Extractive Taxation and the French Revolution*

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Abstract — In this paper, we provide systematic evidence in support of the long-standing hypothesis that taxation was an important driver of the French Revolution. We first document that areas with heavier taxes experienced more riots between 1750 and 1789 and voiced more complaints against taxation in the *cahiers de doléances* of 1789. After showing that these effects are driven by indirect taxes, we exploit sharp changes in the salt tax and the *traites*—the two principal indirect levies—to implement a regression discontinuity design (RDD). We find that unrest was higher on the high-tax side of the border. These effects intensified over time, peaking in the 1780s, and were stronger where fiscal disparities were larger and Enlightenment ideas more widespread. Combining the RDD with weather shocks during the 1780s, we further show that unusually hot summers amplified unrest in high-tax municipalities. We then document that taxation fueled the spread of unrest during the *Grande Peur*—the wave of revolts that swept France in July 1789 and culminated in the abolition of feudal privileges. Finally, we link taxation to revolutionary politics in Paris, documenting that deputies from heavily taxed constituencies were more likely to frame the tax system as oppressive and unequal, support the Revolution, demand the abolition of the monarchy, and vote for the king's execution.

Keywords: Taxation, French Revolution, state capacity, regime change.

JEL codes: D74, H20, H31, O23

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"The Old Regime [. . .] perished because its tax system struck only the inferior classes."
— Norberg (1994), p. 256

1 Introduction

The French Revolution dismantled the *Ancien Régime*, redefining state power and institutions. Its transformations—from abolishing feudal privileges to establishing modern bureaucratic and legal frameworks—extended beyond France, influencing global institutional trajectories (Acemoglu et al., 2011). Although its causes were complex, one widely recognized factor is extractive taxation (Norberg, 1994; Touzery, 2024). Alexis de Tocqueville argued that allowing monarchs to impose taxes without consent "sowed the seed of practically all the vices and abuses" of the *Ancien Régime*, ultimately causing its collapse (Tocqueville, 1856). Yet, systematic empirical evidence on this prominent hypothesis remains limited.

In this paper, we provide new systematic evidence that taxation helped ignite and spread revolutionary unrest, and influenced political behavior during the early years of the Revolution. We digitize and geo-reference newly assembled data from Touzery (2024) on local per capita tax burdens around 1780, and show that heavier taxation was associated with greater unrest in the decades preceding 1789. Figure 1 illustrates this relationship: *bailliages* with heavier tax burdens experienced significantly more riots between 1750 and 1789.[1] We verify that this relationship is robust to controlling for several factors commonly associated with revolutionary unrest—including the spread of Enlightenment ideas, wheat prices, the local presence of aristocrats and clergy, and the size of tax police brigades. Quantitatively, moving from a *bailliage* in the bottom quartile of the tax-burden distribution to one in the top quartile—a difference corresponding to roughly 8% of per capita income at the time—more than doubles the number of riots between 1750 and 1789.

We interpret these patterns as evidence of widespread opposition to taxation. To probe this mechanism more directly, we use the lists of grievances (*cahiers de doléances*) compiled in the spring of 1789 and submitted to Versailles ahead of the Estates General. These records document complaints at the *bailliage* level across a wide range of issues. We find that areas with heavier tax burdens submitted more complaints against taxation, even when expressed relative to the total number of complaints. This relationship holds only for the Third Estate and not for the nobility, consistent with the fact that the former bore most of the tax burden while the latter were largely exempt. Moreover, we provide suggestive evidence that, within the Third Estate, different constituencies emphasized the taxes to which they were most exposed. To further shed

[1] During the *Ancien Régime*, the *bailliage* (in the north of France) or *sénéchaussée* (in the south) referred to a local administrative, financial, and judicial district—just above the parish. In 1789, France had 435 *bailliages*.

light on the nature of fiscal grievances, we classify tax complaints into four categories: economic burden; horizontal inequality, reflecting the unequal incidence of taxation across social groups and territories; vertical inequality, capturing extraction by the Crown and tax farmers without corresponding benefits for the population; and intrusive enforcement, referring to coercive collection practices. We find that the effects of taxation manifest in the first three categories, suggesting that inequality compounded the opposition to taxation beyond its sheer economic burden.

We find that the relationship between taxation and unrest is driven primarily by indirect taxes, rather than by direct or local levies. This is consistent with historical accounts emphasizing popular hostility toward indirect taxes, which were seen as especially regressive, enforced through intrusive state controls, and emblematic of fiscal injustice under the *Ancien Régime* (Sands and Higby, 1949; Touzery, 2024). We then exploit plausibly exogenous variation in the indirect tax burden driven by sharp border discontinuities of two major levies: the salt tax, described as one of the most "iniquitous institutions of the *Ancien Régime*" (Sands and Higby, 1949), and the *traites*, a system of internal customs duties (Heckscher, 1955). Together, these two levies accounted for over 20% of royal revenues by 1780, were deeply resented, and were among the first to be abolished in 1790.

As discussed in Touzery (2024), the salt tax and the *traites* were parts of the same fiscal infrastructure. Both were administered by the *Ferme générale*, enforced by the same guards and warehouses, and defined overlapping fiscal frontiers that divided the kingdom into distinct regimes of taxation and control. The customs lines created in the 1660s largely followed the established borders of the salt tax provinces, producing what Touzery (2024) describes as a cumulative fiscal frontier where different indirect levies operated through a shared network of posts and inspections. This motivates our empirical strategy, which exploits variation at these fiscal frontiers in a nonparametric Regression Discontinuity Design (RDD). We geolocate historical salt tax and *traites* borders from archival maps and cross-reference them with newly hand-collected data on 1780 tax rates, comparing riot activity in municipalities located on either side of these borders.[2]

The RD analysis rests on the assumption that only the salt tax and the *traites* change discontinuously at the border. The exact placement of these fiscal boundaries reflected long-standing provincial privileges, salt-marsh geography, and historical bargains rather than contemporaneous revenue needs, creating sharp but largely exogenous tax discontinuities. We provide several pieces of evidence in support of this identification strategy. First, we verify that municipal

[2]We use the term "municipality" to refer to the parish, which was the smallest administrative unit in France until 1789. In January 1790, parishes were formally replaced by municipalities.

characteristics—such as altitude, soil type, rivers, Roman roads, 18th-century infrastructure, and literacy—vary smoothly at the border. Second, we find no discontinuities in variables plausibly linked to unrest, including exposure to Enlightenment ideas, monastery income, noble population share, wheat prices, the presence of fiscal brigades, and proximity to horse-post relays. Third, we implement placebo tests that shift the tax borders a few kilometers away from their true location, and find no discontinuities in riot incidence. Fourth, results remain unchanged when we restrict the sample to salt tax borders historically drawn about one day's horse travel (roughly 50–70 km) from saltworks and marshes—distances that reflected 14th-century transport and enforcement constraints, not local economic conditions.

A separate concern is that tax borders may coincide with other administrative or historical boundaries. To assess this possibility, we divide each tax border into 1-km segments, and classify each segment along several dimensions: its historical origin (Roman, religious, or *Ancien Régime generalité*); the legal system (written law in the South versus customary law in the North); the organization of representation (distinguishing *pays d'état* from *pays d'élection*); the territorial ressort of regional parliaments; and, the main linguistic frontier, which proxies for deep cultural divides. We show that excluding each category in turn leaves the results unchanged. We also perform a placebo exercise using all jurisdictional borders in France that do not overlap with the high-tax frontier considered in our analysis. Along these borders—where administrative jurisdictions change but tax rates do not—we find no discontinuous change in riot incidence. This confirms that fiscal differences, not jurisdictional ones, drive the results. We present further robustness exercises—including alternative bandwidths, checks on potential reporting biases, and issues related to geo-referencing—below.

Turning to the results, we find that crossing the border from a low- to a high-tax municipality increases the number of riots. The effects begin to emerge in the 1760s, and become larger and more precise over time, peaking in the 1780s. In line with our interpretation, results are driven by tax-related riots, while we find no discontinuities for riots unrelated to taxation, such as food or labor unrest. One interpretation of these findings is that taxation depressed local economic development, making communities poorer and thus more prone to revolt for material reasons. Giommoni and Loumeau (2022) show that municipalities on the high-tax side of the salt tax border were less densely populated by 1780, consistent with a lasting negative effect of the salt tax on economic activity. Although we control for 1780 population in the baseline RD specification, we do not seek to rule out this "income channel." It is plausible that material hardship contributed to unrest, and throughout the paper we present evidence consistent with this view.

Beyond material conditions, other patterns point to ideological mechanisms rooted in perceived

inequality and fiscal injustice. The effects are stronger where fiscal disparities were larger, suggesting that discontent was fueled not only by tax levels but also by how inequitable the system appeared. These perceptions were likely sharper in places more exposed to Enlightenment ideas, which emphasized equality before the law and challenged inherited privilege and arbitrary power (Darnton, 1982; McMahon, 2001). Consistent with this interpretation, we find that the discontinuity in riots is concentrated in areas with greater exposure to Enlightenment ideas, as measured by local book sales and subscriptions to the *Encyclopédie*. We detect no comparable heterogeneity with respect to literacy, indicating that what mattered was not access to reading per se but the diffusion of ideas that questioned the legitimacy of fiscal privilege and unequal treatment.

An alternative interpretation relates to the enforcement reform of the 1730s, when new measures against illicit salt smuggling triggered a surge of unrest on the high-tax side of the border (Davoine et al., 2024). Our evidence, however, suggests that the discontinuities we document reflect broader fiscal grievances rather than the lingering impact of that episode. First, the effects in our data emerge only after 1760 and peak in the 1780s, more than four decades after the reform. Second, the results remain unchanged when excluding riots that explicitly mention the smuggling of specific goods or when dropping small-scale incidents likely reflecting isolated clashes between smugglers and enforcement agents.

Why did the effects of taxation peak after 1780? Indirect taxes had existed for centuries, and the overall burden rose sharply between 1690 and 1760 but changed little thereafter (Touzery, 2024). The surge in unrest after 1780 therefore calls for another explanation. Historians point to the subsistence crises of the 1780s, when droughts devastated harvests and drove up wheat prices (Lefebvre et al., 1947; Waldinger, 2024). To test how adverse weather shocks interacted with taxation, we combine the baseline RD framework with temporal and spatial variation in temperature and precipitation, focusing on municipalities near the tax border. We estimate a two-way fixed effects model that compares municipalities on either side of the border and interacts local weather shocks with a high-tax indicator. We find that a 10% increase in summer temperature (about 1.8°C) roughly doubled the number of riots in high-tax municipalities relative to their low-tax neighbors.

This specification absorbs all time-invariant local characteristics—including long-run differences in economic development that may themselves have been shaped by taxation—thereby strengthening the credibility of the RD design. The results also highlight that material conditions mattered: subsistence crises in the 1780s amplified latent discontent in heavily taxed areas. Together with the earlier evidence on fiscal disparities and Enlightenment exposure, these findings suggest that taxation created the structural foundations for unrest, while both material

hardship and ideological forces acted as catalysts that transformed long-standing grievances about fiscal inequality into open revolt.

If grievances remained local, they might have produced sporadic disorder; if they spread across communities, they could build into a broader political movement. To test whether fiscal discontent helped ignite a broader revolutionary wave, we focus on a key episode: the *Grande Peur* ("Great Fear") of July and early August 1789. Following the fall of the Bastille, rumors of aristocratic conspiracies spread rapidly across rural France, triggering attacks on manor houses and the destruction of feudal records; in response to this wave of unrest, the *Assemblée Nationale* abolished feudal privileges (Lefebvre, 1973). This period allows us to test whether fiscal pressures shaped how far and how fast revolt spread. Using digitized and geo-referenced maps from Lefebvre (1973) combined with data from Zapperi et al. (2025), we trace the spatial spread of the Great Fear. We find that high-tax *bailliages* were more likely to ignite panic contagion, more likely to be swept into the wave, reached it earlier, and saw a larger share of their territory affected.

These patterns suggest that fiscal grievances fueled the revolutionary crisis from below, but the Revolution was also driven from above, through the choices of its representatives. In the last part of the paper, we show that taxation shaped not only popular unrest but also legislative behavior. Using the *Archives Parlementaires*, we analyze more than 60,000 speeches delivered between May 1789—the opening of the *États Généraux*—and January 1793, when Louis XVI was executed. We rely on a two-step classification pipeline that first identifies fiscal passages through rule-based keyword and context filtering, and then applies a supervised model to determine each speech's stance toward the *Ancien Régime* and the Revolutionary fiscal system. We find that deputies from high-tax constituencies engaged very differently with fiscal issues than those from low-tax areas. High-tax legislators were about 60% more likely to speak about taxation, nearly twice as likely to criticize the *Ancien Régime*, and roughly 60% more likely to defend the Revolutionary project in their tax-related speeches. They were also more inclined to frame taxation as unequal or oppressive and to call for fiscal reform. These differences appear only in the first phase of the Revolution, when fiscal questions dominated parliamentary debate.

Finally, we move beyond fiscal debates to examine how taxation shaped political behavior at key turning points of the early Revolution. First, we show that in the weeks following the Great Fear—when these issues were actively debated in the Assembly—deputies from high-tax constituencies were more likely to demand institutional change, explicitly call for the abolition of feudal privileges, and openly criticize the monarchy in their speeches. Second, we turn to the *Assemblée Législative* (October 1791–September 1792), and document that legislators from heavily taxed constituencies were more likely to support the abolition of the monarchy. Third,

using newly digitized roll-call votes from the *Convention Nationale*, we find that deputies from high tax regions were more likely to vote for the king's execution in January 1793.[3]

The notion that taxation was one of the main causes of the French Revolution is widely recognized in the historical literature (Marion, 1921; Sands and Higby, 1949; Touzery, 2024). However, to the best of our knowledge, our paper is the first to provide systematic evidence in support of this idea. In doing so, we also complement work within economics. Sargent and Velde (1995) and White (1995) examine the relevance of growing government debt and budget deficit for the French Revolution, while Velde and Weir (1992) document the structure and evolution of French debt markets in the decades preceding 1789. Waldinger (2024) studies the link between weather shocks and conflict at the onset of the French Revolution. Jha and Wilkinson (2023) and Ottinger and Rosenberger (2023) document that exposure to the American Revolution increased support for the French Revolution a decade later through a process of ideological transmission.[4]

Our results also relate to studies on riots in pre-revolutionary France. Chambru (2019) shows that adverse weather shocks increased riot activity between 1661 and 1789. Albertus and Gay (2025) document that the opening of new post-relay stations triggered riots by intensifying the local presence of the state. Closer to our paper, Davoine et al. (2024) study a reform in the 1730s that created special courts to prosecute salt smugglers. They show that this crackdown generated a surge in smuggling-related conflicts and fueled resentment against the salt tax. We complement this work by shifting the focus from enforcement to taxation itself. First, we document broad effects of taxation on unrest and grievances in the decades immediately preceding the Revolution. Second, we show how economic shocks and Enlightenment ideas amplified these effects. Third, we study the spatial diffusion of unrest, demonstrating that riot contagion was conditional on local tax burdens. Finally, we link pre-revolutionary taxation to revolutionary politics, documenting that deputies from more heavily taxed constituencies were systematically more radical in their demands for reform and more likely to support the Revolution.

More broadly, our findings shed light on the relationship between taxes and revolutions, and resonate with the well-known maxim, "no taxation without representation." Angelucci et al. (2022) have documented how fiscal autonomy and local tax collection enabled medieval English

[3]Political authority during the Revolution was exercised through three successive national assemblies. The *Assemblée Constituante* (1789–1791) drafted the constitutional framework of the new regime; the *Assemblée Législative* (October 1791–September 1792) governed under the Constitution of 1791 until the fall of the monarchy; and the *Convention Nationale*, established after the monarchy's abolition, ruled France from September 20, 1792, to October 26, 1795.

[4]For a detailed discussion of the causes of the French Revolution, see Lefebvre (1951); Ladurie (1971); Lefebvre (1973); Shapiro et al. (1998); Neely (2008) among others. Several papers in economics have also examined the economic consequences of the French Revolution (Acemoglu et al., 2011; Squicciarini and Voigtländer, 2016; Franck and Michalopoulos, 2017; Loumeau, 2023; Chambru et al., 2024).

towns to gain representation. The conceptual framework in Angelucci et al. (2024) rationalizes this process and emphasizes how local economic power led to the incorporation of towns into national decision-making. In contrast, our paper emphasizes the risks of political exclusion: when taxation is imposed without representation, it can become a catalyst for popular unrest and regime change, especially following negative economic shocks. This mechanism is also consistent with theories of institutional change and democratization (Acemoglu and Robinson, 2000, 2006; Scheve and Stasavage, 2016; Stasavage, 2020).

Finally, our results complement the literature on state capacity. Prior work has emphasized the role of mass warfare in strengthening fiscal institutions (Tilly, 1990; Gennaioli and Voth, 2015; Stasavage, 2016; Becker et al., 2020; Cox et al., 2025) and has shown that effective, inclusive taxation fosters economic growth (Besley and Persson, 2010; Dincecco and Katz, 2016; Cantoni et al., 2024; Chambru et al., 2024).[5] Weak states, by contrast, often rely on extractive taxes (Besley and Persson, 2009). These raise revenues in the short run but erode legitimacy, reduce compliance, and can bring down regimes. This logic goes back to classic theories of the "social contract" (Locke, 1690; Hobbes, 1651; Rousseau, 1762), and is central to work in history and political science (Tilly, 1985; Levi, 1997). Our paper provides systematic evidence in support of this theory, focusing on the French *Ancien Régime*—a paradigmatic weak and extractive state.

2 Historical background

This section provides a concise overview of the fiscal institutions of the *Ancien Régime* and the origins of the French Revolution. Our aim is not to offer a comprehensive description, but to highlight the features most relevant for our empirical analysis. A full treatment of either the fiscal system of the *Ancien Régime* or the Revolution itself is beyond the scope of this paper; for detailed accounts, see Norberg (1994) and Touzery (2024) among others.

2.1 Fiscal institutions during the Ancien Régime

The fiscal system under the *Ancien Régime* relied extensively on tax farming. Most taxes were not collected directly by the Crown but leased out to private companies, most prominently the *Ferme générale*. In exchange for an upfront payment to the monarchy, these tax farmers acquired the right to collect revenues on behalf of the state. This arrangement guaranteed the Crown immediate funds but created powerful private intermediaries with strong incentives to maximize extraction (Johnson and Koyama, 2014). Contemporary critics denounced the system as corrupt and abusive, noting that farmers enriched themselves at the expense of taxpayers

[5] Related work has also documented how state centralization and the expansion of administrative capacity promote long-run economic development (Gennaioli and Rainer, 2007; Mastrorocco and Teso, 2023; Aneja and Xu, 2024; Chiovelli et al., 2025).

and that the Crown ceded considerable control over its own revenues (Kwass, 2000).

Taxation was highly fragmented and inefficient. Administrative divisions had been layered over centuries of territorial expansion and compromise, leaving a patchwork of overlapping jurisdictions. Boundaries of fiscal authority rarely coincided with those of judicial or ecclesiastical units, producing a bewildering complexity that few could master. As Jacques Necker, Louis XVI's finance minister, lamented in 1784, the fiscal apparatus was "so convoluted that scarcely one or two men per generation manage to fully master its intricacies" (Necker, 1784). This fragmentation generated sharp inequalities across regions, with otherwise similar areas facing markedly different tax burdens. These spatial disparities were not offset by local public goods provision: higher-tax regions did not systematically receive more services or redistribution, reinforcing perceptions of territorial unfairness.

In addition to inequality across space, the tax system was deeply unequal across social and economic groups. The clergy and the nobility, who together represented roughly 2% of the population, were often exempt from taxation or faced preferential treatment. The Third Estate—the remaining 98% of the population—shouldered the overwhelming share of the fiscal burden. Figure A1 shows a popular caricature from 1789 representing the hard-working Third Estate carrying both the nobility and the clergy on its back. The first item mentioned in the pockets of the nobility is "sel et tabac" (salt and tobacco). The legend reads "A faut espérer q[u]'eu jeu là finira b[i]entôt" ("Hopefully, this game will be over soon"). This echoes Norberg (1994)'s idea that the extractive tax system in place was an important driver of the French Revolution.

On the eve of the Revolution, the French monarchy raised roughly 97% of its revenues through taxation, with the remaining 3% coming from the royal domain. Roughly 40% of revenues came from direct taxes—the *taille*, *capitation*, and *vingtièmes*—while the remainder was raised through indirect levies, such as the salt tax (*gabelle*), excises (*aides*), customs duties (*traites*), and the tobacco monopoly (Figure A2).[6] Royal receipts rose from about 150 million *livres tournois* around 1700 to 350–400 million by the 1780s, equivalent to roughly 20 *livres* per capita (Figure A3, Panel A). Most of this increase occurred before 1760; in the following decades, the overall burden stabilized even as fiscal tensions deepened. The persistence of inequality and the complexity of overlapping fiscal regimes made the system increasingly vulnerable to crisis and, ultimately, to political challenge.

[6]We follow Touzery (2024) in classifying the main levies of the *Ancien Régime* into direct and indirect taxes. As discussed below, certain features of the salt tax made it closer to a poll tax than a conventional indirect levy, but this distinction is largely semantic for our purposes.

2.2 *Indirect taxes*

After 1600, indirect taxation became increasingly central to the fiscal state. The share of royal revenues collected through indirect taxes rose from about 20% in 1600 to roughly 57% on the eve of the Revolution (Figure A3, Panel B). Collected largely by the *Ferme générale*, these taxes operated through a single network of warehouses, barriers, and checkpoints that spanned the kingdom. Although each tax had its own legal regime, together they formed what Touzery (2024) describes as a common fiscal infrastructure—distinct instruments built upon the same administrative geography. Two in particular—the salt tax and the *traites*—stood out for both their fiscal weight and political resonance, jointly accounting for about one-fifth of the effective levy on the average taxpayer. Both were enforced at dense lines of fiscal borders whose location reflected historical bargains and privileges rather than economic fundamentals, a feature we exploit for identification in Section 5.

The salt tax. The salt tax was among the most distinctive and unpopular elements of the French fiscal system. The prominence of the salt tax reflected both the state's monopoly over salt production and the ubiquity of salt in daily life. First introduced in 1246 by Philip IV as a temporary levy to finance crusading campaigns, the *gabelle* was made permanent in the 14$^{\text{th}}$ century; by the 18$^{\text{th}}$ century, it had become one of the monarchy's most important sources of revenue. On the eve of the Revolution, it accounted for roughly 12% of the total levy for the average commoner (Figure A2). The salt tax was abolished in March 1790, in the earliest phase of the Revolution, reflecting widespread opposition (Sands and Higby, 1949).

What made the *gabelle* particularly contentious was not only its size but also its arbitrary geography. Many of its borders followed the outlines of the *généralités*—the fiscal districts used for direct taxation—though with numerous exceptions and irregularities. These correspondences reflected the way different levies were layered upon the same administrative map rather than any deliberate coordination (Touzery, 2024). Panel A of Figure A4 reproduces the historical *Carte des Gabelles* published in 1781 Necker's *Compte rendu au Roi*, which depicts the system on the eve of the Revolution. By the 1780s, France was divided into more than twenty salt-tax regions separated by borders that often bore little relation to economic fundamentals. Many of these boundaries had been fixed centuries earlier—sometimes following wartime frontiers, sometimes carved out to reward loyalty or secure peace—and were maintained with little adjustment despite changes in transport and markets (Touzery, 2024).

For instance, the border between the *Grandes Gabelles* around Paris and the *Provinces Rédimées* in the southwest largely followed the shifting frontiers of the Hundred Years' War and reflected a one-time "redemption" payment made in the 16$^{\text{th}}$ century, rather than any economic rationale. Another example is the *Quart-Bouillon* in Normandy, where in lieu of the standard salt tax,

producers surrendered a quarter of their output to the Crown. The boundaries of this zone were defined by how far a horseman could travel from salt-producing regions such as the Mont-Saint-Michel Bay, a rule of thumb that became obsolete once transport improved. A similar rationale shaped the borders of the *Pays de Salines* in eastern France, where underground saline water from the Alps was boiled to extract salt.

The incidence of the tax was steep. In high tax areas, people were forced to purchase at least one minot per year for every 14 people over eight years old (corresponding to 3.4 kg per person). This amount was close to the estimated yearly need for an adult (including usage for production and agriculture), implying that the salt tax was essentially a forced method of taxation. Since few alternatives to salt existed and because even in low tax areas the price of salt was high, historians estimate that individuals living in regions with a low salt tax rate consumed between 3.5 and 4 kg of salt per year on average (Anderson, 1980). For this reason, the effective consumption of salt did not differ much around the tax border. Estimates suggest that the average household in the high tax area paid about 13% of its annual income in salt tax, as compared to 2.5% in the low tax area (Morineau, 1972).[7] The sale price of salt in Paris was reported at more than nine times the wholesale cost, implying effective tax rates approaching 1,000%.

Enforcement was equally resented. The Crown employed a dense network of tax collectors, or *gabelous*, to patrol borders and monitor storehouses. Popular sayings complained "Ils sont partout, les Gabelous! [The tax collectors are everywhere!]" (Touzery, 2024). Each region operated its own *greniers à sel* (royal salt warehouses) and *tribunaux des gabelles*, forming a network of quasi-autonomous fiscal jurisdictions. Smuggling was rampant, with salt traded illicitly across borders at a fraction of the official price. Crackdowns, particularly in the 1730s and 1740s, sparked violent clashes between smugglers, local populations, and tax officials (Davoine et al., 2024). Folk heroes such as Louis Mandrin, executed in 1755 for leading smuggling bands, became symbols of resistance to fiscal oppression (Kwass, 2014).

The *traites*. The *traites* were another pillar of indirect taxation under the *Ancien Régime*. They referred to a complex system of internal and external customs duties levied on goods as they crossed provincial or national borders. First introduced in the 13th century, the *traites* expanded significantly in the 1660s as the monarchy sought to centralize control over trade and bolster fiscal revenues, and accounted for 8% of tax revenues by 1780. This process marked the consolidation of a "*frontière fiscale*," a fiscal frontier that gradually overlaid the earlier salt tax boundaries (Touzery, 2024). The spatial architecture of the *traites* thus built upon the same

[7] Back of the envelope calculations using data from OECD indicate that, in 2021, the incidence of the tax for the average French household would range from 805 (low tax) to 4,189 Euros (high tax).

administrative skeleton as the *gabelle*: customs lines, brigades, and inspection posts were extended along existing salt tax demarcations.

On the eve of the Revolution, customs duties were divided into three major zones, as shown in Necker's *Carte des Traites* published in the *Compte rendu au Roi* (1781) and reproduced in Figure A4, Panel B. The first was the *Cinq Grosses Fermes*, a large customs bloc surrounding Paris that functioned as a fiscally unified but heavily protected area, broadly coinciding with the *Grandes Gabelles* (high salt tax) region. Goods circulated freely within it, but the bloc was enclosed by high external duties—among the steepest in the kingdom. The second comprised the *provinces réputées étrangères*, which were politically part of France yet treated as quasi-foreign for customs purposes, facing negotiated or reduced tariffs when trading with the core. These largely coincided with the *provinces rédimées*, the *provinces franches*, and the *provinces de petites gabelles* of the salt tax system—regions that had fought for their fiscal autonomy and, in both systems, retained distinct privileges vis-à-vis the royal monopoly. The third included the *provinces à l'instar de l'étranger effectif*, border provinces subject to the same duties as external trade, effectively outside the internal customs union.

As with the salt tax, resentment toward the *traites* stemmed not only from their inefficiency but also from their perceived inequity. Revenues were centralized in the royal treasury and rarely reinvested locally. By the late 1780s, opposition to the *traites* was widespread, featuring prominently in pamphlets, caricatures, and the *cahiers de doléances* (Bosher, 1970; Kwass, 2000). In March 1790, the National Assembly eliminated the internal customs system, along with the salt tax and other emblematic indirect levies. The removal of the *traites* was celebrated as both an economic liberation and a moral victory (Doyle, 1989; White, 1995).

2.3 Cracks in the system

Over centuries, the burden of taxation generated latent discontent among the French population. By the mid-18th century, this discontent had become increasingly visible, with more than 100 episodes of unrest occurring yearly in the 1750s and 1760s. The frequency of riots rose in subsequent years with spikes in 1768 and 1775, before exploding in 1788–1789 (Chambru and Maneuvrier-Hervieu, 2024).[8] The centrality of taxation in public discourse also grew. Figure A5 plots references to taxation in French-language books from the Archives of the National Library of France (Azoulay and de Courson, 2021). Mentions rose steadily, peaking in 1789 when nearly one-quarter of all published works referred to taxes, before falling sharply after 1790. This pattern was driven largely by political philosophy, consistent with the view that the Enlightenment literature helped "create a new public opinion, one that judged power by the

[8]The 1765–1769 increase in riots was fueled by shocks to wheat prices, while the 1775 peak reflects the "Flour wars" sparked by soaring bread prices and food shortages.

yardstick of reason and justice rather than tradition and privilege" (Darnton, 1995).

The debate around the French taxation system intensified in 1781, when King Louis XVI's finance minister Jaques Necker made public his *Compte rendu au Roi* (or, the "Report to the King"). The document represented the first general overview of the Kingdom's finances available to the public (Harris, 1972). It revealed both the spatial disparities in the tax burden and the lists of pensions to nobles, including the names and amounts paid by the state. It also painted an overly positive picture of the Kingdom's finances—most notably by omitting the loans contracted by the French state to finance its involvement in the American War of Independence. As the Kingdom's fiscal position continued to deteriorate, a failed reform in 1787 laid bare the depth of the crisis (White, 1995). Public engagement with fiscal issues surged. Figure A6 shows that between 1780 and 1790, references to taxation in French newspapers increased more than fourfold (Panel A), and that such mentions increasingly appeared alongside words like "justice," "nation," "revolution," and "equality" (Panel B). After 1789, both patterns reversed: references to taxation fell rapidly, returning to their 1780 levels by 1794.

The subsistence crisis of 1788–1789 transformed fiscal discontent into open rebellion and helped ignite the French Revolution (Labrousse, 1944; Ladurie, 1971; Lefebvre, 1973; Neumann, 1977; Neumann and Dettwiller, 1990; Waldinger, 2024). A severe drought, followed by the exceptionally harsh winter of 1788–1789, caused grain shortages and a sharp rise in food prices. Figure A7 plots the evolution of wheat prices and the number of riots. It documents that riots rose sharply after the spike in wheat prices, with a markedly stronger increase in high-tax municipalities. These trends suggest that the subsistence crisis intensified unrest where fiscal pressure was higher. Section 5.5 provides systematic evidence on this interaction.

2.4 The French Revolution

Facing a dire financial situation, on January 24, 1789, the king summoned the Estates General: "We need the support of our loyal subjects to help us overcome the various difficulties we are currently facing, particularly with regard to the state of our finances." The Estates General, which had been last convened in 1614, brought together representatives from all the parts of the Kingdom, belonging to the three estates of society: the clergy, the nobility, and the Third Estate. Ahead of the Estates General, the king asked each estate to survey the population and compile grievances on all matters of public concern. The lists of grievances—also known as the *cahiers de doléances*—were sent to Paris for discussion. Among the complaints expressed by the Third Estate, issues related to taxation were particularly prominent, accounting for over 20% of all grievances (Shapiro et al., 1998).

The opening session of the Estates General in Versailles on May 5, 1789, is often considered the beginning of the French Revolution (Lefebvre, 1962). The king's opening speech was criticized

for lacking serious intentions to implement structural reforms and focused solely on raising taxes. On the same day, Finance Minister Jacques Necker acknowledged that "an expensive war, followed by a series of unfortunate circumstances, has created a great imbalance between revenues and expenditures." He added that "if the two privileged Orders, renouncing their privileges, were to contribute to the burdens of the State in the same manner as the King's other subjects [...], taxes could probably be increased by ten to twelve million *livres* without any rise in the overall burden on taxpayers" (Necker, 1820, pp. 3–17).

The proceedings, however, quickly diverged from Necker's expectations. Frustrated by the lack of progress and aware of growing social and economic discontent, the deputies of the Third Estate declared themselves the *Assemblée Nationale* on June 17 (Doyle, 1989). In the weeks that followed, the clergy and some liberal nobles began to join the Assembly. On June 20, after being locked out of their usual meeting hall, the deputies gathered in a nearby indoor tennis court and swore the famous Tennis Court Oath, vowing not to disband until they had drafted a constitution. Tensions escalated in early July. On July 14, 1789, mobs stormed the Bastille in Paris—a royal fortress and prison that had become a symbol of arbitrary royal authority. The attackers aimed to seize weapons and gunpowder stored inside to defend themselves against the king's troops. Though the Bastille held only seven prisoners at the time, its fall marked a decisive break with the monarchy (Schama, 2004).

In the weeks that followed, rumors of aristocratic plots spread through the countryside, igniting *la Grande Peur* (literally, "the Great Fear"). Peasants attacked manor houses and destroyed feudal records in a wave of spontaneous uprisings aimed at abolishing seigneurial dues and privileges (Lefebvre, 1973). In response, the *Assemblée Nationale* enacted a series of transformative measures, such as abolishing feudal privileges and bringing the Church under state control through the Civil Constitution of the Clergy. On August 26, 1789, the *Assemblée Nationale* adopted the Declaration of the Rights of Man and of the Citizen, establishing liberty, equality before the law, and property rights as foundational principles of the new regime (Furet, 1981; McPhee, 2002).

In the subsequent two years, the *Assemblée Nationale* embarked upon a broad project of institutional reconstruction. Between 1789 and 1791, deputies not only debated the organization of political authority, the limits of royal power, the structure of local and judicial administration, and the role of the Church, but also devoted significant attention to rebuilding the fiscal system beyond the mere abolition of the salt tax and the *traites*. Questions of equity, proportionality, and the legitimate reach of the state featured prominently in these debates. As Pierre-Victor Malouet—a moderate reformer and deputy to the *Assemblée Constituante*—noted in March 1790, "We are troubled about how to replace the *gabelle* only because of the excessive taxes with which the people are already burdened; and these taxes have become oppressive only

because, to the violation of all the rules of a wise distribution, has been added the violation of the proportion that ought to exist between the taxpayers' means and the needs of the State." This phase culminated in the Constitution of 1791, which established a constitutional monarchy and created a new legislature—the *Assemblée Législative*—elected in September 1791.

In September 1792, the monarchy was officially abolished and the French First Republic was declared. A new constituent body, the *Convention Nationale*, was elected by universal male suffrage to draft a republican constitution and steer the country through crisis. The Convention tried King Louis XVI—now referred to as Louis Capet—on 33 charges, including treason and conspiracy against liberty. The king was found guilty and sentenced to death on January 17, 1793. He was executed by guillotine four days later, on January 21, 1793.

3 Data

We assembled several complementary variables drawn from a range of sources. Some were digitized and cleaned from original archival or administrative records, while others come from established datasets used in prior research or were shared directly by other scholars. This section describes the main variables used in the analysis, and reports the summary statistics in Table A1. Additional variables are introduced when they become relevant. Table B1 provides detailed information on each variable, including its definition, construction, and source.

Overall tax burden. We construct a measure of the overall tax burden at the level of the *bailliage* around 1780, using information from Touzery (2024) on the principal categories of taxation under the *Ancien Régime*: direct taxes (including the *taille*, *capitation*, and *vingtième*), indirect taxes (such as the salt tax, tobacco duties, the *aides*, the *traites*, stamp duties, and *octrois*), and local levies.[9] We digitized and geo-referenced the fiscal tables reported by Touzery (2024) and matched them to the administrative boundaries of the *bailliage* using the *Ancien Régime* atlas from Gay et al. (2024). For each *bailliage*, we express the tax burden in *livres* per capita. Figure 2 maps this measure, with darker shading indicating higher values.[10] Around 1780, the average tax burden amounted to 19 *livres* and 7 *sols* per capita. Benchmarking this figure against estimates of income per capita of roughly 72 *livres* (Fourastié and Fourastié, 1977), this implies that taxation absorbed close to 25–30% of average income. Taxation varied substantially across France: tax burdens ranged from around 10 *livres* to more than 35 *livres*, with the 25th percentile of the distribution at about 16 *livres* and the 75th percentile at roughly 25 *livres*.

Indirect taxes. We assemble two novel datasets on the main components of indirect taxation: the

[9] Throughout the analysis, we exclude Paris, which is not comparable to the rest of France along institutional, demographic, and administrative dimensions.

[10] Appendix B.2 reports the geo-referenced maps for the three underlying tax components (direct, indirect, and local).

salt tax and the *traites*. For the salt tax, we geo-referenced the map of all salt tax discontinuities in place on the eve of the French Revolution obtained from the Archives of the National Library of France.[11] The primary source of information is the 1781 Necker's map (Figure A4, Panel A), which includes all salt tax zones with the corresponding tax rate. We cross-validated local salt tax rates by hand-collecting and digitizing the list of rates levied across the kingdom from the *Ordonnances de Louis XIV. roy de France et de Navarre, sur le fait des gabelles & des aydes* (1680).[12] Because the map is imprecise at high spatial resolution, we refine the placement of local salt-tax borders using the geo-referenced maps of *Ancien Régime* institutions assembled by Gay et al. (2024).[13] For the *traites*, we geo-located and identified the three major tariff zones and the other internal customs frontiers that fragmented trade across France on the eve of the Revolution (Figure A4, Panel B). We then generate indicators for whether a *bailliage* lay in a privileged zone or along a tariff boundary.

Popular opposition to taxation. Our main proxy for opposition to taxation is the incidence of riots, drawn from the HiSCoD dataset assembled by Chambru and Maneuvrier-Hervieu (2024). This dataset records over 20,000 violent events across Europe since 1000 AD; we focus on those in contiguous France between 1750 and 1789 classified as economic or political riots.[14] The granular location data allow us to measure riot incidence at the municipality level and aggregate that to the *bailliage* level when relevant. We complement these data with the newly assembled database from Gay (2025), which include richer detail on typology, participants, and sources.

For riots occurring in 1789, coverage is less systematic, and observations—while reflecting major well-documented events—may not be fully comparable in quality to the pre-1789 series. For robustness, we replicate the analysis dropping 1789; however, because our focus is on the onset of the Revolution, we retain this year in the sample, while acknowledging the limitations of the data. To reinforce our evidence for 1789, we complement HiSCoD with the grievances expressed in the *cahiers de doléances* compiled for the Estates General of 1789 and digitized by Degrave (2023).[15] These texts provide systematic accounts of local demands and complaints voiced by

[11] Online access to historical map archives can be found here: `https://gallica.bnf.fr/html/und/cartes/cartes?mode=desktop`.

[12] The full title of the original document is: *Ordonnances de Louis XIV. roy de France et de Navarre, sur le fait des gabelles & des aydes. Données à S. Germain en Laye aux mois de may & juin 1680. Registrées en la Cour des Aydes les 11. may & 21. juin 1680.* Publicly available online from the National Library of France, BnF. To verify that the salt tax did not change over time, we compare the tax rates prevailing in 1680 with those prevailing in 1781.

[13] As a robustness check, we also locate salt-tax borders using alternative historical sources. For the *Grandes Gabelles* area we rely on the *Atlas des Gabelles* from Sanson (1665), while for the other regions we use Necker's *Carte des Gabelles*. See Appendix B.2 for more details.

[14] Economic riots include tax-, food-, or labor-related events; political riots include protests against authority, feudal institutions, or other unspecified uprisings. We exclude events lacking descriptions or clearly unrelated to popular protest, and later show that results are robust to including them.

[15] Degrave (2023) digitizes and extends earlier work by Shapiro et al. (1998).

each estate, and allow us to measure both the intensity and the dimensions of opposition to taxation. Finally, in Section 6 we use data from Zapperi et al. (2025) as well as geo-referenced maps from Lefebvre (1973) to trace out the progression of the *Grande Peur*.

Preferences and behavior of legislators. We examine the behavior of legislators in Paris between May 1789 and January 1793, using three sources. First, we use the *Archives Parlementaires* from the French Revolution Digital Archive (FRDA), which cover 1787–1794 and include debate transcripts, letters, reports, and speeches from the main assemblies.[16] We identified and consolidated speakers by matching family name, suffix, assembly, and date, and then linked these records to legislators' *bailliage* of origin. Appendix E documents our classification pipeline in detail, describing how we identify tax-related passages, code each speech's stance and underlying motive, and classify speeches according to their position on constitutional change in August 1789. Second, we collect the political leaning of members of the *Assemblée Législative* (October 1791–September 1792) from the archives of the *Assemblée Nationale*, and derive each legislator's stance toward the monarchy based on the political group to which they belonged.[17] Third, we use newly digitized roll-call votes from the *Convention Nationale* on the trial of Louis XVI in January 1793. While nearly all legislators (98.8%) declared the king guilty, 35.4% favored a referendum, hoping to spare him from the death penalty, whereas 64.6% voted for execution.

4 Taxation and its discontent

In this section, we study the relationship between taxation and popular discontent on the eve of the French Revolution. First, we show that areas facing heavier taxes experienced more riots between 1750 and 1789 (Section 4.1). Second, we document that high tax areas voiced more complaints against taxation in the *cahiers de doléances* (Section 4.2). Third, we show that these effects are driven by indirect taxes (Section 4.3). Together, these results reveal a systematic association between taxation and popular unrest on the eve of the French Revolution. Although these patterns are robust across outcomes and specifications, they are not obtained from a setting that isolates exogenous variation in tax exposure. In Section 5, we therefore focus on a more specific institutional setting that allows for tighter causal identification.

[16] The FRDA is a joint project between the Stanford University Libraries and the *Bibliothèque Nationale de France*, and can be accessed at: https://frda.stanford.edu/.

[17] Political groups in the *Assemblée Législative* were informal coalitions that reflected deputies' positions on constitutional and institutional questions, including the role of the monarchy. The main groups included the *Majorité réformatrice*, who favored the new Constitution and the democratic reforms; the *Girondins*, who pushed for a more radical break with the crown; and the heterogeneous *Centre*, whose members held more moderate or shifting positions.

4.1 *Taxes and riots*

We begin by examining the relationship between taxation and unrest. We estimate an OLS model that correlates the number of riots occurring in *bailliage* b between 1750 and 1789 with the overall tax burden in that *bailliage*:

$$Y_b = \alpha + \beta Tax_b + \boldsymbol{X_b'}\boldsymbol{\gamma} + \epsilon_b \tag{1}$$

The term $\boldsymbol{X_b}$ includes a vector of *bailliage* covariates discussed below and fixed effects for $0.5° \times 0.5°$ grid cells. This partition is stable over time and avoids the endogeneity of historical administrative boundaries, which were drawn for fiscal and political purposes closely related to our outcome of interest. The grid is also fine enough to absorb persistent local heterogeneity—such as economic structure, geography, or archival coverage—while coarse enough to preserve within-cell variation. Moreover, its resolution aligns with gridded climate and agro-ecological data, used in some of the analyses below.[18]

We present results in Table 1. Column 1 shows a parsimonious specification that includes only geographic fixed effects and baseline *bailliage*-level controls—1780 population and soil fertility.[19] The coefficient is positive and statistically significant, confirming the evidence from Figure 1 that *bailliages* subject to higher taxes experienced more riots between 1750 and 1789. The rest of the table sequentially adds controls drawn from the historical and economic literature on the French Revolution.[20] Column 2 controls for exposure to Enlightenment ideas—proxied by the number of Enlightenment books sold in a *bailliage* between 1769 and 1789.[21] Columns 3 and 4 include the log income of monasteries and the share of nobles in the population, to capture the potential resentment generated by fiscal exemptions for clergy and aristocrats. Column 5 controls for the average wheat price between 1756 (the first year available) and 1789.[22] Column 6 controls for the log number of brigades, since areas with heavier tax burdens may have been more heavily patrolled, mechanically raising the likelihood of conflict.

Across specifications, the coefficient on taxation remains positive, statistically significant, and

[18] We use heteroskedasticity robust standard errors.

[19] The number of observations is lower than the 435 *bailliages* in mainland France because some observations are dropped once controls and fixed effects are included, and because Paris is excluded from the analysis, as noted earlier. Soil fertility is measured with three variables: an indicator of soil fertility obtained from the European Soil Database, the average silt content in the soil (at 100-200cm depth), and the average nitrogen content in the soil (at 30-60cm depth).

[20] See Table B1 for details on the variables included from column 2 onward, and Appendix B7 for a description of the data on tax enforcement brigades. We thank Cédric Chambru and Arnaud Deseau for sharing data on wheat prices and on monasteries' income, respectively.

[21] Results are similar when replacing the number of Enlightenment books with the number of subscriptions to the Encyclopédie—a landmark Enlightenment project aimed at compiling and disseminating human knowledge based on reason, science, and secular thought (Squicciarini and Voigtländer, 2015).

[22] Results remain similar when using alternative price metrics, such as volatility, maximum yearly price, and average annual change.

quantitatively large. According to the preferred specification (column 6), moving from the 25th to the 75th percentile of the tax burden distribution more than doubles the number of riots.[23] Other controls are generally positive but imprecise, except for brigades, which enter positively and are statistically significant. Results are similar when estimating the model using Poisson (column 7), addressing concerns that the number of riots is a sparse count variable.

4.2 Evidence from the lists of grievances

The association between taxation and riots documented in Table 1 is consistent with the idea that fiscal burdens fueled opposition and unrest. To probe this mechanism, we turn to the content of the *cahiers de doléances*—the lists of grievances submitted to Paris ahead of the Estates General (see Section 2.4). Figure A8 plots the distribution of grievances by category, using the coding of Degrave (2023). Complaints about taxes made up roughly 20% of all grievances—comparable in magnitude to those concerning justice (19%) and the economy (18%), and roughly twice as frequent as complaints against the political system (7%), the nobility (8%), or religion (10%).

Table 2 estimates equation (1), using as dependent variable the number of complaints against taxation submitted by the Third Estate.[24] The structure of the table mirrors that of Table 1. Column 1 reports the parsimonious specification, while columns 2–6 sequentially add the full set of controls. Across specifications, the coefficient on the tax burden is positive, statistically significant at the 1% level, and stable in magnitude. In our preferred specification (column 6), moving from the 25th to the 75th percentile of the tax burden distribution increases the number of complaints against taxation by 72% relative to the mean.[25] Column 7 replicates the preferred specification (column 6) using a Poisson model, again confirming that taxation raised the number of tax complaints. Finally, column 8 defines the dependent variable as the number of tax complaints relative to all complaints. This specification rules out the possibility that the effect is mechanically driven by more verbose *cahiers* in high-tax areas; instead, it demonstrates that taxation increased the relative salience of fiscal grievances.

In Appendix C, we provide suggestive evidence that tax complaints reflected patterns of tax incidence. First, we document that there is no association between taxation and tax complaints among members of the nobility, consistent with their extensive fiscal exemptions (Table C1).

[23] This figure is calculated by multiplying the coefficient in column 6 (0.977) by the interquartile difference in the tax burden (25 – 16 livres per capita) and dividing by the average number of riots in the sample (6.652).

[24] Data are available for only 225 *bailliages* (though the number of observations is lower than 225 because some *bailliages* are dropped once fixed effects and controls are included). However, there is no systematic relationship between the probability of observing information from the *cahiers de doléances* and the prevailing tax burden. The estimated coefficient is 0.015, and the corresponding p-value is 0.33. The set of Third Estate *cahiers* comes from two sources: those brought to Paris by elected representatives and a series of surviving parish-level *cahiers*. We therefore control for a dummy indicating whether the *cahiers* were transmitted to Paris by a representative.

[25] This figure is calculated by multiplying the estimated coefficient (5.71) by the interquartile range of the tax burden (9), and dividing by the average number of complaints against taxation (70.99).

Second, within the Third Estate, we show that grievances were directed toward the taxes to which different groups were most exposed (Table C2). Whereas parish-level *cahiers* prioritized the abolition of the salt tax—a highly regressive and unavoidable levy—this concern was supplanted in representative *cahiers* by a focus on the *traites*, an indirect tax on traded and discretionary consumption good. This shift reflects the "filtering" of grievances emphasized by Shapiro et al. (1998): as the drafting process moved from villages to district centers, the priorities of the *bourgeoisie*, who were more affected by trade barriers than by the cost of household salt, increasingly came to dominate.

Finally, we examine how fiscal grievances were framed. In Appendix C, we classify tax grievances into four categories: economic burden; horizontal unfairness, referring to unequal tax treatment across social groups or territories; vertical unfairness, capturing extraction by the Crown and its agents without corresponding benefits; and intrusive enforcement. This classification is necessarily suggestive and involves judgment, as individual grievances can plausibly span multiple dimensions. Descriptively, complaints about the economic burden of taxation are the most frequent, but grievances related to inequality—both horizontal and vertical—account for a substantial share of all tax complaints (Figure C1). Regression results confirm that higher tax burdens were associated with more complaints about economic burden and both forms of unfairness, but not about intrusive enforcement (Figure C2). These findings suggest that opposition to taxation reflected not only its material cost, but also perceptions of fiscal inequality.

4.3 Decomposing the effects of taxation

In Figure 3, we unpack the overall tax burden by distinguishing across its components. Following Touzery (2024), we divide taxes into three main categories: direct taxes (including the *taille*, the *capitation*, and the *vingtième*), indirect taxes (such as the salt tax, the *traites*, the *aides*, tobacco duties, stamp taxes, and *octrois*), and local taxes levied by municipalities or provincial estates to cover specific expenditures. We then replicate the preferred specification (column 6) of Tables 1 and 2, including separately the three tax measures.

Figure 3 plots the coefficients for each tax category, presenting results for the number of riots and the number of complaints against taxes submitted by the Third Estate in Panels A and B, respectively.[26] For both outcomes, the coefficient on direct taxes is small and imprecisely estimated. By contrast, the coefficient on indirect taxes is large, positive, and statistically significant. Perhaps surprisingly, the coefficient on local taxes is negative, though not statistically significant.[27]

[26] To ease comparisons, we standardize each variable to have zero mean and standard deviation equal to one. Tables A2 and A3 (column 6) report the corresponding estimates in tabular form.

[27] One interpretation is that higher local taxes may have reflected stronger local institutions or capacity to provide

These results show that popular unrest was driven primarily by indirect taxes. This is consistent with well-known historical accounts: indirect taxes were regressive, highly visible in everyday life, enforced through intrusive policing methods, and became emblematic of fiscal injustice under the *Ancien Régime* (Sands and Higby, 1949; Touzery, 2024). However, these estimates, as those in previous sections, rely on cross-sectional OLS regressions and do not necessarily identify causal effects. In the next section, we exploit the fact that two of the most important indirect taxes—the salt tax and the *traites*—varied discontinuously across space due to historical contingencies. This setting allows us to implement a regression discontinuity design (RDD) and provide a more credible causal assessment of the impact of taxation on unrest.

5 Exploiting tax border discontinuities

As discussed in Section 2.2, the salt tax and the *traites* were part of the same fiscal infrastructure—administered by the *Ferme générale* and enforced through a shared network of warehouses, posts, and inspection lines. Historically, the customs frontier of the *traites* was laid over the earlier salt tax frontier, so that in most places the two boundaries run in parallel and frequently coincide. We exploit this co-location by geo-referencing both systems and isolating the shared fiscal frontier (Touzery, 2024)—border segments where a municipality steps from the low- to the high-indirect tax regime (or vice versa) in this common infrastructure.

To allow for small cartographic imprecisions at very fine scale, we apply a 1 km tolerance when matching the two lines. Because our data are geo-referenced at the municipality level, we implement the design at this finer spatial resolution (rather than the *bailliage* level used in Section 4), comparing otherwise similar, spatially close municipalities that faced different indirect tax regimes on either side of the shared frontier. Figure A9 shows the salt tax line (red), the *traites* line (yellow), and their overlap (orange), overlaid with the indirect tax burden from Touzery (2024) at the *bailliage* level.[28]

We first introduce the baseline RD design (Section 5.1) and discuss its validity (Section 5.2). We then present the main results (Section 5.3) and assess their robustness (Section 5.4). Finally, we combine the RD analysis with temporal and spatial variation in weather shocks to examine how hot summers interacted with latent discontent arising from taxation (Section 5.5).

public goods, which could have mitigated discontent. Another possibility is that higher local taxes signaled greater capacity of local elites to monitor and suppress unrest.

[28] Appendix B.2 provides the underlying geo-referenced maps and additional cartographic layers used to construct the tax borders.

5.1 *Baseline RD design*

We estimate a spatial regression discontinuity (RD) design that compares close municipalities that were subject to different tax regimes. The model takes the following form:

$$Y_i = f(d_i) + \boldsymbol{\eta}_{b_i} + \beta_1 T_i + \boldsymbol{X_i'\gamma} + \varepsilon_i \tag{2}$$

where Y_i is the number of riots in municipality i, and T_i is a treatment indicator equal to one if the municipality lies on the high-tax side of the border. Because France's fiscal system featured multiple, disconnected tax frontiers rather than a single discontinuity, we assign each municipality to the nearest 10-km border segment and stack all borders into a single dataset. We include border-area fixed effects ($\boldsymbol{\eta}_{b_i}$) to control for local unobserved heterogeneity along each frontier.[29]

The regression also includes different polynomial orders of the distance to the border, $f(d_i)$, and a vector of municipal controls (coordinates, soil fertility, and 1780 population), $\boldsymbol{X_i'}$.[30] Because standard local polynomial estimators may be sensitive to the specific bandwidth used, we employ mean squared error optimal bandwidths, which are valid given the robust approach in Calonico et al. (2014). The optimal bandwidth varies by sample period, ranging from 22 to 25 km and covering roughly 4,100 to 4,400 of the 34,477 municipalities in contiguous France.[31] Standard errors are clustered at the *bailliage* level.

Figure A10 shows the nonparametric relationship between distance to the tax frontier border and the indirect tax burden. The plot reveals a discrete jump of about 60% in indirect taxes when crossing the overlapping borders, providing a clear first stage for our RD design.

5.2 *Validity*

The RD strategy assumes that only the salt tax and the *traites* vary discontinuously at the borders. As discussed in Section 2.2, the exact placement of these borders often reflected historical contingencies unrelated to local economic fundamentals. To further corroborate this idea, we perform several checks to verify that the sample is balanced at the border.

In Figure D1, we consider a range of historical and geographic variables. Panels A to C examine the presence of Roman roads, as well as roads and cities from the Cassini map. Panel D considers the presence of archdioceses, which were often sites of clerical power. Panels E to I focus on

[29] These fixed effects are defined at the level of salt-tax sub-areas and are constructed based on the pair of salt tax rates prevailing on the low- and high-tax sides of each border segment. This procedure yields 15 distinct fixed effects capturing the main zones of the salt tax. By contrast, the relevant customs (*traites*) regimes are much coarser, comprising only three broad zones.

[30] In the baseline specification, we use second-order polynomials, and follow the approach in Calonico et al. (2019) when including covariates.

[31] Salt production sites are excluded, since they are all located at least 50 km from any tax border.

municipal literacy rate in 1786, surface area, altitude, soil fertility, and river access. In Figure D2, we focus on soil characteristics to capture differences in land productivity and agricultural potential. In Figure D3, we consider many of the dimensions historically associated with unrest before and during the French Revolution. The first six panels report results for: (A) the number of Enlightenment books sold between 1769 and 1789, (B) the number of Encyclopédie subscriptions, (C) the log income of monasteries, (D) the share of nobles, (E) average wheat prices (1756-1789), and (F) the log number of brigades.[32] Panels G and H examine the presence of a horse-post relay and the distance to the nearest relay in 1780.[33] Reassuringly, our sample is balanced across all these dimensions. In Appendix D, we present additional results that reduce concerns about endogenous border placement: (i) drawing on evidence about the historical determinants of the salt tax frontier; (ii) and, performing a placebo check that shows no discontinuity in riots when crossing jurisdictional borders that entail minimal changes in taxation.

Even if the borders were determined by historical contingencies and the sample is balanced, one might still worry that tax borders overlapped with other jurisdictional boundaries. This would imply that crossing the tax frontier could also mean moving between distinct institutional or cultural areas. We address this potential concerns in different ways. First, we divide tax borders into 1-km segments and classify each segment according to its historical origin, based on spatial overlap with Roman, archdiocesan, or *généralité* boundaries.[34] Second, we combine information from Gay et al. (2024) with digitized and geo-referenced historical maps that delineate the boundaries of the main institutional and cultural divisions of the *Ancien Régime* along four dimensions: the legal system, the fiscal representation system, the structure of judicial authority, and language borders.[35] We then divide tax borders into 1-km segments, and classify each according to these four criteria. In Appendix D, we confirm that results remain unchanged

[32] Except for the number of Enlightenment books and wheat prices, all variables are measured around 1780.

[33] As shown by Albertus and Gay (2025), the expansion of the horse-post relay network during the 18th century strengthened the state's presence in the countryside and, in turn, was associated with greater unrest. By 1780, the network was nearly complete.

[34] Appendix B.3 describes the procedure in detail and displays the corresponding border-origin map. We assign each segment to the earliest historical boundary with which it overlaps—for example, if a *généralité* border coincides with an earlier Roman frontier, it is classified as Roman. According to this classification, 26% of tax borders overlap with Roman provincial border around 400AD, 10% with archdiocesan borders in place around 1000AD, and 44% with *généralités*; the remaining 20% cannot be assigned to a specific origin.

[35] The legal system contrasts customary law in the North with Roman written law in the South; the fiscal representation system opposes the *pays d'état*—provinces that negotiated taxation with the Crown—to the *pays d'élection*, where taxes were directly administered by royal intendants; the judicial authority is defined by the territorial ressorts of the regional parliaments; and, the language borders separate the *langue d'oïl* regions of the North from the *langue d'oc* regions of the South, reflecting deep-seated cultural and historical divisions. Together, these distinctions capture the principal forms of legal, administrative, and cultural heterogeneity in pre-revolutionary France. All original maps were obtained from Gallica, the digital library of the *Bibliothèque nationale de France*. We digitized the borders shown on each map and assigned municipalities to zones based on the location of their centroids.

when excluding each border type at a time. There, we also present several additional robustness exercises—including placebo borders, alternative bandwidths, and tests showing that the results are not driven by smuggling episodes.

A separate consideration is that taxation itself may have affected local development. Giommoni and Loumeau (2022) document that municipalities on the high-tax side of the salt tax border were less densely populated by 1780, consistent with the long-term economic costs of taxation. We control for 1780 population levels in all specifications to account for these differences. While it is possible that the salt tax reduced economic development, this does not invalidate our identification strategy. If poorer municipalities rebelled more, this would reinforce, rather than contradict, the interpretation that taxation fueled discontent by burdening communities already disadvantaged by fiscal policy.

5.3 Results

Figure 4 presents the RD plot from equation (2) for the period between 1750 and 1789. It shows that the number of riots jumps when moving from the low tax (coded with negative distance) to the high tax (coded with positive distance) side of the border. We report the corresponding point estimate and standard errors in Table A4, column 1. The coefficient is statistically significant, and indicates that crossing the border increases the number of riots by 91% relative to the sample mean.

Subsequent columns of Table A4 replicate the baseline RD regression separately for the six decades between 1750–1759 and 1800–1809. The estimates, also displayed graphically in Panel A of Figure 5, show that the effects of taxation grow over time, becoming statistically significant after 1760, and peaking in the 1780s. The relationship between indirect taxes and riots disappears after 1790. According to the coefficient reported in column 5 of Table A4, for the 1780-89 decade, crossing the tax border roughly doubles the number of riots. From now onwards, we focus on the 1780-89 decade, unless otherwise specified.

Since crossing the border entails a discontinuous change in taxation, we expect any jump in unrest to be concentrated in tax-related riots, rather than in other forms of protests. To test this, we draw on the event descriptions in Chambru and Maneuvrier-Hervieu (2024), and replicate the analysis separately by riot category (Panel B of Figure 5). The results confirm our interpretation: the discontinuity is entirely driven by tax riots, with no effects for political, food, or labor unrest.[36] As in the baseline, effects begin to emerge in the 1760s, intensify thereafter, and peak in the 1780s, before disappearing after 1790 with the abolition of the salt tax and the

[36]We follow the classification in Chambru and Maneuvrier-Hervieu (2024), distinguishing economic riots (tax, food, and labor) from political riots. In the border sample for 1780–1789, tax, food, labor, and political riots account for 49.6%, 15.8%, 2.6%, and 22.8% of all economic and political riots.

traites.

We next show that the intensity of unrest depended on how unequal the fiscal treatment was across the border. In Table 3, we split the sample between borders with the indirect tax gap below (column 1) and above (column 2) the sample median. We find that crossing the border increases the number of riots only when the indirect tax gap was large. This suggests that a greater discontinuity made fiscal inequality more salient and visible to local populations, intensifying perceptions of injustice. The absence of a discontinuity where the tax gap was small reinforces the interpretation that the results capture reactions to visible fiscal disparities rather than to other unobserved differences across space.

In columns 3 to 6 of Table 3, we provide additional evidence consistent with this inequality-aversion mechanism by examining how exposure to Enlightenment ideas shaped responses to taxation. Thinkers of the period not only advanced new views on science and reason but also offered a powerful critique of privilege and arbitrary authority. By emphasizing equality before the law and the illegitimacy of taxation without consent, they recast fiscal inequality as a moral and political failure (Darnton, 1995). We expect, therefore, that in areas where Enlightenment ideas circulated more widely, taxation was less likely to be accepted and more likely to be perceived as unjust.

To test this, we proxy exposure to Enlightenment ideas using two measures: the number of books by Enlightenment authors sold in each *bailliage* between 1769 and 1789, and the number of subscriptions to the *Encyclopédie* (Squicciarini and Voigtländer, 2015). As shown in Figure D3 (Panels A–B), the sample is balanced along both dimensions. We then re-estimate the baseline RD model separately for border segments above and below the median of each measure. The discontinuity in riots appears only in areas with high exposure to Enlightenment ideas (columns 4 and 6), suggesting that ideological diffusion magnified the impact of fiscal inequality. To verify that this pattern does not simply reflect higher literacy, we replicate the analysis by splitting the sample above and below the median literacy rate in 1786 (columns 7–8). The coefficients are nearly identical in the two sub-samples, suggesting that what mattered was not literacy itself but the spread of ideas that challenged privilege and fiscal injustice. Taken together, these results suggest that, alongside material hardship, ideological factors also shaped how people interpreted and reacted to taxation.

5.4 Summary of robustness checks

As noted above, municipalities on either side of the border are balanced across a wide range of characteristics (Figures D1, D2, and D3). The RD estimates are robust to a wide range of additional checks addressing border placement, overlapping institutions, enforcement and smuggling, data quality, and alternative specifications. We summarize the main exercises here

and report full results in Appendix D.

First, RD estimates are stable across alternative bandwidth choices and disappear when borders are artificially shifted away from their true location (Figure D4); they also hold when focusing on borders drawn at distances reflecting 14th-century transport and enforcement constraints rather than local economic conditions (Table D1). Second, results are robust to sequentially excluding border segments overlapping with Roman, religious, or *Ancien Régime* administrative divisions, as well as legal systems, representation regimes, parliamentary jurisdictions, and language boundaries; moreover, we find no discontinuity in riots when crossing borders with minimal tax gaps (Table D2). Third, leave-one-region-out exercises confirm that the results are not driven by any single area (Figure D5). Fourth, we show that the findings are unlikely to reflect enforcement intensity or smuggling-related clashes (Table D3).[37] Fifth, results are robust to excluding events lacking descriptions or participant counts and to restricting attention to larger riots, as well as to excluding 1789 and relying on the dataset assembled by Gay (2025) (Table D5). Finally, estimates are robust to alternative reconstructions of salt-tax borders (Table D6), and to several additional checks—including Poisson estimation, alternative outcome definitions, excluding large cities, varying polynomial orders and kernels, and clustering standard errors at different spatial levels (Tables D6 and D7).

5.5 *Activating latent discontent*

Why did resentment against taxation intensified so sharply in the 1780s? Indirect taxes rose substantially after 1680, but most of the increase occurred before 1770 (Section 2), so the surge in unrest requires an additional explanation. Historians point to the unusually hot and dry summers of the 1780s, which drove up food prices and triggered widespread hardship. After 1785, wheat prices rose by more than 30% following a series of poor harvests. The exceptionally hot summer of 1788, compounded by a harsh winter, pushed prices even higher and fueled the riots that preceded the Revolution (Lefebvre, 1973; Neumann and Dettwiller, 1990; Chambru, 2019; Waldinger, 2024). Figure A7 shows that this surge was steeper in high-tax areas, consistent with the idea that subsistence crises activated long-standing fiscal grievances. We now test this hypothesis formally.

Following Waldinger (2024), we express shocks (temperature and precipitation) in deviation from their long-run (1750–1800) averages.[38] While Waldinger (2024) defines shocks using both spring and summer, we use only summer and later examine more flexibly the impact of shocks

[37] This is important to mitigate concerns that our estimates merely reflect the lingering effects of the crackdown on illicit salt smuggling implemented in the 1730s, which triggered a surge in unrest on the high-tax side of the border (Davoine et al., 2024).

[38] Temperature and precipitation data are from Luterbacher et al. (2004) and Pauling et al. (2006). Results are robust to alternative time windows to define temperature and precipitation deviations from long-run means.

in each season on riots. This is for several reasons. First, early summer is the period in which the major cereals grown in northern and central France—particularly winter wheat and rye—reach the growth stages most sensitive to heat and moisture stress.[39] Second, contemporaries consistently emphasized that cereals could often recover from adverse spring conditions but not from heat or drought during the summer reproductive stages (Young, 1906). Finally, the historical record for 1788 itself indicates that the most severe anomalies occurred in early and mid-summer, with the combination of June–July heat and the destructive hailstorm of July 13, 1788, widely reported as the primary cause of the harvest failure (Neumann, 1977).

We augment the RD model from equation (2) with yearly variation in weather conditions across municipalities, restricting the sample to locations within 25 km of a tax border—the optimal bandwidth from Section 5.3—to sharpen causal identification. We stack the data at the municipality–year level and estimate:

$$Y_{it} = \gamma_i + \delta_t + \beta_0 Z_{i,t-1} + \beta_1 T_i \cdot Z_{i,t-1} + \boldsymbol{X}'_{\boldsymbol{i,t}}\boldsymbol{\gamma} + \epsilon_{it} \tag{3}$$

where Y_{it} is the number of riots in municipality i in year t, T_i is a dummy equal to one if the municipality lies on the high-tax side of the border, and $Z_{i,t-1}$ measures lagged weather shocks (temperature and precipitation), assigned to year t to reflect the delayed effect of harvest conditions on unrest. The specification includes municipality fixed effects (γ_i) to absorb all time-invariant characteristics, such as geography, long-run development, or institutional history, and year fixed effects (δ_t) to capture aggregate shocks common to all municipalities. We further include year fixed effects interacted with municipal covariates (soil fertility and 1780 population), the interaction between distance to the nearest border and weather shocks, and the triple interaction of distance, weather shocks, and the tax dummy ($\boldsymbol{X_{i,t}}$).[40] Standard errors are clustered at the *bailliage* level.

Table 4 presents the results. Column 1 estimates a parsimonious specification without interactions between year dummies and municipal covariates. The coefficient on the interaction between the high-tax dummy and temperature shocks is positive and statistically significant, indicating that unusually high summer temperatures led to more riots in municipalities on the high-tax side of the border relative to nearby low-tax municipalities. By contrast, the precipitation interaction is small and imprecisely estimated, suggesting that high-tax municipalities did not respond differentially to drier-than-average summers.[41] Column 2 reports the baseline

[39] These crops typically complete stem elongation in late spring and enter heading, flowering, and grain filling between late June and late July, when water or temperature anomalies have the largest effect on final yields (Farooq et al., 2011; Chambru, 2019).

[40] The main effects of the tax dummy, distance, and their interaction are absorbed by municipality fixed effects.

[41] These patterns are consistent with recent work showing that precipitation shocks generally produce weaker

specification, which also interacts year dummies with baseline controls (1780 population and soil fertility). Results remain stable, and imply that a 10% increase in summer temperature (1.8°C) more than doubled the number of riots in high-tax municipalities compared to their low-tax neighbors.[42]

Columns 3 and 4 show that the spring and autumn interactions are positive but small and imprecisely estimated. Column 5 reports the winter interaction, which is negative and statistically significant at the 10% level—consistent with the idea that harsh winters damaged crops and contributed to unrest in high-tax areas. Finally, columns 6 and 7 present placebo exercises in which we replace the lagged weather shocks with contemporaneous shocks (column 6) and with shocks occurring in the following year (column 7). In both cases, the coefficients are statistically insignificant and become smaller in magnitude—especially for the one-year lead—reducing concerns that our baseline estimates reflect spurious correlations between weather patterns and unrest rather than the agricultural effects of weather shocks.

These results indicate that adverse weather shocks and taxation interacted to fuel unrest on the eve of the Revolution. In high-tax areas, unusually hot summers made subsistence crises sharper, roughly doubling the incidence of riots relative to nearby low-tax municipalities. This mechanism echoes a broader historical pattern: as Chaney (2013) shows for Nile floods in Egypt, environmental shocks often intensified existing tensions by straining basic living conditions. Our findings also complement Chambru (2019) and Waldinger (2024), who show that weather shocks raised grain prices and provoked food-related unrest. We extend their results by demonstrating that the impact of these shocks was magnified by fiscal burdens.

Taken together with the earlier results on tax-gap heterogeneity and Enlightenment exposure (Table 3), these findings suggest that taxation provided the structural conditions for widespread discontent, while both material hardship and ideological perceptions of inequality acted as catalysts that transformed latent grievances into open revolt.

6 The spatial spread of unrest: Evidence from the Great Fear

Results thus far showed that taxation was a central trigger of unrest. A remaining question, however, is whether these grievances stayed local or instead spread across communities in ways that could transform isolated disturbances into a broader revolutionary wave. To investigate this spatial dimension, we exploit a key episode in the early stages of the Revolution: the Great Fear. This wave of panic and rural uprisings swept across much of France between July 20 and

and less precisely estimated effects than temperature shocks across a range of economic and social outcomes (Burke et al., 2015; Carleton and Hsiang, 2016).

[42]This number is obtained by multiplying the coefficient in column 2 (0.077) by 1.1, and dividing by the average number of riots between 1780 and 1789 in the border sample (0.076).

August 6, 1789, spreading with remarkable speed through rumor transmission and attacks on seigneurial property (see also Section 2.4). Its rapid, epidemic-like trajectory provides a natural setting to study if taxation amplified the propagation of unrest across space at the onset of the Revolution.

We digitized and geo-referenced the historical map in Lefebvre (1973), which depicts the original contours of the Great Fear and the routes along which panic spread (see also Appendix B.5). We combine this map with the data assembled by Zapperi et al. (2025), which identify the municipalities reached by the Great Fear, the epicenters that triggered contagion, and the timing of each arrival. Together, these sources allow us to reconstruct the spatial and temporal diffusion of the Great Fear across *bailliages*. Figure A11 plots the cumulative share of territory reached in high- and low-tax *bailliages*. The figure reveals a clear divergence: high-tax areas were hit earlier and at a faster pace, and by August 4—when the Assembly abolished feudal privileges—they had experienced substantially greater spread. By the end of the period, roughly 80% of the high-tax area had been reached, compared to about 60% of the low-tax area.

Motivated by this descriptive evidence, we return to the *bailliage*-level sample of Section 4 and formally test whether taxation shaped the spatial transmission of the Great Fear by estimating OLS regressions following equation (1). The only difference relative to our baseline specification is that we no longer include geographic fixed effects. Because our objective is to capture how the Great Fear propagated across space, imposing fixed effects would absorb exactly the spatial variation of interest. Table 5 reports the results.

Column 1 shows that high-tax *bailliages* were more likely to host at least one Great Fear epicenter, as identified by Zapperi et al. (2025). Moving from a low- to a high-tax *bailliage* (a 9-*livres* per capita difference) raises this probability by roughly 14.4 percentage points, or 28% relative to the mean. Columns 2 and 3 show that high-tax areas did not merely host epicenters more often—they hosted more of them. High-tax *bailliages* contained a greater number of epicenters both in absolute terms (column 2) and when normalized by area (column 3). Column 4 shifts from epicenter incidence to the overall spatial reach of the Great Fear. Using the footprint derived from the digitized maps in Lefebvre (1973), we estimate that the share of municipalities reached was 38.7 percentage points higher in high-tax *bailliages*, a difference equal to 61% of the mean. Finally, column 5 examines the timing of contagion using the arrival dates reported in Zapperi et al. (2025). The dependent variable measures the number of days between July 20—the start of the Great Fear—and the arrival of the first epicenter within each *bailliage*.[43] The negative and statistically significant coefficient implies that high-tax *bailliages* were reached about 1.6

[43]For *bailliages* without an epicenter in Zapperi et al. (2025), we set this value to $T + 1$, where T denotes the number of days between the first and last contagion events in their data.

days earlier than low-tax ones—a sizable difference given that the entire wave unfolded within a narrow window between July 20 and August 6.

7 Taxation and revolutionary politics

The evidence so far shows that taxation created the structural conditions for unrest, which erupted when material or ideological shocks activated discontent. But taxation may also have shaped politics at the top of the hierarchy—by influencing how legislators spoke, aligned, and ultimately voted. In this section, we explore this channel by examining the preferences and behavior of representatives in the revolutionary assemblies. Section 7.1 leverages the parliamentary speeches delivered between 1789 and 1793. It shows that deputies from high-tax constituencies were more likely to discuss taxation, frame it as a source of inequality and oppression, and denounce the *Ancien Régime* while supporting the revolutionary project. Section 7.2 turns to political behavior, showing that deputies from heavily taxed areas were more likely to join groups opposing the monarchy and vote for the king's execution.

7.1 Evidence from parliamentary speeches

We use data from the *Archives Parlementaires* to analyze the content of speeches delivered between 1789 and 1793. We estimate speech-level regressions of the form:

$$Y_{slbm(y)} = \alpha_{m(y)} + \beta\, Tax_b + \boldsymbol{X_s'}\gamma_1 + \boldsymbol{X_l'}\gamma_2 + \boldsymbol{X_b'}\gamma_3 + \varepsilon_{slbm(y)} \tag{4}$$

where $Y_{slbm(y)}$ denotes the outcome for speech s delivered by legislator l from *bailliage* b in month–year $m(y)$. The term $\alpha_{m(y)}$ captures fixed effects for the exact month–year of the speech, and Tax_b measures the overall tax burden in the legislator's *bailliage* of origin. The model further includes fixed effects (quintile) for word count and speech length ($\boldsymbol{X_s}$), a dummy equal to one if the legislator belongs to the nobility ($\boldsymbol{X_l}$), and *bailliage*-level controls ($\boldsymbol{X_b}$) corresponding to the baseline covariates and fixed effects in the preferred OLS specification of Section 4. Standard errors are clustered at the *bailliage* level.[44]

Fiscal debate. To study how taxation shaped the content and tone of parliamentary speeches during the Revolution, we rely on a two-step classification pipeline. In the first step, a rule-based filter identifies all speeches containing substantive references to taxation or public finance. The algorithm applies curated regular expressions to a normalized corpus, distinguishing fiscal

[44]Table A5 reproduces the baseline specification from Section 4 (Table 1, column 6), and shows that the number of representatives—scaled by 1780 *bailliage* population—is unrelated to the total tax burden, both over the full 1789–1793 period (column 1) and within each of the three assemblies (columns 2–5, 6, and 7). For the *Assemblée Constituante*, we additionally observe each legislator's Estate (Third Estate, Nobility, or Clergy), which allows us to verify that the tax burden is likewise unrelated to the number of representatives drawn from each estate (columns 3–5).

usages of terms such as *impôt*, *contribution*, and *traites* from non-fiscal contexts. In the second step, these fiscal passages are passed to a large-language–model classifier that determines the stance of each speech towards the *Ancien Régime* and the Revolution. Each speech is also annotated for the grounds of its evaluation (e.g., burden level, inequality, oppression) and for explicit actions or reform proposals. The model extracts short French quotations supporting each label, and all annotations are reviewed for consistency across assemblies and periods. Appendix E.1 describes this process in detail.

We present results in Table 6. We divide the sample into two periods: May 1789 to September 1791 (Panel A); and, October 1791 to January 1793 (Panel B).[45] In its early phase, discussions focused on dismantling the fiscal apparatus of the *Ancien Régime*, including the abolition of the salt tax and the *traites*; later, attention turned to designing a new, unified tax system based on equality before the law (Lefebvre, 1962; Doyle, 1989; White, 1995). We take the promulgation of the French Constitution in September 1791-which established a constitutional monarchy-as the end point of the earlier phase. The second period covers the *Assemblée Législative* and the early *Convention Nationale*, when fiscal issues gave way to mounting political turmoil, war, and the intensifying confrontation with the monarchy, ending with the king's execution in January 1793 (Furet, 1981; McPhee, 2002; Schama, 2004).

In column 1, the dependent variable equals one if a speech discusses taxation. In Panel A, the coefficient is positive and statistically significant, indicating that high-tax legislators were more likely to deliver speeches on tax-related issues. The magnitude is sizable: legislators from high-tax *bailliages* were 6.3 percentage points more likely to address taxation—about 70.8% relative to the mean—than those from low-tax areas. In Panel B, the coefficient turns negative, small, and imprecisely estimated, consistent with the decline in the salience of fiscal issues after September 1791.

In columns 2 and 3, we examine the stance of the speech. The dependent variables equal one if the speech is about taxes and criticizes the *Ancien Régime* (column 2) or supports the Revolution (column 3). In Panel A, both coefficients are positive and statistically significant, indicating that legislators from high-tax areas were more likely to attack the *Ancien Régime* and to defend the Revolutionary project when discussing taxation. The magnitudes are large: deputies from high-tax *bailliages* were 3.6 percentage points more likely to criticize the *Ancien Régime* (relative to a mean of 2%) and 4.5 percentage points more likely to voice support for the Revolution (mean of 7.2%). In Panel B, coefficients become again small and imprecise.

In columns 4 to 6, we turn to speech motives. The dependent variables equal one if a speech

[45] Tables A6 and A7 present the coefficients on the nobility status dummy and on the main *bailliage*-level controls for the models underlying Panels A and B of Table 6.

frames taxation as oppressive, condemns fiscal inequality, or calls for tax reform. In Panel A, all coefficients are positive and statistically significant at the 5–10% level. Legislators from high-tax *bailliages* were 1.8 percentage points more likely than those from low-tax areas to frame taxation as oppressive or unequal—effects corresponding to 90% and 94.7% of the respective means. They were also 4.5 percentage points (86.5% of the mean) more likely to demand fiscal reforms. As with the previous outcomes, the coefficients in Panel B become small and imprecise, consistent with the declining prominence of fiscal issues after September 1791.

Institutional change. Next, we move beyond fiscal debates and ask whether taxation also shaped legislators' rhetoric on broader questions of institutional change. We focus on a pivotal episode in the early Revolution: the debates surrounding the abolition of feudal privileges in August 1789. In the days leading up to the Night of August 4 and its immediate aftermath, the *Assemblée Nationale* confronted fundamental questions about sovereignty, equality, and the dismantling of the social and legal order of the *Ancien Régime*, alongside the drafting of the Declaration of the Rights of Man and of the Citizen (Lefebvre, 1973; Furet, 1981; McPhee, 2002).

We restrict the sample to speeches delivered between August 1 and August 31, 1789, and estimate regressions analogous to equation (4).[46] We report the results in Panel A of Table 7.In columns 1 and 2, we classify speeches based on how speakers evaluated the *Ancien Régime* and their stance toward the monarchy. Specifically, we code whether references to the old order are neutral, critical, or framed in explicitly moral terms emphasizing injustice, oppression, or privilege, and whether speakers defend the monarchy, accept its weakening, or support its abolition. Columns 3–6 classify speeches according to the speaker's position on constitutional change, distinguishing between calls for a rollback of the *Ancien Régime*, defense of the July 1789 status quo (prior to the abolition of feudal privileges), moderate reform, and radical reform. Appendix E.3 provides additional details on the coding scheme and classification procedure.

The coefficient in column 1 is positive and statistically significant, indicating that legislators from high-tax constituencies were more likely to criticize the *Ancien Régime*. Mirroring this pattern, the coefficient in column 2 is negative and statistically significant, implying that these legislators were less likely to defend the monarchy. The magnitudes are substantial: representatives from high-tax *bailliages* were 48.6 percentage points (relative to a mean of 20.2%) more likely to criticize the old order and 25.2 percentage points (relative to a mean of 8.7%) less likely to defend the monarchy than their counterparts from low-tax constituencies.

Columns 3–6 reveal a pronounced ideological shift in positions on constitutional change. Tax exposure has no effect on the probability of advocating a rollback of *Ancien Régime* institutions

[46]The only difference is that, because the analysis is restricted to a single month, we replace month fixed effects (as in Table 6) with week fixed effects.

(column 3). Instead, the main margin of adjustment operates through attitudes toward the *status quo*: legislators from high-tax areas were less likely to defend the July 1789 institutional framework (column 4), and more likely to support radical reforms that went beyond incremental institutional change (column 6). We find no corresponding increase in support for moderate reforms (column 5).

Given that the Great Fear may have influenced the political climate and the tone of parliamentary debate in the summer of 1789, we verify that our results are robust to controlling for local exposure to it. In Panel B, we include an indicator for whether a *bailliage* hosted at least one Great Fear epicenter. In Panel C, we control for the share of municipalities reached by the Great Fear. Since these variables are possibly endogenous and therefore constitute "bad controls" (Angrist and Pischke, 2009), the estimates should be interpreted with caution. Reassuringly, however, the coefficients remain in line with those reported in Panel A.

7.2 Political preferences and voting behavior

In this section, we turn to the political behavior of legislators, asking whether fiscal burdens also influenced the positions they adopted and the votes they cast. We estimate individual level regressions that correlate legislators' political preferences and voting behavior with the tax burden in the *bailliage* of origin. We further include the baseline vector of *bailliage*-level controls and a dummy equal to one if the legislator belongs to the nobility. We cluster standard errors at the *bailliage* level.

Assemblée Législative. We begin by examining legislators' stance toward the monarchy. To do so, we focus on the *Assemblée Législative* (October 1791–August 1792), the first elected legislature under the Constitution of 1791. This body is particularly well suited to our analysis for two reasons. First, we can use individual-level records for its members, including the political groups to which each deputy belonged. This information allows us to construct consistent indicators of legislators' positions and to compare their alignments in a systematic way. Second, the *Assemblée Législative* governed at a moment when the viability of constitutional monarchy was deeply contested (see also Section 2.4).

In column 1 of Table 8, the dependent variable equals one if the legislator joined a group that demanded reforms and political change. This definition includes the *Extreme Gauche*, *Gauche*, *Centre Gauche*, *Majorité réformatrice*, *Constitutionnels*, *Constitutionnels modérés* and *Girondins*.[47] The coefficient on the tax burden is positive and statistically significant, indicating that legislators representing high-tax *bailliages* were more likely to align with reformist groups. Substantively,

[47] During the *Assemblée Législative* (October 1791–September 1792), 773 individuals served as legislators, of whom 700 can be linked to their *bailliage* of origin. Reassuringly, the number of legislators (scaled by 1780 population) is unrelated to the tax burden (Table A5, columns 2–5). The lower number of observations in columns 1–3 of Table 8 (600 rather than 700) reflects that some *bailliages* are dropped once controls and fixed effects are included.

the magnitude is large: deputies from high-tax areas were 49.5 percentage points more likely to join a pro-change group, relative to a mean of 44.7%.

In column 2, we narrow the definition of "pro-change" to the more radical groups—*Extrême Gauche*, *Gauche*, *Centre Gauche*, *Girondins*, and *Constitutionnels*. The coefficient is statistically significant at the 10% level and becomes smaller in absolute magnitude, though expressed relative to the sample mean is comparable to that in column 1. Column 3 isolates the moderately reformist factions—*Constitutionnels modérés* and *Majorité réformatrice*. In this case, the coefficient remains positive, statistically significant, and closer in magnitude to the baseline. These patterns indicate that fiscal pressure shaped legislators' political alignments, with somewhat stronger effects among more moderate reformers.

Convention Nationale. We next examine whether this pattern persisted after the fall of the monarchy. The collapse of the throne in August 1792 led to the election of the *Convention Nationale*, which assumed full legislative authority. In January 1793, deputies were called to decide the fate of Louis XVI. Nearly all legislators (98.8%) voted "guilty," but they were divided over punishment: some advocated a referendum, hoping to spare the king, while others (about 65%) supported immediate execution. Column 4 of Table 8 focuses on this vote, using as the dependent variable an indicator equal to one if the deputy voted for the king's execution. The coefficient on the tax burden is again positive and significant, indicating that legislators from high-tax areas were more likely to favor execution. The effect is sizable: representatives from high-tax constituencies were 29.7 percentage points (45.4% relative to the mean) more likely to support the death sentence than those from low-tax constituencies.

8 Conclusion

In this paper, we provide systematic evidence in support of the longstanding hypothesis that taxation was an important cause of the French Revolution. We begin by documenting that areas subject to heavier taxation saw more unrest in the decades before 1789 and voiced stronger grievances in the *cahiers de doléances*. These complaints reveal that discontent was not simply about the weight of taxation, but also about inequality. Hostility was particularly strong toward indirect levies—such as the salt tax and the *traites*—which were regressive, visible, and coercively enforced.

To move beyond correlations, we exploit the sharp fiscal discontinuities created by salt tax and customs borders. We find that municipalities lying just inside the high-tax region experienced twice as many riots as their neighbors across the line, with effects concentrated in tax-related unrest and becoming increasingly pronounced in the 1780s. These patterns suggest that taxation

created the structural conditions for discontent, which was subsequently activated and amplified by material hardship and ideological forces. Two sets of results support this interpretation. First, the increase in unrest is stronger when crossing tax borders where fiscal disparities were larger and where Enlightenment ideas were more widespread. Second, combining the RD design with spatial and temporal variation in weather shocks, we show that unusually hot summers that devastated harvests sharply intensified unrest in high-tax areas.

We then examine the spatial spread of unrest during the Great Fear of July and early August 1789: this wave of panic and rural uprisings swept across France within days, and we show that it advanced differently across fiscal regimes. High-tax *bailliages* were more likely to trigger contagion, more likely to be reached, and saw a larger portion of their territory swept into the wave. Finally, we provide evidence that taxation shaped the politics of the Revolution from above. Deputies from high-tax constituencies were more likely to denounce fiscal injustice and support the revolutionary project in their speeches, more likely to join anti-monarchy factions, and more likely to vote for the king's execution.

Taken together, our results suggest that taxation was an important driver of the French Revolution. They are consistent with the longstanding view that extractive fiscal systems can erode legitimacy and fuel revolutionary upheaval. Future work could explore whether similar mechanisms operated in other contexts—such as Imperial Russia or late-Qing China—to assess how far these dynamics travel across time and place.

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Tables

TABLE 1 – TAXATION AND RIOTS (1750-1789)

Dep. var.:	Economic and political riots						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Overall tax burden	0.769**	0.779**	0.781**	0.801**	1.064***	0.977**	0.175***
	(0.324)	(0.329)	(0.339)	(0.352)	(0.398)	(0.390)	(0.053)
Enlightenment books		-0.002	-0.002	-0.001	-0.001	-0.001	0.000
		(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.000)
Log. income monasteries			0.184	-0.444	0.490	1.263	0.162
			(3.344)	(3.415)	(3.392)	(3.415)	(0.380)
Share nobles				5.317	7.064	7.173	-0.580
				(6.534)	(7.266)	(7.226)	(0.775)
Av. wheat prices (1756-1789)					0.137	0.155	-0.091
					(0.597)	(0.604)	(0.105)
Log. brigades						5.947**	0.919***
						(2.787)	(0.348)
R^2	0.510	0.512	0.512	0.531	0.540	0.547	
N	322	322	322	319	302	302	281
Dep. var. mean	6.627	6.627	6.627	6.668	6.652	6.652	7.149
Dep. var. SD	12.53	12.53	12.53	12.58	12.64	12.64	12.97
Poisson							X

Notes: The table reports estimates from equation (1). The dependent variable is the number of economic and political riots from Chambru and Maneuvrier-Hervieu (2024) that occurred in each *bailliage* between 1750 and 1789. "Overall tax burden" is the total tax burden (in *livres*) per capita. All specifications include coordinate fixed effects (defined as $0.5^\circ \times 0.5^\circ$ cells) and a vector or *bailliage*-level controls (1780 population and soil fertility). Columns 1 to 6 estimate OLS regressions. Column 7 replicates column 6 using Poisson. The variables introduced in columns 2 to 7 are described in detail, together with the corresponding source, in Table B1. Robust standard errors are reported in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.1.

TABLE 2 – TAXATION AND COMPLAINTS

Dep. var.:	Complaints against taxes							Share
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Overall tax burden	5.561***	5.545***	5.511***	4.474**	5.834***	5.982***	0.109***	0.793**
	(1.447)	(1.442)	(1.550)	(1.814)	(2.014)	(2.004)	(0.025)	(0.376)
Enlightenment books		0.002	0.003	0.002	0.003	0.002	0.000	0.001
		(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.000)	(0.002)
Log. income monasteries			-9.336	-18.07	-9.954	-10.373	-0.398	-3.554
			(18.25)	(19.84)	(20.59)	(20.78)	(0.284)	(2.926)
Share nobles				-34.88	16.72	23.96	1.584	3.572
				(86.17)	(93.08)	(92.51)	(1.107)	(17.32)
Av. wheat prices (1756-1789)					-5.355	-5.111	-0.186	-1.550
					(6.338)	(6.369)	(0.114)	(1.143)
Log. brigades						-12.66	-0.582***	-5.881**
						(11.21)	(0.177)	(2.892)
R^2	0.837	0.837	0.837	0.837	0.837	0.837		0.761
N	127	127	127	125	121	121	121	121
Dep. var. mean	69.84	69.84	69.84	70.50	70.99	70.99	70.99	17.78
Dep. var. SD	77.85	77.85	77.85	78.29	79.15	79.15	79.15	7.467
Poisson							X	

Notes: The table reports estimates from equation (1). In columns 1 to 7, the dependent variable is the number of Third Estate complaints against taxes for the 225 *bailliages* for which data on the lists of grievances from Shapiro et al. (1998) and Degrave (2023) are available. In column 8, the dependent variable is the share of complaints against taxes, relative to all complaints. The drop from 225 to 127 observations is due to the inclusion of fixed effects and controls. "Overall tax burden" is the total tax burden (in *livres*) per capita. All specifications include coordinate fixed effects (defined as $0.5^\circ \times 0.5^\circ$ cells), a vector or *bailliage*-level controls (1780 population and soil fertility), and a dummy for Third Estate *cahiers*. All columns estimate OLS regressions, except for column 7, which replicates column 6 using Poisson. The variables introduced in columns 2 to 8 are described in detail, together with the corresponding source, in Table B1. Robust standard errors are reported in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.1.

TABLE 3 – RIOTS AROUND THE TAX BORDER - HETEROGENEOUS ANALYSIS

Dep. var.	Economic and political riots							
	Indirect tax gap		Encyclopedie subscriptions		Enlightenment books		Literacy rates	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Below median	Above median	Below median	Above median	Below median	Above median	Below median	Above median
High tax area	-0.036	0.152***	0.003	0.169***	0.047	0.083***	0.078	0.074***
	(0.028)	(0.055)	(0.026)	(0.064)	(0.049)	(0.028)	(0.055)	(0.032)
N	1,745	2,595	2,139	2,092	2,659	1,834	2,746	1,608
Bandwidth (in km)	23.29	24.80	22.21	24.39	27.75	23.09	31.93	17.27
Dep. var. mean	0.062	0.085	0.066	0.086	0.086	0.058	0.054	0.088
Dep. var. SD	0.295	0.551	0.372	0.551	0.431	0.498	0.307	0.538

Notes: The table reports non-parametric RD estimates following Calonico et al. (2014) under optimal bandwidth and polynomial order selection from equation (2). The dependent variable is the number of economic and political riots from Chambru and Maneuvrier-Hervieu (2024) between 1780 and 1789. The treatment equals one for the municipalities in the area with a higher tax rate. The specification includes border fixed effects as well as a set of municipal controls (population in 1780, coordinates, and soil fertility). Columns 1–2 split the sample by the median indirect tax gap around the border. Columns 3–4 and 5–6 split the sample by exposure to Enlightenment ideas, measured respectively by *Encyclopédie* subscriptions and the number of Enlightenment books sold in the *bailliage* between 1769 and 1789. Columns 7–8 split the sample by 1786 literacy rates. The variables are described in detail, together with the corresponding source, in Table B1. The sample includes all municipalities in contiguous France within the optimal bandwidth. Standard errors are clustered at the *bailliage* level. Significance levels: *** p<0.01, ** p<0.05, * p<0.1.

TABLE 4 – WEATHER SHOCKS, INDIRECT TAXES, AND RIOTS (1780-1789)

Dep. var.:	Economic and political riots						
						Weather shock t	Weather shock $t+1$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Temperature shock $(t-1)$*High tax	0.071*	0.077**	0.008	0.003	-0.002*		
	(0.039)	(0.036)	(0.008)	(0.015)	(0.001)		
Precipitation shock $(t-1)$*High tax	0.009	0.009	0.007	0.009	0.007		
	(0.007)	(0.007)	(0.005)	(0.008)	(0.005)		
Temperature shock (placebo)*High tax						0.047	0.013
						(0.039)	(0.046)
Precipitation shock (placebo)*High tax						0.001	0.003
						(0.005)	(0.003)
Bandwidth (in km)	25	25	25	25	25	25	25
N	41,920	41,840	41,840	41,840	41,840	41,840	41,840
Dep. var. mean	0.008	0.008	0.008	0.008	0.008	0.008	0.008
Dep. var. SD	0.105	0.105	0.105	0.105	0.105	0.105	0.105
Municipality FE	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓
Municipal controls × Year FE		✓	✓	✓	✓	✓	✓
Season	Summer	Summer	Spring	Autumn	Winter	Summer	Summer

Notes: The table reports estimates from equation (3). The dependent variable is the number of economic and political riots from Chambru and Maneuvrier-Hervieu (2024) that occurred in each year between 1780 and 1789. In columns 1 and 2 (resp., columns 3, 4, and 5), "Temperature shock $(t-1)$" and "Precipitation shock $(t-1)$" are defined, following Waldinger (2024), as the one year lag of the deviation from the summer (resp., spring, autumn, and winter) temperature and precipitation relative to the long run mean (1750 to 1800). See Table B1 for more details. Columns 6 and 7 replicate column 2 replacing lagged temperature and precipitation shocks with shocks measured in years t and $t+1$, respectively. "High tax" is a dummy variable indicating the side of the tax border with the higher tax rate. All specifications include municipality and year fixed effects, the main effect of the temperature and precipitation shocks, the interaction between the shocks and the high tax dummy, the interaction between the shocks and distance to the tax border, and the triple interaction of the shocks with the high tax dummy and distance to the tax border. Columns 2 to 7 also control for the interaction between baseline controls (population in 1780 and soil fertility) and year fixed effects. Standard errors are clustered at the bailliage level. Significance levels: *** p<0.01, ** p<0.05, * p<0.1.

TABLE 5 – TAXATION AND THE 1789 GREAT FEAR

Dep. var.:	1[At least one epicenter]	# of epicenters	# of epicenters per 1,000 km^2	Share reached by Great Fear	Great Fear arrival day
	(1)	(2)	(3)	(4)	(5)
Overall tax burden	0.016***	0.043**	0.079**	0.043***	-0.179***
	(0.005)	(0.020)	(0.040)	(0.004)	(0.058)
Adjusted R^2	0.232	0.358	0.028	0.335	0.169
N	400	400	400	400	400
Dep. var. mean	0.517	1.470	1.527	0.635	12.825
Dep. var. SD	0.500	2.534	5.883	0.439	5.097

Notes: The table reports estimates from equation (1). In column 1, the dependent variable is a dummy equal to one if the *bailliage* hosted at least one Great Fear epicenter from Zapperi et al. (2025). In columns 2 and 3, the dependent variable is the number of Great Fear epicenters from Zapperi et al. (2025), in absolute value and scaled by *bailliage* area (per 1,000 km^2). In column 4, the dependent variable is the share of municipalities within the *bailliage* reached by the Great Fear according to the map from Lefebvre (1973). In column 5, the dependent variable is the the days from July 20, 1789, to the *bailliage*'s first Great Fear arrival recorded in Zapperi et al. (2025). "'Overall tax burden" is the total tax burden (in *livres*) per capita. All regressions include *bailliage*-level controls: 1780 population, soil fertility, the number of Enlightenment books, log income of monasteries, the share of nobles, average wheat prices (1756-1789), and the log number of brigades. See Table B1 for more details. Robust standard errors are reported in parentheses. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

TABLE 6 – TAXATION AND PARLIAMENTARY SPEECHES

Dep. var.		Tax speech stance		Tax speech motive		
	About taxes	Critical *Ancien Régime*	Support Revolution	Oppression	Inequality	Tax reform
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Period: May 1789–Sept 1791						
Overall tax burden	0.007**	0.004***	0.005*	0.002**	0.002*	0.005*
	(0.003)	(0.001)	(0.003)	(0.001)	(0.001)	(0.003)
R^2	0.174	0.083	0.171	0.028	0.064	0.118
N	31604	31604	31604	31604	31604	31604
Dep. var. mean	0.089	0.020	0.072	0.004	0.019	0.052
Dep. var. SD	0.285	0.141	0.259	0.066	0.135	0.222
Panel B: Period: Oct 1791-Jan 1793						
Overall tax burden	-0.003	-0.000	-0.003	0.001*	-0.000	-0.001
	(0.003)	(0.001)	(0.002)	(0.000)	(0.001)	(0.002)
R^2	0.141	0.049	0.136	0.024	0.039	0.089
N	35712	35712	35712	35712	35712	35712
Dep. var. mean	0.049	0.008	0.043	0.002	0.008	0.024
Dep. var. SD	0.216	0.089	0.204	0.049	0.089	0.153

Notes: The table reports estimates from equation (4) for speeches delivered between May 1789 and September 1791 (Panel A) and between October 1791 and January 1793 (Panel B). In column 1, the dependent variable is a dummy equal to one if the speech is about taxes. In columns 2–6, the dependent variable is a dummy equal to one if the speech is about taxes and: criticizes the *Ancien Régime* (column 2); supports the Revolution (column 3); frames taxation as oppressive (column 4); condemns the unequal tax system (column 5); and, calls for fiscal reform (column 6). See Appendix E.1 for more details on variable construction and definition. "Overall tax burden" is the total tax burden (in *livres*) per capita. All specifications include: fixed effects for geography ($0.5^\circ \times 0.5^\circ$ cells), month-year of the speech, word count (quintile), and average word length (quintile); a dummy equal to one if the legislator belongs to the nobility; 1780 population; soil fertility; the number of Enlightenment books; log income of monasteries; the share of nobles; average wheat prices (1756-1789); and, the log number of brigades. See Table B1 for variable details. Standard errors are clustered at the *bailliage* level. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

TABLE 7 – TAXATION AND CONSTITUTIONAL REFORMS: AUGUST 1789

Dep. var.	*Ancien Régime*	Monarchy	Constitutional Direction			
	Criticize	Defend	Rollback reforms	Status quo	Moderate reforms	Radical reforms
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Baseline						
Overall tax burden	0.054***	-0.028***	-0.006	-0.070**	-0.055	0.041***
	(0.020)	(0.009)	(0.005)	(0.034)	(0.041)	(0.015)
Adjusted R^2	0.297	0.160	0.019	0.030	0.163	0.149
N	460	460	460	460	460	460
Dep. var. mean	0.202	0.087	0.024	0.130	0.270	0.113
Dep. var. SD	0.402	0.282	0.153	0.337	0.444	0.317
Panel B: Controlling for Great Fear epicenters						
Overall tax burden	0.053**	-0.026***	-0.009	-0.078**	-0.041	0.040**
	(0.021)	(0.010)	(0.006)	(0.033)	(0.042)	(0.016)
Adjusted R^2	0.296	0.158	0.020	0.033	0.172	0.147
N	460	460	460	460	460	460
Dep. var. mean	0.202	0.087	0.024	0.130	0.270	0.113
Dep. var. SD	0.402	0.282	0.153	0.337	0.444	0.317
Panel C: Controlling for Great Fear spread						
Overall tax burden	0.073***	-0.035***	-0.007	-0.096***	-0.034	0.048***
	(0.009)	(0.006)	(0.006)	(0.027)	(0.029)	(0.015)
Adjusted R^2	0.310	0.163	0.017	0.063	0.177	0.151
N	460	460	460	460	460	460
Dep. var. mean	0.202	0.087	0.024	0.130	0.270	0.113
Dep. var. SD	0.402	0.282	0.153	0.337	0.444	0.317

Notes: The table reports estimates from equation (4) for speeches delivered in August 1789. In column 1 and 2, the dependent variable is a dummy equal to one if the speech criticizes the *Ancien Régime* and defends the monarchy, respectively. Columns 3–6 describe the constitutional direction of the speech, with dummies indicating whether the speech supports: rolling back reforms (column 3), the status quo (column 4), moderate reforms (column 5), radical reforms (column 6). See Appendix E.3 for more details on variable construction and definition. "Overall tax burden" is the total tax burden (in *livres*) per capita. All specifications include: fixed effects for geography ($0.5^\circ \times 0.5^\circ$ cells), week of the speech, word count (quintile), and average word length (quintile); a dummy equal to one if the legislator belongs to the nobility; 1780 population; soil fertility; the number of Enlightenment books; log income of monasteries; the share of nobles; average wheat prices (1756-1789); and, the log number of brigades. See Table B1 for variable details. Panel A presents the baseline results, while Panels B and C additionally control for, respectively, an indicator for whether the *bailliage* hosted at least one Great Fear epicenter (from Zapperi et al., 2025) and the share of municipalities reached by the Great Fear. Standard errors are clustered at the *bailliage* level. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

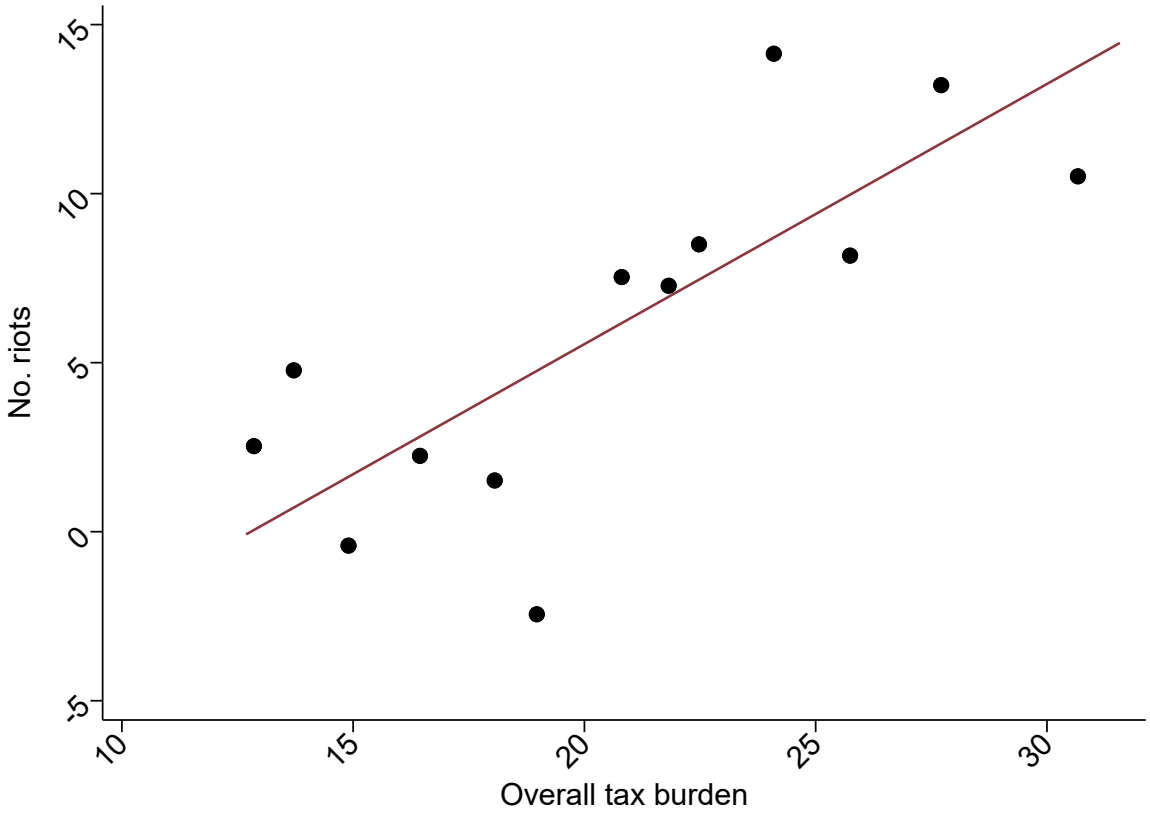
TABLE 8 – TAXATION AND REVOLUTIONARY POLITICS

Dep. var.:	1[Pro-Change]			1[Vote for king's execution]
	All	Openly	Moderately	
	(1)	(2)	(3)	(4)
Overall tax burden	0.056***	0.020*	0.036***	0.031**
	(0.015)	(0.011)	(0.013)	(0.014)
Enlightenment books	0.000***	0.000***	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Log. income monasteries	0.133	0.345**	-0.212	0.167
	(0.216)	(0.147)	(0.185)	(0.189)
Share nobles	-0.614	0.506*	-1.120*	-0.445
	(0.586)	(0.298)	(0.584)	(0.958)
Av. wheat prices (1756-1789)	0.023	-0.010	0.033	0.150**
	(0.095)	(0.071)	(0.076)	(0.075)
Log. brigades	0.586**	0.315	0.271	-0.098
	(0.281)	(0.237)	(0.178)	(0.155)
1[Noble]	0.185	0.051	0.134	-0.092
	(0.142)	(0.111)	(0.112)	(0.126)
R^2	0.304	0.262	0.312	0.341
N	600	600	600	465
Dep. var. mean	0.447	0.155	0.292	0.654
Dep. var. SD	0.498	0.362	0.455	0.476

Notes: The table reports estimates from equation (4). In columns 1 to 3, the dependent variable is a dummy if a legislator in the Legislative Assembly (October 1791–August 1792) belongs to one of the following political group: *Extreme Gauche*, *Gauche*, *Centre Gauche*, *Majorité réformatrice*, *Constitutionnels*, *Constitutionnels modérés* and *Girondins* (column 1); *Extrême Gauche*, *Gauche*, *Centre Gauche*, *Girondins*, and *Constitutionnels* (column 2); *Constitutionnels modérés* and *Majorité réformatrice* (column 3). In column 4, the dependent variable is a dummy if a legislator in the *Convention Nationale* voted in favor of the king's death penalty in January 1793. "Overall tax burden" is the total tax burden (in *livres*) per capita. All specifications include coordinate fixed effects (defined as $0.5^\circ \times 0.5^\circ$ cells), a dummy equal to one if the legislator belongs to the nobility, 1780 population, soil fertility, the number of Enlightenment books, log income of monasteries, the share of nobles, average wheat prices (1756-1789), and the log number of brigades. See Table B1 for variable details. Standard errors are clustered at the *bailliage* level. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

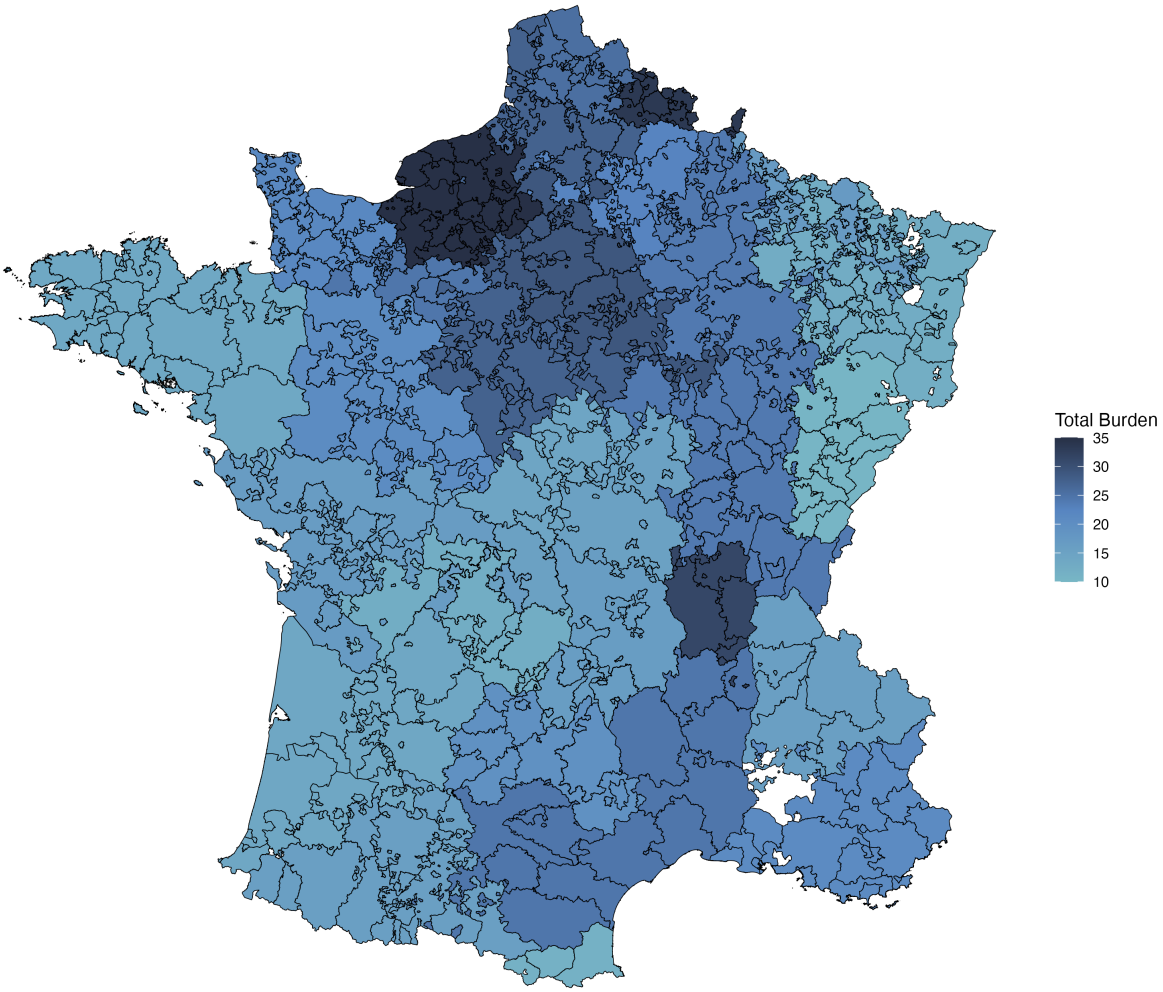
Figures

FIGURE 1 – TAXES AND RIOTS (1750-1789)



Notes: The figure displays the binscatter plot for the relationship between the number of political and economic riots (1750-1789) from Chambru and Maneuvrier-Hervieu (2024) and the overall tax burden (in *livres*) per capita across *bailliages* in contiguous France. The underlying OLS regression partials out fixed effects for $0.5^\circ \times 0.5^\circ$ grid cells, 1780 population, and soil fertility. The regression coefficient and heteroskedasticity robust standard errors are, respectively, 0.769 and 0.324.

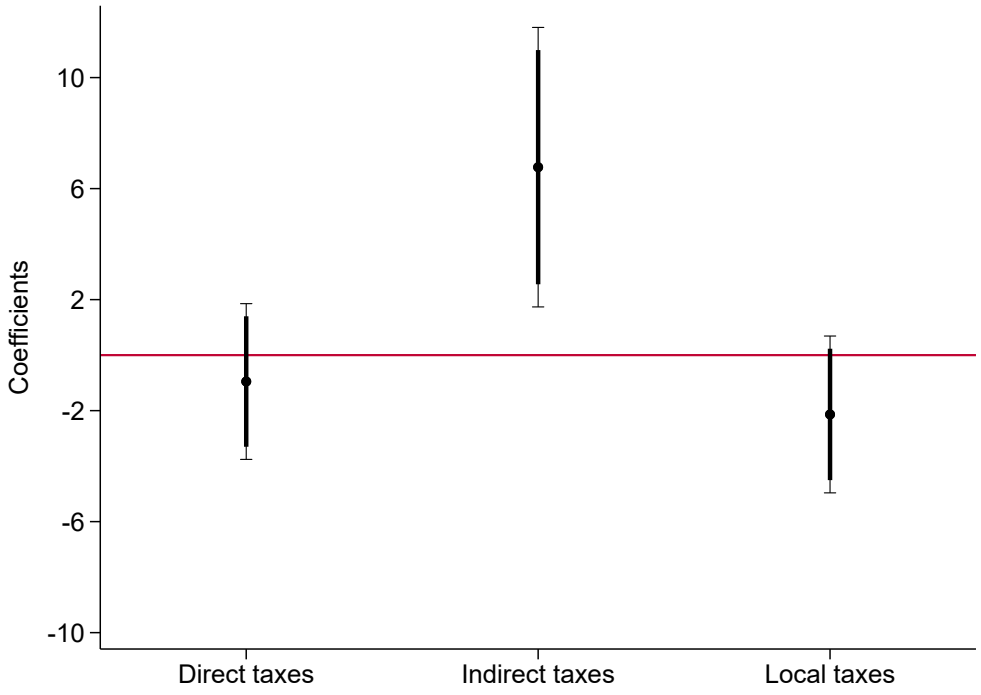
FIGURE 2 – OVERALL TAX BURDEN



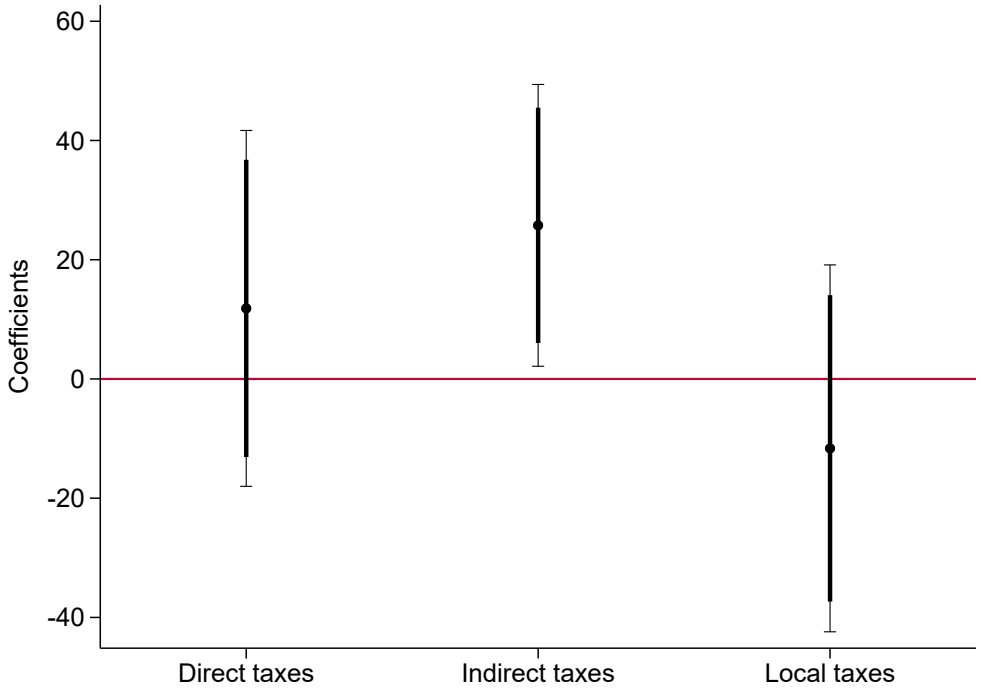
Notes: The figure plots the per capita tax burden, expressed in livres, around 1780 in each *bailliage* in contiguous France. Data come from Touzery (2024). See Section 3 and Appendix B.2 for more details.

FIGURE 3 – DECOMPOSING THE OVERALL TAX BURDEN

(A) EFFECTS ON RIOTS (1750–1789)

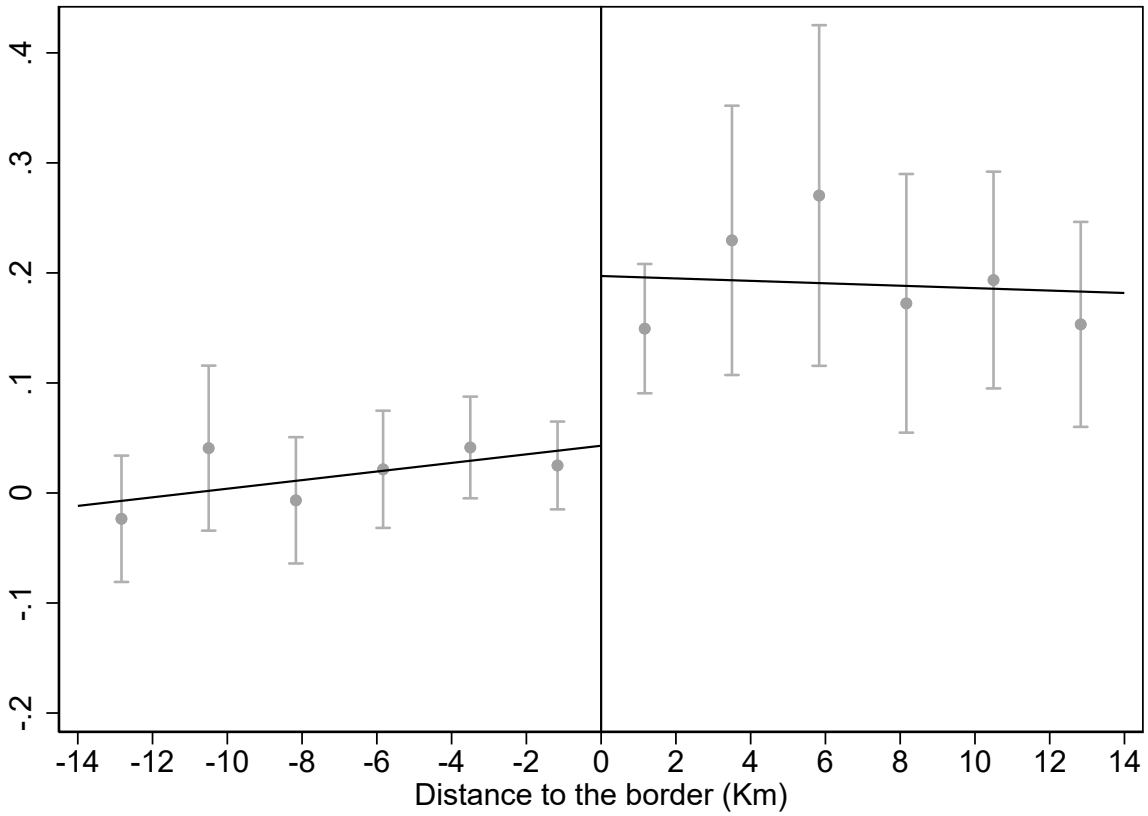


(B) EFFECTS ON COMPLAINTS (1750–1789)



Notes: The figure reports coefficients, with corresponding 90% and 95% confidence intervals, on each tax category displayed on the x-axis. In Panel A (resp., Panel B), the dependent variable is the number of economic and political riots between 1750 and 1789 (resp., the number of complaints against taxation recorded in the list of grievances). "Direct taxes" include: the taille, the capitation, and the vingti'eme. "Indirect taxes" include the salt tax, the traites, tobacco duties, stamp taxes, and octrois. "Local taxes" refer to the taxes levied by municipalities or provincial estates to cover specific expenditures. All regressions include the three tax categories, coordinate fixed effects (defined as $0.5^\circ \times 0.5^\circ$ cells), 1780 population, soil fertility, the number of Enlightenment books, log income of monasteries, the share of nobles, average wheat prices (1756-1789), and the log number of brigades. Regressions in Panel B further control for a dummy for Third Estate *cahiers*. See Table B1 for variable details. All tax measures are standardized to have zero mean and standard deviation equal to one. Standard errors are robust. The corresponding OLS estimates in tabular forms are reported in Tables A2 and A3.

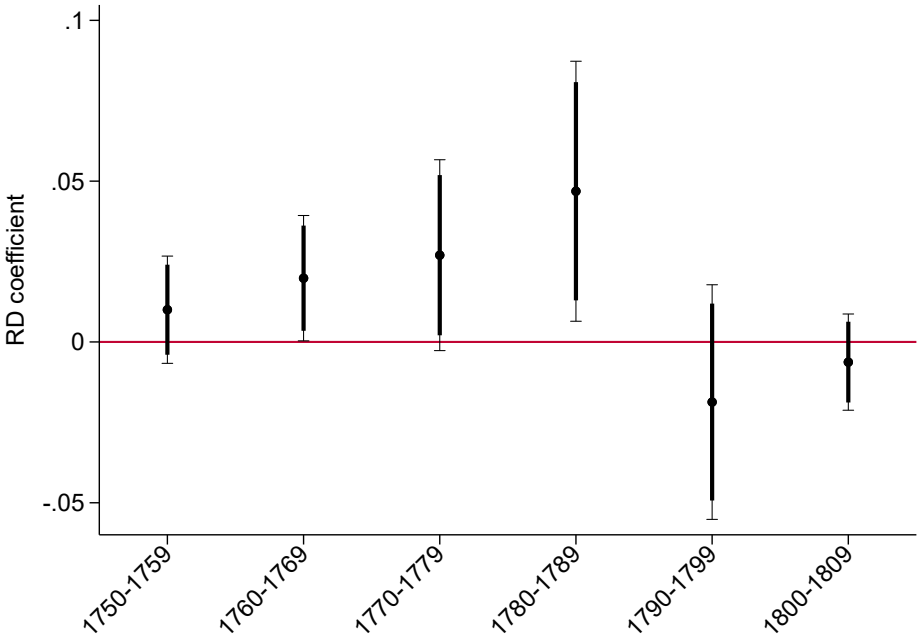
FIGURE 4 – RIOTS AROUND THE TAX BORDERS (1750-1789)



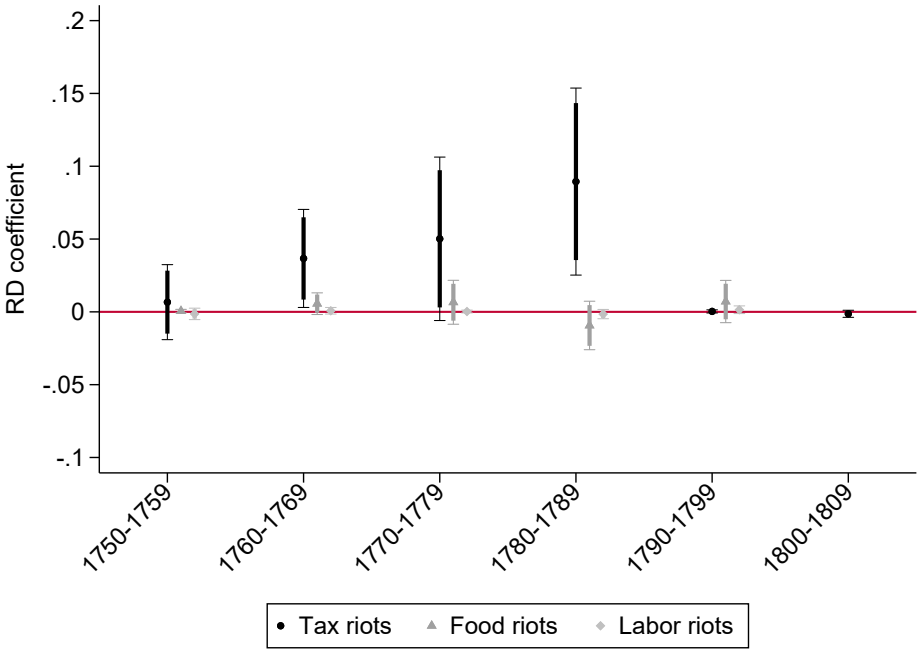
Notes: The plot shows nonparametric RD estimates from equation (2), implemented following Calonico et al. (2014) with optimal bandwidth and polynomial order selection. The dependent variable is the number of economic and political riots from Chambru and Maneuvrier-Hervieu (2024) between 1750 and 1789. The treatment equals one for municipalities on the high-tax side of the border. The specification includes border fixed effects and municipal controls (1780 population, coordinates, and soil fertility). The sample consists of all municipalities in contiguous France within the optimal bandwidth. The estimated coefficient is 0.200, and the standard error—clustered at the *bailliage* level—is 0.086.

FIGURE 5 – RIOTS AROUND THE TAX BORDERS, BY DECADE AND TYPE

(A) OVER TIME



(B)TYPES OF RIOTS



Notes: The plots show non-parametric RD estimates, with corresponding 90% and 95% confidence intervals, from equation (2) following Calonico et al. (2014) under optimal bandwidth and polynomial order selection. In Panel A, the dependent variable is the number of economic and political riots in each 10-year period. In Panel B, the dependent variable is the number of riots by type (tax, food, labor) in each 10-year period. Riot classifications follow Chambru and Maneuvrier-Hervieu (2024). The treatment equals one for municipalities in the area with a higher rate. The specification includes border fixed effects and municipal controls (1780 population, coordinates, and soil fertility). The sample consists of all municipalities in contiguous France within the optimal bandwidth. Standard errors are clustered at the *bailliage* level.

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Online appendix (not copy-edited or formatted) for:
T. Giommoni, G. Loumeau and M. Tabellini. "*Extractive Taxation and the French Revolution*".

A Supporting material

A.1 Tables

TABLE A1 – DESCRIPTIVE STATISTICS

	Mean	Standard deviation	No. obs.
Panel A. *Bailliages*: main outcomes and controls			
Economic and political riots (total #, 1750-1789)	9.31	19.38	423
Complaints against taxes	69.83	77.85	127
Overall tax burden (*livres* per capita)	20.63	5.280	423
Indirect tax burden (*livres* per capita)	11.10	3.235	423
Direct tax burden (*livres* per capita)	7.63	2.69	423
Local tax burden (*livres* per capita)	1.90	1.82	423
Enlightenment books	51.18	359.32	423
Sh. nobles	0.09	0.10	418
Income monasteries (thousands of *livres*)	2,590	4,960	423
Average wheat prices (1756-1789)	21.67	2.84	404
Brigades	3.49	6.38	423
Population	19,237	95,205	423
1[At least one epicenter]	0.52	0.50	400
# of epicenters	1.47	2.53	400
# of epicenters per 1000 km^2	1.53	5.88	400
Share reached by Great Fear	0.64	0.44	400
Great Fear arrival day	12.83	5.10	400
Panel B. Municipalities within optimal bandwidth (25 km)			
Economic and political riots (total #, 1780-1789)	0.08	0.46	4,524
Salt tax burden (*livres* per capita)	0.71	0.43	4,524
Indirect tax burden (*livres* per capita)	11.50	3.28	4,443
Population	4,445	22,586	4,524
Panel C. Parliamentary speeches: main outcomes			
1[About taxes]	0.07	0.25	67,951
1[Critical ancien regime]	0.01	0.12	67,951
1[Support revolution]	0.06	0.23	67,951
1[Oppression]	0.003	0.058	67,951
1[Inequality]	0.01	0.11	67,951
1[Tax reform]	0.03	0.19	67,951
Panel D. Legislators: main outcomes			
1[Pro change (all)]	0.45	0.50	600
1[Pro change (openly)]	0.16	0.36	600
1[Pro change (moderately)]	0.29	0.45	600
1[Vote for king's execution]	0.65	0.48	465
1[Noble]	0.04	0.19	600

Notes: This table reports descriptive statistics. The sample in analysis are all bailliage in Panel A. In Panel B, the sample is all municipalities within the optimal bandwidth computed following Calonico et al. (2014) around the composite border (Figure A9). Panel C reports outcomes at the legislator level for key votes between 1789 and 1793.

TABLE A2 – TAXATION AND RIOTS: DECOMPOSITION (1750-1789)

Dep. var.:	Number of Riots						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Direct taxes	-1.196	-1.177	-1.112	-0.983	-0.839	-0.951	0.075
	(1.518)	(1.544)	(1.531)	(1.575)	(1.445)	(1.422)	(0.249)
Indirect taxes	7.316***	7.352***	7.434***	7.466***	7.198***	6.772***	0.729***
	(2.275)	(2.313)	(2.346)	(2.391)	(2.665)	(2.552)	(0.211)
Local taxes	-2.575**	-2.559**	-2.607**	-2.702**	-1.698	-2.137	-0.231
	(1.128)	(1.132)	(1.119)	(1.148)	(1.423)	(1.432)	(0.143)
Enlightenment books		-0.730	-0.730	-0.542	-0.528	-0.490	0.026
		(1.340)	(1.334)	(1.245)	(1.253)	(1.224)	(0.047)
Log. income monasteries			1.405	0.842	0.914	1.723	0.372
			(2.800)	(2.850)	(3.020)	(3.044)	(0.372)
Share nobles				0.440	0.659	0.667	-0.061
				(0.666)	(0.738)	(0.735)	(0.084)
Av. wheat prices (1756-1789)					2.392	2.616	0.155
					(1.882)	(1.933)	(0.324)
Log. brigades						2.255**	0.340***
						(1.003)	(0.121)
Adjusted R^2	0.251	0.251	0.248	0.271	0.258	0.267	
N	322	322	322	319	302	302	281
Dep. var. mean	6.627	6.627	6.627	6.668	6.652	6.652	7.149
Dep. var. SD	12.53	12.53	12.53	12.58	12.64	12.64	12.97
Poisson							X

Notes: The table reports estimates from equation (1). The dependent variable is the number of economic and political riots from Chambru and Maneuvrier-Hervieu (2024) that occurred in each *bailliage* between 1750 and 1789. "Direct taxes" include: the taille, the capitation, and the vingti'eme. "Indirect taxes" include the salt tax, the traites, tobacco duties, stamp taxes, and octrois. "Local taxes" refer to the taxes levied by municipalities or provincial estates to cover specific expenditures. All regressions include the three tax categories (standardized to have zero mean and standard deviation equal to one), coordinate fixed effects (defined as $0.5^\circ \times 0.5^\circ$ cells), 1780 population, and soil fertility. Columns 1 to 6 estimate OLS regressions. Column 7 replicates column 6 using Poisson. The variables introduced in columns 2 to 7 are described in detail, together with the corresponding source, in Table B1. Robust standard errors are reported in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.1.

TABLE A3 – TAXATION AND COMPLAINTS: DECOMPOSITION (1750-1789)

Dep. var.:	Complaints against taxes						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Direct taxes	16.53	16.50	13.78	12.30	11.62	11.84	0.338*
	(14.55)	(14.68)	(12.88)	(15.67)	(14.86)	(14.92)	(0.193)
Indirect taxes	22.84*	22.79*	25.11**	25.05**	25.19**	25.77**	0.374***
	(12.52)	(12.52)	(11.63)	(11.61)	(11.57)	(11.81)	(0.12)
Local taxes	-10.36	-10.34	-11.35*	-12.13	-12.21	-11.64	-0.381
	(6.791)	(6.866)	(6.366)	(8.153)	(15.27)	(15.38)	(0.248)
Enlightenment books		0.589	0.667	0.907	1.008	0.731	-0.001
		(1.928)	(1.770)	(1.777)	(1.836)	(2.038)	(0.029)
Log. income monasteries			-9.362	-8.603	-9.428	-9.776	-0.350
			(14.40)	(15.52)	(15.80)	(15.80)	(0.219)
Share nobles				2.144	2.795	3.297	0.154*
				(6.964)	(7.598)	(7.536)	(0.092)
Av. wheat prices (1756-1789)					-0.679	-0.291	-0.083
					(23.73)	(23.61)	(0.443)
Log. brigades						-3.704	-0.179***
						(3.688)	(0.053)
Adjusted R^2	0.70	0.70	0.69	0.68	0.68	0.67	
N	127	127	127	125	121	121	121
Dep. var. mean	69.84	69.84	69.84	70.50	70.99	70.99	70.99
Dep. var. SD	77.85	77.85	77.85	78.29	79.15	79.15	79.15
Poisson							X

Notes: The table reports estimates from equation (1). The dependent variable is the number of Third Estate complaints against taxes. "Direct taxes" include: the taille, the capitation, and the vingti'eme. "Indirect taxes" include the salt tax, the traites, tobacco duties, stamp taxes, and octrois. "Local taxes" refer to the taxes levied by municipalities or provincial estates to cover specific expenditures. All regressions include the three tax categories (standardized to have zero mean and standard deviation equal to one), coordinate fixed effects (defined as $0.5^\circ \times 0.5^\circ$ cells), 1780 population, soil fertility, and a Third Estate *cahiers* dummy. Columns 1 to 6 estimate OLS regressions. Column 7 replicates column 6 using Poisson. The variables introduced in columns 2 to 7 are described in detail, together with the corresponding source, in Table B1. Robust standard errors are reported in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.1.

TABLE A4 – RIOTS AROUND THE TAX BORDER

Dep. var.:	Economic and political riots						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Period: 1750-1789	Specific decade					
		1750	1760	1770	1780	1790	1800
High tax area	0.200**	0.012	0.047***	0.065**	0.077**	0.001	0.002
	(0.086)	(0.015)	(0.018)	(0.031)	(0.035)	(0.010)	(0.008)
N	4,117	3,809	4,797	4,092	4,362	4,701	3,594
Bandwidth (in km)	22.39	19.93	28.34	22.17	24.39	27.50	18.20
Dep. var. mean	0.220	0.036	0.038	0.067	0.076	0.011	0.014
Dep. var. sd	1.422	0.309	0.269	0.616	0.467	0.210	0.131

Notes: The table reports non-parametric RD estimates following Calonico et al. (2014) under optimal bandwidth and polynomial order selection, according to model (2). The dependent variable is the number of economic and political riots from Chambru and Maneuvrier-Hervieu (2024), over the time period specified at the top of each column (1750-1789 in column 1; each decade from 1750-1759 to 1800-1809, in columns 2 to 7). The treatment equals one for the municipalities in the area with a higher tax rate. The specification includes border fixed effects as well as a set of municipal controls (population in 1780, coordinates, and soil fertility). The variables are described in detail, together with the corresponding source, in Table B1. The sample includes all municipalities in contiguous France within the optimal bandwidth. Standard errors are clustered at the *bailliage* level. Significance levels: *** p<0.01, ** p<0.05, * p<0.1.

TABLE A5 – NUMBER OF LEGISLATORS AND TAX BURDEN BY BAILLIAGE

Dep. var.:	Number of legislators per 1,000 inhabitants						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	All	Ass. Constituante (1789-1791)				Ass. Legislative	Convention Nat.
	1789-1793	All	Tiers État	Noblesse	Clerge	1791-1792	1792-1793
Overall tax burden	-0.002	-0.001	-0.001	0.002	-0.001	-0.002	0.002
	(0.006)	(0.003)	(0.002)	(0.001)	(0.001)	(0.003)	(0.002)
Enlightenment books	0.000	0.000	0.000	0.000	0.000	0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Log. income monasteries	-0.004	0.008	0.011	0.002	-0.004	-0.005	-0.008
	(0.017)	(0.012)	(0.009)	(0.005)	(0.004)	(0.009)	(0.007)
Share nobles	0.166**	0.137**	0.080*	0.053	0.003	0.017	-0.020
	(0.077)	(0.056)	(0.041)	(0.035)	(0.012)	(0.043)	(0.032)
Av. wheat prices (1756-1789)	0.029**	0.018**	0.012**	0.001	0.005**	0.007	0.004*
	(0.012)	(0.007)	(0.005)	(0.002)	(0.002)	(0.005)	(0.002)
Log. brigades	-0.008	-0.007	0.007	-0.006	-0.007*	-0.003	0.000
	(0.014)	(0.012)	(0.009)	(0.005)	(0.004)	(0.006)	(0.005)
Adjusted R^2	0.102	0.094	0.028	-0.021	0.158	-0.052	-0.027
N	302	302	302	302	302	302	302
Dep. var. mean	.048	.024	.013	.005	.004	.015	.014
Dep. var. SD	.067	.043	.029	.019	.018	.032	.027

Notes: The table reports estimates from equation (1). The dependent variable is the number of legislators originating from each *bailliage*, expressed per 1,000 inhabitants, constructed from XX. Column 1 covers the entire 1789–1793 (January) period. Column 2 restricts the sample to the *Assemblée Constituante* (1789–1791), with columns 3–5 reporting results separately by Estate. Column 6 focuses on the *Assemblée Législative* (1791–1792), and column 7 covers the *Convention Nationale* from September 1792 to January 1793. "Overall tax burden" is the total tax burden (in *livres*) per capita. All specifications include coordinate fixed effects (defined as $0.5° \times 0.5°$ cells), 1780 population, soil fertility, the number of Enlightenment books, log income of monasteries, the share of nobles, average wheat prices (1756-1789), and the log number of brigades. See Table B1 for variable details. Robust standard errors are reported in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.1.

TABLE A6 – TAXATION AND PARLIAMENTARY SPEECHES: MAY 1789-SEPTEMBER 1791

Dep. var.		Tax speech stance		Tax speech motive		
	1[About taxes]	Critical ancien regime	Support revolution	Oppression	Inequality	Tax reform
	(1)	(2)	(3)	(4)	(5)	(6)
Overall tax burden	0.007**	0.004***	0.005*	0.002**	0.002*	0.005*
	(0.003)	(0.001)	(0.003)	(0.001)	(0.001)	(0.003)
Enlightenment books	0.000**	0.000**	0.000***	0.000***	0.000	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Log. income monasteries	-0.007	-0.008	-0.009	-0.005	0.000	0.006
	(0.025)	(0.010)	(0.021)	(0.005)	(0.010)	(0.018)
Share nobles	0.037	0.013	0.020	-0.020**	-0.006	0.072
	(0.095)	(0.022)	(0.086)	(0.008)	(0.030)	(0.075)
Av. wheat prices (1756-1789)	0.001	-0.001	0.002	0.002	0.004	-0.002
	(0.007)	(0.003)	(0.006)	(0.002)	(0.003)	(0.005)
Log. brigades	0.016	0.007	0.036	0.001	0.006	0.019
	(0.026)	(0.011)	(0.023)	(0.007)	(0.010)	(0.018)
1[Noble]	0.019	0.007*	0.016	-0.000	0.003	0.007
	(0.015)	(0.004)	(0.015)	(0.002)	(0.003)	(0.008)
R^2	0.174	0.083	0.171	0.028	0.064	0.118
N	31604	31604	31604	31604	31604	31604
Dep. var. mean	0.089	0.020	0.072	0.004	0.019	0.052
Dep. var. SD	0.285	0.141	0.259	0.066	0.135	0.222

Notes: The table reports estimates from equation (4) for speeches delivered between May 1789 and September 1791. In column 1, the dependent variable is a dummy equal to one if the speech is about taxes. In columns 2–6, the dependent variable is a dummy equal to one if the speech is about taxes and: criticizes the *Ancien Regime* (column 2); supports the Revolution (column 3); frames taxation as oppressive (column 4); condemns the unequal tax system (column 5); and, calls for fiscal reform (column 6). "Overall tax burden" is the total tax burden (in *livres*) per capita. All specifications include: fixed effects for geography ($0.5° \times 0.5°$ cells), month-year of the speech, word count (quintile), and average word length (quintile); a dummy equal to one if the legislator belongs to the nobility; 1780 population; soil fertility; the number of Enlightenment books; log income of monasteries; the share of nobles; average wheat prices (1756-1789); and, the log number of brigades. See Table B1 for variable details. Standard errors are clustered at the *bailliage* level. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

TABLE A7 – TAXATION AND PARLIAMENTARY SPEECHES: OCTOBER 1791 TO JANUARY 1793

Dep. var.		Tax speech stance		Tax speech motive		
	1[About taxes]	Critical ancien regime	Support revolution	Oppression	Inequality	Tax reform
	(1)	(2)	(3)	(4)	(5)	(6)
Overall tax burden	-0.003	-0.000	-0.003	0.001*	-0.000	-0.001
	(0.003)	(0.001)	(0.002)	(0.000)	(0.001)	(0.002)
Enlightenment books	-0.000**	-0.000***	-0.000*	-0.000	-0.000***	-0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Log. income monasteries	-0.016	-0.023**	-0.015	-0.002	-0.008	-0.000
	(0.020)	(0.009)	(0.020)	(0.003)	(0.009)	(0.013)
Share nobles	-0.263**	-0.058**	-0.249*	0.013	-0.010	-0.181**
	(0.132)	(0.028)	(0.134)	(0.011)	(0.034)	(0.083)
Av. wheat prices (1756-1789)	0.001	0.003	0.002	0.003	0.004	0.005
	(0.008)	(0.004)	(0.007)	(0.002)	(0.004)	(0.005)
Log. brigades	0.019	-0.021	0.020	-0.017	-0.000	0.006
	(0.032)	(0.017)	(0.032)	(0.016)	(0.009)	(0.025)
1[Noble]	-0.041**	-0.011	-0.032*	0.001	-0.007**	-0.015
	(0.019)	(0.007)	(0.019)	(0.002)	(0.003)	(0.010)
R^2	0.141	0.049	0.136	0.024	0.039	0.089
N	35712	35712	35712	35712	35712	35712
Dep. var. mean	0.049	0.008	0.043	0.002	0.008	0.024
Dep. var. SD	0.216	0.089	0.204	0.049	0.089	0.153

Notes: The table reports estimates from equation (4) for speeches delivered between October 1791 and January 1793. In column 1, the dependent variable is a dummy equal to one if the speech is about taxes. In columns 2–6, the dependent variable is a dummy equal to one if the speech is about taxes and: criticizes the *Ancien Regime* (column 2); supports the Revolution (column 3); frames taxation as oppressive (column 4); condemns the unequal tax system (column 5); and, calls for fiscal reform (column 6). "Overall tax burden" is the total tax burden (in *livres*) per capita. All specifications include: fixed effects for geography ($0.5° \times 0.5°$ cells), month-year of the speech, word count (quintile), and average word length (quintile); a dummy equal to one if the legislator belongs to the nobility; 1780 population; soil fertility; the number of Enlightenment books; log income of monasteries; the share of nobles; average wheat prices (1756-1789); and, the log number of brigades. See Table B1 for variable details. Standard errors are clustered at the *bailliage* level. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

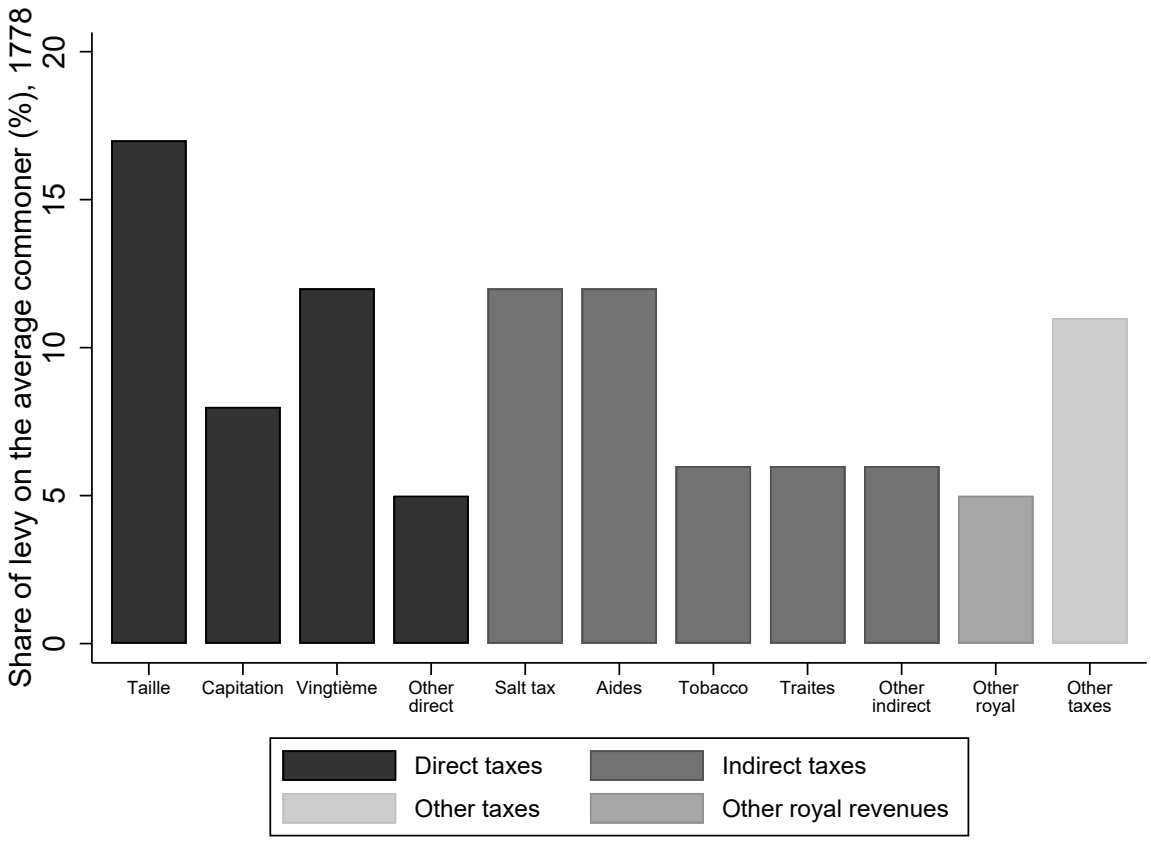
A.2 Figures

FIGURE A1 – SATIRE OF THE THIRD ESTATE CARRYING THE NOBILITY AND THE CLERGY (1789)



Notes: Popular caricature representing the hard-working Third Estate carrying the nobility and clergy. The legend reads "A faut espérer q[u]'eu jeu là finira b[i]entôt" ("Hopefully, this game will be over soon"). Out of the nobility's "full" pocket, the first item listed is "sel" ("salt"). *Source:* Anonym satire (1789), National Library of France, BnF, https://gallica.bnf.fr/ark:/12148/btv1b8410972x.item.

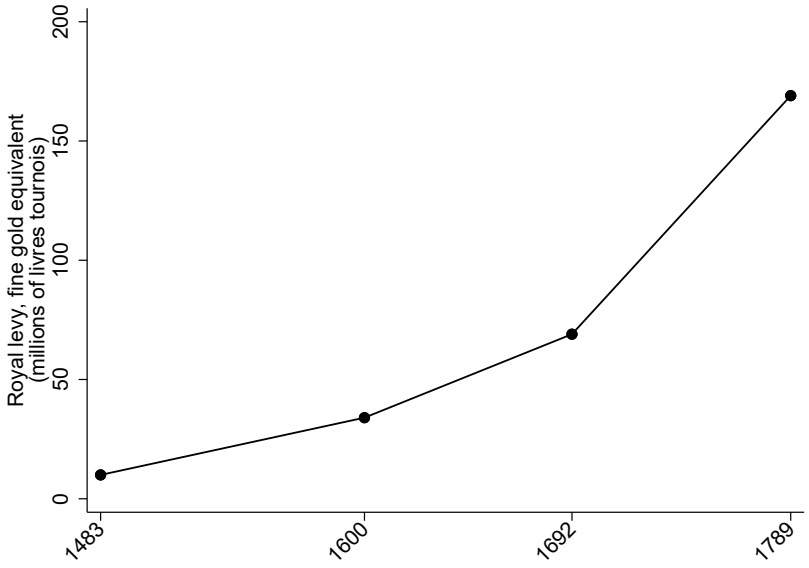
FIGURE A2 – TOTAL LEVY ON AVERAGE COMMONERS (1778)



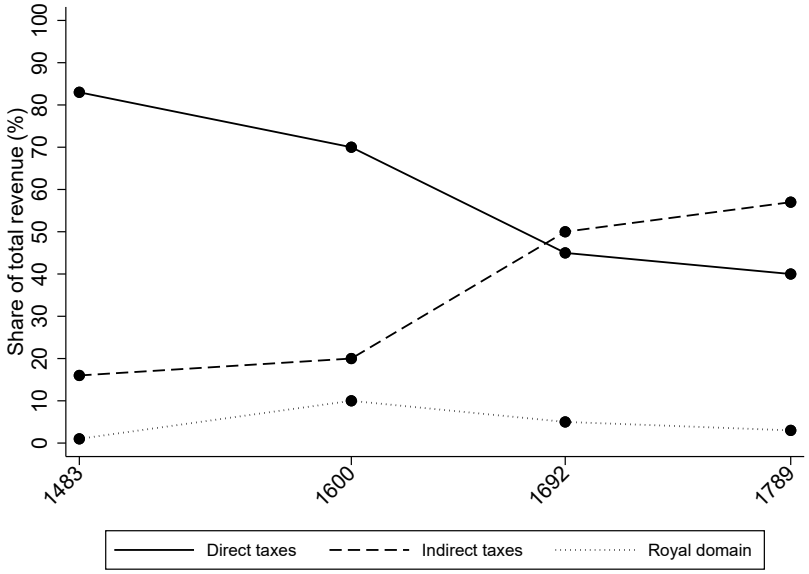
Notes: The table reports the levy on the average commoner in France in 1778 by source. Other royal levy include costs associated to minting money and linked to royal domains. *Source*: Data come from Touzery (2024), which digitizes archival material from the *Archives nationales (France), Section ancienne, sous-série G/7 (Contrôle général des finances), cartons G/7/1435–G/7/1450, Tables et mémoires sur les impositions par généralités (Commission de La Rochefoucauld), circa 1778.*

FIGURE A3 – EVOLUTION OF ROYAL REVENUES

(A) TOTAL ROYAL LEVY



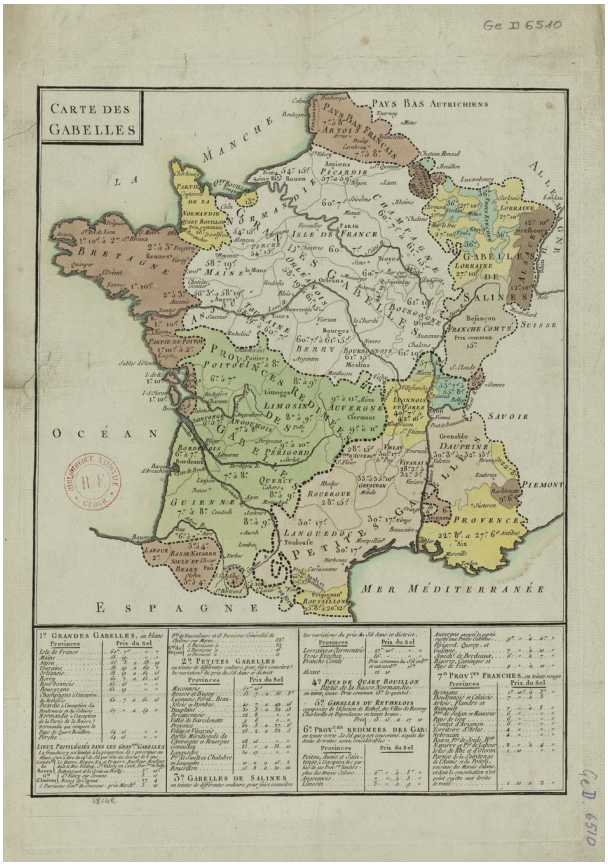
(B) COMPOSITION OF ROYAL LEVY



Notes: The figure reports the total royal revenues over time (in fine gold equivalent). Panel A reports the total royal levy, expressed in fine gold equivalent. Panel B represents the composition of the total royal levy. Data come from Touzery (2024) and the official royal public finance records from the National Library of France, BnF. Total in 1789: 501,645,679 *livres tournois*. For comparison purposes, population in mainland France increased by about 30%, from 20 to 27 million, between 1700 and 1789.

FIGURE A4 – MAPS OF FRANCE'S BORDERS

(A) SALT TAX MAP (1781)



(B)TRAITES MAP (1781)



Notes: Panel A reproduces the map of the salt tax from Necker's *Compte rendu au Roi* (1781), which depicts the patchwork of salt-tax regions and their boundaries on the eve of the Revolution. Source: National Library of France, BnF. Panel B reproduces the map of the *traites* from Necker's *Compte rendu au Roi* (1781), which depicts the main customs zones of France on the eve of the Revolution. Source: National Library of France, BnF.

FIGURE A5 – MENTIONS OF TAXATION IN FRENCH BOOKS (1750-1810)



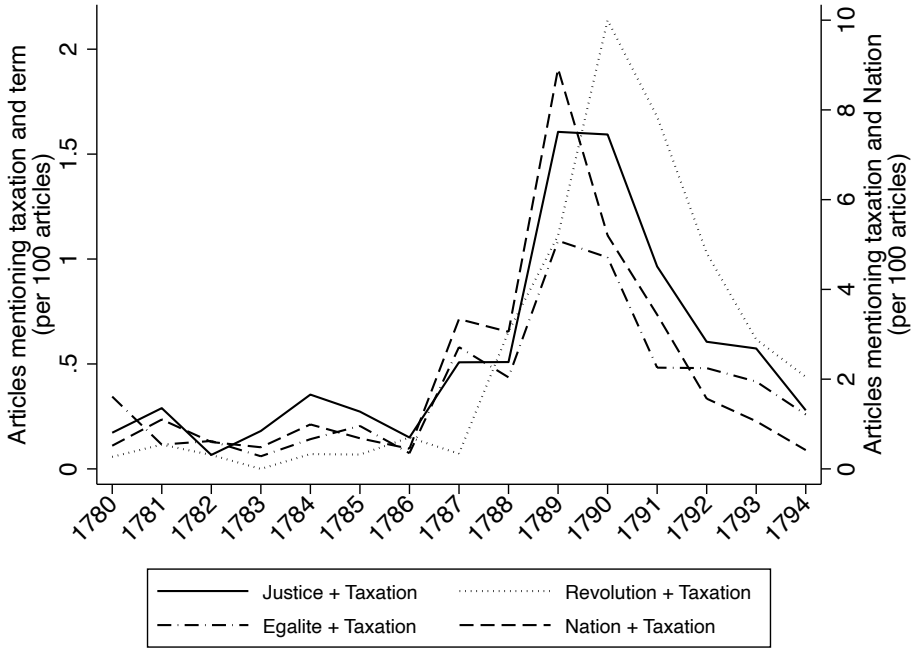
Notes: The figure displays the number of French books as a share of all French books mentioning taxes (French keyword used is "impôt"), in each year from 1750 to 1810. Data come from Azoulay and de Courson (2021), relying on the Archives of the National Library of France, BnF.

FIGURE A6 – MENTIONS OF TAXATION IN FRENCH PRESS ARTICLES, 1780–1795

(A) TAXATION

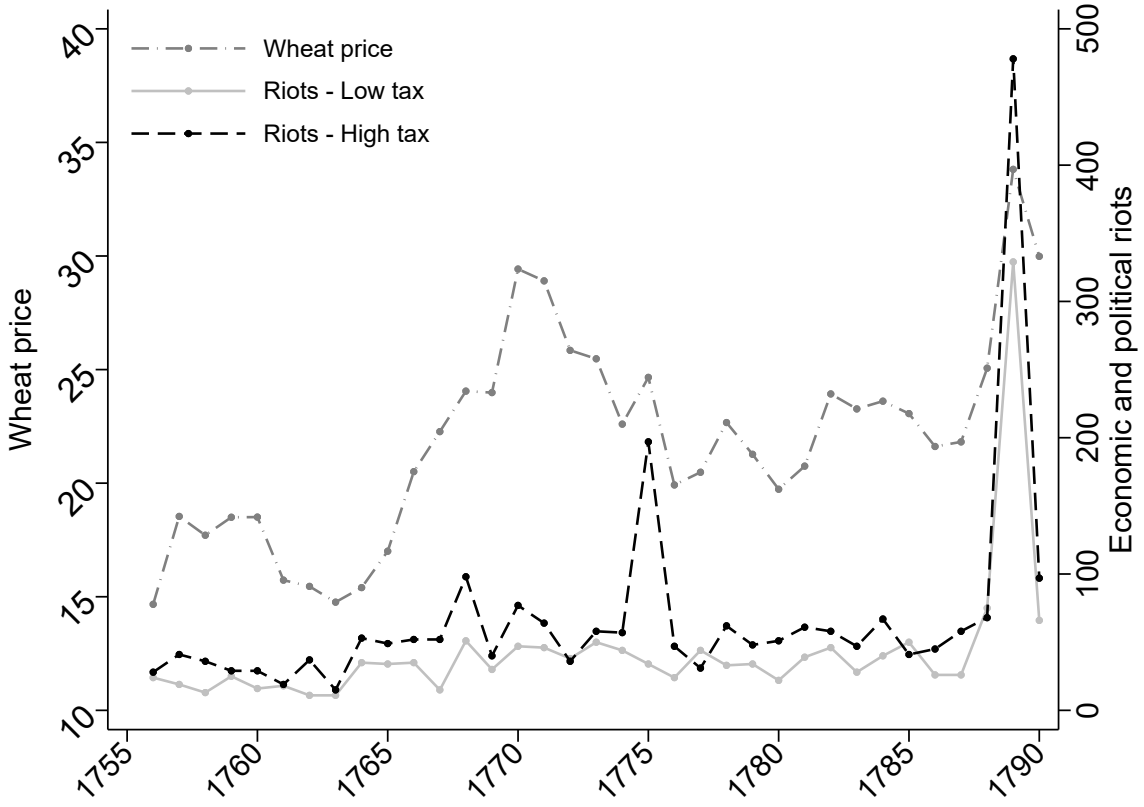


(B) TAXATION AND SELECTED TERMS



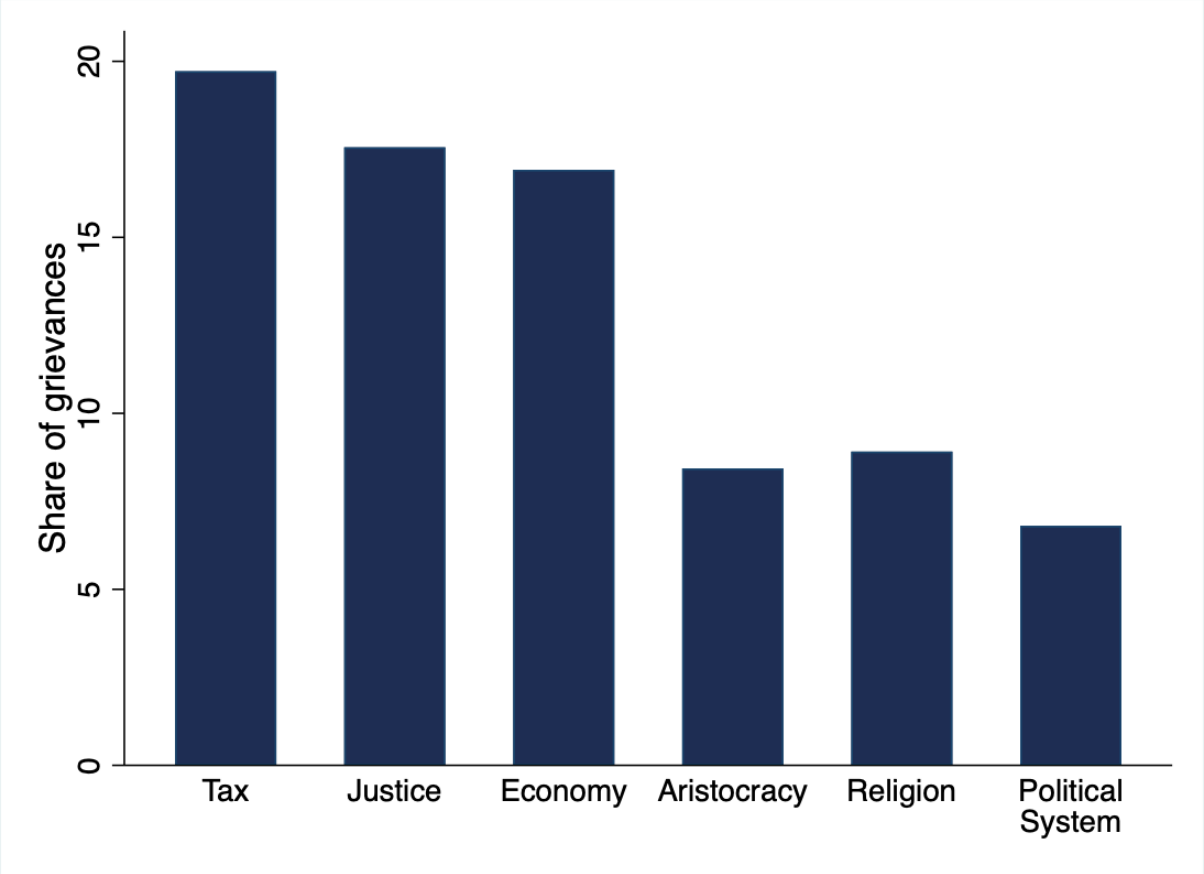
Notes: Panels A and B plot the number of articles from the French Press indexed by the National Library of France: i) with at least one mention to the keyword "impôt" (tax); and, ii) with at least one joint occurrence of "impôt" (tax) and each selected term ("justice", " révolution", "nation" or "égalité"). Data come from Azoulay and de Courson (2021), based on the Archives of the National Library of France (BnF).

FIGURE A7 – WHEAT PRICES AND RIOTS



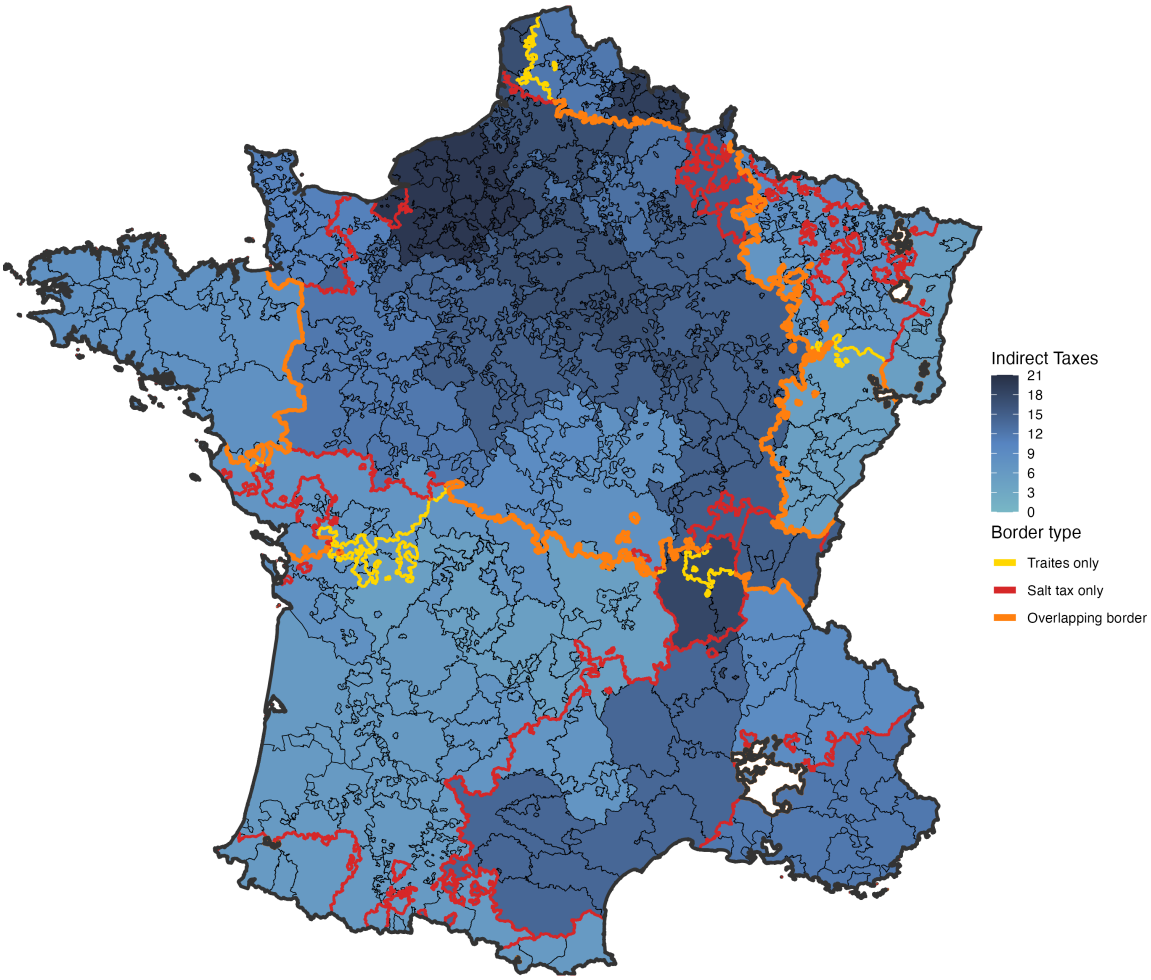
Notes: The figure displayes the evolution of wheat prices, expressed in grams of silver per litre, and economic and political riots in contiguous France from 1756 to 1789. Wheat prices were first collected by Labrousse (1933) and digitized by Chambru (2019), who shared the data with us. "Riots - High tax" (resp., "Riots - Low tax") indicates the number of economic and political riots from Chambru and Maneuvrier-Hervieu (2024) recorded in *bailliages* with the overall tax burden above (resp., below) the sample median.

FIGURE A8 – OVERALL FREQUENCY OF COMPLAINTS



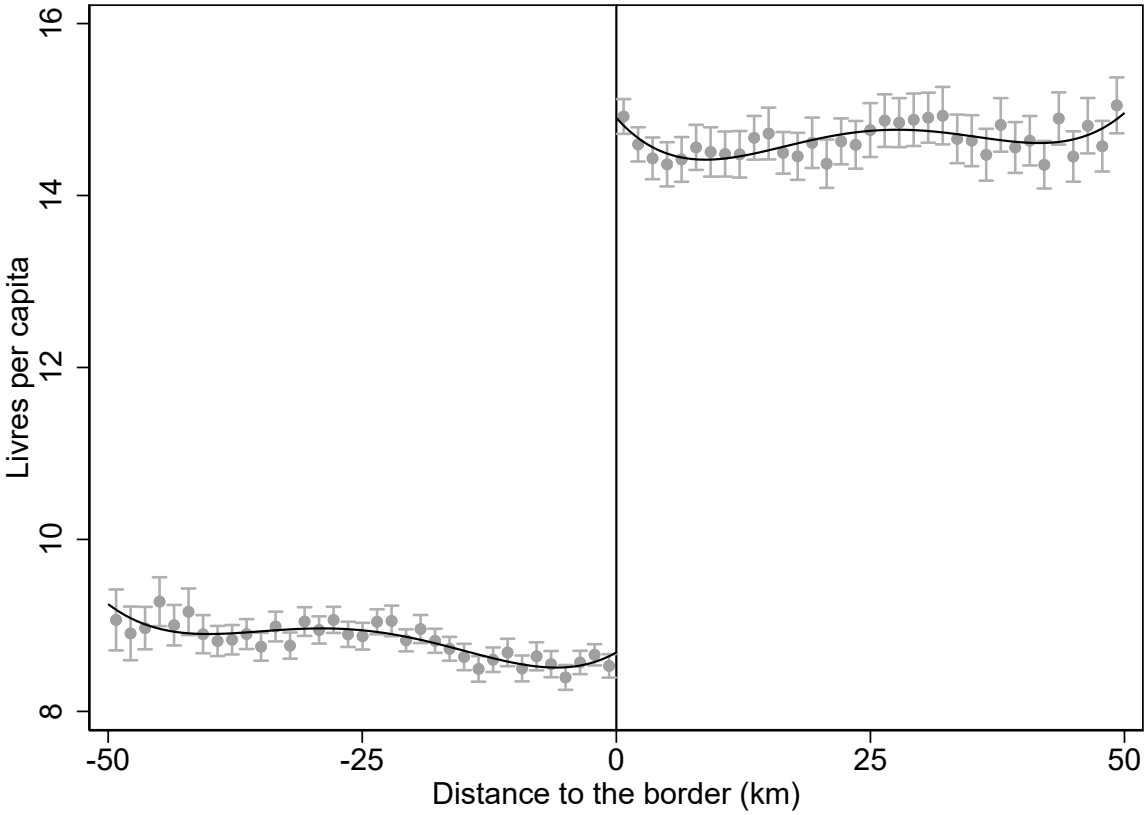
Notes: The figure plots the number of complaints in each category, relative to all complaints reported in the list of grievances from Degrave (2023).

FIGURE A9 – INDIRECT TAX BORDERS



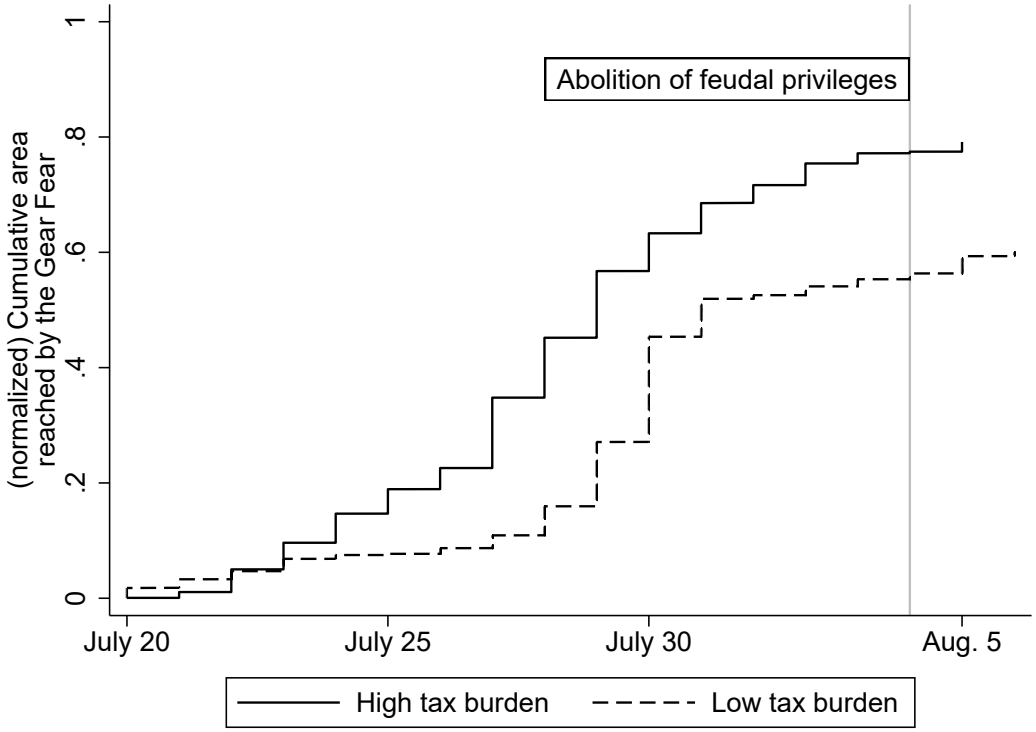
Notes: The figure reports the borders of the salt tax (red) and the *traites* (yellow), highlighting the overlapping sections where the indirect tax frontier overlaps (orange). The *bailliage* level indirect tax burden is reported in the background. Source: National Library of France, BnF.

FIGURE A10 – FIRST STAGE: INDIRECT TAXES AROUND THE BORDER



Notes: The plot shows the nonparametric relationship between distance to the tax frontier (where the salt tax and the *traites* overlap) and the indirect tax burden (in *livres* per capita). Values on the x-axis greater than zero correspond to municipalities on the high-tax side of the border.

FIGURE A11 – SPREAD OF THE 1789 GREAT FEAR IN HIGH AND LOW TAX BAILLIAGES



Notes: The plots shows the cumulative share of territory reached by the Great Fear between July 20 and August 6, 1789, in above and below median tax *bailliages*.

B Data appendix

B.1 Variables definition and sources

TABLE B1 – DESCRIPTION OF MAIN VARIABLES

Variable name	Description	Source
Dependent variables		
Economic and political riots	Number of economic and political riots (1750–89; 1780–89)	Chambru and Maneuvrier-Hervieu (2024)
Cahiers de doléance: complaints against taxes, Third Estate	Number of complaints against taxation submitted by the Third Estate	Degrave (2023) and Shapiro et al. (1998)
Grande Peur: 1[At least one epicenter]	Dummy = 1 if the *bailliage* hosted at least one Great Fear epicenter	Lefebvre (1973) and Zapperi et al. (2025)
Grande Peur: # of epicenters	Number of Great Fear epicenters in absolute value	Lefebvre (1973) and Zapperi et al. (2025)
Grande Peur: # of epicenters per 1,000 km^2	Number of Great Fear epicenters scaled by *bailliage* area (per 1,000 km^2)	Lefebvre (1973) and Zapperi et al. (2025)
Grande Peur: share reached by Great Fear	Share of municipalities within the *bailliage* reached by Great Fear	Lefebvre (1973) and Zapperi et al. (2025)
Grande Peur: Great Fear arrival day	Days from July 20, 1789, to the *bailliage*'s first Great Fear arrival	Lefebvre (1973) and Zapperi et al. (2025)
Tax speech: About taxes	Dummy = 1 if the speech contains reference to taxation	Archives Parlementaires (FRDA)
Tax speech: Critical of *Ancien Regime*	Dummy = 1 if a tax speech is critical of the *Ancien Regime*	Archives Parlementaires (FRDA)
Tax speech: support revolution	Dummy = 1 if a tax speech supports the Revolutionary system	Archives Parlementaires (FRDA)
Tax speech: Oppression	Dummy = 1 if a tax speech frames taxation as oppressive	Archives Parlementaires (FRDA)
Tax speech: Inequality	Dummy = 1 if a tax speech condemns the unequal tax system	Archives Parlementaires (FRDA)
Tax speech: Tax reform	Dummy = 1 if a tax speech calls for fiscal reform	Archives Parlementaires (FRDA)
Speech: monarchy defend	Dummy = 1 if a speech defends the monarchy in 1789	Archives Parlementaires (FRDA)
Speech: rollback reforms	Dummy = 1 if a speech supports rolling back reforms in 1789	Archives Parlementaires (FRDA)
Speech: status quo	Dummy = 1 if a speech supports the status quo in 1789	Archives Parlementaires (FRDA)
Speech: moderate reforms	Dummy = 1 if a speech supports moderate reforms in 1789	Archives Parlementaires (FRDA)
Speech: radical reforms	Dummy = 1 if a speech supports radical reforms in 1789	Archives Parlementaires (FRDA)
Legislators' political leaning	Dummy = 1 if a legislator of the *Assemblée Nationale Législative* (October 1791–September 1792) belongs to a group which opposes the monarchy.	National Assembly archives
Legislators' vote on king execution	Dummy = 1 if a legislator of the *Convention Nationale* (January 1793) voted for king's execution.	National Assembly archives

Variable name	Description	Source
Main regressors		
Overall tax burden	Overall tax burden in 1780, measured in *livres* per capita	Touzery (2024)
Direct tax burden	Direct tax burden in 1780, measured in *livres* per capita	Touzery (2024)
Indirect tax burden	Indirect tax burden in 1780, measured in *livres* per capita	Touzery (2024)
Local tax burden	Local tax burden in 1780, measured in *livres* per capita	Touzery (2024)
Other variables		
Population	Municipality population in 1780	Cagé and Piketty (2023)
Soil fertility	An index obtained by three variables: a measure from the European Soil Database, the average silt content in the soil (at 100-200cm depth), and the average nitrogen content in the soil (at 30-60cm depth)	European Soil Database and European Environment Agency
Indirect tax gap	Dummy = 1 if a municipality's indirect tax gap across the border is above the median of the sample	Touzery (2024)
Enlightenment ideas: *Encyclopedie* subscriptions	Number of *Encyclopedie* subscriptions sold in a *bailliage* for the period 1769-1789	Squicciarini and Voigtländer (2015)
Enlightenment ideas: *Enlightenment* books	Number of Enlightenment books sold in a *bailliage* between 1769 and 1789	Burrows and Curran (2014)
Literacy rate	Dummy = 1 if a *bailliage*'s literacy proxy, the 1786 marriage-signature rate, is above the sample median	Cagé and Piketty (2023)
Log. income monasteries	Natural logarithm of the income of monasteries (in thousands of livres)	Deseau (2023)
Share nobles	The aristocratic share of the population, as described in Appendix individuals with markers of noble status (see B.6)	Geneanet (online database)
Av. wheat price (1756-1789)	Average wheat price, between 1756 and 1789	Chambru (2019)
Log. brigades	Natural logarithm of the number of tax brigades in 1780	Touzery (2024)
Weather: temperature shock	One year lag of the deviation from the seasonal temperature relative to the long run mean (1750-1800)	Waldinger (2024)
Weather: precipitation shock	One year lag of the deviation from the seasonal precipitation relative to the long run mean (1750-1800)	Waldinger (2024)
Number of legislators per 1,000 inhabitants	Number of legislators per 1,000 inhabitants	National Assembly archives
Cahiers de doléance: Number of complaints against taxations, Nobles	Number of complaints against taxation submitted by the nobles at the *bailliage* level	Degrave (2023) and Shapiro et al. (1998)
Tax mentions in French books	Share of French books mentioning the word "*impôt*"	Azoulay and de Courson (2021)
Tax mentions in French articles	Number of articles per 100 French articles mentioning the word "*impôt*" jointly with selected terms such as "*justice*", "*révolution*", "*nation*" or "*égalité*"	Azoulay and de Courson (2021)
Cahiers de doléance: categories	Number of complaints against taxation due to economic burden, horizontal unfairness, vertical unfairness or intrusive enforcement submitted by the Third Estate	Touzery (2024)
Distance from closest salines and from salt marshes	Border distance from closest salt marshes	European Environment Agency
Smuggling-related riots	Smuggling riots with reference to a specific good or with fewer than 8 participants	Chambru and Maneuvrier-Hervieu (2024)

Notes: This table presents all variables used in the analysis. Appendix B.2 and Appendix B.3 provide detailed descriptions of the construction of fiscal variables and border classification, respectively. Appendix B.6 describes the construction of the *Share of nobles*. Appendix E provides further details on the parliamentary speeches data.

Variable name	Description	Source
Other variables		
Border type: Roman borders	Roman administrative borders	McCormick et al. (2013)
Border type: Archdiocesan borders	Archdiocesan boundaries circa AD 1000	Grigoli and Maione-Downing (2013)
Border type: *Généralité* border	Généralité borders from the *Ancièn Regime*	Gay et al. (2024)
Border type: Legal system	Borders that coincide with jurisdictional boundaries	National Library of France, BnF
Border type: Fiscal system	Borders that coincide with fiscal organization boundaries	National Library of France, BnF
Border type: Representation system	Borders that coincide with representation system boundaries	National Library of France, BnF
Border type: Language divide	Borders that coincide with linguistic divides	National Library of France, BnF
Border type: Minimal tax gap	Borders with a negligible fiscal differential	Touzery (2024)
Municipality characteristics: Roman road	Presence of Roman road in the municipality's territory	McCormick et al. (2013)
Municipality characteristics: Cassini road	Presence of a road from the Cassini map in the municipality's territory	Perret et al. (2015)
Municipality characteristics: Cassini city	Presence of a city from the Cassini map in the municipality's territory	Perret et al. (2015)
Municipality characteristics: Archdiocese	Presence of an archdiocese in the municipality's territory	Grigoli and Maione-Downing (2013)
Municipality characteristics: Surface area	surface area of the municipality	National Institute of Geographic and Forest Information (IGN)
Municipality characteristics: Municipality altitude	Mean elevation above sea level	National Institute of Geographic and Forest Information (IGN)
Municipality characteristics: River	Presence of a river in the municipality's territory	National Institute of Geographic and Forest Information (IGN)

Notes: This table presents the main dependent and explanatory variables used in the analysis of the paper.

Variable name	Description	Source
Other variables		
Soil characteristics: Soil drainage	Measure of soil drainage capacity of the municipality's soil	European Soil Database and European Environment Agency
Soil characteristics: Silt content	Measure of silt content in the municipality's soil	European Soil Database and European Environment Agency
Soil characteristics: Coarse fragments	Measure of coarse fragments in the municipality's soil	European Soil Database and European Environment Agency
Soil characteristics: Clay content	Measure of clay content in the municipality's soil	European Soil Database and European Environment Agency
Soil characteristics: Sand content	Measure of sand content in the municipality's soil	European Soil Database and European Environment Agency
Soil characteristics: Bulk density	Measure of bulk density of the municipality's soil	European Soil Database and European Environment Agency
Soil characteristics: Nitrogen content	Measure of nitrogen content in the municipality's soil	European Soil Database and European Environment Agency
Soil characteristics: Carbonyl content	Measure of carbonyl content in the municipality's soil	European Soil Database and European Environment Agency
Soil characteristics: Organic carbon content	Measure of organic carbon content in the municipality's soil	European Soil Database and European Environment Agency
Soil characteristics: Average PH in water	Measure of average PH level of the water in the municipality's soil	European Soil Database and European Environment Agency
Soil characteristics: Average soil salinity	Measure of average salinity of the municipality's soil	European Soil Database and European Environment Agency
Soil characteristics: Average water retention	Measure of average water retention of the municipality's soil	European Soil Database and European Environment Agency
Horse-post relay	Presence of a horse-post relay in the municipality's territory	Albertus and Gay (2025)
Distance to post relays	Distance to closer horse-post relay	Albertus and Gay (2025)

Notes: This table presents the main dependent and explanatory variables used in the analysis of the paper.

B.2 Measuring and decomposing the local tax burden

We construct a novel dataset measuring the fiscal burden at the *bailliage* level on the eve of the French Revolution. The dataset combines two complementary sources of evidence.

Tax burden: total and by category. First, we collect data at the *généralité* level on the total tax burden and its decomposition into direct, indirect, and local taxes. Our primary source is Touzery (2024), which digitizes archival material from the *Archives nationales (France), Section ancienne, sous-série G/7 (Contrôle général des finances), cartons G/7/1435–G/7/1450, Tables et mémoires sur les impositions par généralités (Commission de La Rochefoucauld), circa 1778*. When necessary, these data are supplemented with information from later archival records—*États des impositions par généralités, 1788–1789—drawn from cartons G/7/1739–G/7/1745* of the same archival series. Together, these sources provide a comprehensive and internally consistent picture of aggregate fiscal pressure at the *généralité* level shortly before the Revolution.

Figure B1 summarizes the spatial distribution of fiscal pressure across *bailliages* on the eve of the French Revolution (Panel A). Following Touzery (2024), we further classify taxes under the *Ancien Régime* into three broad categories: direct, indirect, and local taxes. Direct taxes include the *taille*, the *capitation*, and the *vingtième*, which were assessed directly on individuals or households, often based on landholding, status, or income proxies, and were formally levied by the Crown. Indirect taxes comprise levies collected on goods, transactions, or consumption, most prominently the salt tax (*gabelle*), internal customs duties (*traites*), excises (*aides*), the tobacco monopoly, stamp duties, and *octrois* on goods entering towns. These taxes were largely administered by the *Ferme générale* and enforced through a dense network of fiscal borders, warehouses, and patrols. Local taxes consist of levies imposed by municipalities or provincial estates to finance local expenditures, such as infrastructure, poor relief, or administrative costs. Throughout the analysis, we express each tax category in *livres* per capita and use their sum to construct the overall tax burden faced by each *bailliage* around 1780. Figure B1, Panels B–D, displays the three components separately.

The salt tax and the *traites*. Second, we assemble disaggregated evidence on the two central components of indirect taxation in late–*Ancien Régime* France: the salt tax (*gabelle*) and the *traites*. Our primary source for both is Necker's 1781 report to the King (Necker, 1781). By combining information from this report with recent advances in historical cartography and administrative reconstruction, we recover two key moments of the indirect tax system: (i) the geographic delineation of tax zones, and (ii) measures of local tax burden.

Geo-referencing historical borders poses several challenges. The most important ones are:

i. Lack of modern coordinates systems, such that maps are typically inaccurate;
ii. Lack of borders in a modern sense such that the exact placement of the border is sometimes

unclear;

iii. Jurisdictions referred to in the source may differ and be non-overlapping;

iv. Sources, such as maps, have heterogeneous quality over space and time;

v. Historical sources may be conflicting.

To minimize potential errors arising from these challenges, we integrated the most reliable historical sources on salt tax and *traites* borders covering the entire Kingdom, with state-of-the-art geo-referenced administrative divisions of the *Ancien Régime* from Gay et al. (2024). We prioritized Necker's 1781 report to the King (Necker, 1781) as it is temporally proximate to the Revolution; thus, reducing the risk of missing unobserved changes in the fiscal system. As a base map, we used the salt tax and *traites* maps reported in Figure B2. To address the spatial imprecision of this map at finer resolutions, we leveraged the Royal *ordonnances* on the salt tax from 1680, which specify locations and corresponding tax rates (Figure B3), as well as the *bailliage* layer from Gay et al. (2024) (Figure B5, Panel A).

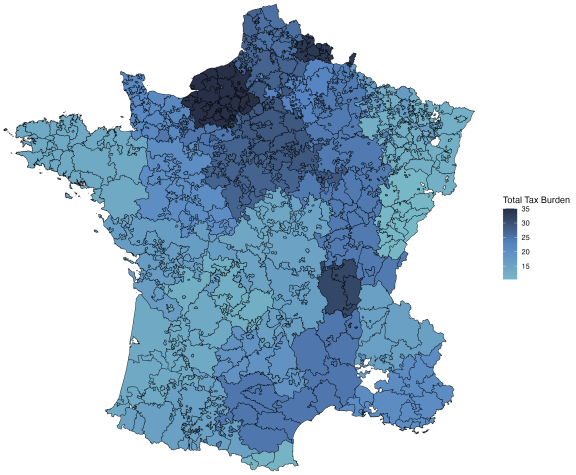
As robustness for our approach to the salt tax border placement, we relied on Sanson (1665)'s *Atlas des Gabelles*, whose main illustration is presented in Figure B4.[48] The manuscript map, produced by the Sanson family, royal cartographers to the French crown, details the historical boundaries of France's salt tax regions (*gabelles*), and provides one of the most comprehensive contemporary depictions of fiscal geography under the *Ancien Régime* in the 17th century. For our purposes, the Atlas suffers from two main disadvantages. First, it only covers the *Grandes Gabelles* area. Second, it was drafted nearly 125 years before the Revolution. Already by 1680, minor differences in the salt tax system appears (e.g., *Quart-Bouillon* area). Despite the general stability of the salt tax system, this fact argues in favor of relying on sources temporally closer to the Revolution.[49] However, we verify that results are robust to using the Sanson (1665)'s *Atlas des Gabelles* to delineate the *Grandes Gabelles* area and re-estimate our main specification using this approach. Finally, we provide extensive robustness and placebo checks in Section 5.4.

[48] We could not conduct the same exercise for the *traites* as we are not aware of a *traites* equivalent to the Sanson (1665)'s *Atlas des Gabelles*.

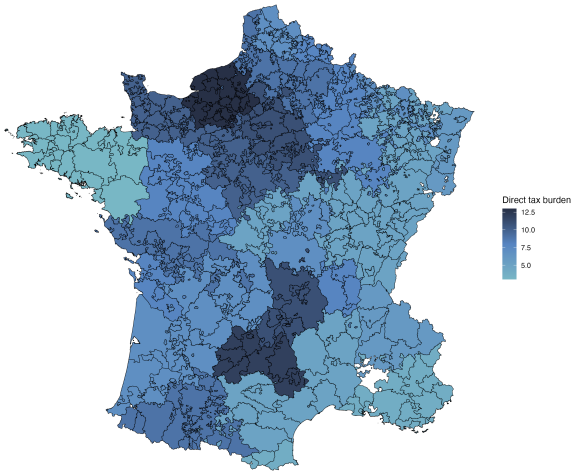
[49] Panel A of Figure B5 reports the map of *bailliage* border from Gay et al. (2024). Panels B and C also display our baseline map of the salt tax and the salt tax map obtained using Sanson's atlas as source for the *Grandes Gabelles* borders.

FIGURE B1 – FISCAL BURDEN AT THE BAILLIAGE LEVEL, CIRCA 1780

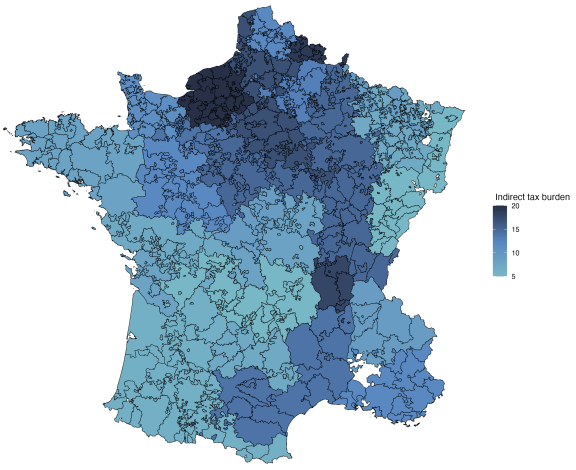
(A): OVERALL TAX BURDEN



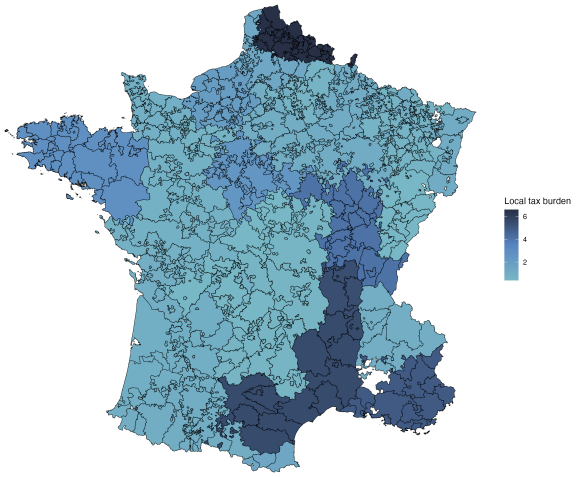
(B): DIRECT TAX BURDEN



(C): INDIRECT TAX BURDEN



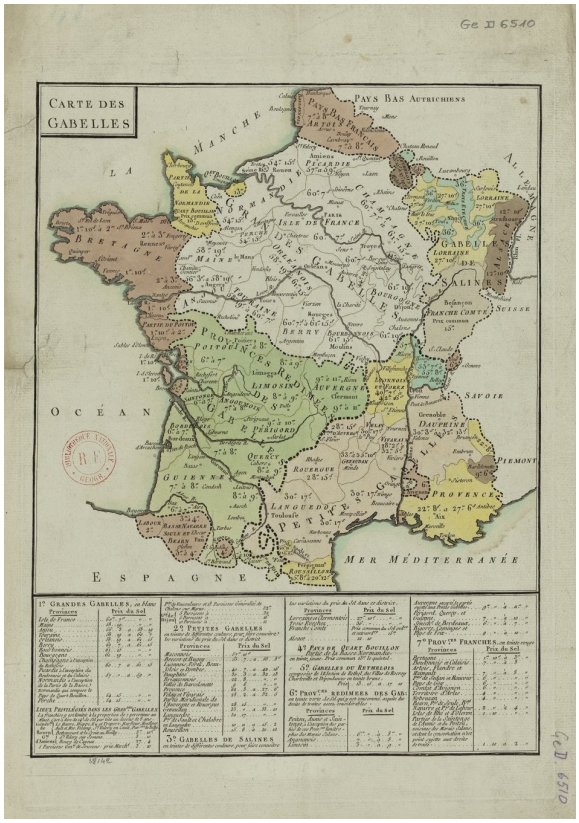
(D): LOCAL TAX BURDEN



Notes: The figure displays the fiscal burden, expressed in *livres* per capita, at the *bailliage* level around 1780. Panel A reports the total tax burden, while panels B–D decompose this total into direct, indirect, and local taxes, respectively. *Généralité*-level aggregates are drawn from Touzery (2024) and archival sources from the *Contrôle général des finances*; they are allocated to the *bailliage* level using Necker's 1781 Report to the King (Necker, 1781). The definition of tax categories (direct, indirect, local) follows Touzery (2024).

FIGURE B2 – MAPS OF FRANCE'S INDIRECT TAX BORDERS

(A) SALT TAX MAP (1781)

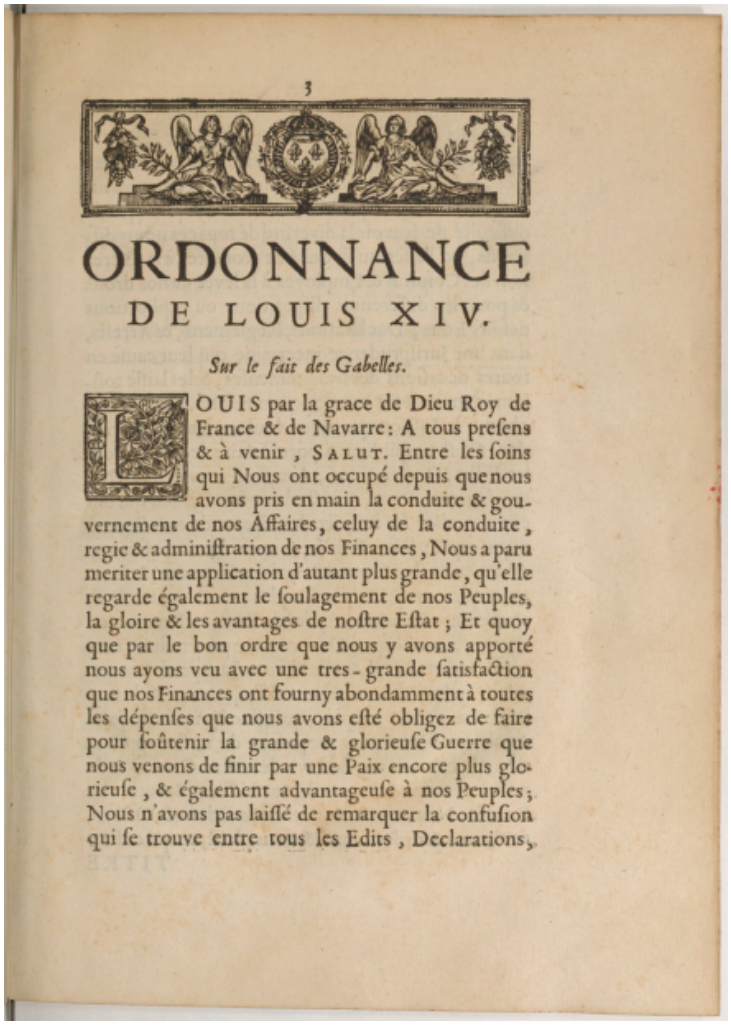


(B) TRAITES MAP (1781)



Notes: Panels A and B reproduce the maps of the salt tax and the *traites*, respectively. Both maps are from the *Compte rendu au Roi* (Necker, 1781) and are available through the National Library of France (BnF).

FIGURE B3 – ROYAL *ordonnance* ON THE SALT TAX (1680)



3

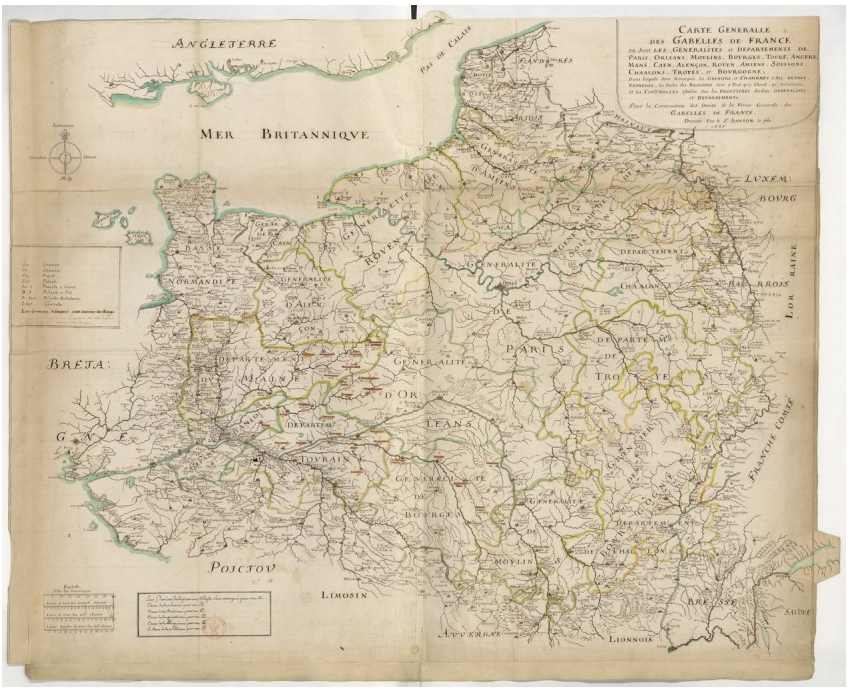
ORDONNANCE
DE LOUIS XIV.

Sur le fait des Gabelles.

LOUIS par la grace de Dieu Roy de France & de Navarre: A tous preſens & à venir, SALUT. Entre les ſoins qui Nous ont occupé depuis que nous avons pris en main la conduite & gouvernement de nos Affaires, celuy de la conduite, regie & adminiſtration de nos Finances, Nous a paru meriter une application d'autant plus grande, qu'elle regarde également le ſoulagement de nos Peuples, la gloire & les avantages de noſtre Eſtat; Et quoy que par le bon ordre que nous y avons apporté nous ayons veu avec une tres-grande ſatisfaction que nos Finances ont fourny abondamment à toutes les dépenſes que nous avons eſté obligez de faire pour ſoûtenir la grande & glorieuſe Guerre que nous venons de finir par une Paix encore plus glorieuſe, & également advantageuſe à nos Peuples; Nous n'avons pas laiſſé de remarquer la confuſion qui ſe trouve entre tous les Edits, Declarations,

Notes: The figure shows the first page of the *Ordonnance de Louis XIV de mai 1680 sur le fait des gabelles*. Source: National Library of France, BnF.

FIGURE B4 – SANSON (1665)'S *Atlas des Gabelles*

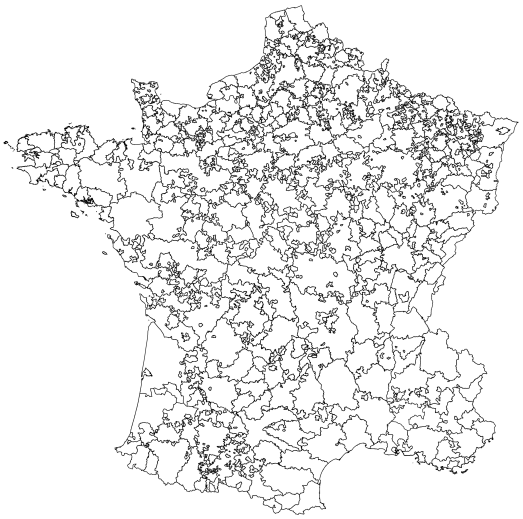


Source gallica.bnf.fr / Bibliothèque nationale de France

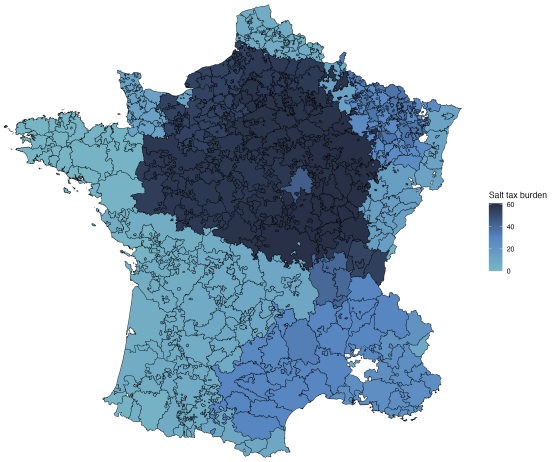
Notes: The figure shows the main map of Sanson (1665)'s *Atlas des Gabelles*. Source: National Library of France, BnF.

FIGURE B5 – GEOGRAPHY OF THE SALT TAX, CIRCA 1780

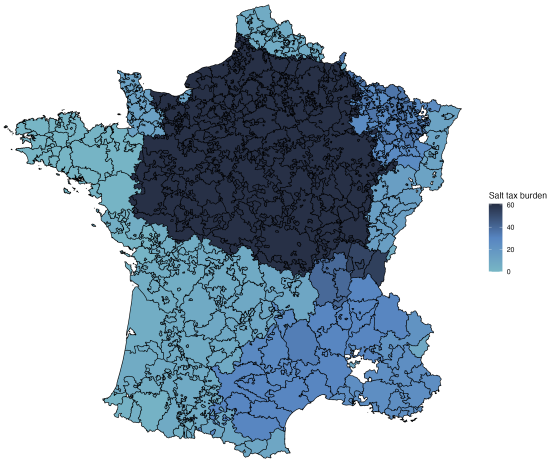
(A): GAY ET AL. (2024)'S MAP OF BAILLIAGES



(B): SALT TAX (BAILLIAGES)



(C): SALT TAX (BAILLIAGES+SANSON)



Notes: Panel A displays the *bailliage* borders from Gay et al. (2024). Panels B and C plot the baseline salt tax map and the alternative salt tax map constructed using Sanson's atlas as the source for the *Grandes Gabelles* borders, respectively.

B.3 Border classification

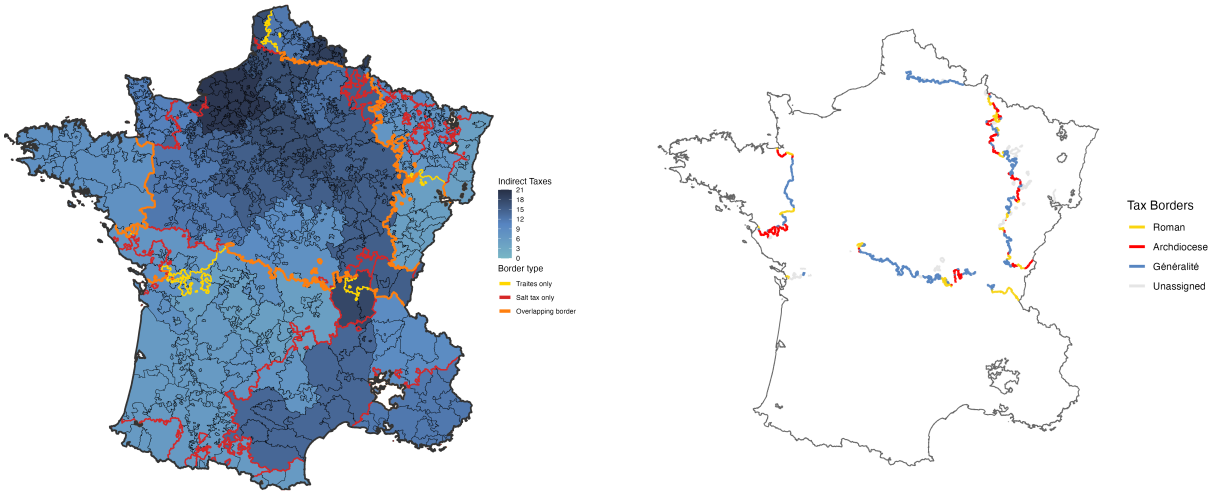
The RD analysis presented in Section 5 focuses on border segments where the boundaries of the salt tax and the *traites* coincide. Panel A of Figure B6 displays the full set of salt tax and *traites* borders, highlighting in orange the segments where the two overlap. To investigate the historical origins of these overlapping border segments, Panel B of Figure B6 examines their correspondence with major administrative boundaries from different historical periods.

We proceed in two steps. First, we partition each continuous overlapping border into 1-kilometer segments, allowing the final segment of each continuous line to be shorter than 1 km. This discretization produces a set of elementary border segments that constitute the unit of analysis for the classification exercise. Second, we assign each 1-kilometer segment to a candidate historical origin using a conservative, intersection-based rule. Specifically, a segment is classified as potentially originating from a given historical boundary if it intersects that boundary at any point. This procedure intentionally errs on the side of inclusion, assigning segments whenever there is any plausible spatial overlap rather than requiring exact spatial alignment.

As candidate historical origins, we consider three sets of administrative boundaries drawn from distinct and historically influential periods: Roman administrative borders, archdiocesan boundaries circa AD 1000, and *généralité* borders from the *Ancien R'egime*. Together, these boundaries capture persistent institutional divisions that plausibly shaped the location of fiscal borders on the eve of the Revolution.

FIGURE B6 – FRANCE'S INDIRECT TAX BORDERS: OVERLAP AND ORIGIN

(A) INDIRECT TAX BORDERS (B) BORDER ORIGIN



Notes: Panel A reports the borders of the salt tax (red) and the *traites* (yellow), highlighting in orange the segments where the two overlap and form a common indirect tax frontier. The *bailliage*-level indirect tax burden is shown in the background. Panel B reports the historical origin of the tax border resulting from the overlap between the salt tax and the *traites*. The figure highlights border segments classified as Roman (yellow), archdiocesan (red), *g'en'eralit'e* (blue), or unassigned. For the purpose of this classification, the border is divided into 1-kilometer segments, and each segment is assigned to the earliest historically documented boundary with which it overlaps.

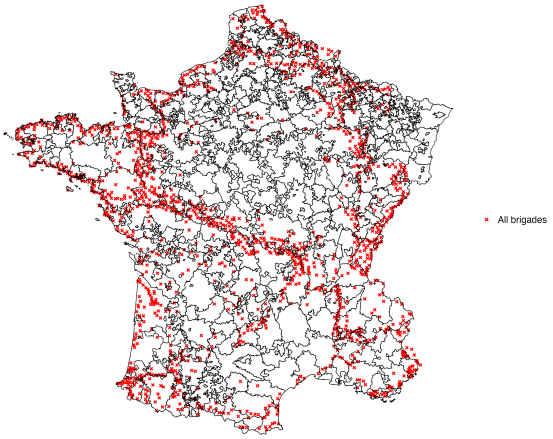
B.4 Mapping local enforcement on the eve of the Revolution

Throughout the analysis, we use information on tax enforcement on the eve of the Revolution. To this end, we geo-code data on the location and type of tax enforcement brigades operating circa 1780, drawing on Touzery (2024) and archival records from the *Ferme générale*. Figure B7 maps the resulting set of enforcement brigades. Panel A displays all brigades; Panel B restricts attention to fixed brigades—permanent installations typically located in towns or major transportation nodes; and Panel C shows mobile brigades.

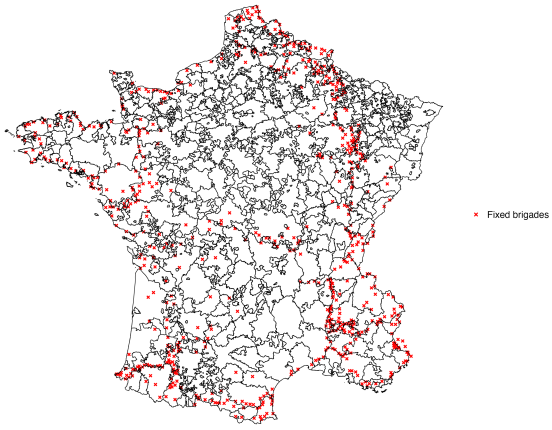
As emphasized by Touzery (2024), these maps should be interpreted as a snapshot rather than a comprehensive representation of enforcement activity. Mobile brigades were, by design, not tied to fixed locations. Their mapped positions therefore reflect administrative attachment points at a given moment in time, rather than the full spatial extent of their operations. Consistent with this interpretation, contemporaneous accounts underscore the scale of enforcement capacity: Lavoisier (1791) reports that total employment in tax enforcement around 1780 amounted to 21,188 agents, roughly half of whom served in mobile brigades. Together, these observations highlight both the importance of mobile enforcement and the inherent limitations of representing such units using static maps.

FIGURE B7 – GEOGRAPHY OF TAX BRIGADES, CIRCA 1780

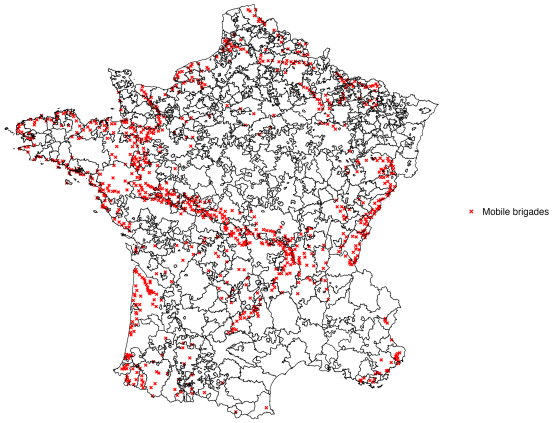
(A): ALL BRIGADES



(B): FIXED BRIGADES



(C): MOBILE BRIGADES

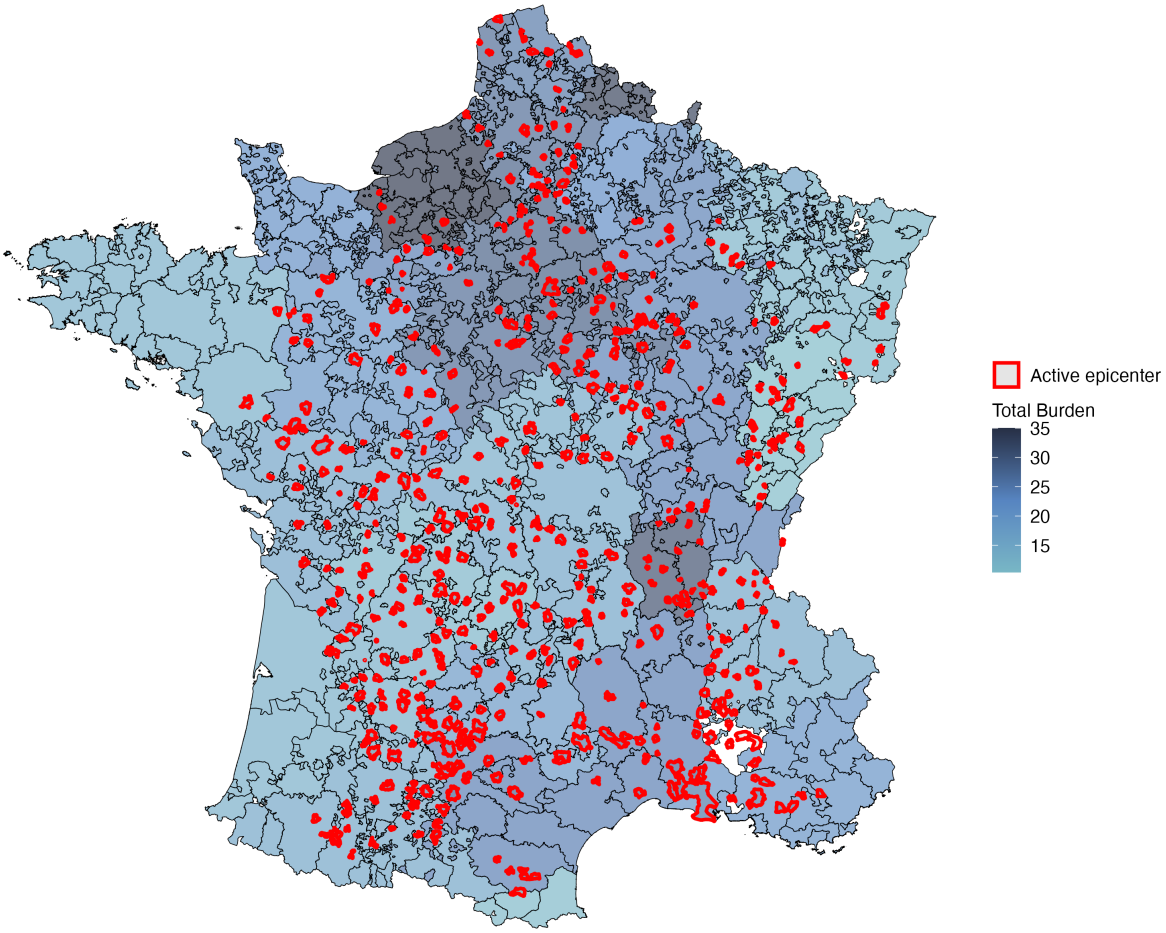


Notes: The figure displays the location of tax enforcement brigades circa 1780, drawing on Touzery (2024) and archival records from the *Ferme Générale*. Panel A shows all brigades, while Panels B and C display fixed and mobile brigades, respectively.

B.5 Mapping the Great Fear

In Section 6, we document the geographic diffusion of the Great Fear during the summer of 1789. We assemble spatial and temporal information from two complementary historical sources that together allow us to trace both the origins and the extent of the panic. First, we draw information on the initial epicenters of the Great Fear from recent work by Zapperi et al. (2025), which identifies and geo-codes the primary outbreak locations (Figure B8). Second, we characterize the overall geographic reach of the Great Fear relying on the comprehensive reconstruction in Lefebvre (1973), which documents the municipalities affected during the summer of 1789 (Figure B9). Because Lefebvre (1973) does not systematically report the exact timing of arrival for all affected municipalities, we impute arrival dates using a proximity-based procedure. For each municipality recorded as affected in Lefebvre (1973) but not identified as epicenters in Zapperi et al. (2025), we assign the arrival date corresponding to the geographically nearest epicenter. This procedure allows us to measure the diffusion timing across space, while preserving the distinction between initial outbreak locations and subsequent spread.

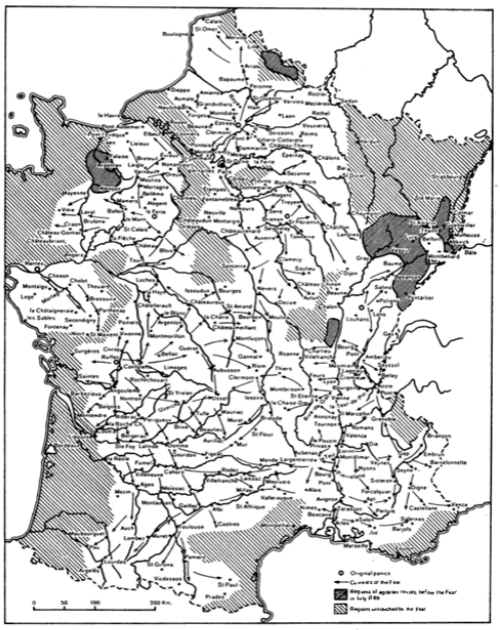
FIGURE B8 – GREAT FEAR EPICENTERS FROM ZAPPERI ET AL. (2025)



Notes: The figure shows the initial epicenters of the Great Fear, drawn from Zapperi et al. (2025), who identify and geo-code the primary outbreak locations.

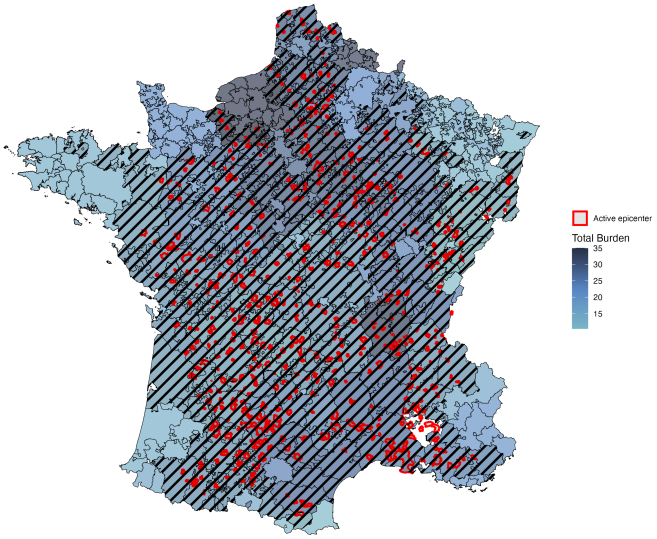
FIGURE B9 – THE SPREAD OF THE 1789 GREAT FEAR

(A): GREAT FEAR SPREAD FROM LEFEBVRE (1973)



1. The Currents of the Great Fear

(B): THE GREAT FEAR AT THE BAILLIAGE LEVEL



Notes: Panel A reproduces the Great Fear map reported by Lefebvre (1973). Panel B presents our final dataset, which combines information on Great Fear epicenters from Zapperi et al. (2025) with the spatial extent of the panic documented by Lefebvre (1973), aggregated at the *bailliage* level using the *bailliage* boundaries from Gay et al. (2024).

B.6 Constructing the number of nobles at the local level

To construct the variable measuring the number of nobles at the municipal level, we rely on information about the surnames of residents in each town in France and matched these surnames to established lists of aristocratic families. The procedure unfolded in two steps: first, we collected microdata on residents' surnames; second, we analyzed these surnames to identify individuals belonging to noble lineages.

Data collection. The first step was to assemble a micro-level dataset containing information on individuals residing in French municipalities in 1780. We relied on one of the largest genealogical portals currently available, the collaborative platform geneanet.org—part of ancestry.org. As of December 2025, the portal contains roughly 2 million family trees and more than 9 billion indexed individuals. These records are drawn from a wide range of documentary sources, including historical censuses, parish and civil registers (births, deaths, and marriages), notarial and court records, military death registries and archives, and royal or seigneurial manorial archives (see Giommoni and Loumeau, 2022 for more details).[50] The resulting dataset contains, for all individuals alive in 1780 and covered by geneanet.org, their given names and surnames, dates of birth and death, and geo-localized municipality of residence.

Data cleaning and noble identification. Before identifying nobles in the microdata, we undertook an extensive cleaning process to improve data reliability. This involved manually removing duplicate entries, standardizing and cleaning name and surname fields, and excluding individuals with implausible birth or death dates. After cleaning, we identified members of the nobility by matching individuals' surnames to a consolidated list of aristocratic families in the Kingdom of France. This list was compiled from several sources, including the *Association d'entraide de la noblesse française*, Wikipedia, and Noblesse Wiki.[51] Using this procedure, we identified 4,968 surnames associated with families of aristocratic origin. Finally, we computed the share of nobles at the municipal (or *bailliage*) level in 1780 by aggregating individuals linked to noble surnames within each municipality and dividing by the municipal population reported in Cagé and Piketty (2023). In the resulting dataset, nobles represent approximately 2.4% of the population—slightly above, but broadly consistent with, the 1–2% range commonly cited in the historical literature (e.g., Le Roux, 1998; Nassiet, 1999).

[50] This extensive body of genealogical information reflects a long-term effort to digitize historical documents, coordinated by the platform in collaboration with a large community of contributors.

[51] See the *Association d'entraide de la noblesse française* here, Wikipedia here, and Noblesse Wiki here.

C Additional evidence from the lists of grievances

This section provides additional evidence from the lists of grievances.

Members of the nobility. In Table C1, we compare these results with those obtained using the *cahiers* submitted by the nobility. Because nobles were largely exempt from taxation, we would not expect to observe a systematic relationship between tax burdens and fiscal complaints. We estimate equation (1), but, given that the data are much sparser—relatively few *bailliages* have surviving noble *cahiers*—we are unable to include geographic fixed effects. Aside from this limitation, the specification is identical to that used in Table 2 in the main text. In contrast with the results for the Third Estate, the coefficient on the overall tax burden is close to zero and statistically insignificant. The same holds when estimating regressions using Poisson (column 7) and expressing tax complaints relative to all complaints (column 8).

Heterogeneity within the Third Estate. Next, we explore whether different constituencies within the Third Estate emphasized distinct fiscal grievances, reflecting the taxes to which they were most exposed. We exploit the existence of two stages of the *cahiers*: the initial parish-level documents and the filtered versions transmitted to Paris by elected representatives. The former capture complaints from poorer, more rural communities, while the latter reflect the views of a relatively more affluent segment of the Third Estate. As emphasized by Shapiro et al. (1998), a process of filtering occurred as the drafting of the *cahiers* moved from villages to district centers. In this process, the priorities of the *bourgeoisie*—who were more affected by trade barriers than by the cost of household salt—increasingly came to dominate the content of the *cahiers*.

We focus on two of the most important and visible levies of the period, which differed sharply in their incidence: the *traites*—an indirect tax on traded goods that primarily affected more affluent and commercially active households—and the salt tax, an unavoidable levy that fell disproportionately on poorer, subsistence consumers. Accordingly, we would expect the representative *cahiers* to voice stronger complaints against the *traites*, while the parish *cahiers* should focus more heavily on the salt tax.

Table C2 tests this prediction. Columns 1–3 report results for the representative *cahiers*, and columns 4–6 for the parish *cahiers*. Because of the smaller number of observations, we exclude the interaction of geographic fixed effects, but include all other controls. In both sets of *cahiers*, exposure to taxation increases general tax complaints (columns 1 and 4). However, when distinguishing by type, the coefficients reveal sharply different patterns: in the representative *cahiers*, higher tax burdens are associated with more complaints about the *traites*, whereas in the parish *cahiers* the relationship appears almost exclusively in complaints about the salt tax. While only suggestive, this pattern is consistent with the idea that fiscal grievances mirrored

the economic position of each group and the taxes they most directly faced.

The content of tax complaints. Having established how the salience of taxation varied across groups, we next turn from who complained to what they complained about. To this end, we classify tax complaints in the *cahiers* into four categories, drawing on detailed coding of the object, subject, and—when available—the proposed action. The first category is economic burden, which captures grievances about the weight and multiplicity of levies. The second is horizontal unfairness, reflecting anger at the unequal incidence of taxation across groups and territories, given the exemptions enjoyed by the nobility, clergy, and privileged provinces. The third one is vertical unfairness, which refers to extraction by the Crown and its agents, such as the *Ferme générale* and tax collectors, who were perceived as enriching themselves at the expense of the population. The fourth one is intrusive enforcement, targeting coercive methods of collection, including the *contrainte solidaire*, mandatory salt purchases at the *greniers à sel*, and the presence of *gabelous*.

Although our typology is designed to capture the principal dimensions of fiscal discontent, it inevitably involves judgment, particularly when grievances could plausibly span more than one category. With this caveat, Figure A8, Panel B, shows that complaints about the economic burden of taxes accounted for about 40% of all tax grievances. Vertical unfairness represented close to 20%, while horizontal unfairness made up a slightly smaller share. Complaints about intrusive enforcement were comparatively rare, below 5%, whereas a sizable residual group (roughly 20%) could not be unambiguously classified. Figure C2 replicates the preferred specification in Table 2 (column 6), replacing the dependent variable with counts by category.[52] The coefficient on taxation is positive and statistically significant for economic burden, horizontal inequality, and vertical inequality. By contrast, the effect is imprecise and small for intrusive enforcement. While only suggestive, this evidence underscores that grievances about inequality—both horizontal and vertical—were central alongside complaints about the sheer burden of taxation. The analysis below further corroborates this interpretation.

[52]The corresponding estimates in tabular form are reported in Table C3.

TABLE C1 – TAXATION AND NOBILITY COMPLAINTS

Dep. var.:	Complaints against taxes							Share
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Overall tax burden	-0.020	-0.028	-0.027	-0.041	-0.062	-0.052	-0.004	0.316
	(0.239)	(0.241)	(0.258)	(0.257)	(0.329)	(0.348)	(0.025)	(0.416)
Enlightenment books		0.001	0.001	0.001	0.001	0.001	0.000	0.008
		(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.000)	(0.005)
Log. income monasteries			-0.019	0.041	0.075	0.206	0.020	0.854
			(1.623)	(1.645)	(1.956)	(1.769)	(0.131)	(3.203)
Share nobles				-10.91	-9.852	-9.50	-0.677	-14.52
				(9.617)	(9.758)	(9.591)	(0.699)	(30.47)
Av. wheat prices (1756-1789)					0.052	0.072	-0.002	1.989**
					(0.650)	(0.618)	(0.044)	(0.760)
Log. brigades						1.598	0.081	-5.087
						(6.138)	(0.435)	(5.658)
Adjusted R^2	0.050	0.040	0.029	0.024	0.011	0.001		0.066
N	100	100	100	100	98	98	98	98
Dep. var. mean	13.14	13.14	13.14	13.14	13.07	13.07	13.07	32.77
Dep. var. SD	9.690	9.690	9.690	9.690	9.660	9.660	9.660	14.82
Poisson							X	

Notes: The table reports estimates from equation (1). In columns 1 to 7, the dependent variable is the number of complaints against taxes submitted by the nobility for the *bailliages* for which data on the lists of grievances from Shapiro et al. (1998) are available. In column 8, the dependent variable is the share of complaints against taxes, relative to all complaints. All specifications include 1780 population and soil fertility. All columns estimate OLS regressions, except for column 7, which replicates column 6 using Poisson. "Overall tax burden" is the total tax burden per capita, expressed in *livres* per capita. The variables introduced in columns 2 to 8 are described in detail, together with the corresponding source, in Table B1. Robust standard errors are reported in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.1.

TABLE C2 – TAX COMPLAINTS ACROSS THIRD ESTATE CONSTITUENCIES

Dep. var.:	Complaints against taxes					
	(1) Total	(2) Traites	(3) Salt tax	(4) Total	(5) Traites	(6) Salt tax
Overall tax burden	1.377***	0.229***	0.121***	4.443*	0.008	0.904***
	(0.326)	(0.066)	(0.025)	(2.609)	(0.246)	(0.174)
Enlightenment books	0.002	-0.000	-0.000	0.055	-0.001	0.002
	(0.004)	(0.000)	(0.000)	(0.092)	(0.006)	(0.007)
Log. income monasteries	-0.931	-0.677	-0.013	5.184	2.094	0.391
	(2.986)	(0.431)	(0.206)	(30.00)	(3.129)	(2.453)
Share nobles	21.39	3.67	1.59	-35.52	-18.01	-6.8
	(27.75)	(4.05)	(1.30)	(120.3)	(19.66)	(11.33)
Av. wheat prices (1756-1789)	-0.448	-0.013	-0.100**	9.675	2.316***	-0.385
	(0.618)	(0.104)	(0.047)	(12.70)	(0.772)	(0.529)
Log. brigades	-1.702	-0.711	0.785	64.66	10.61	2.041
	(5.025)	(1.270)	(0.539)	(91.93)	(8.14)	(5.54)
Adjusted R^2	0.082	0.054	0.149	-0.003	0.179	0.343
Dep. var. mean	34.34	4.48	1.106	171.2	12.21	8.886
Dep. var. SD	18.85	3.449	1.484	76.63	8.501	6.711
N	170	170	170	44	44	44
Cahiers	Third Estate	Third Estate	Third Estate	Parish	Parish	Parish

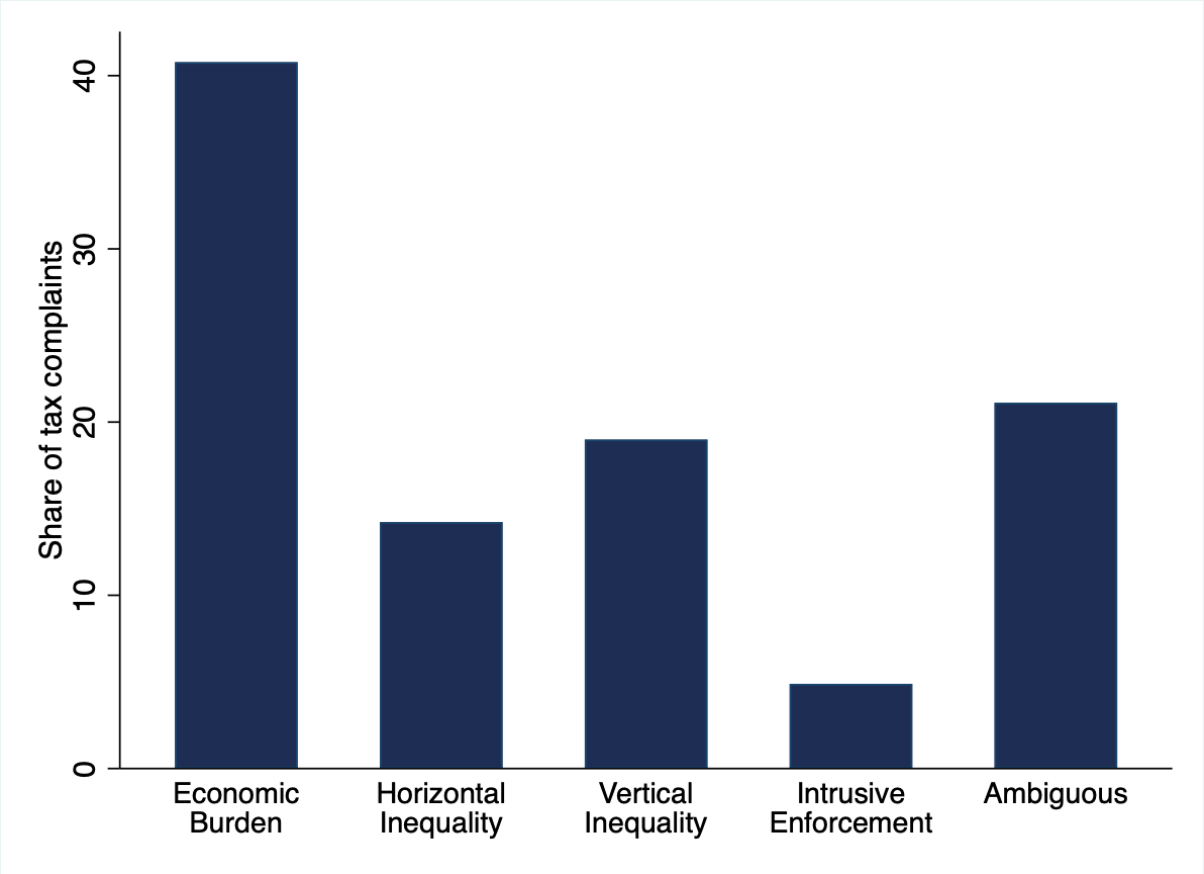
Notes: The table reports estimates from equation (1). In columns 1 and 4, the dependent variable is the number of complaints against taxes in Third Estate and Parish *cahiers*. In column 2 and 5 (resp., 3 and 6), the dependent variable is the number of complaints against the *traites* (resp., the salt tax). "Overall tax burden" is the total tax burden (in *livres*) per capita. All specifications also control for 1780 population, soil fertility, the number of Enlightenment books, log income of monasteries, the share of nobles, average wheat prices (1756-1789), and the log number of brigades. See Table B1 for variable details. Robust standard errors are reported in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.1.

TABLE C3 – TAXATION AND COMPLAINTS BY TAX CATEGORY

Dep. var.:	Economic burden	Horizontal unfairness	Vertical unfairness	Intrusive enforcement
	(1)	(2)	(3)	(4)
Overall tax burden	1.900**	0.969**	1.710***	0.086
	(0.838)	(0.429)	(0.437)	(0.283)
Enlightenment books	-0.004	0.001	0.004**	0.002**
	(0.003)	(0.001)	(0.002)	(0.001)
Log. income monasteries	-5.735	-0.826	3.265	-1.502
	(7.155)	(3.292)	(3.962)	(3.064)
Share nobles	-41.42	-12.67	30.82	17.12
	(36.96)	(21.17)	(21.50)	(16.56)
Av. wheat prices (1756-1789)	-0.758	-0.617	-1.356	-1.659*
	(1.754)	(1.205)	(2.020)	(0.986)
Log. brigades	-6.391	1.103	-3.219	-2.360
	(4.121)	(2.700)	(2.573)	(1.597)
R^2	0.761	0.559	0.572	0.186
Dep. var. mean	29.79	9.934	12.65	3.314
Dep. var. SD	33.84	12.56	13.63	5.038
N	121	121	121	121

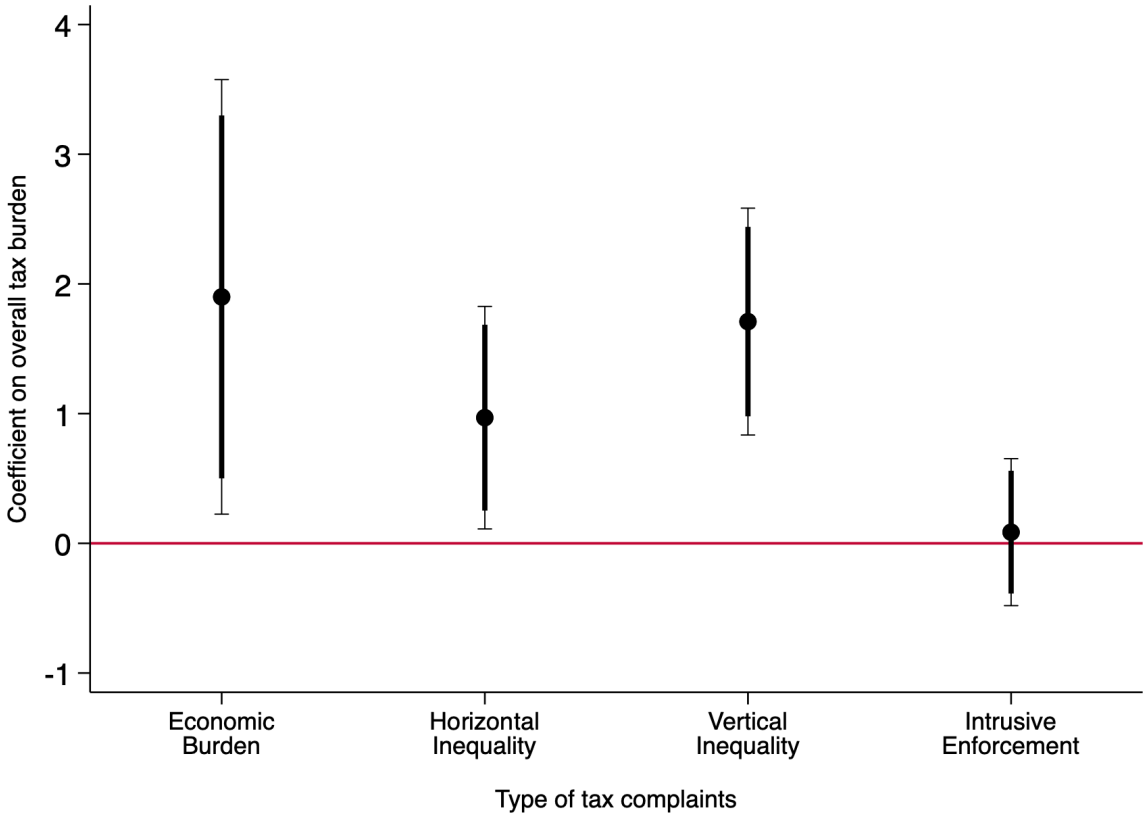
Notes: The table reports estimates from equation (1). The dependent variable is the number of Third Estate complaints by tax category. "Overall tax burden" is the total tax burden (in *livres*) per capita. All specifications include coordinate fixed effects (defined as $0.5^\circ \times 0.5^\circ$ cells), 1780 population, soil fertility, the number of Enlightenment books, log income of monasteries, the share of nobles, average wheat prices (1756-1789), and the log number of brigades. See Table B1 for variable details. Robust standard errors are reported in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.1.

FIGURE C1 – FREQUENCY OF TAX COMPLAINTS BY TYPE



Notes: The figure plots the number of tax complaints in each category, relative to all tax-related complaints. Categories were constructed by the authors to capture major dimensions of tax discontent.

FIGURE C2 – EFFECTS OF OVERALL TAX BURDEN ON TAX COMPLAINT CATEGORIES



Notes: The figure reports coefficients, with 90% and 95% confidence intervals, on each tax category displayed on the x-axis. The dependent variable is the number of complaints in each tax category. The regression includes the overall tax burden, fixed effects for $0.5° \times 0.5°$ grid cells, 1780 population, soil fertility, the number of Enlightenment books, the log income of monasteries, the log number of nobles, the average wheat price (1756–1789), and the log number of brigade agents.See Table B1 for variable details. Robust standard errors are reported in parentheses. The corresponding OLS estimates are reported in Table C3.

D RD Robustness

Endogenous border placement. Figures D1, D2, and D3 show that municipalities on either side of the border are balanced across a wide range of characteristics. We provide further evidence that the results are not driven by endogenous border placement. Figure D4 shows that estimates remain stable across alternative bandwidth choices (Panel A) and that placebo borders shifted a few kilometers from their true location produce no discontinuities in riots (Panel B).

We also exploit the historical logic behind the location of salt tax borders. Many were drawn in the 14th century about one day's horse travel—roughly 50 to 70 kilometers—from the main salines and salt marshes, reflecting enforcement and transport constraints rather than local economic conditions (Touzery, 2024; Davoine et al., 2024). As transportation infrastructure improved over time, these distances lost their practical relevance, yet the borders themselves remained unchanged. In columns 2–4 of Table D1, we isolate these 'saline borders," focusing on the frontier of the *pays de salines* and on segments lying within 50–60, 50–70, and 50–80 kilometers from the nearest salt marshes.[53] Although the magnitude and the precision of coefficients varies, results remain positive, statistically significant at either the 5% or the 10% level, and in line with those from the baseline specification (presented in column 1).

Spatial overlap with other boundaries. Next, we address the concern that borders may coincide with other institutional, administrative, or cultural boundaries. In Table D2, we first sequentially exclude borders by their historical origin—Roman (column 2), religious (column 3), or *Ancien Régime* (column 4). Then, we successively exclude border segments overlapping with key administrative institutions—the legal system to distinguish written law in the south versus customary law in the North (column 5), representation system for *pays d'état* versus *pays d'élection* (column 6), and regional parliament authority (column 7). Finally, we drop border segments intersecting language boundaries, which proxy for deep cultural divides (column 8). In all cases, the estimates remain close to the baseline reported in column 1.

We then replicate the analysis for borders outside the *Grandes Gabelles*, where indirect tax differences were minimal. For this exercise, we select all *généralité* borders non-overlapping with salt tax or *traites* borders. These serve as a placebo: if crossing a border with no fiscal discontinuity affected unrest, we would observe a jump in riots. As shown in column 9, the coefficient is small and statistically insignificant. Finally, we divide France into $1^\circ \times 1^\circ$ grid cells (91 in total) and re-estimate the model while omitting each cell in turn. Figure D5 shows that the coefficients remain stable, indicating that no single region drives the results.

[53] The *pays de salines* refers to the regions surrounding France's major saltworks from underground water—such as those of Franche-Comté and Lorraine—where salt production and trade were concentrated and heavily regulated.

While none of these exercises is definitive on its own, taken together they mitigate concerns that the estimated treatment effects reflect administrative, institutional, or cultural differences rather than fiscal discontinuities between high- and low-tax areas.

Border enforcement and smuggling. One potential concern is that our results may not reflect broader popular discontent with taxation, but instead the mechanics of border enforcement. There are two channels through which this could arise. First, the high side of the tax border may have been more heavily patrolled, mechanically increasing the likelihood of encounters between the population and fiscal brigades. Figure D3, Panel F, mitigates this concern, showing that brigade presence is balanced at the border. Second, differences in salt prices across borders encouraged smuggling, and police crackdowns on contraband often escalated into open conflict. Davoine et al. (2024) show that the monarchy's anti-smuggling reforms of the 1730s triggered waves of unrest as both smugglers and local communities resisted brigades. It is therefore reasonable to ask whether our results primarily capture smuggling-related riots—whether direct confrontations with brigades, lingering hostility from the 1730s crackdown, or heightened willingness of communities to join clashes when smugglers were caught.

In principle, one solution would be to exclude all riots classified as 'smuggling." However, this category in Chambru and Maneuvrier-Hervieu (2024) is broad: many entries describe general confrontations during inspections or seizures rather than contraband per se. This reflects the fact that in the original Nicolas (2002) data many events were simply coded as smuggling-related, even though the descriptions make it unclear whether contraband was actually involved.[54] Dropping them entirely would therefore remove a large set of events that were in fact expressions of resistance to taxation. While no empirical strategy can perfectly resolve this issue, we implement two complementary checks, reported in Table D3. First, we exclude all riots that explicitly mention the smuggled good, which must reflect contraband.[55] Column 2 shows that the RD coefficient remains statistically significant and close in magnitude to the baseline (column 1). Second, we exclude all events with fewer than eight participants (the bottom quartile), which are more likely to capture isolated clashes between brigades and smugglers. The coefficient, reported in column 3, is somewhat smaller and less precisely estimated, but remains economically meaningful and significant at the 10% level. Column 4 confirms that results are robust when applying both restrictions simultaneously. Taken together, these exercises suggest that our findings are not driven by smuggling episodes.

[54] In the HiSCoD database (Chambru and Maneuvrier-Hervieu, 2024), smuggling events correspond to Category 204, labeled 'affrontement lié à la contrebande du sel et du tabac." This classification, inherited from Nicolas (2002), encompasses both explicit references to salt or tobacco contraband and more ambiguous confrontations that may have arisen during inspections, seizures, or arrests.

[55] Among the events in Category 204 that specify a commodity, salt is by far the most frequently mentioned (52.4%), followed by tobacco (38.5%) and spirits (10.3%).

Selected mis-reporting. A further concern is that riots may be selectively under-reported on the low-tax side of the border, biasing our estimates upward. Table D4 addresses this possibility. Columns 2 and 3 exclude events lacking a description or information on the number of participants—likely to be smaller incidents more prone to under-reporting. In both cases, the estimates remain statistically significant and close to the baseline (column 1). Column 4 restricts the sample to events with both a description and participant information, while columns 5 and 6 exclude riots with fewer than 5 or 10 participants, respectively.

Riot data quality. As discussed in Section 3, the dataset of Chambru and Maneuvrier-Hervieu (2024) is not exhaustive for 1789, when the sheer volume and speed of events made systematic recording difficult. If riots were more likely to be documented on the high-tax side of the border, this could bias our estimates upward. In column 2 of Table D5, we replicate the baseline specification (reported in column 1 for ease of comparison) excluding the riot events which took place in 1789. The coefficient becomes somewhat smaller, but remains positive, statistically significant, and quantitatively large. A separate concern with the dataset of Chambru and Maneuvrier-Hervieu (2024) is that, as shown by Gay (2025), transcription errors and inconsistencies can occur in the coding of events and their characteristics. If such imperfections were systematically correlated with location relative to the border, our estimates could be biased. To address this, column 3 of Table D5 relies on the Nicolas dataset assembled by Gay (2025). Column 4 shows a similar test as of column 3, dropping 1789. In both cases, results are similar to the baseline.

Coding salt tax borders. Next, we address the concern that our border coding may be imprecise because historical sources on the exact location of salt-tax boundaries are incomplete and sometimes inconsistent across regions. To mitigate these concerns, we adopt a three-step approach. First, we use Necker's 1781 salt tax map as the base, prioritizing sources close to the Revolution to minimize the risk of missing unobserved changes in the system. To improve spatial precision, we supplement this with the 1680 Royal *ordonnances*, which specify locations and corresponding tax rates, together with the high-resolution *bailliage* layer from Gay et al. (2024). Second, for the *Grandes Gabelles* area we rely on the *Atlas des Gabelles* from Sanson (1665), while for the other regions we use Necker's *Carte des Gabelles*. Third, for robustness, we reconstruct the *Grandes Gabelles* from the *Atlas des Gabelles* but derive all other salt-tax boundaries solely from *bailliage* borders. Columns 2 and 3 of Table D6 implement these alternative codings. In column 2, we combine the *Atlas des Gabelles* for the *Grandes Gabelles* with Necker's 1781 map for other regions. In column 3, we again use the *Atlas des Gabelles* for the *Grandes Gabelles* but rely on *bailliage* borders elsewhere. In both cases, the estimates are consistent with the baseline (column 1)—if anything slightly larger—underscoring that our results are not sensitive

to alternative border reconstructions.

Additional robustness checks. In columns 4 to 7 of Table D6, we further replicate the analysis estimating the model with Poisson, excluding the largest cities (above the 95th percentile of the population distribution), defining the dependent variable as an indicator for having at least one riot between 1780 and 1789, and to including also riots outside the 'economic" and political" categories defined by Chambru and Maneuvrier-Hervieu (2024) . Results are similar to those from the baseline specification. Finally, Table D7 demonstrates that results are stable when adding quadratic polynomials (column 2), applying alternative kernels and bandwidth selection methods (columns 3 to 5), and clustering standard errors at the *généralité* (column 6) or $1^\circ \times 1^\circ$ cell (column 7) level.

TABLE D1 – RIOTS AROUND THE TAX BORDER (1780–1789): DISTANCE FROM SALT MARSHES

Dep. var.:	Economic and political riots			
		Salines and distance from salt marshes		
	(1) Baseline	(2) 50-60 km	(3) 50-70 km	(4) 50-80 km
High tax area	0.077**	0.036*	0.054**	0.103*
	(0.035)	(0.021)	(0.025)	(0.052)
N	4,362	1,742	1,844	2,512
Bandwidth (in km)	24.39	16.54	17.29	26.12
Dep. var. mean	0.076	0.037	0.043	0.069
Dep. var. sd	0.467	0.224	0.253	0.444

Notes: The table replicates the baseline RD specification (Table A4, column 5) focusing on borders whose distance is between 50 and 60 km (column 2), between 50 and 70 km (column 3), and between 50 and 80 km (column 4) from the closest salt marshes. The reported coefficients are non-parametric RD estimates from equation (2) following Calonico et al. (2014) under optimal bandwidth and polynomial order selection. The dependent variable is the number of economic and political riots between 1780 and 1789. The treatment equals one for municipalities in the area with a higher rate. The specification includes border fixed effects as well as a set of municipal controls (population in 1780, coordinates, and soil fertility). The sample includes all municipalities in contiguous France within the optimal bandwidth. Standard errors are clustered at the *bailliage* level. Significance levels: *** p<0.01, ** p<0.05, * p<0.1.

TABLE D2 – RIOTS AROUND THE TAX BORDER (1780–1789): BORDER OVERLAP

Dep. var.:	Economic and political riots								
		Exclude borders							
	(1) Baseline	(2) No Roman	(3) No archidiocese	(4) No généralité	(5) No legal system	(6) No fiscal organization	(7) No representation system	(8) No language divide	(9) Minimal tax gap
High tax area	0.077**	0.069**	0.078**	0.059*	0.088**	0.097**	0.094**	0.077**	0.009
	(0.035)	(0.035)	(0.039)	(0.031)	(0.039)	(0.040)	(0.041)	(0.035)	(0.036)
Observations (bandwidth)	4,362	3,520	3,774	1,338	4,107	3,865	3,449	4,359	5,973
Bandwidth (in km)	24.39	24.70	24.48	17.75	24.29	25.21	23.90	24.56	9.71
Dep. var. mean	0.076	0.078	0.081	0.064	0.081	0.085	0.077	0.077	0.026
Dep. var. sd	0.467	0.431	0.491	0.516	0.480	0.496	0.502	0.468	0.199

Notes: The table replicates the baseline RD specification (Table A4, column 5), reported in column 1. Columns 2 to 8 exclude borders that overlap with the origin (columns 2–4) or characteristics (columns 5–8) reported at the top of the column. See Appendix B.3 for more details on border classification. In column 9, the analysis only includes border segments outside of the *Grande Gabelle* with minimal tax gap. The reported coefficients are non-parametric RD estimates from equation (2) following Calonico et al. (2014) under optimal bandwidth and polynomial order selection. The dependent variable is the number of economic and political riots between 1780 and 1789. The treatment equals one for municipalities in the area with a higher rate. The specification includes border fixed effects as well as a set of municipal controls (population in 1780, coordinates, and soil fertility). Standard errors are clustered at the *bailliage* level. Significance levels: *** p<0.01, ** p<0.05, * p<0.1.

TABLE D3 – RIOTS AROUND THE TAX BORDER (1780-1789): ADDRESSING SMUGGLING

Dep. var.:	Economic and political riots			
		Excluding smuggling-related riots:		
	(1) Baseline	(2) Mentioning smuggled good	(3) With few participants	(4) Mentioning smuggled good or with few participants
High tax area	0.077**	0.067**	0.045*	0.037*
	(0.035)	(0.029)	(0.023)	(0.019)
N	4,362	4,180	4,040	3,891
Bandwidth (in km)	24.38	22.90	21.68	20.56
Dep. var. mean	.076	.076	.075	.077
Dep. var. sd	.466	.472	.453	.461

Notes: The table replicates the baseline RD specification (Table A4, column 5), reported in column 1, excluding smuggling riots (category 204 in Chambru and Maneuvrier-Hervieu, 2024): with reference to a specific good (column 2); with fewer than 8 (first quartile) participants (column 3). Column 4 excludes all smuggling riots excluded from columns 2 and 3. The reported coefficients are non-parametric RD estimates from equation (2) following Calonico et al. (2014) under optimal bandwidth and polynomial order selection. The treatment equals one for municipalities in the area with a higher rate. The specification includes border fixed effects as well as a set of municipal controls (population in 1780, coordinates, and soil fertility). Standard errors are clustered at the *bailliage* level. Significance levels: *** p<0.01, ** p<0.05, * p<0.1.

TABLE D4 – RIOTS AROUND THE TAX BORDER (1780-1789): ADDRESSING MIS-REPORTING

Dep. var.:	Economic and political riots					
	(1) Baseline	(2) Non-missing description	(3) Non-missing no. participants	(4) With description and no. participants	(5) More than 5 participants	(6) More than 10 participants
High tax area	0.077**	0.072**	0.068**	0.069**	0.062**	0.038**
	(0.035)	(0.034)	(0.031)	(0.031)	(0.030)	(0.017)
N	4,362	4,519	4,986	4,993	5,012	4,886
Bandwidth (in km)	24.38	25.88	30.15	30.25	30.42	29.17
Dep. var. mean	0.076	0.074	0.072	0.072	0.072	0.070
Dep. var. sd	0.467	0.459	0.475	0.476	0.475	0.444

Notes: The table replicates the baseline RD specification (Table A4, column 5), reported in column 1, excluding riots that: lack event description (column 2), number of participants (column 3), or either of the two (column 4); involve fewer than 5 (column 5) and 10 (column 6) participants. includes only municipalities with riots with more than 5 (resp., 10) participants. The reported coefficients are non-parametric RD estimates from equation (2) following Calonico et al. (2014) under optimal bandwidth and polynomial order selection. The treatment equals one for municipalities in the area with a higher rate. The specification includes border fixed effects as well as a set of municipal controls (population in 1780, coordinates, and soil fertility). Standard errors are clustered at the *bailliage* level. Significance levels: *** p<0.01, ** p<0.05, * p<0.1.

TABLE D5 – RIOTS AROUND THE TAX BORDER (1780-1789): RIOT DATA ISSUES

Dep. var.:	Economic and political riots			
	(1) Baseline	(2) Baseline Excluding 1789	(3) Gay (2025) Data	(4) Gay (2025) Data Excluding 1789
High tax area	0.077**	0.072**	0.072**	0.071**
	(0.035)	(0.033)	(0.034)	(0.033)
N	4,362	4,633	4,493	4,553
Bandwidth (in km)	24.39	26.96	25.66	26.28
Dep. var. mean	0.076	0.073	0.075	0.074
Dep. var. sd	0.467	0.454	0.460	0.458

Notes: The table replicates the baseline RD specification (Table A4, column 5), reported in column 1. Column 2 excludes 1789. Columns 3 and 4 use data from Gay (2025), measuring riots in the period 1780-1789 and 1780-1788, respectively. The reported coefficients are non-parametric RD estimates from equation (2) following Calonico et al. (2014) under optimal bandwidth and polynomial order selection. The treatment equals one for municipalities in the area with a higher rate. The specification includes border fixed effects as well as a set of municipal controls (population in 1780, coordinates, and soil fertility). The sample includes all municipalities in contiguous France within the optimal bandwidth. Standard errors are clustered at the *bailliage* level. Significance levels: *** p<0.01, ** p<0.05, * p<0.1.

TABLE D6 – RIOTS AROUND THE TAX BORDER (1780-1789): ROBUSTNESS CHECKS/1

Dep. var.:	Economic and political riots						
	(1) Baseline	(2) Tax map: Sanson and Necker	(3) Tax map: Sanson and bailliage border	(4) Poisson	(5) Excluding big cities (top 5%)	(6) 1[at least one riot]	(7) All riots
High tax area	0.077**	0.111**	0.102**	0.783**	0.077**	0.041**	0.076**
	(0.035)	(0.046)	(0.042)	(0.319)	(0.034)	(0.019)	(0.036)
N	4,362	1,043	1,017	4,362	4,358	4,279	4,479
Bandwidth (in km)	24.38	17.54	15.54	24.38	25.18	23.63	25.58
Dep. var. mean	0.076	0.093	0.084	0.077	0.071	0.051	0.080
Dep. var. sd	0.467	0.587	0.366	0.471	0.373	0.220	0.478

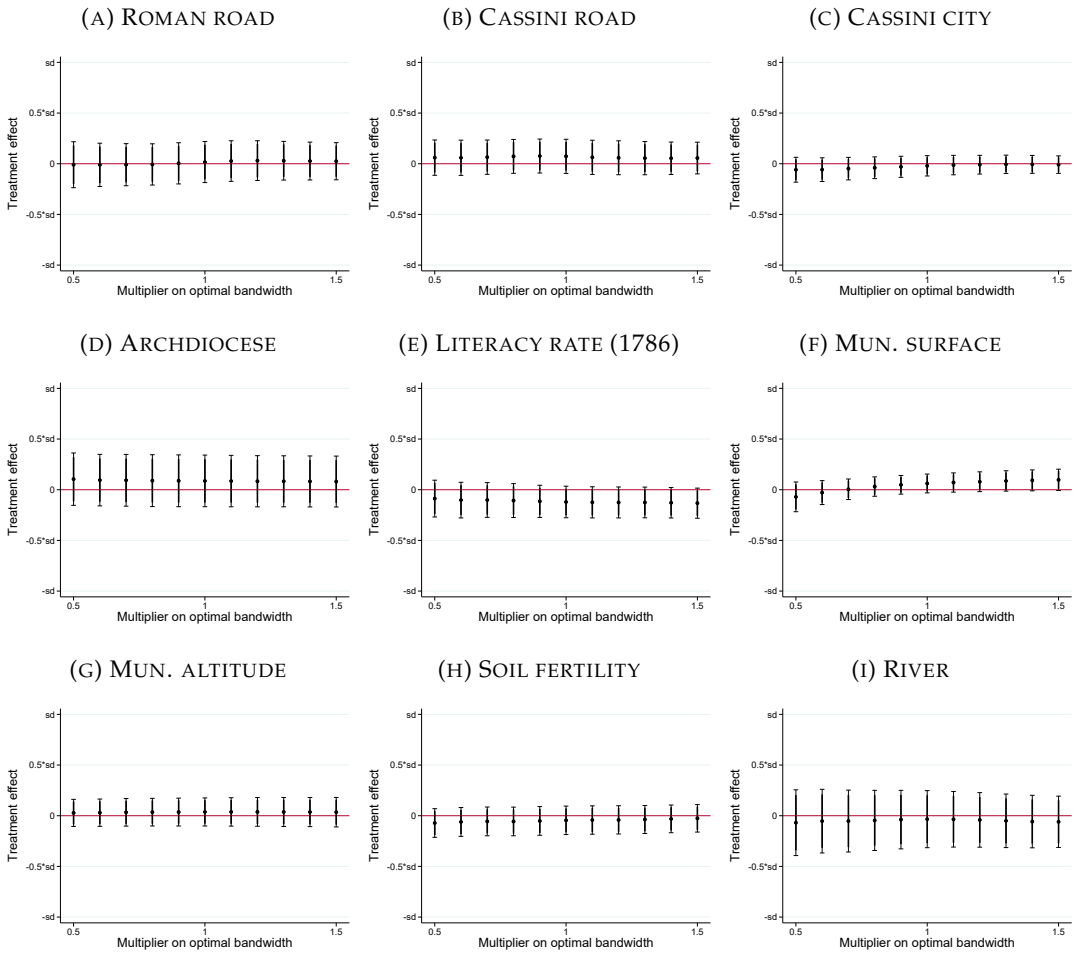
Notes: The table replicates the baseline RD specification (Table A4, column 5), reported in column 1. In column 2, the salt-tax regions are defined relying on the salt tax map derived from Sanson (1665) for the *Grandes Gabelles* area and on the map of Necker (1781) for the other tax borders. In column 3, the salt-tax regions are defined relying on the salt tax map derived from Sanson (1665) for the *Grandes Gabelles* area and on the *baillage* borders for the other tax borders. Columns 4 to 6 replicate column 1 by: estimating Poisson regressions (column 4); excluding from the sample municipalities in the top 5% of the 1780 population distribution (column 5), and using as dependent variable a dummy variable indicating that at least one riot happened in a certain municipality (column 6); and, including all riots recorded in Chambru and Maneuvrier-Hervieu (2024) for the 1780-1789 period (column 7). The reported coefficients are non-parametric RD estimates from equation (2) following Calonico et al. (2014) under optimal bandwidth and polynomial order selection. The treatment equals one for municipalities in the area with a higher rate. The specification includes border fixed effects as well as a set of municipal controls (population in 1780, coordinates, and soil fertility). The sample includes all municipalities in contiguous France within the optimal bandwidth. Standard errors are clustered at the *bailliage* level. Significance levels: *** p<0.01, ** p<0.05, * p<0.1.

TABLE D7 – RIOTS AROUND THE TAX BORDER(1780-1789): ROBUSTNESS CHECKS/2

Dep. var.:	Economic and political riots						
	(1) Baseline	(2) Quadratic Polynomial	(3) Uniform Kernel	(4) Epanechnikov Kernel	(5) Bandwidth Select 'msetwo'	(6) Cluster *généralité*	(7) Cluster $1° \times 1°$
High tax area	0.077**	0.063**	0.088**	0.081**	0.078**	0.077*	0.069**
	(0.035)	(0.031)	(0.039)	(0.037)	(0.032)	(0.043)	(0.032)
N	4,362	4,770	3,789	3,973	4,645	4,310	3,655
Bandwidth (in km)	24.38563	28.12714	19.77716	21.19439	18.44395	23.87381	18.29995
Dep. var. mean	0.076	0.072	0.078	0.076	0.075	0.076	0.075
Dep. var. sd	0.467	0.449	0.466	0.457	0.442	0.468	0.443

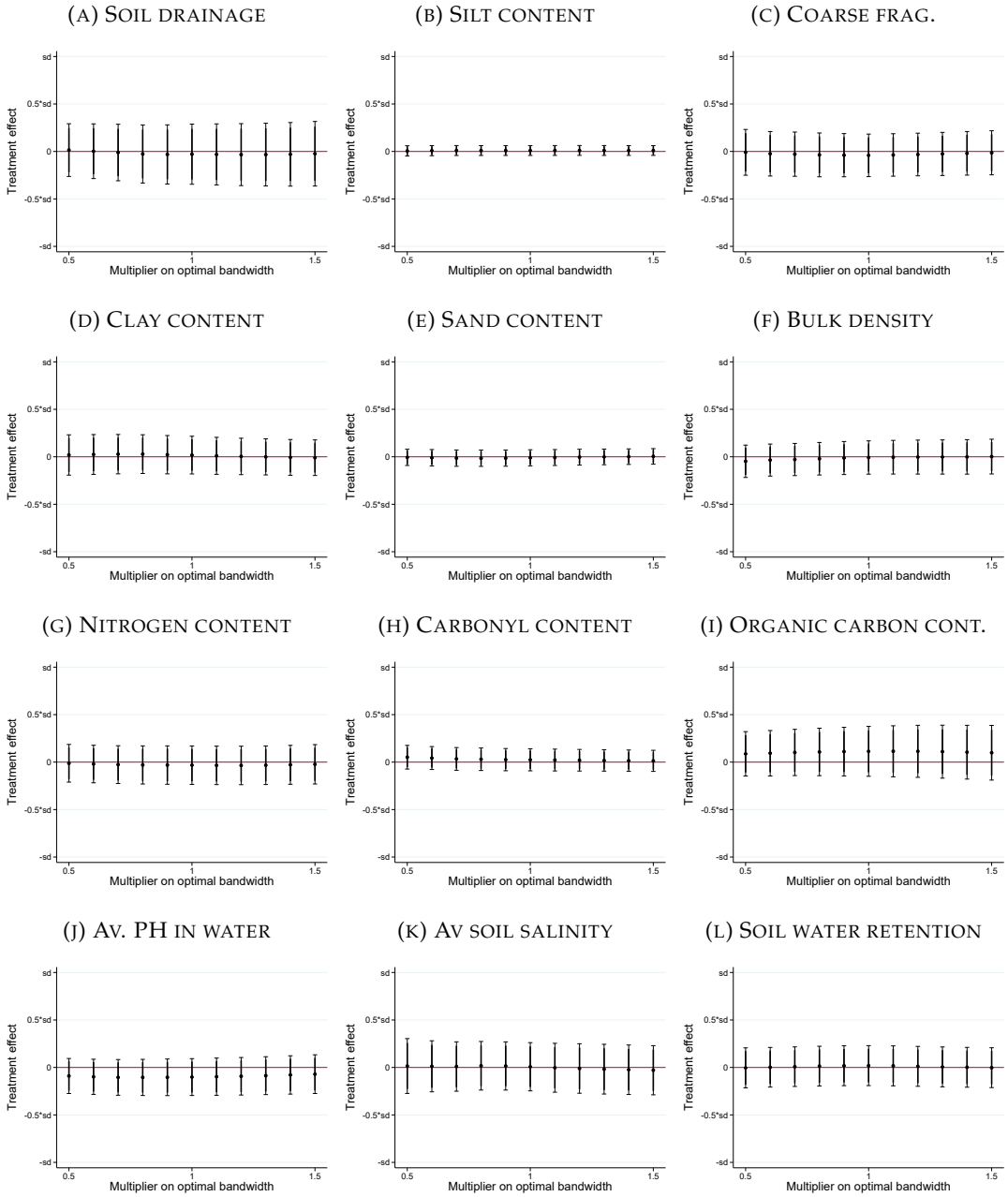
Notes: Column 1 replicates the baseline specification (Table A4, column 5), reporting non-parametric RD estimates following Calonico et al. (2014) under optimal bandwidth and polynomial order selection from equation (2). The dependent variable is the number of economic and political riots in the period 1780-1789. Column 2 selects a quadratic polynomial order. Columns 3 and 4 use the Uniform and Epanechnikov kernels, respectively. Column 5 applies the bandwidth selection method 'msetwo,' which allows for different bandwidths for the left and right sides, with bandwidths of 18.44 km and 36.04 km for the left and right sides, respectively. Column 6 clusters standard errors at the *généralité* level and column 7 clusters standard errors at $1° \times 1°$ cell grids. All specifications include border fixed effects as well as a set of municipal controls (population in 1780, coordinates, and soil fertility). The sample includes all municipalities in contiguous France within the optimal bandwidth. Standard errors are clustered at the *bailliage* level, except for column 6. Significance levels: *** p<0.01, ** p<0.05, * p<0.1.

FIGURE D1 – BALANCE CHECKS: MUNICIPAL CHARACTERISTICS



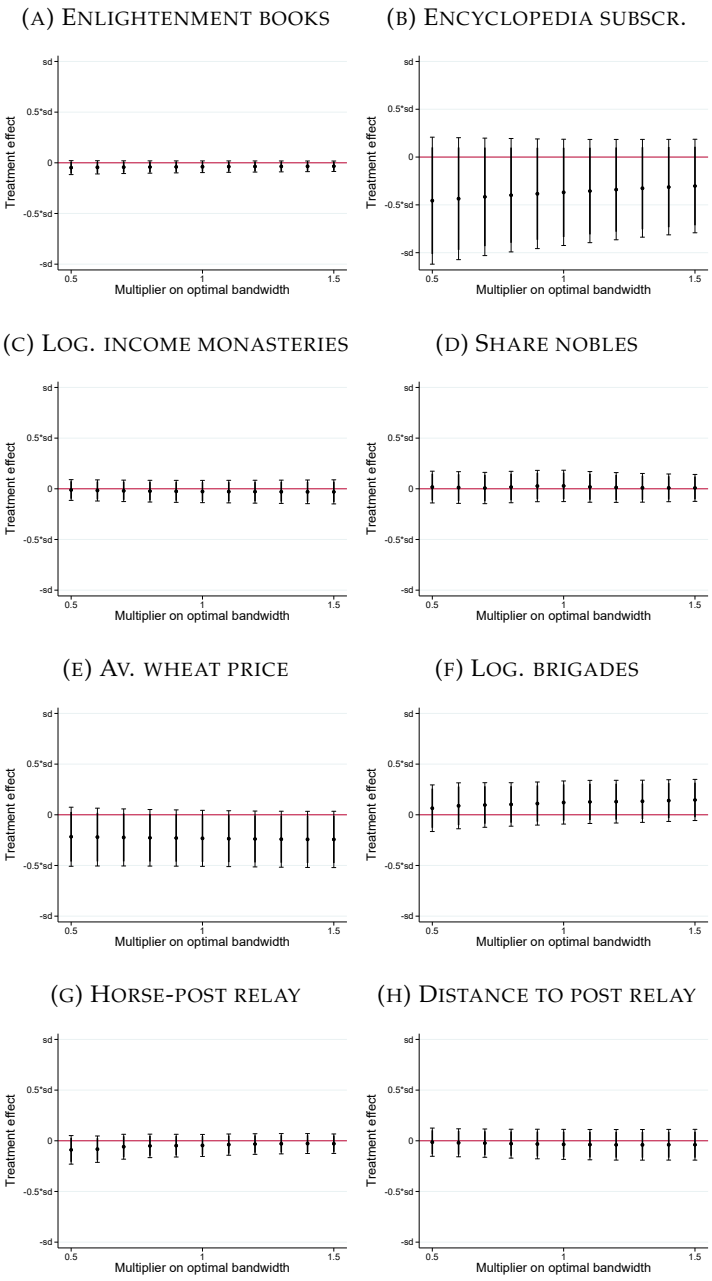
Notes: The plot reports nonparametric RD estimates from equation (2), following Calonico et al. (2014), using varying bandwidths. The dependent variable is indicated at the top of the corresponding panel (see Table B1 for variable definitions). The coefficients are expressed in terms of SD of the corresponding dependent variable in the y-axis of each plot. The treatment equals one for municipalities on the high-tax side of the border. All regressions include border fixed effects and municipal controls (1780 population, coordinates, and soil fertility), except in Panel H, where soil fertility is omitted. The sample includes all municipalities in contiguous France within the optimal bandwidth. Standard errors are clustered at the *bailliage* level.

FIGURE D2 – BALANCE CHECKS: SOIL CHARACTERISTICS



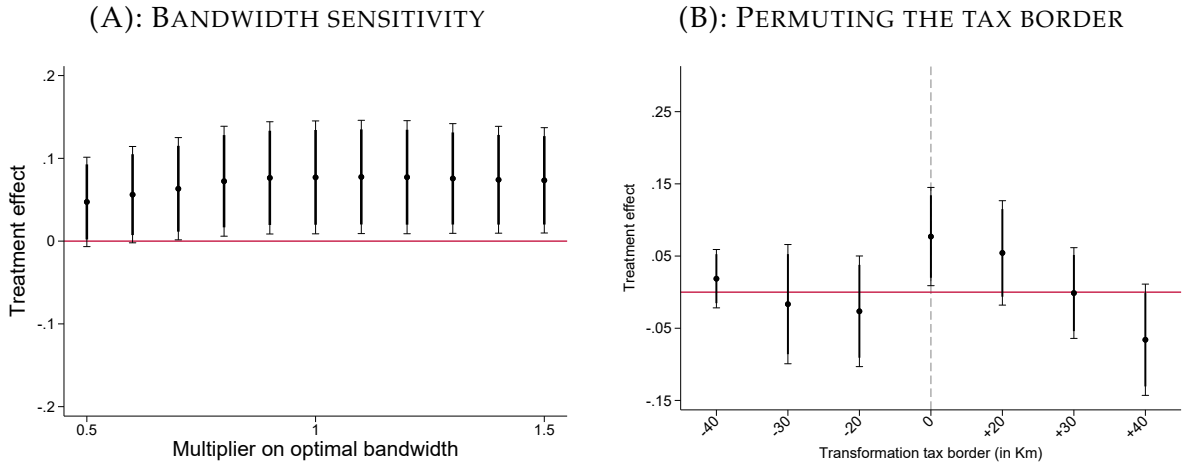
Notes: The plot shows non-parametric RD estimates from equation (2) following Calonico et al. (2014), using different bandwidths. The dependent variable is the soil characteristics indicated at the top of the corresponding panel. The coefficients are expressed in terms of SD of the corresponding dependent variable in the y-axis of each plot. The treatment equals one for municipalities on the high-tax side of the border. All regressions include border fixed effects and municipal controls (1780 population, coordinates, and soil fertility), except in Panels B and G, where soil fertility is omitted. The sample includes all municipalities in contiguous France within the optimal bandwidth. Standard errors are clustered at the *bailliage* level.

FIGURE D3 – BALANCE CHECKS: POTENTIAL DRIVERS OF REVOLUTIONARY ACTIVITY



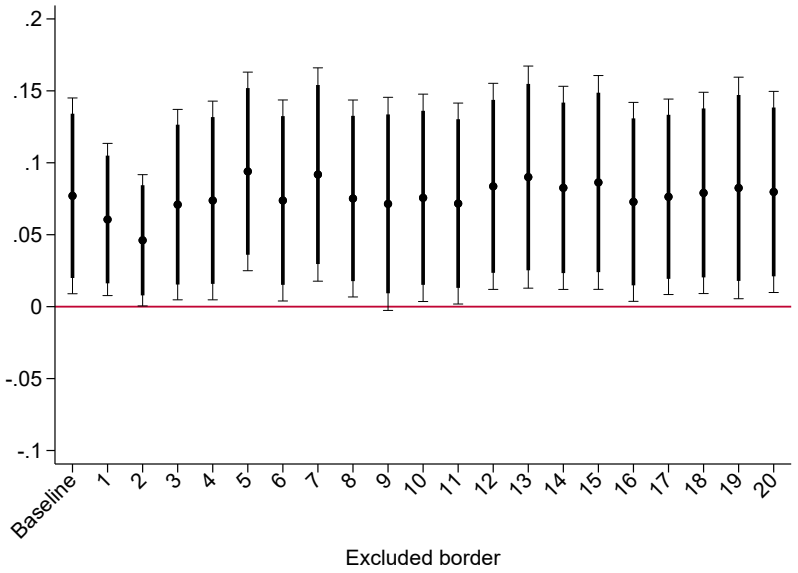
Notes: The plot reports nonparametric RD estimates from equation (2), following Calonico et al. (2014), using varying bandwidths. The dependent variable is indicated at the top of the corresponding panel (see Table B1 for variable definitions). The coefficients are expressed in terms of SD of the corresponding dependent variable in the y-axis of each plot. The treatment equals one for municipalities on the high-tax side of the border. All regressions include border fixed effects and municipal controls (1780 population, coordinates, and soil fertility). The sample includes all municipalities in contiguous France within the optimal bandwidth. Standard errors are clustered at the *bailliage* level.

FIGURE D4 – ROBUSTNESS CHECKS AROUND THE TAX BORDER



Notes: The figure replicates the baseline specification (Table A4, column 5). Panel A explores the sensitivity of results to the choice of the bandwidth—from 0.5 to 1.5 times the optimal bandwidth. Panel B presents placebo tests where the tax border is permuted by ±0/10/20/30/40 km. Each dot plots non-parametric RD estimates from equation (2) following Calonico et al. (2014) under optimal bandwidth and polynomial order selection. The dependent variable is the number of economic and political riots, between 1780 and 1789. The treatment equals one for municipalities in the area with a higher rate. The specification includes border fixed effects as well as a set of municipal controls (population in 1780, coordinates, and soil fertility). The sample includes all municipalities in contiguous France within the optimal bandwidth. Standard errors are clustered at the *bailliage* level.

FIGURE D5 – RIOTS AROUND THE BORDER: EXCLUDING BORDER SEGMENTS



Notes: The figure replicates the baseline RD specification (Table A4, column 5) dropping one geographic border at a time. The border segments are defined, after dividing the French territory in blocks with sides of 1°. Each dot plots non-parametric RD estimates from equation (2) following Calonico et al. (2014) under optimal bandwidth and polynomial order selection. The dependent variable is the number of economic and political riots, between 1780 and 1789. The treatment equals one for municipalities in the area with a higher rate. The specification includes border fixed effects as well as a set of municipal controls (population in 1780, coordinates, and soil fertility). The sample includes all municipalities in contiguous France within the optimal bandwidth. Standard errors are clustered at the *bailliage* level.

E Parliamentary speeches

E.1 Data and text pre-processing

Corpus construction. We use the *Archives Parlementaires* from the French Revolution Digital Archive (FRDA), which cover 1789–1794 and include debate transcripts, letters, reports, and speeches from the main assemblies.[56] The material follows Text Encoding Initiative (TEI) guidelines and is provided in a standardized XML format, which allows us to extract, for each speech-level intervention ("speech" hereafter), the assembly, date, speaker, and text. In the analysis, we focus on speeches delivered between May 1789 and January 1793. We complement the FRDA data with the *Persée Archives Parlementaires* portal, which covers 1789–1793.[57] However, the *Persée* data exhibit a gap between October 1791 and October 1792, contain more OCR noise, and lack complete date information for some entries. For these reasons, we use them only as a supplementary source for validation and speaker identification.

Cleaning and speech segmentation. We use the TEI XML provided by the FRDA to construct a block-level dataset that preserves the original document order and supports reproducible downstream text analysis. Based on the TEI structure, we segment the material into two types of blocks: *speech blocks* and *narrative blocks*. Speech blocks correspond to interventions that are explicitly encoded as speech units in the XML, so that a single intervention remains one observation even when it spans multiple paragraphs or pages. Narrative blocks consist of text that is not part of any speech unit—such as procedural remarks—and are stored alongside speech blocks in their original sequence. In the analyses, we restrict attention to speech blocks and use narrative blocks only to preserve document structure when needed.

For each speech block, we record the associated page range using the XML pagination markers. We retain page references for each speech block, which is useful for validation and for matching entities across sources (for example, when resolving speaker identities). We also clean and harmonize dates extracted from the TEI hierarchy and correct a small number of obvious anomalies due to OCR or transcription errors, so that the date sequence within each volume is internally consistent.

Speaker data and merge with contextual data. A key step is to identify and consolidate speaker identities across interventions and link them to individual-level and geographic information. First, we collect biographical information for the universe of French legislators serving between May 1789 and January 1793 from the historical archive on French deputies of the *Assemblée*

[56] The FRDA is a joint project between the Stanford University Libraries and the *Bibliothèque Nationale de France*. It is available at https://frda.stanford.edu/.

[57] The *Persée Archives Parlementaires* portal is the outcome of a collaboration among BIS, IHMC–IHRF, and *Persée*. It is available at https://archives-parlementaires.persee.fr/view_root_grid.

Nationale.[58] The data cover the *États généraux* (May 5, 1789-June 27, 1789), the *Assemblée Nationale Constituante* (July 9, 1789-September 30, 1791), the *Assemblée nationale législative* (October 1, 1791-September 21, 1792), and the first four months of the *Convention nationale* (September 21, 1792-January 31, 1793).[59] For each legislator, we collect information on place of birth, political affiliation within the assembly, and the number of mandates held. We then assign the corresponding *bailliage* based on the place of birth.[60]

Next, for each intervention, we recover a standardized speaker string from the XML speaker field. We then match interventions to legislators using a hierarchical procedure that moves from high-confidence automated rules to more context-intensive resolution for the remaining ambiguous cases. In a first pass, we accept only unique, exact matches between the extracted speaker name (typically a family name, sometimes with an explicit geographic qualifier) and the legislator roster. For names that remain unresolved, we use the *Persée Archives Parlementaires* portal as an auxiliary reference. The *Persée* version digitizes speaker lists for selected pages within some tomes, providing an independent record of who speaks on a given page; we use these lists to cross-check and resolve cases where the XML speaker field is noisy, abbreviated, or incomplete.

For the remaining unmatched names—especially those that appear frequently—we perform additional curation and disambiguation. In straightforward cases, we add new entries when a legislator is missing from our roster. When multiple individuals share the same family name, we disambiguate using (i) geographic qualifiers when available (for example, a department or locality appended to the name) and (ii) the assembly and date of the intervention when service periods do not overlap. These steps yield a unique speaker identifier for the large majority of interventions, which we then use to merge speech-level records with legislator characteristics and other contextual datasets.

In a final backstop step, we use an LLM-assisted procedure to propose a likely identity for a small residual set of ambiguous speaker strings, based on the intervention text and basic metadata (assembly and date). We apply this step conservatively and only accept outputs that are both unique and high-confidence; otherwise, we leave the speaker unmatched.

Overall, of the 113,438 speaker blocks, we assign a standardized speaker identity for 110,131 of them, leaving 3,307 blocks unmatched (2.92%). In the analysis below, we restrict attention to interventions with a matched speaker.

[58] The historical archive on French deputies of the *Assemblée Nationale* (*Base de données des députés français depuis 1789*) is available at https://www2.assemblee-nationale.fr/sycomore/recherche.

[59] We end the data collection in January 1793, the month of the king's execution.

[60] To identify the municipality and *bailliage* of birth, we rely on the municipality names reported in the historical archive and conduct manual verification in ambiguous cases (e.g., municipalities sharing the same name, name changes over time, or subsequent municipal mergers).

We obtain the list of presiding officers and their dates of service from the *Assemblée Nationale*'s official historical database.[61] We flag presiding-officer interventions based on the speaker tag and assign the corresponding president's name using the intervention date and the tenure information in this list.

Textual controls. To characterize the corpus and to control for differences in speech length and style, we compute a small set of standardized textual features for each intervention using the cleaned speech text. In the analysis in Section 7.1, we control for word count and speech length.

E.2 Tax speech identification pipeline

Tax keywords. Our classification pipeline combines a keyword-based pre-selection step with an LLM-based refinement step. We first scan the full corpus using a set of tax-related keywords to identify candidate speeches that are plausibly about taxation or fiscal policy. A speech is selected as a candidate if it contains at least one keyword from either the core list or the optional list described below. We then run the LLM classifier only on this subset. This structure reduces computation and focuses the model on potentially relevant material, while avoiding spending LLM calls on speeches that are clearly unrelated to taxation.

The keyword list is organized around a set of core tax terms that capture direct references to taxation and closely related fiscal instruments. These core keywords are designed to cover standard tax categories and fiscal concepts (for example, references to taxes and impositions, specific tax instruments and classic tax types, and terms connected to fiscal administration and collection). In addition, we maintain an "optional/extended" (opt) list that includes broader fiscal language related to public finance but less specific to taxation. In the implementation, the opt definition is intentionally broader than the core definition: measures based on the opt list include all core matches plus additional matches from the optional keywords, and therefore provide a more inclusive indicator of tax-related content than the core baseline.

Because some terms can appear in both fiscal and non-fiscal contexts, we refine the keyword filter using whitelist/blacklist rules. The key idea is not to drop entire speeches, but to mask specific match spans that are likely to be false positives, so that they do not trigger selection or inflate counts. For ambiguous words (for example, terms that can refer to legal rights or non-fiscal meanings), we use context-based patterns to exclude obvious non-tax uses (blacklist), while preserving clearly fiscal phrases and constructions (whitelist). This reduces false positives at the keyword stage and ensures that the LLM classifier is applied primarily to speeches that contain credible fiscal content, rather than to texts that merely contain ambiguous words in

[61] *Assemblée Nationale* (France), "Les Présidents de l'Assemblée nationale depuis 1789," official website (accessed December 22, 2025), https://www2.assemblee-nationale.fr/decouvrir-l-assemblee/histoire/les-presidents-de-l-assemblee-nationale-depuis-17893.

non-fiscal contexts.

LLM taxonomy and prompt design. We use a multi-stage coding scheme to classify each speech excerpt with respect to its fiscal content and stance. The large language model (LLM) is instructed to apply this taxonomy consistently and to return, for each excerpt, a structured record with a small set of fields. Here, we describe the design of these fields; below, we reproduce the full prompt given to the model.

The first stage classifies the topicality of the excerpt with respect to taxation and related charges. Each passage is assigned to one of five categories: (i) `main_tax` for speeches that discuss specific taxes and their bases, rates, assessment, or collection (for example, *taille*, *gabelle*, contributions); (ii) `other_fiscal` for discussions of public finance more broadly, including budgets, treasuries, public debt, and the allocation or misuse of public funds; (iii) `parafiscal` for non-tax public charges such as fines, fees, licenses, and similar instruments; (iv) `feudal_dues` for seigneurial and ecclesiastical dues such as feudal rents and tithes; and (v) `none` when the passage is not substantively about taxation, public charges, or feudal dues. Separating topicality from stance allows us to distinguish fiscal from non-fiscal debates and to filter out speeches that only mention taxes incidentally.

The second stage captures dual-channel polarity towards fiscal institutions under two regimes. We code a stance towards the *Ancien Régime* fiscal order (Old Regime taxes, feudal dues, tax farming, internal tariffs, and related institutions) and a separate stance towards Revolutionary fiscal arrangements. For the Old Regime channel, we distinguish between speeches that are critical of Old Regime fiscal institutions (for example, denouncing oppression, inequality, or privileges), speeches that defend or seek to preserve them, and speeches that do not take a clear position. For the Revolutionary channel, we distinguish between speeches that advance the Revolutionary fiscal project of the relevant phase, speeches that undermine or seek to roll back key Revolutionary fiscal arrangements, and speeches that remain neutral. In our coding rules, "criticism from radical reformers"—for example, complaints that new taxes are still too close to Old Regime privilege and should be made more egalitarian—is treated as supporting the Revolutionary system rather than as simple opposition. The two channels are coded independently: a speech can be critical of both Old Regime and Revolutionary measures, or evaluate only one regime.

The third stage records the grounds or motives that speakers invoke when they criticise or defend fiscal arrangements. This is a multi-valued field that distinguishes between (i) horizontal inequality among taxpayers at the same social or legal level (for example, differences across similar provinces, parishes, or professions, or between rich and poor commoners when the focus is on distribution within non-privileged groups); (ii) vertical inequality, such as rent

extraction associated with structural privileges and exemptions enjoyed by higher orders (the nobility, the clergy, and other privileged bodies) and by rulers or fiscal intermediaries; and, (iii) arguments that frame taxation explicitly as oppression, servitude, slavery, or tyranny. The prompt gives concrete examples for each category and includes explicit guidance on how to treat class-based language such as *les riches*, which is coded as horizontal inequality when it refers to differences among non-privileged citizens and as vertical inequality when it clearly targets privileged orders. In the analysis, we combine horizontal and vertical inequality in a single ground.

The fourth stage captures actions demanded by the speaker. We distinguish between (i) specific proposals to abolish, modify, replace, or introduce particular taxes, dues, or fiscal instruments; and (ii) broader and more generic calls to reorganize fiscal institutions, financial administration, or constitutional rules governing taxation. These action codes allow us to distinguish speeches that only express complaints or justifications from those that also formulate concrete or institutional reforms. In the main analysis we group these two actions in a single "Tax reform" category.

In addition to these main fields, we create a flag marking speeches that are primarily about parliamentary procedures or the order of business, with little substantive fiscal discussion. This indicator allows us to capture the speeches without any substantive content. We always exclude these speeches from the main analysis.

Finally, the model is required to provide 1–3 short quotations from the original French text, each accompanied by a one-sentence explanation of which part of the coding it supports. These quotations serve as an "evidence field" that anchors the labels in the underlying text and facilitates prompt refinement and subsequent human inspection. The model returns all of these elements in a structured format, and we check that each record contains the expected fields before merging it into the analysis dataset.

Implementation details. We implement this classification scheme using the `GPT-5` model provided by OpenAI, accessed via the API with a fixed prompt that encodes the taxonomy described above. For each speech, we supply the cleaned French text and basic metadata such as the date and the type of assembly. We set the temperature parameter to zero in order to minimize randomness and obtain stable classifications, and we choose an output length that is sufficient to return the full set of fields and short quotations. Other sampling parameters are kept at their default values.

Speech texts are processed in batches. For each batch, we send the prompt and the corresponding speeches to the model and receive, for every speech, a structured record containing the topicality, the two polarity channels, the grounds, the actions, the flags, and the evidence quotations. We

then check, with simple automated routines, that each record is well formed and contains all required fields. If a record cannot be parsed or is missing key elements, we either re-run the model once for that speech or drop the observation from the LLM-based dataset; such problematic cases are rare and are not used in the empirical analysis. For transparency, we keep the raw model outputs (including the evidence quotations) and add internal indicators that track whether a speech was successfully parsed and passed all validation checks.

Full prompt. We now report the full prompt provided to the model.

```
You are a careful historical-text annotator. Read a French-language excerpt from
    the French Revolution era and classify it about TAX/FISCAL stance using the
    taxonomy below. Work semantically (not by keywords alone), quote short evidence,
     and return JSON ONLY (no prose). Never use deprecated tag names; always use the
     current names listed in the schema.

==================== GENERAL PRINCIPLES ====================
- Always reason about the *meaning* of the passage, not just keywords.
- When in doubt, be slightly conservative: avoid over-interpreting very vague hints.

- If metadata such as DATE and ASSEMBLY_TYPE is provided, use it as historical
    context (e.g., early 17891791 vs Convention in 1793) to interpret fiscal stance,
     but do not contradict explicit statements in TEXT.

Optional context variables (if available):
DATE = <YYYY-MM-DD>
ASSEMBLY_TYPE = <Constituante | Législative | Convention | ...>

Important  incidental tax flag:
- Use the "incidental_tax_reference" flag ONLY when the main topic is non-fiscal
    and tax/dues are merely mentioned in passing.
- If the passage has a substantive tax/fiscal topic (direct_tax, indirect_fiscal,
    parafiscal_fees_fines, or feudal_dues_ancient), DO NOT use "
    incidental_tax_reference".

Speaker-only rule:
- Ignore reported speech (e.g., X a dit que, quotations of others, Un membre: ),
    crowd reactions or stage directions (e.g., (Murmures), (Applaudissements), On
    crie: ).
- Base stance and evidence ONLY on the current speakers own declarative statements.
- If the speaker is indiscernible, prefer none for polarity and not_discernible"
    for regime_alignment, and choose a lower confidence level.

==================== TASK ====================
Given one excerpt (variable name: TEXT), do the following stages in order.
```

```
-------------------- Stage 1  Tax topicality (single choice) --------------------
Choose exactly one value for "tax_topicality":

- "main_tax":
  About taxes themselves as taxes: impôt / imposition / fiscalité / fisc; taille;
      gabelle; traites / tariffs; droits dentrée; droits denregistrement explicitly
      as a tax; tax bases and rates; assessment rolls / rôles; perception /
      recouvrement; tax collection and enforcement of taxes.

- "other_fiscal":
  Fiscal governance and public finance: Trésor public; caisse de lextraordinaire;
      budget lines; public debt service; earmarking or misallocation of public funds
      ; who bears a public expense (which social group, which region) when the
      mechanism is fiscal or quasi-fiscal.

- "parafiscal_fees_fines":
  Non-tax public charges: fines (amendes), fees, licenses/patentes, stamp and
      registration charges as procedural fees, court fees, etc., when discussed as
      public financial burdens or instruments.

- "feudal_dues_ancient":
  Old-regime seigneurial or ecclesiastical dues: cens, champarts, lods et ventes,
      banalités, dmes, corvées, etc., including their abolition, compensation, or
      settlement.

- "none":
  The passage is not about taxes, fiscal matters, public charges, or feudal dues in
      any substantive way.

If you choose direct_tax, indirect_fiscal, parafiscal_fees_fines, or
    feudal_dues_ancient, DO NOT use "incidental_tax_reference".

-------------------- Stage 2  Dual-channel fiscal polarity (institutional stance)
    --------------------
Judge stance separately for OLD REGIME fiscal institutions and REVOLUTIONARY fiscal
     institutions.
Each field is single-choice with a "none" option. Either, both, or neither may be
    non-"none".

Interpret these as attitudes toward the *fiscal systems and policies* of each
    regime, not global political allegiance.
```

```
 old_regime_polarity  { "critical" | "supportive" | "none" }

Meaning: Does the passage delegitimize or normalize the *Old-Regime fiscal order* (
    Old-Regime taxes, feudal dues/tithes, tax farming, internal tariffs/traites in
    the Old-Regime sense, etc.)?

- "critical": denounces oppression, inequality, arbitrariness, or privilege in Old-
    Regime fiscal institutions; calls to abolish, repudiate, or fundamentally
    transform these Old-Regime elements.
- "supportive": defends, praises, or calls to maintain or restore Old-Regime fiscal
     arrangements (e.g., preserving privileges, tax exemptions, tax farming, feudal
    dues).
- "none": Old-Regime fiscal order not evaluated or only mentioned descriptively.

 revolutionary_system_polarity  { "defend" | "condemn" | "none" }

Meaning: Given DATE and ASSEMBLY_TYPE (if provided), does the passage *advance or
    undermine* the Revolutionary fiscal project of that phase?

- "defend" (advance): supports the current or proposed fiscal arrangements of that
    phase, or proposes a more accountable / more anti-privilege / more egalitarian
    alternative that is consistent with the Revolutionary project of that phase.
  Criticizing a measure as not radical enough, still too close to Old-Regime
     privilege, or insufficiently equal BUT demanding more equal contributions,
     higher taxes on the rich, or removal of remaining exemptions counts as "defend
     ".

- "condemn" (undermine): seeks to roll back or abandon key Revolutionary fiscal
    arrangements without a principled egalitarian replacement; reintroduces
    privilege or arbitrariness; calls to restore Old-Regime fiscal logic.

- "none": Revolutionary fiscal system not evaluated or only described.

Tie-breaking within a channel:
- If cues conflict, prefer the position expressed with stronger, explicit normative
     language.
- If strong cues clearly point in *both* directions within the same channel (e.g.,
    equally strong praise and condemnation), set that channel to "none" and set
    confidence = "low".

The two channels are independent. For example:
- One can be critical of Old-Regime fiscal institutions and also critical of some
    Revolutionary tax policies.
```

```
- One can defend Revolutionary fiscal measures while having no explicit statement
    about the Old Regime in this excerpt.

-------------------- Stage 3  Motives / grounds for the stance (multi-select)
    --------------------
Now identify the main *reasons* or *motives* for the tax/fiscal stance. This is a
    multi-select list; it may be empty if no clear motive is expressed.

Choose zero or more from:

- "G1_burden_level"
  Use when the passage emphasizes the overall *weight* or *level* of the tax or
      charge: the taxes are too heavy, crushing, ruinous, or unsustainable for the
      people or for specific groups.
  Examples: impôts trop lourds; fardeau insupportable; le peuple ne peut plus vivre;
       contributions excessives; surcharge fiscale.

- "G2_horizontal_inequality"
  Use when the passage emphasizes unequal treatment among taxpayers who are on the
      same social or legal level, or who should be treated similarly:
  peasants vs peasants; provinces vs provinces; parishes vs parishes; professions vs
       professions; or non-privileged citizens vs other non-privileged citizens.
  This also includes class-based complaints such as les riches vs les pauvres or
      citoyens aisés vs peuple when the focus is on how the tax burden is shared
      among non-privileged social groups.
  Examples: la répartition de la taille est injuste entre paroisses; certaines
      provinces paient beaucoup plus que dautres; les contribuables des campagnes
      supportent une charge disproportionnée; les citoyens aisés contribuent trop
      peu par rapport au peuple.

- "G3_vertical_inequality_rents"
  Use when the passage criticizes structural privileges or exemptions of higher
      orders (nobility, clergy, privileged bodies) and/or vertical extraction of
      rents by rulers and fiscal intermediaries from the people:
  king, court, royal household, fermiers généraux, financiers, traitants, those who
      appropriate public revenues.
  Examples: le clergé et la noblesse ne doivent plus tre exempts dimpôts; tous
      doivent payer également àltat; les privilèges fiscaux des ordres privilégiés
      doivent tre abolis; la cour dilapide les deniers publics; les fermiers géné
      raux senrichissent aux dépens du peuple; les financiers pillent le Trésor.

  Guidance for les riches / class-based rhetoric:
  - If les riches clearly refers to members of the privileged orders (nobility or
```

```
     clergy), or is explicitly tied to exempt or privileged status, treat this as
     vertical inequality and select "G3_vertical_inequality_rents".
  - If the passage criticizes how taxes are apportioned among non-privileged
     citizens (wealthy commoners vs poor commoners), or if the identity of les
     riches is left general/unspecified, treat this as horizontal inequality and
     select "G2_horizontal_inequality".
  - When both aspects are clearly present (e.g. references to les riches allied with
      the court, financiers, or privileged orders), you may select both "
     G2_horizontal_inequality" and "G3_vertical_inequality_rents".

- "G4_oppression"
  Use when taxation or dues are framed explicitly as *oppression*, *servitude*, *
     slavery*, *tyranny*, or systematic abuse of the peoples liberty and rights,
  beyond simply being heavy.
  Examples: oppression fiscale; tyrannie des impôts; le peuple est opprimé par les
     contributions; les impôts réduisent les citoyens en esclavage.



Guidance:
- These grounds are not mutually exclusive. When a passage clearly supports several
     motives (for example, both horizontal and vertical inequality, or burden plus
    oppression), select all that apply.
- Only select a ground when there is clear textual support in the speakers own
    words.

-------------------- Stage 4  Actions demanded (multi-select) --------------------
Identify specific *actions* or *political changes* demanded by the speaker. This is
     multi-select; may be empty.

- "A1_tax_reform_specific":
  Concrete proposals to modify, abolish, replace, or introduce particular taxes,
     dues, or fiscal instruments,
  or specific rules for their assessment, collection, or allocation.



-------------------- Stage 5  Evidence extraction --------------------
Extract 13 short quotes ( 30 words each) from TEXT in French (speaker-only).

For each quote:
- Use only the current speakers declarative statements.
```

```
- Add one short sentence explaining which label(s) (topicality, polarity, grounds,
    actions, or flags) it supports.

Example structure:
"evidence": [
  {
    "quote": "<30-word French quote>",
    "reason": "Explains why this supports [label1, label2, ...]."
  }
]

-------------------- Stage 6  Confidence and flags --------------------
Provide:

- "confidence" as a discrete label in {"high","medium","low"}:

  - "high": the decision is clear and well-supported by the text (including the case
      of an obvious no-stance, where both fiscal polarity channels = "none").
  - "medium": a stance exists but the evidence is thin (e.g., only one weak cue), or
      there is a split topic but the primary interpretation is still defensible.
  - "low": unresolved ambiguity (e.g., conflicting cues within a channel, unclear
     phase/topic, or heavy reliance on external context).

- "flags" as a list (may be empty), using zero or more of:

  - "procedural_or_agenda_only":
    The passage is mainly about agenda-setting and/or procedures (rules of debate,
       voting procedure, order of the day, scheduling), with minimal substantive
       fiscal discussion.
  - "ambiguous_contribution":
    The speakers contribution is very short, unclear, heavily truncated, or strongly
        context-dependent, making stance difficult to interpret.
  - "incidental_tax_reference":
    Taxes or dues are mentioned only in passing; the main topic is something else.
       Do NOT use if tax/fiscal matters are central to the passage.

=================== EXAMPLES (GOLDEN ANNOTATIONS) ===================
The following example illustrates the expected JSON structure. Do NOT copy it
    literally; adapt labels to the actual TEXT you are given.

Example 1  1789 critique of the gabelle

Example 1 TEXT:
```

```
 Les habitants de nos campagnes sont accablés par la gabelle; ce monopole odieux
    renchérit le sel nécessaire àla vie, tandis que les privilégiés y échappent.
    Nous réclamons la suppression de cette taxe et létablissement dun impôt plus é
    gal.

Example 1 JSON:
{
  "tax_topicality": "main_tax",
  "old_regime_polarity": "critical",
   "grounds": [
    "G1_burden_level",
    "G3_vertical_inequality_rents",
    "G4_oppression"
  ],
  "actions": [
    "A1_tax_reform_specific"
  ],

  "evidence": [
    {
      "quote": "Les habitants de nos campagnes sont accablés par la gabelle; ce
          monopole odieux renchérit le sel nécessaire àla vie",
      "reason": "Shows a heavy and oppressive salt tax on rural inhabitants,
          supporting direct_tax, G1_burden_level and G4_oppression, and
          old_regime_polarity = critical."
    },
    {
      "quote": "tandis que les privilégiés y échappent",
      "reason": "Highlights that privileged groups escape the gabelle thanks to their
           status, supporting G3_vertical_inequality_rents and old_regime_polarity =
          critical."
    },
    {
      "quote": "Nous réclamons la suppression de cette taxe et létablissement dun imp
          ôt plus égal",
      "reason": "Demands abolition of the gabelle and a more equal tax, supporting
          A1_tax_reform_specific and the inequality-related motive."
    }
  ],
  "confidence": "high",
  "flags": []
}
```

```
==================== OUTPUT FORMAT (JSON ONLY) ====================
Return a single JSON object with exactly the following fields and possible values:

{
  "tax_topicality": "main_tax | other_fiscal | parafiscal_fees_fines |
      feudal_dues_ancient | none",
  "old_regime_polarity": "critical | supportive | none",
  "revolutionary_system_polarity": "defend | condemn | none",
  "grounds": [
    "G1_burden_level",
    "G2_horizontal_inequality",
    "G3_vertical_inequality_rents",
    "G4_oppression",

  ],
  "actions": [
    "A1_tax_reform_specific",

  ],
   "evidence": [
    {
      "quote": "<30 words>",
      "reason": "<one-sentence justification>"
    }
  ],
  "confidence": "high | medium | low",
  "flags": [
    "procedural_or_agenda_only",
    "ambiguous_contribution",
    "incidental_tax_reference"
  ]
}

==================== INPUT VARIABLE ====================
TEXT = <<<FRENCH_EXCERPT>>>

Return JSON only.
```

Illustrative model outputs. We report three examples of the model's output. For each, we show the original French excerpt, an English translation, and the JSON record returned by the classifier under the final taxonomy.

Example 1

Original (French).

> Je me détermine difficilement à combattre une opinion, fruit d'une longue méditation, et je ne le fais que pour l'intérêt de ceux que je représente et de ceux qui seront dans la suite représentés.
>
> La base du territoire n'est pas juste. La sixième partie de l'Auvergne ne produit rien ; lui donnerez-vous une représentation égale à celle des autres parties de cette province qui sont très-productives ?
>
> La base de la contribution est contraire aux principes du droit naturel, et les circonstances présentes la rendent d'une exécution dangereuse. À l'instant où l'on élira les députés pour la législature qui doit suivre cette Assemblée, la masse des impositions ne sera pas encore déterminée conformément au régime que vous devez établir. Croirez-vous avoir ordonné une représentation libre, lorsque vous l'aurez fondée sur les bases d'une contribution créée par le despotisme ?
>
> Je ne puis donc admettre les bases du territoire et de la contribution.

English translation.

> I find it difficult to resolve to oppose an opinion that is the fruit of long reflection, and I do so only in the interest of those whom I represent and those who will be represented in the future.
>
> The territorial basis is not just. One sixth of Auvergne produces nothing; will you give it representation equal to that of the other parts of this province that are highly productive?
>
> The contribution basis is contrary to the principles of natural right, and present circumstances make it dangerous to implement. At the moment when deputies are elected for the legislature that is to follow this Assembly, the overall amount of taxes will not yet have been fixed in accordance with the regime you are to establish. Will you think you have ordered free representation when you have founded it on a contribution basis created by despotism?
>
> I therefore cannot accept the territorial and contribution bases.

Model output.


```
{
  "tax_topicality": "main_tax",
  "old_regime_polarity": "critical",
  "revolutionary_system_polarity": "none",
  "grounds": ["G3_oppression"],
```

```
  "actions": [],
  "evidence": [
    {
      "quote": "La base de la contribution est contraire aux principes du droit
          naturel",
      "reason": "Normative critique of using tax contribution as a basis; supports a
          critical stance toward that fiscal basis (old_regime_polarity = critical)."
    },
    {
      "quote": "fondée sur les bases d'une contribution créée par le despotisme",
      "reason": "Links the contribution basis to despotism, indicating oppressive
          design and supporting G4_oppression."
    },
    {
      "quote": "la masse des impositions ne sera pas encore déterminée",
      "reason": "Shows that the overall tax burden (impositions) is central to the
          argument, supporting main_tax topicality."
    }
  ],
  "confidence": "medium",
  "flags": []
}
```


Example 2

Original (French).

> appuie le projet proposé et insiste sur l'extrême désir des peuples d'être délivrés d'un impôt injuste, immoral, vexatoire, comme celui de la gabelle.

English translation.

> [speaker] supports the proposed project and insists on the people's strong desire to be rid of an unjust, immoral, and vexatious tax such as the gabelle.

Model output.


```
{
  "tax_topicality": "main_tax",
  "old_regime_polarity": "critical",
  "revolutionary_system_polarity": "defend",
  "grounds": ["G3_oppression"],
  "actions": ["A1_tax_reform_specific"],
  "evidence": [
    {
      "quote": "appuie le projet proposé",
```

```
    "reason": "Shows support for the proposed measure, aligning with the
        Revolutionary fiscal reform (revolutionary_system_polarity = defend;
        A1_tax_reform_specific)."
   },
   {
    "quote": "un impôt injuste, immoral, vexatoire, comme celui de la gabelle",
    "reason": "Denounces the Old-Regime gabelle as unjust and vexatious, supporting
         old_regime_polarity = critical and G3_oppression."
   }
  ],
  "confidence": "high",
  "flags": []
}
```


Example 3

Original (French).

> informe l'Assemblée qu'il a reçu une requête par laquelle la ville de Nevers demande que son octroi, qui finit au mois d'octobre prochain, soit continué pour deux ans.
>
> Cette demande est renvoyée au comité des finances qui en rendra compte à l'Assemblée.

English translation.

> He informs the Assembly that he has received a petition by which the town of Nevers requests that its octroi, which expires in the month of next October, be extended for two years.
>
> This request is referred to the finance committee, which will report back to the Assembly.

Model output.


```
{
  "tax_topicality": "main_tax",
  "old_regime_polarity": "none",
  "revolutionary_system_polarity": "none",
  "grounds": [],
  "actions": [],
  "evidence": [
   {
    "quote": "la ville de Nevers demande que son octroi ... soit continué pour deux
         ans",
    "reason": "Shows that the topic is a municipal entry tax (octroi), supporting
        main_tax topicality."
   },
```

```
    {
      "quote": "Cette demande est renvoyée au comité des finances",
      "reason": "Indicates a procedural referral to the finance committee rather than
           a substantive tax stance."
    }
  ],
  "confidence": "high",
  "flags": ["procedural_or_agenda_only"]
}
```

E.3 Institutional change

Sample construction and temporal filtering. The analysis of taxation and institutional change presented in Section 7.2 in the main text focuses on speeches delivered within a narrow temporal window surrounding a pivotal early moment of the Revolution: the abolition of feudal privileges and the drafting of the Declaration of the Rights of Man and of the Citizen in August 1789. We restrict the sample purely on temporal grounds, retaining all speeches delivered within a symmetric four-week window around this event period. Concretely, we retain only speeches dated between July 4 and September 28, 1789.

This temporal restriction serves two purposes. First, it isolates debates taking place during a phase of acute constitutional uncertainty in August 1789, when the institutional environment remained fluid and deputies explicitly confronted questions of sovereignty, rights, and the future political order. Second, it ensures that the LLM-based classification is applied to speeches whose meaning and stakes can be interpreted relative to a well-defined historical context, rather than across heterogeneous phases of the Revolution.

LLM taxonomy and prompt design. We use a multi-stage coding scheme to classify each speech excerpt with respect to its position on institutional change during a pivotal early moment of the French Revolution. The LLM is instructed to apply this taxonomy consistently and to return, for each excerpt, a structured record with a small set of fields. Here, we describe the design of these fields; below, we reproduce the full prompt given to the model.

The first stage classifies the speaker's desired constitutional direction relative to the institutional framework prevailing at the time of the speech. Each passage is assigned to exactly one of five categories: (i) `rollback_toward_ancien_regime` for speeches that seek to restore or move closer to pre-1789 arrangements; (ii) `keep_current_system_mostly_intact` for speeches that emphasize consolidation of the existing compromise with at most minor adjustments; (iii) `moderate_reform_current_system` for speeches advocating incremental reforms within the logic of the current institutional framework; (iv) `radical_reform_beyond_current_system` for speeches calling for changes that go beyond the prevailing institutional order's basic con-

straints; and (v) `not_discernible` when the passage does not clearly express a position on constitutional direction. Framing this dimension relative to the current institutional order allows us to distinguish reaction, consolidation, and reformist positions within a rapidly evolving constitutional context.

The second stage captures the speaker's evaluation of the *Ancien Régime* and its institutions. Each passage is assigned to exactly one of five categories: (i) `positive_or_defensive` for speeches that praise or defend the old order or its institutions; (ii) `neutral_or_descriptive` for passages that refer to the Ancien Régime in a factual or descriptive manner without clear evaluation; (iii) `critical_technical` for criticisms that focus on functional or administrative defects, such as inefficiency, disorder, or mismanagement; (iv) `critical_moral_unfair_oppressive` for explicitly moral condemnations that frame the old order as unjust, oppressive, arbitrary, or violative of rights; and (v) `not_discernible` when the passage does not contain a meaningful or classifiable evaluation. Distinguishing among these categories allows us to separate descriptive references to the past from normative critiques, and to identify whether opposition to the *Ancien Régime* is primarily technical or grounded in moral claims.

The third stage captures the speaker's stance toward the monarchy and the king. Each passage is assigned to exactly one of five categories: i) `defend_or_strengthen_monarchy` for speeches that defend the monarchy as a necessary or central institution, or that seek to preserve or expand royal powers; (ii) `preserve_with_limited_reforms` for passages that support maintaining the monarchy while accepting or proposing limited institutional constraints or reforms; (iii) `accept_significant_weakening` for positions that accept a strongly constrained or subordinated monarchy with sharply reduced powers, while still assuming the existence of a king; (iv) `support_abolition` for passages that advocate abolishing the monarchy or replacing the king; and (v) `not_discernible` when the passage does not express a clear or classifiable stance toward the monarchy.

In addition to these main fields, the model assigns a confidence level to each classification and may flag speeches that are primarily procedural or whose contribution is substantively ambiguous. These flags allow us to identify excerpts with limited substantive content and to exclude purely procedural interventions from the analysis.

Finally, the model is required to provide 1–3 short quotations from the original French text, each accompanied by a one-sentence explanation of which part of the coding it supports. These quotations serve as an evidence field that anchors the labels in the underlying text and facilitates prompt refinement and subsequent human inspection. The model returns all elements in a structured JSON format, and we verify that each record contains the expected fields before incorporating it into the analysis dataset.

Implementation details. The implementation details for the institutional change classification are identical to those described in E.2. We implement this classification scheme using the `GPT-5` model provided by OpenAI, accessed via the API with a fixed prompt encoding the taxonomy described above. For each speech, we supply the cleaned French text together with basic metadata such as the date and the type of assembly. We set the temperature parameter to zero in order to minimize randomness and obtain stable classifications, and we choose an output length sufficient to return the full set of fields and short evidence quotations. All other sampling parameters are kept at their default values.

Speech texts are processed in batches. For each batch, we send the prompt and the corresponding speeches to the model and receive, for every speech, a structured record containing the classification labels, flags, confidence indicators, and evidence quotations. We then verify, using simple automated routines, that each record is well formed and contains all required fields. If a record cannot be parsed or is missing key elements, we either re-run the model once for that speech or drop the observation from the LLM-based dataset; such cases are rare and are excluded from the empirical analysis. For transparency, we retain the raw model outputs and internal indicators tracking successful parsing and validation.

Full prompt. We now report the full prompt provided to the model.

```
You are a careful historical-text annotator. Read a French-language excerpt from
    the French Revolution and classify it along three political dimensions using the
     taxonomy below. Work semantically (not by keywords alone), quote short evidence
    , and return JSON ONLY (no prose).

==================== CONTEXT: PIVOTAL MOMENTS OF THE REVOLUTION
    ====================
Below is a list of key events that structure the major political crises of the
    Revolution.
Each entry includes the event name, date, and a short explanation of what happened
    and why the moment mattered.

1. **Abolition of Feudalism & Declaration of the Rights of Man and Citizen (August
    1789)**
   In early August 1789, the National Constituent Assembly debated how far to
       dismantle the social and legal order of the Ancien Régime.
   This period includes the Night of 4 August, when many feudal privileges were
       renounced, and the drafting of the Declaration of the Rights of Man and
       Citizen.
   Deputies confronted fundamental questions of sovereignty, equality, rights, and
       the end of corporate privilege.
```

```
==================== CONTEXT FOR THIS SPECIFIC SPEECH ====================
This speech is taking place in the window around the following pivotal event:

**EVENT_NAME:** <EVENT_NAME>
**EVENT_DATE:** <EVENT_DATE>
**EVENT_DESCRIPTION:** <EVENT_DESCRIPTION>

At this time, the institutional settlement is:
**CURRENT_INSTITUTIONAL_SETTLEMENT:** <CURRENT_INSTITUTIONAL_SETTLEMENT>

This speech is taking place in the window around <EVENT_NAME> on <EVENT_DATE>,
    which involved <EVENT_DESCRIPTION>.
Considering this context and the current institutional settlement, classify the
    stance of the speaker along the three dimensions below.
Use this context to interpret whether calls for order, firmness, the law, the
    constitution, etc., are directed against the king, émigrés, refractory priests,
    the crowd, or other actors, in a way that is historically coherent for this
    moment. However, do not contradict explicit statements in TEXT.

==================== GENERAL PRINCIPLES ====================
- Always reason about the *meaning* of the passage, not just keywords.
- When in doubt, be slightly conservative: avoid over-interpreting very vague hints.

- You may use DATE and ASSEMBLY_TYPE as additional historical context, but never
    override explicit statements in TEXT.
- The classification is intended for speeches delivered in a time window around a
    pivotal moment, but your task is always to classify THIS speechs stance, not to
    describe the event itself.

Optional metadata:
DATE = <DATE_YYYY_MM_DD>
ASSEMBLY_TYPE = <ASSEMBLY_TYPE>

Speaker-only rule:
- Ignore reported speech (e.g., X a dit que, quotations of others, Un membre: ),
    crowd reactions or stage directions (e.g., (Murmures), (Applaudissements), On
    crie: ).
- Base stance and evidence ONLY on the current speakers own declarative statements.
- If the speaker is indiscernible, prefer "not_discernible" for the main labels and
     choose a lower confidence level.

==================== TASK ====================
Given one excerpt (variable name: TEXT), do the following stages in order:
```

```
1) constitutional_direction (relative to the current institutional settlement)
2) ancien_regime_evaluation (attitude toward the Ancien Régime)
3) monarchy_stance (attitude toward the monarchy/king)
4) evidence, confidence, and flags

-------------------- Stage 1  constitutional_direction (single choice)
    --------------------
Question: relative to the *current institutional settlement* at the time of the
    speech, does the deputy want to roll back toward the Old Regime, keep the
    current compromise, or push for further reform (moderate vs radical) along the
    revolutionary direction?

Choose exactly ONE value for "constitutional_direction":

- "rollback_toward_ancien_regime"
- "keep_current_system_mostly_intact"
- "moderate_reform_current_system"
- "radical_reform_beyond_current_system"
- "not_discernible"

Definitions and decision rules:

 "rollback_toward_ancien_regime":
 The speaker wants to restore or move closer to pre-1789 arrangements, or to undo
     core revolutionary reforms already enacted.
 Typical cues:
 - Defence or re-establishment of powers clearly associated with the king,
     privileged orders, or feudal/corporate privileges.
 - Calls to suspend, overturn, or strongly limit key revolutionary changes in order
      to return to the previous order.

 "keep_current_system_mostly_intact":
 The speaker mainly wants to preserve and consolidate the existing constitutional
     settlement, with at most minor adjustments.
 Typical cues:
 - Emphasis on order, stability, and respect for the current constitution or laws.
 - Criticism of both reaction and radical change; slogans like no more revolutions,
      respect what has been established.

 "moderate_reform_current_system":
 The speaker accepts the current system as a baseline but advocates *incremental*
     reforms within its logic.
```

```
  Typical cues:
  - Technical improvements, clarifications, or limited legal changes.
  - Perfecting or completing the existing constitution or institutional framework
      without fundamentally replacing it.

 "radical_reform_beyond_current_system":
  The speaker wants major changes that go beyond the current settlements basic logic
       or constraints.
  Typical cues:
  - Calling for a republic when a constitutional monarchy is in force.
  - Demanding a new constitution, a complete re-foundation of powers, or a
      fundamentally different political order.

 "not_discernible":
  The passage does not clearly indicate the desired constitutional direction (e.g.,
      mainly procedural, or focused on a narrow topic with no institutional
      implications), or contains irreconcilable signals.

Guidance for mixed cases:
- If multiple tendencies appear, choose the *most consequential* direction that the
     speaker clearly endorses as their programmatic aim.
- If signals are contradictory and equally strong in opposite directions, choose "
    not_discernible" and set confidence = "low" and/or flag "ambiguous_contribution
    ".
- Do not infer moderate_reform_current_system from general calls for firmness,
    order, or enforcement unless the speaker explicitly proposes a change to
    institutions or laws. If no reform is articulated, use
    keep_current_system_mostly_intact or not_discernible depending on clarity.

-------------------- Stage 2  ancien_regime_evaluation (single choice)
    --------------------
Question: how does the speaker evaluate the Ancien Régime (its institutions, norms,
     and social order), when it is referenced?

Choose exactly ONE value for "ancien_regime_evaluation":

- "positive_or_defensive"
- "neutral_or_descriptive"
- "critical_technical"
- "critical_moral_unfair_oppressive"
- "not_discernible"

Definitions:
```

```
 "positive_or_defensive":
 The speaker praises or defends the Ancien Régime, or specific institutions of the
     old order.
 Examples:
 - Nostalgia for good old times of order, hierarchy, or stability.
 - Defending old institutions or customs as wise, just, or necessary.
 - Arguing that the old order was better than the current one.

 "neutral_or_descriptive":
 The Ancien Régime is described factually without clear positive or negative
     evaluative language.
 Examples:
 - Sous lancien régime, telle chose se faisait ainsi without praise or blame.

 "critical_technical":
 The criticism focuses on functional or technical defects rather than moral
     injustice.
 Examples:
 - Complaints about inefficiency, disorder, confusion, or mismanagement.
 - Critique that the old system did not work well, without calling it unjust or
     oppressive.

 "critical_moral_unfair_oppressive":
 The criticism is explicitly moral: the old order is unjust, oppressive, tyrannical
     , arbitrary, or violates natural rights.
 Examples:
 - Language of injustice, oppression, servitude, tyrannie, violations des droits,
     privilèges injustes.

 "not_discernible":
 There is no meaningful reference to the Ancien Régime, or references are too vague
      to classify.

Guidance for mixed cases:
- If both technical and moral critiques are present, choose "
    critical_moral_unfair_oppressive" and mention both aspects in the evidence.
- If there are clearly positive and clearly negative evaluations of the Ancien Ré
    gime in the same short passage, choose "not_discernible" and set confidence = "
    low" and/or flag "ambiguous_contribution".
- Treat references to clearly pre-1789 institutions such as privilèges, droits fé
    odaux, dmes, corvées, droits de chasse, gabelles, jurandes, corporations,
    parlements, and seigneurial justice as references to the Ancien Régime, even if
```

```
    the term Ancien Régime is not used. If the speaker clearly evaluates these
    institutions (positively or negatively), assign a non-"not_discernible" label.
- When the speaker talks about lancien ordre, lancien système, lancienne
    constitution, anciens abus, or explicitly contrasts avant 1789 with the present,
     you may treat this as an evaluation of the Ancien Régime if the judgment is
    clear. Use "critical_moral_unfair_oppressive" when the language suggests
    injustice, oppression, servitude, or tyranny; use "critical_technical" when the
    focus is on confusion, disorder, or inefficiency; and use "positive_or_defensive
    " when the old system is presented as orderly, wise, or preferable.
- If the Ancien Régime (or its core institutions) is mentioned in a factual way but
     clearly as a negative baseline that justifies reforms (ce qui se passait
    autrefois, les abus anciens que nous avons détruits), you may classify this as "
    critical_technical" or "critical_moral_unfair_oppressive" rather than "
    not_discernible", depending on whether the criticism is primarily functional or
    moral.

-------------------- Stage 3  monarchy_stance (single choice) ---------------------
Question: what is the stance of the speaker toward the monarchy/king on an ordered
    scale from defence to abolition?

Choose exactly ONE value for "monarchy_stance":

- "defend_or_strengthen_monarchy"
- "preserve_with_limited_reforms"
- "accept_significant_weakening"
- "support_abolition"
- "not_discernible"

Definitions:

 "defend_or_strengthen_monarchy":
  The speaker defends the monarchy as a necessary or central institution and/or
      wants to preserve or increase royal powers.
  Typical cues:
  - Strong emphasis on the King as guarantor of order or constitution.
  - Opposition to constraints on the kings authority; calls to restore royal
      prerogatives.
  - Denunciation of attacks on the monarchy itself as illegitimate or dangerous.

 "preserve_with_limited_reforms":
  The speaker supports keeping the monarchy, but accepts or proposes limited reforms
       or constraints.
  Typical cues:
```

```
  - Calls for better advisors or more responsible ministers.
  - Mild restrictions on royal veto or administration while clearly retaining a
      strong role for the king.
  - Defence of the king plus acceptance of some adjustments.

 "accept_significant_weakening":
  The speaker accepts or advocates a strongly weakened monarchy, with clearly
      limited powers, but still assumes a king exists.
  Typical cues:
  - Strong parliamentary supremacy.
  - The king reduced to a largely ceremonial or tightly controlled role.
  - Acceptance that the monarch is subordinated to the nation or assembly in almost
      all decisions.

 "support_abolition":
  The speaker supports ending the monarchy or replacing the king (e.g., establishing
       a republic or another non-hereditary executive).
  Typical cues:
  - Explicit calls to abolish or depose the king, or to suppress the monarchy as an
      institution.
  - Proposals that logically entail the disappearance of the king as head of state.

 "not_discernible":
  No clear stance on the monarchy is expressed in the passage, or signals are too
      contradictory to classify.

Guidance:
- If the speaker refers only to the constitution or the law without the monarch,
    infer monarchy_stance only when the institutional implications are clear;
    otherwise use "not_discernible".
- In mixed or ironic passages, classify based on the most explicit and serious
    programmatic statements.
- You may treat clear references to le pouvoir exécutif, le chef du pouvoir exé
    cutif, le trône, la cour, la famille royale, or le palais as indirect references
     to the monarchy/king when the context makes it obvious that the hereditary
    monarch (and not just generic ministers) is at issue.
- Debates about explicitly monarchical constitutional prerogatives (veto royal,
    sanction, inviolabilité du roi, hérédité de la couronne, régence, suspension du
    roi) should be used to infer monarchy_stance when the speaker clearly supports
    or attacks these powers or the hereditary principle, even if the word roi is not
     written in the excerpt.
- When the speaker attributes conspiracies, dangers, or betrayals to la cour or to
    les agents du pouvoir exécutif in a context where the crisis centres on the king
```

```
     (for example Varennes, veto crises, the insurrection of 10 August, or the trial
     of Louis XVI), you may classify this as "accept_significant_weakening" or "
    support_abolition" if the speech logically implies that the monarchy should be
    strictly subordinated, suspended, or suppressed.
- Conversely, when the speaker insists on the dignity, inviolability, or necessary
    authority of the throne, or defends the hereditary executive as a safeguard for
    order and the constitution, you may classify this as "
    defend_or_strengthen_monarchy" or "preserve_with_limited_reforms", even if roi
    is not named explicitly.
-------------------- Stage 4  Evidence extraction --------------------
Extract 13 short quotes ( 40 words each) from TEXT in French (speaker-only).

For each quote:
- Use only the current speakers declarative statements.
- Choose quotes that best support your three main labels.
- Add one short sentence explaining which label(s) (constitutional_direction,
    ancien_regime_evaluation, monarchy_stance) it supports and why.

Expected structure:

"evidence": [
  {
    "quote": "<40-word French quote>",
    "reason": "One sentence explaining which label(s) this quote supports and why."
  }
]

If the passage is very short or uninformative, you may provide only 1 quote and
    explain briefly why classification is difficult.

-------------------- Stage 5  Confidence and flags --------------------

  - "high": the decision is clear and well-supported by explicit statements in TEXT
      (including cases where it is clearly appropriate to choose "not_discernible").
  - "medium": a stance exists but the evidence is thin (e.g., only one weak cue), or
      there are minor ambiguities while one interpretation is still clearly
     dominant.
  - "low": strong ambiguity (e.g., conflicting cues, very short or truncated passage
     ) or substantial reliance on contextual inference.

- "flags" as a list (may be empty), using zero or more of:

  - "procedural_or_agenda_only":
```

```
   The passage is mainly about agenda-setting or procedure (rules of debate, voting
        procedure, order of the day, scheduling) and any substantive stance is
       secondary or only implicit.
  - "ambiguous_contribution":
    The speakers contribution is very short, strongly context-dependent,
       contradictory, or truncated, making stance difficult to interpret.

==================== OUTPUT FORMAT (JSON ONLY) ====================
Return a single JSON object with exactly the following fields and possible values:

{
  "constitutional_direction": "rollback_toward_ancien_regime |
      keep_current_system_mostly_intact | moderate_reform_current_system |
      radical_reform_beyond_current_system | not_discernible",
  "ancien_regime_evaluation": "positive_or_defensive | neutral_or_descriptive |
      critical_technical | critical_moral_unfair_oppressive | not_discernible",
  "monarchy_stance": "defend_or_strengthen_monarchy | preserve_with_limited_reforms
      | accept_significant_weakening | support_abolition | not_discernible",
  "evidence": [
    {
      "quote": "<40 words>",
      "reason": "<one-sentence justification>"
    }
  ],
  "confidence": "high | medium | low",
  "flags": [
    "procedural_or_agenda_only",
    "ambiguous_contribution"
  ]
}

==================== INPUT VARIABLES ====================
DATE = <YYYY-MM-DD>
ASSEMBLY_TYPE = <assembly type>
EVENT_NAME = <short label>
EVENT_DATE = <date or date range>
EVENT_DESCRIPTION = <24 sentences>
CURRENT_INSTITUTIONAL_SETTLEMENT = <13 sentences>
TEXT = <<<FRENCH_EXCERPT>>>

Return JSON only.
```

Illustrative model outputs. We report two examples of the model's output. For each, we

show the original French excerpt, an English translation, and the JSON record returned by the classifie.

Example 1

Original (French).

> propose un projet de rédaction : « La liberté publique, exige que la séparation des pouvoirs soit déterminée, et que les agents du pouvoir exécutif soient responsables de leur administration, »

English translation.

> Proposes a draft: "Public liberty requires that the separation of powers be defined, and that the agents of the executive power be accountable for their administration."

Model output.


```
{
  "constitutional_direction": "moderate_reform_current_system",
  "ancien_regime_evaluation": "not_discernible",
  "monarchy_stance": "accept_significant_weakening",
  "evidence": [
    {
      "quote": "La liberté publique, exige que la séparation des pouvoirs soit dé
          terminée, et que les agents du pouvoir exécutif soient responsables de leur
           administration",
      "reason": "Indique une volonté de préciser la séparation des pouvoirs et d'
          imposer la responsabilité des agents exécutifs, ce qui correspond àune ré
          forme modérée et àun affaiblissement significatif du pouvoir monarchique ex
          écutif."
    }
  ],
  "confidence": "high",
  "flags": []
}
```


Example 2

Original (French).

> observe qu'il y a encore quarante-sept membres inscrits pour la parole, et qu'il est déjà très-tard.
>
> D'après ces observations, la discussion est renvoyée à lundi prochain.

English translation.

> Notes that forty-seven members are still signed up to speak and that it is already very late. In light of these remarks, the discussion is postponed until next Monday.

Model output.


```
{
  "constitutional_direction": "not_discernible",
  "ancien_regime_evaluation": "not_discernible",
  "monarchy_stance": "not_discernible",
  "evidence": [
    {
      "quote": "observe qu'il y a encore quarante-sept membres inscrits pour la
          parole, et qu'il est déjà très-tard.",
      "reason": "This quote addresses the procedural timing of debate, without
          revealing any substantive stance on constitutional direction, the Ancien Ré
          gime, or the monarchy."
    }
  ],
  "confidence": "high",
  "flags": [
    "procedural_or_agenda_only"
  ]
}
```