

# The Measure of Disorder: Population, State-Building and Rebellion in Old Regime France, 1661-1789

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## The Measure of Disorder

- ▶ As stressed by Tocqueville (1856), the *Ancien Régime* (1661-1789) was a key stage in the long history of state-building in France. Louis XIV imposed his authority on the aristocratic elites and accelerated the process of centralization and administrative development. Yet, monarchical institutions proved to be not viable in the revolutionary collapse, triggered by state finance failure.
- ▶ It has been hypothesized that population growth had a key destabilizing effect on early-modern societies, and on prerevolutionary France in particular. I propose to study this claim in the case of Old Regime France through the lens of collective violence, on the basis of a large data set of rebellions occurred in France from 1661 to 1789. Even though the monarchy put an end to large revolts, which almost disappeared until the Revolution, France continued to experience continuous small-scale unrest, which grew significantly in the decades preceding the Revolution.
- ▶ No thunderclap in a quiet sky!

## The Measure of Disorder: Roadmap

- ▶ I collect data to construct population series, rebellion indices, and indicators of family behavior, wages, production, height and state taxation.
- ▶ I argue that France experienced a period of strongly unequal growth in the second half of the eighteenth century, due to the interaction of Malthusian effects of population increase and unequal distribution of land.
- ▶ I assess the growing burden of state taxation, with a focus on indirect taxes that were met with no less rising resistance.
- ▶ I investigate the regional distribution of rebellion, and find that no region deviated from the country-level trend, while distinctive local patterns cannot be clearly related to demographic features that would support the population pressure hypothesis.

# The Measure of Disorder: Roadmap

## I. Rationale and context

- State-building, protest and repression
- The Population pressure hypothesis
- The Thompson critique

## I. Quantitative sources and methodology

- Family behavior
- Population
- Rebellion data
- Wages and production
- Anthropometrics
- State revenue

## II. Interpreting disorder

- Unequal growth
- Unequal taxes
- Regional patterns

## Concluding remarks

- ▶ "Absolutism" emerged from the repression of the great revolts of the sixteenth and first half of the seventeenth century, with increasing state domestic violence, especially from 1640 to 1675: tax resistance redefined as treason, Great criminal ordinance of 1670 (Brown, 1999).
- ▶ However, small scale violent conflict remains though a key component of old regime society, especially when conflicts cannot be solved legally: it belongs to the repertoire of contention (Tilly, 1986).
- ▶ In the eighteenth century, the monarchy does not have to rely on the military to restore order. The role of royal courts increases ("themistocracy").
- ▶ Now, a rise in rebellion is to be observed in the second half of the eighteenth century, until the Revolution. What happened?

## The Population Pressure Hypothesis: Goldstone (1984)

- ▶ Exogenous population increase: population is no "self-regulated system".
- ▶ Distributive effects: marginalized social groups are the first to suffer from "Malthusian effects": rising grain prices, rising rents and difficult access to land, unemployment.
- ▶ Drawing on Dupâquier (1978), Goldstone mentions the following crucial trends observed in the French countryside in the second half of the eighteenth century:
  - ▶ rising age of marriage, "indicating difficulties in accumulating the resources needed to start a family"
  - ▶ falling real wages
  - ▶ an increase in the population "floating" between countryside and cities, and rising urbanization
  - ▶ rising unemployment
- ▶ Furthermore, the increase in taxation made necessary by the ever-growing needs of the state disproportionately burdened the small peasantry.

A summary of Goldstone's narrative by Turchin (2009):

*... population growth leads to rural misery, urban migration, falling real wages, and an increased frequency of food riots and wage protests. After a certain lag time, the negative effects of population expansion begin to affect the elites, who become riven by increasing rivalry and factionalism. Another consequence of rapid population growth is the expansion of youth cohorts. This segment of the population is particularly impacted by lack of employment opportunities. Finally, growing economic inequality, elite competition, and popular discontent fuel ideological conflicts. ... As all these trends intensify, the end result is state bankruptcy and consequent loss of the military control, elite movements of regional and national rebellion, and a combination of elite-mobilized and popular uprisings following the breakdown of central authority. ... A breakdown of social order is also accompanied by increased banditry, homicides, and other kinds of violent crimes. On the ideological level, the feeling of social pessimism is pervasive and the legitimacy of the state authority is at its lowest point...*

...

### The Thompson critique

In a famous paper about 18th century English food riots, British sociologist E.P. Thompson warned against simplistic explanations of rebellion driven by coarse economicism ("The Moral Economy of the English Crowd", 1971).

*[The word "riot"] can conceal what may be described as **a spasmodic view of popular history**. According to this view the common people can scarcely be taken as historical agents before the French Revolution. Before this period they intrude occasionally and spasmodically upon the historical canvas, in periods of sudden social disturbance. These intrusions are compulsive, rather than self-conscious or self-activating: they are **simple responses to economic stimuli**. It is sufficient to mention a bad harvest or a down-turn in trade, and all requirements of historical explanation are satisfied.*



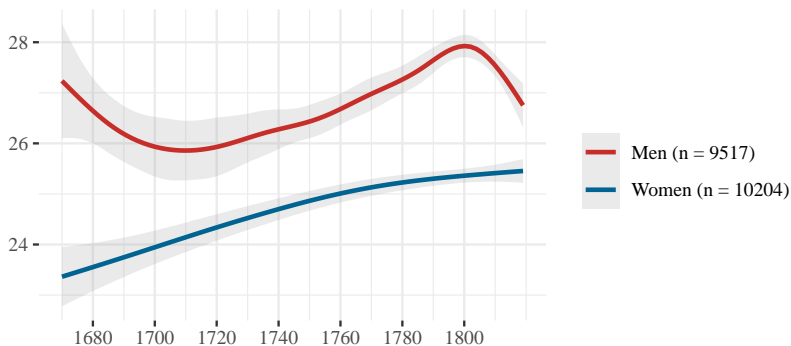
### Taking into account the Thompson critique

- ▶ Variations in abstract variables are indeed no explanation for historical phenomena. However, they may help understand the latter because they give clues about the frame of people's actions. The moral economy of early modern peasants, defining what they take for a fair price, does not contradict the fact that they rebel more when the bread price is higher.
- ▶ Likewise, a population increase may induce more social tensions through various channels, without erasing the complexity of rebellion acting out.
- ▶ The occurrence, intensity and motivation of rebellions is informative of tensions that run through society, and conversely.

## I. Quantitative sources and methodology

- ▶ I study family behavior based on the Henry survey data (Séguy, 2001).
- ▶ Anonymous sample of marriages: 44383 marriages contracted from 1740 to 1829, in a sample of ca. 400 villages and towns over France.
- ▶ Nominative sample of parents: 34812 marriages contracted from 1670 to 1819, in a subsample of preceding villages. Less observations, but more information, especially on progeny.

## Evolution of age at marriage (1)



**Figure:** Mean age at first marriage by year of marriage in rural France, nominative sample, 1670-1819. Nonlinear fit (GAM) with 95% confidence intervals.

## Evolution of age at marriage (2)

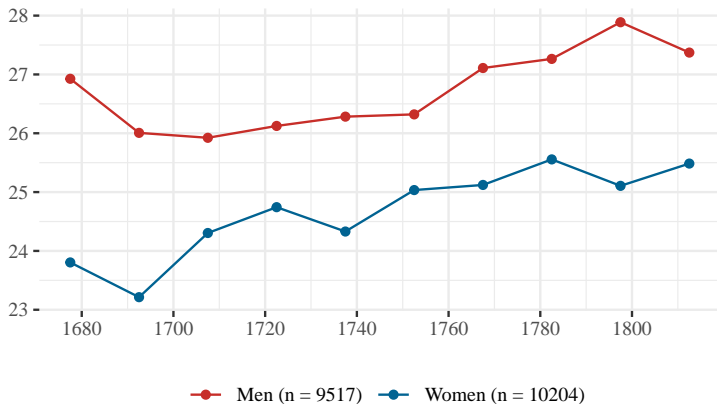
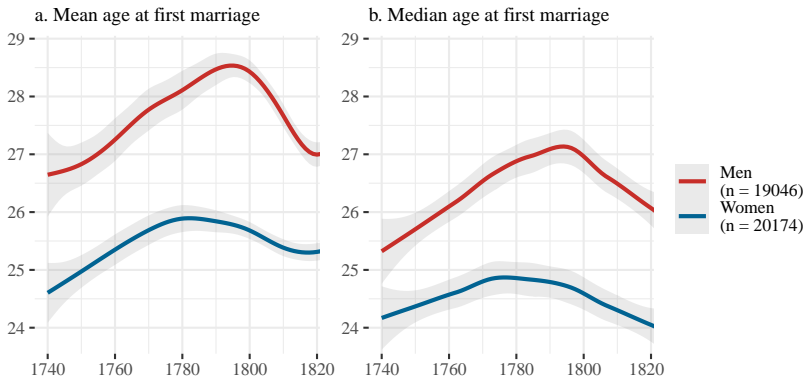


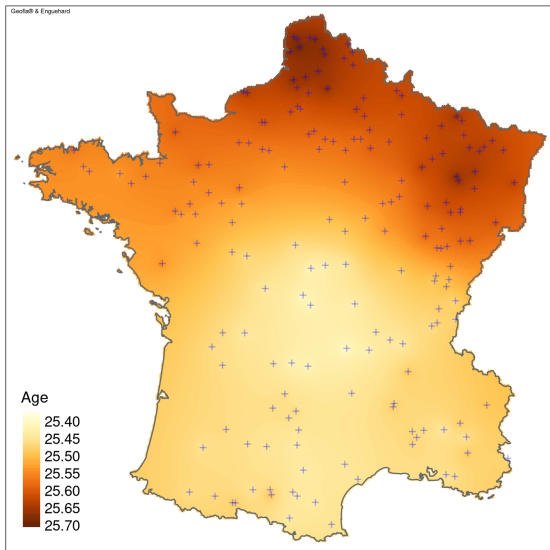
Figure: Mean age at first marriage by year of marriage in rural France, nominative sample, 1670-1819. 15-year averages.

## Evolution of age at marriage (3)



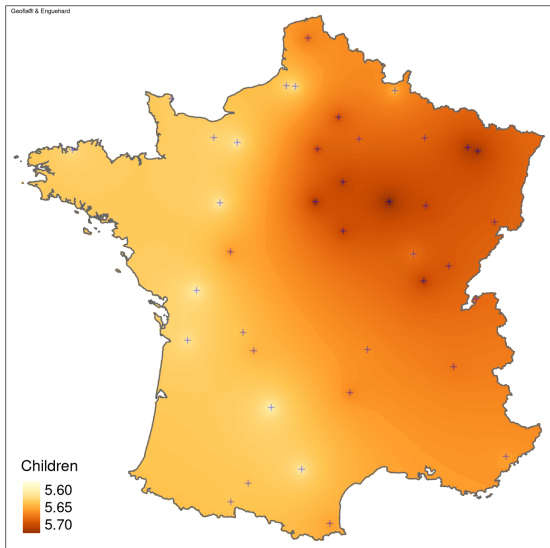
**Figure:** Age at first marriage by marriage year in rural France, anonymous sample, 1740-1829. a. is a GAM fit, b. is the LOESS of annual medians, with 95% ci. intervals.

## I. Quantitative sources and methodology: Family behavior



**Map:** Mean age of women at first marriage in rural France, interpolated by inverse distance weighting (1740-1789).

# I. Quantitative sources and methodology: Family behavior



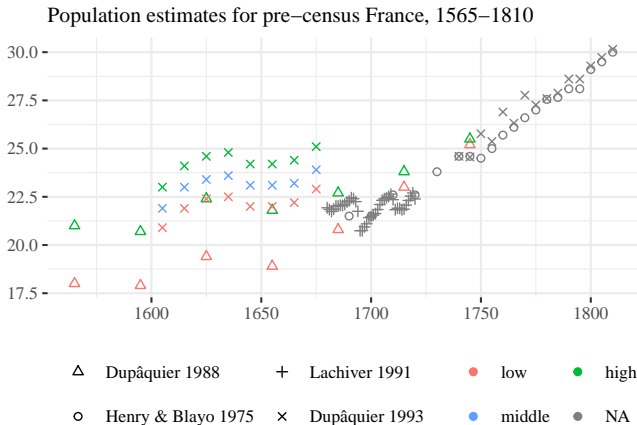
**Map:** Variations of marital fertility in rural France, interpolated by inverse distance weighting (1670-1789).



### Population series at the country and local levels

- ▶ To assess the intensity of rebellion, population series at the country and local levels are necessary.
- ▶ A new attempt at population reconstruction would be desirable, but it is unfeasible with available data. It would imply to know either subsequent deaths by age, or current births.
- ▶ One has to build up on existing literature.

## Sources for French population



**Figure:** Population (million inhabitants) within present French metropolitan frontiers (including Corsica), from various sources.

## French population: a synthesis

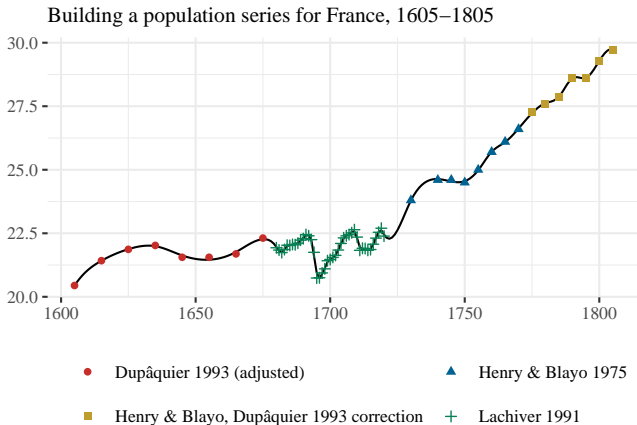
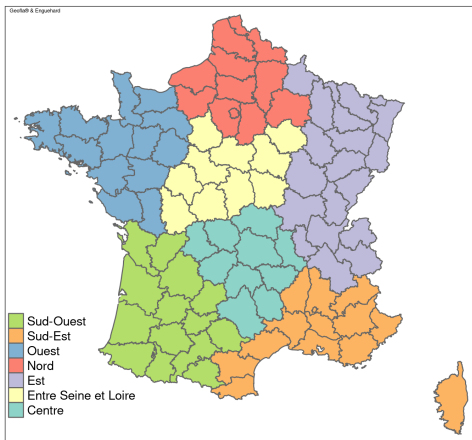


Figure: Population (million inhabitants) within present French metropolitan frontiers (including Corsica), from selected sources.

## Regional population series: Lachiver regions



Map: Regions from Lachiver (1991)

## Regional population series: Lachiver regions

First, build a series of regional shares from Lachiver for 1680-1720 and from the departmental census of 1790 corrected by Langlois (1976). Departments that did not yet exist have to be estimated from later SGF censuses.

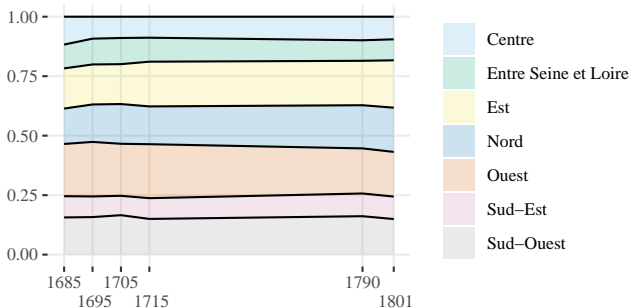


Figure: Share of each Lachiver region in the total population, 1685-1801.

## Regional population series: Lachiver regions

Then, apply the series of regional shares to the country-level series.

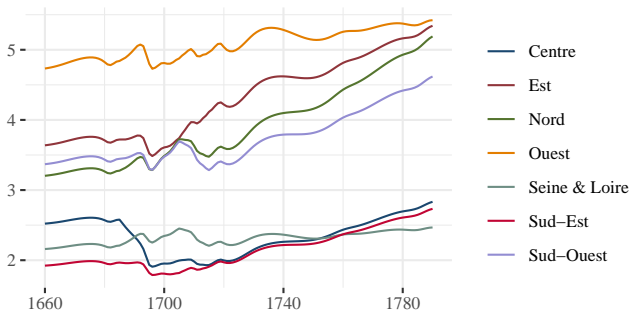


Figure: Population by Lachiver region (million inhabitants).

### Population series by généralité and by département

- ▶ The same thing can be done for old regime districts, généralités, using figures for ca. 1700 and ca. 1780 (Dupâquier & Lepetit, 1988).
- ▶ The same thing can then be done for each département inside a Lachiver region. For this, I map the 1700-1780 population growth rates of généralités to corresponding départements. Then, intraregional shares can be applied to the regional series to get departmental series.
- ▶ Of course, this is quite imprecise (généralités do not overlap departments). Let us compare estimations by généralité and by département when this is possible.
- ▶ The best practice is to use the three series for assessing rebellion intensity.

Table: POPULATION ESTIMATES BY GÉNÉRALITÉ AND BY DÉPARTEMENT

Territorial unit		Year	Population (thous.)	
<i>Généralité</i>	Department codes		(1)	(2)
Alsace	67, 68	1699	263	287
		1790	676	697
Bretagne	22, 29, 35, 44, 56	1699	1778	1881
		1790	2586	2320
Dauphiné	05, 26, 38	1699	584	609
		1790	678	781
Franche-Comté	25, 39, 70	1699	365	400
		1790	733	753
Lyonnais	42, 69	1699	390	332
		1790	727	620
Lorraine	54, 55, 57, 88	1699	643	665
		1790	1232	1193
Provence	04, 13, 83, (06, 84)	1699	705	543
		1790	715	781



### Rebellion data

- ▶ French historian Jean Nicolas and his team gathered 8528 *émotions populaires* happening between 1661 and 1789, mainly from police and justice archives (*La rébellion française*, 2002).
- ▶ It should be noted that most *émotions populaires* are small scale: half of them have 4 to 21 participants. Most big revolts happen in the preceding period, and there is no big scale revolt in France between the *Tard-avisés* of 1707 and 1789.
- ▶ The data was typed by Cédric Chambru ("Do it right!", 2019), who used it to study the effect of weather shocks on rebellion.
- ▶ The collect aimed at being exhaustive, yet concerns about sample representativeness arise.

## Rebellion size and representativeness of the sample (1)

Were the small events forgotten?

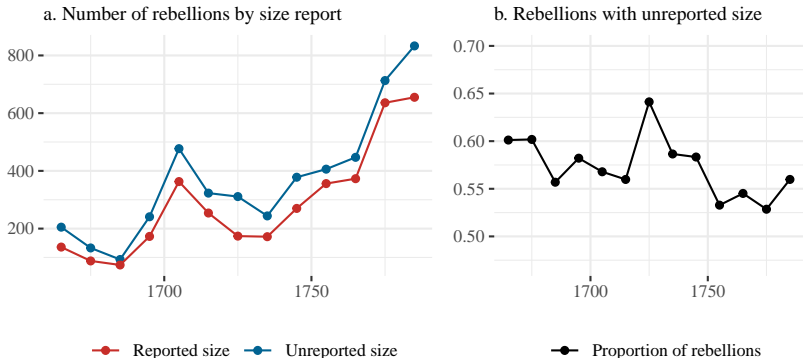


Figure: Evolution of rebellion size report in the database, in absolute value and in proportion, 1661-1789.

## Rebellion size and representativeness of the sample (2)

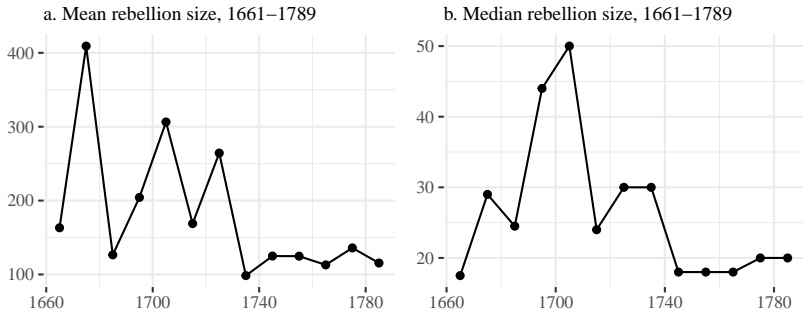


Figure: Mean and median number of participants per event, 1661-1789

## Rebellion size and representativeness of the sample (3)

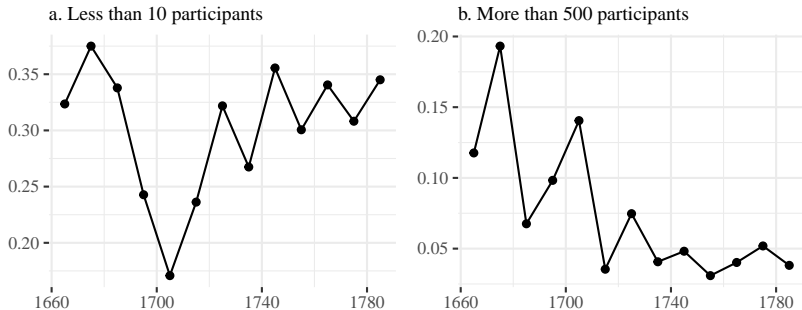


Figure: Proportions of rebellions with at most 10 participants and at least 500 participants, respectively (1661-1789).

## Rebellion indices

- ▶ Denoting  $E$  is the number of events and  $P$  population of area  $i$  in year  $t$ , the standard rebellion index is simply

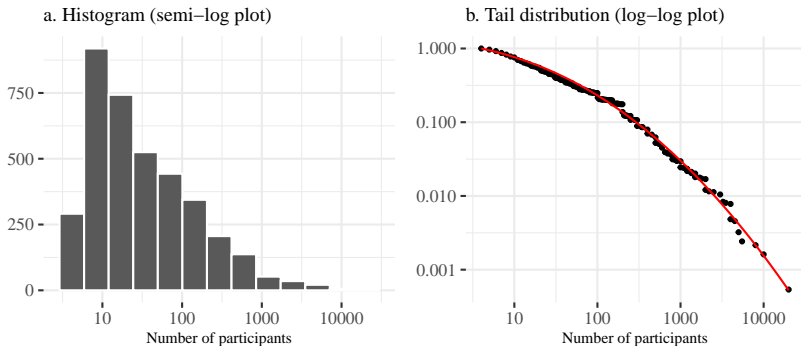
$$r_{it} = \frac{E_{it}}{P_{it}}$$

- ▶ Denoting  $n$  the number of participants and  $j$  the index for events in area  $i$  and year  $t$ , the size-weighted rebellion index is

$$\rho_{it} = \frac{\sum_j n_{it}^j}{P_{it}}$$

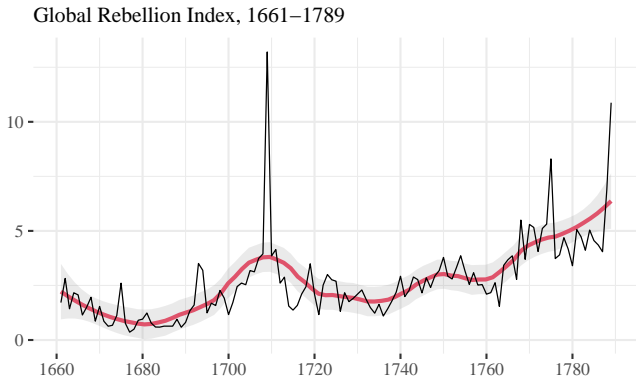
where  $n_{it}^j = 20$  if missing.

## Distribution of rebellion size



**Figure:** Subsample of 3724 rebellions for which a number of participants is indicated. Red curve of chart b. is a log-normal distribution fit.

## The rise in rebellion



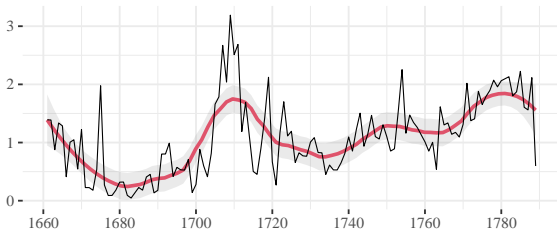
**Figure:** Annual number of *émotions populaires* recorded within present French borders per million inhabitants. Red curve is the LOESS of the annual series, with 95% confidence interval.

## Rebellion index by type

a. Food riots (n = 1526)

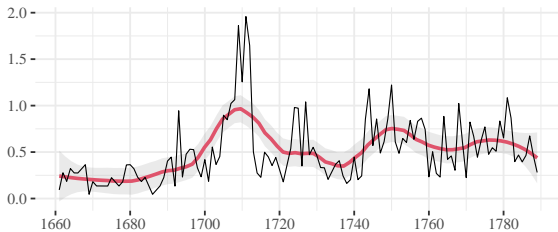


b. Resistance to state taxation (n = 3392)

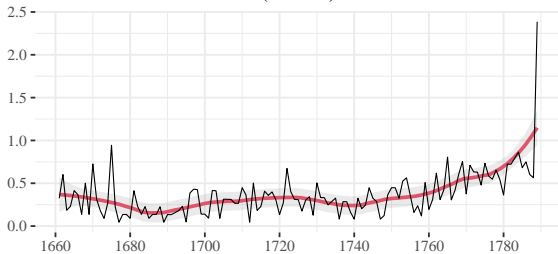




c. Resistance to state authority (n = 1557)

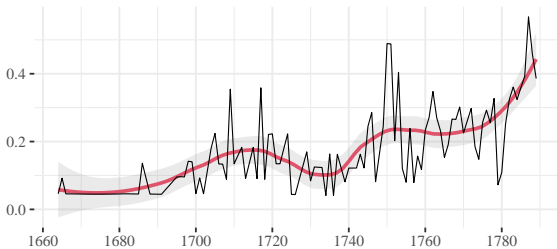


d. Resistance to local authorities (n = 1156)

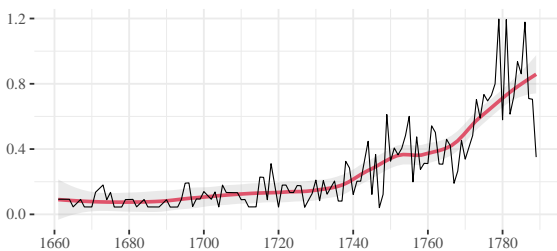


# I. Quantitative sources and methodology: Rebellion data

e. Labor disputes (n = 470)

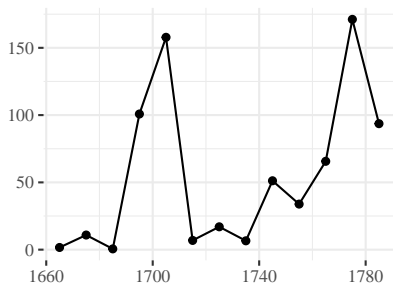


f. Various collective violence (n = 839)

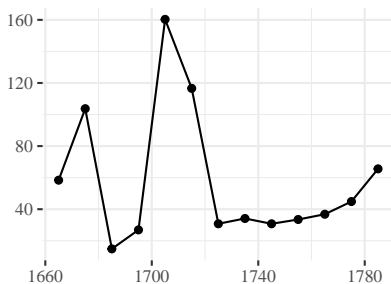


## Size-weighted rebellion index by type

a. Food riots

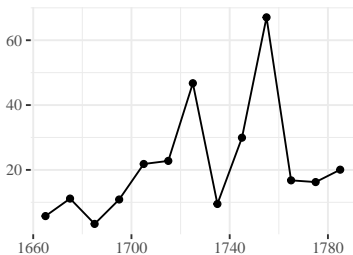


b. Tax resistance

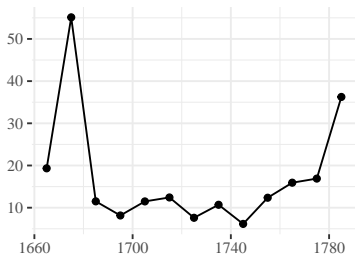


# I. Quantitative sources and methodology: Rebellion data

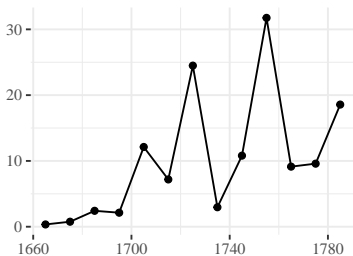
c. Resistance to state authority



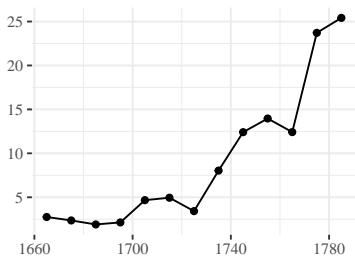
d. Resistance to local authorities



e. Labor disputes



f. Various collective violence



- ▶ Thanks to the recent work of Ridolfi (2019), new wage and price series are available for preindustrial France.
- ▶ Three types of workers: agricultural laborer, building craftsman, building laborer. The first category accounts for 36% of the population in 1788, and 52% of the peasantry (Morrisson & Snyder, 2000).
- ▶ I build a wage index for the physical economy (ie. without services) from this, using estimates of the evolution of sector shares (Morrisson, 2007).
- ▶ I use this wage index and the population series for France to interpolate the estimates of nominal Gross Physical Product of Marcewski (1961). Denoting  $x_t$  the country wage bill and  $y_t$  the nominal GPP, for  $t \in \llbracket 1, T - 1 \rrbracket$  the set of missing years,  $y_t$  is given by

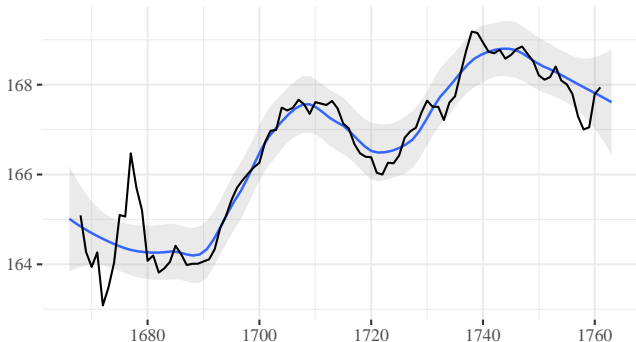
$$\frac{y_t}{y_{t-1}} = \frac{x_t}{x_{t-1}} \left( \frac{y_T}{y_0} \frac{x_0}{x_T} \right)^{\frac{1}{T}}$$

### Measuring welfare with height

- ▶ Wages can be misleading since they do not take into account the variation in days worked, which could have been an adjustment variable even more decisive than wages in the Old regime (importance of unemployment): height, which reflects the nutritional status, is therefore a useful complement (Schubert, 2008).
- ▶ I rely on the work of Komlos (2003): a sample of 38700 observations, extracted from military archives, of soldiers enlisted from 1671 to 1786 and coming from all provinces.
- ▶ I replicate Komlos' results with a more accurate method (truncated regression instead of truncated OLS): country-level trend and regional variations. Then, I try to investigate the regional variation in the decrease occurred after 1750.

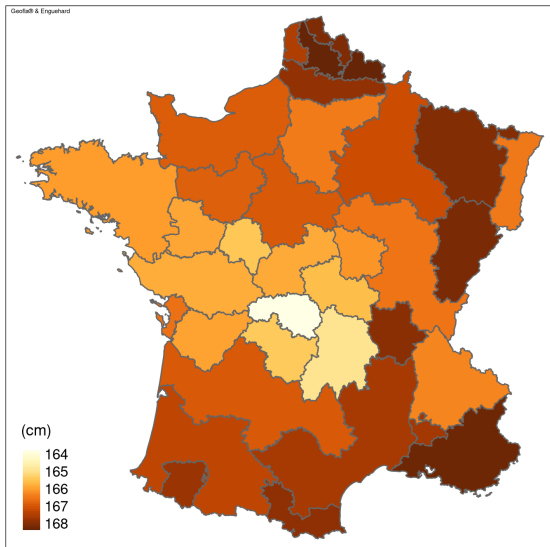
## Truncated regression with coefficients for year of birth

Same trend and cycles as Komlos, but higher levels (Komlos overestimated the standard deviation).



**Figure:** Height of adult French soldiers, 1666-1763 (cm, standardized for Île-de-France). The black line is a five-year moving average of the results, while the blue curve is a LOESS with 95% confidence intervals in shaded area.  $N = 15695$

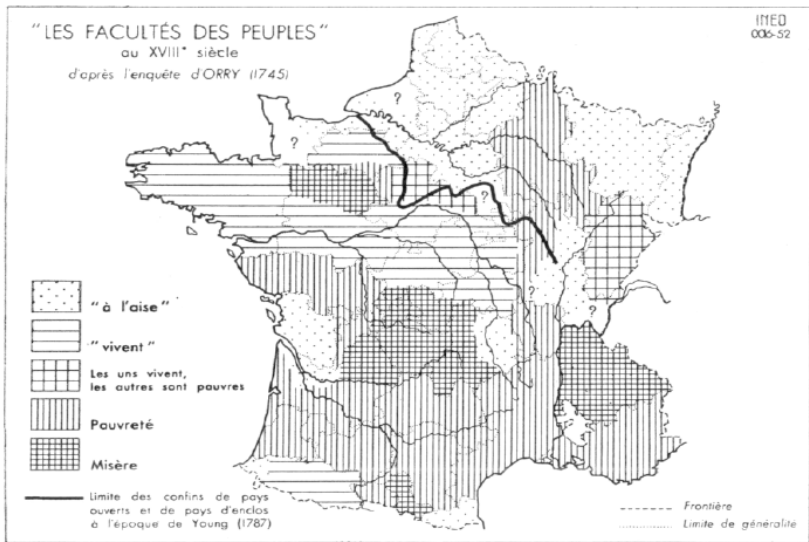
# I. Quantitative sources and methodology: Anthropometrics



Map: Height of adult French men by province, 1660-1770.



# I. Quantitative sources and methodology: Anthropometrics



Map: Regional welfare according to Controller-General Orry, 1745 (Dainville, 1952).

**Table:** TRUNCATED REGRESSION OF HEIGHT IN THE MILITARY, 1660-1763*Dependent variable is height (French inches).*

Explanatory variable	coef. (s.e.)	p-value	Explanatory variable	coef. (s.e.)	p-value
<i>Intercept</i> (Midnorth)	62.167*** (0.140)	0.001	<i>Birthyear</i> $\geq$ 1750 (Midnorth)	0.209 (0.239)	0.382
<i>Southwest</i>	-0.098 (0.110)	0.370	<i>Birthyear</i> $\geq$ 1750 $\times$ Southwest	-0.740 (0.498)	0.138
<i>Southeast</i>	0.220* (0.100)	0.027	<i>Birthyear</i> $\geq$ 1750 $\times$ Southeast	-0.821* (0.443)	0.064
<i>Center</i>	-0.661*** (0.139)	0.001	<i>Birthyear</i> $\geq$ 1750 $\times$ Center	0.085 (0.628)	0.892
<i>West Center</i>	-0.292*** (0.100)	0.003	<i>Birthyear</i> $\geq$ 1750 $\times$ West Center	-0.471 (0.404)	0.243
<i>East Center</i>	0.099 (0.108)	0.359	<i>Birthyear</i> $\geq$ 1750 $\times$ East Center	-1.125*** (0.410)	0.006
<i>North</i>	0.436*** (0.097)	0.001	<i>Birthyear</i> $\geq$ 1750 $\times$ North	-0.746** (0.324)	0.021
<i>East</i>	0.566*** (0.091)	0.001	<i>Birthyear</i> $\geq$ 1750 $\times$ East	-1.091*** (0.299)	0.001

Log-likelihood: -21736 on 25 df.  $N = 15298$

### Evolution of the tax burden

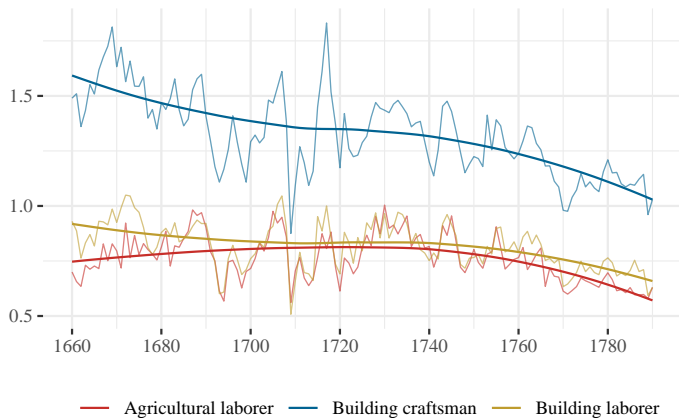
- ▶ Old regime taxation is threefold (state, landlords and municipalities, church). According to my research question, I focus on state taxation, which causes the most rebellions: 3336 disturbances, against only 76-226 for seigneurial taxation and 36 for tithes.
- ▶ The evolution of state revenue is informative of the evolution of the tax burden resulting from state taxation - however, not of its absolute value, given the extreme heterogeneity across provinces (Necker, 1784).
- ▶ I collect various estimates of the royal revenue to get a series as complete as possible from 1600 to 1789, relying on Guéry (1978), Riley (1987), Mathon de la Cour (1788) and White (1789).
- ▶ Mathon de la Cour presents the original financial accounts, and therefore information on the composition of state revenue.

## II. Interpreting disorder

### Economic growth in 18th century: back to the debate

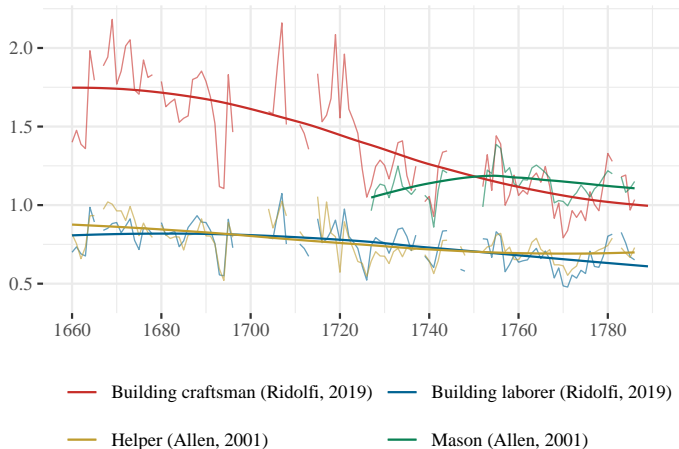
- ▶ Growth of agricultural production per capita in eighteenth century France is defended by Morrisson (2007), in particular on the basis of decreasing mortality. Indeed, subsistence crises are no more deadly (Chevet, 1993).
- ▶ However, Hoffmann (1996), based on measurement of TFP growth across France, finds at best stagnation per capita (great heterogeneity across France). This is consistent with a return of food rioting in 1740-1790, a decrease in real wages and a reversal of the secular increase in height (Komlos, 2003 and Schubert, 2008).
- ▶ Growth was concentrated in the industry and trade sectors - and did not benefit to the peasantry. Daudin (2005) emphasizes international trade, but this was a tiny share of the economy (a few percent) and "indirect effects" are unproven.
- ▶ Why were subsistence crises not deadly anymore? Exogenous decrease in diseases (Perrenoud, 1989), higher integration of grain markets and better crisis management by the state. Weir (1989): that the effect of wheat prices on mortality decreased from the seventeenth to the eighteenth century, to become insignificant in northern France by the mid-eighteenth century.
- ▶ Moderate shortage... that affected the poorest.

### Real wages (1)



**Figure:** Evolution of welfare ratios in France outside the Paris region, 1660-1790, smoothed by LOESS. Source: Ridolfi (2019.)

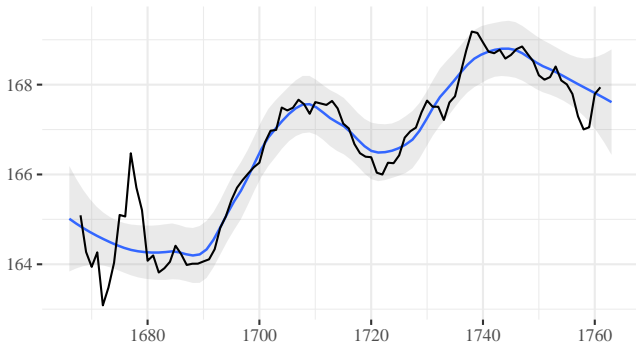
### Real wages (2)



**Figure:** Annual wage of a male worker divided by the cost of a barebones consumption bundle for a couple with two children, smoothed by LOESS.

### Truncated regression with coefficients for year of birth

Observe the decrease from 1740.



**Figure:** Height of adult French soldiers, 1666-1763 (cm, standardized for Île-de-France). The black line is a five-year moving average of the results, while the blue curve is a LOESS with 95% confidence intervals in shaded area.  $N = 15695$



## II. Interpreting disorder: Unequal growth

Height decreased/stagnated in the years 1740-1800 (Schubert, 2008), and increased again only in the 19th (Weir, 1993).

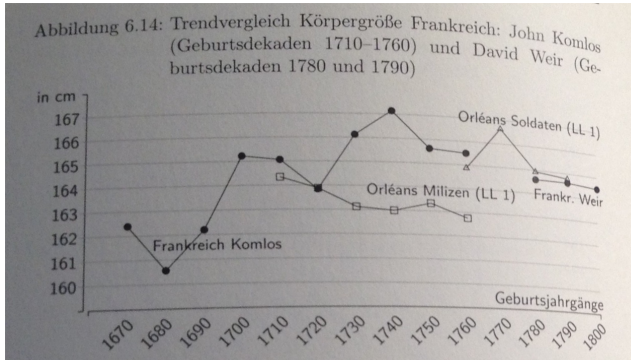
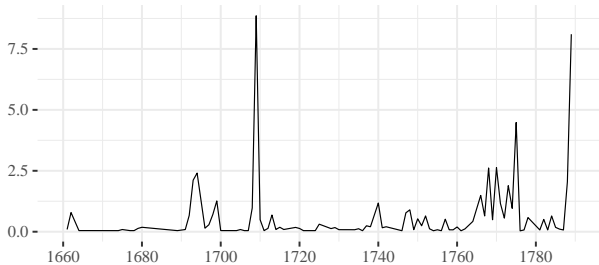


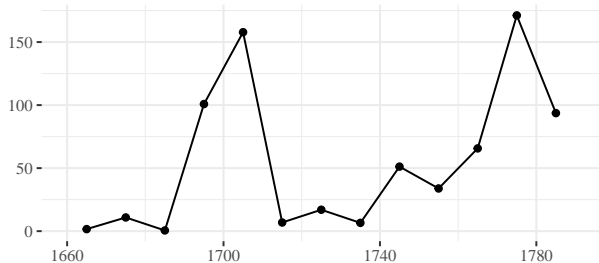
Figure: Source: Schubert, 2008.

## II. Interpreting disorder: Unequal growth

a. Food riots (n = 1526): standard index



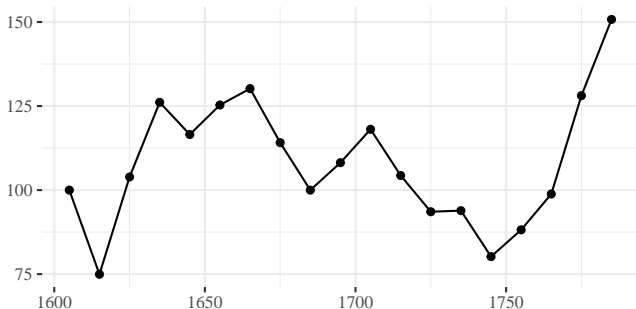
b. Size-weighted food riot index (10-year averages)



### Unequal land

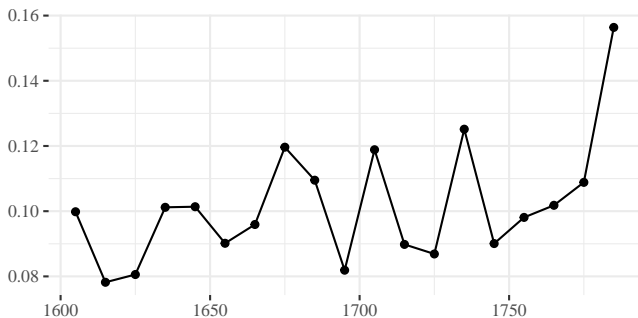
- ▶ The key point was the increased difficulty to access land, which is quite documented (see eg. Damilaville's account in the Encyclopédie, or Saint-Jacob, 1958). Most peasants were not self-sufficient (in the villages observed by Hoffmann, something like 90%) and had to work outside (and at least 97 percent of work should have taken place outside the family farm to meet the household's needs). Morrisson and Snyder: 70% of peasants were day laborers or mixed workers.
- ▶ Consistent with the rise in age at marriage already observed.
- ▶ Worsen by unequal land taxes (Hoffman, 1986) and rising rents. Consequence of the demographic growth?
- ▶ Contrast between the wealthy farmers like the Chartier studied by Moriceau and Postel-Vinay, with many children and expanding land leases, and poor farmers that may have restricted their fertility because they could not settle their children.

### Rising land rents (1)



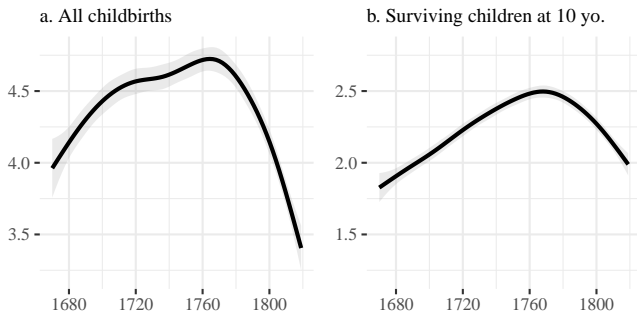
**Figure:** Nominal land rent divided by the nominal wage of an agricultural laborer, 1600-1789 (base 1600-1609 = 100). Source: Hoffmann (1996) and Ridolfi (2019).

### Rising land rents (2)



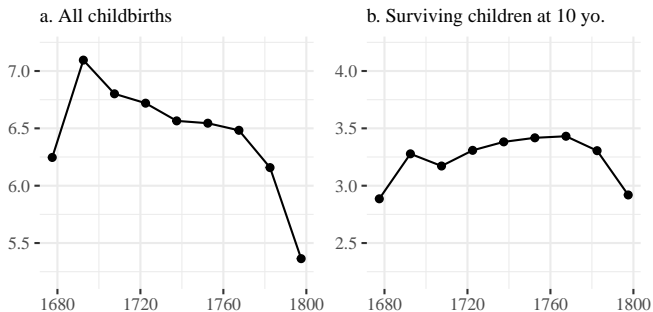
**Figure:** Land rent in the Paris region compared to wheat price (proportion of the available yield), 1600-1788. Source: Hoffmann (1996) and Baulant (1968).

### Evolution of marital fertility: no restrictions



**Figure:** Mean number of children per marriage in rural France by marriage year (marriages with a at least one child): a. all childbirths, and b. children surviving at least 10 years only.

### Evolution of marital fertility: with restrictions



**Figure:** Mean number of children per marriage in rural France by marriage year, with restrictive conditions: first marriage for both spouses, at least one child, marriage observed at least 25 years and wife died after 49 yo..

### Rise in nominal inequality (1)

Nominal wages did better than GPP during the years of crises, but then failed to keep up with the nominal growth of production. Still demography?

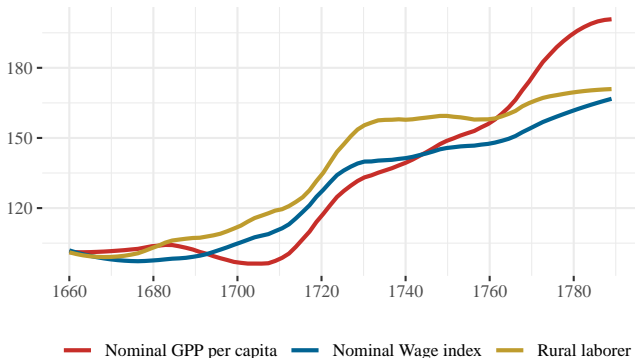


Figure: Nominal wage indices and nominal gross physical product (GPP) per capita, 1660-1789 (base 1660 = 100 for all, LOESS).



### Rise in nominal inequality (2)

- ▶ Consistent with Morrisson & Snyder (2000): between 1748-1759 and 1760-1790, the top decile increased its share from 46 to 56%.
- ▶ Also a rise in unemployment and urban beggary, well perceived by the revolutionaries:

*Pour que l'augmentation de population assure le bonheur d'un État, il faut qu'elle marche avec l'accroissement du travail, et la France ne se trouve pas aujourd'hui dans cette proportion... La disproportion de la population de la France avec le travail qu'elle lui fournit est donc la cause première et essentielle de l'indigence.*

Enquête du Comité de mendicité, 1790-1791 (Goy and Dupâquier, 1988).

### Rise in real inequality (1)

- ▶ According to Hoffman et al. (2002), the change in relative prices was decisive for the rise in preindustrial inequality: they find that in the long run (1500-1900), the cost of living of top income groups decreased relative to the cost of living in the bottom forty percent in France. For example, domestic servants were cheaper. In France, nurses became affordable for the small bourgeoisie (Grenier, 1988): the jobless children of demographic growth?
- ▶ Using Ridolfi (2019) new price series and the nominal GPP series based on Marcewski, I find that the price of food and basic goods evolved like per capita nominal GPP. As production in handicrafts and other superior goods certainly increased, this implies that the price of inferior goods increased relatively to the price of superior goods.

### Rise in real inequality (2)

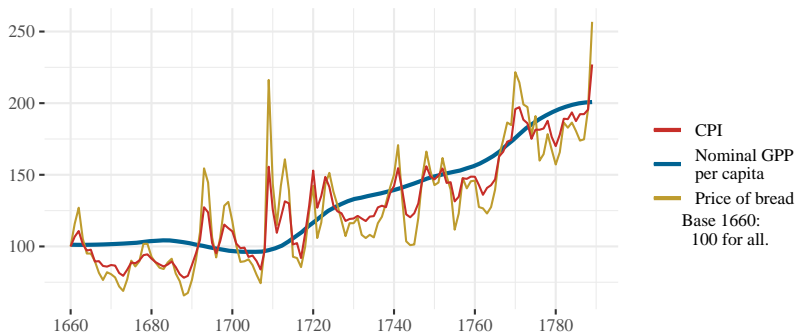


Figure: Inferior goods prices and per capita nominal GPP, 1600-1789.

### Rise in real inequality (3)

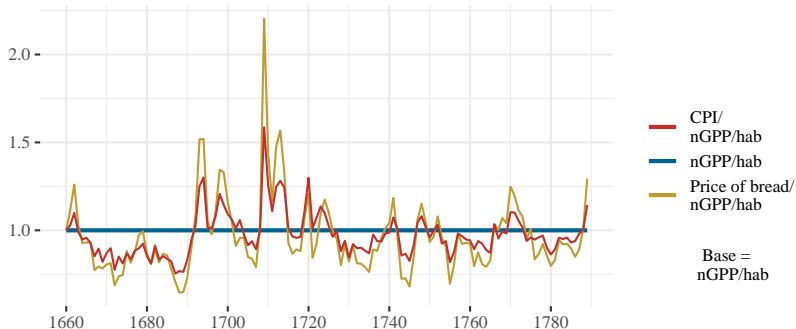


Figure: Inferior goods prices and per capita nominal GPP, 1600-1789.

### Rise in real inequality (4)

Let  $y$  be nominal GPP per capita,  $q$  the production per capita,  $i$  the sector of inferior goods (eg. bread) and  $s$  the sector of superior goods (eg. handicrafts). By definition,

$$y = p_i q_i + p_s q_s \quad (1)$$

Now it is empirically observed that

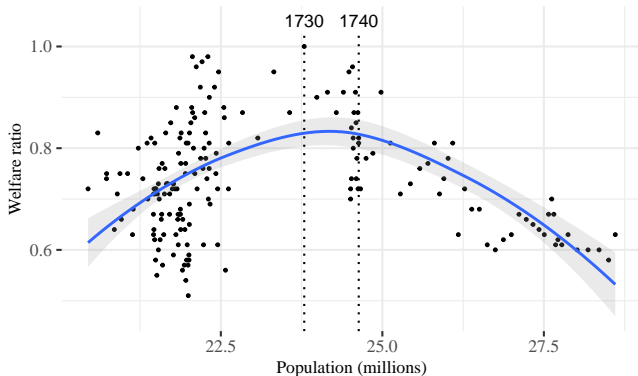
$$\alpha p_i = y + \varepsilon \quad (2)$$

$$\hat{p}_i - \hat{p}_s = \hat{q}_s + \hat{q}_i \left( \frac{\alpha}{q_i} - 1 \right)^{-1} > 0 \quad (1) \text{ and } (2)$$

Unless decreasing food supply, the relative price of inferior goods rises at least as fast as the production of superior goods. In particular, if  $\hat{q}_i \approx 0$ ,

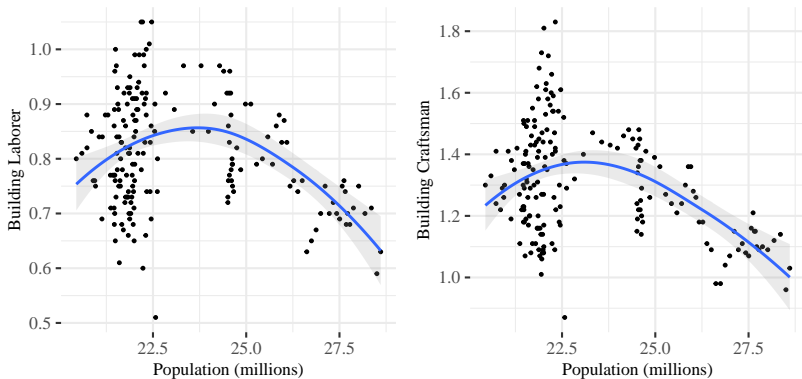
$$\hat{p}_i - \hat{p}_s \approx \hat{q}_s$$

### Malthusian versus Boserupian effects, 1605-1790



**Figure:** Welfare ratio of an agricultural laborer and French population, 1605-1790 (LOESS with 95% c.i.).

### Malthusian versus Boserupian effects: robustness check



**Figure:** Welfare ratio of building workers and French population, 1605-1790 (LOESS with 95% c.i.).

### The short Malthusian period: 1740-1790

- ▶ The short Malthusian period: negative relationship between real wages and population between 1740 and 1790, while the converse is true for the preceding period, and there is no relationship anymore in the nineteenth century (growing population and stable real wages, according to Ridolfi).
- ▶ 17th and beginning of the 18th century: high and variable mortality, low demographic growth, "good years" increase food supply (or labor demand) more than population (or labor supply).
- ▶ 1740-1790, the short Malthusian period: decreasing mortality and high demographic growth, yet before proto-industrialization boosts labor demand and agricultural productivity really rises.



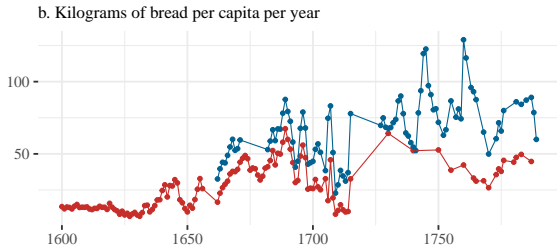
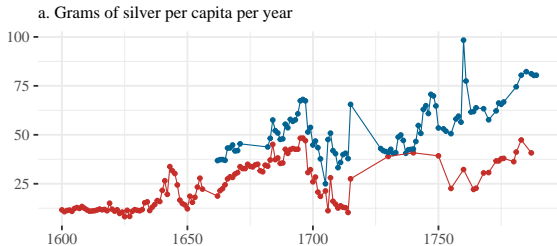
### The short Malthusian period: 1740-1790

- ▶ It is "Malthusian" in the sense that population increase leads to decrease in wages, not in the sense of a self-regulated population. Weir (1984) and Chevet (1993) show that fertility does not "respond" to mortality.
- ▶ A key effect: the unequal (and even more unequal) distribution of land, which leads to excess supply in wage labor. Wealthy farmers win the jackpot: cheaper workforce, competitive advantage for leases, opportunity to reduce their taxes. In this regard, Malthusian effects act on relative conditions, without necessarily decreasing average welfare.
- ▶ The short Malthusian period was precisely when rebellion rose. Without overinterpreting, it seems reasonable to think that it played a role.

### Unequal taxes

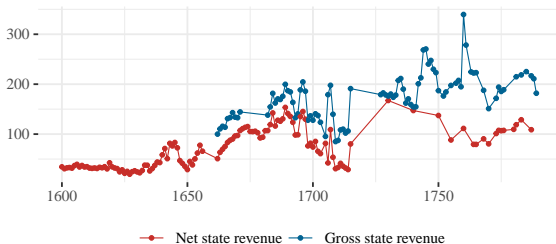
- ▶ With 3336 cases and 40% of rebellions if including side-motives, (state) tax rebellion is the most represented type. Content analysis of *Cahiers de doléances* has shown that taxation was the main concern of peasants in 1789 (Markoff, 1996).
- ▶ In the long run, the burden from state taxation increased dramatically, through the development of the fiscal-military state. State revenue was highly variable, but from the 1660s to the 1780s, the share of gross state revenue in GPP roughly doubled (from ~6% to ~12%).
- ▶ The tax burden fell chiefly on the small peasantry, since the bourgeoisie and the towns managed to get exemptions (Gelabert, 1995).
- ▶ Furthermore, heterogeneity between provinces was considerable: Île-de-France per capita contribution equal to five times that of Brittany in 1784, according to Necker's figures. 31 livres pc in pays d'élections, while less than 17 livres pc in pays d'états.

### Evolution of state revenue (1)

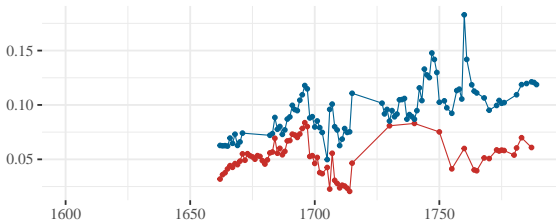


### Evolution of state revenue (2)

c. Divided by the cost of the subsistence basket, per capita  
(gross revenue = 100 in 1662)

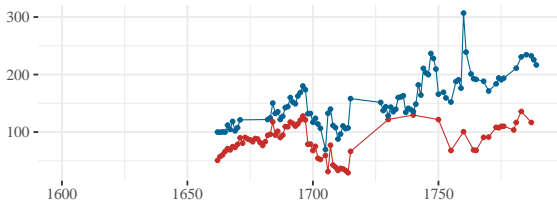


d. Proportion of the Gross Physical Product (GPP)

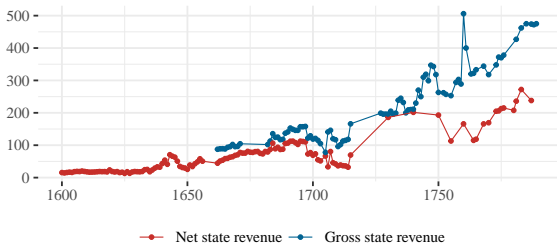


### Evolution of state revenue (3)

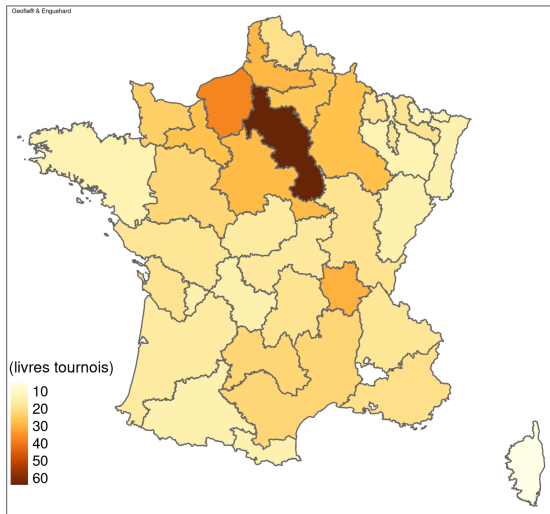
e. Divided by the wage index, per capita  
(gross revenue = 100 in 1662)



f. Divided by the wage of an agricultural laborer, per capita  
(gross revenue = 100 in 1662)



### Why Île-de-France still deserved its name



Map: Fiscal contribution to the state per capita by *généralité* in 1784. Source: ESFDB and Necker (1784)

### The state between public and private

- ▶ There was a fundamental contradiction between state goals (modernize and universalize taxation in order to secure revenue) and existing institutional framework. The provinces all referred to their specific rights and France was far from fiscal centralization. There was still no clear distinction between public duties and private claims, as well as between a state tax and a seigneurial right.
- ▶ Furthermore, tax collection was heavily inefficient and collectors ("harpies", according to Vauban) captured a huge margin, especially in the privatized system of Fermes. Attempts at reform were numerous but no one really succeed, leading directly to the financial state breakdown of 1788-1789.

## II. Interpreting disorder: Unequal taxes

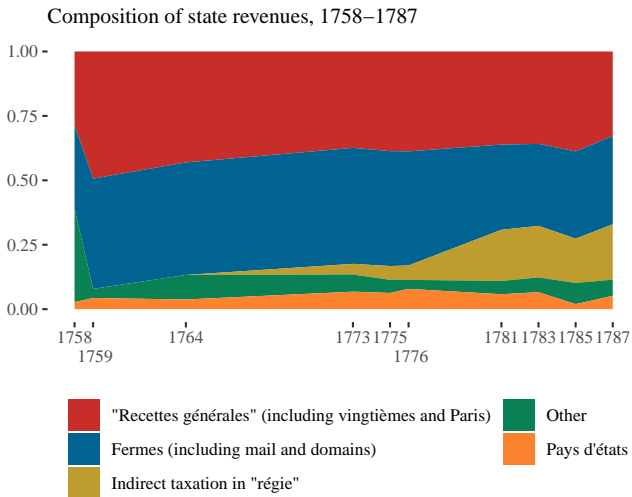


Figure: Proportion of each revenue type in the gross revenue of the French monarchy, 1758-1787. Source: Mathon de la Cour (1788).



### Indirect taxation and the rise of contraband (1)

- ▶ Direct taxation was mostly contested in courts. 97% of antifiscal rebellions relate to indirect taxation. In particular, 2/3 relate to the gabelle, the salt tax, which made half of the Fermes revenue (Marion, 1914). Gabelle was the most hated tax (second topic after "taxation" in rural cahiers according to Markoff, 1996).
- ▶ Extreme incentive to smuggle between taxed and exempted regions: the monopoly price of salt was more than 70 times the purchase price! This led to increased contraband, and entire villages living from it and defending smugglers in case of state intervention (half of disturbances).
- ▶ Hobsbawmian "social bandits": interesting for the underlying logic of collective action. A mix of material incentives and community-based ideology.

### Indirect taxation and the rise of contraband (2)

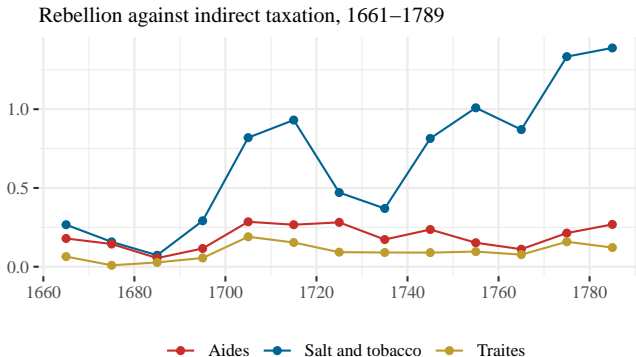
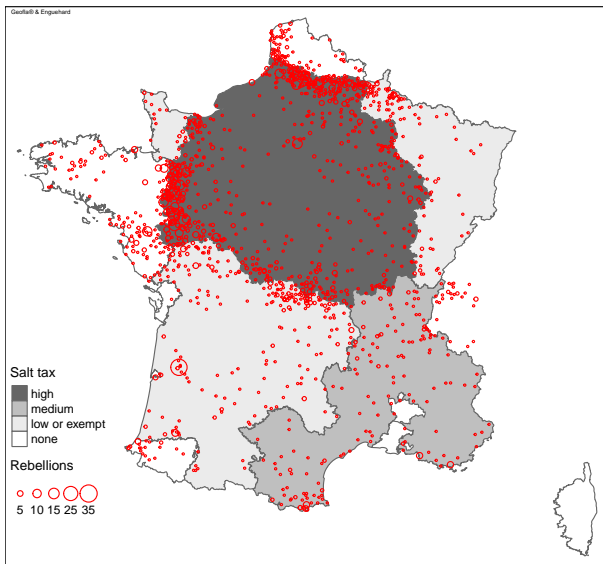


Figure: Mean annual number of rebellions against indirect taxation per million inhabitants, 1661–1789.

## II. Interpreting disorder: Unequal taxes



Map: Rebellions related to salt and tobacco smuggling, and salt tax regions, 1661-1789.

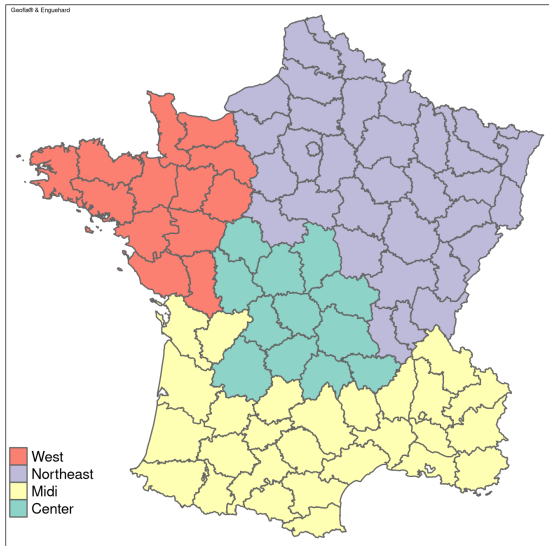
### Brustein (1986) regional social orders

How to explain different regional involvement of peasants in the Revolution? Brustein proposed to distinguish different "regional social orders".

- ▶ Northeast: cash tenancy, agricultural wage labor, commercialized agriculture, open fields and little peasant property (only 1/3 to the third estate): antagonistic landlord-peasant relation. Goldstone adds demographic growth to this.
- ▶ West: subsistent sharecropping and agricultural servant labor, more peasant property: mutual-interested landlord-peasant relation.
- ▶ Midi: peasants more market-oriented, more freeholds (roman law); advantage of multicropping.

However, a detailed study of peasant movements during the Revolution dismisses the idea of a higher involvement of the North (Markoff, 1996). In spite of this, is this a relevant division for prerevolutionary rebellion?

## II. Interpreting disorder: Regional patterns



Map: Regional social orders according to Brustein (1986).

## II. Interpreting disorder: Regional patterns

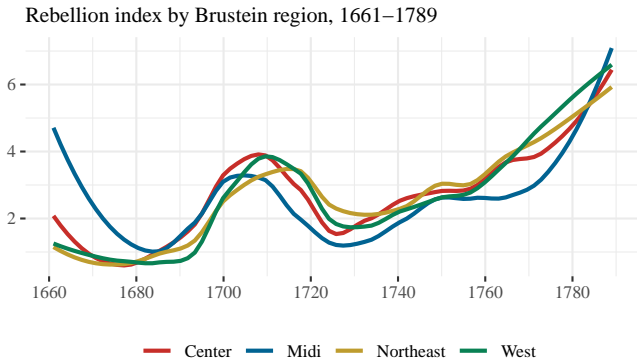


Figure: LOESS of the annual number of rebellions per million inhabitants, according to the regional division of Brustein, 1661-1789.

- ▶ Are Brustein regions relevant for prerevolutionary rebellion? The answer is no. More interesting, this common trend suggests a common mover at the country level.
- ▶ Same exercise with Lachiver regions: still globally the same trend, but little difference begins to appear (Southeast, North).
- ▶ However, no clear relation with the trends in age at marriage, which one would expect from the population pressure. hypothesis.

## II. Interpreting disorder: Regional patterns

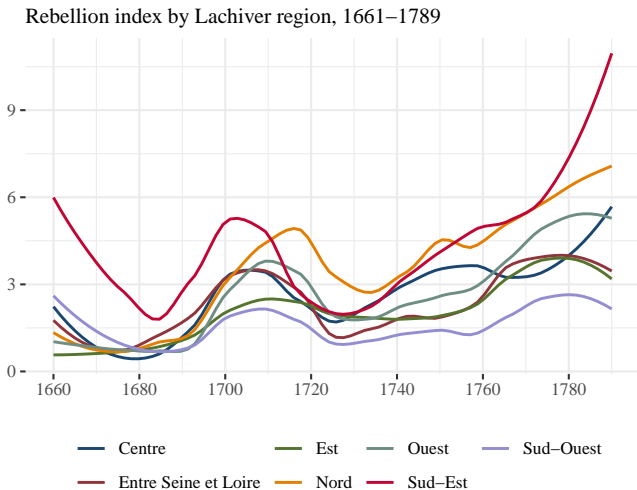
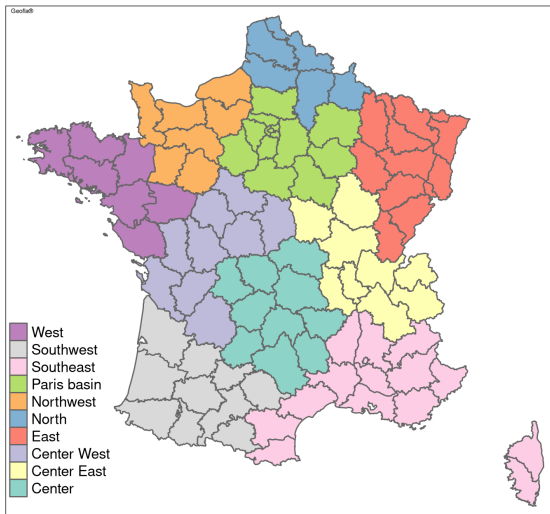


Figure: LOESS of the annual number of *émotions populaires* per million inhabitants, by Lachiver region.



## II. Interpreting disorder: Regional patterns



Map: Regional division used for the anonymous part of the Henry survey.

## II. Interpreting disorder: Regional patterns

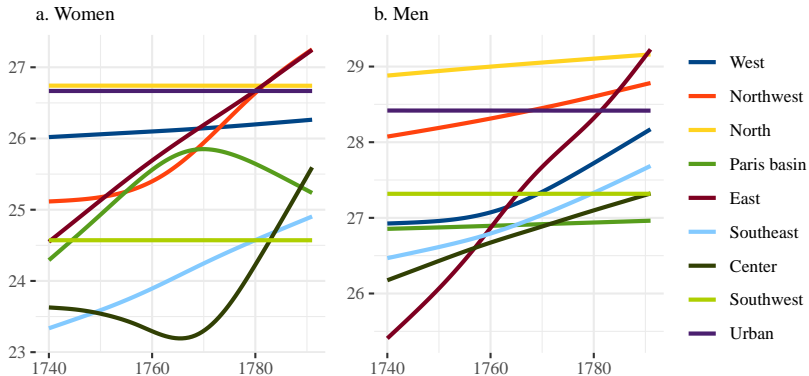


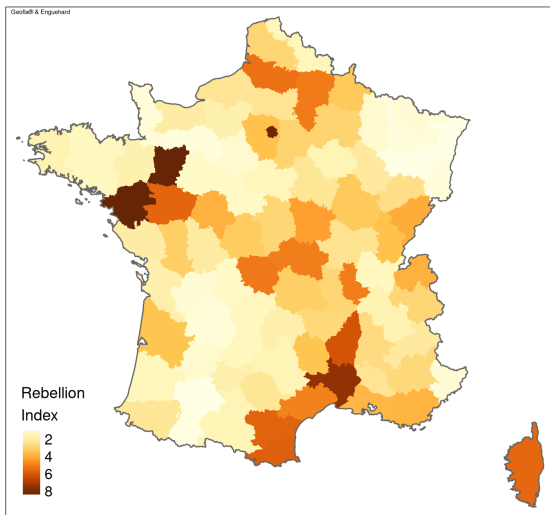
Figure: Evolution of mean age at first marriage by region, anonymous sample (1740-1791).

### Spatial distribution

A common trend does not mean a unique level: high local variability. Once again, it has no clear relation with the population pressure hypothesis. The region more prone to it (fastest population growth, most distinctive rise in age at marriage, most distinctive decline in height after the 1750) is quiet Northeast.

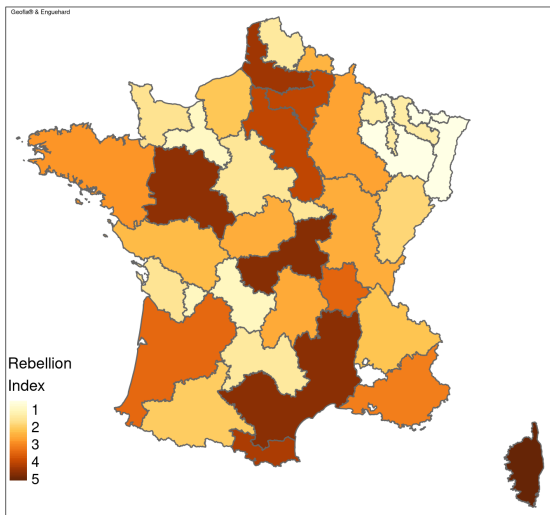
- ▶ Antifiscal West: certainly a "fiscal border effect", but also antitax tradition – future Chouans, according to Bercé (1974)! Nantes is the most rebel city. Past population increase.
- ▶ Hungry Upper Normandy: large food riots. Dense population, early birth control and decrease in fertility, breadbasket for Paris.
- ▶ Restless Paris: anti-state police (arrests) and labor disputes. Decreasing skill premium due to more entrants?
- ▶ Violent Languedoc: From protestant revolts to various collective violence at the end of the century. Poor but not the worse?

## II. Interpreting disorder: Regional patterns



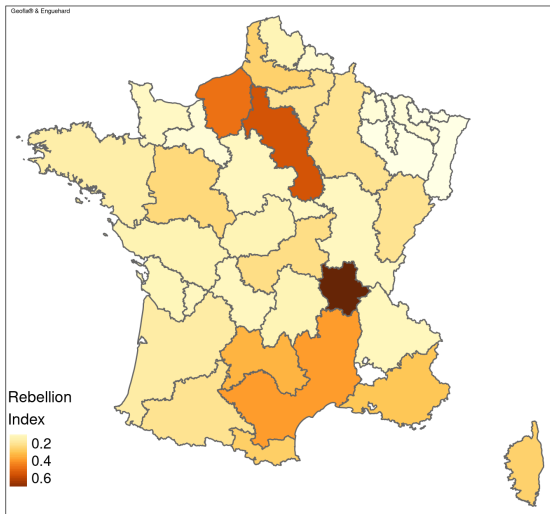
**Map:** Mean annual number of *émotions populaires* recorded within present French borders per million inhabitants, by department.

## II. Interpreting disorder: Regional patterns



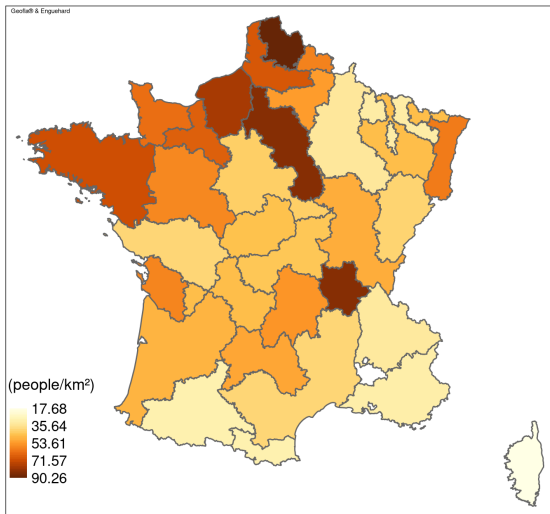
**Map:** Mean annual number of *émotions populaires* recorded within present French borders per million inhabitants, by *généralité*.

## II. Interpreting disorder: Regional patterns



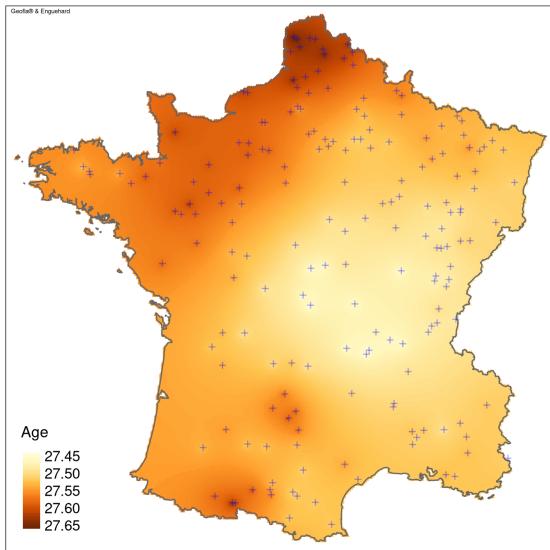
Map: Size-weighted rebellion index by *généralité*, 1661-1789.

## II. Interpreting disorder: Regional patterns



Map: Population density by *généralité*, 1778-1787.

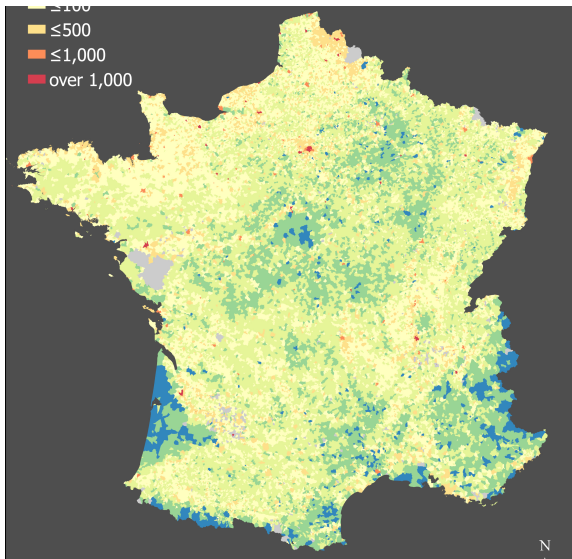
## II. Interpreting disorder: Regional patterns



**Map:** Mean age of men at first marriage in rural France, interpolated by inverse distance weighting (1740-1789).

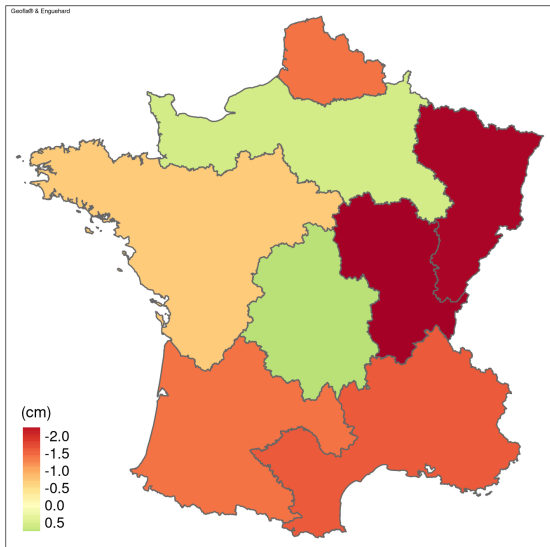


## II. Interpreting disorder: Regional patterns



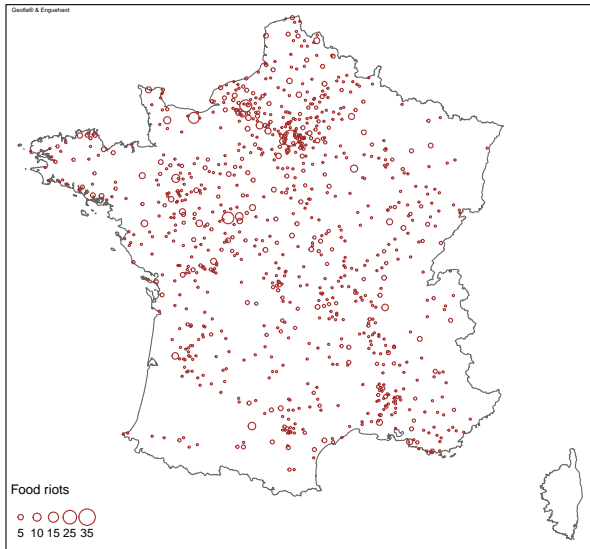
Map: Population density at the communal level, 1794. (From ANRcommunes)

## II. Interpreting disorder: Regional patterns



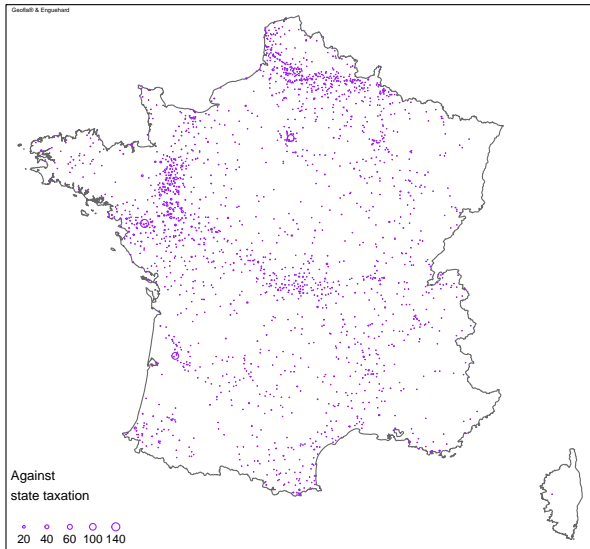
**Map:** Height increase of adult French men between 1740-1749 and 1750-1763, by region.

## II. Interpreting disorder: Regional patterns



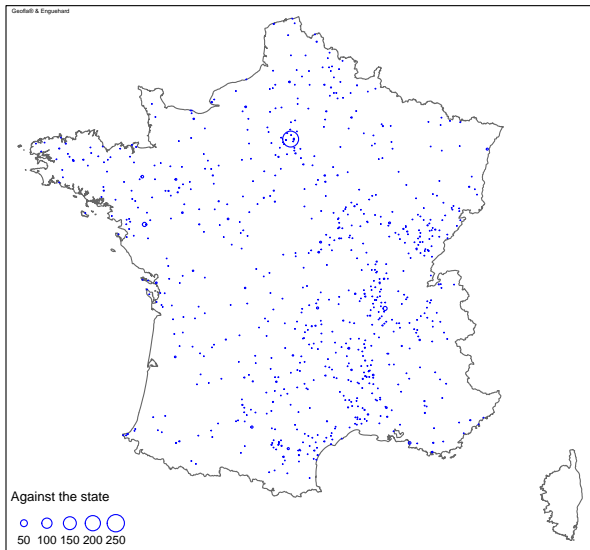
Map: Map of food riots, 1660-1789.

## II. Interpreting disorder: Regional patterns



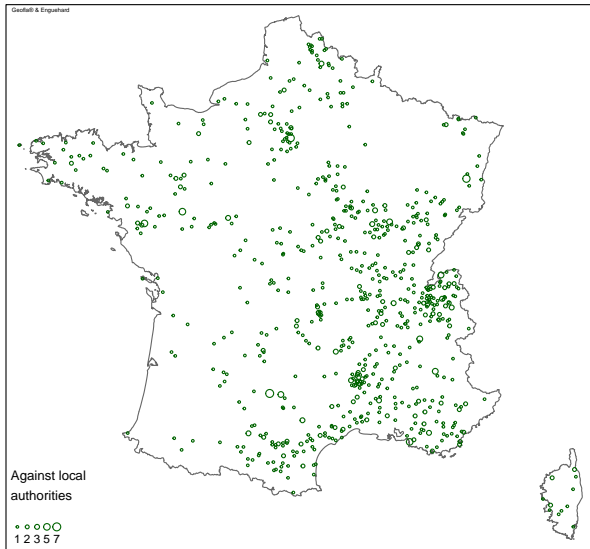
Map: Map of rebellions against state taxation, 1660-1789.

## II. Interpreting disorder: Regional patterns



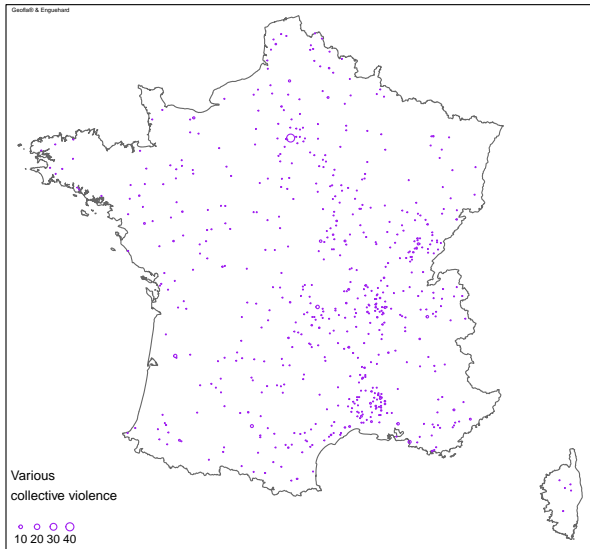
Map: Map of rebellions against state authority, 1660-1789.

## II. Interpreting disorder: Regional patterns



Map: Map of rebellions against local authorities, 1660-1789.

## II. Interpreting disorder: Regional patterns



Map: Map of various collective violence, 1660-1789.

## II. Interpreting disorder: Regional patterns

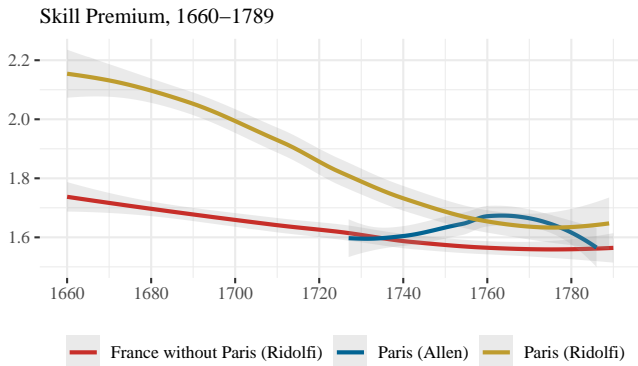


Figure: Annual wage of a building craftsman divided by the annual wage of a building laborer.



## Concluding remarks

- ▶ The population pressure works at the country level, less at the regional level. However, evidence is still far too general or too fragmented to give a definite answer.
- ▶ Whatever the difficulty of the question, it is powerful heuristic to study the social changes of eighteenth century France: rising inequality due to land distribution, prices and taxation. From this perspective, population increase only worsens an existing institutional dynamics.
- ▶ There is obviously no single explanation for the rise in rebellion (not to mention Revolution) and political and cultural factors are no less important.
- ▶ This work seeks to connect various dimensions of the very rich available data on Old Regime. Yet, further research is still needed to explore regional variation in wages, regional evolution of land distribution, and renew population reconstruction.

### Back to the Thompson critique

- ▶ E.P. Thompson (1971) complained that "for decades systematic social history has lagged in the rear of economic history". Thereafter, rebellion has been a privileged subject of social history, not of economic history.
- ▶ Indeed, rebellion do not easily fit into the framework of economic analysis (eg. "rational peasant" theories), because it involves values and representations. However, it is inseparable from questions of rank, distribution and taxation. More generally, it tells us to what extent people comply to the existing order and to the ideological justification of the inequality regime (cf. Capital and Ideology).
- ▶ Therefore, it offers new perspectives for economic history in general, and for the history of inequality in particular!

## Concern for injustice, concern for inequality

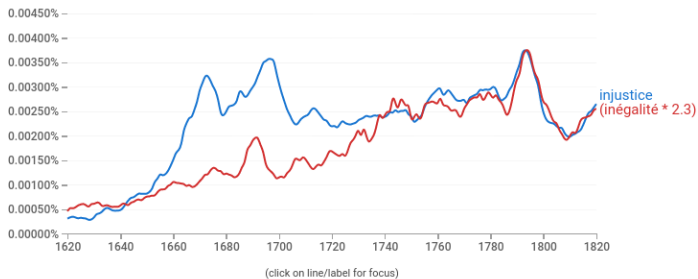


Figure: Occurrence of words "inégalité" and "injustice" in French books, 1620-1820 (Google Books Ngram)

## Acknowledgements

- ▶ Thank you for your attention!
- ▶ I would like to thank my supervisor, Thomas Piketty, and Lionel Kesztenbaum, who accepted to be referee, for their precious advice and help.
- ▶ This work was also made possible thanks to the benevolence of many people, in particular Cédric Chambru who constituted the database of rebellions and accepted to share it, Leonardo Ridolfi who shared wage and price series and John Komlos who shared height data. All errors are mine.