

Taxes, National Identity, and Nation Building: Evidence from France*

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Abstract

What is the relationship between state capacity and the creation of well functioning national institutions grounded in the rule of law? This paper argues that increased state capacity can lower the collective action costs of creating national institutions by facilitating the formation of a common identity. This hypothesis is tested by exploiting the fact that the French Monarchy was more successful in substituting its fiscal and legal institutions for those of the medieval seigneurial regime within an area of the country known as the Cinq Grosses Fermes (CGF). Highly disaggregated data on regional self-identification from the 1789 Cahiers de Doléances confirm that regions just inside the CGF were more likely than regions just outside the CGF to identify themselves as ‘French’ or ‘subjects of the king’ as opposed to identifying with local institutions. We also show that regions inside the CGF that affiliated with national identity were also more likely to provide local public goods, support the national political party, and had lower fertility rates in the nineteenth century.

Key words: Culture; Beliefs; Institutions; State Capacity

JEL classification: D03; N43

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It is only government by a single man that in the long run irons out diversities and makes each member of a nation indifferent to his neighbor's lot.

Alexis de Tocqueville, *The Old Regime and the French Revolution*, Book II, ch. 8

1 INTRODUCTION: CAPACITY, CONSTRAINT, AND COOPERATION

The relationship between political development and economic development is one of the most active areas of research in social science today. There are two main approaches to this question. One focuses on state capacity – the ability of government to extract revenue (fiscal capacity) and enforce rules (legal capacity).¹ The other approach focuses on the establishment of rule of law, which is commonly associated with credible constraints on government and the uniform application of rules across all segments of society.² At the risk of over-simplifying, the proponents of state capacity claim that any rules consistently enforced on a subject population (excluding the government itself), are conducive to growth. The rule of law approach, on the other hand, argues that ‘good’ rules in the sense that they are inclusive (Acemoglu and Robinson (2006)) and lead to credibly enforced contracts between any group in society are what matters most.

This paper proposes an answer to the question, ‘What is the relationship between state capacity and the creation of well functioning national institutions based on rule of law?’ It will show that regions with higher state capacity at the end of the eighteenth century in France were more likely to identify with national, or general, interests as opposed to local, or particularistic, interests. We will argue that this result is important to our understanding of how well functioning political institutions are achieved since the latter require broad agreement by the governed on what rights are important and what constitutes a violation of them. In other words, successful constitutional arrangements require citizens to overcome their particularistic interests in order to agree on what is and what is not legitimate behavior by the government (Buchanan and Tullock, 1965; Weingast, 1995; Levi, 1997; McGuire and Ohsfeldt, 1986). The creation of a shared identity through the actions of high capacity states is thus a vital part of the story of how rule of law is generated since it is likely to lower the cost of reaching constitutional settlements. More generally, we will show that the shift in affiliation from a local to a national identity across French regions was associated with many characteristics associated with modern economic growth. These include higher local public goods provisionment, lower fertility rates, and higher literacy.

The fundamental identification problem this paper addresses is that there may be unobservable variables

¹The literature is vast. See Weber (1968); Tilly (1990); Besley and Persson (2011); Dincecco (2009); Johnson and Koyama (2013a, 2014, 2013b) and the citations therein.

²This literature is also vast. See North and Weingast (1989); Rodrik et al. (2004); Acemoglu et al. (2005) and the citations therein.

correlated with both state capacity and national identity. For example, linguistic fractionalization or economic development. To minimize these potential sources of bias, two rich historical episodes will be exploited. The first is the creation of the internal free trade zone known as the Cinq Grosses Fermes (CGF) in 1664 by Louis XIV's finance minister, Jean-Baptiste Colbert. Within the area of the CGF, the absolute monarchy achieved more success in suppressing the local privileges that were inherited from the feudal regime than it did outside the CGF boundaries (Heckscher, 1955, 103-106). More importantly, the monarchy was much more successful in imposing its centralized fiscal institutions on the populations within the CGF. This forced individuals within the CGF to interact with, and eventually identify with, a centralized French state. Instead of (or in addition to) paying local landlords taxes and dealing with seigneurial justice, merchants, nobles, and clergy within the CGF were increasingly subjected to royal, or 'French', tax bureaucracies and justice systems.

In order to identify the effect of increased state capacity on social identity, I use the highly disaggregated information contained within the Cahiers de Doléances sent to the Estates General in 1789. Confronted with an intractable fiscal situation in 1788, Louis XVI agreed to the calling of the French representative assembly known as the Estates General for the first time since 1614. In anticipation of the debates which would emerge from the meeting, every baillage (town or village) in France was asked to compile a list of grievances. Representatives of each Estate (first = clergy, second = nobility, and third = everyone else) in each town were given the opportunity to submit one of these documents.³ These baillage-level Cahiers were sent to the capital of the electoral district in which they were located. Then, each of these approximately 200 electoral districts summarized the baillage Cahiers for each estate into a 'General' Cahier. It is these General Cahiers that I use to measure regional identification with the king or the French state. This task is made possible because of the work of Beatrice Hyslop who, in the 1930's, undertook the massive endeavor to read and analyze all the General Cahiers with an eye toward the question of what types of 'nationalism' existed across France on the eve of the Revolution (Hyslop, 1934, 1936). Importantly for the current study, Hyslop was unconcerned with the particular research question of this paper - 'Whether greater national identification was associated with being located in the Cinq Grosses Fermes?' Indeed, she hardly mentions fiscal boundaries in her work and draws no definite links between a region's membership in the CGF and any of the forty-nine variables she codes for each of the Cahiers.

These two historical sources - the geographic and fiscal reality of the CGF region along with the data on national identity provided by the Cahiers de Doléances - allow us to identify the effect of state capacity on national identity by comparing the reported national identity of similar groups 'close' to both sides of the CGF border. This focus on the local treatment effect of the CGF border results in an estimate of the effect of state capacity on national identity that is less subject to bias due to unobservables than simply comparing groups inside the CGF to those outside (the average treatment effect). This is because CGF and non-CGF regions close to the border are more likely to have similar characteristics than regions more distant from the border. We will confirm this is the case by comparing the value of observables on both sides of the border in

³In general, the third estate represented urban interests rather than peasant, agricultural, interests.

Section 4.⁴

In addition to the literatures on state capacity and rule of law mentioned above, this paper touches on several other topics of concern to social scientists. It contributes to those who write about State capacity and identity behavior. For example, Hoff and Pandey (2014) build on the work of Swidler (1986) by showing that the effect of economic incentives on children in rural India is influenced by whether they are primed on their ‘caste’ identity or on the more egalitarian identity provided by the central government of Uttar Pradesh State. More generally, the results in this paper are consistent with arguments that preferences matter for economic development (Hirschman, 1977; Fehr and Hoff, 2011; McCloskey, 2010; Mokyr, 2005). Our unique contribution is to identify an important historical mechanism through which preferences (or social identity) were formed and unified during the early-modern period – increases in state capacity.

This paper also contributes to the historical literature on the origins of the French Revolution, and more specifically, French Revolutionary nationalism, at the end of the Old Regime. Many of these studies focus on questions related to the present work such as linguistic or religious affiliation and Revolutionary sentiment (de Certeau et al., 2002; Bell, 1995).⁵ Historians such as Hyslop (1934) and Shapiro et al. (1998) did tremendous work compiling and studying the contents of the Cahiers de Doléances, often with an analytical eye towards the origins of French Revolutionary nationalistic sentiment. To the extent that they relate national identification with what we term state capacity here, however, they focus on average treatment effects in their formal analysis. For example, Markoff (1998) looks at the correlation between a region being a pays d’état (less monarchical control) versus a pays d’élection (more monarchical control) and the degree of agreement between First and Second Estates on various issues brought up in the Cahiers. This is a valuable analysis which addresses fundamental issues that make possible the hypothesis of the current paper.⁶ However, the correlations identified by Markoff (1998) fall short of identifying a causal effect of state capacity on national identity, which is a prime focus of the present study.⁷

Finally, this paper make a contribution to the literature on the effects of political borders on economic activity. One strand of this literature focuses on international borders as in Spolaore (2012) and Pinkovskiy (2013). Another strand looks at the effects of internal tax and regulatory barriers on economic development (Schulze and Wolf, 2009; Ploeckl, 2013; Franck et al., Forthcoming). Our analysis is especially related to that of Daudin (2010) who uses data on product prices to show that at the end of the eighteenth century individuals within the Cinq Grosses Fermes tended not to trade with those outside of it. Our results suggest, however,

⁴Our approach is, therefore, that of regression discontinuity design. For a recent influential example of RDD applied to historical data, see Dell (2010).

⁵More generally, it is difficult to over-state the influence of Anderson (1991) on the study by national sentiment within the humanities and its resultant emphasis on print culture.

⁶For example, an implicit assumption of the present study is that more identification with king or country leads to more agreement on how to solve constitutional dilemmas - Markoff (1998) specifically addresses this question and provides support for it.

⁷To reiterate, however, the collected articles in Shapiro et al. (1998) and in Markoff (2010) are in broad agreement with the present, general thesis, that stronger states are conducive to the creation of individuals with less particularistic interests.

that the political and economic implications of the CGF tariff region went well beyond the dead-weight losses from foregone trades. Social identity, in addition to commerce, was affected by the CGF boundary.

2 STATE CAPACITY, PREFERENCES, AND POLITICAL COOPERATION

In this section we will address three questions: (1) What is state capacity? (2) How might state capacity mold preferences or identity? (3) How do preferences affect the ability of a group to reach cooperative political arrangements or to write a constitution?

In ‘Politics as a Vocation’ Max Weber defines states as political communities that ‘...claim a monopoly on the legitimate use of physical force within a given territory’ (Weber, 1946, 1918). More recently, researchers have operationalized Weber’s definition as consisting of two, measurable, characteristics: (1) The ability to extract revenue, or fiscal capacity, and (2) the ability to enforce rules, or legal capacity. Fiscal and legal capacity tend to be positively correlated with each other or, to use the terminology of Besley and Persson (2011), they ‘cluster’. It is very rare to observe a polity with either high taxes and an inability to enforce rules or low taxes and an effective legal environment. As such, and given the difficulties of measuring legal capacity, most historical studies focus on just fiscal capacity in order to trace the development of the state over time (e.g. Dincecco (2009)). In Europe, these studies tend to show that around the end of the sixteenth century, state capacity was dramatically increasing in places like England, France, the Low Countries, and Prussia.⁸

But what effect did these increases in capacity have? Aside from imposing some minimal rules that probably facilitated trade and eventually allowed for greater investment in education (see, e.g., Epstein (2000), Dincecco (2009), and Johnson and Koyama (2014)), is it possible that individuals living in high state capacity regions actually had their preferences molded so that they were more likely to identify themselves with the newly powerful governments which were taxing them? Historians and sociologists have been aware of this possibility for some time. Most famously, one of the main themes in Tocqueville (1998) is that the French Revolution would have never been possible if the institutions of the absolute monarchy had not been so successful in undermining the feudal regime during the eighteenth century.⁹ In sociology, Swidler (1986) argues that the ‘ascriptive’ identity of individuals can be influenced by external institutions and can shift relatively quickly during periods of instability. This theme is built upon by Ross and Nisbett (1991) who discuss the work in social psychology supporting the idea that the social identity of individuals is strongly influenced by their environment. Bowles (1998) presents an exhaustive survey of how economic institutions, of which fiscal capacity is one important aspect, can affect preferences. Perhaps the most relevant mechanism he discusses

⁸For the overall picture after 1600, see Dincecco (2009), the essays in Bonney (1995), and Karaman and Pamuk (2013). For a classic treatment of England, see Brewer (1988). For a more recent attempt at endogenizing the explanation for investment in capacity in England and France, see Johnson and Koyama (2013*b*).

⁹The role of state power in affecting individual beliefs is a common theme of historians, especially since the work of Foucault (1977) which influenced many subsequent studies (for example, Sabean (1987) or Rebel (1983)).

for our purposes is that described by Fromm and Maccoby (1970) in which a change in formal institutions (such as the fiscal or legal environment) favors certain individuals who thrive under the new institutions. This, in turn, gives a reproductive advantage to these individuals and their traits (Zajonc, 1968). Those living inside the CGF were more successful if they understood the legal and economic institutions under which they had to trade. Those outside the CGF could be successful without such knowledge (we will provide evidence for these claims in Section 3.1 below).

In economics, the importance of preferences for economic development has perhaps been made most forcefully by Hirschman (1977). For him, the increasing importance of markets, or ‘doux commerce’, during the seventeenth and eighteenth centuries had a profound effect on what individuals valued. The shift was from treating money-making as shameful and personal honor as paramount, towards a more ‘modern’ outlook which valued individualism and market institutions. More recently, McCloskey (2010) has pursued the argument that it was a change in beliefs (as manifested in the rhetoric of individuals) which made possible the Great Divergence in incomes of the late eighteenth century and signaled the onset of modern economic growth.

For Hirschman (1977) the driving force behind preference changes was trade. For McCloskey (2010) it was a combination of the Reformation, the printing press, and revolutions of the late early-modern period. Recently, however, Tocqueville’s view that strong states may play a significant role in forming individual preferences has received support from work in development economics. In particular, Fehr et al. (2008) and Hoff and Pandey (2014) suggests that the values people affiliate with can be strongly affected by the institutions which surround them.¹⁰

It is, therefore, possible that the changes in preferences identified by Hirschman (1977) and McCloskey (2010) that laid the foundations for modern economic growth may have been largely a by-product of the increases in state capacity that occurred between 1500 and 1800 in Europe. In particular, these changes were characterized by a shift in social identity such that individuals affiliated less with particularistic and local institutions. Instead, they started thinking of themselves as individuals in a shared national culture. One consequence of this was that they also became more concerned with dismantling local institutions in favor of the new national institutions. This manifested itself as a desire to standardize economic and legal institutions and to eliminate the vestiges of the feudal regime such as serfdom (we will investigate these claims specifically in Section 5).

That it is easier to get a constitutional settlement when individuals share a common set of preferences has been pointed out explicitly by Buchanan and Tullock (1965). It is also implicit in Weingast (1995) since, for him, the essence of the constitutional settlement is a shared agreement among individuals on what is or is not a violation of rights. Thus, the constitution is, in effect, a formalization of the focal points of the citizens. Furthermore, we know from the detailed studies of voting at the U.S. Constitutional Convention

¹⁰For a recent survey of this work in behavioral economics, see Fehr and Hoff (2011).

that preferences (both those of the delegates and their constituents) mattered a great deal for reaching an agreement (McGuire and Ohsfeldt, 1986).¹¹ There is also a growing literature on the importance of consent for policies to be credibly enforced. Dal Bó et al. (2010), for example, show that policies (constitutions) that are agreed upon by a group through a democratic process are more likely to be implemented than policies that are not implemented through a shared consensus.¹²

The evidence for the importance of preferences in generating positive political and economic outcomes is extensive. There is also evidence that changing preferences played an important role in what is probably the most important event in modern economic history, the Great Divergence. What is less clear is what caused this change in preferences. In what follows below, we will present evidence from Old Regime France that suggests Tocqueville was right when he asserted that it was state capacity (the strong absolute monarchy) that ‘ironed out the diversities’ of the French people and made possible the political and economic changes of the Revolution and beyond.

3 HISTORICAL BACKGROUND AND DATA

3.1 *The Cinq Grosses Fermes and French Fiscal Capacity Before and After 1664*

Before Louis XIV took power in 1661, the French fiscal system was characterized by a wildly confusing amalgam of both direct and indirect taxes. The indirect taxes were mainly the octrois, péages, and various adjunct taxes to the aides, traites, and gabelles. The octrois were primarily taxes on collected at city gates and included the huge fiscal resource of the entrées de paris. The aides were mainly excises on wine and other spirits. These and the droits de marque on iron, oil, soap, paper, cloth, and leather, were often collected as border tariffs in the regions in which they were imposed. Also, movement of salt or tobacco was often taxed on border of the gabelles and tabac regions. The main direct taxes were the taille, the capitation (permanent from 1704), and the first and second vingtièmes (from 1749 and 1760 respectively) (see Heckscher (1955, 78-93) and Bosher (1964, 1-5)). These latter taxes, at least in theory, were supposed to be surtaxes of 5% each on the income of all Frenchmen. In practice, however, they were resisted and manipulated with varying levels of success by provincial and class interests at all levels.¹³

Onto this scene Louis XIV’s finance minister, Jean-Baptiste Colbert, arrived with ambitious ideas for reform. Colbert was mercantilist and wanted primarily to adjust border taxes so as to favor the export of French

¹¹In a footnote at the end of their paper, McGuire and Ohsfeldt note that Rossiter (1966, 294-5) claims that because of the varying preferences of delegates from different regions, ‘...if a dozen back country farmers had attended the Philadelphia convention, there would have been no nationalist charter.’

¹²There is a growing literature on the importance of democratically arrived upon policies and effective implementation of these policies. See Dal Bó et al. (2010) for further cites.

¹³A telling anecdote is that when the second vingtième was introduced there was an attempt at the same time to introduce a general land survey by the monarchy’s Finance minister Henri Léonard Jean Baptiste Bertin. This was was fiercely resisted by the parlements (legislators) across the country since they didn’t want the government to know how much they had (and could therefore tax).

finished goods and the import of raw materials from abroad. This implied high export taxes at the border on raw materials and low import taxes. Similarly, it implied low export taxes on finished goods, but high import taxes on these items. This plan for a customs union with unified export and import taxes on the border was described by Colbert in a document of 18 September, 1664. He succeeded in bringing about half the country into this unified customs union and placed the management of taxes in it under a group of tax farmers known as the Cinq Grosses Fermes.¹⁴ The end result were two separate tax regions: The Cinq Grosses Fermes in the center and The Provinces Reputed Foreign in the East, South, and West (See Boshier (1964, 5-9) and Heckscher (1955, 96-102)).¹⁵

The proposed unified customs union was not accepted by all the provinces, but was instead centered on the traditional lands of the absolute monarchy (these will be described in detail in section 3.2 below). As such, the CGF border was not necessarily random and this is a threat to our identification strategy. One piece of evidence suggesting that this is not an important threat to our results is that Hyslop finds no evidence for the nationalist sentiment she observes in the General Cahiers of 1789 in the Cahiers compiled for the Estates General of 1614 – about fifty years before the creation of the CGF border (Hyslop, 1934, 59-63). Nonetheless, we will deal with the potential endogeneity of the border in several ways. First we will focus on the local treatment effect and will show that as we compare regions closer to the CGF boundary, differences on observables disappear. This suggests, that regions close to each other but on opposite sides of the CGF boundary were very similar. Second, in section 6 we will show explicitly that linguistic differences disappear as one approaches the CGF boundary. Finally, we will focus in section 5 on some outcome measures other than national identity that we expect to be less affected by deep historical factors which might bias our results. In particular, we will look at the expressed desire in the Cahiers for (a) economic standardization, (b) legal standardization, and (c) the elimination of serfdom. While it is plausible that unobserved differences in language, culture, or history may affect the likelihood of a region to both join the CGF and their national identity, it is less plausible that these regions would join the CGF – a customs union that resulted in higher taxation for members – because they desired economic or legal standardization or the elimination of serfdom. Why wouldn't a region like the Alsace have just as great a desire for these things?

The creation of the CGF unleashed a process which plausibly had a profound impact on the desire of French citizens for reform as well as on their likelihood to identify themselves in relation to either the institutions of the monarchy or those of a more local character. In particular, Boshier (1964, 13-15) says of the Company

¹⁴For more background on tax farming see Johnson (2007), Balla and Johnson (2009), and the citations therein. The original Cinq Grosses Fermes were the (1) traite foraine, le rêve et le haut passage de Champagne et de Normandie, (2) la traite foraine de Normandie, (3) le traite domaniale de Champagne, Picardie, Normandie, et Bourgogne, (4) la douane de Lyon, and (5) les droits d'entrée sur l'épicerie, drogueries et grosses denrées. These were united under the ownership of René Brunet in 1589. The process was pushed through during the high period of the wars of religion by a cash strapped Henri iii (r. 1574-1589) (Roux, 1916, 70-73). The reasons for unification were, in all likelihood, as more due to a desire to increase the amount of lending the farms could support than to gain administrative efficiencies (Johnson and Koyama, 2013b).

¹⁵The Provinces Reputed Foreign were Angoumois, Artois, Auvergne, lower Navarre, Béarn, Brittany, Cambrésis, Foix, Dauphiné, Flanders, Forez, Franch-Compté, Gascony, Guyenne, Hainaut, Ile-de-Rhé, Ile d'Oléron, Languedoc, Limousin, Lyonnais (in parts, see below), Marche, Provence, Roussillon, Rouergue, Saintonge, and Vivarais.

of General Farms, ‘The methods of collection had been reformed [by Colbert] without reforming the system of duties.’ As this quote suggests, as a result of the creation of the CGF, two processes unfolded: (1) There was suppression of local, or seigneurial, control of fiscal instruments, especially within the area of the CGF (Heckscher, 1955, 103-106).¹⁶ (2) There was a dramatic increase in the amount of exactions, especially within the area of the CGF (we will provide extensive evidence for this in section 4 below).

To see how these two factors conspired to affect opinion about economic reform and national affiliation, consider that the creation of the internal tariff barriers raised the cost of commerce significantly – and that the more barriers one had to cross, the greater this distortion. Thus, for example, in 1702 Jean Anisson de Hauteroche, deputy of Commerce for Lyon, in writing up a reform project for internal customs emphasized that they raised the price of French goods by between 6 and 15 percent (Bosher, 1964, 32).

Furthermore, these distortions had different effects on citizens depending on whether they lived inside or outside the CGF. Inside the CGF the tax system was particularly baroque and oppressive. This meant that individuals received a high return for learning how to work within the system. Thus, members of the nobility often focused on confirming their noble heritage (as ratified through the institutions of the monarchy) so as to retain their exemptions and privileges (Conchon, 2002). Likewise, members of the third estate, who were often represented by bourgeois merchants, had to learn to work within the tax and legal system to survive. This also meant individuals inside the CGF were more focused on a discussion of reform of monarchical institutions. Outside the CGF, by contrast, trade and life in general was more oriented away from the center of the country and more likely to be with foreigners. Thus, the eastern region of Metz, for example, was opposed to tax reform at the end of the eighteenth century (‘the single tariff project’) because they were content with focusing on foreign trade Bosher (1964, 135).

3.2 *The Construction of the Cinq Grosses Fermes Boundary*

To determine which Hyslop cities are included within the boundary of the Cinq Grosses Fermes we use the following procedure. As a first cut, we use the entry on ‘Cinq Grosses Fermes’ in le Rond d’Alembert and Diderot (1784) as the source for the delineation of the CGF border. The relevant entry is reproduced in Appendix A, Figure 10. The entry lists all the provinces included within the border of the CGF as described in Colbert’s ordinance of 1664. For our baseline estimates, we also include Lyon since, as explained in Appendix A, Figure 11, Lyon was granted special status with ‘privileged communications’ with the CGF.¹⁷ After establishing the provinces contained in the CGF we then used the shapefiles of French provinces provided by *Euratlas* (2012) to reproduce a first-cut at the boundary.

The CGF boundary did not actually perfectly correspond to the borders of the provinces delineated in the

¹⁶Thus, for example, in 1724 the royal commission on péages started investigating who had legitimate claim and to confiscate those that didn’t. The commission claimed to have reduced the number of tolls from 5,688 to 2,054 during the reign of Louis XV. By 1789 there were supposed to be only 1,600 (Bosher, 1964, 2).

¹⁷We also repeat the analysis with Lyon excluded in in Section 4, Table 3.

1664 ordinance. Thus, in the second step, we use two sources to check on membership status of each Hyslop city individually. The first source we use is Saugrain (1720) which was a population census commissioned at the end of the seventeenth century.¹⁸ With the Saugrain (1720) census we confirm whether each Hyslop city is in a CGF province as defined by the 1664 edict. We next consult Expilly (1768) which is an eighteenth century geographic dictionary. It contains entries for most of the Hyslop cities and explains their legal and economic status. Where there is not an explicit entry for the city, we use the relevant entry on the province or the *généralité* (another fiscal unit) in which the city was located (as recorded in Saugrain (1720)), which in all cases is sufficient to explain whether the city is in or out of the CGF. After confirming the status of the Hyslop cities, we adjust the initial boundary of the CGF border accordingly using GIS software. The resulting border is illustrated in Figure 2 below along with the Hyslop cities.

3.3 Measuring Fiscal Capacity at the End of the Old Regime

In order to establish that fiscal capacity was greater in the region of the Cinq Grosses Fermes than in the rest of the country we rely on data on taxes per capita recorded by Jacques Necker, the finance minister of Louis XVI, in 1784. In his *De l'administration des finances de la France*, Necker recorded for almost every tax district the total taxes per capita collected by the monarchy.¹⁹ These include both direct and indirect taxes.²⁰ The tax district boundaries in 1700 are illustrated in Figure 1. Since our analysis of the Cahiers will be done at the city rather than the province level, we use GIS software to extract the values of taxes p.c. for each city in each province. To account for the resulting correlation in fiscal capacity across cities, we will cluster standard errors at the province level in all regressions. We call the resulting fiscal capacity measure *Log Taxes per capita*.

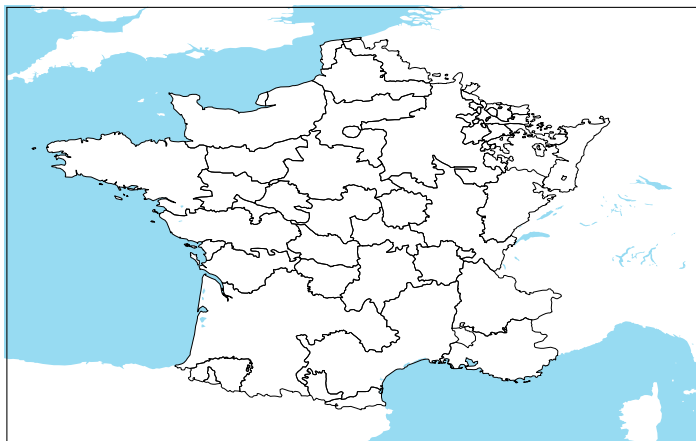


Figure 1: The borders of the provinces in 1700.

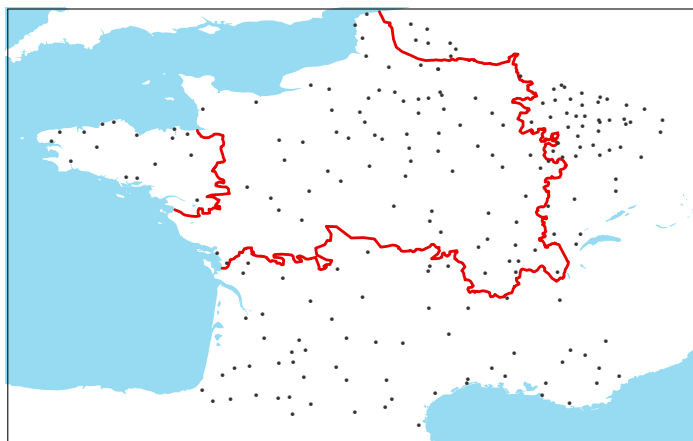


Figure 2: Cities of origin for the General Cahiers and the CGF boundary.

¹⁸The exact origins and methods used of the Saugrain census are uncertain. However, the institutional information it contains is much more precise than the actual population estimates (Hussenet, 1996).

¹⁹These data are reproduced in Nordman and Ozouf-Marignier (1989).

²⁰The tax districts, of which there were about 31 in 1784, were originally created in 15?? by Francis I (Wolfe, 1972).

3.4 *The Cahiers de Doléances and Hyslop's Coding*

The locations of the cities in which the General Cahiers were compiled and then sent to Paris are shown in Figure 2. As can be seen from the map, their distribution is not uniform. Particularly in the south-central and western regions of the country the distance between Cahiers observations is further than in the east.

The main outcome variable I use is called *National Identity* and comes from the coding of the General Cahiers by Hyslop (1934) for various degrees of what she terms ‘nationalism’.²¹ To Hyslop, nationalism was a ‘common consciousness’ that manifested itself on four different margins as shared ‘French’ notions of: (1) geography, (2) race, (3) traditions and, (4) formal institutions (a ‘desire for uniformity’) (Hyslop, 1934, ch 3).

‘Geography’ is interpreted by Hyslop, and coded accordingly, as a recognition of defined national boundaries for an entity called ‘France’. ‘Race’ consists of references in the Cahiers to supposed shared French ‘virtues’, or, more commonly, notions of citizenship. ‘Traditions’ include references to a shared French ‘Constitution’, a common religion, a common language, or the desirability of national plan for educational instruction. ‘Formal institutions’ (or what Hyslop refers to as a ‘desire for uniformity’) include references to legal and administrative uniformity or economic uniformity. This last category, is of particular relevance for the influence of the CGF on national sentiment and, as such, we will investigate the relationship between membership in the CGF and the desire for uniformity in greater detail in Section 5.

Hyslop counts the instances in which each of these four characteristics (and their sub-components) of national sentiment appear in each of the General Cahiers. She then constructs a single index out of her sub-indexes in which she records for each Estate whether ‘national patriotism is strongest (to the king or Nation)’, ‘loyalties were mixed’, ‘loyalties to localities, class, or both outweigh national patriotism’, or, ‘no sentiment towards nation or locality is shown’. I code these entries as 3, 2, 1, and ‘missing’ respectively. As such, the main outcome variable, *Identity* runs from 3 to 1. I then take the average of this number over the Cahiers for the nobility and the third estates as the main outcome variable to measure *National Identity*.²²

4 ANALYSIS

The identification strategy is to investigate the discontinuity in national sentiment close to the border of the CGF. This regression discontinuity approach should provide an unbiased estimate of the effect of state capacity on national identification assuming that regions close to the border are relatively similar and if the membership in the CGF results in a ‘treatment’ of living under state institutions with higher fiscal capacity.

²¹Hyslop also published an extensive guide to her analyses as Hyslop (1936).

²²I exclude the cahiers of the clergy and the relatively small number of ‘unified’ cahiers in which the grievances of all three estates are lumped together. The rationale for excluding the clergy is that their identities were more likely affected by religious policy than tax policy. [need to add a section in the appendix showing this is true. Also can show results are slightly weaker, but still go through if the clergy are included in the measure.]

As a first cut at seeing if there is some relationship between national sentiment and membership in the CGF, Figure 3 illustrates the spatial distribution of the value of the variable *National Identity*. In the Figure, a heat map of the value of *National Identity* is created based on the inverse weight of it's value for each of the surrounding 12 cities for each grid on the map. Visual inspection of the map provides support for the hypothesis that regions within the CGF were more likely to identify themselves with France or the king, in 1789. With the notable exception of the Gironde (Bordeaux) and La Rochelle regions in the mid-west and, to a lesser extent, the area around Dijon in the mid-east, the discontinuity at the border in national sentiment appears large and robust.

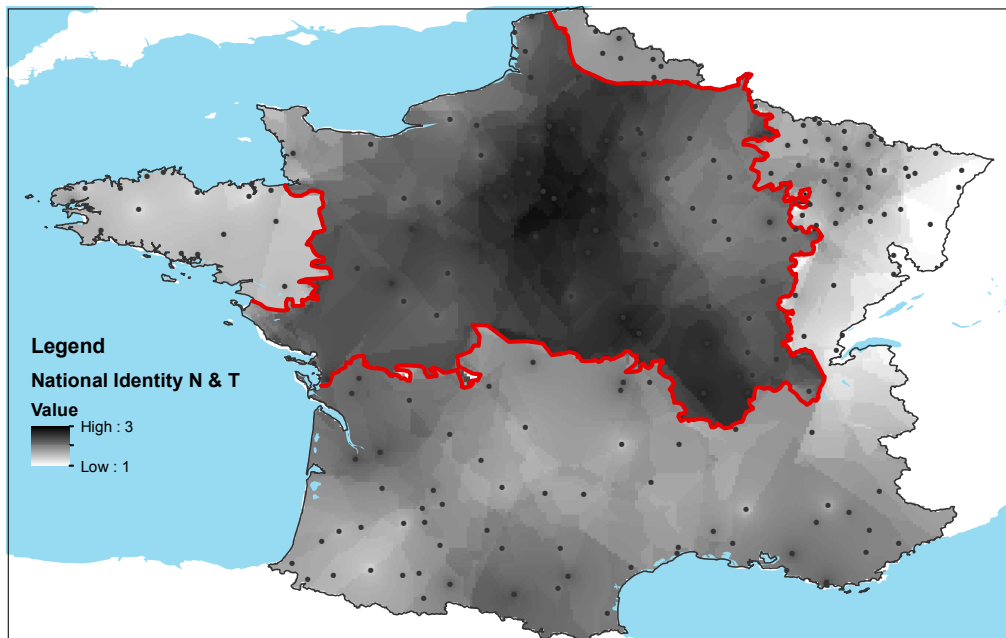


Figure 3: *National Identity* in the 1789 General Cahiers. Darker color represents greater identification in the Cahiers by the Nobility and Third Estate with either the ‘King’ or ‘France’ according to Hyslop (1934). Each grid point in map assigned a value based on the inverse-weighted distance of surrounding 12 cities that sent in Cahiers (exponent of distance used is the default of 2). The Cinq Grosses Fermes region is delineated in red and treated as a barrier.

In order for the identification strategy to be convincing, the characteristics (other than national affiliation) of nearby regions on either side of the CGF border should be similar. Since we can’t test whether potentially important unobservable characteristics differ, in Table 1 we instead investigate whether our identifying assumption holds for the observables which we will also be including as control variables. In columns (1), (2), and (3) we show the average value of each control variable outside the CGF, inside the CGF, and the difference between the two. In brackets under the difference we report the p-value of a two-sided t-test of significance. In columns (4) - (6) we report the statistics on the variables for only the cities within 150 kilometers of the CGF boundary. In columns (7)-(9) we report the statistics for only the cities within 75 kilometers of the boundary. If our identification strategy is appropriate, differences in variables for cities inside and outside the CGF should decrease as we restrict our sample to the area closer to the boundary.

The control variables we investigate are the following (see Appendix B for more details on the construction of the control variables): *Urban* measures urban density around the city and is constructed using data on all cities in France with populations greater than 5,000 in 1800 provided in Bosker et al. (2013). *Wheat Suitability* data come from the FAO and are described in Fischer et al. (2002). These data are constructed by combining characteristics of wheat (optimal growing temperature, soil type, etc.) with highly disaggregated climatic and geographic data covering variables such as precipitation, cloud cover, ground-frost frequency, soil types and slope characteristics. The data have a spatial resolution of 0.5 degree x 0.5 degree (or about 60 x 60 kilometers at 45 degrees latitude, typical for France). We extract the wheat suitability for each of our cities using geospatial software. *Ruggedness* is from Sappington et al. (2007) and measures the variation in the altitude of the terrain surrounding each city. *DRivers* and *DSeas* are simply measures of the distance of each city from major rivers and seas contained in the *Euratlas* (2012) shapefiles. *Communes* is from the Bosker et al. (2013) dataset and measure the average number of cities in the province the Hyslop city is located in that had some form of self-governance. *Bishoprics* and *Archbishoprics* are similarly constructed measures made using the Bosker et al. (2013) data and indicate how close the Hyslop city is to major centers of the Catholic religion. *Universities* is also constructed using the Bosker et al. (2013) data and measures how many cities, on average, had a major university in the province of the Hyslop city. Finally, the two main dependent variables we focus on, *Log Taxes per capita* and *National Identity*, are constructed as described above in sections 3.3 and 3.4.

Column (3) of Table 1 indicates that, using the full sample, four variables - *Urban*, *DSeas*, *Bishoprics*, and *Communes* - are all shown to be significantly different outside the CGF than inside. Furthermore, *Universities* is significant at the 0.104 level and *DRivers* is also very close. When we restrict the sample to cities within 150 kilometers of the CGF boundary, only *Urban* and *Communes* retain their significance. Most of the other differences in the variables become much less significant. When the sample is restricted to cities only 75 kilometers from the boundary, then *Communes* continues to be significant and *DSeas* becomes barely significant at the 10 % level. All the other variables are indistinguishable from zero. This suggests that, at the border of the CGF, at least on observables, regions were fairly similar. Given our relatively small sample of cities (only 208 in the full sample), it is not clear whether 150 km or 75 km is the more appropriate distance to investigate for the local treatment effect. For example, at 75 km there are only 29 cities in the CGF group. Because of this, we will report estimates of the local treatment effect of the CGF boundary for all three samples (full, 150 km, and 75 km) for most regressions. Only when we focus on individual border segments will we restrict ourselves to the full and 150 km restrictions due to sample size considerations.

In the last two rows of Table 1 we show that the two main outcome variables - *Log Taxes per capita* and *National Identity* - are significantly different between cities inside and outside the CGF regardless of how close we approach the border. Furthermore, these are large differences. In the full sample, a standard deviation in *Log Taxes per capita* is 0.39 whereas the CGF cities pay, on average 0.57 more in taxes per person. Similarly, a standard deviation in *National Identity* is about 0.61 whereas the value of the variable is about 0.51 higher

in cities inside the CGF boundary. Furthermore, these differences in the outcome variables are stable as we restrict our attention to cities closer to the border. This suggests that the local average treatment effects we estimate below are also relevant more globally.

	Full Sample			<150 km of CGF Boundary			<75km of CGF Boundary		
	Inside CGF (1)	Outside CGF (2)	Difference (3)	Inside CGF (4)	Outside CGF (5)	Difference (6)	Inside CGF (7)	Outside CGF (8)	Difference (9)
Urban	35.24	21.34	-13.90*** [0.000]	25.86	21.25	-4.62** [0.0391]	21.88	21.09	-0.79 [0.626]
Wheat Suitability	3.56	3.65	0.09 [0.609]	3.65	3.52	-0.13 [0.553]	3.62	3.57	-0.06 [0.842]
Ruggedness	0.72	0.69	-0.03 [0.234]	0.73	0.69	-0.04 [0.213]	0.72	0.67	-0.06 [0.234]
DRivers	57555.46	73887.09	16331.63 [0.131]	63189.89	60201.12	-2988.776 [0.804]	67979.8	59884.77	-8095.029 [0.628]
DSeas	198996.9	160707.4	-38289.57** [0.022]	184022.6	202359.4	18336.79 [0.391]	144701.3	194888.5	50187.22* [0.076]
Communes	0.63	0.48	-0.15*** [0.006]	0.65	0.36	-0.29*** [0.000]	0.69	0.40	-0.29*** [0.002]
Bishoprics	0.48	0.31	-0.18*** [0.000]	0.39	0.25	-0.15*** [0.006]	0.33	0.24	-0.09 [0.158]
Archbishoprics	0.09	0.11	0.02 [0.407]	0.10	0.08	-0.02 [0.566]	0.08	0.10	0.02 [0.725]
Universities	0.08	0.12	0.04 [0.104]	0.06	0.07	0.01 [0.783]	0.06	0.07	0.02 [0.674]
Log Taxes per capita	3.33 (n=73)	2.75 (n=130)	-0.574*** [0.000]	3.18 (n=51)	2.73 (n=71)	-0.46*** [0.000]	3.16 (n=29)	2.75 (n=46)	-0.411*** [0.000]
National Identity (2nd & 3rd Estates)	2.44 (n=69)	1.93 (n=110)	-0.51*** [0.000]	2.39 (n=48)	1.87 (n=60)	-0.52*** [0.000]	2.41 (n=27)	1.91 (n=39)	-0.50*** [0.000]
Observations	73	135	208	51	71	122	29	46	75

Table 1: The Balance of Observables Inside and Outside the Cinq Grosses Fermes. Columns (1), (2), and (3) give the raw averages and differences, along with p-values (in brackets) of a ttest of no difference in the variables. *, **, and *** represent 1%, 5%, and 10% significance respectively. Columns (4), (5), and (6) show the same statistics using only cities within 150 kilometers of the CGF boundary. Columns (7), (8), and (9) do the same analysis for cities within 75 kilometers of the CGF boundary.

While Table 1 is reassuring for our identification strategy and suggests support for our main hypothesis, we would like to estimate the local treatment effect of the border while controlling for potentially confounding variables we can observe. To do this, we use OLS to estimate the following regression equation:

$$y_i = \alpha_i + \beta \text{CGF}_i + f(\text{geographic location}_i) + \theta \text{Urban}_i + \mathbf{G}'_i \cdot \mathbf{\Lambda} + \varepsilon_i \quad (1)$$

Where y_i is either the value of *Log Taxes per capita* from Necker or the Hyslop measure of *National Identity* for General Cahier city i . *CGF* is a dummy variable equal to one if the city is located in the Cinq Grosses Fermes. $f(\text{geographic location}_i)$ is a set of spatial trends on both sides of the CGF boundary. We will investigate several different functional forms for the spatial trends, however, in most regressions we will report estimates from specifications that include either linear or cubic trends. Urban_i is our measure of urban density. \mathbf{G}'_i is a vector of geographic (*Wheat Suitability*, *Ruggedness*, *DRivers*, and *DSeas*), religious (*Bishoprics* and *Archbishoprics*), educational (*Universities*), and political (*Communes*) controls. ε_i is an iid error term.

4.1 Baseline Estimates

Table 2 reports the results from estimating Equation 2 for our two outcome variables using the full sample as well as using only cities 150 km and 75 km from the CGF boundary. We report the value of β , which is the coefficient of interest. We are testing two hypotheses in Table 2. First, were cities within the CGF taxed at a higher rate than those outside (i.e. was fiscal capacity higher in the CGF)? Second, did cities inside the CGF have a greater affiliation with national as opposed to local identity?

Regressions (1)-(3) provide strong support for the first hypothesis. Cities located within the CGF were taxed significantly higher than those outside. According to the estimate using the full sample and linear trends (Panel A), a city in the CGF paid approximately 27% more in taxes per capita than a city outside. When we restrict our attention to cities within 75 km of the boundary, this estimate increases to 39%. The estimates are somewhat less robust to using a quartic trend, though the sizes of the coefficients are still quite large (24% at 75 km) even when we narrow the sample.

Our second hypothesis, that greater state capacity causes greater national affiliation, implies that the β coefficient should be positive and significant. This is precisely what is found in the estimates in columns (4)-(6). Assuming linear trends (Panel A) and using the full sample, a city inside the CGF boundary has about a one standard deviation higher affiliation with *National Identity* than a city just outside the border. Furthermore, this effect gets larger as we restrict the sample to cities closer to the border. Under the cubic spatial trend specification in Panel B, these results are supported for the full sample and restricting the sample to cities within 150 km of the boundary. It is only under the most restrictive specification, using just the 66 cities within 75 km of the border, that the estimate becomes imprecise. Though even then, it's economic significance is still large ($\beta = 0.57$).

	Dependent Variable					
	Log Taxes Per Capita			National Identity (2nd & 3rd Estates)		
	Full Sample	<150 km	<75 km	Full Sample	<150 km	<75 km
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Linear Polynomial in Distance to CGF Border						
CGF Dummy	0.266** (0.116)	0.324** (0.148)	0.388** (0.161)	0.669*** (0.154)	0.679*** (0.236)	0.707** (0.253)
R-sq	0.671	0.557	0.473	0.222	0.237	0.204
Panel B: Cubic Polynomial in Distance to CGF Border						
CGF Dummy	0.448** (0.169)	0.211 (0.152)	0.238 (0.251)	0.624** (0.290)	1.319** (0.560)	0.566 (0.878)
R-sq	0.677	0.582	0.457	0.237	0.227	0.250
Spatial Trends	Y	Y	Y	Y	Y	Y
Pop Density Control	Y	Y	Y	Y	Y	Y
Geography Controls	Y	Y	Y	Y	Y	Y
Rel., Educ., & Political Controls	Y	Y	Y	Y	Y	Y
Observations	203	122	75	179	108	66

Table 2: The Effect of the Cinq Grosses Fermes Border on *National Identity*: Baseline Estimates. Estimates set the entire land border of the CGF as 0 distance. Dependent variable is either *Log Taxes per capita* or *National Identity*. Robust standard errors clustered on province reported in parentheses. *, **, and *** represent 1%, 5%, and 10% significance respectively.

Overall, the results in Table 2 support our claim from section 3.1 that fiscal capacity was much greater within the region of the CGF. They also support our primary hypothesis that citizens living in regions with higher fiscal capacity were more likely to identify with national as opposed to local institutions. We illustrate these results visually in Figures 4 and 5. In both figures the distance to the CGF border is on the x-axis (negative is inside the CGF) and the value of national identification is on the y-axis. The values of *Identity* averaged over province are graphed along with the linear and cubic fits of these against distance from the border after partialling out the control variables.²³ The vertical distance between the fitted lines at ‘0’ distance from the CGF border is the estimated treatment effect reported in Table 2, specification 4.

The Figures raise a couple potential concerns that we will address in the sections below. First, as we mentioned above in reference to Figure 3, the Gironde and La Rochelle regions in the west are outliers. The cities in the province of La Rochelle (Rocheftort, St. Jean, La Rochelle, and Saintes) are actually split by the CGF boundary. Also, the relatively prosperous city of Bordeaux and its surrounding regions exhibits much higher national identification than other cities in the South. In Section 4 below we will address this potential source

²³The average distance of the individual cities from the border within the province is used as the ‘distance’ of the province from the border.

of bias in our estimates by investigating the treatment effect of CGF membership on cities near the individual border segments of the West, South, and East separately.

Another potential source of concern is that Lyon appears to be an influential observation. This could be inappropriate given our decision to include it as a CGF city due to its special status. Because of this concern, we will show in section 3 below that our results are robust to the exclusion of Lyon from the sample.

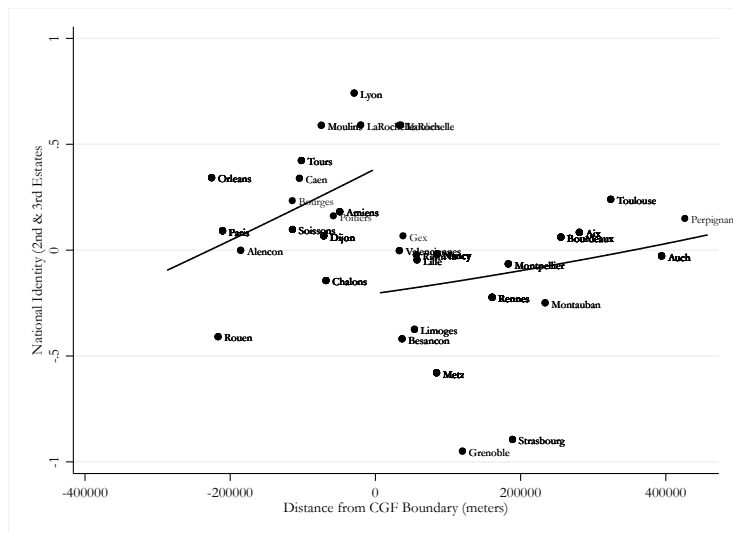


Figure 4: Average Provincial *National Identity* Versus Distance from CGF Border for All Estates: Linear Spatial Trends. See text for details.

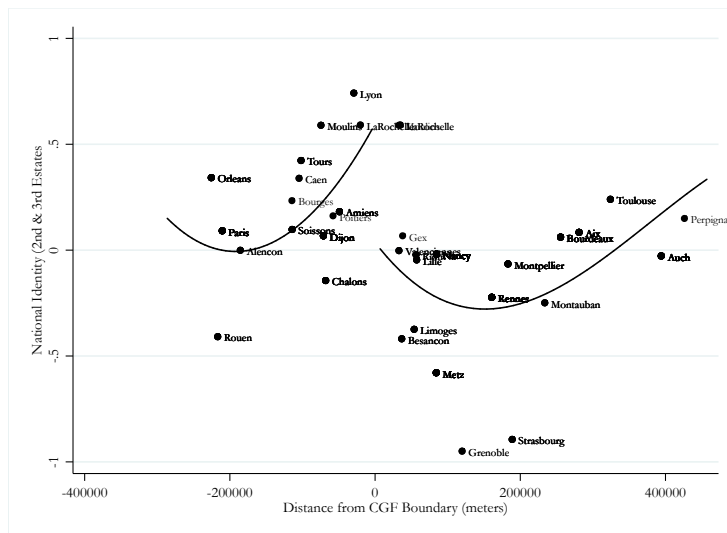


Figure 5: Average Provincial *National Identity* Versus Distance from CGF Border for All Estates: Cubic Spatial Trends. See text for details.

4.2 Robustness and Specification Tests

In Table 3 below we demonstrate the robustness of our main results. In Panels A and B we test the specification of the spatial trends using a quadratic polynomial (Panel A) and a quartic polynomial (Panel B). The results for both *Log Taxes per capita* and *National Identity* using a quadratic polynomial are similar to using the linear trends. All the estimates are both economically and statistically significant and are robust to restricting the sample down to 75 kilometers from the CGF boundary. When we use quartic polynomials in distance to the border in Panel B, the results look very similar to our baseline estimates using a cubic trend. Both fiscal capacity and *National Identity* are much higher for cities inside the CGF region than outside up to the restriction of using only observations within 150 kilometers of the border. However, when we restrict the sample to 75 kilometers from the border, then the estimates on both *Log Taxes per capita* and *National Identity* become indistinguishable from zero.

	Dependent Variable					
	Log Taxes Per Capita			National Identity (2nd & 3rd Estates)		
	Full Sample	<150 km	<75 km	Full Sample	<150 km	<75 km
(1)	(2)	(3)	(4)	(5)	(6)	
Panel A: Quadratic Polynomial in Distance to CGF Border						
CGF Dummy	0.326** (0.158)	0.522*** (0.183)	0.405* (0.194)	0.707*** (0.202)	0.879* (0.430)	1.633*** (0.514)
R-sq	0.670	0.562	0.470	0.244	0.225	0.239
Panel B: Quartic Polynomial in Distance to CGF Border						
CGF Dummy	0.329* (0.183)	0.331* (0.189)	-0.359 (0.458)	0.852* (0.475)	1.190* (0.646)	1.708 (1.242)
R-sq	0.675	0.576	0.467	0.231	0.217	0.298
Panel C: Linear Polynomial in Distance to CGF Border, Drop Lyon						
CGF Dummy	0.264** (0.118)	0.312* (0.153)	0.346** (0.158)	0.657*** (0.156)	0.641** (0.232)	0.687** (0.282)
R-sq	0.669	0.550	0.465	0.213	0.222	0.170
Panel D: Cubic Polynomial in Distance to CGF Border, Drop Lyon						
CGF Dummy	0.463** (0.191)	0.122 (0.133)	0.0603 (0.213)	0.619* (0.320)	1.226* (0.625)	0.620 (0.907)
R-sq	0.675	0.578	0.457	0.228	0.210	0.216
Panel E: OLS						
CGF Dummy	0.426*** (0.0820)	0.418*** (0.0925)	0.392*** (0.114)	0.391*** (0.102)	0.556*** (0.0947)	0.588*** (0.149)
R-sq	0.651	0.558	0.489	0.209	0.200	0.191
Spatial Trends	Y	Y	Y	Y	Y	Y
Pop Density Control	Y	Y	Y	Y	Y	Y
Geography Controls	Y	Y	Y	Y	Y	Y
Rel., Educ., & Political Controls	Y	Y	Y	Y	Y	Y
Observations	203	122	75	179	108	66

Table 3: Robustness and Specification Tests. Robust standard errors clustered on province reported in parentheses. *, **, and *** represent 1%, 5%, and 10% significance respectively.

In Panels C and D we investigate the robustness of our main results to the exclusion of Lyon - the second most important city in France in the eighteenth century. The estimates using both outcome variables under both the linear and the cubic trends are similar in size and significance to the baseline results in Table 2.

Lastly, in Panel E we show simple OLS estimates without any spatial trends so as to give an idea of the average treatment effect of CGF membership. As expected, these all exhibit the correct sign and are highly significant. The sizes of the coefficients in specifications (1) and (4), furthermore, are comparable to those

in Table 2. This suggests our estimates of the local treatment effect of the CGF boundary on fiscal capacity and social identity can be generalized to regions receiving the treatment, but further from the boundary.

4.3 Analysis of Separate Boundary Segments

In Table 4 we investigate how robust our estimates are by focusing on separate segments of the CGF boundary. Natural choices for the segments are in the West on the Brittany border, in the East, and in the South. These choices are illustrated in Figures 6, 7, and 8.



Figure 6: Western CGF Boundary.



Figure 7: Eastern CGF Boundary.



Figure 8: Southern CGF Boundary.

In Table 4 we report the results of running our baseline specification on samples of cities that are restricted to be near either the Western, Eastern, Southern CGF boundary segments. Because the sample sizes become small very quickly when we focus on individual borders, we only report results using the full sample of cities.²⁴

Using linear trends, the impact of the CGF boundary on the Western border is economically significant and very large. The β coefficient on fiscal capacity in column (1) suggests that taxes per capita are between one-half and two-thirds lower just over the Western CGF boundary. The coefficient of 0.85 estimated in column (2) in Panel A suggests a local treatment effect of CGF membership of 1.4 times a standard deviation in the *National Identity* variable ($\sigma = 0.61$). When we use the cubic trends in Panel B, the results on the Western border remain robust. The estimate in column (2) in Panel B suggests a treatment effect of being inside the CGF boundary on the Western border of three times a standard deviation in *National Identity*.

The results using the Eastern border are also highly robust. Taxes are about 50% lower just over the Eastern boundary according to the estimates in column (3). *National Identity* is also much higher just inside the CGF. The estimates with linear trends suggest a being in the CGF raises national affiliation by a little over one-half a standard deviation. Using the cubic trends, this estimate triples and retains its statistical significance.

The Southern border yields the least robust results. Under both linear and cubic trends, there is no effect of being inside the CGF on fiscal capacity. Specification (6) yields mixed results on *National Identity*. The

²⁴When using the full sample, we exclude cities outside the CGF that are not near the relevant border. So for example, when investigating the Western border we exclude cities in the South and East that are not in the CGF.

estimate in Panel A suggests an economically significant effect, however, under the cubic specification in Panel B, the coefficient is basically reduced to zero. This suggests a non-robust effect in the South - a fact that is consistent with the outlier observations in La Rochelle and around Bordeaux we observed in Tables 4 and 5.

Dependent Variable	West CGF Border		East CGF Border		South CGF Border	
	Log Tax pc (1)	Identity (2)	Log Tax pc (3)	Identity (4)	Log Tax pc (5)	Identity (6)
Panel A: Linear Polynomial in Distance to CGF Border						
CGF Dummy	0.660*** (0.120)	0.845*** (0.252)	0.480*** (0.146)	0.376* (0.207)	0.0557 (0.101)	0.446** (0.214)
R-sq	0.671	0.264	0.675	0.346	0.660	0.148
Panel B: Cubic Polynomial in Distance to CGF Border						
CGF Dummy	0.484* (0.229)	1.823*** (0.426)	0.441** (0.199)	0.905* (0.514)	0.00208 (0.160)	0.114 (0.371)
R-sq	0.673	0.281	0.667	0.344	0.661	0.168
Spatial Trends	Y	Y	Y	Y	Y	Y
Pop Density Control	Y	Y	Y	Y	Y	Y
Geography Controls	Y	Y	Y	Y	Y	Y
Rel., Educ., & Political Controls	Y	Y	Y	Y	Y	Y
Observations	89	80	130	112	130	125

Table 4: The Effect of the Cinq Grosses Fermes Border on *Log Taxes per capita* and *National Identity*: Estimates Using Separate Border Segments. Robust standard errors clustered on province reported in parentheses. *, **, and *** represent 1%, 5%, and 10% significance respectively.

Overall, the results in Table 4 suggest that support for our hypothesis that higher fiscal capacity causes greater affiliation with national identity is coming primarily from cities close to the Eastern CGF boundary and the boundary between Brittany and the rest of France in the West.

5 ALTERNATIVE MEASURES OF PREFERENCES

In section 3.1 we described how the fiscal agents who operated in the CGF area were able to achieve two things: (1) They suppressed aspects of the feudal regime (like corvée labor arrangements, for example). (2) They were also able increase taxes collected using the existing set of tax instruments managed by the absolute monarchy. The first of these facts was likely to cause people living in the CGF to disassociate themselves more with the feudal regime. The second fact was likely to lead individuals within the CGF to be more focused on reforming and standardizing the institutions of the absolute monarchy whereas those outside the CGF would have been more focused on trade with outsiders. In this section we test these propositions by looking at two dependent variables from Hyslop related to reform - whether the Cahiers mention (i) standardizing economic

institutions or (ii) standardizing legal institutions - along with one variable measuring association with the feudal regime - whether the Cahiers mention a (iii) desire to abolish serfdom.

In Columns (1), (2), and (3) of Table 5 we show that membership in the CGF was associated with a desire for making economic institutions more uniform. These results are particularly strong using linear trends. Under the quartic specifications they begin to fall apart as the sample is restricted to cities near the boundary. Overall, though, these results are strong support for the observations by contemporaries like Tocqueville and subsequent researchers that the desire to improve national institutions (those of the Monarchy) played a major role in unifying the preferences of Frenchmen. This suggests that our results on *National Identity* reported in Table 2 stem, not from a happy desire to be ruled by the nation state, but at least in part, by a desire to improve it.

Columns (4) - (6) use the desire for legal uniformity as the outcome variable. The results are less robust than for economic uniformity. Nonetheless, the signs are all positive, indicating membership in the CGF did incline individuals towards legal reform. Only specification (5) under the linear trend is statistically significant however.

In columns (7)-(9) we investigate whether membership in the CGF region inclined individuals towards the abolishment of serfdom. There is significant support for this, particularly under the linear trends reported in Panel A. The results using the cubic trends are, consistent with the other results reported, less robust but still retain the correct sign and similar amounts of economic significance.

The results in Table 5 also provide additional support for the causal role of the increase in fiscal capacity in determining *National Identity*. This is because, as we discussed in Section 3.1, it may have been plausible that unobserved differences in language, culture, or history affected the likelihood of a region to both join the CGF and their general national identity, however, it is less plausible that these regions would join the CGF if a customs union that resulted in higher taxation if because they desired economic or legal standardization or the elimination of serfdom.

	Dependent Variable								
	Economic Uniformity			Legal Uniformity			Abolish Serfdom		
	Full Sample	<150 km	<75 km	Full Sample	<150 km	<75 km	Full Sample	<150 km	<75 km
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Panel A: Linear Polynomial in Distance to CGF Border									
CGF Dummy	0.338*** (0.102)	0.468*** (0.112)	0.470*** (0.156)	0.0749 (0.0516)	0.128** (0.0489)	0.193 (0.135)	0.0812 (0.0577)	0.181** (0.0739)	0.300** (0.119)
R-sq	0.146	0.177	0.235	0.0375	0.0500	0.113	0.0428	0.0572	0.139
Panel B: Cubic Polynomial in Distance to CGF Border									
CGF Dummy	0.409*** (0.148)	0.302 (0.263)	-0.0871 (0.418)	0.0965 (0.135)	0.422 (0.321)	0.318 (0.522)	0.362** (0.144)	0.500 (0.315)	0.325 (0.426)
R-sq	0.156	0.155	0.255	0.0302	0.0403	0.0815	0.0764	0.0853	0.114
Spatial Trends	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pop Density Control	Y	Y	Y	Y	Y	Y	Y	Y	Y
Geography Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Rel., Educ., & Political Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observations	208	122	75	208	122	75	208	122	75

Table 5: The effect of CGF membership on preferences for standardization and reform. Robust standard errors clustered on province reported in parentheses. *, **, and *** represent 1%, 5%, and 10% significance respectively.

An important part of the argument of this paper is that higher state capacity makes it more likely that individuals cooperate because they come to share a common sense of identity. In Table 6 we test this by looking at whether being located within the CGF made the second and third estates more likely to hold the same value for *National Identity*. Specifically, we construct a variable called *SD Identity* which measures the standard deviation of the identities of the two estates in each city. We then run our baseline specifications in Table 6 using this as the dependent variable.

	Dependent Variable = Standard Deviation of 2nd and 3rd Estate Identity					
	Linear Polynomial in Distance to CGF Border			Cubic Polynomial in Distance to CGF Border		
	Full Sample	<150 km	<75 km	Full Sample	<150 km	<75 km
	(1)	(2)	(3)	(4)	(5)	(6)
CGF Dummy	-0.315*	-0.514*	-0.774**	-0.560*	-0.868*	-0.908
	(0.164)	(0.257)	(0.272)	(0.306)	(0.448)	(0.864)
R-sq	0.107	0.121	0.260	0.131	0.147	0.201
Spatial Trends	Y	Y	Y	Y	Y	Y
Pop Density Control	Y	Y	Y	Y	Y	Y
Geography Controls	Y	Y	Y	Y	Y	Y
Rel., Educ., & Political Controls	Y	Y	Y	Y	Y	Y
Observations	108	66	43	108	66	43

Table 6: The effect of CGF membership on variance of *National Identity* between second and third estates. Robust standard errors clustered on province reported in parentheses. *, **, and *** represent 1%, 5%, and 10% significance respectively.

The coefficients estimates in Table 6 strongly support the hypothesis that the second and third estates were more likely to hold common social identities inside the CGF than outside. Given that a standard deviation in *SD Identity* is 0.37, the linear specifications reported in columns (1) - (3) suggest being inside the CGF increases agreement between the two estates by between one and two standard deviations. Under the cubic specification, these estimates increase to about a two to two and half standard deviation decrease the outcome variable. Overall, these results suggests that not only did national affiliation increase inside the CGF during the eighteenth century, but that this process also generated a *shared* sense of identity between the nobility and urban merchants inside the CGF region.

6 THE CGF BOUNDARY AND LINGUISTIC DIFFERENCES

Another concern raised in Section 3.1 was that our main results may be spurious because of unobserved differences in cultural or linguistic composition between the CGF and non-CGF regions. It would be unsurprising if individuals in the CGF regions affiliated themselves more with a national as opposed to a local identity if

the very reason they joined in the first place was because they all spoke a language which they associated as ‘French’.

Data on language use within early-modern France is extremely scarce. Given the non-scientific nature of the surveys conducted during the eighteenth century (see, e.g. de Certeau et al. (2002)), we use a relatively rigorous report completed in 1863 by the French ministry of education (Ministère de l’instruction publique, 1863). It gives the percentage of adults who did not speak French as their first language in every Department.²⁵ We call this variable *1863 Language Survey* and Figure 16 in the Appendix shows the distribution of responses.

Table 7 shows the results of running specifications based on Equation 1 on this measure of French language use. The main finding from the table is that in 1863 there was no relationship between the use of the patois and CGF membership. Overall, the results in Table 7 provide additional support for the randomness of the CGF border and, by extension, the causal interpretation we attribute to fiscal capacity on national identity.

	Dependent Variable = 1863 Language Survey					
	Linear Polynomial in Distance to CGF Border			Cubic Polynomial in Distance to CGF Border		
	Full Sample	<150 km	<75 km	Full Sample	<150 km	<75 km
	(1)	(2)	(3)	(4)	(5)	(6)
CGF Dummy	-0.0651 (0.0504)	-0.0239 (0.0602)	-0.0917 (0.0743)	-0.0448 (0.0897)	-0.0280 (0.121)	-0.156 (0.220)
R-sq	0.594	0.299	0.299	0.605	0.287	0.281
Spatial Trends	Y	Y	Y	Y	Y	Y
Pop Density Control	Y	Y	Y	Y	Y	Y
Geography Controls	Y	Y	Y	Y	Y	Y
Rel., Educ., & Political Controls	Y	Y	Y	Y	Y	Y
Observations	208	122	75	208	122	75

Table 7: The difference in language use inside and outside the CGF in 1863. Robust standard errors clustered on province reported in parentheses. *, **, and *** represent 1%, 5%, and 10% significance respectively.

7 THE PERSISTENT EFFECT OF IDENTITY

So far, we have focused on demonstrating two facts: (1) That membership in the CGF was causally related to higher fiscal capacity and (2) That membership in the CGF was causally associated with greater affiliation with national, as opposed to local, identity. An important related question is, “Did greater national affiliation have any effects on the development of national economic and political institutions?” Or, as the title of the

²⁵The Departments were regional boundaries created during the Revolution. They are about equal in geographic size and have numbered about 80 up to the present day.

paper suggests, did the creation of a national identity in certain regions affect nation building? And if it did, was this effect stronger in the CGF region where individuals had a longer history of being subject to the strong fiscal institutions of the state?

In this section we test these two propositions by looking at the correlation between regional *National Identity* from the Cahiers des Doléances in 1789 and various measures of the strength of national institutions in the nineteenth century. In order to get at the specific question of whether an historical legacy of strong state institutions affected the importance of national affiliation to this process, in some regressions we will instrument *National Identity* with a dummy variable equal to one if the city was a member of the CGF and a zero otherwise. We acknowledge that this instrument does not, in all likelihood, satisfy the exclusion criterion that it only affect the outcomes through its influence on *National Identity*. Nonetheless, we are interested in whether or not the correlation between *National Identity* and the strength of national institutions in the nineteenth century is mediated by the historical legacy of membership in the CGF. In particular, we hypothesize that since those cities that were in the CGF were also subject to a particularly strong “treatment” from the fiscal and legal institutions of the absolute monarchy, then it should also be these regions in which identity mattered most in subsequent decades.

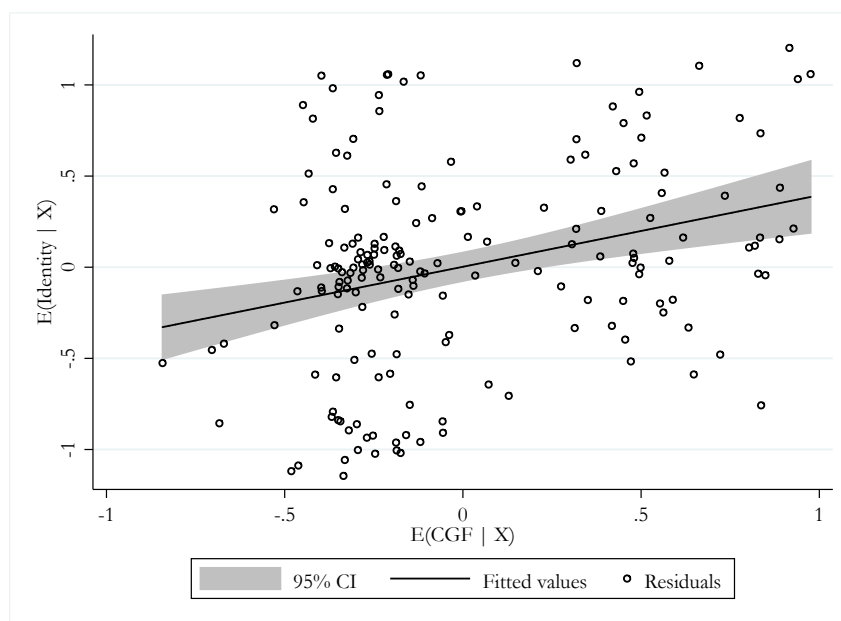


Figure 9: Partial regression plot of CGF against *National Identity*. Underlying regression is the first stage in IV specifications from Tables 8 and 9.

Unsurprisingly, given the analysis in the sections above, Figure 9 suggests our hypothesis that CGF membership generated strong affiliation with *National Identity* is valid. It shows the partial regression plot of CGF against *National Identity* from the first stage of the IV regressions we will run below. Conditional on inclusion of the geographic and historical controls described in Table 1, there is a strong positive correlation between CGF membership and *National Identity* (the F-Statistic for this regression is 13.87).

In what follows below, we investigate the effect of *National Identity* on several measures of strength of national political and economic institutions. These include: local public goods provisionment, support for the Revolution, support for the Republican party during the Third Republic, and Fertility in 1821.

7.1 Local Public Goods Provisionment

We begin by investigating the effect of *National Identity* on local public goods provisionment. It is well known in the economics and political science literatures that in developing economies, fractionalization is negatively related to a localities overcoming the costs of collectively providing lpg's such as education, welfare, and other infrastructure (**insert citations here. . .**).

We focus on three measure of spending on public goods. The first two concern spending by Communes, which are the equivalent of county, or district, level spending.²⁶ These were the lowest level administrative divisions in nineteenth century France for which data a generally available. The first variable is *Log Total Commune Spending* and measures the per capita Departmental average of spending on public goods by all of its communes between 1878 and 1902. These data were collected from the section on the *Situation Financière des Départements* contained in the *Annuaire Statistiques de la France*. The second measure looks specifically at spending on education by the communes averaged up to the Department level. It spans the years 1855 to 1902 and is based on the series collected by Diebolt and Trabelsi (2009) and extended by Franck and Johnson (2014).²⁷ We call this variable *Log Educ Commune Spend pc*. We also construct a measure of spending on education by the national government in each Department. We call this variable *Log Educ State Spend pc*. Lastly, we create a measure of human capital based on conscript literacy rates in 1874 drawn, again, from the *Annuaire Statistique*.²⁸

We extract the value of each of the dependent variables above for each of our Cahier cities. Then we run OLS regressions of *National Identity* on each of the outcomes. We include the full vector of controls from equation 1 in each regression. We also run IV regressions for each outcome, using the CGF membership dummy as the instrument. We predict that local public goods provisionment, measured as *Log Total Commune Spending* or *Log Educ Commune Spend pc* should positively correlated with *National Identity*. This is because those who affiliate more strongly with national identity will be more willing and able to overcome the coordination problems necessary to contribute to public goods than those who have a more local outlook (see, e.g., Alesina et al. (1999) or Miguel (2004)). By similar logic, we predict that spending by the national government in a Department should be uncorrelated with *National Identity* since national spending was less contingent on local preferences for public goods (and thereby should have been unaffected by heterogeneity etc. . .). Finally, we predict that literacy should have been higher in places were the locality spent more on schools.

²⁶The three main administrative divisions in nineteenth century France, from the lowest level of hierarchy to the highest, were the Commune, the Department, and the State.

²⁷We use population from the *Annuaire Statistique* in 1886 to convert these numbers to per capita terms.

²⁸The measure is the share of conscripts (twenty year old men reporting for universal military service in the Department where their father lived) who could read and write (including high-school graduates).

	Dependent Variable							
	Log Total Commune Spend pc		Log Educ Commune Spend pc		Log Educ State Spend pc		Conscript Literacy	
	OLS	IV	OLS	IV	OLS	IV	OLS	IV
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Identity	0.0976 (0.0594) [0.01]	0.345 (0.331) [0.41]	0.0547 (0.0412) [0.02]	0.692*** (0.255) [1.18]	0.0966*** (0.0362) [0.03]	-0.231 (0.193) [0.51]	0.0900** (0.0372) [0.25]	0.287* (0.165) [0.78]
R-sq	0.307		0.373		0.114		0.150	
Pop Density Control	Y	Y	Y	Y	Y	Y	Y	Y
Geography Controls	Y	Y	Y	Y	Y	Y	Y	Y
Rel., Educ., & Political Controls	Y	Y	Y	Y	Y	Y	Y	Y
Observations	160	160	160	160	160	160	170	170

Table 8: The effect of *National Identity* on public goods provisionment and literacy in the nineteenth century. Paris region excluded from all regressions. The instrument used in the IV regressions is a dummy variable for membership in the CGF. Robust standard errors clustered on Department reported in parentheses. *, **, and *** represent 1%, 5%, and 10% significance respectively.

Table 8 reports the results of our regressions. Standard errors are reported in parentheses under the coefficient estimate. The numbers in brackets gives the percentage of a standard deviation in the dependent variable a one standard deviation increase in the independent variable induces. The Paris region is excluded from all regressions.²⁹ Column (1) indicates *National Identity* is uncorrelated with LPG spending at the commune level. However, when we focus on just the variation in *National Identity* explained by CGF membership in column (2), the economic significance is quite large even though the coefficient is not statistically significant at conventional levels. The coefficient implies a one standard deviation increase in *National Identity* leads to about a 41% increase in total spending at the commune level. When we focus on just education spending, the story is similar in the sense that *National Identity* across all of France is uncorrelated with public goods provisionment. However, when we focus on *National Identity* as mediated by CGF membership in column (4), the effect is large and statistically significant at the one-percent level. The coefficient in column (4) suggests a one standard deviation increase in *National Identity* leads to about a doubling of local education spending.

The regression in column (5) shows a positive effect of *National Identity* on state spending, but it is economically very small. The IV regression in column (6), by contrast, supports our prediction that state spending should be uncorrelated with *National Identity*. This last result strongly suggests that the estimates in (2) and (4) are not biased because of some unobservable that would induce greater spending on public goods at both the national and local levels (e.g. population density, economic development, etc. . .).

Finally, the results in columns (7) and (8) suggest a positive relationship between human capital attainment and *National Identity*. While both the OLS and IV coefficient estimates are positive and statistically significant, the economic significance of the IV coefficient is, as predicted, over three times larger.

Overall, these results support our hypothesis that *National Identity* should be correlated with the ability of a region to invest in national institutions, such as education.

7.2 Political Support for Republican Government

Another prediction we made above is that *National Identity* should be correlated with support for national government. In order to test this we create two variables. The first is *Revolutionary Letters* which measures the number of letters to the editor of pro-French Revolution newspapers during the first phase of the Revolution between ?? and ??. These data are drawn from de Certeau et al. (2002) who interpret them as indicative of regional support for the centralizing policies of the early revolutionaries. The second variable is *Republican Index*. It gives the average share of Republican mayors elected in each arrondissement in each Departement in each election year from 1874 to 1888.³⁰ The Third Republic (1870-1940) was a period during which republican government in France was highly contested by both royalist and church pressures. The Republican party was on the side of state centralization and, eventually, emerged as the stable victor and molded many of French

²⁹Including Paris does not substantively change our results.

³⁰These data were collected by **cite Franck**. . . . There were four elections: 1874, 1878, 1884, and 1888.

institutions to this day (e.g. in matters of education, religion, and foreign policy) (See, e.g., Weber (1976) or Brown (2010)). There were other referenda and elections in France before the Third Republic, but these tended to be votes for stability (as in 1848 or 1870, for example) or based on an extremely limited franchise (as in 1795, for example), and, therefore, do not convey a true sense of popular support for a centralized and republican government.

We predict that *National Identity* should be positively correlated with both of our measures of support for the central government. Furthermore, this positive correlation should be particularly strong in the regions subject to the historical influence of the state in the CGF.

	Dependent Variable					
	Revolutionary Letters		Republican Index		Fertility 1821	
	OLS	IV	OLS	IV	OLS	IV
	(1)	(2)	(3)	(4)	(5)	(6)
Identity	-0.132 (0.392) [0.02]	5.412* (2.810) [0.86]	0.123*** (0.0407) [0.28]	0.331* (0.185) [0.76]	-0.0204* (0.0123) [0.11]	-0.144** (0.0646) [0.82]
R-sq	0.176		0.104		0.142	
Pop Density Control	Y	Y	Y	Y	Y	Y
Geography Controls	Y	Y	Y	Y	Y	Y
Rel., Educ., & Political Controls	Y	Y	Y	Y	Y	Y
Observations	170	170	170	170	158	158

Table 9: . . . The effect of *National Identity* on support for central government and fertility. Paris region excluded from all regressions. The instrument used in the IV regressions is a dummy variable for membership in the CGF. Robust standard errors clustered on Department reported in parentheses. *, **, and *** represent 1%, 5%, and 10% significance respectively.

The results of our regressions on *National Identity* and *Republican Index* are reported in Table 9. As expected support for the Revolution is correlated with *National Identity*. Under the OLS specification in column (1), however, the size of the effect is small. By contrast, the coefficient from the IV regression suggests a one standard deviation increase in *National Identity* is correlated with almost a one standard deviation increase in letters written to Revolutionary newspapers. Similarly, the support for the Republican party during the early decades of the Third Republic is also correlated with *National Identity*. As with the other regressions, the effect is much bigger when we restrict attention to *National Identity* explained by CGF membership. The coefficient from the IV regression in column (4) indicates one standard deviation increase in *National Identity* is associated with three-quarters of a standard deviation increase in Republican mayors be elected at the local level between 1874 and 1888.

7.3 Fertility

The final outcome we investigate is fertility in 1821. We are interested in this for several reasons. First, the demographic transition plays a central role in unified growth models which attempt to explain the transition from the Malthusian economy to modern economic growth (see, e.g. Galor and Weil (2000)). Furthermore, the French demographic transition is particularly interesting since it seems to have been both very early and very influential across Europe (Spolaore and Wacziarg, 2014). Our last set of regressions can offer insight into whether or not the influence of the French state on social identity may have been correlated with the shift in fertility behavior that was associated with the French demographic transition.

To measure fertility we use the data in Bonneuil (2007) reported for 1821. This year is chosen as it is the earliest observation we can get that is unaffected by the upheavals of the Revolutionary or Napoleonic periods. Furthermore, we focus on early fertility since we want to identify the origins of the transition and, over the subsequent decades, all Departments in France are converging to relatively low fertility rates.

Columns (5) and (6) in Table 9 report the results of our regressions using *Fertility 1821* as the dependent variable. The coefficient estimates strongly support the hypothesis that *National Identity* was correlated with early declines in Fertility in France. Under the OLS regression, there is an economically and statistically weak relationship. However, when we focus on *National Identity* explained by CGF membership, the size of the coefficient greatly increases. The coefficient in column (6) suggests a one standard deviation increase in *National Identity* was associated with 82% of a standard deviation reduction in fertility.

8 CONCLUSIONS

In *The Old Regime and the French Revolution*, Alexis de Tocqueville describes how, in creating a strong fiscal and legal state, the Absolute Monarchy sowed the seeds of its own destruction and paved the way towards a constitutional democracy and modernity. The research described in this paper provides vital empirical support for this claim by showing that, even within France, variation in the strength of the institutions of the Monarchy had a profound effect on the social identity of its subjects and their subsequent support for national economic and political institutions.

APPENDICES FOR ONLINE PUBLICATION ONLY

A INCLUSION CRITERIA FOR CITIES IN THE CGF

Section to be written...

Les provinces des *cinq grosses fermes*, c'est-à-dire celles qui, suivant l'article 3 du titre premier de l'ordonnance de 1787, sont comprises dans l'étendue du tarif de 1664, à l'entrée & à la sortie desquelles se perçoivent les droits qu'il impose, sont la Normandie, la Picardie, la Champagne, la Bourgogne, dont il faut aujourd'hui distraire le petit pays de Gex, le Bourbonnois, le Berry, le Poitou, l'Aunis, l'Anjou, le Maine, & toutes celles qui sont renfermées dans le cercle intérieur que forment ces provinces, comme l'Orléanois, le Nivernois, la Tourraine, l'île de France & autres.

Le Beaujolois a été ajouté aux provinces des *cinq grosses fermes*, par arrêt du conseil du 10 avril 1717.

Figure 10: The Provinces Contained within the Cinq Gross Fermes. Extract from the 'Cinq Grosses Fermes' entry in le Rond d'Alembert and Diderot (1784).

La Provence en laissa établir de tous côtés; le Languedoc, dont le gouvernement comprenoit le Quercy, le Rouergue & le Vivarais, fut également séparé des provinces voisines par des bureaux; mais le Lyonnais conserva des communications privilégiées avec les *cinq grosses fermes*, & avec le Languedoc & la Provence.

Figure 11: Explanation of Special Lyonnais Relationship with Cinq Gross Fermes. Extract from the 'Cinq Grosses Fermes' entry in le Rond d'Alembert and Diderot (1784).

B DESCRIPTION OF CONTROL VARIABLES

Section to be written...

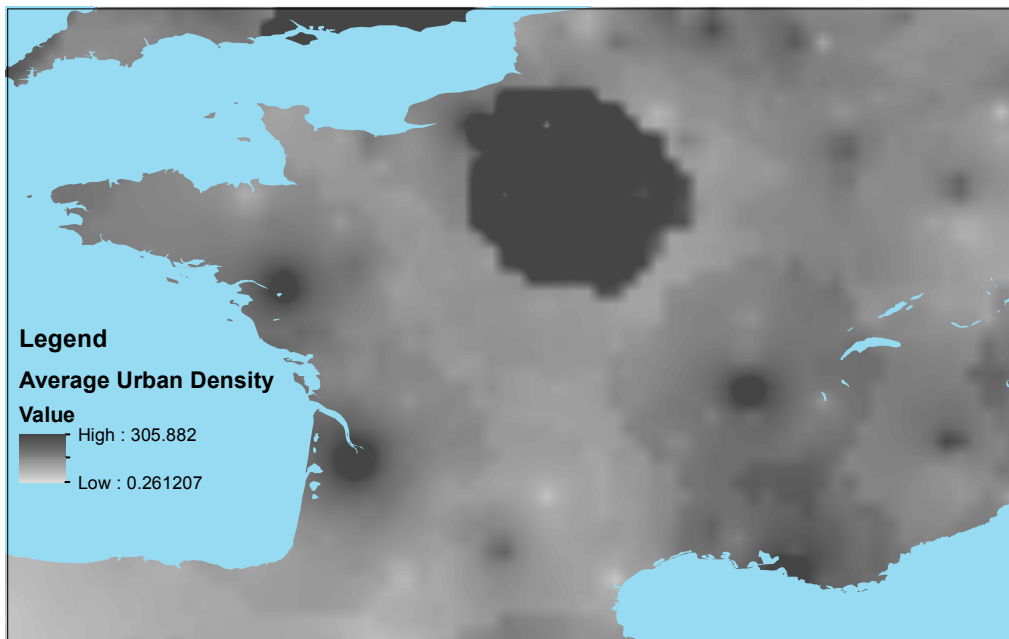


Figure 12: Urban Density. Constructed by assigning a value for urban density to each grid cell using the inverse weighted average (power of 1.5) of the surrounding Bosker et al. (2013) cities with populations of at least 5,000 in 1800. Open circles correspond to the Bosker cities.

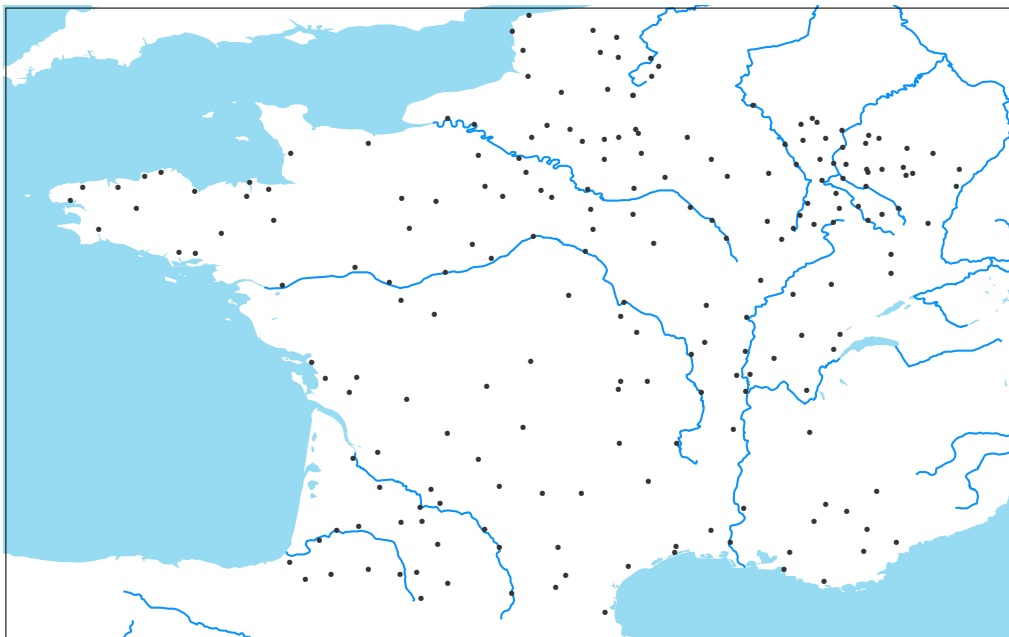


Figure 13: Major Rivers and Seas and the Cahiers Cities. *Source: Euratlas (2012).*

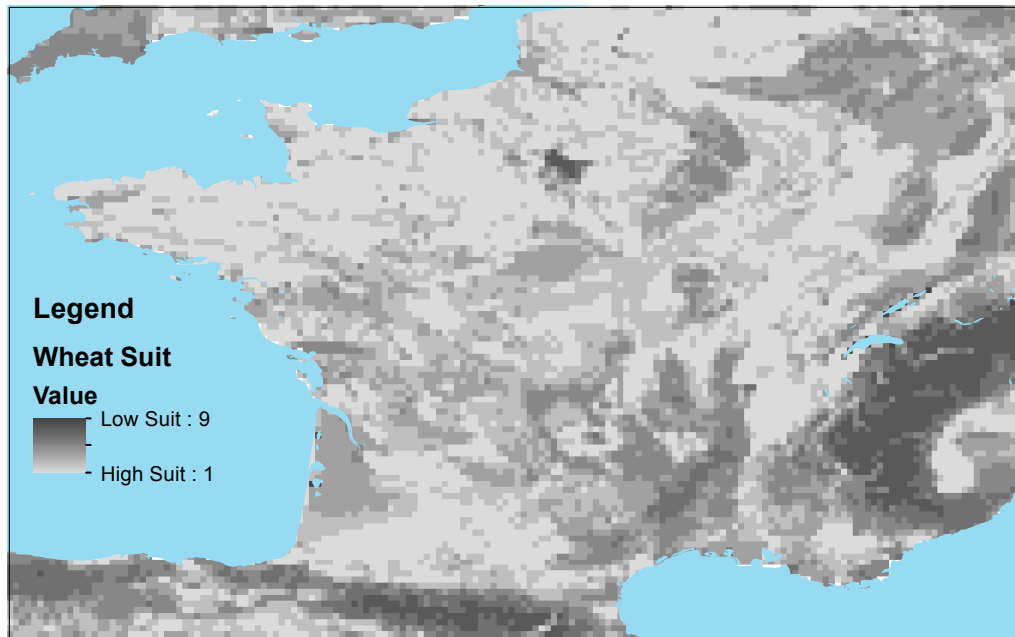


Figure 14: Wheat Suitability and Cahiers Cities. *Source:* Fischer et al. (2002).

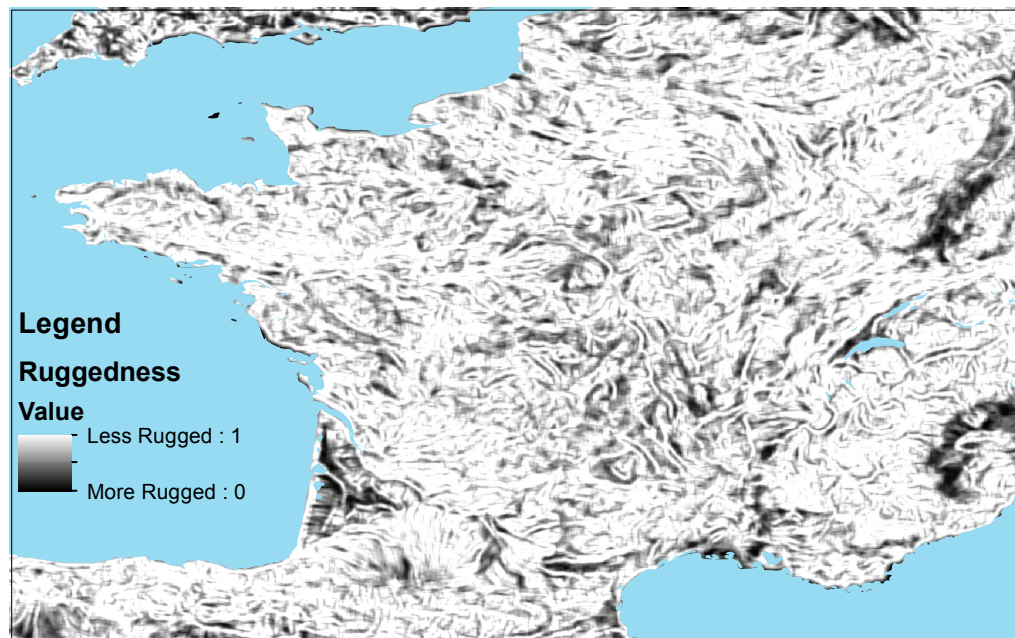


Figure 15: Terrain Ruggedness and Cahiers Cities. *Source:* Sappington et al. (2007).

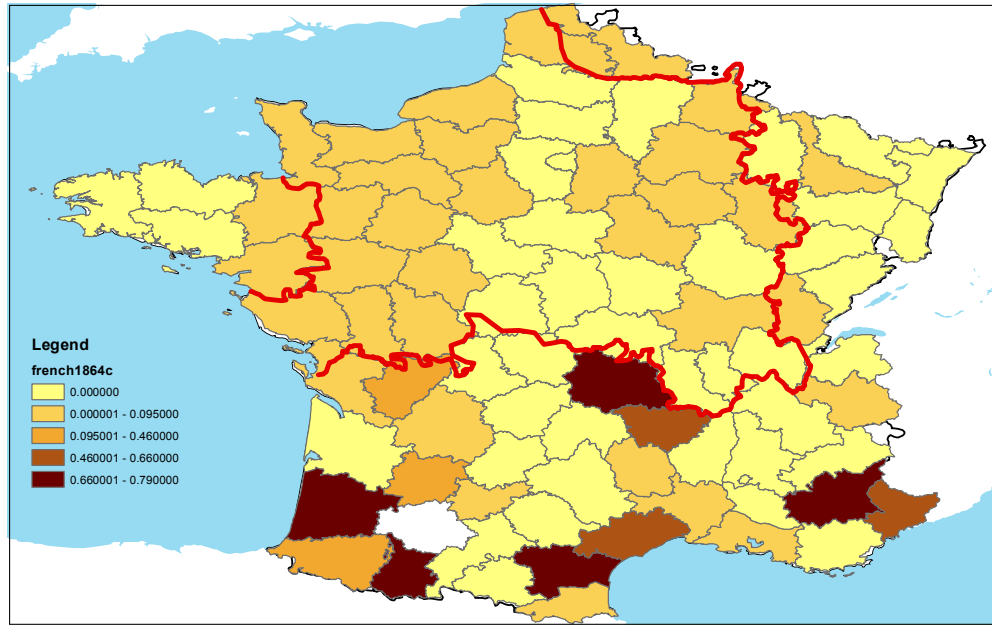


Figure 16: Percentage of adults not speaking French as their first language in 1863. *Source:* Weber (1976).

C OTHER JURISDICTIONAL BORDERS

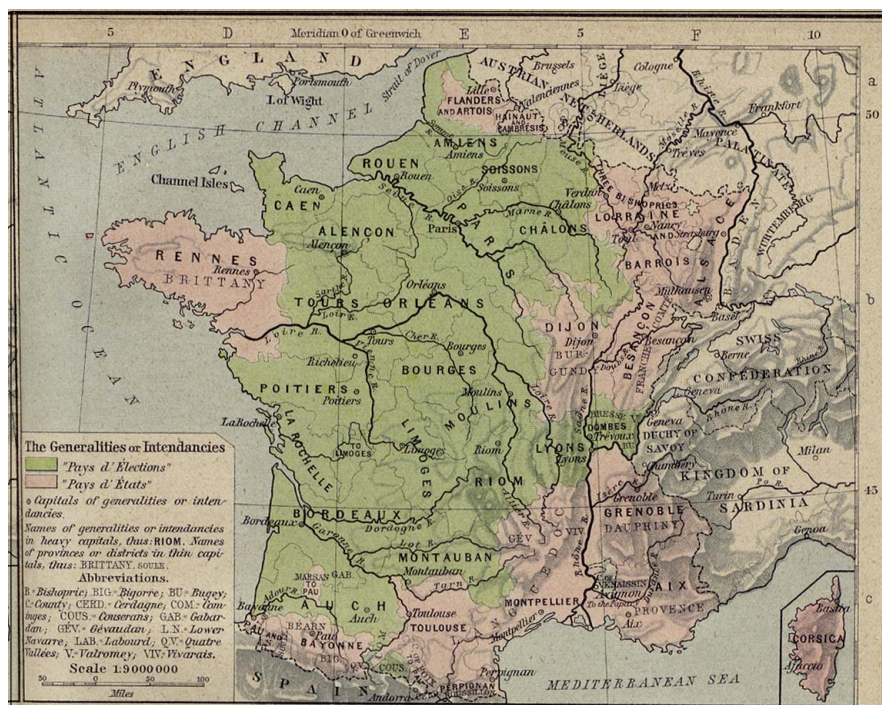


Figure 17: Map showing the Pays d'État and the Pays d'Élection around 1789. Source: Shepherd (1956).

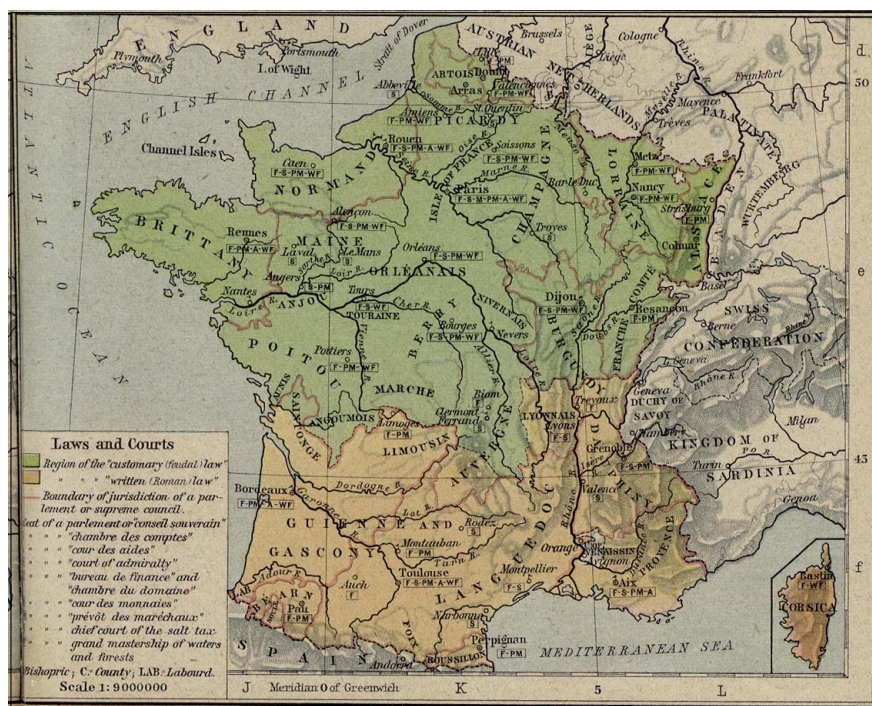


Figure 18: Map showing Law Courts and Legal Regions around 1789. Source: Shepherd (1956).

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