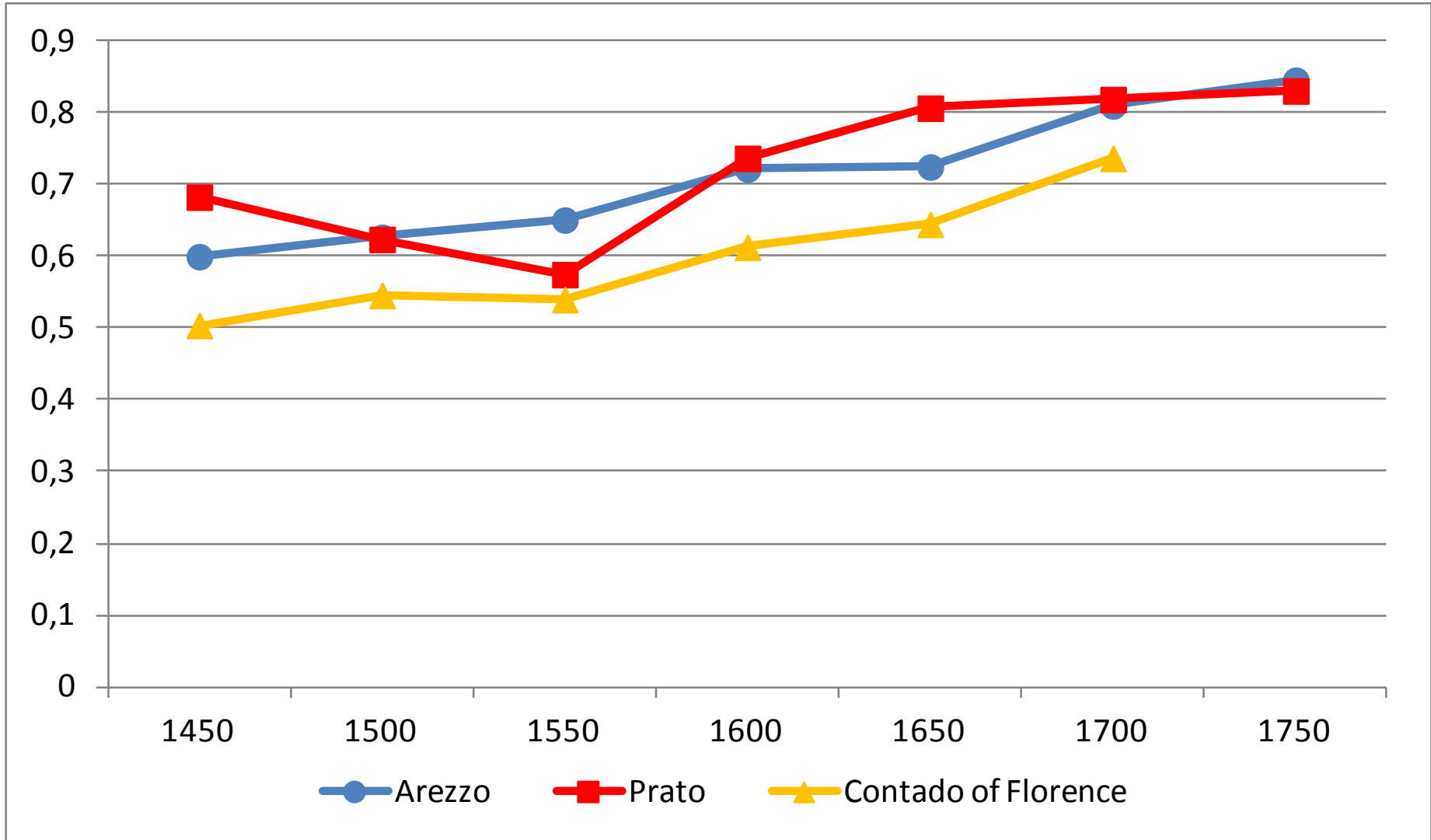
# Economic inequality in Tuscan cities, 1300-1800 (Gini indexes)



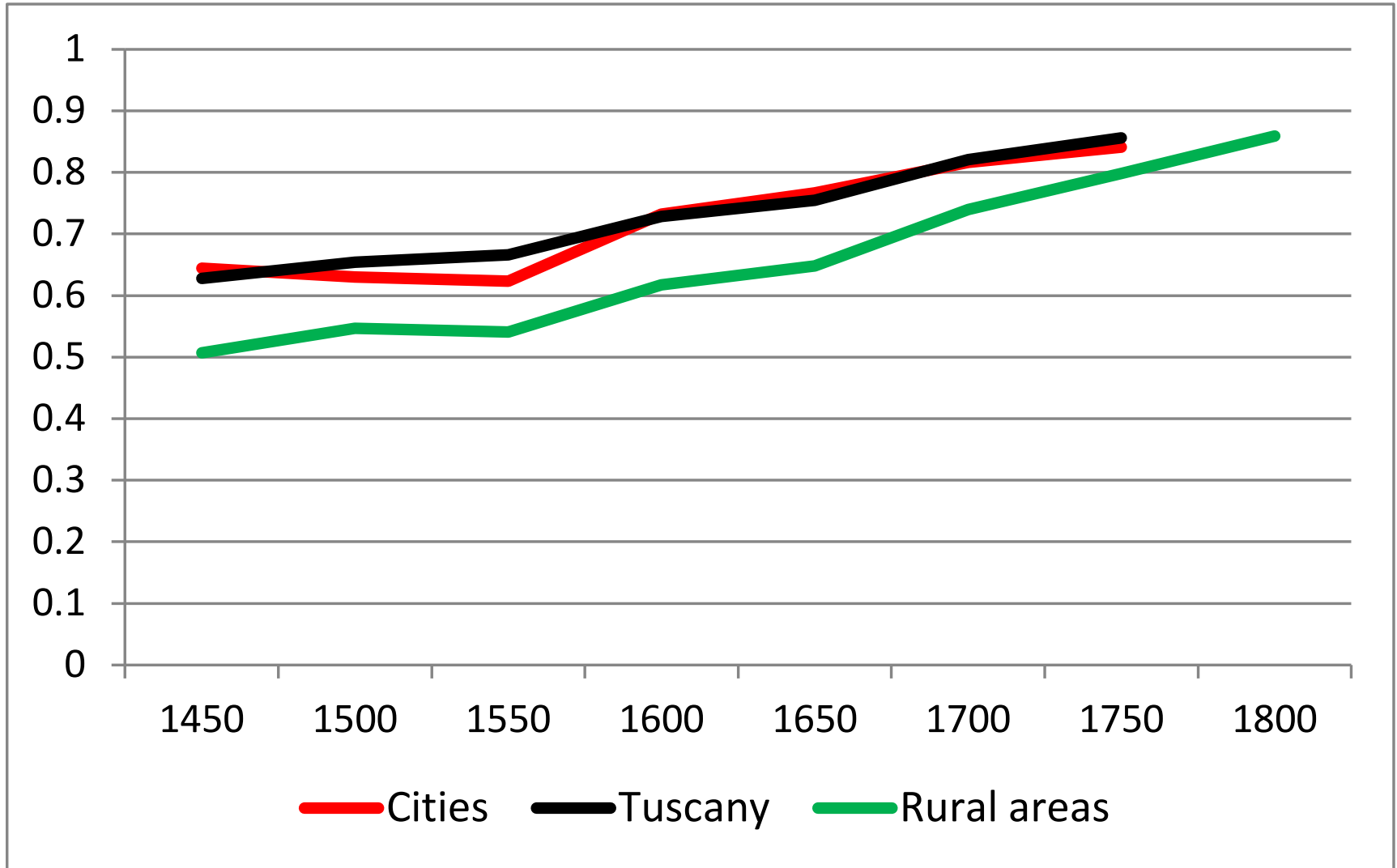
# Findings from (provisional) regression analysis

	(1)	(2)	(3)	(4)	(5)
Year	0.0007*** (0.0001)	.0008*** (0.0001)	0.0008*** (0.0001)	0.0008*** (0.0001)	0.0008*** (0.0001)
Pre-Black Death	0.1211*** (0.0309)	0.1215*** (0.0309)	0.1303*** (0.0307)		
Per capita GDP (ln)	0.1431 (0.0902)	0.1750** (0.0869)	0.1637* (0.0919)	0.1807* (0.0913)	0.1761* (0.0993)
Population (ln)	0.0465*** (0.0066)	0.0076 (0.0120)	0.0025 (0.0209)	-0.0008 (0.0124)	-0.0157 (0.0228)
Urban (ref.: Rural)		0.0884*** (0.0280)		0.0869*** (0.0307)	
Estimo (ref.: Decima)		0.0172 (0.0216)	0.0228 (0.0235)	0.0325 (0.0279)	0.0358 (0.0285)
Catasto (ref.: Decima)		-0.0243 (0.0205)	-0.0226 (0.0230)	-0.0197 (0.0224)	-0.0235 (0.0249)
Fixed effects (community dummies)			Yes		Yes
F	90.55***	49.53***	24.24***	31.41***	13.85***
R <sup>2</sup>	0.6674	0.7030	0.7405	0.6490	0.6919
N	130	130	130	115	115

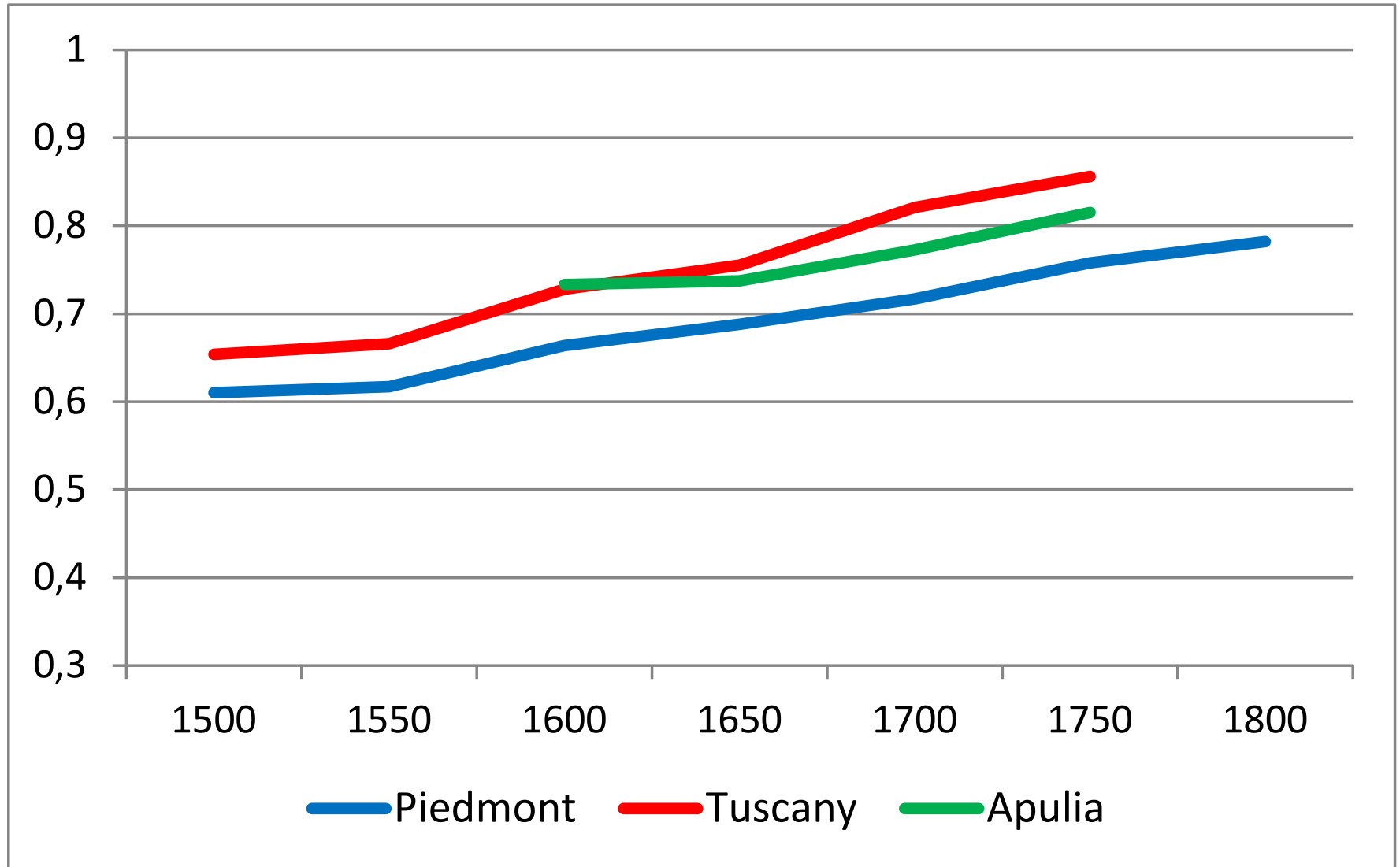
# Towards a regional reconstruction, 1450-1750: the data used



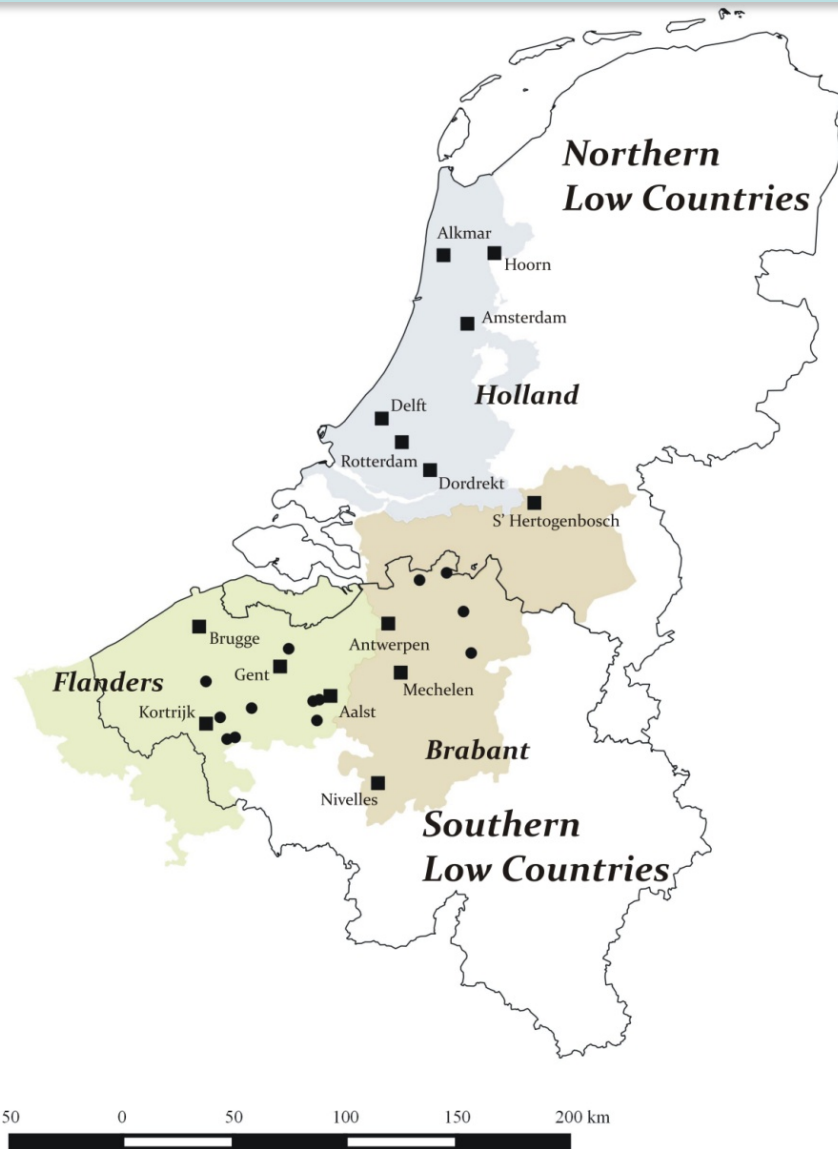
# The Tuscan regional reconstruction



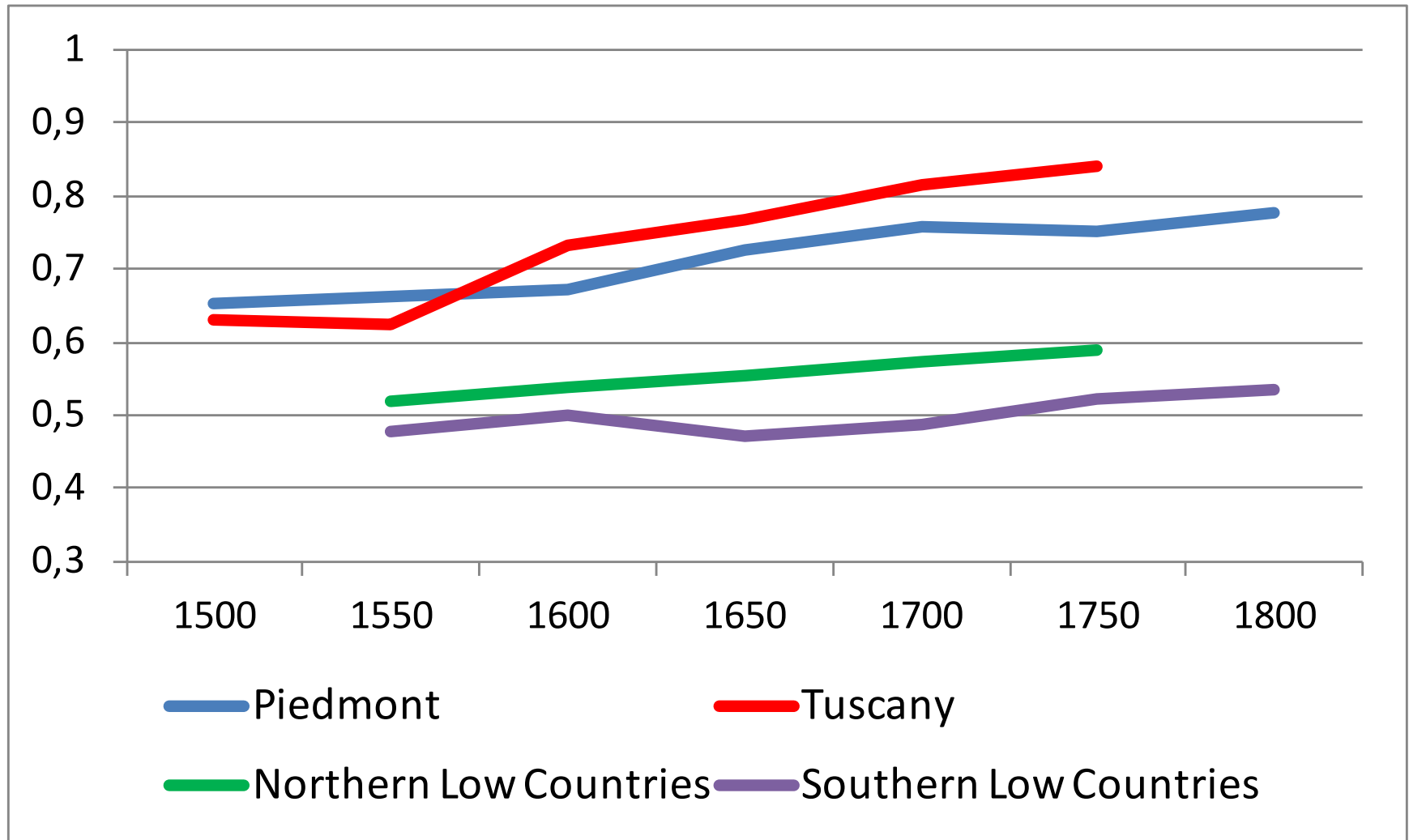
# Comparing regional trends in Italy: Piedmont, Tuscany and Apulia (for now!)



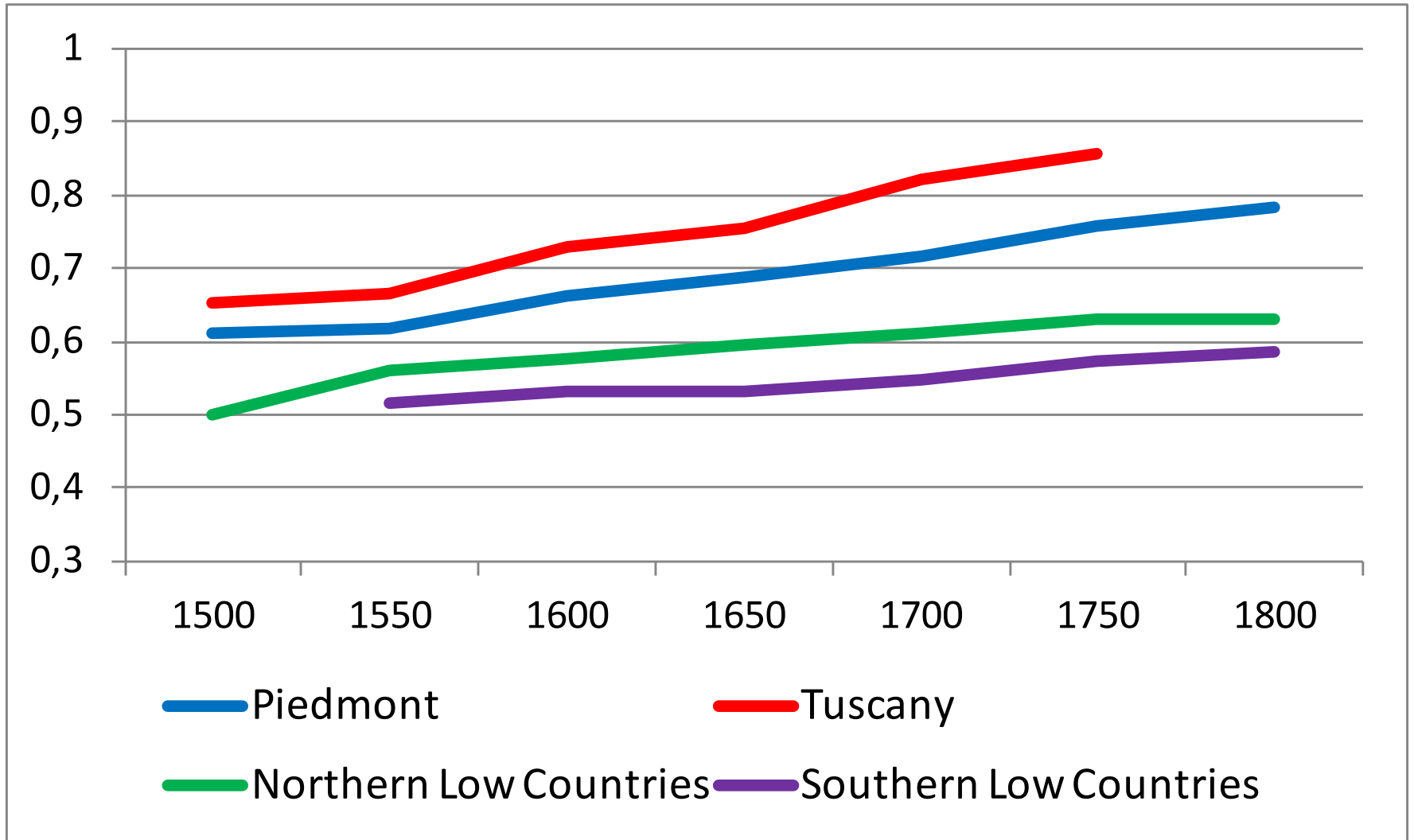
# Taking the comparison beyond Italy: the Low Countries



# Urban trends in inequality (Gini)



# Regional trends in inequality (Gini)

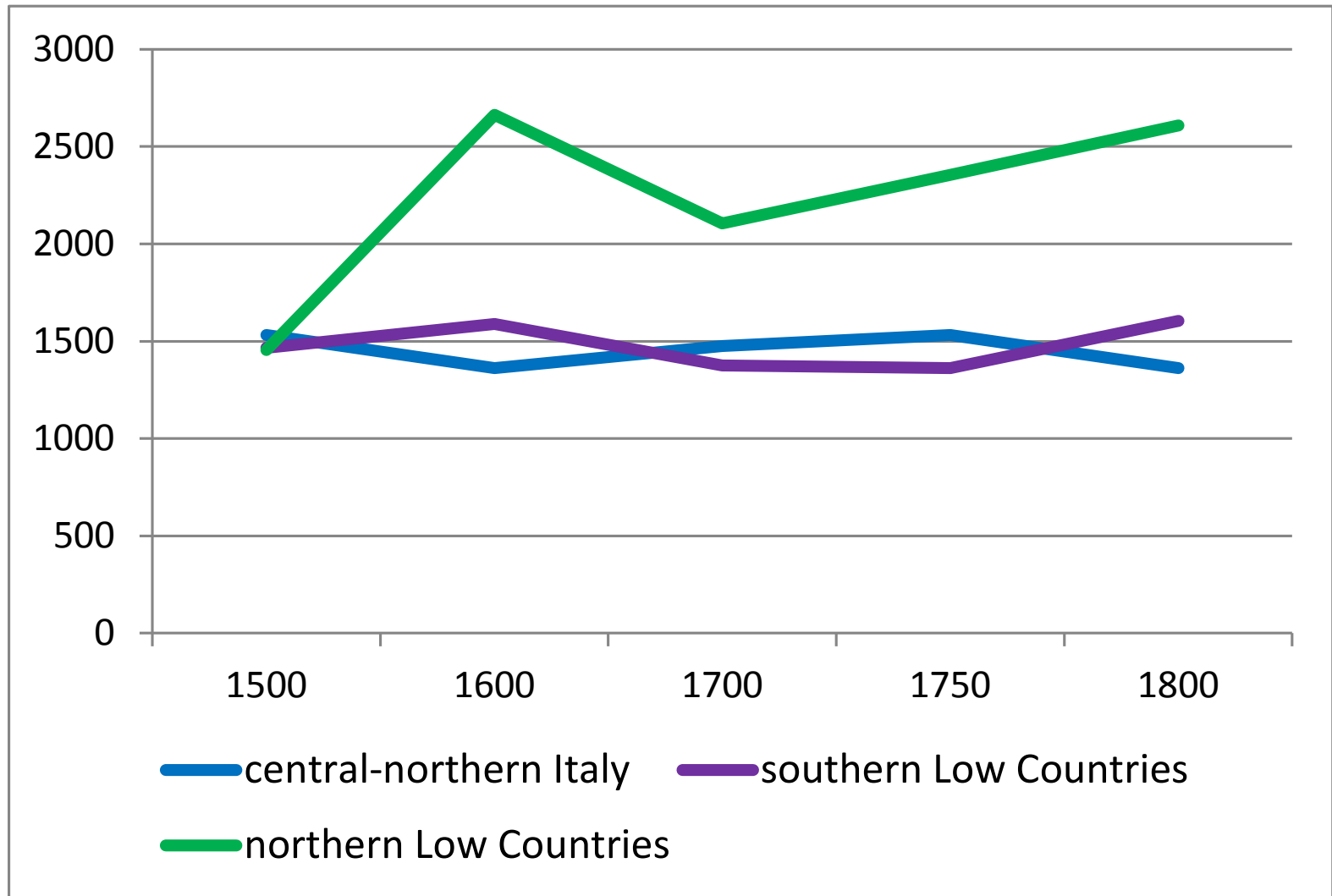




# Possible explanations

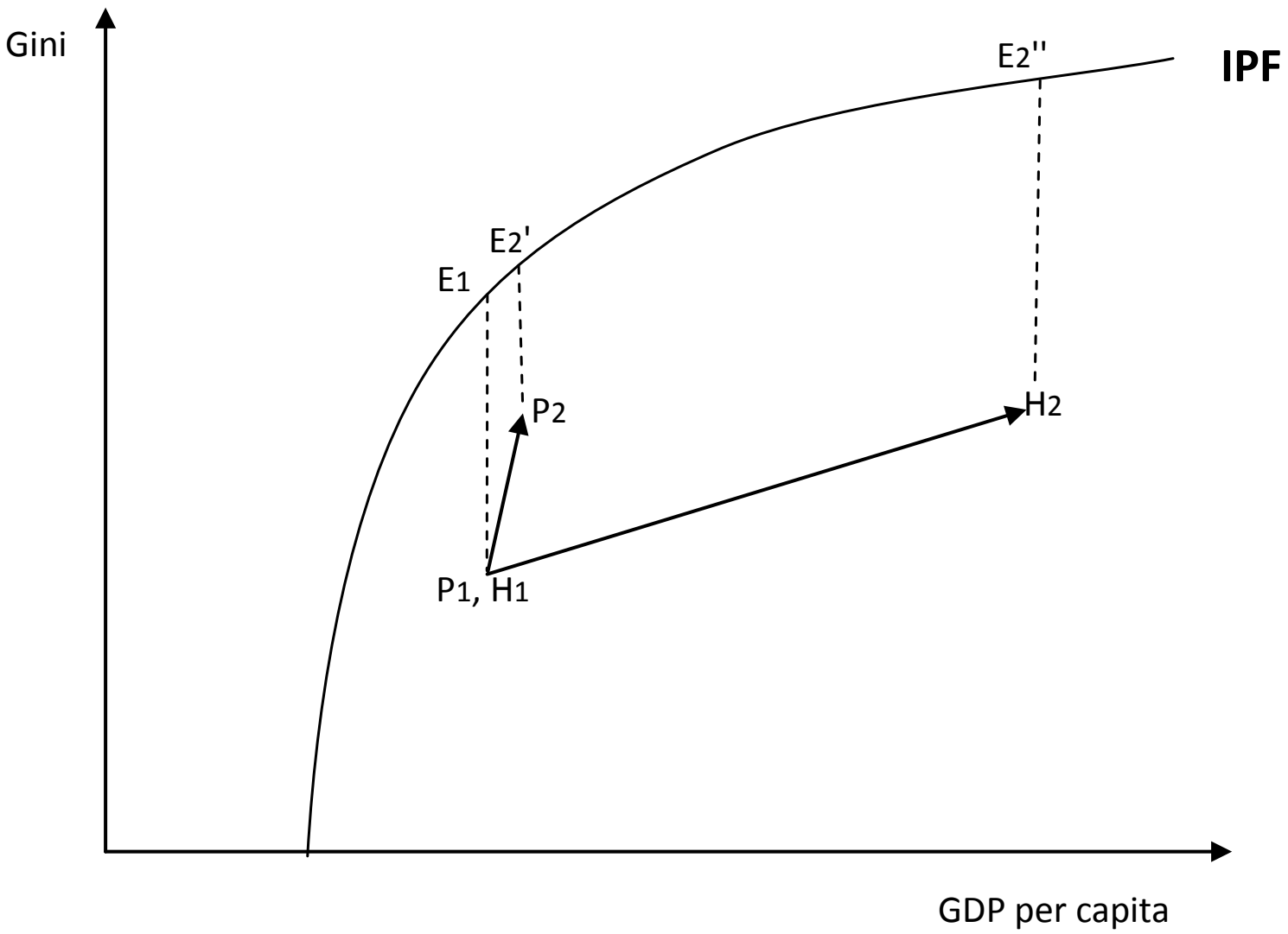
- Across four different States, on both sides of the Little Divergence, **we find empirically a broadly similar path** of increase in economic inequality throughout the Early Modern period
- As it seems, **no single causal factor can explain all four cases** (plus Apulia) for the whole period: this means there was no «necessary» condition to have inequality increase, but **possibly a range of «sufficient» conditions**. We are considering the following:
  - Economic growth
  - Demographic factors (urbanization)
  - Proletarianization
  - Institutions and politics (extraction of inequality)

# GDP per capita

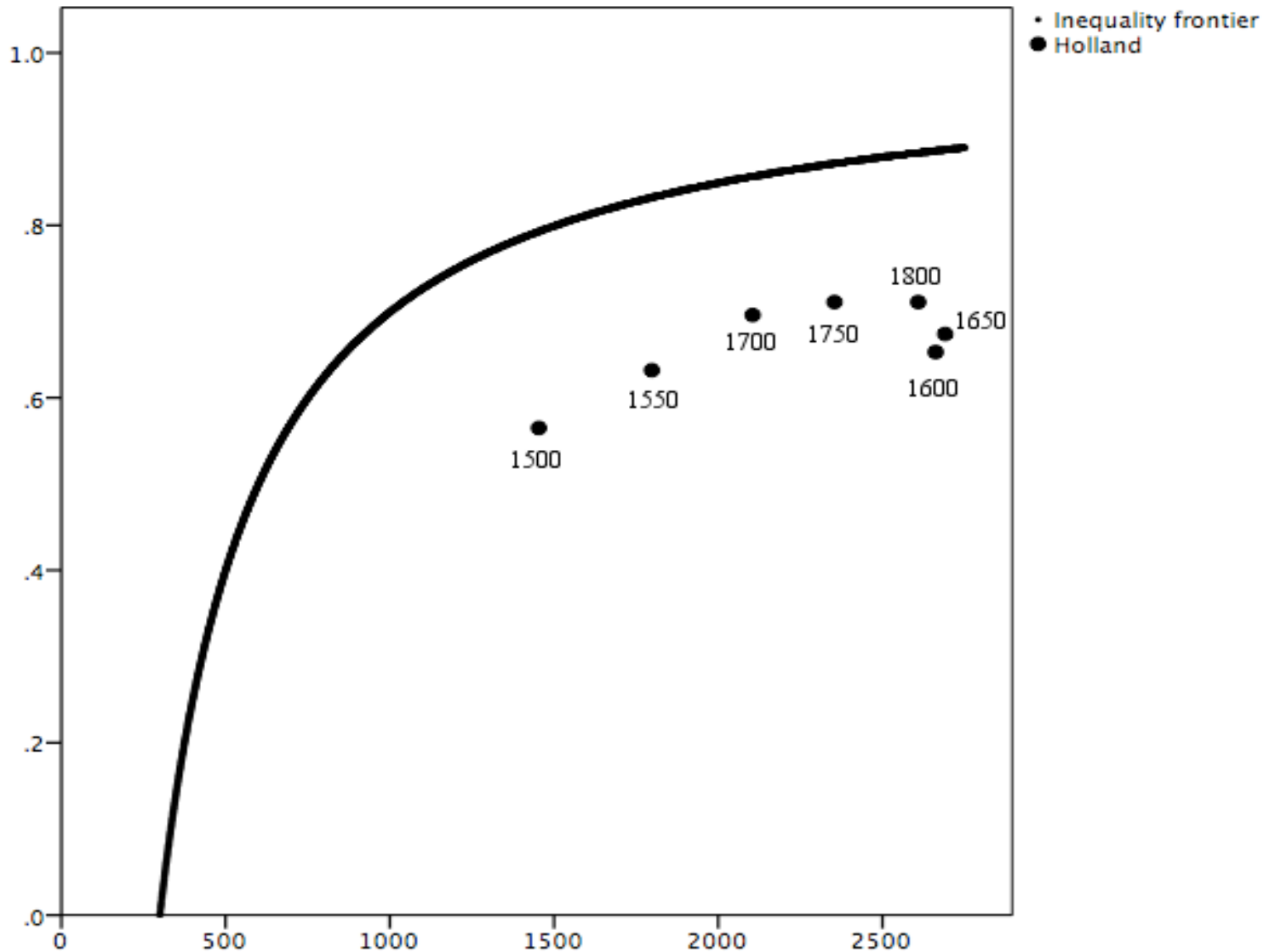


Source: Maddison Project (2014)

# Politics, institutions, & inequality extraction

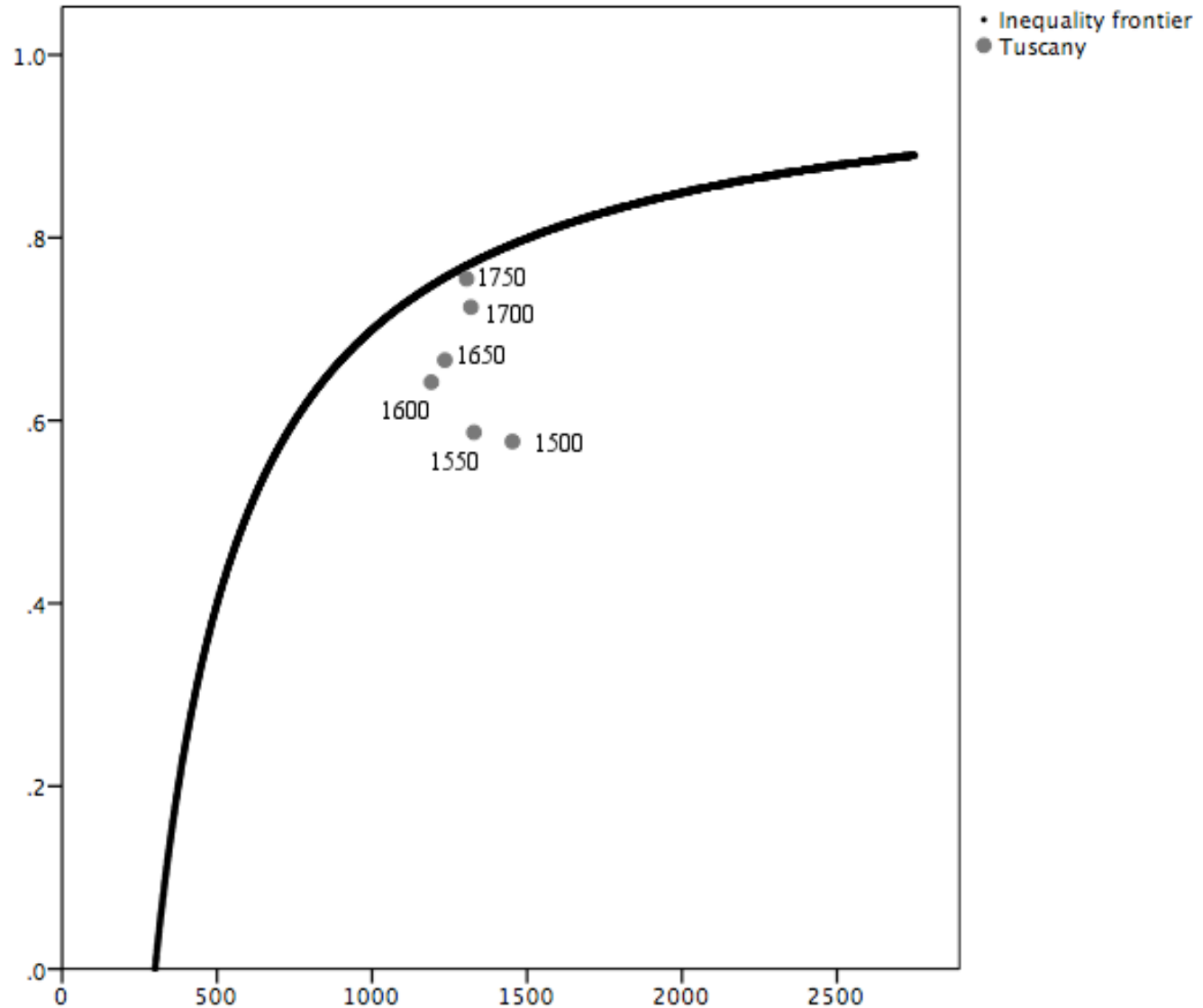


# Extraction of inequality: the northern Low Countries...

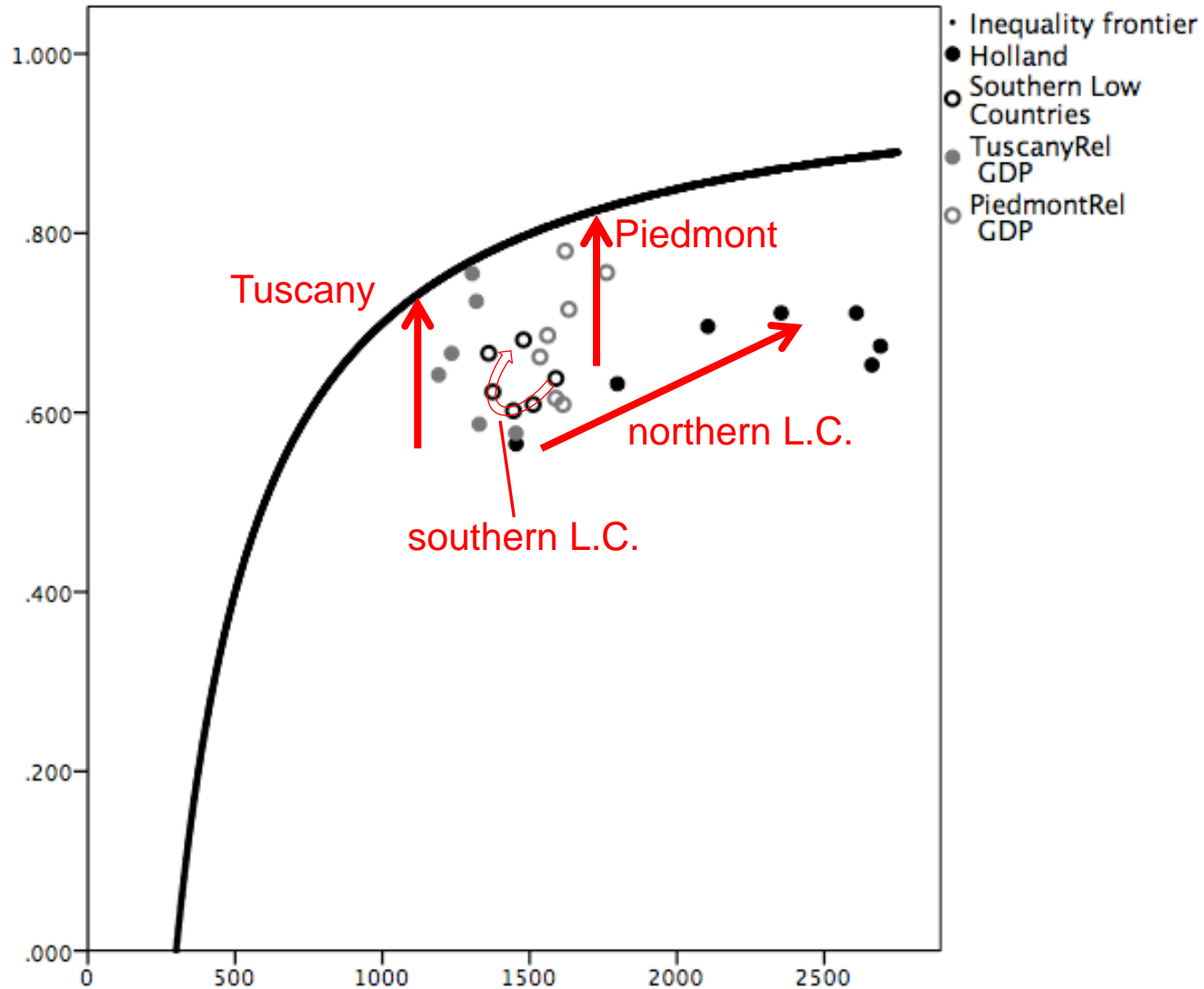


# ... and Tuscany

Converted Gini coefficients  
(1550 = 76% extraction ratio, as in Northern Low Countries)

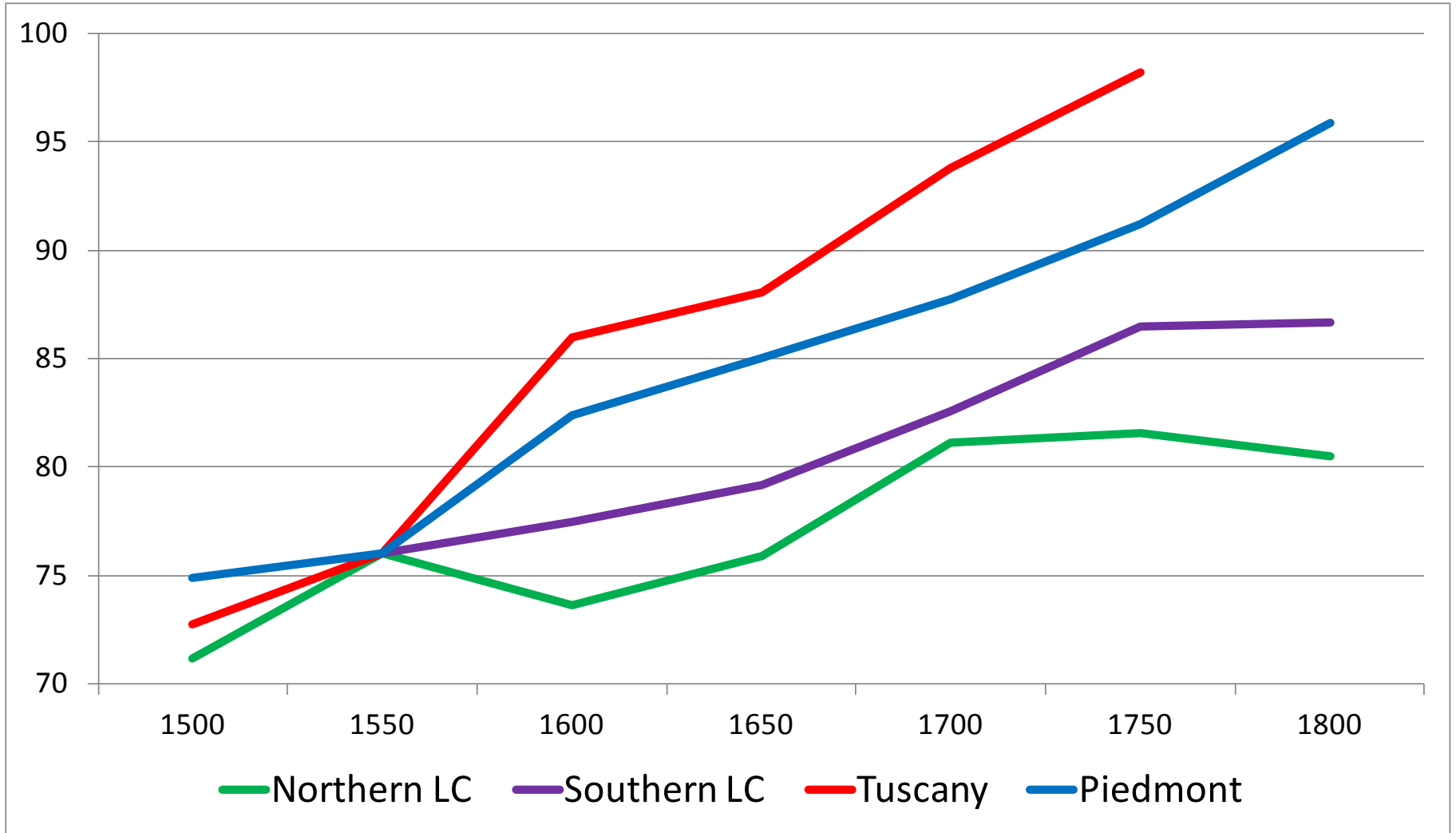


# All cases



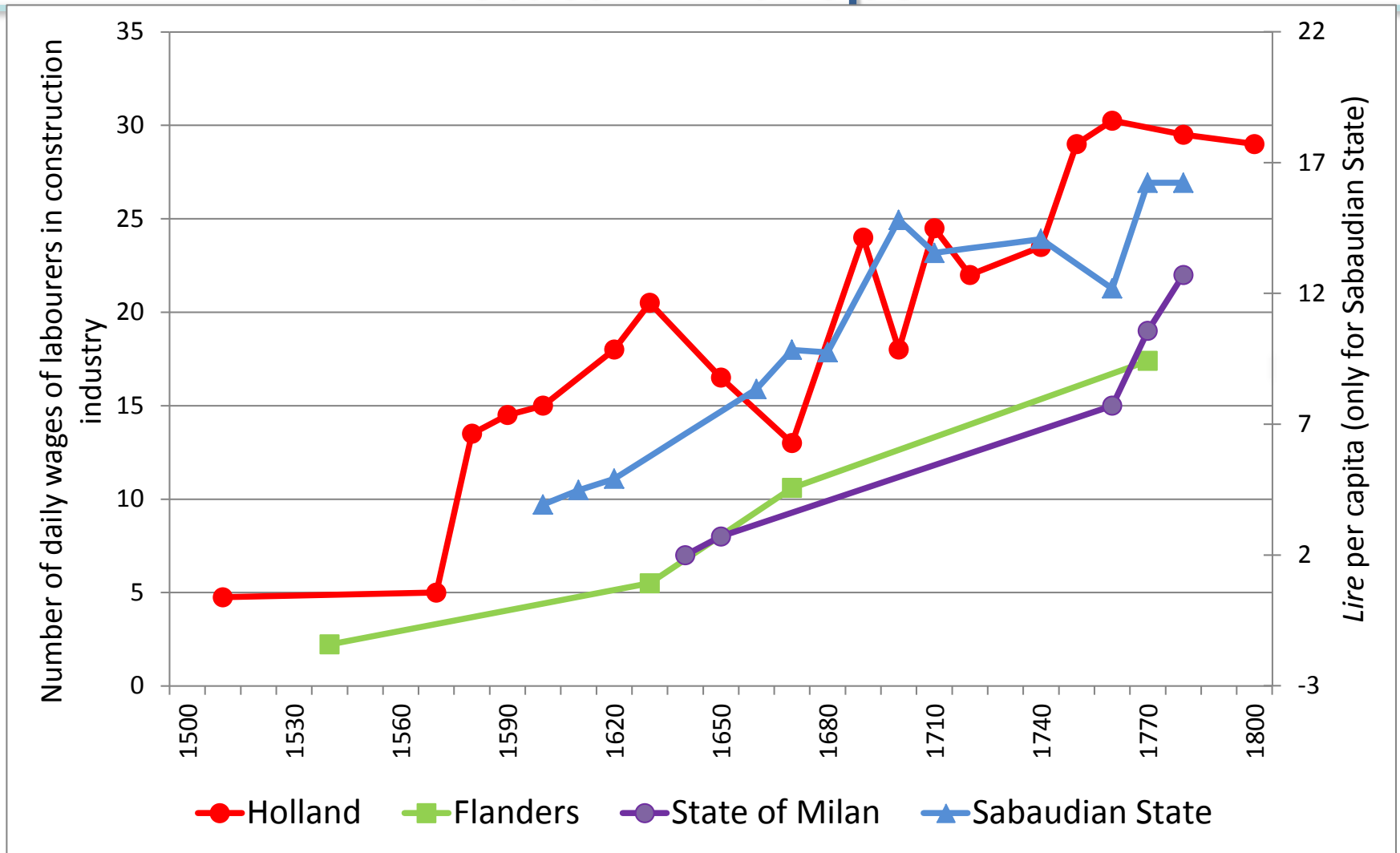
io)

# Extraction ratios



Converted extraction ratios: 1550 = 76%

# Increasing extraction and the rise of the fiscal state in Europe



Increase in per-capita fiscal burden, ca. 1500-1800

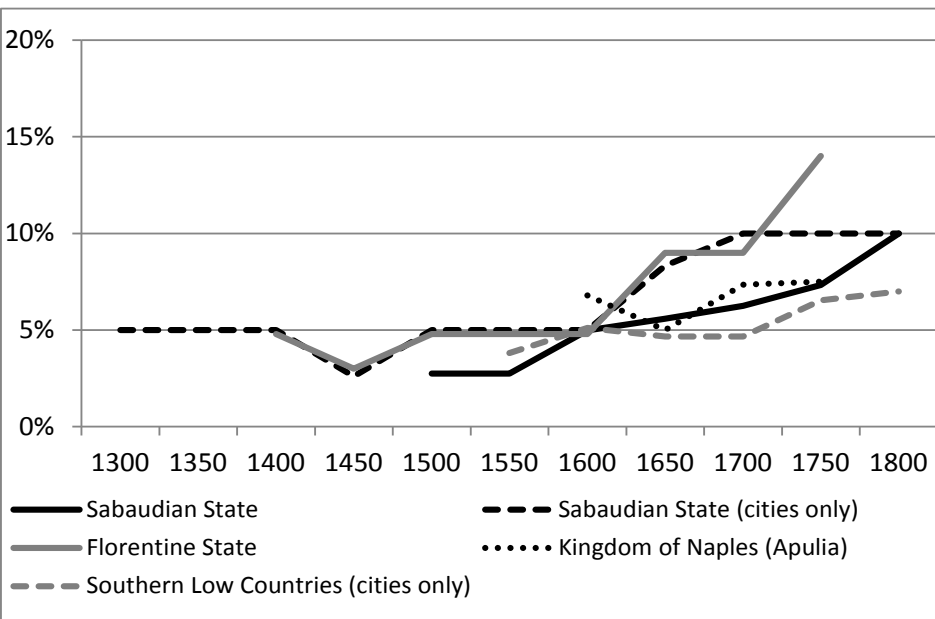


# Politics and institutions

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- The fact that although inequality grew everywhere, trends in inequality extraction ratios differed deeply suggests to pay particular attention to political and institutional factors.
- **The rise of the fiscal-military state:**
  - **Growth of regressive fiscal pressure**  
Relative exception: Dutch Republic
  - **Inegalitarian Redistribution through interest payments & warfare**  
And in the opposite direction: poor relief (2016 article by Van Bavel and Rijma, suggesting differences in levels of “social spending” across preindustrial Europe)
- **Processes of “proletarianization”**

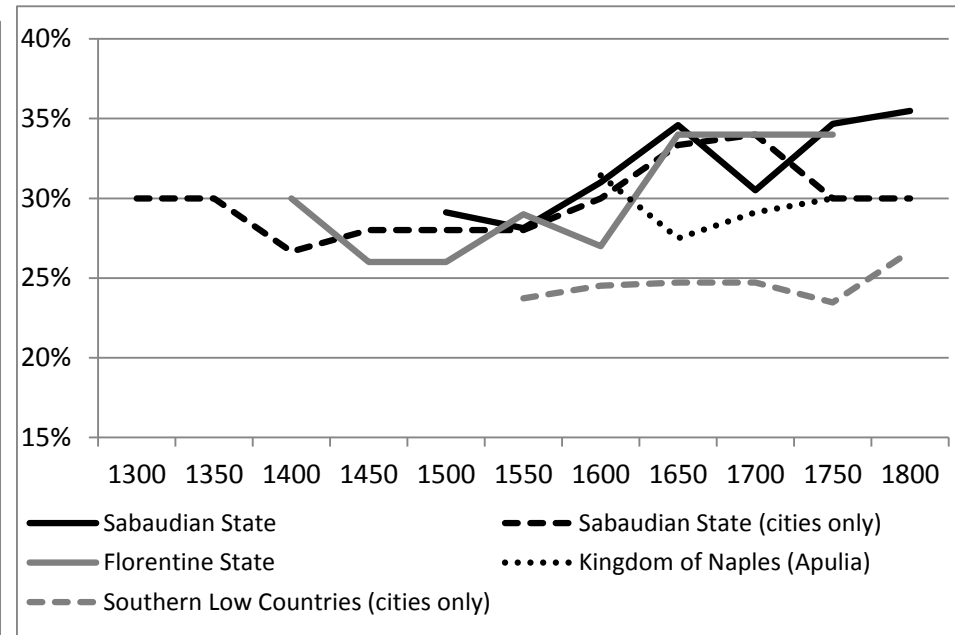
# Other fields of enquiry: the prevalence of the rich in Europe, 1300-1800



Richness line = 1000% of median

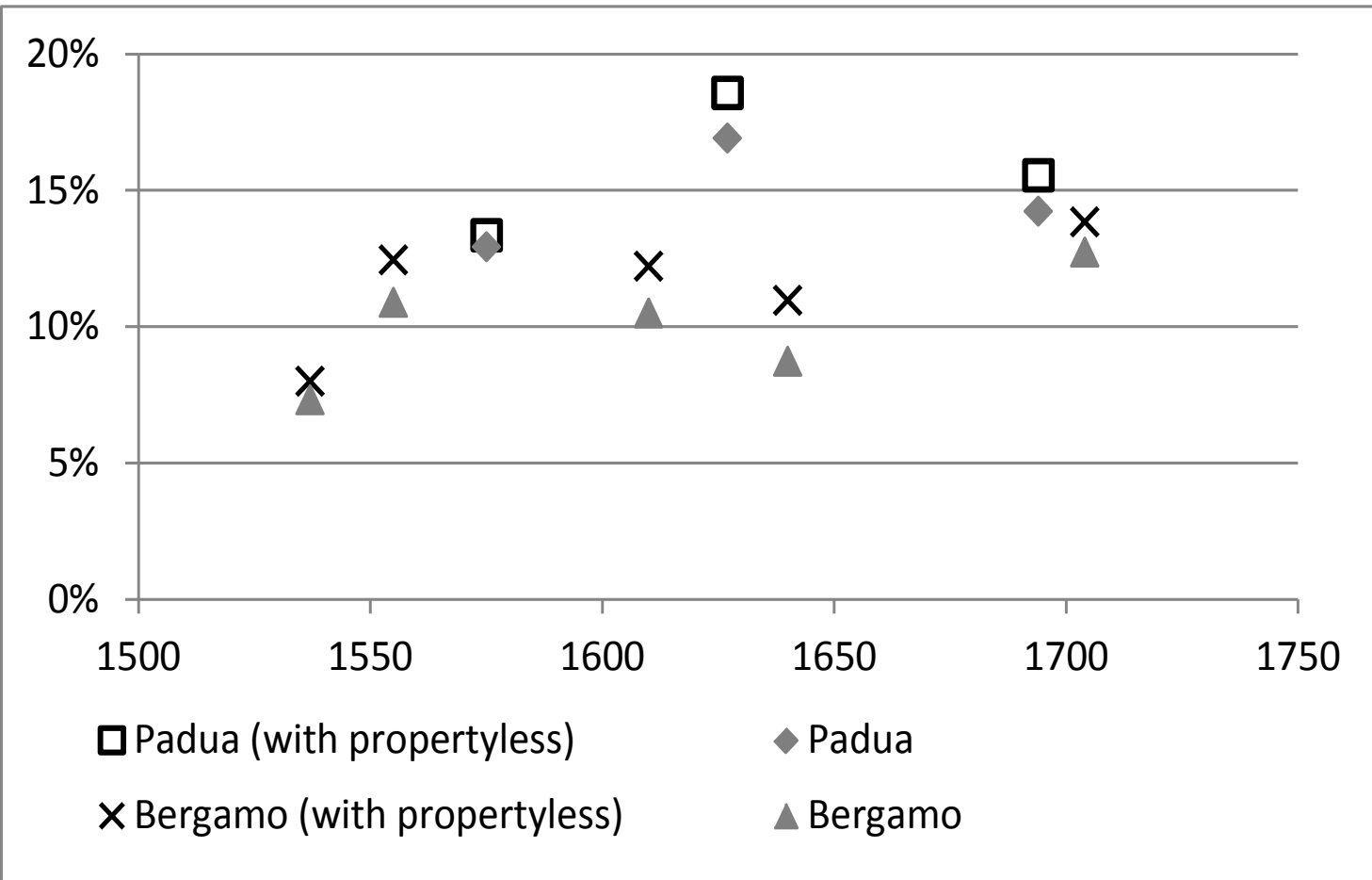
$$R^{HC}(\mathbf{x}) = \frac{1}{n} \sum_{i=1}^n 1_{x_i > \rho} = \frac{r}{n}$$

Source: G. Alfani, "The rich in historical perspective. Evidence for preindustrial Europe (ca. 1300-1800)". IGIER Working Paper – coming soon...



Richness line = 200% of median

# (notice the robustness of these measures to distortions caused by truncated distributions)

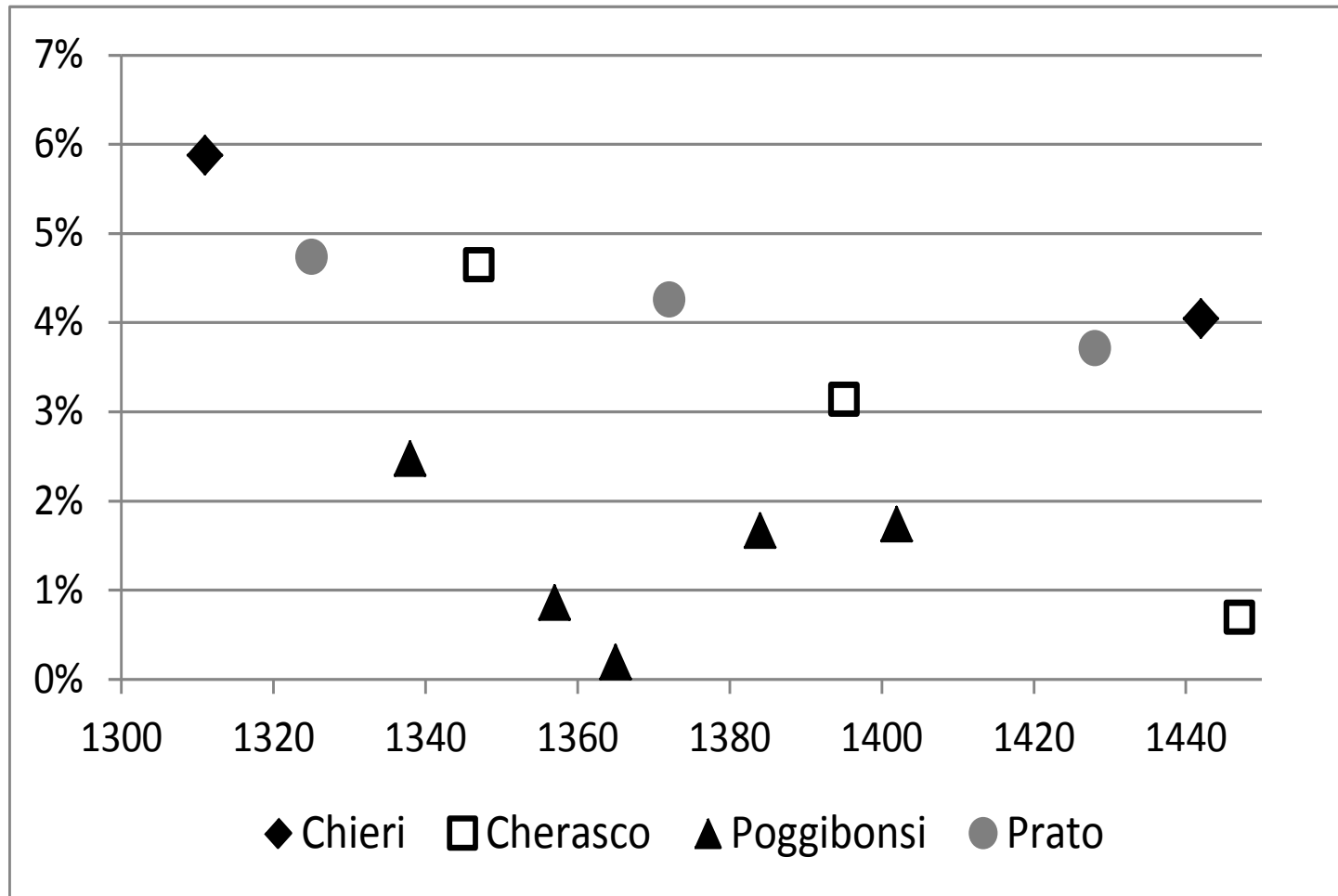


Prevalence of the rich, with and without the propertyless

(Padua and Bergamo, 1500-1750. Richness line = 1000% of median value)

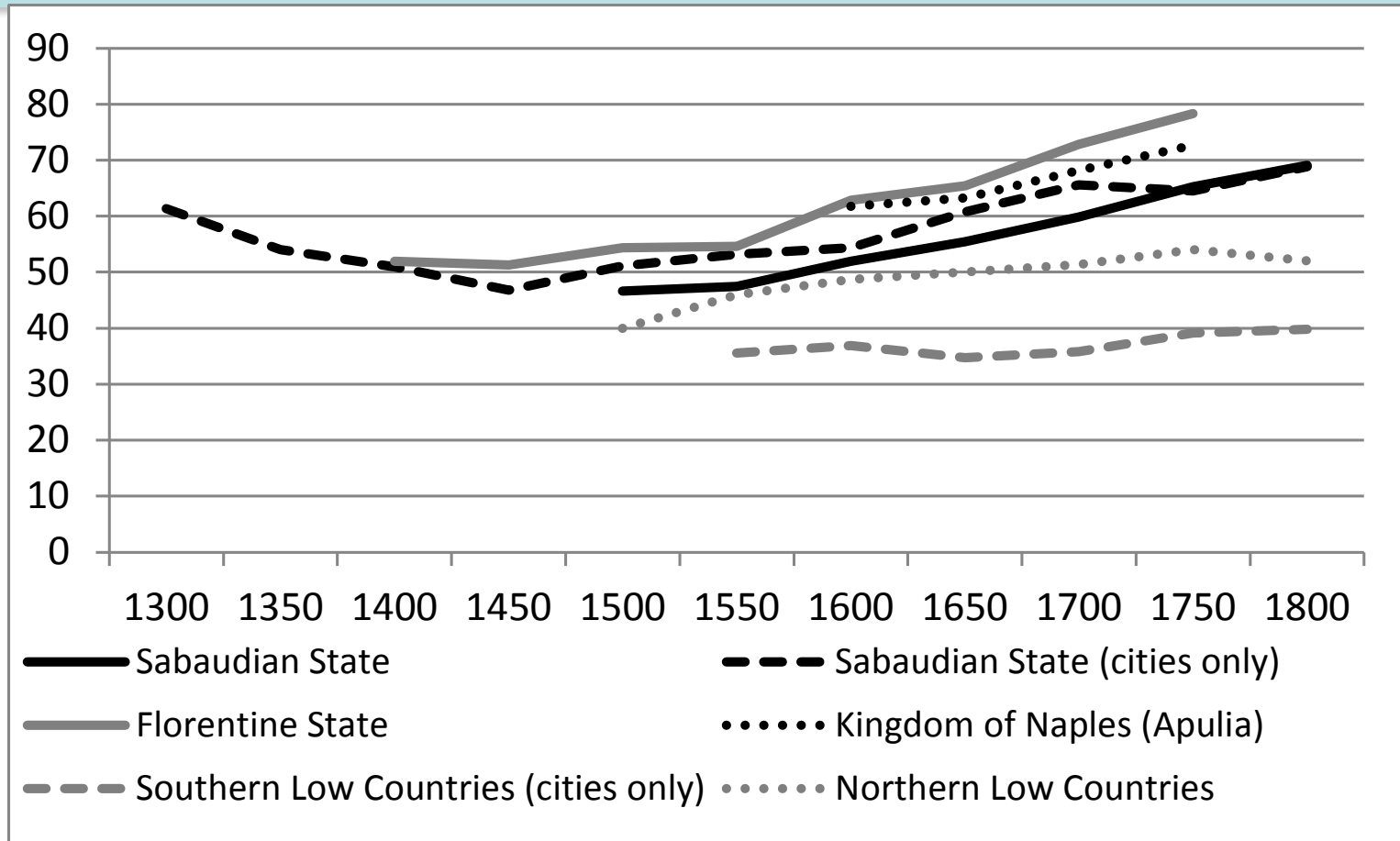
Source: G. Alfani, "The rich in historical perspective. Evidence for preindustrial Europe (ca. 1300-1800)". IGIER Working Paper 2016

# The impact of the Black Death (Sabaudian State and Florentine State. Richness line =1000% of median)



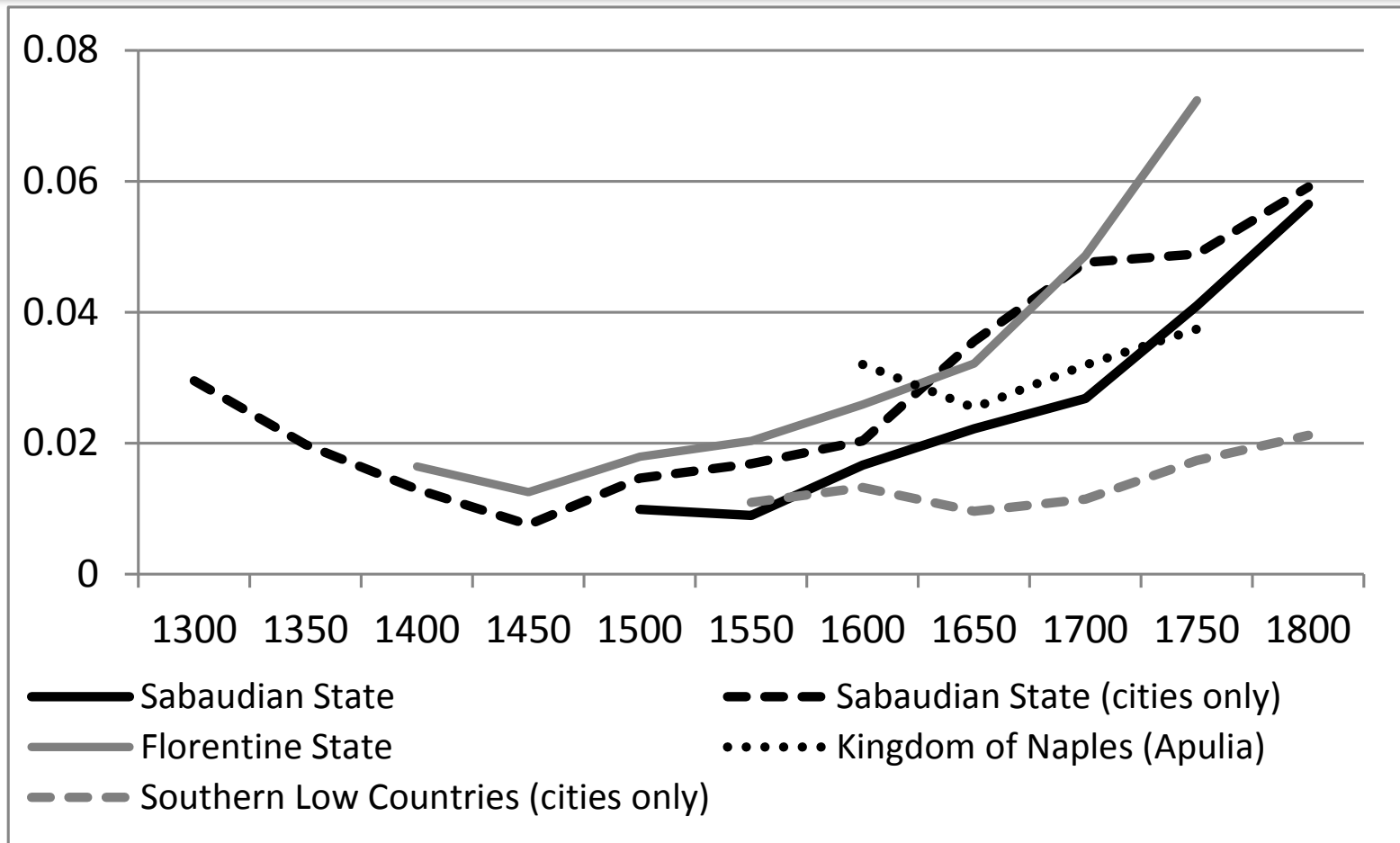
Source: G. Alfani, "The rich in historical perspective. Evidence for preindustrial Europe (ca. 1300-1800)". IGIER Working Paper 2016

# The share of the top 10%



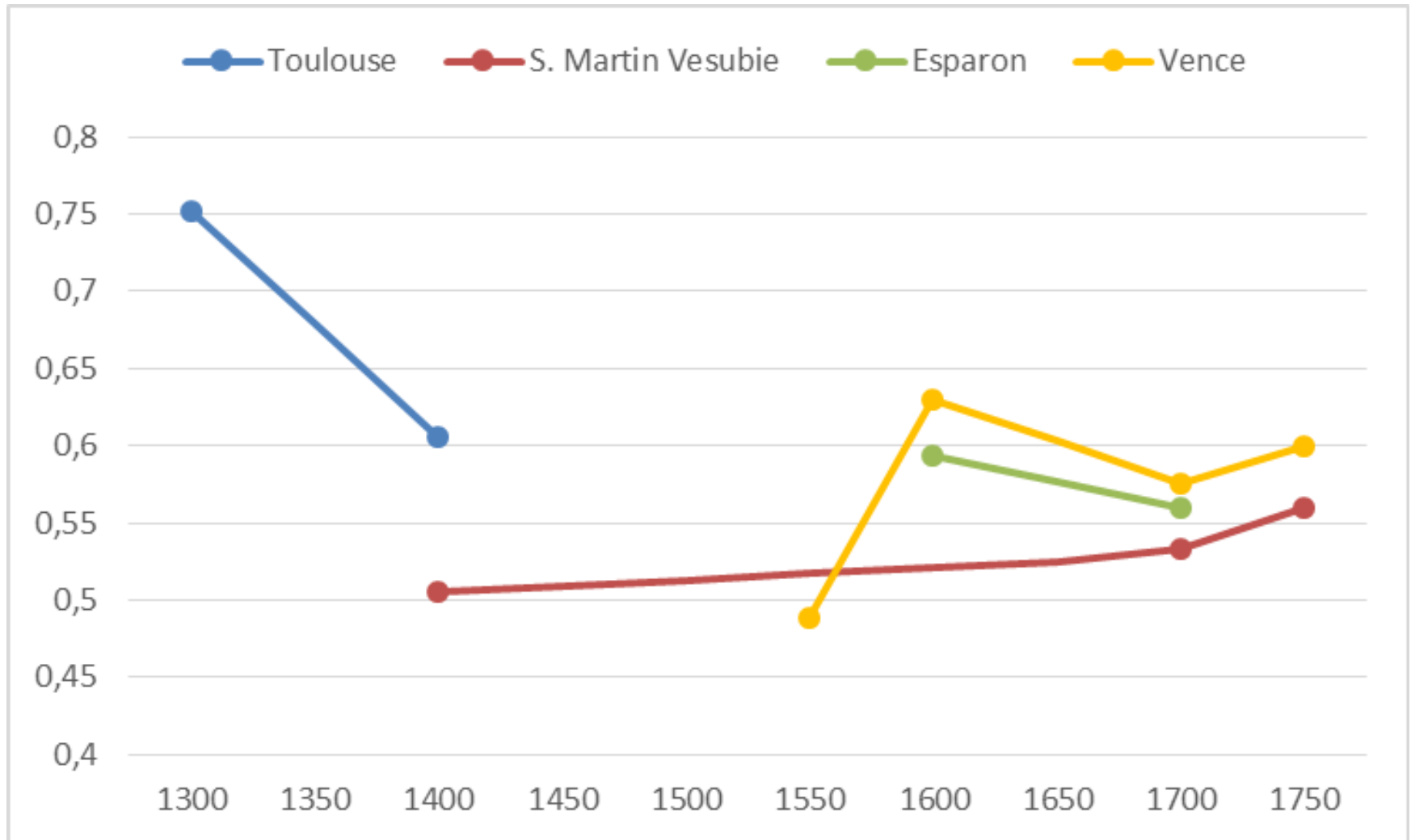
In Italy, where the figures refer to wealth (in the Low Countries they refer to income), for 1800 we found shares of the top 10% very close to those proposed by Piketty (2014) for Europe in 1810: about 80%

# «Richness» indexes ( $\beta=1$ , richness line = 1000% of median)



$$R_{\beta}^{Cha}(\mathbf{x}, \rho) = \frac{1}{n} \sum_{i=1}^n \left( 1 - \left( \frac{\rho}{x_i} \right)^{\beta} \right)_{+}, \quad \beta > 0$$

# Provisional data for southern France (Ginis)

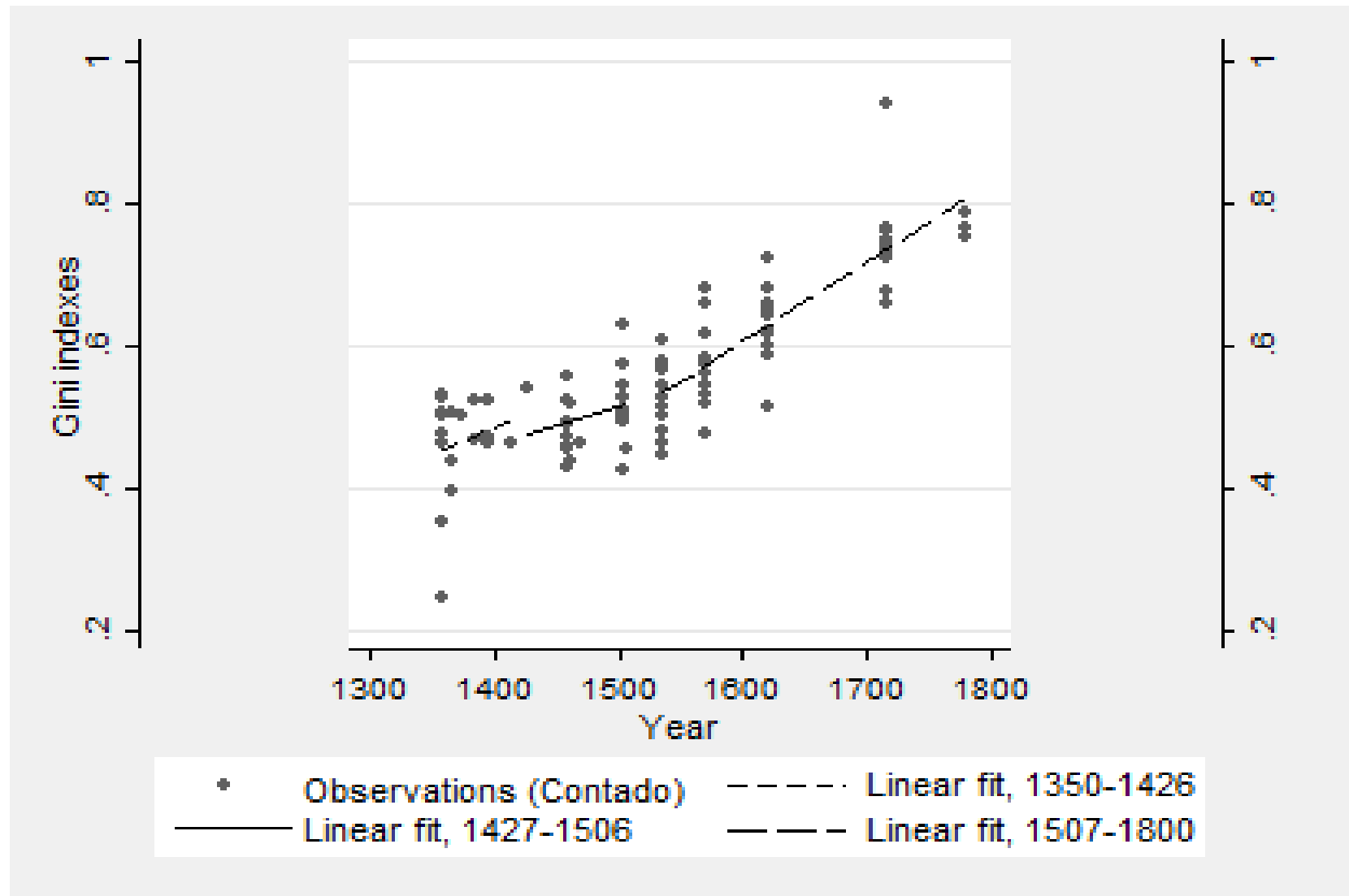




Thanks for your attention!



# The trend is not “created” by the sources: Chow Test



# A limitation of the Tuscan (and generally, the Italian) data: part of the poor (the property-less) is not included

## % Propertyless in the Florentine State

Community	Year			
	1350	1450	1500	1550
Florentine Contado (overall)		33.1%	30.6%	
Prato	37.6%	17.9%	32.2%	
Arezzo				50.1%

# Solving weighting issues: Tuscan urbanization rates (cities > 5,000)



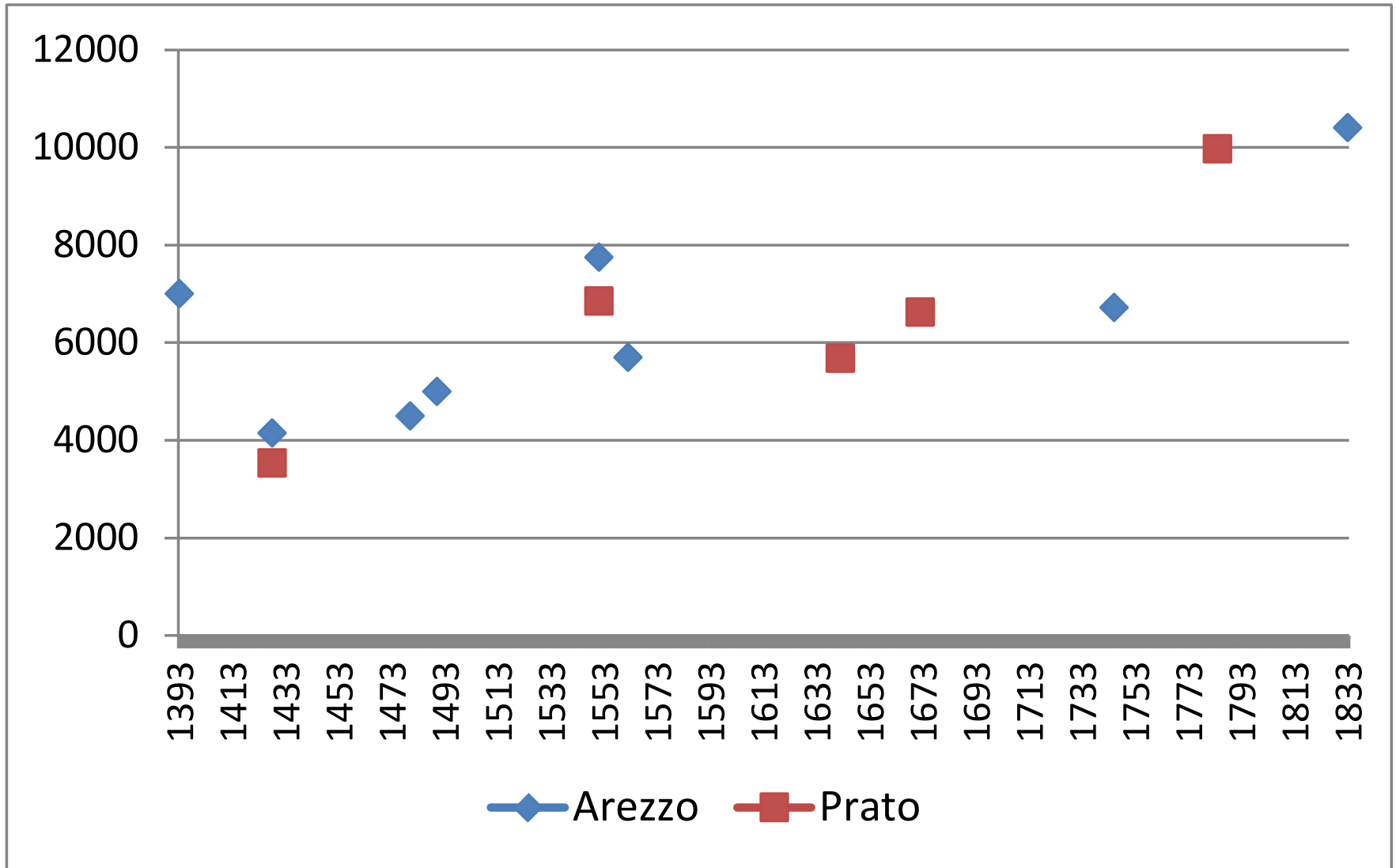
Source: Breschi and Malanima 2002

# Weighting issue n.1: urban-rural wealth ratio

## Average household wealth in the Florentine State (1427)

	Hearths	Average net taxable wealth per hearth
Florence	9821	777
Arezzo	1189	208.3
Prato	951	157.2
<i>contado</i> (excluding Prato)	25615	52.6
Florentine State (overall)	59770	197.3

# Population of Prato and Arezzo, 1393-1833



# Rural/Urban average wealth ratio in the Florentine State, 1450-1750

