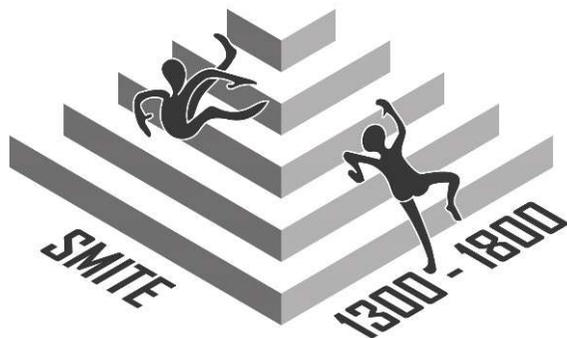


# Joint Vienna Institute

## *Pandemics & Inequality.*

*From the Black Death to the Spanish Flu (and beyond)*

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*Guido Alfani*

Dondena Centre and IGIER,  
Bocconi University  
Stone Center on Socio-Economic  
Inequality, New York  
CEPR

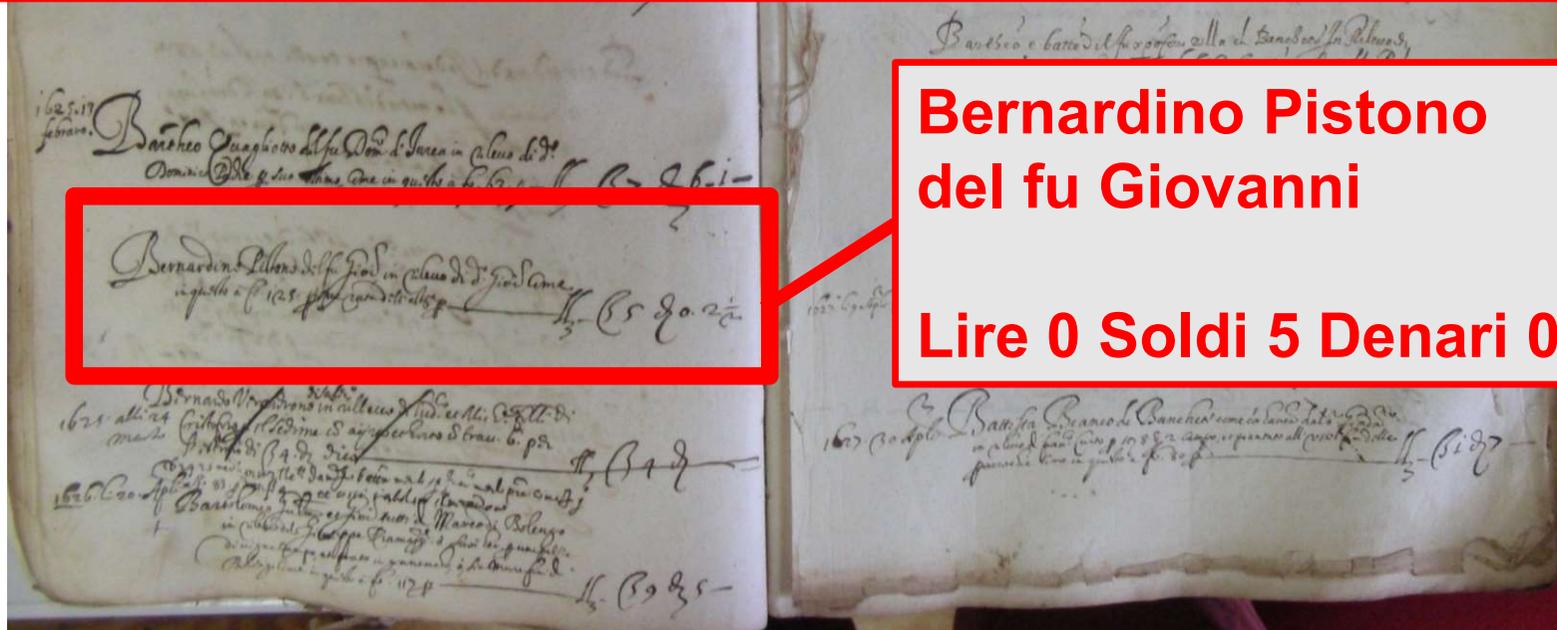
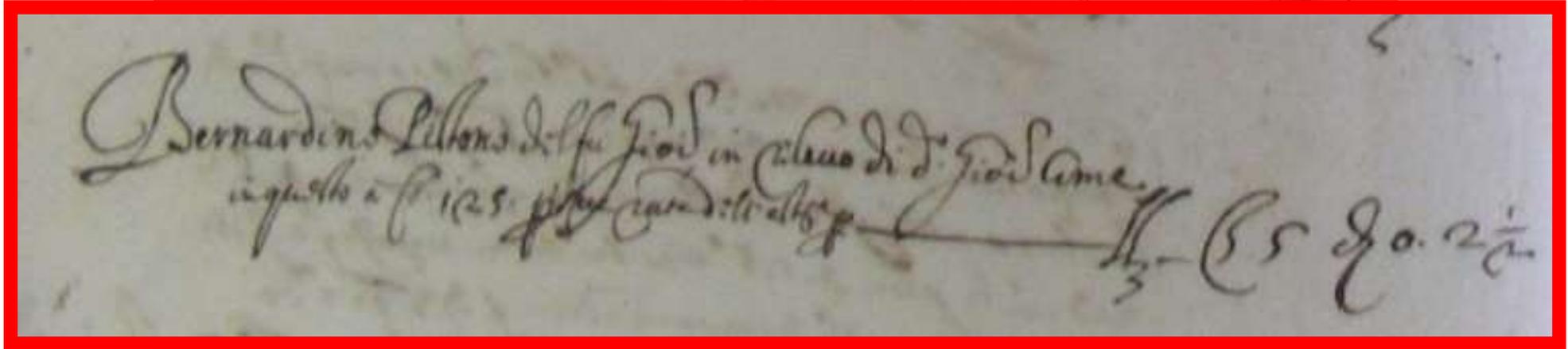
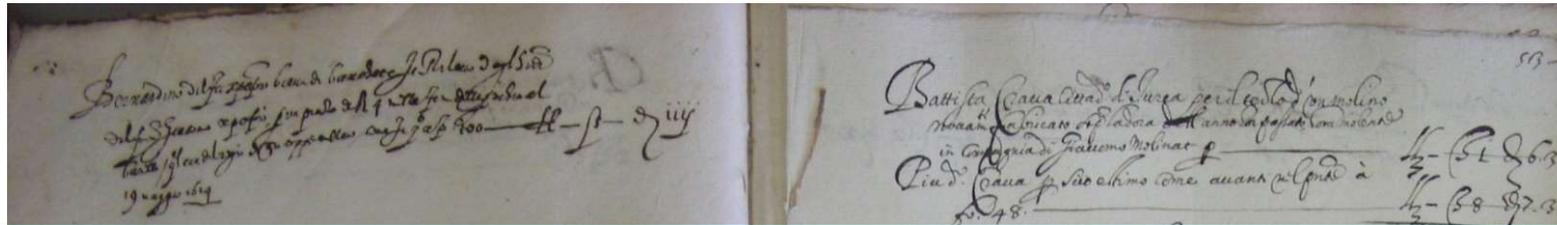
23 November 2021

# The story so far

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- Up until recently, we had very little information about long-term trends in economic inequality in preindustrial Europe. The notable exception was Van Zanden (1995) on Holland in the Low Countries
- Something more could be glimpsed from macro-level indicators, like real wages and land rents (for ex. Álvarez Nogal and Prados de la Escosura 2013)
- The situation has now changed entirely, and for many European regions we have time series of (mostly wealth) inequality covering the early modern period and part of the Middle Ages
- Most of the new data which has become available is the result of a project funded by the ERC (Starting Research Grant program): **EINITE – Economic Inequality across Italy and Europe, 1300-1800** ([www.dondena.unibocconi.it/EINITE](http://www.dondena.unibocconi.it/EINITE))
- The availability of these new data allows us to look in deeper and different ways at **the distributive consequences of major epidemics and pandemics**, including for the most disadvantaged sectors of society (**the poor**).

A reminder: much of the new data was collected directly from archival sources, usually (for wealth inequality) property tax records like the Italian *estimi*.



**Bernardino Pistono  
del fu Giovanni  
Lire 0 Soldi 5 Denari 0**

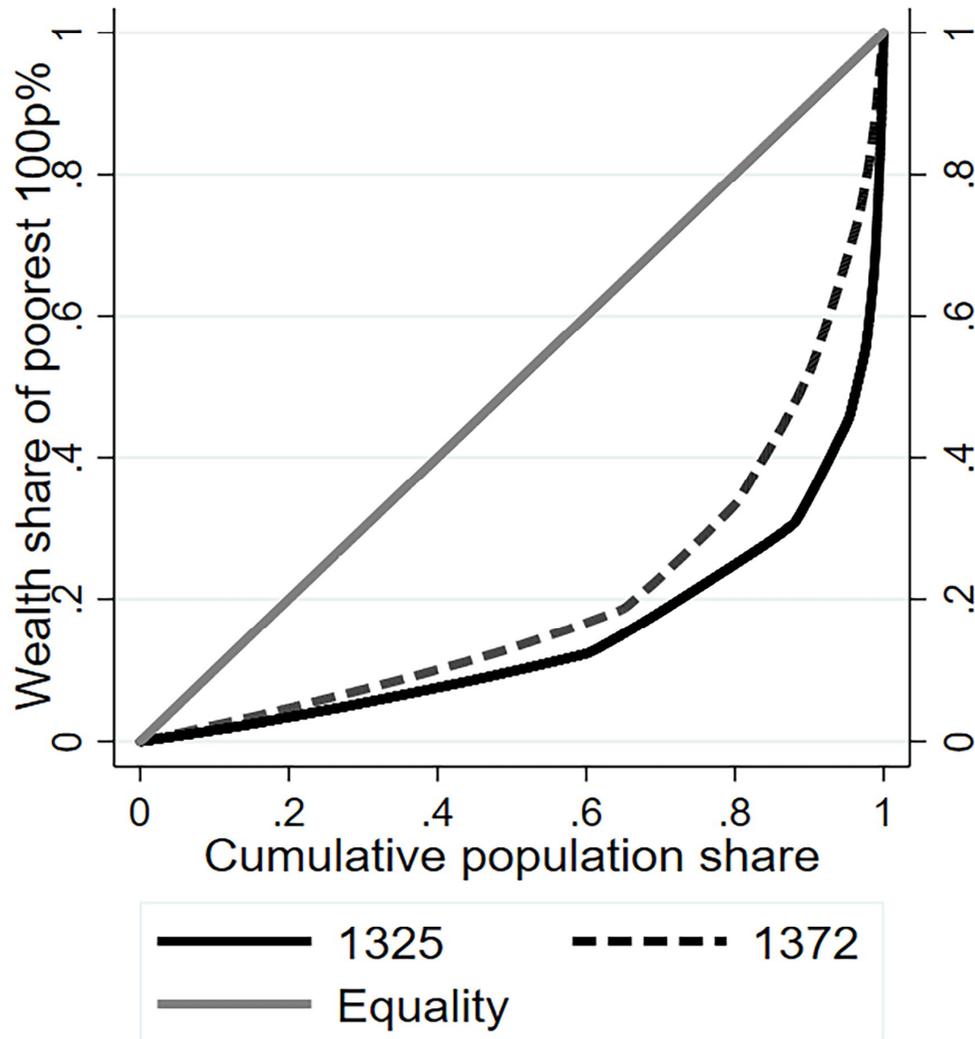
# An overview of inequality in the long run: the share of wealth of the top 10% in Europe, 1300-2010 (but the devil is in the detail...)



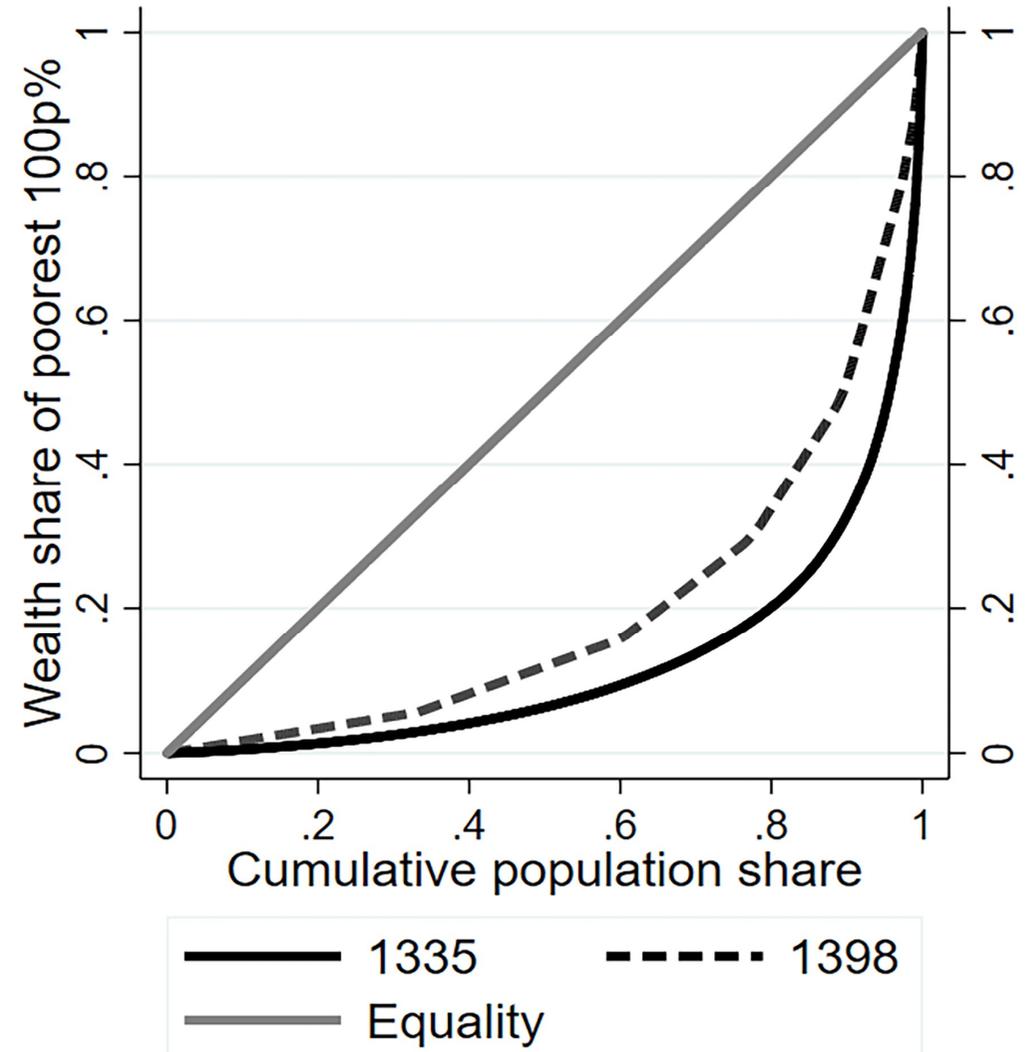
Source: Alfani, "Economic inequality in preindustrial times: Europe and beyond", *Journal of Economic Literature*, 59(1), 2021.

# The Black Death of 1347-52 *did* cause significant «egalitarian» redistribution, in Tuscany, south France and elsewhere

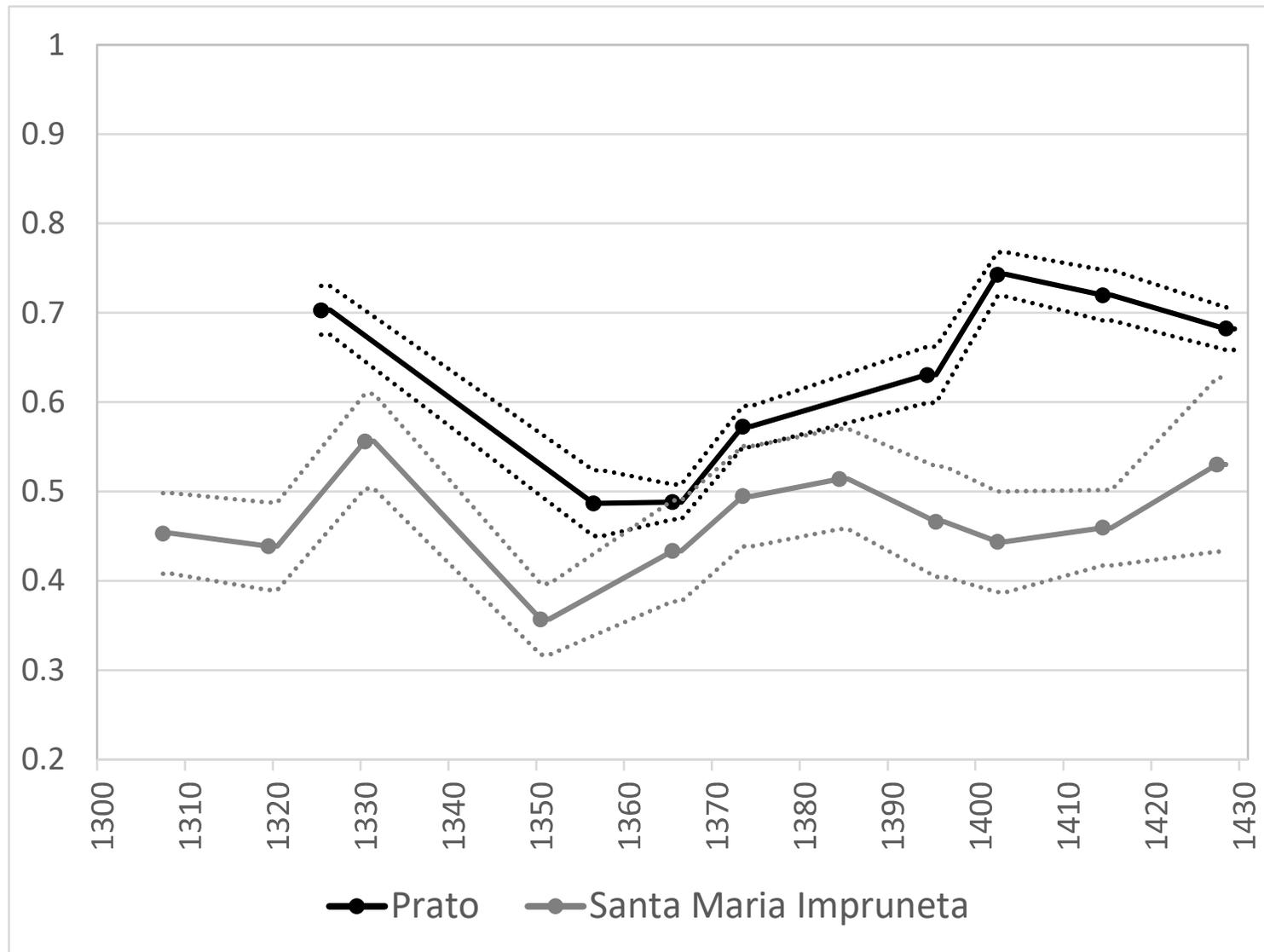
## Prato



## Toulouse

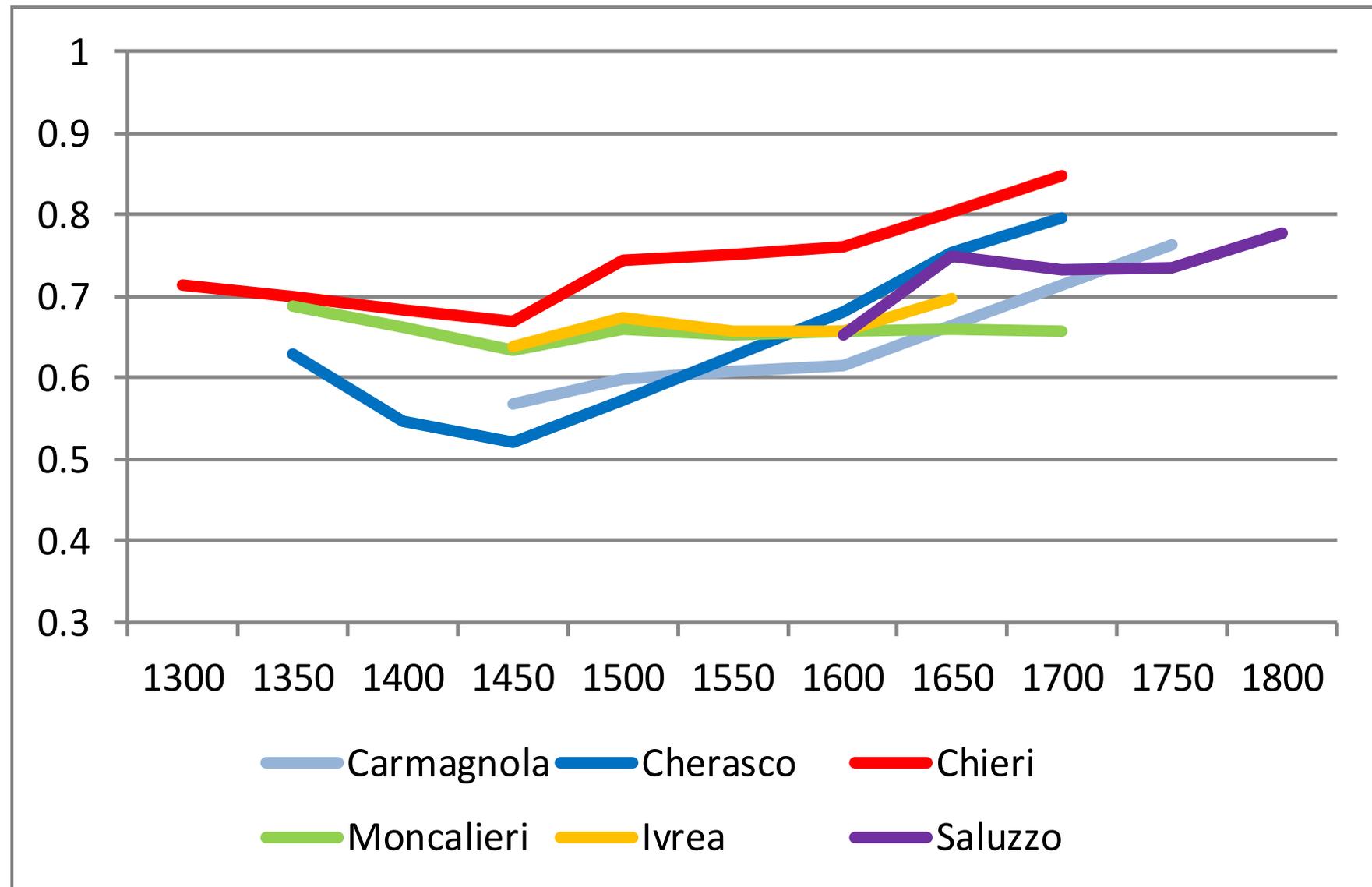


# Wealth distribution in medieval Tuscany, ca. 1300-1430 (Gini indexes with 95% confidence intervals)



Source: Alfani, “Epidemics, inequality and poverty in preindustrial and early industrial times”, *Journal of Economic Literature*, forthcoming

# The case of Piedmont, northwestern Italy. (wealth inequality, Gini indexes. Propertyless excluded)

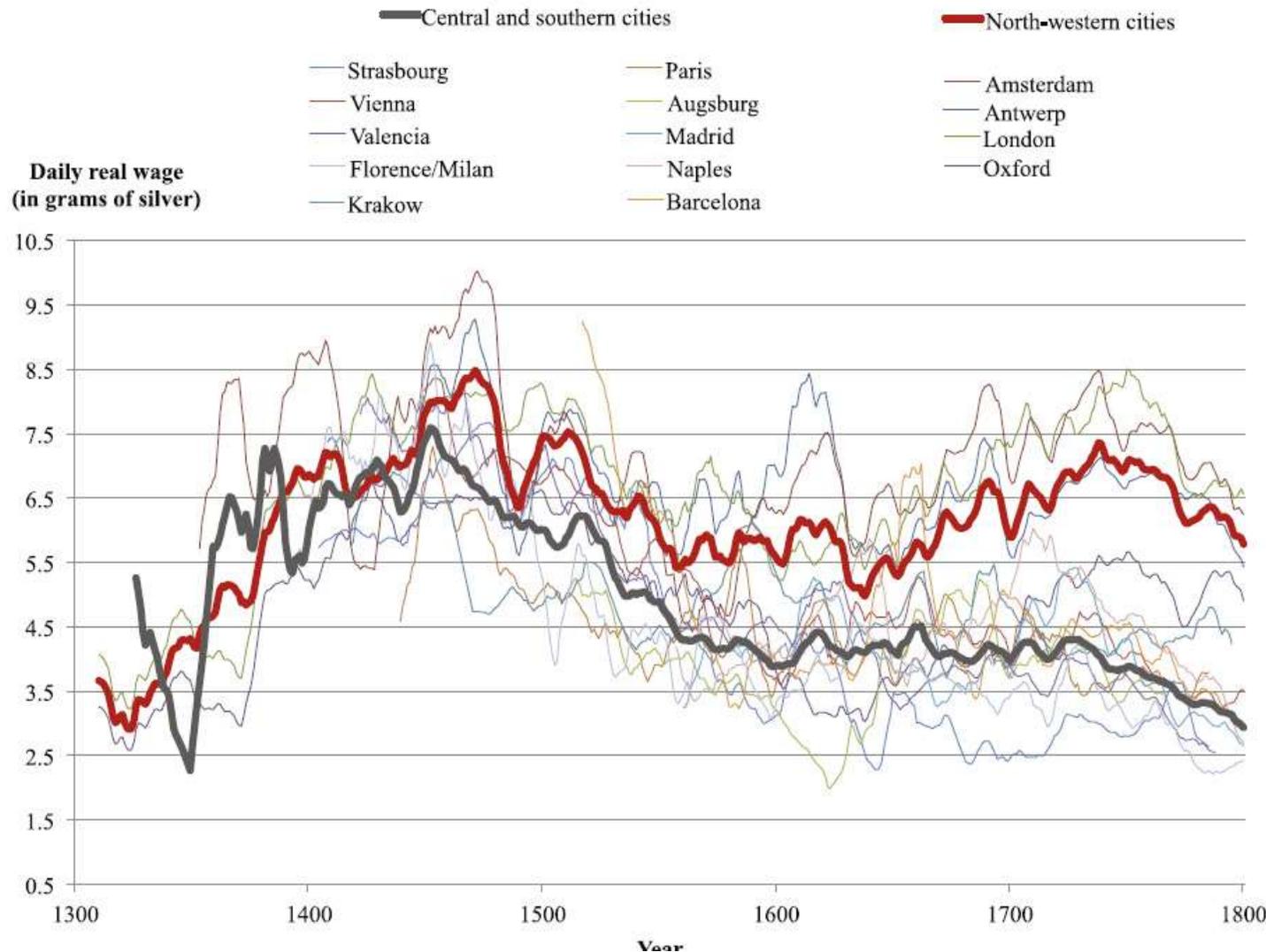


Source: Alfani, "Economic inequality in northwestern Italy: A long-term view (fourteenth to eighteenth centuries)", *Journal of Economic History*, 2015

# Evidence about real wages etc. supports the view that the Black Death led to a decline in income inequality as well

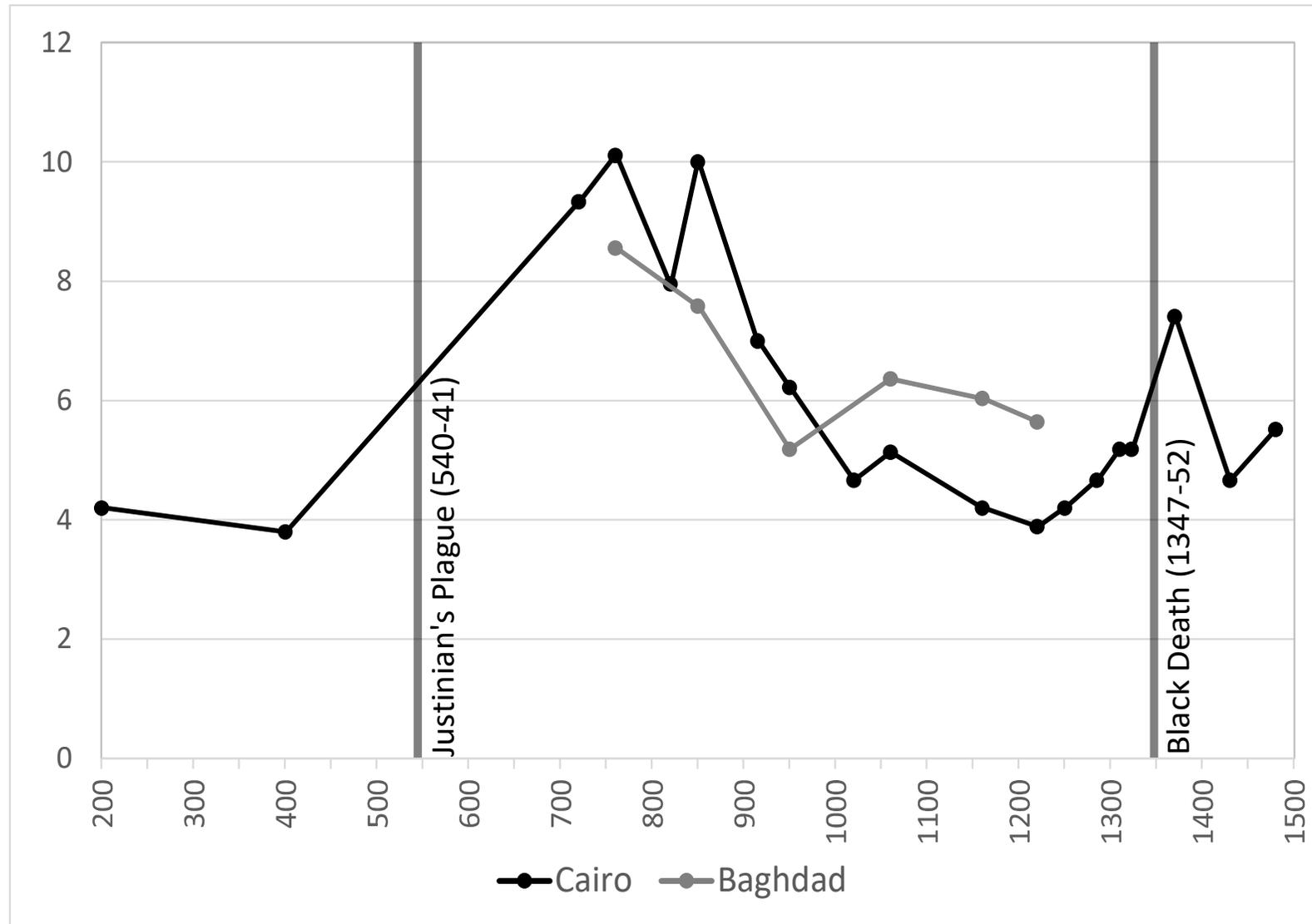
M. Fochesato

Explorations in Economic History 70 (2018) 91–131



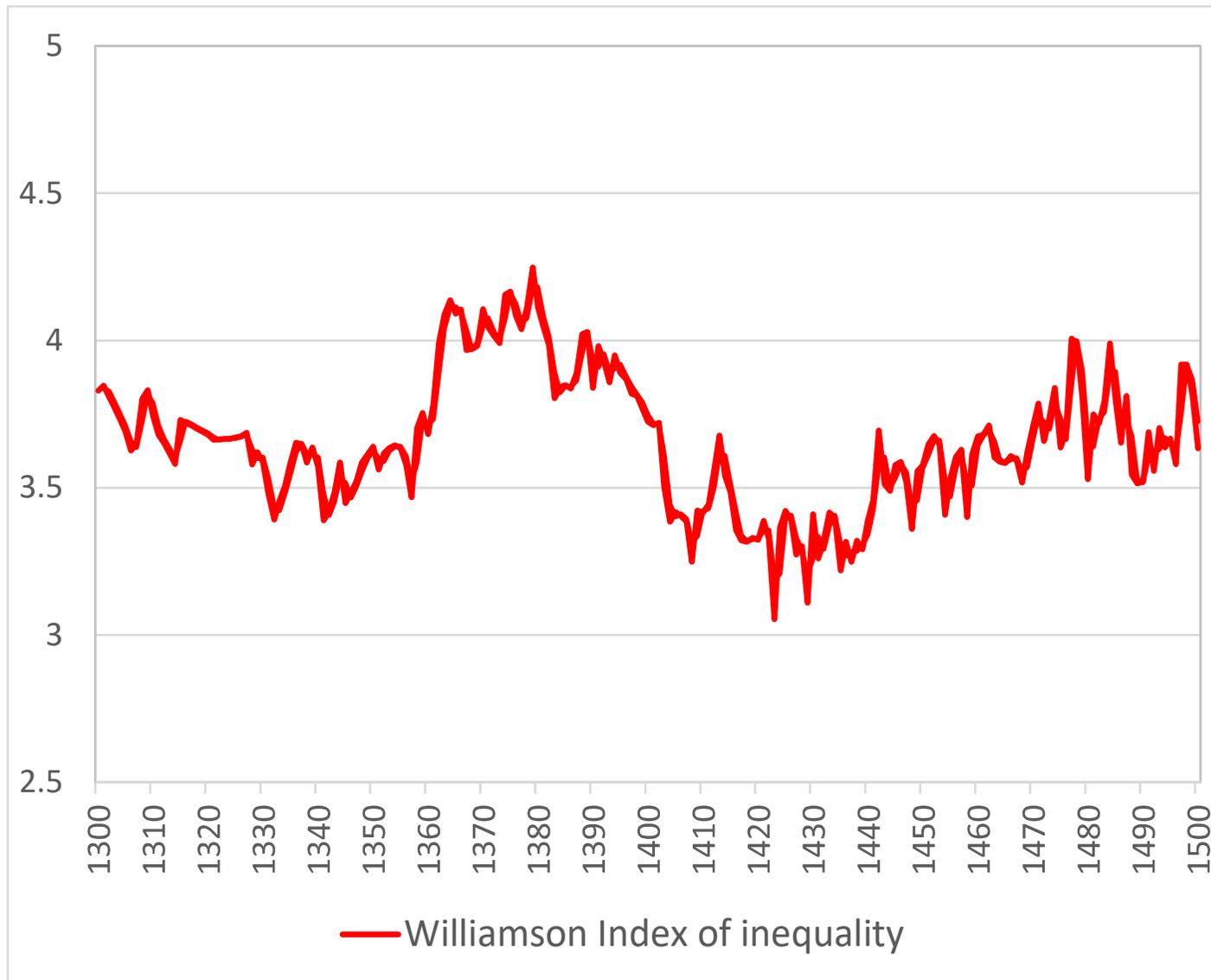
Source: M. Fochesato (2018), "Origins of Europe's North-South Divide: Population changes, real wages and the 'Little Divergence' in Early Modern Europe", *Explorations in Economic History*

# Increase in real wages after the Black Death did not involve Europe only but took place across the broader Mediterranean area as well. The same might have happened after Justinian's Plague (540-41 CE)



Source: Alfani, "Epidemics, inequality and poverty in preindustrial and early industrial times", *Journal of Economic Literature*, forthcoming (based on data from Pamuk and Schatzmiller 2016)

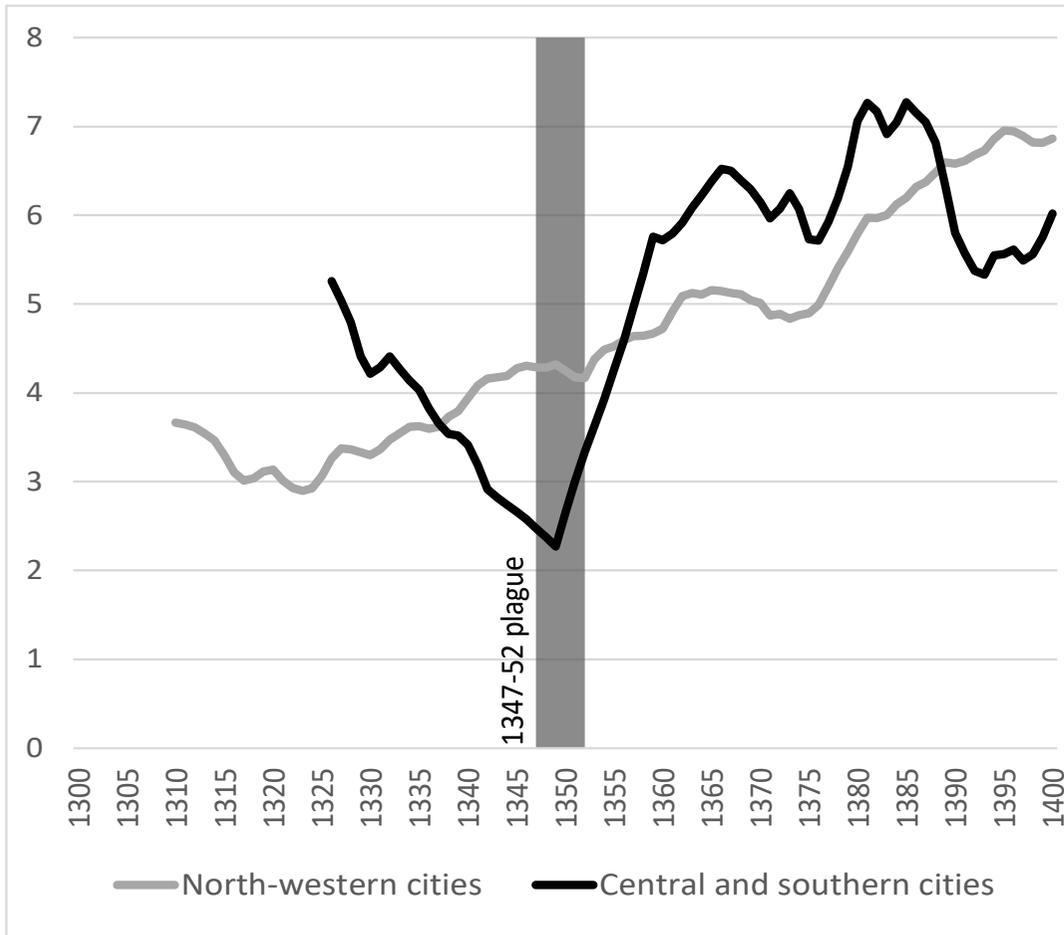
# Local context matters: income inequality in Spain, 1300-1500 (Williamson Index of inequality, nominal values in logs)



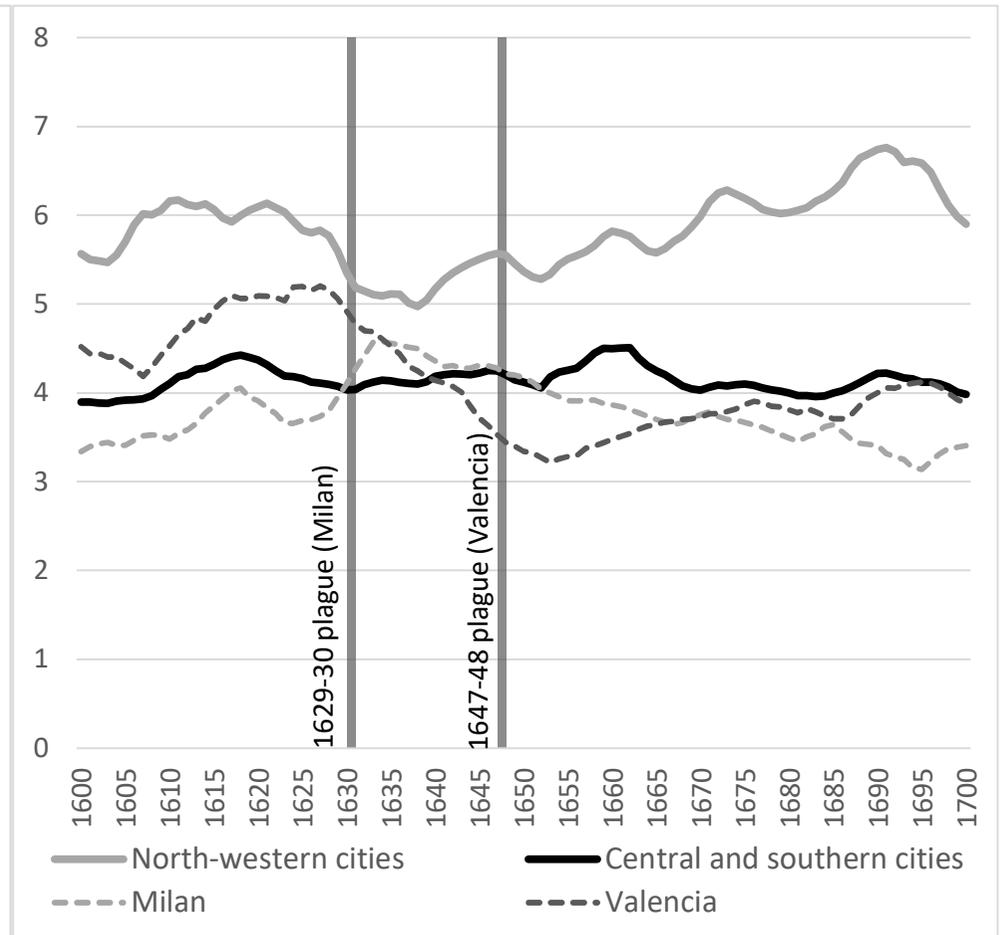
Source: Alfani, “Epidemics, inequality and poverty in preindustrial and early industrial times”, *Journal of Economic Literature*, forthcoming (the graph is based on data from Prados de la Escosura, Álvarez-Nogal and Santiago-Caballero 2020).

More importantly, the inequality reduction observed after the Black Death *did not* take place after the terrible seventeenth-century plagues. This is suggested by the (somewhat indirect) evidence for income inequality...

### A. Real wages and the Black Death

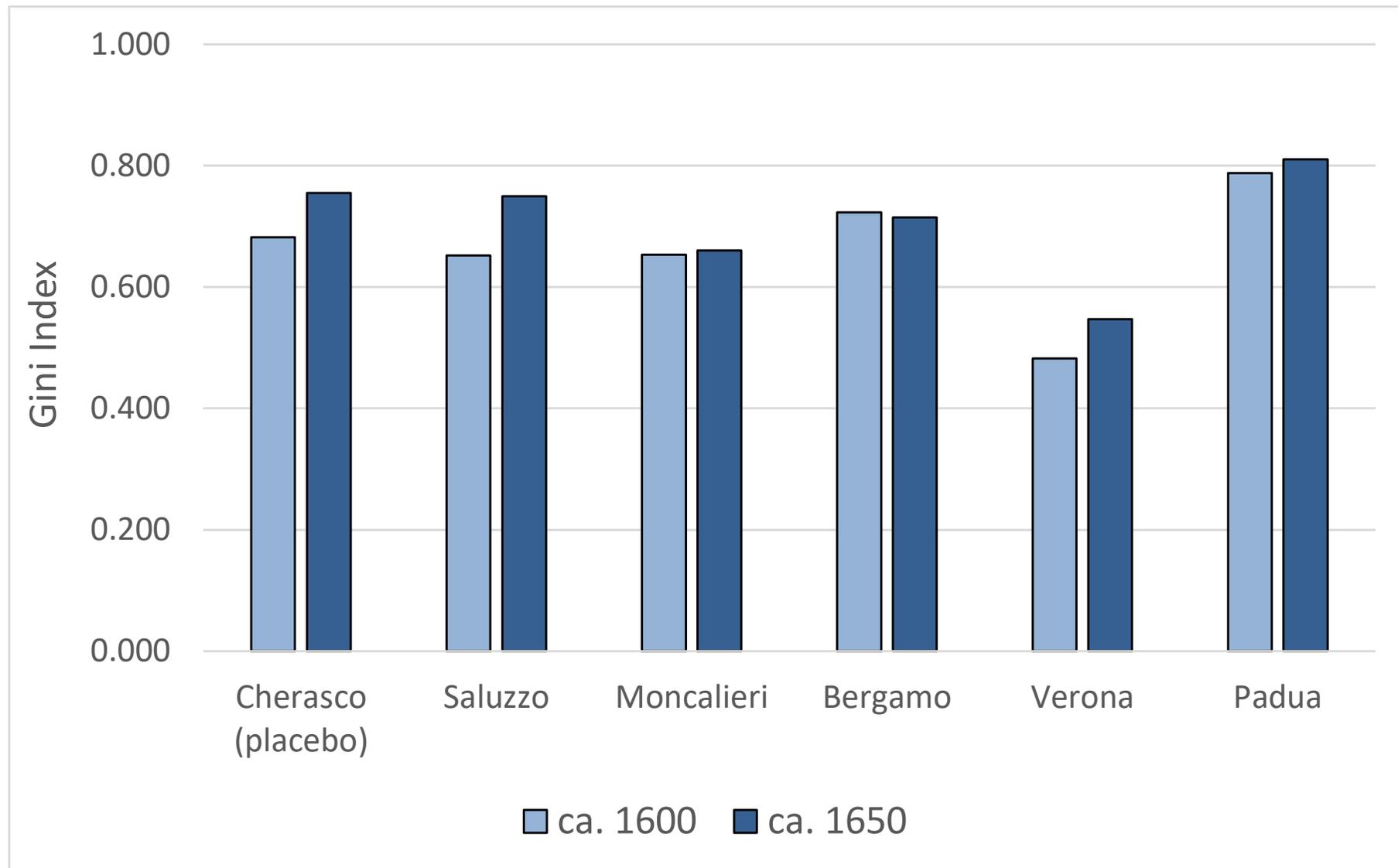


### B. Real wages and the plagues of the 17th C.



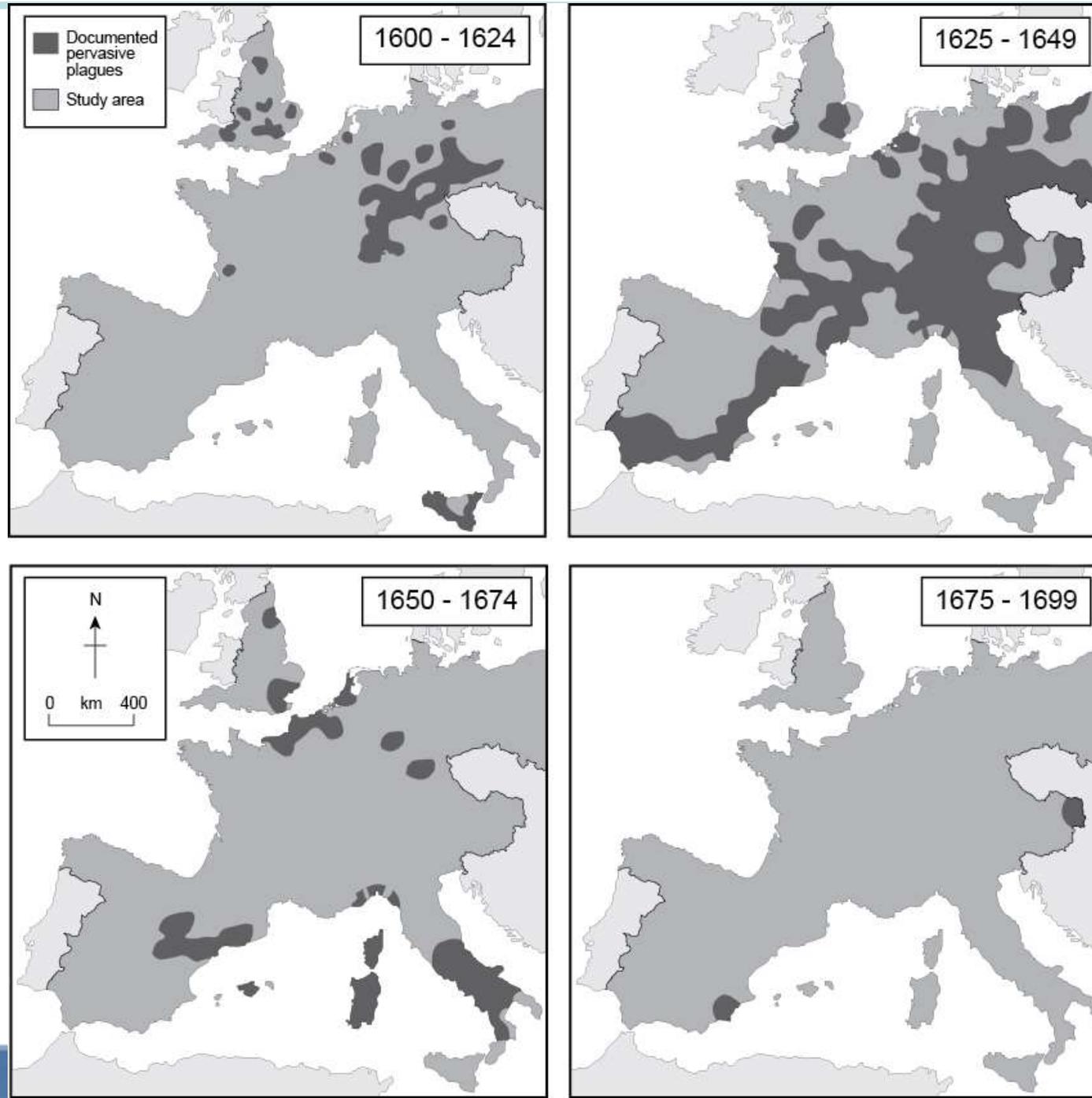
Source: Alfani, “Epidemics, inequality and poverty in preindustrial and early industrial times”, *Journal of Economic Literature*, forthcoming

# ... and for wealth inequality as well (cities of northwestern Italy – Piedmont, Gini indexes of wealth concentration)



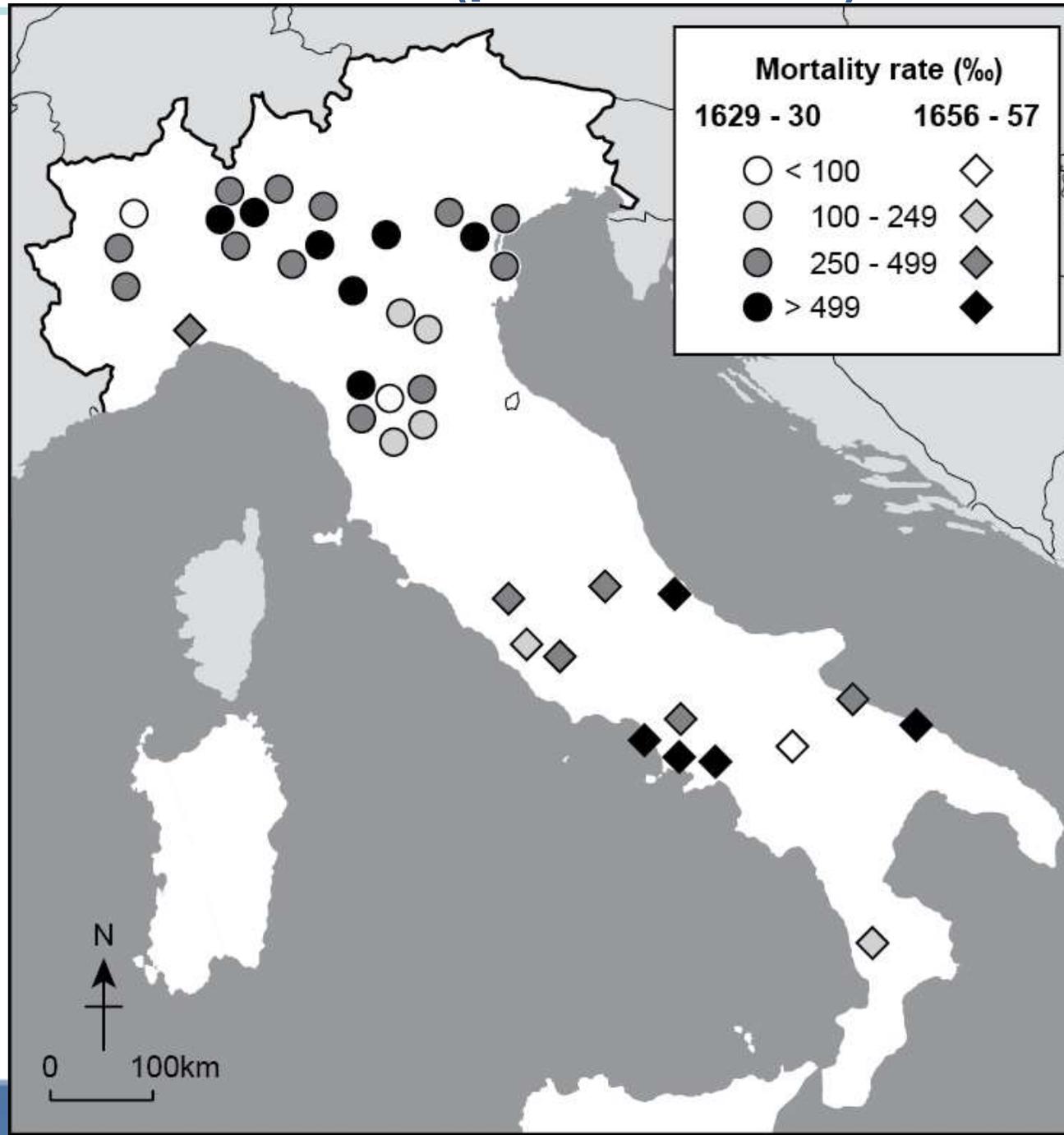
Source: Alfani, “Epidemics, inequality and poverty in preindustrial and early industrial times”, *Journal of Economic Literature*, forthcoming

# Plague in Western Europe, 1600-1699



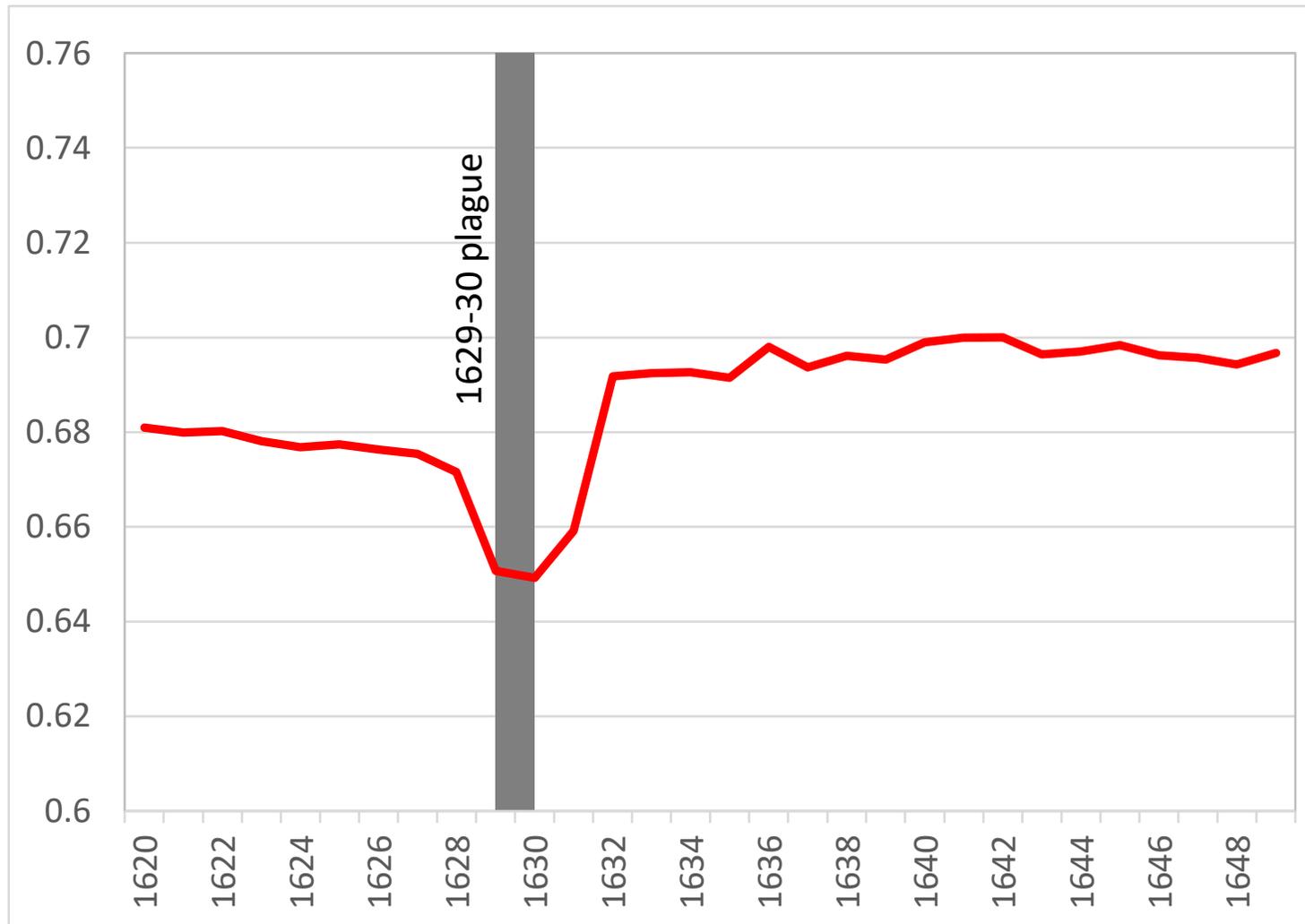
Source: Alfani,  
'Plague in  
seventeenth  
century  
Europe and  
the decline of  
Italy', EREH  
2013

# Urban mortality rates during the plagues of 1629-30 and 1656-57 (per thousand)



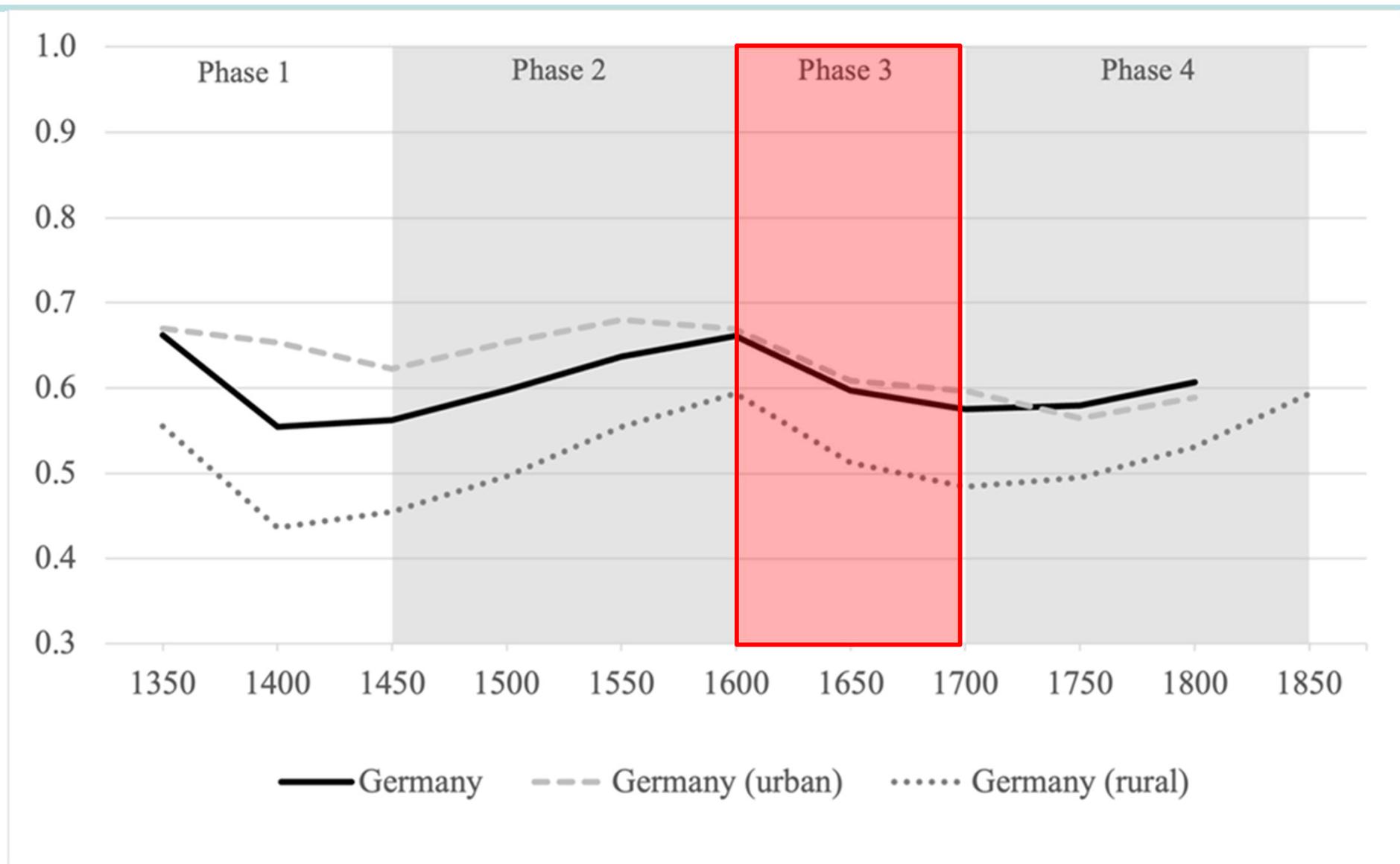
Source: Alfani,  
'Plague in  
seventeenth  
century  
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2013

# To be precise, the seventeenth-century plagues did lead to inequality reduction, but this was limited and very short-lived, hence in most instances unobservable (based on the surviving sources)



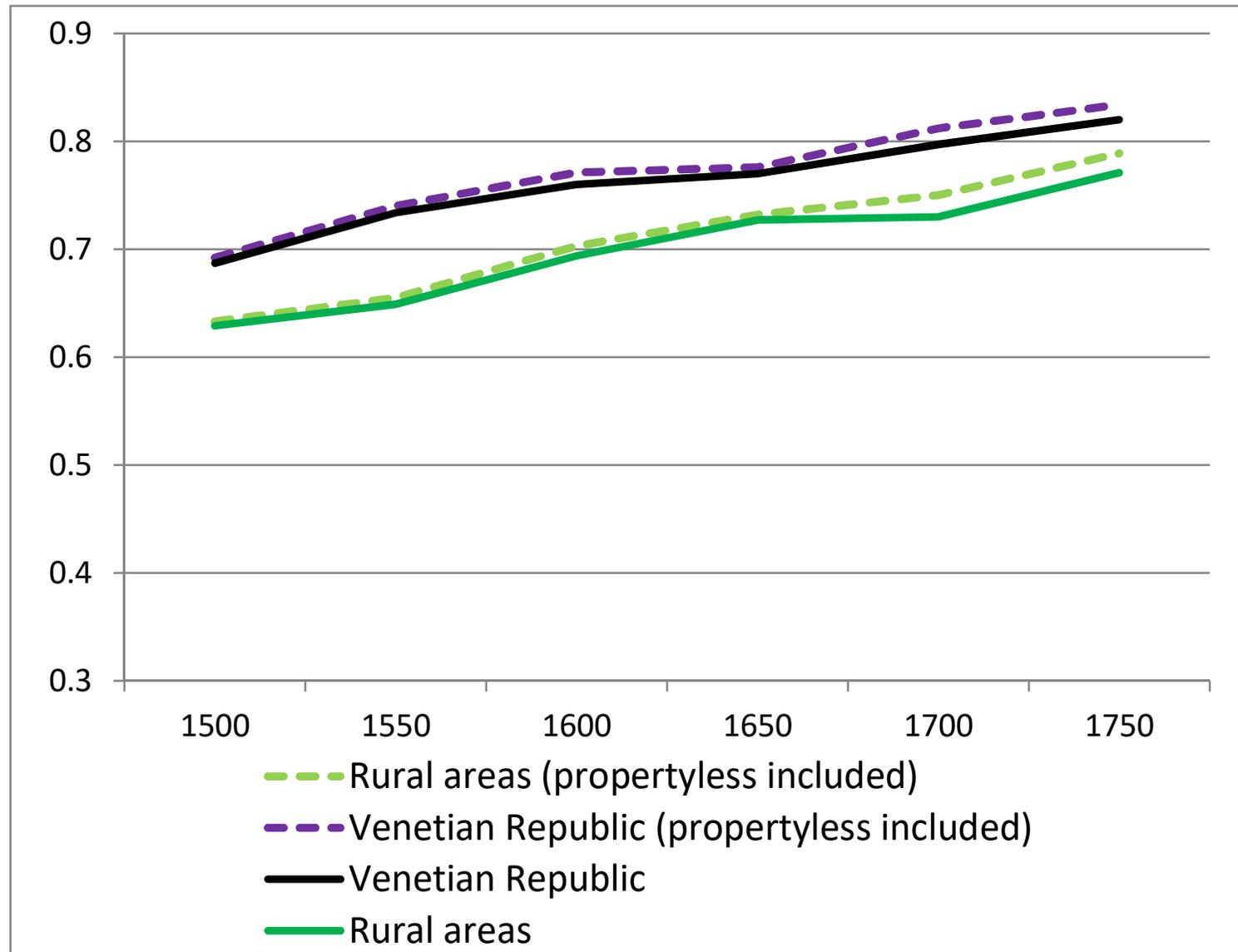
Thanks to the local availability of exceptional archival sources, the city of Ivrea (northern Italy) is currently the only place for which we have yearly observations of wealth inequality across the terrible plague of 1630

# A (partial) exception: the German area, where the effects of the 17th C. plague added up to those of the Thirty Years' War



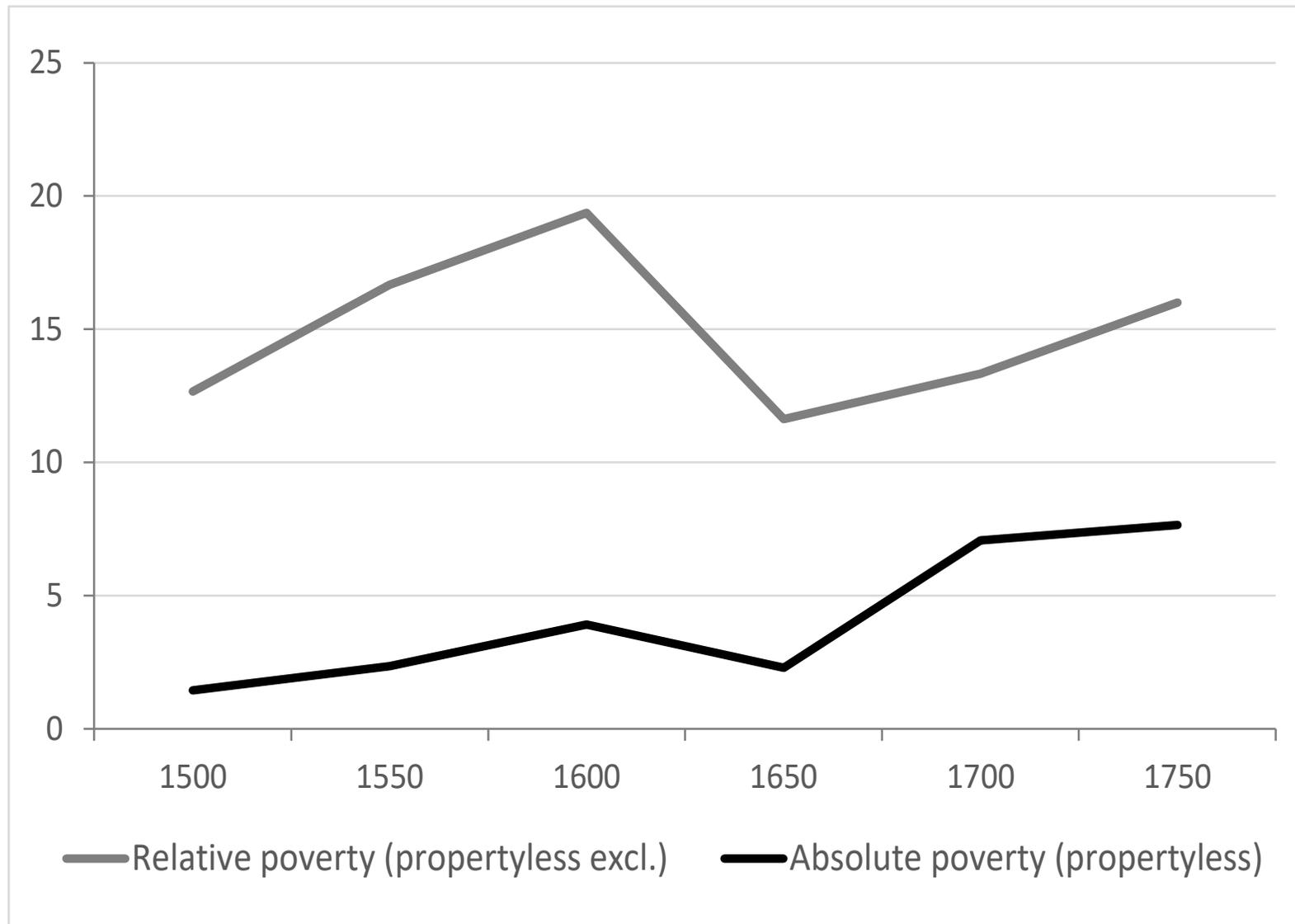
Source: Alfani, Gierok and Schaff, “Economic inequality in preindustrial Germany, ca. 1300–1850”, *Journal of Economic History*, 2022, forthcoming

# A closely related problem: what happened to the poor? Let's begin with some evidence from the Republic of Venice...



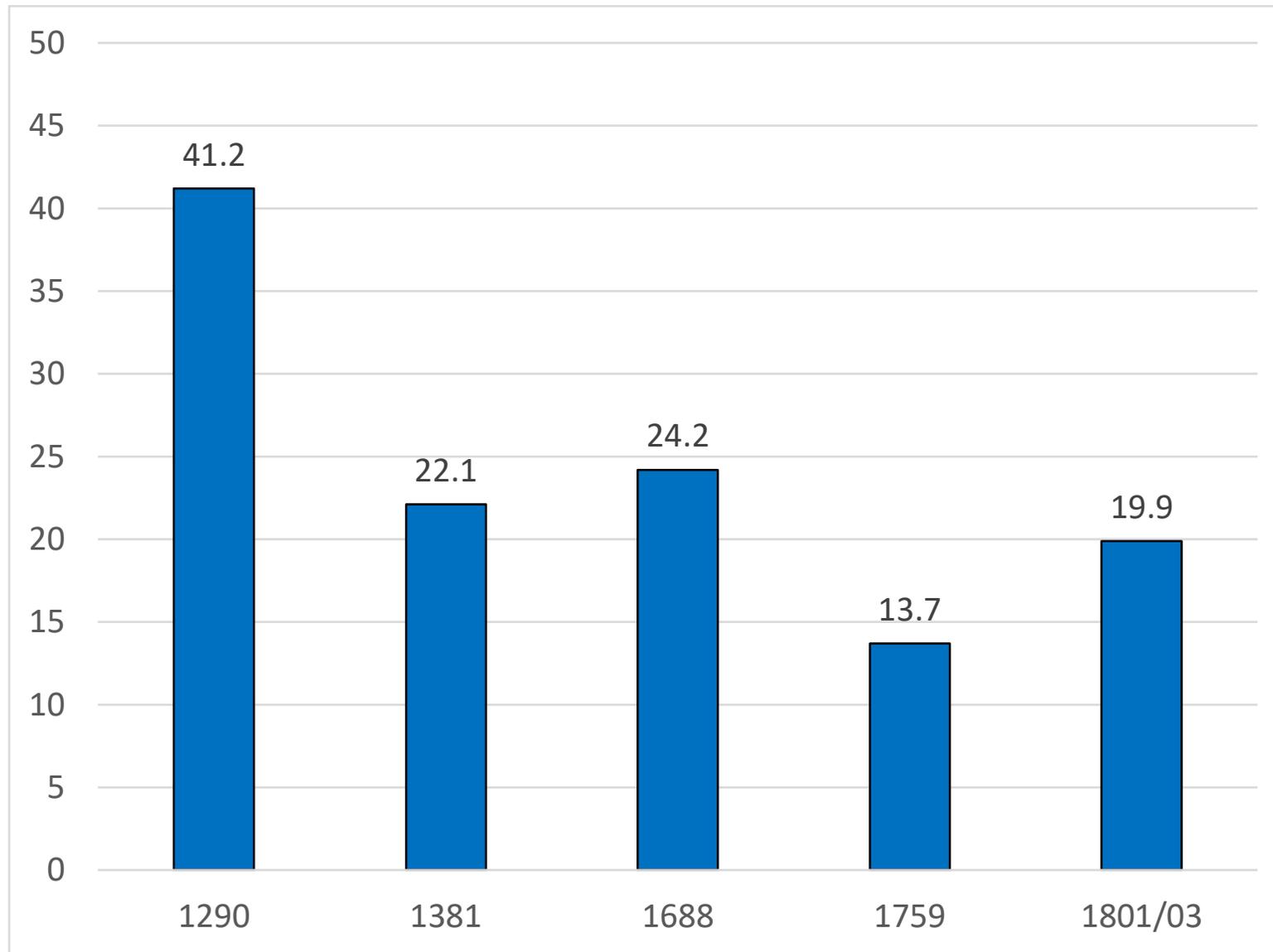
Source: Alfani and Di Tullio, *The Lion's Share. Inequality and the Rise of the Fiscal State in Preindustrial Europe*, Cambridge University Press 2019

# Absolute and relative poverty in the Republic of Venice, 1500-1750



Source: Alfani, “Epidemics, inequality and poverty in preindustrial and early industrial times”, *Journal of Economic Literature*, forthcoming

# Prevalence of poverty in England, 1290-1801/03 (% of households with income insufficient for having access to a 'respectability basket')



Source: elaboration from data in Broadberry et al., *British Economic Growth 1280-1870*, p. 329

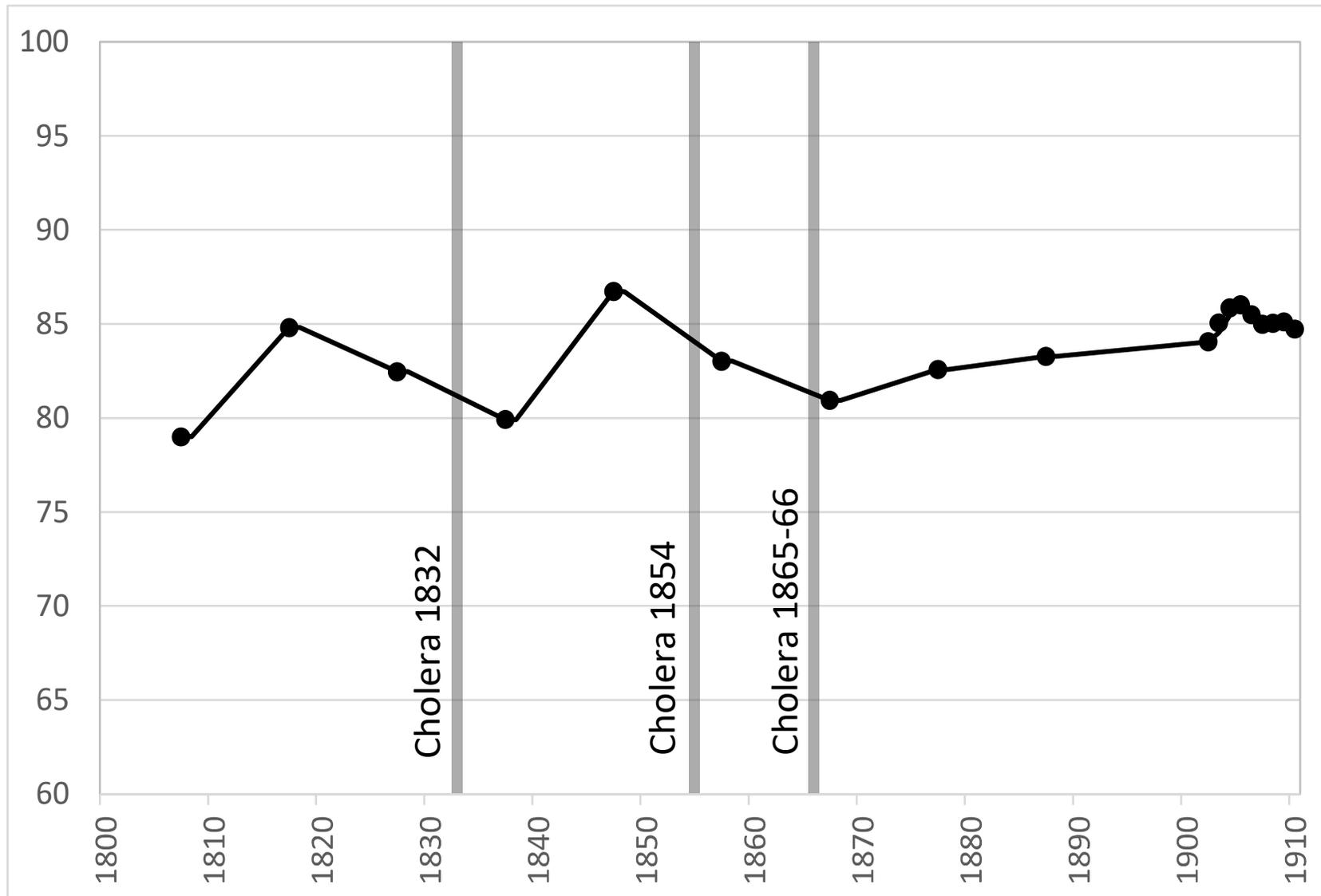
# But *how* did plagues lead to a reduction in the prevalence of poverty (which also contributed to a reduction in inequality)?

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- From the fifteenth century, plague came to be considered to be a «**disease of the poor**» by the doctors of the time. This view is also supported by many modern studies (Slack 1985; Cohn 2010; Galanaud et al. 2015; Alfani and Murphy 2017).
- Given the very high mortality rates typical of the seventeenth-century plagues in southern Europe (for example, 35% of the overall population of North Italy is estimated to have died of plague during 1630), it is obvious that also parts of the elite died – but this does not mean that the socially-selective character of plague disappeared. Selectivity was due to the **living conditions of the poor**, but also to the fact that **institutions actively shifted mortality towards them**.
- As a consequence, we would need to disentangle two very different mechanisms through which plagues (as well as other major epidemics affecting more severely the poor, for example those caused by cholera in the 19<sup>th</sup> C.) reduced inequality:

**redistribution** towards the poor **VS** **extermination** of the poor

# Wealth inequality and cholera pandemics in France, 1800-1910 (share of the richest 10%)



Source: Alfani, “Epidemics, inequality and poverty in preindustrial and early industrial times”, *Journal of Economic Literature*, forthcoming

# The economic consequences of the Spanish Flu (whose epidemiology is much closer to Covid-19 than plague or cholera...)

Until recently, scholars have shown a very limited interest in the economic consequences of the Spanish Flu. A major problem: concomitance of World War I

Things started to change before Covid-19: fear for a new pandemic of lethal flu

- **Sweden (Karlsson, Nillson and Pichler 2014)**: strong impact on poverty (ratio 1:4 between influenza deaths and new poor in need of public assistance); the most-affected areas grew at a slower pace after the pandemic; etc.
- **U.S. (Brainerd and Siegler 2002; Garrett 2009)**: increase in the number of bankruptcies, but traces of quicker growth after the pandemic due, at least in part, to the return to the pre-crisis trend

Research intensified during the last few months, for example:

- Evidence of a **negative impact on social capital** (interpersonal trust) (Aassve, Alfani, Gandolfi, Le Moglie 2020)
- **Worldwide**, it has been estimated that a Spanish Flu death rate of 2% was associated with a **drop in real per capita GDP** of 6% for the typical country (Barro et al. 2020).
- **In Italy**, evidence of a **quick return to the pre-crisis trend** (Carillo and Jappelli 2020), although it remains unclear whether the damage caused by the pandemic was actually recovered or not (V path vs L path)
- **In Italy**, evidence of an **increase in income inequality** after the pandemic, also because the poor were more strongly affected by the crisis (increase in unemployment, etc.) (Galletta and Giommoni 2020)

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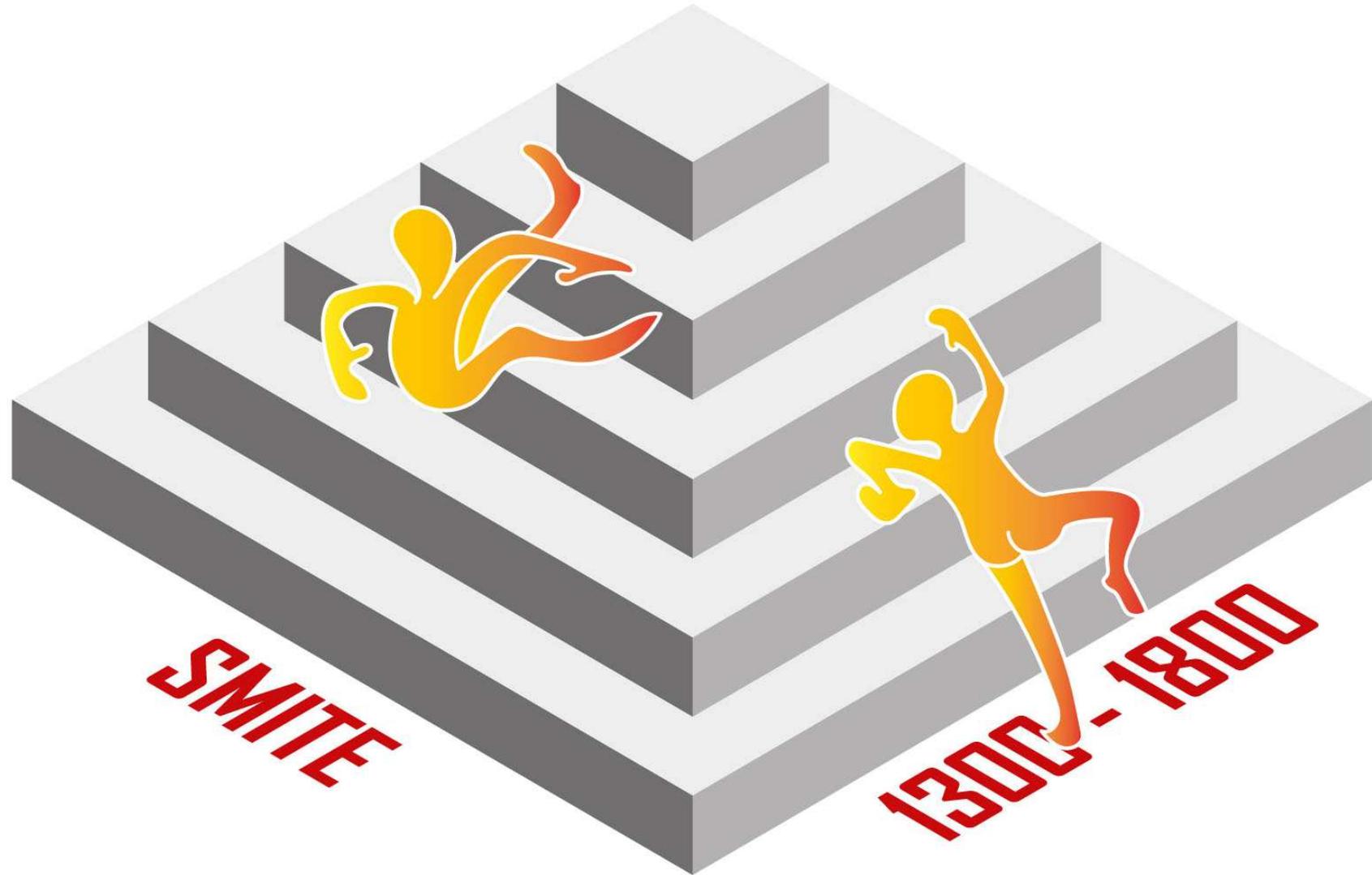
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The Spanish Flu probably led to an increase in poverty and inequality

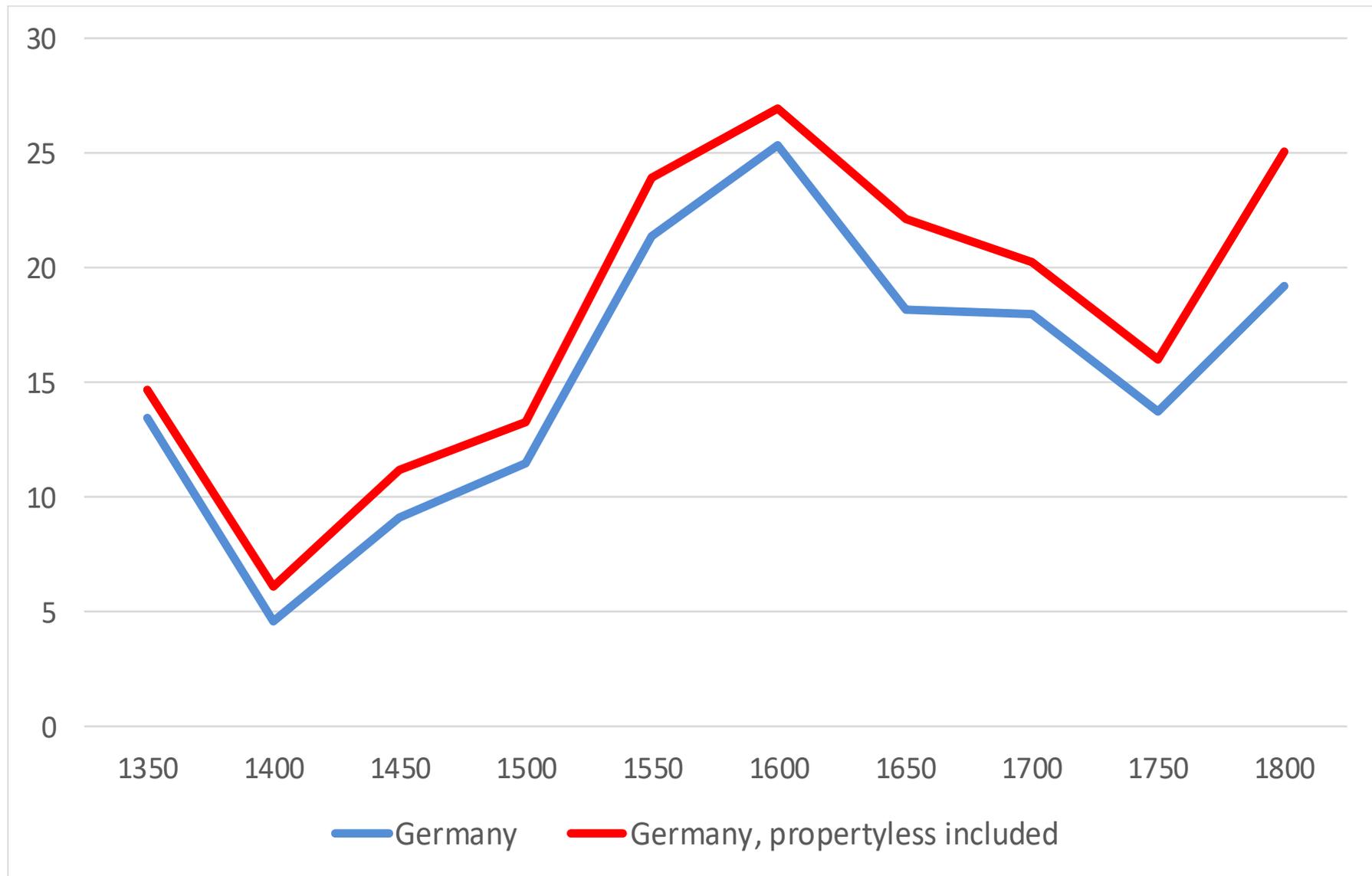
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# SMITE



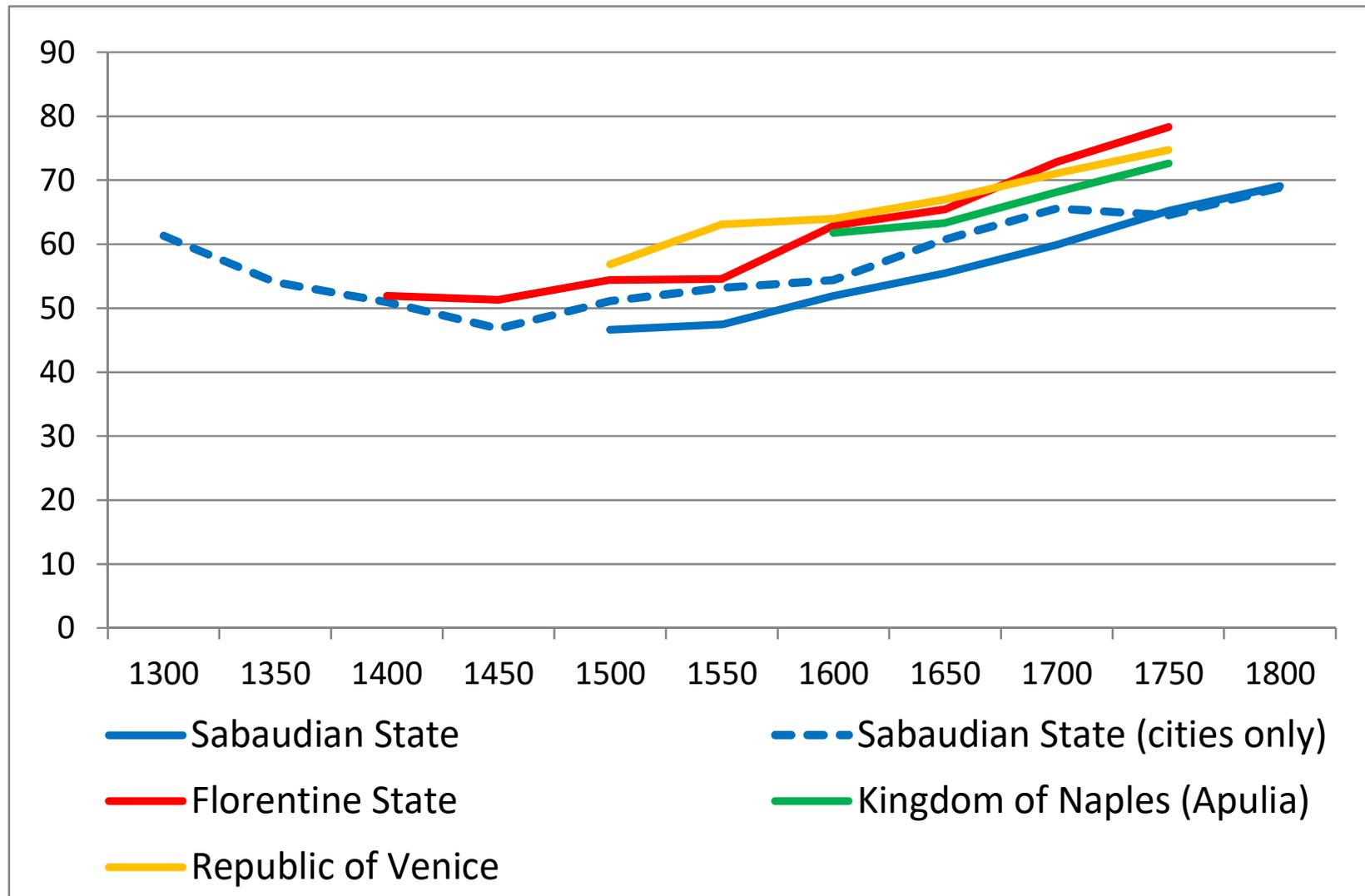
**Thanks for your attention!**

# Poverty in the German area



Source: Alfani, Gierok and Schaff, provisional results

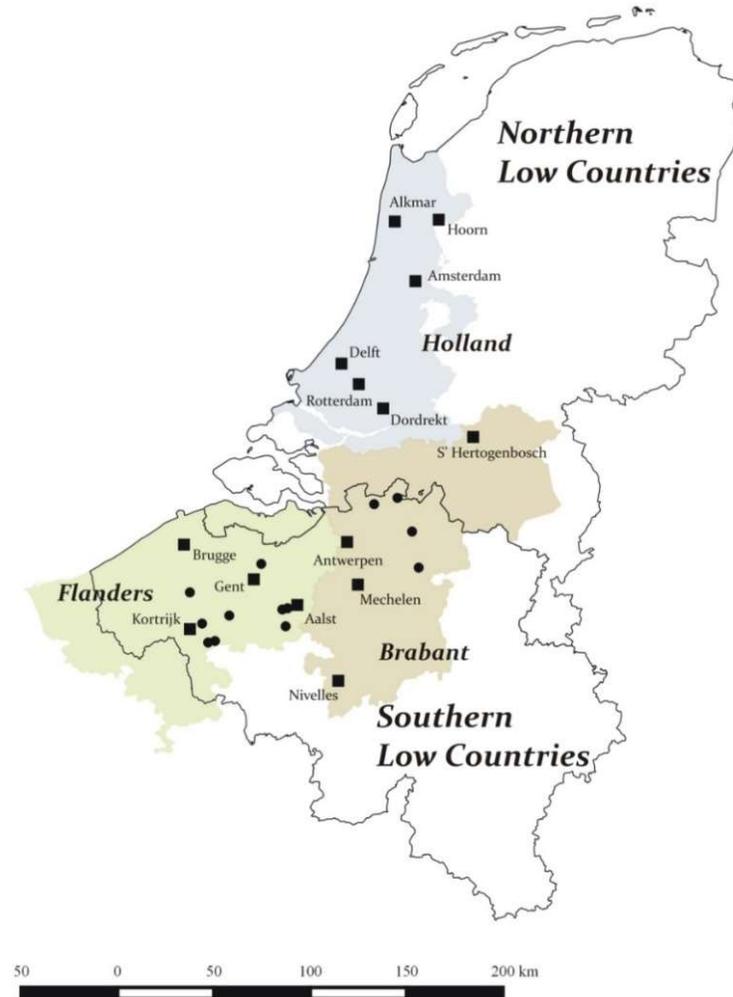
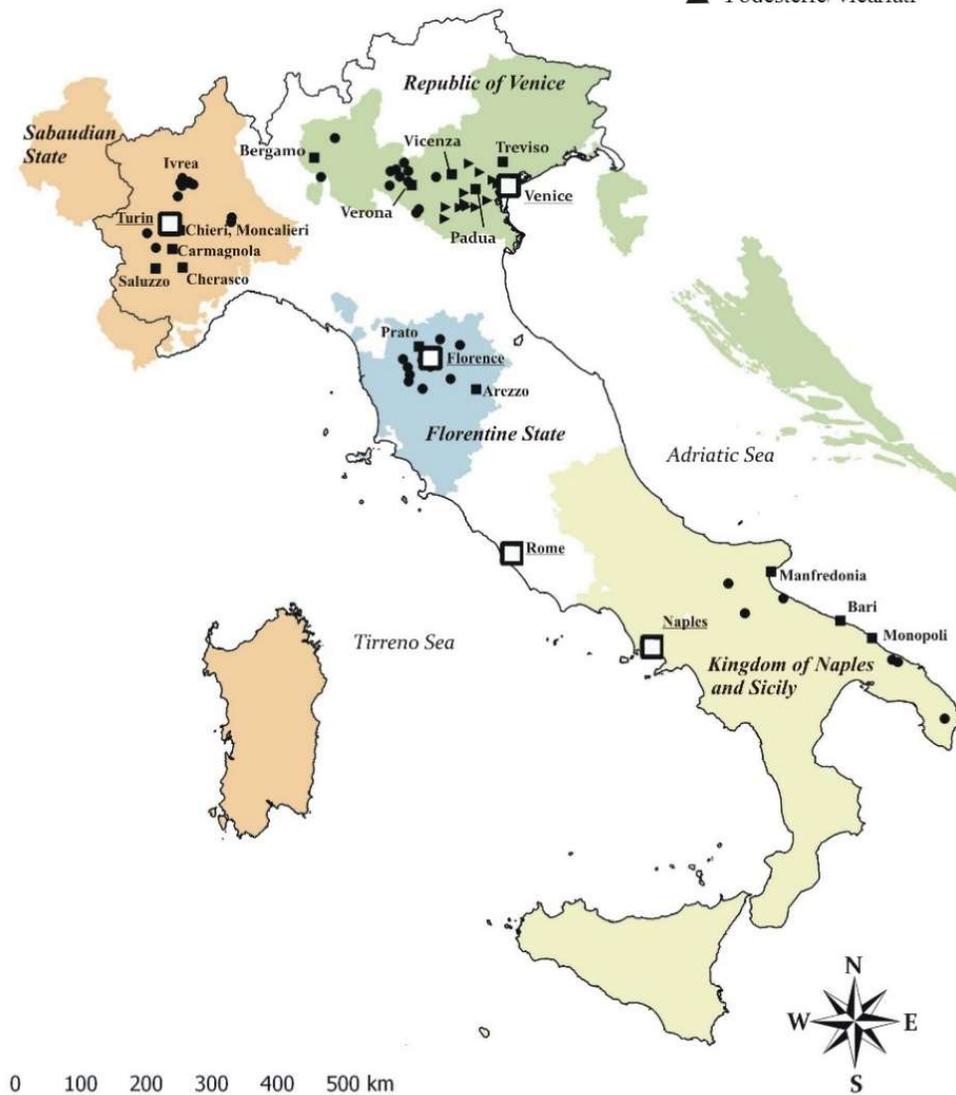
# The share of the top 10%



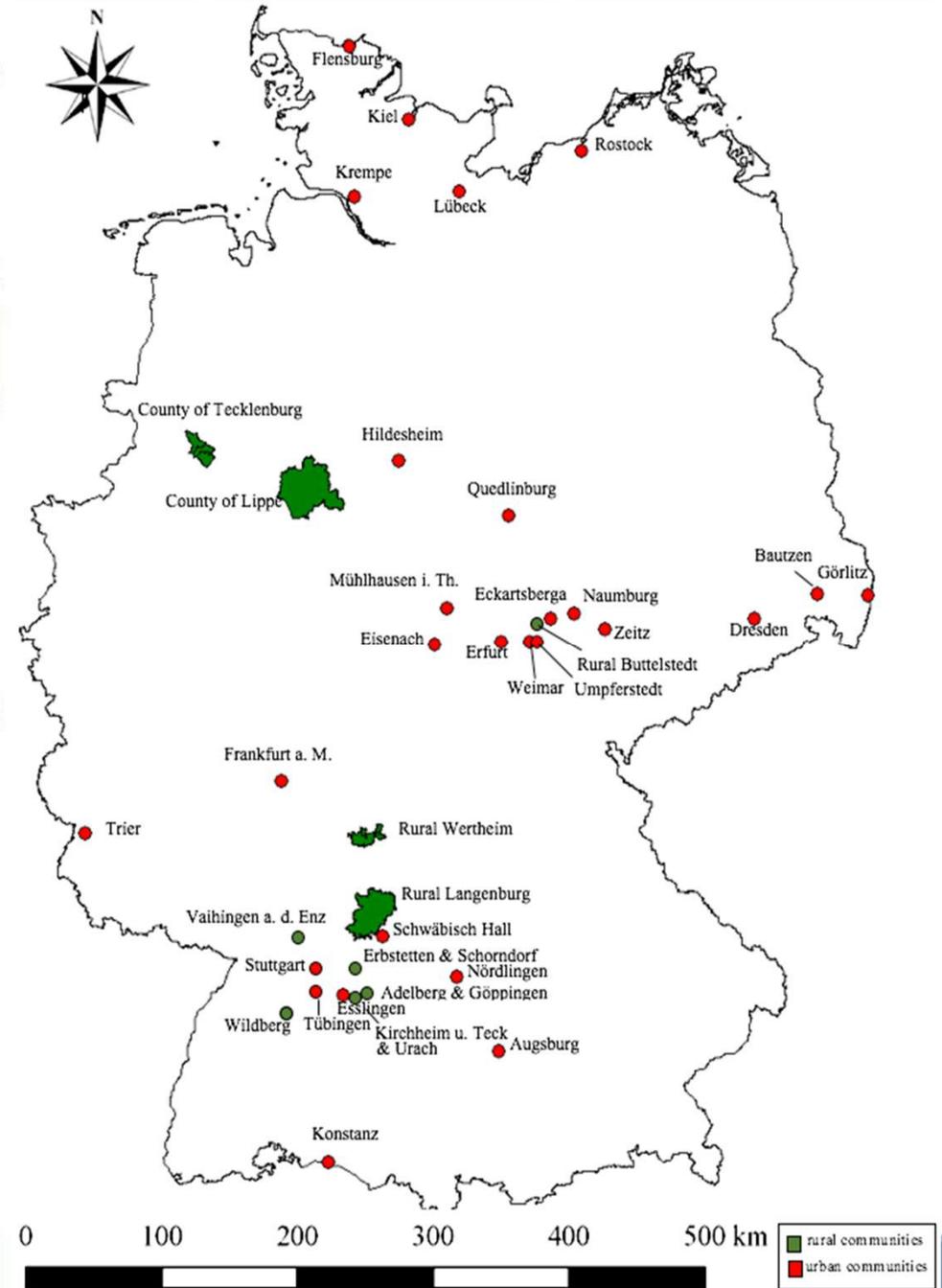
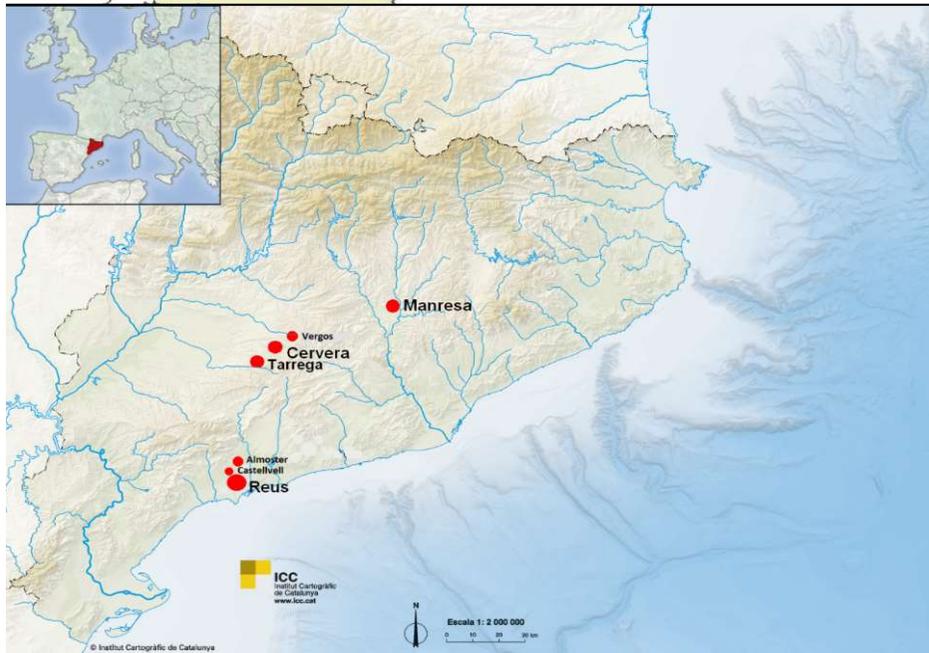
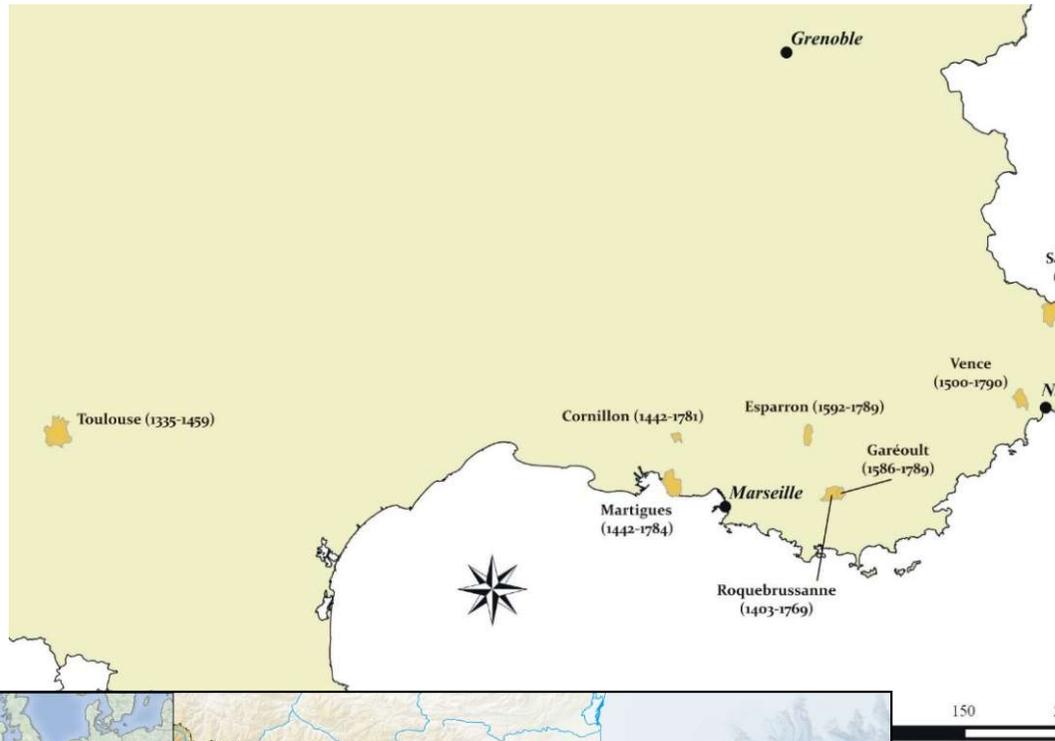
In Italy, where the figures refer to wealth, for 1800 we found shares of the top 10% very close to those proposed by Piketty (2014) for Europe in 1810: about 80%

# The areas covered by EINITE: Italy and the Low Countries...

- Legend
- Capital cities
  - Cities
  - Rural communities
  - ▲ Podesterie/Vicariati



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



# The Republic of Venice

