Extractive States: The Case of the Italian Unification.*

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Abstract

Despite the huge evidence on the adverse impact of extractive policies, we still lack a framework that identifies their determinants. Here, we lay out a two-region, two-social class model for thinking about this issue, and we exploit its implications to identify the causes of the opening of the present-day divide between North and South of Italy. Differently from the extant literature, we document that it arose because of the region-specific policies selected between 1861 and 1911 by the elite of the Kingdom of Sardinia, which annexed the rest of Italy in 1861. While indeed pre-unitary land property tax revenues and railway diffusion were shaped by each region's farming productivity but not by its political relevance for the Piedmontese elite, the opposite was true for the post-unitary ones. Moreover, post-unitary tax distortions and the severity of the remaining extractive policies—captured by the region's taxation capacity and political relevance—determined the North-South gaps in culture, literacy, and development but not that in the manufacturing industry value added. Consequently, extraction neither eased the formation of an unitary market nor favored industrialization. Our results remain robust to considering fixed region and time effects and the structural conditions differentiating the two blocks in 1861, i.e., pre-unitary inclusiveness of political institutions, land ownership fragmentation, and inputs. Crucially, our framework clarifies the incentives of dominating groups in other unions, e.g., post-Civil War USA and EU.
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"The vast majority of the population [...] feels entirely cut off from our institutions. People see themselves subjected to the State and forced to serve it with their blood and their money, but they do not feel that they are [an] organic part of it." (Sydney Sonnino, *Speech to the Chamber of Deputies*, 30 March 1881).

1 Introduction

Despite the huge evidence documenting that extractive institutions and policies can limit the access to rents discouraging in turn innovation (North et al., 2009) and can undermine both property rights protection and contract enforcement (Acemoglu and Robinson, 2012), we still lack a framework that identifies their determinants. Here, we lay out a two-region, two-social class model for thinking about this issue, and we exploit its implications to propose a novel account of the present-day economic divide between North and South of Italy.[1]

A well-known literature has traced back this gap to the diverse political trajectories followed by the two clusters during the Middle Ages (Putnam et al., 1993). In particular, the experience of more inclusive political institutions—i.e., the communes—would have helped Northern Italy develop a stronger culture of cooperation easing economic interactions (Guiso et al., 2016; Tabellini, 2010). Recent contributions however have raised several doubts on this slant. First, Boranbay and Guerriero (2016) show for Europe that instead the main driver of present-day culture has been the medieval need of sharing climate-driven consumption risk and that, up to the 17th century, the two clusters displayed similar cultural endowments. Second, a growing body of research reveals that the two groups were similarly underdeveloped in 1861 (Federico, 2007; Ciccarelli and Fenoaltea, 2013). Inspired by this evidence, we document that the opening of the present-day divide is the result of the region-specific policies selected between 1861 and 1911 by the elite of the Kingdom of Sardinia, which annexed the rest of Italy in 1861. They penalized more the regions farther away from the fiercer enemy of the House of Savoy and so less politically relevant for the Piedmontese elite.

In the model, we consider two regions, which are first independent and then unified by a completely unforeseen shock similar to the one that originated the unitary state. The Northern region represents the Kingdom of Sardinia, whereas the Southern one stands for

[1]To elaborate, in 2008 Southern Italy displayed a nine percent lower share of respondents to the European Value Study reporting "tolerance and respect for other people" as important qualities children should be encouraged to learn and a 40 percent lower income per capita than Northern Italy (Iuzzolino et al., 2011).

any of the other states annexed by the Kingdom of Italy in 1861. Each region is inhabited by a mass zero elite and a mass one citizenry, who consumes the untaxed supply of a private good and a region-specific public good whose production is financed through the tax revenues not appropriated by the elite. The private good technology is multiplicative in the region-specific productivity and the citizenry's investment in an input that can be seen as either a culture of cooperation or human capital. The first interpretation links directly our setup to the extant literature on the medieval determinants of the present-day divide. Under autarky, each elite selects her region's tax rate by maximizing the sum of the citizenry's welfare and the rents net of linear tax-collection costs. Thus, equilibrium tax revenues fall with the marginal tax-collection costs and, because these are sizable, with the taxable value and thus the regional productivity. Under political union instead, both region-specific tax rates are selected by the Northern elite, who is less concerned with the Southern citizenry's welfare and appropriates from the South relatively more than the Southern elite can under autarky. In particular, the extractive power of the Northern elite is sufficiently strong to make taxation of the South profitable at the margin. These assumptions are consistent with the fact that the unitary state exercised a tight control on the annexed regions and was dominated by the elite of the Kingdom of Sardinia, who was chiefly interested in the Northern export-oriented farming and industry. The mix between stronger extractive capacity and her limited concerns with the South leads the Northern elite to raise from this region tax revenues rising with the South's productivity and falling with both the marginal tax-collection costs and the South's political relevance, i.e., the weight the Northern elite attaches to the Southern citizenry's welfare. In addition, extraction from the South is larger than under autarky, provided that the South's technology is not too backward, and pushes the Southern citizenry to prefer private to public good production. Hence, the Southern citizenry's investment and welfare rise with the factors limiting taxation, like the marginal tax-collection costs and the political relevance, and unification damages the South when it is not sufficiently salient for the North.

To test these predictions, we analyze the thirteen present-day Italian regions annexed by the Kingdom of Italy between 1861 and 1911 but not part of the Kingdom of Sardinia. Being the Italian economy mainly agrarian over our 1801-1911 sample, we proxy the extent of extraction first and foremost with the land property taxation. Given the available in-

formation however, we do not study land property tax rates but the relative revenues per capita. Land property tax rates have been region-specific over the whole sample and, absent developed financial markets, dramatically shaped the landowners' capacity to invest in new farming technologies and the industry. Turning to the regional productivity, we rely upon the geographic drivers of the profitability of the main export-oriented farming sectors, i.e., arboriculture and sericulture. Next, we use as inverse metrics of the marginal tax-collection costs a measure of state capacity, i.e., the share of previous decade in which the state to which the region belonged partook in external wars. Finally, we propose as an inverse proxy for political relevance the distance between each region's main city and the capital of the fiercer enemy of the House of Savoy. Being our model applicable to any extent of extraction, these two proxies also capture the impact on the South of the other distortionary policies selected by the post-unitary government and illustrated in our historical analysis.

Consistent with our model, while the pre-unitary revenues from land property taxes in 1861 lire per capita were shaped by each region's farming productivity but not by its political relevance for the Piedmontese elite, the opposite was true for the post-unitary ones. Moreover, post-unitary tax distortions—proxied with the difference between the observed revenues and the counterfactual ones forecasted through pre-unitary estimates—and the severity of the remaining extractive policies—captured by the region's taxation capacity and political relevance—determined the North-South gaps in culture, literacy, and development. Since our proxies for the drivers of extraction are driven by either geographic features independent of human effort or events outside the control of the policy-makers, reverse causation is not an issue. Nevertheless, our results could still be produced by unobserved heterogeneity. To evaluate this aspect, we follow a two-step strategy. First, we control not only for fixed region effects, but also for time effects and their interaction with the structural conditions differentiating the two blocks in 1861, i.e., pre-unitary inclusiveness of political institutions, land ownership fragmentation, coal price, and the railway length. Including these controls has little effect on our estimates. Second, we build on Oster (2016), and we calculate that on average selection on unobservables would have to be about 4 times greater than selection on observables to completely explain away our results. Given the very high fit of our regressions, this is unlikely. Finally, two extra results rule out the possibility that extractive policies were

the acceptable price for the Italian development (Romeo, 1987). First, extraction did not shape the manufacturing sector value added and in turn industrialization. Second, while the pre-unitary length of railway additions in km per square km was only affected by the region's farming productivity, the post-unitary diffusion of the rail system was only driven by the regional political relevance resulting useless in the formation of an unitary market.

Albeit a long literature has related the present-day divide to post-unitary policies (Sereni, 1947; Salvemini 1963; Romeo, 1987; Cafagna, 1989), nobody has provided a framework clarifying how these policies solved the unitary government's trade-off between extraction-related losses—i.e., investment distortions, tax-collection costs, and military weakness—and rent-seeking gains.[2] In doing this, we also contribute to the aforementioned literature on extractive institutions by endogenizing the extent of extraction in a setup sufficiently general to be applied to other instances. Recent examples are the German opposition to the post-2011 rescue packages demanded by Greece (Guiso et al., 2015) and the tensions between the Basque Country (Northern Ireland) and the Spanish (UK) government (Abadie and Gardeazabal, 2003; Besley and Mueller, 2012), whereas a case in point contemporaneous to the natural experiment we focus on is the post-Civil War gap between the ex-Confederate states and the territories that sustained the Union during the war. To confirm the external validity of our analysis, we study this last instance, and we provide evidence that the growing divide between the two clusters was related to the tax burdens imposed on them by the federal government, which was initially dominated by the ex-Union states.

The paper proceeds as follows. In section 2, we review some key facts about 19th century Italy to motivate our model, which we illustrate in section 3. In section 4 then, we state the model empirical implications, which we test in section 5. Finally, we present our conclusions in section 6, and we gather both tables and figures in the appendix.

2 Italy Before and After the Unification: A Primer

Next, we describe the political and economic contexts of the Italian regions over the 1801-1911 period, detailing at the same time the evolution of public policies.

[2]By studying the determinants of regional tax policies and public spending, we also contribute to the literature on public goods, internal and external conflicts, and the size of nations (Alesina and Spolaore, 2005).

2.1 The Era of *Risorgimento*

The Congress of Vienna divided Italy in eight absolutists states: the Kingdom of Sardinia, formed by Liguria, Piedmont, and Sardinia and ruled by the Piedmontese House of Savoy; the Kingdom of Lombardy-Venetia under the direct control of Austria; the Grand Duchy of Tuscany and the Duchies of Modena and Parma, all in the hands of branches of the Habsburg dynasty; the Duchy of Lucca then absorbed by Tuscany in 1847; the Papal State; and, to the south of Lazio and Marche, the Kingdom of the Two Sicilies ruled by the Bourbons.[3] This division re-established the status quo preceding the Napoleonic conquests and served two key purposes. First, it deprived the Bourbons of any interest in waging war being their only neighbor the Pope, who in turn was constrained by his religious role. Second, it kept in check Austria and France by establishing the Kingdom of Sardinia as a buffer state between the two powers. Exactly this balance fed the ambitions of the House of Savoy who became the champion of the Italian liberals. Supported by urban workers and lower military ranks, the liberals longed to establish a unitary state by organizing a series of subversive acts in the wake of the unrests of 1820, 1830, and 1848. Even if none of these turmoils overthrew a pre-unitary regime, they forced the absolutist rulers to implement some of the liberal laws brought about by the Napoleonic armies and inspired by the French revolution.

The liberal wave flooded the whole peninsula but was particularly effective in washing away several long-lived feudal privileges from the Kingdom of the Two Sicilies, where one third of the clerical and common lands were privatized and the feudal system was finally abolished in 1806 [Pescosolido 2014, p. 50-58]. Such an institutional discontinuity did not release the Italian peasants from their destitution but allowed a rising class of bourgeoisie, attracted by the mid of the 19th century rise in the international demand, to acquire part of the nester nobility's domains and prioritize export-oriented over subsistence farming [Pescosolido 2014, p. 29-30 and 39-40]. In particular, arboriculture and sericulture soon gained a net dominance accounting by 1859 for respectively the 33 and 14 percent of total export, while next two—in terms of export relevance—cultivations—i.e., wine and hemp—racked up the seven percent of total export (Ministero dell'Agricoltura, Industria e Commercio, 1864). Albeit more lucrative than wheat breeding—sixty times in the arboriculture case [Dimico et al.

[3]Our historical account is based on Killinger (2002), Duggan (2008), Paoletti (2008), and Riall (2009).

2012, p. 7], both activities were also more capital intensive. Silk indeed is obtained from the fibers of the cocoons of the mulberry silkworm larvae dissolved in boiling water and then spun through reels powered at the time by watermills. This need of water favored the concentration of sericulture in the irrigated Po valley [Federico 2009, p. 18]. Over and above irrigation ditches, citrus and olive trees require a temperature above 4 Celsius degrees: this last feature explains their almost exclusive diffusion in the South [Dimico et al. 2012, p. 8].

Farming productivity increased in both the sharecropping-based Northern farms and the Southern latifundia, which maintained a primacy over the 19th century (Federico, 2007).[4] Table 2 summarizes these patterns by using our proxies for farming productivity and differentiating the thirteen regions analyzed in our empirical exercise according to their political relevance for the Piedmontese elite as inversely measured by *Distance-to-Enemies*, which is the distance between each region's main city and the capital of the fiercer enemy of the House of Savoy (see section 4 for more details and table 1 for sources and construction). To illustrate, Veneto displays the lowest average value of *Distance-to-Enemies* being the only region bordering either Austria or France, and so we treat it as the "high" political relevance cluster. Similarly, we label the other regions with below-average values of *Distance-to-Enemies*—i.e., Abruzzi, Emilia Romagna, Lombardy, Marche, Tuscany, and Umbria—the "middle" political relevance group and the remainder—i.e., Apulia, Basilicata, Calabria, Campania, Lazio, and Sicily—the "low" political relevance group. We also refer to the latter as "South" and to the union of the high and middle political relevance groups with both Liguria and Piedmont, which represented the leading regions of the Kingdom of Sardinia, as "North." As table 2 reveals, the South was moderately inferior than the middle and high political relevance cluster in the sericulture and wheat breeding sectors but greatly (moderately) superior in the arboriculture one (in terms of gross saleable farming product per employee, i.e., *GSP-L*).

After two centuries of decline (Malanima, 2010), the Italian population doubled over the 1800-1860 period but the peninsular economy remained essentially agrarian and so the GDP per capita stagnated until the 1880s against a background of regional differences (see upper-left graph in figure 1).[5] To illustrate, the South displayed for all the pre-unitary period

[4]The latter supported larger investments by assuring the peasants credit and job security (Petrusewicz, 1996).
[5]To illustrate, in 1861 the 69 percent of the active population was employed in the agricultural sectors (SVIMEZ, 2011), and only the one percent worked exclusively in the industry [Pescosolido 2014, p. 130].

an income level significantly higher than the North but this advantage,[6] which was mainly driven by the idiosyncratic shocks to the regional export-oriented sectors,[7] did not help it fill the enormous gap with the leading European countries on the road to industrialization [Pescosolido 2014, p. 77-84]. Just to name a few examples, in 1861 the number of spindles in respectively the North and South corresponded to the 0.8 and 0.2 percent of the English one, whereas the 1861 iron production amounted to the even lower levels of 0.46 and 0.04 percent of the UK one (Pescosolido, 2011). The causes of this common backwardness—similarly revealed by the 1861 values added of the textile and manufacturing sectors (see table 2)—were multiple and ranged from the scarcity of coal and navigable rivers to the mix of the underdevelopment of railway, roads, and merchant navy and the shortage of both human and real capital [Pescosolido 2014, p. 89-101]. None of these initial structural conditions displayed however significantly different values in the low and middle-high political relevance clusters, save for the limited gaps in railway length and coal price (see table 2).[8] In this respect, only the Kingdom of Sardinia seemed ready to take on the Second industrial revolution challenge with its significantly larger endowment of human capital and more efficient textile sector both gained through a more vigorous public investment effort [Zamagni 1980, p. 124-126].[9]

The 1848 defeat in the Austro-Sardinian War indeed forced Carlo Alberto to abdicate in favor of his son Vittorio Emanuele II, who upheld a liberal constitution to calm down the internal uprisings and gain support for his territorial ambitions. This change allowed the rising liberal class to obtain a larger public spending in railway and other valued public goods, like literacy, in exchange for the acceptance of larger military expenses. None of the other Italian states could obtain a similar balance [Duggan 2008, p. 261]. On the one hand, Vienna avoided unrests and any grant of rights in the Lombardy-Veneto by appeasing local

[6] We express this and the other monetary variables in 1861 lire per capita employing the Malanima's (2006) and Baffigi's (2011) price indexes. While the underlying 1871-1911 data are collected from Vecchi (2011), the 1801-1861 figures are constructed combining the series for the Northern regions reported in Malanima (2006), those for the whole country proposed by Malanima (2010), and population data from SVIMEZ (2011).

[7] The Southern arboriculture sector was hit by the 1825-1834 fall in international prices, while the Northern silk production was halved by the 1840-1860 Pebrine epidemic [Pescosolido 2014, p. 39-41 and 145].

[8] The financial sector exhibited however the following variation. While the Northern markets were populated by both small institutes—i.e., "casse di risparmio"—and medium-sized commercial banks, the Southern markets were still dominated by a plethora of medieval micro-credit institutions [Pescosolido 2014, p. 90-91].

[9] To illustrate, in 1861 Piedmont and Liguria displayed on average 55.25 percentage points of illiterates and a 0.007 textile industry value added in thousands of 1861 lire per capita (see for sources table 1).

elites through high nonmilitary expenditures and artificially low tax rates [Dincecco et al. 2011, p. 900]. On the other hand instead, the Bourbons—scared by the 1820 and 1848 domestic unrests—escaped democratic reforms by rising the military spending and, because of the population's aversion to taxation, by squeezing nonmilitary expenditures [Pescosolido 2014, p. 96]. A similar aversion to novel duties, together with less ferocious internal conflicts, kept taxation and spending low in the remaining states [Dincecco et al. 2011, p. 898-899].

Figure 1 depicts these patterns. While the bottom-left graph reports, in default of information on the tax rates, the revenues from land property taxes in 1861 lire per capita, the bottom-right one displays the decennial change in the railway network in km per square km. Land property taxes, which represented the largest direct tax and hit the land profitability estimated by one of the nine existing regional cadastres,[10] remained up to the 1850s larger in the South, whereas investments in railway diffusion, which represented the largest nonmilitary expenditure, were trifle before 1840 and barely higher in the North at unification.

2.2 Italian Unification and the Rise of the North-South Divide

Over the 1850s, the power of the Kingdom of Sardinia's parliament relative to the king grew steadily and its leader became count Camillo of Cavour, who was appointed prime minister in 1852. Cavour realized that the Savoys could not fight Austria alone and, thus, sustained France in the Crimean War (1853-1856) to win the favor of Napoleon III. This attempt was such a success that the Kingdom of Sardinia and France first signed a secret pact against Austria and then defeated its military in Lombardy in 1859. This victory triggered insurrections in Tuscany, Giuseppe Garibaldi's conquest of the South, and the invasion of the Papal State. The Kingdom of Italy was proclaimed on March 17th 1861.

"A narrow elite of northerners dominated [the new government and] bureaucracy. Not until 1887 did a southerner become prime minister [i.e., Crispi]. The king preferred if he could to have a premier from Piedmont (with whom he could speak in dialect)" [Duggan 2014, p. 141] and, indeed, Piedmontese was the 58 percent of all the 1861-1911 prime ministers, share which rises to the 85 percent when the entire North is considered (see also upper-right graph in figure 1) and is similar to what one would obtain by focusing on

[10]This measure was obtained through either geometrical or descriptive data (Parravicini, 1958).

lower-ranked policy-makers.[11] "In the 1890s [indeed] 60 per cent of the top administrative posts were occupied by Lombards, Venetians, or Piedmontese" [Duggan 2014, p. 141] and the provinces were run by government-appointed prefects, each of whom "was a personal friend of the king or the prime-minister and [...] usually came from Piedmont. [Moreover, the commune's] mayor was nominated by the central government [and the prefect could] oversee, and if need be, veto, municipal decisions" [Duggan 2014, p. 139]. Empowered by its new European stand and military power [Pescosolido 2014, p. 96], this Piedmontese-led ruling class favored the Northern export-oriented farming and manufacturing industry while selecting trade, financial, and public spending policies and the Northern population when levying the taxes necessary to finance public spending [Sereni, 1947; Salvemini 1963, p. 286; Romeo, 1987; Cafagna, 1989]. Since the underdevelopment of the banking sector and the Malthusian nature of the agrarian economy made the participation in the second Industrial revolution dependent on the after tax farming profits only, these policies dramatically shaped the relative performance of the two clusters [Pescosolido 2014, p. 90-92, 118-120, and 157].

To begin with, the 1861 introduction of the Piedmontese custom tariffs decreased by 80 percent the average Southern duties (Pescosolido, 2011). This liberal reform initially fostered the very lucrative exports of olive oil, citrus, and silk but then irremediably exposed these activities to the fall in the farm crops prices determined in the 1880s by the mix of the soaring international supply and the advances in maritime transportation [Iuzzolino et al. 2011, p. 20]. Between 1887 and 1891, the exports of citrus fruits, oil, and wine roughly halved, whereas those of silk remained stable [Pescosolido 2014, p. 198-201 and 224-228]. This juncture allowed the Po Valley nester nobility and the industrial triangle entrepreneurs to form a new ruling coalition and so direct in 1887 a protectionist reform uniquely aimed at protecting wheat breeding and those Northern manufacturing industries that had artificially survived the liberal years thanks to the newborn state intervention [Pescosolido 2014, p. 64, 177-182, and 202; Ministero dell'Agricoltura, Industria e Commercio 1890, p. 419-420]. To illustrate, while the Northern textile industry fully dominated the national allocation of the military clothing contracts, the monopoly of both the steamboat construction and the Italian navigation was assigned to Genoese firms with the consequent exclusion of the Neapolitan

[11] The share of ex-Kingdom of Sardinia(North)-born ministers was 35 (64) percent (Corbetta and Piretti, 2008).

ones, which albeit more developed at unification went bankrupt in the 1870s [Pescosolido 2014, p. 182-184 and 203]. A similar logic guided the organization of land reclamation with only four per cent of the relative spending invested in the South before World War I [Iuzzolino et al. 2011, p. 23], the allocation of coal mining permits and public contracts to the newborn iron and steel industry,[12] the exclusive assignment to the Piedmontese Banca Nazionale of the faculty of opening new branches and issuing banknotes convertible in the entire country [Pescosolido 2014, p. 151], and above all the public investment in railway, which constituted the 67 (53) percent of the 1861-1881(1911) Italian public spending (Picci, 2002). To elaborate, Liguria and Piedmont enjoyed over the 1861-1881(1911) period an average railway spending of 874 (457)—1861—lire per square km, which was 12 (3) times bigger than that received by Veneto and 18 (4) times higher than that gained by the other regions. Moreover, the 1885 reform handed the vast majority of the property of the railway industry to Northern hands [Pescosolido 2014, p. 159-167]. Crucially, the real purpose of this effort "was more the military one of controlling the national territory, especially in the South, than favoring commerce [. . . The] railway fares acted in many cases as customs duties, making it more economic for the South to export goods abroad by sea rather than try to sell its products to the North via railway" [Iuzzolino et al. 2011, p. 22].

Crucially, such an impressive infrastructural program was financed through highly unbalanced rises in the land property tax, which as discussed above was the most important shifter of investment (Parravicini, 1958). After an initial phase in which a 10 percent surcharge was added to the pre-unitary tax rates, the 1864 reform fixed a target revenue to be raised—i.e., "contingente"—equal to the 1863 yield plus 20 millions—i.e., 125 millions—allocating it to nine fiscal districts resembling the pre-unitary states (law 1831/1864).[13] The ex-Papal State took on the 10 percent of the *contingente*, the ex-Kingdom of Two Sicilies the 40 percent, and the rest of the Kingdom of Italy (ex-Kingdom of Sardinia) only 29 (21) percent. To further weigh this burden down, between 1867 and 1868, two other 10 percent surcharges were added to the *contingente* creating the disparities between high and middle-low political relevance

[12] While the permits to mine for coal in Elba were assigned to the Northern Terni-Banca Commerciale group, the only Southern blast furnace was opened in Bagnoli with Northern capitals [Pescosolido 2014, p. 274].

[13] The law also established a formal 12.5 percent tax rate on the estimated market value of land, rural buildings, and farming activities. In 1866, the last two items became object of autonomous duties (law 2136/1865). From 1867 (1871) on, 3 (13) millions were levied on the new Venetian (Roman) district (Parravicini, 1958).

regions described in the bottom-left graph in figure 1. In complaining about the oppressing nature of these policies, the Sicilian senator Antonino Paternò-Castello denounced that "the excessive amount of the land property tax [...] impacts mainly the small landowners, who find themselves greatly burdened and deprived of the means necessary to organize a rational farming" [Parravicini 1958, p. 163]. Eventually, the 1876 achievement of the balanced budget together with Crispi's political success opened the way to more egalitarian policies like the 1888 removal of all surcharges and the 1886 cadastral reform (law 3682/1886). This last change gradually harmonized the regional tax rates especially after the First World War.[14]

At that point however, the combination of the international competition, the definitive loss of public contracts, and the heavy land property taxation squeezed the Southern investment rates to the point that the divergence between the two blocks was irreversible [Nitti, 1993; Pescosolido 2014, p. 205 and 280]. In fact, both the manufacturing industry and the advanced export-oriented farming were wiped out from the South, while an embryonic but expanding manufacturing industry was established in the North [Iuzzolino et al. 2011, p. 19-26; Pescosolido 2014, p. 254-269 and 278-279].[15] More important, extraction deteriorated the relationship between the government and the Southern population, who experienced the unification as a seizure [Zamagni 1993, p. 172; Iuzzolino et al. 2011, p. 14]. Extraction indeed unchained a civil war going under the name of "brigandage," which between 1861 and 1864 brought about 20,000 Southern victims and imposed a de facto militarization of the area,[16] and opened the way to massive emigration. After the turn of the century indeed, the emigration rate surpassed the Northern one, whereas exactly the opposite happened for the repatriation rates [Iuzzolino et al. 2011, p. 21]. Moreover, the population started to display a progressively weaker culture as prompted by the fall of the share of active population engaged in political, union, and religious activities (see figure 2), which constitutes a measure of social capital and was initially higher in the South. Contrary to the claims of the extant literature indeed (Guiso et al., 2016), the present-day advantage of the North does

[14]Before the official conclusion of the harmonization in 1956, the tax rate first felt to 7 percent in 1886 (law 3682/1886) and then increased again to 8.8 percent in 1897 (law 23/1897). More important, it was applied in the new geometric particle-cadastre system only when it produced revenues higher than those prescribed by the *contingente* (Parravicini, 1958). This together with the fact that only one third of the cadastres was reformed by 1922 leaves region-specific almost all the tax rates in our sample (Parravicini, 1958).

[15]The balancing policies pushed by Nitti and Sonnino turned out to be too weak [Pescosolido 2014, p. 295-297].

[16]In 1870, half of the Kingdom of Italy's army—120,000 units—policed the South (Felice, 2014).

not predate the unification. To see this, the leftmost graph in figure 2 shows the homogeneity between clusters in the cumulated discounted number of years of activity over the 1000-1600 period of Cistercian and Franciscan houses. Boranbay and Guerriero (2016) document that these monks met the population's demand for insurance against consumption shocks in exchange for the acceptance of a culture of cooperation and so, at the European level, there is a strong correlation between their expansion and present-day norms of respect and trust.

The fascist regime's aversion to internal migrations and its rush to arming, managed through investments in the Northern heavy industry, have stretched even more the gap, which has been only barely filled by the 1960s booms and state aids [Iuzzolino et al. 2011, p. 26-51]. Despite these more recent events however, it is clear at this point that the present-day divide originated in the policies set by the first post-unitary governments.

3 Theory

Consider a territory divided in two regions $r \in \{N, S\}$, each inhabited by a mass zero elite and a mass one of equal citizens consuming a region-specific public good g_r and a private good, whose demand and supply are D_r and X_r. In the case of 19th century Italy, N represents the Kingdom of Sardinia and S stands for any of the other states annexed by the Kingdom of Italy in 1861. In each region r, the citizenry produces $X_r = A_r C_r$, where $A_r > 0$ is the region-specific productivity parameter and C_r labels either the citizenry's culture of cooperation or his human capital. The first interpretation links directly our setup to the literature on the medieval determinants of the present-day divide and captures the relevance of culture in curbing transaction costs, expanding market exchange, and facilitating the division of labor (Tabellini, 2010; Guerriero, 2016). In terms of our historical experiment, X_r can be interpreted as the return from one of the export-oriented farming and manufacturing sectors requiring a progressively more complex technology and higher division of labor.

Timing.—The order of economic and policy choices is the following:

At time zero, the citizenry of region r linearly invests in C_r. When the input is culture, this assumption captures two fundamental insights of evolutionary psychology and Malthusian growth theories: a social group dictates to its members, via natural selection and cross-punishment, cultural norms maximizing its fitness (Barkow et al., 1992; Clark,

2005; Galor, 2011), and these norms are embraced by the group's members the faster the larger the culturally-driven reproductive advantage is (Andersen et al., 2016). Hence, it is reasonable to maintain that in Malthusian environments similar to that discussed in section 2 a citizenry expecting larger returns from cooperation ends up with a larger culture C_r.

At time one and under autarky (political union), the elite of region r (N) selects the rate(s) t_r (t_N^U and t_S^U) at which the private good(s) is (are) then taxed. Under autarky, each tax rate maximizes the regional elite's rent—as defined next—net of linear tax-collection costs plus the welfare of the region's citizenry. Under political union instead, t_N^U (t_S^U) maximizes the Northern elite's rent—as defined next—net of linear tax-collection costs plus the welfare of the citizenry of region N (S) weighted by a parameter equal to one (a parameter $\beta < 1$ increasing with region S's political relevance for the Northern elite).

At time two and under autarky (political union), the private good is produced, and the elite of region r (N) uses a share $\alpha < 1$ (α in the North and $\alpha^U < \alpha$ in the South) of the regional tax revenues to obtain with a linear technology g_r (g_N and g_S) and pockets the rest. Next, the citizenry of region r consumes both g_r and the untaxed private good.

Discussion.—The Northern elite's ability to seize all unitary rents captures the supremacy of the Piedmontese elite (see section 2). The inequality $\alpha^U < \alpha$ implies furthermore that the Northern elite could extract from the Southern population a rent larger than that possibly obtainable by the Southern elite. This closely squares with the constraints on the pre-unitary rulers' extractive power imposed by the credible threat of unrests and with the post-unitary occupation of the Southern regions by the Northern army (see section 2). Finally, the asymmetric relevance for the N elite of the Southern citizenry's welfare incorporates into the model the fact that post-unitary governments privileged the regions closest to their fiercer enemy and so most useful (dangerous) for defense purposes (in case of a treachery).

3.1 Autarky

Under autarky, the citizenry of region r selects C_r maximizing the objective function

$$\sqrt{D_r + \gamma g_r} - C_r = \sqrt{\left(1 - \hat{t}_r\right) X_r + \alpha\gamma\hat{t}_r X_r} - C_r = \sqrt{\tilde{t}_r A_r C_r} - C_r, \tag{1}$$

where hats label equilibrium quantities, $\tilde{t}_r \equiv 1 - \hat{t}_r\left(1 - \alpha\gamma\right)$, and γ gauges the citizenry's

relative preferences for g_r *vis-a-vis* D_r. We hypothesize that $\alpha\gamma > 1$, and thus that the citizenry prefers public to private good production. This restriction reflects the urgency of public spending in railway diffusion (land reclamation and harbor development) felt by the Northern (Southern) bourgeoisie in the pre-unitary period (see section 2).[17] The unique and global equilibrium level of investment and the citizenry's welfare equal $\tilde{t}_r \frac{A_r}{4} = \hat{C}_r = V_r$. Taking this into account, the elite of region r selects a tax policy maximizing

$$(1 - \alpha - K)\, t_r A_r \hat{C}_r + V_r, \tag{2}$$

where the marginal tax-collection costs are such that $K > \max\left\{1 - \alpha, \frac{\gamma-1}{\gamma}\right\}$. This last assumption is consistent with the limits to war waging imposed on the pre-unitary states (Kingdom of Italy) by the Congress of Vienna (Triple Alliance) and discussed in section 2. The unique and global solution to problem (2) is $\hat{t}_r = \frac{1}{2A_r(K+\alpha-1)} - \frac{1}{2(\alpha\gamma-1)}$, which falls as K increases due to the larger taxation costs and rises with γ because of the larger sub-utility from public good consumption. In addition, $\hat{t}_r$ decreases with A_r since at the margin the social gains from taxation are fixed—i.e., $\alpha\gamma - 1$—and the Northern elite's net rent is decreasing with the regional productivity. Finally, $\hat{t}_r$ has an uncertain relationship with α, which limits the elite's rents but augments the sub-utility from public good consumption. Thus, the equilibrium investment and welfare equal $\frac{A_r}{8} + \frac{\alpha\gamma-1}{8(K+\alpha-1)}$, which rises with A_r, γ, and α and falls with K since it is an inverse measure of the feasibility of public good production. Tax revenues $\hat{t}_r A_r \hat{C}_r = \frac{\alpha\gamma-1}{16(K+\alpha-1)^2} - \frac{A_r^2}{16(\alpha\gamma-1)}$ display behaviors similar to $\hat{t}_r$ and thus fall with A_r and K, rise with γ, and have an uncertain relationship with α.

3.2 Political Union

Under political union, the Northern elite devotes to the production of g_S a share of tax revenues $\alpha^U < 1 - K < \frac{1}{\gamma}$ given our restrictions on K.[18] In words, we assume that under political union the extent of extraction from the South is sufficiently severe to make at the margin taxation profitable for the Northern elite and, given the hypothesized limits to state capacity, to endogenously let the citizenry prefer private to public good production. Since the

[17] Allowing the level of public good to shape future investment is an important avenue for further research.
[18] Envisioning a fall in the quality of g_S under political union would not change the gist of the model.

tax revenues not appropriated by the Northern elite from region r finance g_r, the citizenry's problem is as under autarky and $\hat{C}_N^U = V_N^U = \tilde{t}_N^U \frac{A_N}{4} = \tilde{t}_N \frac{A_N}{4} = V_N = \hat{C}_N$, $\hat{C}_S^U = V_S^U = \tilde{t}_S^U \frac{A_S}{4}$, and $\tilde{t}_S^U \equiv 1 - \hat{t}_S^U \left(1 - \alpha^U \gamma\right)$. Hence, the Northern elite selects $\left\{t_N^U, t_S^U\right\}$ maximizing

$$(1 - \alpha - K)\, t_N A_N \hat{C}_N^U + \left(1 - \alpha^U - K\right) t_S A_S \hat{C}_S^U + V_N^U + \beta V_S^U, \tag{3}$$

where $\beta < 1$ reflects the Southern citizenry's political relevance. Since there is no trade between regions, $\hat{t}_N^U = \hat{t}_N$, $\hat{t}_S^U = \frac{1}{2(1-\alpha^U\gamma)} - \frac{\beta}{2A_S(1-\alpha^U-K)}$, and $\hat{t}_S^U A_S \hat{C}_S^U = \frac{A_S^2}{16(1-\alpha^U\gamma)} - \frac{\beta^2\left(1-\alpha^U\gamma\right)}{16(1-\alpha^U-K)^2}$. Thus, the tax revenues raised in the South increase with both A_S and γ, decrease with K, and have an uncertain relationship with α^U. The first comparative statics is different from the autarky case because now the marginal rent-extraction benefits are higher than the marginal tax-collection costs, and thus an increase in A_S and in turn in the private good production implies more extraction. Finally, $\hat{t}_S^U A_S \hat{C}_S^U$ fall with β and are larger than under autarky when A_S is not too small and $\beta \to 0$. As seen in section 2, over the 19th century the South kept a significant but not extreme technological primacy and displayed the most limited political relevance for the Piedmontese elite. Hence, the post-unitary governments extracted from it above-average land property tax revenues per capita, which were also larger than those raised by the Bourbons (see figure 1). Proposition 1 summarizes our analysis:

Proposition 1: *Under autarky, the tax revenues raised in the South fall with the regional productivity A_S and decrease with the marginal tax-collection costs K. Under political union, they rise with A_S, fall with both K and the political relevance of the South for the Northern elite β, and are larger than under autarky if A_S is not too small and $\beta \to 0$.*[19]

Next, we take stock of the results obtained in this section to analyze the impact on investment and outcomes of an exogenous shock turning autarky into a political union.

3.3 The Rise of the North-South Divide

Under political union, the Southern citizenry's investment and welfare $\hat{C}_S^U = V_S^U = \frac{A_S}{8} + \frac{\beta\left(1-\alpha^U\gamma\right)}{8(1-\alpha^U-K)}$ rise with K, β, and α^U since all these factors curb extraction and so investment distortions. Moreover, a little bit of algebra shows that the Southern citizenry's welfare is

[19] To elaborate, $\hat{t}_S^U A_S \hat{C}_S^U > \hat{t}_S A_S \hat{C}_S$ whenever $\frac{A_S^2}{16(1-\alpha^U\gamma)} + \frac{A_S^2}{16(\alpha\gamma-1)} > \frac{\beta^2\left(1-\alpha^U\gamma\right)}{16(1-\alpha^U-K)^2} + \frac{\alpha\gamma-1}{16(K+\alpha-1)^2}$.

higher under autarky (political union) for β lower (higher) than $\frac{(\alpha\gamma-1)\left(1-\alpha^U-K\right)}{(1-\alpha^U\gamma)(K+\alpha-1)}$. Going back to our historical experiment, given levels of α^U, γ, and K common to all the annexed regions, those to which the Piedmontese elite assigned a large β should have gained from unification, whereas those for which β was moderate or low should have lost. Consistent with this remark, figure 3 displays the negative relationships between the regional political relevance on the one hand and distortions in land property taxes, railway diffusion, culture, and human capital on the other hand. Proposition 2 summarizes these remarks:

Proposition 2: *Under political union, both the Southern citizenry's investment $\hat{C}_S^U$ and welfare V_S^U rise with the marginal tax-collection costs K and the political relevance β, and they are lower (higher) than under autarky for β sufficiently small (large).*

To assess the relevance of these results, two remarks are crucial. First, our model provides a general theory of endogenous extractive policies in a political or economic union dominated by one of its constituents caring asymmetrically about the remaining members. Accordingly, $\hat{t}_S^U$ can be interpreted as the extent of any of the distortionary policies selected by the unitary government and discussed in section 2, i.e., trade, financial, and public spending policies. As a result, proxies for both the marginal tax-collection cost and the political relevance will be negatively related to the entire array of post-unitary distortionary policies. Second, our analysis can be extended to endogenize the parameter β in order to consider reforms towards a more democratic political process constraining the Northern elite's choices (North et al., 2009; Acemoglu and Robinson, 2012; Boranbay and Guerriero, 2016). Similarly, the Northern elite might be induced to extract less if worried that the South's citizenry could opt out of the modern sector producing X_S and specialize instead in a sector demanding no investments. We leave the first robustness check to future research being less related to our historical experiment, but we discuss in details the second one in the following section.

3.4 General Equilibrium Disincentives to Extraction

The Southern citizenry can consume an alternative good T_S—i.e., wheat—produced through a "traditional" technology, which is linear in the productivity parameter L_S with $L_S < \frac{A_S^2}{16} + \frac{\beta A_S\left(1-\alpha^U\gamma\right)}{8(1-\alpha^U-K)} - \frac{3\beta^2\left(1-\alpha^U\gamma\right)^2}{16(1-\alpha^U-K)^2}$. Being the traditional sector technology independent of investment activities, the indirect utility of the citizenry S producing the good T_S equals

$\sqrt{(1-\hat{\tau}_S^U)\,T_S + \alpha^U\gamma\hat{\tau}_S^U T_S} = \sqrt{\tilde{\tau}_S^U L_S}$, where τ_S^U is the tax rate levied on the traditional good in the South and $\tilde{\tau}_S^U \equiv 1 - \hat{\tau}_S^U\left(1-\alpha^U\gamma\right)$. In equilibrium, $V_S^U = \frac{\beta\left(1-\alpha^U\gamma\right)}{2(1-\alpha^U-K)}$ because $\tau_S^U = \frac{1}{1-\alpha^U\gamma} - \frac{\beta^2\left(1-\alpha^U\gamma\right)}{4L_S(1-\alpha^U-K)^2}$. Thus, the Southern citizenry selects the traditional sector if $\alpha^U < \frac{3\beta-A_S(1-K)}{3\beta\gamma-A_S} \equiv \overline{\alpha}^U$, even if the Northern elite would always prefer otherwise under our restriction on L_S. Therefore, the latter is now willing to extract a weakly lower surplus by acting as if α^U was at least $\overline{\alpha}^U$ to levy taxes on a more productive activity. The Northern elite will face a similar incentive, should we allow for inter-group trade. In this last case, extraction is curbed by the prospect of cheap imports. Since regional trades were very limited over our sample [Zamagni 1993, p. 10], we leave also this extension to future research.

4 Empirical Implications

Our model produces two sets of implications regarding the aforementioned thirteen present-day Italian regions incorporated by the Kingdom of Italy before World War I but not part of the Kingdom of Sardinia. While the first one concerns the determinants of pre-unitary and post-unitary tax policies, the second one deals with the impact of the determinants of post-unitary extractive policies on both post-unitary investment and economic outcomes. These implications can be restated as testable predictions in the following manner:

Predictions: *Pre-unitary tax revenues will fall with both the region's productivity and the marginal tax-collection costs but will be independent of the region's political relevance for the Piedmontese elite. Post-unitary tax revenues will increase with the region's productivity and decrease with both the marginal tax-collection costs and the region's political relevance. Finally, both post-unitary cultural and human capital accumulation and economic outcomes will rise with the marginal tax-collection costs and the region's political relevance.*

5 Evidence

To test our predictions, we need, first and foremost, information on the most economically relevant taxes, proxies for the regional productivity, the tax-collection costs, and the regional political relevance, and measures of both cultural and human capital accumulation and economic outcomes. Furthermore, we require an appropriate empirical strategy.

5.1 Measuring Taxation and Its Determinants

Following the extant literature (Ciccarelli and Fenoaltea, 2013), we base our analysis on 10-year benchmarks. Moreover, we focus on the period around the unification over which the thirteen regions we consider kept stable territorial limits and extractive policies remained region-specific, i.e., 1801-1911 (Parravicini, 1958).[20] We employ present-day regional boundaries, but our results are similar if we switch to the historical ones.[21]

Being the Italian economy mainly agrarian over the sample (see section 2), we analyze the land property taxation to construct our main proxy for extractive policies. In the absence of sufficient information on the pre-unitary fiscal legislation and given the structure of the *contingente* system, we focus on the revenues from land property taxes—i.e., "imposta sul valore fondiario"—per capita in 1861 lire, i.e., *Land-Taxes*. We use the year available and nearest to each date. Over the sample, *Land-Taxes* accounted for 54 percent of the revenues from direct taxes, have been region-specific, and hit the estimated land profitability shaping in turn the landowner's investment. To rule out that our results are driven by the availability of land to farm, we show that they are similar if we divide tax revenues by the arable land (see the Internet appendix). Unfortunately, we cannot compare our estimates with those produced by focusing on the milling tax since it was in place over the 1868-1884 period only.

To gauge farming productivity, we exploit the geographic inputs to the technologies producing silk, citrus, olives, and wheat. While the first three correspond to the export-oriented farming analyzed in the basic model, wheat breeding embodies the traditional sector discussed in section 3.4. To the best of our knowledge, there is no information on the land suitability for the other relevant albeit secondary export-oriented cultivations in our sample, i.e., grapevine and hemp (see section 2). Lacking also information on the land suitability for mulberry, we proxy the productivity of sericulture with the normalized first principal component extracted from the share of the region's surface covered by large lakes and rivers and the average growing season precipitation in the previous decade in ml, i.e., *Sericulture*.[22] Turning to wheat farming and arboriculture, we build on the analysis in section

[20] This is roughly the period elapsing between the 1797 treaty of Campo Formio and World War I.

[21] After having annexed the Venetian and Roman provinces, the Kingdom of Italy entirely incorporated Friuli-Venezia Giulia and Trentino-Alto Adige in 1918 and 1919. Molise was separated from Abruzzi in 1963.

[22] The basin (precipitation) data are in grid format, cover the entire World (Europe) at a 0.5 degrees spatial

2, and we use principal component analysis to aggregate only those geographic features positively correlated to the underlying "productivity" construct (Rosenthal and Voeten, 2007). Accordingly, we elect as a proxy for the productivity of wheat farming the variable *Wheat*, which is the normalized first principal component extracted from the land suitability for wheat in hundredth and the average growing season precipitation in the previous decade in ml, and as a proxy for the productivity of arboriculture the variable *Arboriculture*, which is the normalized first principal component extracted from the land suitabilities for citrus and olive trees in hundredth and the average growing season temperature in the previous decade in Celsius degrees.[23] Consistent with our measurement strategy, the growing season temperature does not correlate with the first principal component extracted from itself, the land suitability for wheat, and the growing season precipitation, whereas symmetrically the growing season precipitation is unrelated to the first principal component extracted from itself, the land suitabilities for citrus and olive trees, and the growing season temperature.

To validate this aspect of our measurement exercise, we pursue a two-step strategy. First, we document for the post-unitary sample the strong and significant—conditional on both time dummies and the average land suitability for agriculture—partial correlation of *Sericulture* and *Arboriculture* with the production of respectively silk in kg and both citrus fruits in hundreds and olive oil in hectoliters (see table 3). Second, we show that our estimates are similar when we distinguish between citrus or olive breeding (see the Internet appendix). It is worth to stress that we cannot use directly the land suitabilities for wheat, citrus, and olive trees, the share of surface covered by lakes and rivers, and the growing season temperature and precipitation since the first four will be absorbed by the fixed effects, while the last two will not capture alone the productivity of either arboriculture or sericulture.

Turning to the marginal tax-collection costs, we follow Dincecco et al. (2011), and we incorporate into the analysis the share of previous decade in which the state to which the region belonged partook in external wars, i.e., *War*. A broad literature has shown that a key determinant of a state capacity to raise tax revenues is the provision of common interest public goods, such as fighting external wars (Besley and Persson, 2009). Accordingly, higher

resolution (for the 1400-1900 period), and are collected from the GLWD dataset (Pauling et al., 2006).

[23]The land suitability (temperature) data are in grid format, cover the entire World (Europe) at a 0.5 degrees spatial resolution (for the 1500-2004 period), and come from the GAEZ dataset (Luterbacher et al., 2004).

values of *War* should correspond to lower marginal tax-collection costs. Our results will be similar, should we consider the share of years from the Congress of Vienna in which the state to which the region belonged partook in external wars (see the Internet appendix).

Finally, we employ as an inverse metrics of a region's political relevance *Distance-to-Enemies*, which is the distance in km between the region's main city and Vienna over the 1801-1813, 1848-1881, and 1901-1914 periods, and Paris otherwise. Our choice can be explained as follows. Conquered by Napoleon in 1796, the Kingdom of Sardinia came out from the Congress of Vienna as an independent reign formally opposed to France. Yet, the Austro-Sardinian War, ignited by the Spring of Nations, fired up an enmity between the Savoys and Austria that flowed in 1859 and 1866 into the Second and Third Wars of Independence. France took this opportunity to draw up an alliance with the Kingdom of Sardinia with the twofold aim of gaining back Nice and the Savoy and erecting a wall against Austria. The French-Italian coalition ended in 1881 when France established a protectorate in Tunisia. Frustrated in its colonial efforts, Italy secured in 1882 the Triple Alliance with Austria and Germany by committing to mutual support against a French attack. The deterioration of the relationship between England and the Triple Alliance due to Otto von Bismark's "realpolitik" and the conflicts in Africa promoted however the 1902 French-Italian colonial agreements. The revived Paris-Rome axis paved the way to the end of the Triple Alliance and the blast of World War I. To evaluate the appropriateness of this choice, we construct the following placebo test (see the Internet appendix). First, we define an alternative inverse metrics of the political relevance as the average distance in km between each region's main city and the capital/s of the foreign power/s less salient for the House of Savoy because excluded from the Congress of Vienna and/or from the Triple Alliance and Entente.[24] Second, we document that such an indicator is never statistically significant in our post-unitary regressions.

5.2 Endogenous Taxation

We estimate endogenous taxation equations of the type

$$LT_{r,t} = \alpha_r + \beta'_{\mathbf{0}}\mathbf{A}_{r,t} + \beta'_{\mathbf{1}}\mathbf{A}^2_{r,t} + \gamma_0 S_{r,t} + \gamma_1 S^2_{r,t} + \delta_0 P_{r,t} + \delta_1 P^2_{r,t} + \epsilon_{r,t}, \tag{4}$$

[24] This (these) is (are) Istanbul between 1801 and 1815 (Amsterdam, Copenhagen, and Istanbul between 1816 and 1882 and Amsterdam, Copenhagen, Istanbul, Lisbon, and Madrid between 1883 and 1914).

where $LT_{r,t}$ is *Land-Taxes* in region r and year t, the vector $\mathbf{A}_{r,t}$ gathers *Sericulture*, *Wheat*, and *Arboriculture*, $S_{r,t}$ labels *War*, and $P_{r,t}$ is *Distance-to-Enemies*. α_r accounts for time-invariant determinants of taxation such as differences in the regional cadastres (see section 2) and geographic characteristics such as the land suitability for agriculture or the ruggedness of terrain, which, in turn, shaped transportation costs and the arable land [Pescosolido 2014, p. 98 and 129]. Including the squared terms of $\mathbf{A}_{r,t}$, $S_{r,t}$, and $P_{r,t}$ incorporates into equation (4) the nonlinearities in the functional forms of the equilibrium tax revenues (see section 3). The key implications to be tested are that the marginal effect of a rise in either *Sericulture* or *Arboriculture* is negative (positive) in the pre(post)-unitary sample, the marginal effect of an increase in *War* is positive, and the marginal effect of a rise in *Distance-to-Enemies* is insignificant in the pre-unitary sample and positive and significant otherwise.[25]

In judging our empirical strategy, it is important to highlight the adequacy of the empirical approach and the exogeneity of the regressors. Starting from the former, the two crucial untested assumptions we embrace are that unification was an exogenous shock and that it did not dramatically change the structure of the regional economies making our positive taxation model inadequate for the post-unitary sample. For what concerns the first point, there is a broad agreement in the historical literature that "the unification of Italy in 1861 caught almost everyone, both in Italy and abroad, by surprise" [Cohen and Federico, 2003, p. 70]. Turning to the second point, the percentage of the active population employed in the industrial sectors grew between 1861 and 1911 by only four percent—i.e., from 17 to 21—in the North and even felt by three percent—i.e., from 21 to 18—in the South. As stressed by the related historical literature then [Zamagni 1980, p. 136; Pescosolido 2014, p. 211 and 278-279], Italy remained before World War I an intrinsically agricultural economy. Speaking instead of the exogeneity of the regressors, three observations are key. First, the controls encapsulated in $\mathbf{A}_{r,t}$ are exogenous because driven by either climate shocks or features of the region's terrain independent of human effort. Second, *War* is determined by the following six external conflicts: 1. "Austro-Sardinian" War of 1848; 2. "Roman Republic" War of 1849; 3. "Italian Unification" War of 1859; 4. "Italian-Roman" War of 1860; 5. "Neapoli-

[25]For instance, the second marginal effect can be expressed in terms of the parameters of equation (4) as $\left(\hat{\gamma}_0 + 2\hat{\gamma}_1\overline{S}\right)\Delta$, where Δ is the rise in *War* from the value $\overline{S}$, whereas $\hat{\gamma}_0$ and $\hat{\gamma}_1$ are estimated coefficients.

tan" War of 1860; 6. "Seven Weeks" War of 1866. As detailed in the Internet appendix, these clashes were unfold by the pre-unitary foreign policy of the Kingdom of Sardinia, the unrests provoked by the Spring of Nations, and the German realpolitik. Hence, since the Piedmontese elite did not foresee the unification [Duggan 2008, p. 208-213], none of the policy makers selecting extractive policies also affected these conflicts (Killinger, 2002; Paoletti, 2008; Riall, 2009). Finally, also *Distance-to-Enemies* is determined by events outside the control of the elites of the pre-unitary states and of the Piedmontese elite after the unification, like the Congress of Vienna, the Spring of Nations, the French expansion in Tunisia, and the German realpolitik.[26] Moreover, since *Distance-to-Enemies* is identified by its time variation and exports were mainly channeled via maritime transportation (see section 2), it cannot simply reflect the distance from international markets. Finally, multicollinearity is not an issue since the correlation between *War* and *Distance-to-Enemies* is limited.

Columns (1) to (3) of table 4 display the estimates for three alternative specifications for the pre-unitary sample, the first excluding both *War* and *Distance-to-Enemies*, the second excluding only *Distance-to-Enemies*, and the third one including all controls. Columns (4) to (6) of table 4 have the same structure but are based on the post-unitary sample. To control for arbitrary correlation within groups, we always allow for clustering by region.[27] We will obtain similar results, should we deal with generic spatial dependence in the error term by relying on the Conley's (1999) standard errors (see the Internet appendix).

The results are consistent with the model predictions, and the implied effects are quite large. First, in the pre-unitary sample a rise in *Arboriculture* from the lowest North's value—i.e., 0.18 in Lombardy—to the highest South's one—i.e., 1 in Apulia—implies a 5.3-standard-deviation fall in *Land-Taxes* in column (1) and is always significant at 10 percent or better in columns (1) to (3). This is not the case for either *Sericulture*. These patterns are consistent with the mid-19th century boom in arboriculture exports and the Pebrine epidemic (see section 2). Second, the proxies for farming productivity are insignificant in the post-unitary sample as expected given the rising political power of the industrialists after the agrarian

[26] For the 1801-1851 sample, we cannot construct a proxy for the political relevance of each region for the elite of the pre-unitary state to which it belonged since the partition of Italy by the Congress of Vienna was precisely aimed to assure that none of these states could attack or be attacked by the neighboring states.

[27] Our conclusions are the same when we deal with the "few clusters" problems by using the critical values of the T distribution with degrees of freedom equal to the number of clusters (Cameron and Miller, 2015).

crisis (see section 2). Third, *War* is not significantly related to *Land-Taxes*. This result squares with the relative higher difficulty of all the Italian states to implement tax rises versus other types of policies. To illustrate, the unitary government could easily impose in 1861 the enormous—two thirds of the total—Piedmontese public debt upon the rest of the country, but the share of direct taxes not exacted was still about the thirty percent in 1866 [Frascani 1988, p. 14; Pescosolido 2014, p. 148-173]. Finally, *Distance-to-Enemies* is insignificant in the pre-unitary sample but represents the strongest predictor of the post-unitary revenues from land property taxes, and a rise from its lowest North's value—i.e., 436 in Veneto—to its highest South's one—i.e., 1586 in Sicily—is conducive to a 1.3-standard-deviation increase in *Land-Taxes*, which is significant at 5 percent in column (6).

All in all, it is fair to summarize our results stating that pre-unitary tax policies trade-off net tax-collection costs minimization and the citizenry's welfare maximization, whereas post-unitary ones respond only to the asymmetric rent-seeking interests of the Piedmontese elite. Next, we study the impact of this rational extraction process on post-unitary outcomes.

5.3 The Rise of the North-South Divide

Given the functional form for $V_S^U = \hat{C}_S^U$, we estimate outcome equations of the type

$$Y_{r,t} = \alpha_r + \boldsymbol{\beta}_{\mathbf{2}}' \mathbf{A}_{r,t} + \gamma_2 S_{r,t} + \gamma_3 S_{r,t}^2 + \delta_2 P_{r,t} + \zeta D_{r,t} + \nu_{r,t}, \tag{5}$$

where $Y_{r,t}$ is the ratio of one among six development indicators to its 1861 value, i.e., *Culture*, *Illiterates*, *GDP*, *GSP*, *VA-T*, and *VA-M* (see table 1). These indicators are respectively the share of active population engaged in political, union, and religious activities,[28] the percentage points of the illiterates in the total population over the age of six, the income in 1861 lire per capita, the gross saleable annual farming product per employee, and the value added in the textile and manufacturing industries in thousands of 1861 lire per capita. While *Culture* (*Illiterates*) is positively (negatively) linked to culture (human capital accumulation), the textile and above all the manufacturing value added gauge the profitability of the sectors that became the bulk of the Italian industry between the two wars [Pescosolido 2014, p.

[28]The post-unitary activity rate was 54 (53) percent in the North (South). Felice (2012) constructs another proxy for culture, which however is less reliable being a mix of socio-political participation and crime rates.

199-204]. When needed, we impute a missing observation with the preceding data point. Crucially, our results are robust to focusing on the 1871-1911 subsample for which we observe all the variables (results available upon request) and/or considering different proxies for $Y_{r,t}$, i.e., the life expectancy, the height of conscripted workers, the logarithm of the population per square km, and the value added in the engineering, chemical, and metal-making industries again in thousands of 1861 lire per capita (see the Internet appendix).

α_r controls for time-invariant drivers of development and, notably, geography, differences in the regional cadastres, and asymmetric initial structural conditions, such as the pre-unitary inclusiveness of the political process, extent of power fragmentation, and availability of local inputs and infrastructures. To avoid that these dimensions, which constituted the only significant differences between clusters in 1861 (see section 2), are biasing our results through a time-variant effect, we document that the gist of our empirical analysis is robust to experimenting with time dummies and their interaction with proxies for the pre-unitary inclusiveness of political institutions, land ownership fragmentation, coal price, and railway length (see section 5.4). Considering in a similar manner any of the other initial structural dimensions reported in table 2 or the 1861 level of human capital delivers similar results.

$D_{r,t}$ is the difference between the observed *Land-Taxes* and the land property tax revenues per capita forecasted using the specification in column (1) of table 4, i.e., *Distortion-LT*. We do not use as forecasting model one of the specifications reported in columns (2) and (3) of the same table since post-unitary values of $S_{r,t}$ and $P_{r,t}$ should be irrelevant in the counterfactual autarky regime. In our model, the severity of post-unitary extraction entails that the Southern citizenry prefers private to public good production, and thus observed tax revenues higher than the counterfactual levels—i.e., positive *Distortion-LT* values—imply excessive taxation. This interpretation is consistent with the evidence on the inefficiency of post-unitary public spending in the South discussed in section 2. In evaluating how appropriate the construction of *Distortion-LT* is, three observations are key. First, our approach is closely related to the synthetic control method whereby the land property taxes that would prevail in the conterfactual scenario without unification and forecasted from the endogenous taxation model run on pre-unitary data can be seen as a synthetic control obtained by the preintervention characteristics of the treated units (see Abadie et al., [2015]). Crucially,

a similar variable cannot be constructed building on the preintervention characteristics of untreated units since the two-century-long stagnation of the Italian economy and the peculiarity of the post-unitary Italian tax code make the Italian regions an unique case within the most comparable sample of European regions (Malanima, 2010). Second, as discussed in section 3.3, *War* and *Distance-to-Enemies* capture the economic relevance of all post-unitary distortionary policies, whereas *Distortion-LT* chiefly incorporates unobserved components of the region's tax-collection costs and political relevance specific to the selection of land property taxes. Accordingly, we interpret a significant δ_2 and/or a significant marginal effect of a rise in $S_{r,t}$ together with an insignificant ζ (the way around) as supportive of the primacy of the entire array of distortionary public policies over tax distortions (otherwise). Finally, as for the estimates in table 4, *War*, *Distance-to-Enemies*, and *Distortion-LT* should all be considered exogenous because driven by events outside the control of the Piedmontese elite.

A glance at figures 1 and 3 confirms the model predictions. The two bottom-graphs in figure 1 show the opposite post-unitary evolutions of land property tax revenues and railway diffusion. In a nutshell, the regions less politically relevant for the Piedmontese elite experienced both the most hindering tax policies and the weakest public effort in railway construction, whereas the opposite is true for the regions nearest to the French and Austrian borders. A similar pattern arises when post-unitary distortions in land property taxes and those in railway diffusion, which are further discussed in section 5.5, are compared with the evolution of both *Culture* and *Illiterates* (see figure 3). To elaborate, *Distortion-LT* is the lowest in Veneto, which enjoyed a 1.188—1861—lire per capita average fall in land property taxes, and the highest in the South, which bore a 0.580—1861—lire per capita average rise in *Land-Taxes*, whereas the post-unitary gap in land property tax distortions between blocks was 0.408—1861—lire per capita or correspondingly a strikingly 651.2—1861—lire per square km of arable land (see table 1 and the Internet appendix). To put these figures into perspective, a back-of-the-envelope calculation reveals that tax distortions raised of seven times the 1871 start-up cost of a citrus cultivation in the South at the prevailing saving rate of five percent (Della Torre et al., 2006), i.e., from 1.4 to 10 years of average after-tax farming profits per square km of arable land.[29] Not surprisingly, absent developed financial markets,

[29]To illustrate, we build on Dimico et al. (2012), Pescosolido (2010), and SVIMEZ (2011), and we calculate

the South was braked by this huge spike in investment costs and witnessed the sharpest fall in a culture of cooperation and the most limited decline in illiteracy.

Multivariate analysis confirms these relationships (see table 5). As expected, the marginal effects of a rise in *War*, δ_2, and ζ are negative (positive if the dependent variable is *Illiterates*) whenever significant. To illustrate, a one-standard-deviation rise in *War*—i.e., 0.01—from its post-unitary mean—i.e., 0.005—corresponds to a 0.6-standard-deviation fall in *Culture* and a one-standard-deviation increase in *Illiterates*. Similarly, a rise in *Distance-to-Enemies* from the lowest North's to the highest South's value—1150 km—implies a 1.1-standard-deviation decrease in *Culture* and a 1.7-standard-deviation fall in *GSP*, whereas a one-standard-deviation increase in *Distortion-LT* or 1.8—1861—lire per capita leads to a roughly 0.7-standard-deviation decrease (rise) in *GDP*, *GSP*, *VA-T* (*Illiterates*) and 1.4-standard-deviation fall in *VA-M*. All these coefficients are significant at 10 percent or better.

5.4 Identifying Causal Relationships

Albeit reverse causation is not an issue (see sections 5.2 and 5.3), we cannot exclude that our results are driven by unobserved heterogeneity and, in particular, by differences in 1861 structural conditions. To evaluate whether this is the case, we operate as follows. First, we assess the impact of the initial structural dimensions on the estimates discussed in section 5.3. Next, we use selection on observables to assess the bias from unobservables.

5.4.1 Controlling for Observables

To illustrate the first exercise, we consider time dummies and their interaction with the four dimensions displaying significantly different 1861 values in the South and in the North (see table 2). Crucially, including decennial dummies also controls for another key time-varying confounder, which is the series of end of the 19th century international shocks to the terms of trade of the farming products discussed in section 2 (Barbagallo, 1980).

The first factor we consider is the average over the 1000-1850 period of the constraints on the elite's power developed by Tabellini (2010) and Boranbay and Guerriero (2016), i.e.,

that the average pretax farming profits per square km of arable land in Sicily were 5964 lire, which we take as a proxy for the remainder of the South. Moreover, we use the fact that the average (distortions in) land property tax revenues per square km of arable land in the South were 565 (483) lire and that, being seed and labor costs negligible, the main start-up expenses of a citrus cultivation were the five years of land property taxes to be payed while the newly planted trees became productive [Dimico et al. 2012, p. 2].

Democracy-I. Including this observable allows us to directly contrast our framework with the aforementioned literature on the persistent effects of medieval political institutions on present-day culture and outcomes (Putnam et al., 1993). The second structural condition we analyze has been instead proposed by Del Monte and Pennacchio (2011), and it is defined as the 1861 number of payers of land property taxes divided by the agricultural population both collected from the "Inquiry into agriculture and peasant conditions" completed in 1885 by Stefano Jacini, i.e., *Land-Fragmentation-I*. Incorporating this control into equation (5) directly tests the idea that inequality in land ownership and, more generally, power originated an exploiter Southern bourgeoisie (Felice, 2014). We will obtain similar estimates should we employ as proxy for power fragmentation the Gini coefficient proposed by Vecchi (2011). Crucially, considering either *Democracy-I* or *Land-Fragmentation-I* makes also possible to compare our model testable predictions with the alternative idea that the present-day divide originates in the backwardness of the Kingdom of Two Sicilies (Franchetti and Sonnino, 1876) and/or the persistence of the Southern pre-unitary feudal system (Gramsci, 1966). To understand instead the role of the variation in input availability on the asymmetric spread of the Industrial Revolution (Krugman, 1981), we control for the 1861 coal price per tonne in Genoa, which was the main harbor for its import, augmented for the transport cost to the region in 1861 lire, i.e., *Coal-Price-I*. As clarified by Missiaia (2012), coal contributed the most to the post-unitary power needs becoming increasingly pivotal in the success of the industrial sectors. Exploiting instead variation in hydroelectric power, again available from Missiaia (2012), delivers similar estimates. Finally, to explore the role of the initial regional endowments of infrastructures, we include into our analysis the 1861 railway length in km per square km, i.e., *Railway-I*. Crucially, using the predetermined values of these four structural conditions minimizes the likelihood of their endogeneity.

Panels A to D of table 6 report the estimates of the specifications considering also time dummies and their interaction with initial structural dimensions. Three are the key observations. First, our results remain qualitatively similar when we condition on observables suggesting that, as discussed in more details in section 5.4.2, selection on unobservables should not be considered an issue. Consistent with this remark, estimates available upon request reveal that the time-variant impacts of the starting conditions are in general statistically

insignificant implying that alternative explanations of the opening of the present-day gap do not make a dent in fitting the data. Second, the region's taxation capacity is, conditional on observables, the main driver of outcomes suggesting that it was the mix of all distortionary policies to really matter. Finally, conditional on observables, distortionary policies do not significantly shape *VA-M*. This pattern crucially implies that extraction did not allow the Northern growth sector to start its chase to the most advanced European industries as the prewar divide clearly suggests [Pescosolido 2014, p. 278-300]. Hence, post-unitary distortions cannot be considered the acceptable price that the low political relevance regions had to pay for the industrialization of the only part of the country ready for it and, in turn, of Italy (Romeo, 1987).[30] This conclusion squares with proposition 2 whereby a sufficient rise in the rulers' extractive power penalizes all low political relevance regions.

5.4.2 Using Selection on Observables to Assess the Bias from Unobservables

Despite our attempts to control for observables, our estimates may still be biased by unobservables correlated with the regional productivity, the region's taxation capacity, and/or its political relevance. To evaluate this issue, we calculate the index proposed by Oster (2016) to measure how much stronger selection on unobservables, relative to selection on observables, must be to explain away the entire estimated effect. To see how it is calculated, consider a regression with a restricted set of control variables and one with a full set of controls. Next, denote the estimate of the coefficient attached to the variable of interest and the R^2 from the first regression λ^R and R^R, where R stands for "restricted," and those from the second regression λ^F and R^F, where F stands for "full." Then, the index is the absolute value of $\frac{\lambda^F(R^F-R^R)}{(\lambda^R-\lambda^F)(1-R^F)}$. The intuition behind the formula is as follows. The lower the absolute value of $(\lambda^R - \lambda^F)$ is and the nearer R^F is to its maximum value of 1, the less the estimate of the coefficient attached to the variable of interest is affected by selection on observables, and the stronger selection on unobservables needs to be to explain away the entire effect. Moreover, the higher the absolute value of λ^F and $R^F - R^R$ are, the greater is the effect that needs to be explained away by selection on unobservables.

In table 7, we focus on the variables testing the key model predictions, i.e., the proxy for

[30] To illustrate, the divide "was not deliberately constructed [...] to the disadvantage of the South, but it was even acceptable in a country [with a differentiated] productive system" [Iuzzolino et al. 2011, p. 26].

the productivity of arboriculture and the measure of the regional political relevance in the endogenous taxation models run respectively on the pre-unitary and post-unitary samples (see columns (1) and (2)), and *War*, War^2, *Distance-to-Enemies*, and *Distortion-LT* in the outcome equations (see columns (3) to (8)). The covariates incorporated only in the full set are listed in the last three lines of table 7 and include in the case of the outcome regressions the time effects and their interaction with *Democracy-I* since these are the most relevant extra controls in table 6. We will obtain similar indexes (available upon request), should we focus instead on one among *Land-Fragmentation-I*, *Coal-Price-I*, and *Railway-I*. The median and the average of the indexes in columns (1) and (2) are 0.72 and 0.96, whereas those in columns (3) to (8) are 1.09 and 3.89. Thus, to attribute the entire OLS estimates to selection effects, on average selection on unobservables would have to be about 4 times greater than selection on observables. Given the very high fit of our regressions—i.e., with an average within R^2 of 0.31(0.47) in table 4(5) and 0.75 in panel A of table 6, this is unreasonable.

5.5 Endogenous Public Good Provision

We close our analysis by assessing whether distortions in taxation were accompanied by similar distortions in public spending. To elaborate, we build on our model, and we first identify the pre-unitary determinants of railway diffusion and we then assess its post-unitary distortions by estimating public good provision equations of the following type

$$R_{r,t} = \alpha_r + \iota_t + \beta'_{\mathbf{3}}\mathbf{A}_{r,t} + \beta'_{\mathbf{4}}\mathbf{A}^2_{r,t} + \gamma_4 S_{r,t} + \gamma_5 S^2_{r,t} + \delta_3 P_{r,t} + \delta_4 P^2_{r,t} + \tau_0 O_r \iota_t + \eta_{r,t}, \quad (6)$$

where $R_{r,t}$ is the length in km per square km of railway built in the previous decade, i.e., *Railway*. Following Picci (2002), we also consider the orographic nature of each region as a proxy for railway building costs by including in the specification the terrain ruggedness O_r in km—i.e., *Ruggedness*—interacted with time dummies ι_t. Since ι_t appears also as extra control, we do not cluster standard errors at the regional level to preserve a sufficient within-region variation. This time, α_r accounts for time-invariant shifters of railway diffusion like the traveling distance from international markets and long-lasting institutions.

Table 8 is structured in the same way as table 4 and reveals the following two facts. First, the crucial aim of pre-unitary railway diffusion was the strengthening of the export of farming

products and, in particular, wheat in Lombardy-Venetia, which because of the support of Vienna was the only Italian state outside the Kingdom of Sardinia with any public spending capacity [Pescosolido 2014, p. 38 and 100]. Accordingly, a rise in *Wheat* from the lowest South's value—i.e., 0 in Calabria—to the highest North's one—i.e., 0.87 in Lombardy—implies a huge 42.8-standard-deviation increase in *Railway* in column (1) and is always significant at 5 percent in columns (1) to (3). Second, the post-unitary railway expansion was only shaped by the regional political relevance. In particular, a rise in *Distance-to-Enemies* from the lowest North's value to the highest South's value—1150 km—leads to a 7.6-standard-deviation fall in *Railway*, which is significant at 5 percent (see column (6)).

Placing side to side these with the estimates discussed above, we can conclude that regions farther away from the possible battlefields enjoyed the slowest post-unitary railway diffusion but paid the highest relative costs. Moreover, plotting the differences between the observed post-unitary values of *Railway* and those forecasted using the specification in column (1) of table 8—i.e., *Distortion-R*—across regional clusters reveals that both low and middle political relevance regions experienced periods of both under- and over-investment in railway, whereas the state's effort in the high political relevance region was generally more intense than it would have been without unification (see upper-right graph in figure 3). This evidence is consistent with the conclusions we draw in section 5.4 insofar it speaks again against the idea that subsidization of the Northern infrastructures at the South's expenses was optimal. On the one hand indeed, the unitary government failed to provide the South with the technical means to replace the foreign markets with domestic outlets in the aftermath of the price shocks of the 1880s further squeezing the after tax profits to be invested in the industry [Iuzzolini et al. 2011, p. 20]. On the other hand, to effectively strengthen the newborn advanced manufacturing industry the highest railway spending should have targeted the middle and not the high political relevance regions [Iuzzolini et al. 2011, p. 22].

5.6 External Validity

To alleviate concerns that the Italian unification might be a special case, we briefly discuss the closely related case of the post-Civil War divide between Southern and Northern US states, which we illustrate in more details in the Internet appendix.

In the 1850s, slavery was source of mounting political tension between the Southern slave states and the abolitionist North, and accordingly the Republicans, dominant in the North, built the entire 1860 Lincoln's presidential campaign on a complete ban on slave-owning. Lincoln's election was then the final trigger to the secession of eleven Southern states first and a dreadful conflict between them and the rest of the Union then. The war brought about almost one million casualties, the murder of Lincoln, and the tacit understanding among the winners that the "prewar leadership of the Southern slavocrats in national politics was permanently to be replaced in favor of the Northern direction" [Donald and Randall 1961, p. 535]. To this end, the new government first split the ex-Confederate states into five military districts under martial law and then steadily raised their property taxes to force redistribution of land from those white planters that, because of the heavier tax burden, were going to be expropriated of their estates to blacks and poor whites [Foner 1988, p. 346-383]. Yet, because of this last group's liquidity constraints, Southern land were increasingly acquired by Northern landowners greatly widening the development gap between the two blocks [Foner 1988, p. 399]. Similarly to the Italian case, the Southern rage together with the Northern population's discontent with political instability irremediably put an end, after the Democrats' victory of the disputed 1876 presidential election, to extraction but only when its consequences were already permanent [Donald and Randall 1961, p. 548].

6 Conclusions

This paper has developed a theory of "endogenous extractive policies" grounded on the mix of the heterogeneity in the relevance of the dominated groups for the dominating one and changes in the rulers' extractive power. Crucially, our framework helps shed new light on a key issue in economics, which is the huge divide between North and South of Italy despite more than 150 years of common formal institutions. In particular, we document that its opening is the result of the region-specific policies selected between 1861 and 1911 by the elite of the Kingdom of Sardinia, which annexed the rest of Italy in 1861. To illustrate, pre-unitary land property taxes and railway diffusion were shaped by each region's farming productivity but not by its political relevance for the Piedmontese elite, whereas the opposite was true for post-unitary ones. Moreover, post-unitary tax distortions and the severity of

the remaining extractive policies—captured by the region's taxation capacity and political relevance—determined the North-South gaps in culture, literacy, and development but not that in the manufacturing industry value added. Together these two patterns imply that extraction cannot be considered the acceptable price for the Italian development since it neither eased the formation of an unitary market nor favored industrialization.

Since our proxies for the drivers of extraction are independent of the policy-makers' will, reverse causation is not an issue. Yet, our results could still be produced by unobserved heterogeneity. To evaluate this aspect, we follow a two-step strategy. First, we document that our estimates remain robust to the consideration of both fixed region and time effects and the structural conditions differentiating the two blocks in 1861, i.e., pre-unitary inclusiveness of political institutions, land ownership fragmentation, coal price, and the railway length. Second, we build on Oster (2016), and we calculate that on average selection on unobservables would have to be about 4 times greater than selection on observables to completely explain away our results. Given the very high fit of our regressions, this is unlikely.

Our results characterize the crack of the dawn of the North-South divide, and identifying more recent factors aggravating these disparities is a key avenue for further research [Iuzzolino et al. 2011 p. 7-10]. More important, our framework can be employed to study related cases as the deep conflicts that are shaking the EU nowadays (see also Guiso et al., [2015]).

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Tables and Figures

Table 1: Summary of Variables

	Variable	Definition and Sources	1801-1851	1861-1911
Economic outcomes:	*Culture*:	Ratio of the share of the active population engaged in political, union, and religious activities to its 1861 value. Source: SVIMEZ (2011).		0.935 (0.155)
	Illiterates:	Ratio of the percentage points of illiterates in the total population over the age of six to its 1861 value. Source: SVIMEZ (2011).		0.784 (0.191)
	GDP:	Ratio of the income in 1861 lire per capita to its 1861 value. Sources: Malanima (2006, 2010), Baffigi (2011), Vecchi (2011), SVIMEZ (2011).		1.118 (0.285)
	GSP:	Ratio of the gross saleable annual farming product per employee, normalized in such a way that its mean for Italy in 1911 is 100, to its 1861 value. Source: Esposto (1997).		1.123 (0.278)
	VA-T:	Textile industry value added in thousands of 1861 lire per capita over its 1861 value. Source: Ciccarelli and Fenoaltea (2013).		1.213 (0.526)
	VA-M:	Manufacturing—i.e., food, mechanical engineering, leather and footwear, and textiles—value added in thousands of 1861 lire per capita over its 1861 value. Source: Ciccarelli and Fenoaltea (2013).		1.273 (0.354)
Policies:	*Land-Taxes*:	Land property tax revenues in 1861 lire per capita. Sources: Dincecco et al. (2011), Ministero delle Finanze (1863, 1872, 1882, and 1888), Ministero dell'Agricoltura, Industria e Commercio (1900 and 1912).	3.236 (1.970)	3.590 (1.187)
	Distortion-LT:	Difference between *Land-Taxes* and the forecasted land property tax revenues in 1861 lire per capita.		0.360 (1.752)
	Railway:	Length of railway built in the previous decade in km per square km. Sources: SVIMEZ (2011), Romani (1982).	0.0016 (0.0036)	0.0089 (0.0152)***
	Distortion-R:	Difference between *Railway* and the forecasted length of railway built in the previous decade in km per square km.		0.001 (0.018)
Farming technology:	*Sericulture*:	Normalized first principal component extracted from the share of the region's surface covered by lakes and rivers and the average growing season precipitation in ml in the previous decade. Sources: Pauling et al. (2006), http://worldwildlife.org/	0.306 (0.239)	0.323 (0.243)
	Wheat:	Normalized first principal component extracted from the land suitability for wheat ranging between 0 and 100 and the average growing season precipitation in ml in the previous decade. Sources: Pauling et al. (2006), http://www.gaez.iiasa.ac.at	0.281 (0.199)	0.298 (0.201)
	Arboriculture:	Normalized first principal component extracted from the land suitability for citrus and olive trees ranging between 0 and 100 and the average growing season temperature in Celsius in the previous decade. Sources: Luterbacher et al. (2004), http://www.gaez.iiasa.ac.at	0.547 (0.192)	0.532 (0.192)
Other drivers of extraction:	*War*:	Share of previous decade in which the state to which the region belonged partook in external wars. Source: http://www.correlatesofwar.org	0.004 (0.011)	0.005 (0.010)
	Distance-to-Enemies:	Distance in km between the region's main city and the capital of the fiercer enemy of the House of Savoy, i.e., Vienna over the 1801-1813, 1848-1881, and 1901-1914 periods, and Paris otherwise.	934.539 (311.239)	803.462 (255.570)***
Initial structural conditions:	*Democracy-I*:	Constraints on the elite's power averaged between 1000 and 1850. Sources: Tabellini (2010), Boranbay and Guerriero (2016).		1.838 (0.961)
	Land-Fragmentation-I:	1861 number of payers of land taxes divided by the agricultural population. Source: Jacini (1885).		0.412 (0.165)
	Coal-Price-I:	1861 coal price per tonne in Genoa augmented for the transport cost in 1861 lire. Source: Missiaia (2012).		44.019 (7.144)
	Railway-I:	1861 railway length in km per square km. Sources: SVIMEZ (2011), Romani (1982).		0.012 (0.007)
	Deposits-I:	1861 deposits held in Casse di Risparmio ordinarie in 1861 lire per capita. Source: Missiaia (2012).		11.310 (16.267)
	Rivers:	1861 navigable rivers in km per square km. Source: Ministero dell'Agricoltura, Industria e Commercio (1878).		0.059 (0.052)
	Roads:	1861 accesible national roads in km per square km. Source: Ministero dell'Agricoltura, Industria e Commercio (1878).		0.028 (0.014)
	Trade:	1861 freight shipped through the region's major harbors per capita. Source: SVIMEZ (2011).		0.248 (0.351)
	Ruggedness:	Terrain ruggedness in km. Source: http://gecon.yale.edu/		0.292 (0.082)

Note: 1. The last two columns report the mean and, in parentheses, the standard deviation of each variable in the pre- and post-unitary samples. *** labels a difference between the two means significant at 1% in a t-test with unequal variances; **, 5%; *, 10%.

Table 2: High & Middle Versus Low Political Relevance Regions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	1801-1851			1861			1861-1911		
	H&M Political	Low Relevance	(1) - (2)	H&M Political	Low Relevance	(4) - (5)	H&M Political	Low Relevance	(7) - (8)
Culture-L:				0.757	1.017	- 0.260	0.712	0.950	- 0.238
				(0.207)	(0.343)	(0.160)	(0.173)	(0.394)	(0.071)***
Illiterates-L:				74.514	82.933	- 8.419	55.057	70.858	- 15.801
				(11.571)	(8.079)	(5.478)	(19.427)	(13.703)	(3.768)***
GDP-L:	329.880	400.958	- 71.079	317.947	347.510	- 29.563	365.138	374.061	- 8.922
	(39.160)	(53.891)	(10.825)***	(13.036)	(0)	(4.927)***	(72.579)	(112.294)	(21.811)
GSP-L:				71.343	88.133	- 16.790	78.686	96.644	- 17.959
				(15.176)	(24.988)	(11.703)	(17.726)	(27.803)	(5.381)***
VA-T-L:				0.005	0.003	0.002	0.007	0.003	0.004
				(0.003)	(0.002)	(0.001)	(0.007)	(0.002)	(0.001)***
VA-M-L:				0.044	0.040	0.004	0.058	0.050	0.009
				(0.013)	(0.008)	(0.006)	(0.028)	(0.016)	(0.005)*
Land-Taxes:	2.588	3.992	- 1.403	4.739	4.356	0.382	3.635	3.537	0.098
	(1.870)	(1.831)	(0.420)***	(1.678)	(1.375)	(0.847)	(1.260)	(1.112)	(0.269)
Distortion-LT:				1.222	1.385	- 0.163	0.172	0.580	- 0.408
				(1.683)	(1.206)	(0.804)	(1.919)	(1.533)	(0.391)
Railway:	0.0022	0.0008	0.0013	0.002	0.002	0.0003	0.009	0.009	0.0002
	(0.005)	(0.001)	(0.0008)*	(0.003)	(0.003)	(0.0016)	(0.017)	(0.013)	(0.003)
Distortion-R:				- 0.001	- 0.009	0.008	0.005	- 0.003	0.008
				(0.005)	(0.015)	(0.006)	(0.018)	(0.019)	(0.004)*
Sericulture:	0.387	0.211	0.176	0.403	0.220	0.183	0.408	0.224	0.184
	(0.250)	(0.187)	(0.050)***	(0.265)	(0.211)	(0.132)	(0.248)	(0.196)	(0.050)***
Wheat:	0.397	0.146	0.251	0.411	0.153	0.258	0.419	0.158	0.262
	(0.198)	(0.079)	(0.033)***	(0.207)	(0.092)	(0.087)**	(0.192)	(0.087)	(0.033)***
Arboriculture:	0.408	0.708	- 0.299	0.389	0.685	- 0.296	0.394	0.694	- 0.300
	(0.101)	(0.140)	(0.028)***	(0.107)	(0.149)	(0.073)***	(0.100)	(0.139)	(0.028)***
War:	0.005	0.003	0.003	0.012	0.029	- 0.017	0.004	0.006	- 0.003
	(0.014)	(0.006)	(0.002)	(0.013)	(0.012)	(0.007)**	(0.007)	(0.012)	(0.002)
Distance-to-Enemy:	755.786	1143.083	- 387.298	596.286	903.167	- 306.881	649.452	983.139	- 333.687
	(204.068)	(285.051)	(56.996)***	(87.355)	(153.750)	(70.922)***	(155.368)	(231.839)	(45.473)***
Democracy-I:				2.492	1.074	1.418			
				(0.929)	(0.181)	(0.359)***			
Land-Fragmentation-I:				0.340	0.496	- 0.156			
				(0.102)	(0.204)	(0.092)*			
Coal-Price-I:				46.894	40.664	6.230			
				(8.663)	(3.980)	(3.655)*			
Railway-I:				0.015	0.007	0.008			
				(0.008)	(0.004)	(0.003)**			
Deposits-I:				16.963	4.716	12.247			
				(19.550)	(11.119)	(8.672)			
Rivers:				0.068	0.048	0.019			
				(0.052)	(0.059)	(0.031)			
Roads:				0.027	0.028	- 0.001			
				(0.012)	(0.017)	(0.008)			
Trade:				0.236	0.261	- 0.025			
				(0.348)	(0.412)	(0.214)			
Ruggedness:				0.267	0.321	- 0.054			
				(0.060)	(0.104)	(0.048)			
Number of observations	42	36		7	6		42	36	

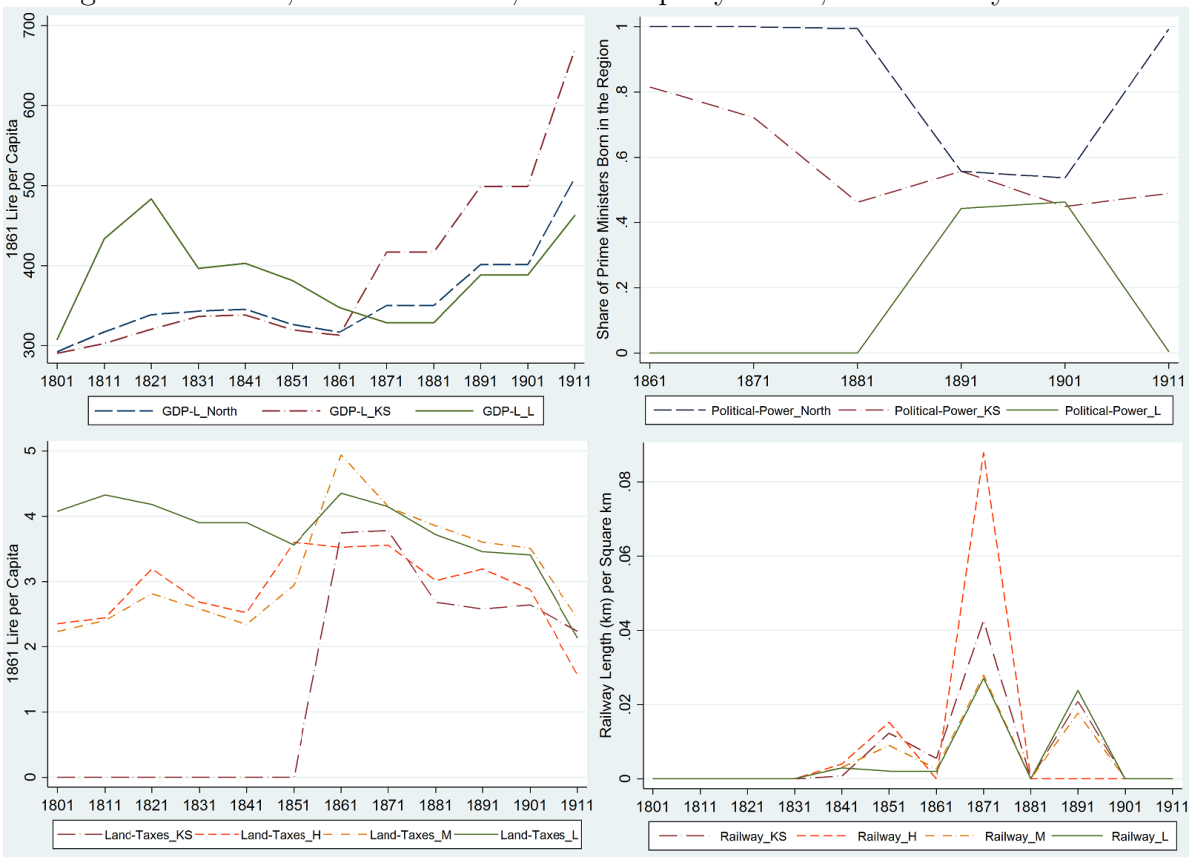
Notes:
1. *Culture-L*, *Illiterates-L*, *GDP-L*, *GSP-L*, *VA-T-L*, *VA-M-L*, and *VA-E-L* label respectively the share of the active population engaged in political, union, and religious activities, the percentage points of illiterates, the GDP, the gross saleable annual farming product per employee, and the value added in the textile, manufacturing, and engineering sectors (see also table 1).
2. Columns (1), (4), and (7) (columns (2), (5), and (8)) report the mean and, in parentheses, the standard deviation of each variable over the relevant period in the high and middle (low) political relevance group, whereas columns (3), (6), and (9) display the difference between the mean in the high and middle political relevance group and that in the low political relevance cluster over the relevant period and, in parentheses, its standard error. *** denotes a difference significant at the 1% confidence level based on a t-test with unequal variances; **, 5%; *, 10%. The high and middle (low) political relevance cluster includes Abruzzi, Emilia Romagna, Lombardy, Marche, Tuscany, Umbria, and Veneto (Apulia, Basilicata, Calabria, Campania, Lazio, and Sicily).

Table 3: Cross-Validating the Proxies for the Productivity of Export-Oriented Farming

Sericulture	0.79***		
Arboriculture		0.46***	0.66***
	Silk-P	*Citrus-P*	*Olive-P*

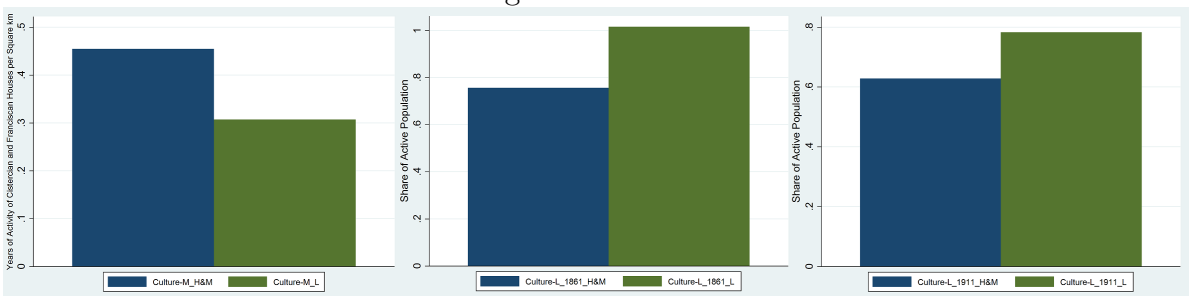
Notes:
1. *Silk-P* is the regional production of silk in kg, whereas *Citrus-P* (*Olive-P*) is that of citrus fruits in hundreds (olive oil in hectoliters). All variables are obtained from Ministero dell'Agricoltura, Industria e Commercio (1864, 1881, 1892, 1900, and 1912) and the sample consists of 78 observations over the 1861-1911 period.
2. The entries are partial correlations calculated removing the effect of both time dummies and the average land suitability for agriculture, which we directly collected from http://www.sage.wisc.edu/iamdata/ *** labels a partial correlation significant at the 1% confidence level; **, 5%; *, 10%.

Figure 1: Income, Political Power, Land Property Taxes, and Railway Diffusion



Note: 1. "Political-Power" is the share of prime ministers born in the region averaged over the previous decade. The underlying information is collected from Corbetta and Piretti (2008). The other variables are defined in tables 1 and 2. The _M (_H) group comprehends Abruzzi, Emilia Romagna, Lombardy, Marche, Tuscany, and Umbria (Veneto), whereas the _KS one gathers Liguria and Piedmont. The _North (_L) cluster includes the _M, _H, and _KS groups (Apulia, Basilicata, Calabria, Campania, Lazio, and Sicily).

Figure 2: Culture



Note: 1. "Culture-M" is the average cumulated discounted number of years of activity of Cistercian and Franciscan houses per square km in every half-century between 1000 and 1600 (see for sources and construction Boranbay and Guerriero, [2016]). The series ending in _H&M (_South) average the values for Abruzzi, Emilia Romagna, Lombardy, Marche, Tuscany, Umbria (Apulia, Basilicata, Calabria, Campania, Lazio), and Veneto (Sicily) except for "Culture-M_H&M," which does not include the data for Umbria. In this case indeed, Umbria is an outlier being the region of origin of Saint Francis and in turn of the Franciscans, who first and foremost expanded by building new houses in neighboring regions (Boranbay and Guerriero, 2016).

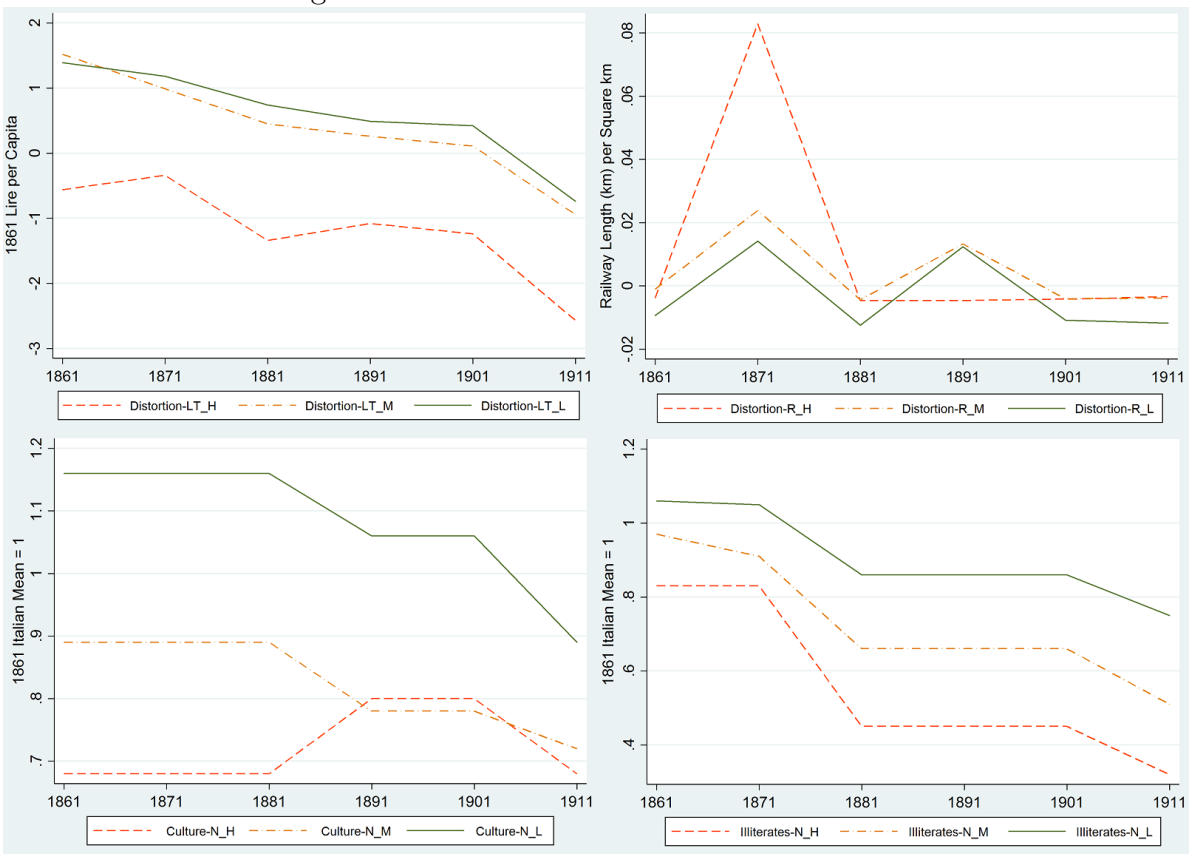
Table 4: Endogenous Taxation

	(1)	(2)	(3)	(4)	(5)	(6)
	1801-1851 sample			1861-1911 sample		
	The dependent variable is *Land-Taxes*					
Sericulture	- 5.622	2.046	3.249	- 17.520	- 16.236	- 12.214
	(11.948)	(10.234)	(9.609)	(16.801)	(9.866)*	(10.131)
Wheat	- 3.925	- 5.358	- 3.562	- 23.343	- 12.385	- 12.998
	(7.922)	(5.880)	(6.233)	(12.922)*	(10.645)	(10.001)
Arboriculture	- 12.827	- 8.177	- 5.016	- 5.180	- 5.635	- 5.603
	(5.877)**	(3.657)**	(2.784)*	(15.205)	(16.544)	(18.048)
War		- 13.119	- 11.020		65.296	79.169
		(24.637)	(30.611)		(74.961)	(81.546)
Distance-to-Enemies			0.001			0.0013
			(0.001)			(0.0006)**
Estimation	Fixed Region Effects OLS					
R^2	0.21	0.28	0.30	0.19	0.44	0.45
Number of observations	78	78	78	78	78	78

Notes: 1. The entries are marginal effects, whereas the parentheses gather standard errors allowing for clustering by region. *** labels significant at the 1% confidence level; **, 5%; *, 10%.

2. All specifications incorporate *Sericulture*, *Sericulture*^{2}, *Wheat*, *Wheat*^{2}, *Arboriculture*, and *Arboriculture*^{2}. The specifications in columns (2) and (5) (columns (3) and (6)) also include *War* and *War*^{2} (*War*, *War*^{2}, *Distance-to-Enemies*, and *Distance-to-Enemies*^{2}). The marginal effects of *Sericulture*, *Wheat*, and *War* are calculated for a rise from their lowest values in the low political relevance group, i.e., respectively 0.01, 0.00, and 0 (0.00, 0.01, and 0) in the pre(post)-unitary sample. The marginal effects of *Arboriculture* and *Distance-to-Enemies* are calculated for a rise from their lowest values in the high and middle political relevance group, i.e., respectively 0.18 and 436.

Figure 3: The Rise of the North-South Divide



Note: 1. "Culture-N," and "Illiterates-N" are respectively *Culture-L* and *Illiterates-L* normalized in such a way that their means for Italy in 1861 equal one (see table 2). The _H (_L) group comprehends Veneto (Apulia, Basilicata, Calabria, Campania, Lazio, and Sicily). The _M cluster includes Abruzzi, Emilia Romagna, Lombardy, Marche, Tuscany, and Umbria.

Table 5: The Rise of the North-South Divide

	(1)	(2)	(3)	(4)	(5)	(6)
	The dependent variable is:					
	Culture	*Illiterates*	*GDP*	*GSP*	*VA-T*	*VA-M*
War	- 8.674	18.692	- 1.741	- 13.535	- 22.031	5.469
	(4.140)**	(5.700)***	(8.959)	(8.396)	(10.856)**	(10.170)
Distance-to-Enemies	- 0.00012	- 0.00004	0.0001	- 0.0004	- 0.0003	- 0.0002
	(0.00006)**	(0.00004)	(0.0001)	(0.0001)***	(0.0002)	(0.0001)**
Distortion-LT	0.052	0.077	- 0.141	- 0.095	- 0.228	- 0.277
	(0.034)	(0.028)**	(0.040)***	(0.040)**	(0.115)*	(0.054)***
Estimation	Fixed Region Effects OLS					
R^2	0.25	0.81	0.48	0.35	0.26	0.69
Number of observations	78	78	78	78	78	78

Notes: 1. The entries are marginal effects, whereas the parentheses gather standard errors allowing for clustering by region. *** labels significant at the 1% confidence level; **, 5%; *, 10%.

2. All specifications include the proxies for farming productivity—i.e., *Sericulture*, *Wheat*, and *Arboriculture*—as well as *War*, War^2, *Distance-to-Enemies*, and *Distortion-LT*. The marginal effect of *War* is calculated for a rise from its post-unitary mean 0.005.

Table 6: The Rise of the North-South Divide — Robustness

	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A. Number of observations = 78. The dependent variable is:					
	Culture	*Illiterates*	*GDP*	*GSP*	*VA-T*	*VA-M*
War	- 19.715	11.934	- 23.083	- 29.142	- 23.754	2.939
	(6.818)***	(7.081)*	(12.170)*	(15.541)*	(25.614)	(4.683)
Distance-to-Enemies	- 0.0001	0.0001	- 0.0002	0.0001	- 0.0001	0.0003
	(0.0002)	(0.0001)	(0.0001)	(0.0002)	(0.0003)	(0.0002)
Distortion-LT	- 0.027	0.034	- 0.030	- 0.040	- 0.129	- 0.075
	(0.029)	(0.026)	(0.039)	(0.074)	(0.093)	(0.040)*
P-value for *Democracy-I* × 1861-1901 dummies	[0.17]	[0.02]	[0.02]	[0.01]	[0.00]	[0.05]
Estimation	Fixed Region and Time Effects OLS					
R^2	0.51	0.96	0.79	0.60	0.71	0.91
	(1)	(2)	(3)	(4)	(5)	(6)
	Panel B. Number of observations = 78. The dependent variable is:					
	Culture	*Illiterates*	*GDP*	*GSP*	*VA-T*	*VA-M*
War	- 17.078	12.141	- 5.630	- 26.703	- 59.223	3.329
	(2.889)***	(4.264)***	(10.364)	(9.296)***	(31.051)*	(3.871)
Distance-to-Enemies	- 0.0001	$8.88E^{-6}$	- 0.00005	0.0002	0.0004	0.0003
	(0.0002)	(0.0001)	(0.00017)	(0.0002)	(0.0004)	(0.0002)
Distortion-LT	- 0.030	0.048	- 0.014	- 0.042	- 0.201	- 0.086
	(0.044)	(0.025)*	(0.067)	(0.075)	(0.123)	(0.050)*
P-value for *Land-Fragmentation-I* × 1861-1901 dummies	[0.50]	[0.02]	[0.26]	[0.13]	[0.50]	[0.02]
Estimation	Fixed Region and Time Effects OLS					
R^2	0.45	0.94	0.77	0.64	0.38	0.93
	(1)	(2)	(3)	(4)	(5)	(6)
	Panel C. Number of observations = 78. The dependent variable is:					
	Culture	*Illiterates*	*GDP*	*GSP*	*VA-T*	*VA-M*
War	- 17.365	13.477	- 6.332	- 24.880	- 61.167	3.744
	(2.463)***	(4.547)***	(10.406)	(8.428)***	(26.646)**	(6.000)
Distance-to-Enemies	- 0.0001	$- 1.15E^{-6}$	- 0.0001	0.0002	0.0004	0.0004
	(0.0002)	(0.00006)	(0.0002)	(0.0002)	(0.0005)	(0.0002)
Distortion-LT	- 0.024	0.044	- 0.008	- 0.035	- 0.179	- 0.072
	(0.042)	(0.025)*	(0.066)	(0.080)	(0.126)	(0.052)
P-value for *Coal-Price-I* × 1861-1901 dummies	[0.66]	[0.08]	[0.14]	[0.07]	[0.10]	[0.48]
Estimation	Fixed Region and Time Effects OLS					
R^2	0.43	0.93	0.76	0.57	0.36	0.89
	(1)	(2)	(3)	(4)	(5)	(6)
	Panel D. Number of observations = 78. The dependent variable is:					
	Culture	*Illiterates*	*GDP*	*GSP*	*VA-T*	*VA-M*
War	- 17.374	13.272	- 9.281	- 30.535	- 44.238	8.534
	(4.192)***	(5.193)***	(11.287)	(10.553)***	(25.327)*	(6.806)
Distance-to-Enemies	- 0.0001	0.00002	- 0.0001	0.0003	0.0001	0.0003
	(0.0002)	(0.00007)	(0.0002)	(0.0002)	(0.0004)	(0.0002)
Distortion-LT	- 0.025	0.042	- 0.012	- 0.047	- 0.151	- 0.065
	(0.035)	(0.020)*	(0.055)	(0.065)	(0.080)*	(0.043)
P-value for *Railway-I* × 1861-1901 dummies	[0.41]	[0.61]	[0.88]	[0.34]	[0.00]	[0.02]
Estimation	Fixed Region and Time Effects OLS					
R^2	0.47	0.94	0.76	0.58	0.65	0.93

Notes: 1. The entries are marginal effects, whereas the parentheses gather standard errors allowing for clustering by region. *** labels significant at the 1% confidence level; **, 5%; *, 10%.

2. All specifications include the proxies for farming productivity—i.e., *Sericulture*, *Wheat*, and *Arboriculture*—as well as well as *War*, War^2, *Distance-to-Enemies*, and *Distortion-LT*. Furthermore, the specifications in panels (A) to (D) incorporate time effects interacted with respectively *Democracy-I*, *Land-Fragmentation-I*, *Coal-Price-I*, and *Railway-I*. Finally, the marginal effect of *War* is calculated for a rise from its post-unitary mean 0.005.

Table 7: Using Selection on Observables to Assess the Bias from Unobservables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	The dependent variable is:							
	Land-Taxes		*Culture*	*Illiterates*	*GDP*	*GSP*	*VA-T*	*VA-M*
The ratio is calculated for the variable:								
Sericulture								
$Sericulture^2$								
Arboriculture	0.11							
$Arboriculture^2$	0.30							
War			0.98	9.03	1.72	1.12	27.1	0.52
War^2			1.06	30	1.94	1.04	3.29	1.03
Distance-to-Enemies		1.15	2.65	2.39	0.98	0.16	0.39	1.43
$Distance\text{-}to\text{-}Enemies^2$		2.30						
Distortion-LT			0.18	2.97	0.40	0.46	2.02	0.52
The extra controls in the full set are {*Sericulture*, $Sericulture^2$, *Wheat*, $Wheat^2$, *Arboriculture*, $Arboriculture^2$, *War*, War^2},	NO	YES	NO	NO	NO	NO	NO	NO
{*Distance-to-Enemies*, $Distance\text{-}to\text{-}Enemies^2$},	YES	NO	NO	NO	NO	NO	NO	NO
time dummies and {*Democracy-I* × 1861-1901 dummies}.	NO	NO	YES	YES	YES	YES	YES	YES

Notes: 1. The indexes listed in column (1) (columns (2) to (8)) are obtained from regressions run on the pre(post)-unitary sample.
2. Each cell reports an index constructed as explained in section 5.4.2 and based on the coefficients attached to the relevant variable that we obtain from two regressions, one with a "restricted set" of covariates and another with a "full set" of covariates. The regressors included in the restricted sets of covariates are over and above the fixed region effects: 1. those incorporated in the specification reported in column (2) of table 4 in the case of column (1) of the present table; 2. *Distance-to-Enemies* and $Distance\text{-}to\text{-}Enemies^2$ in the case of column (2) of the present table; 3. those considered in columns (1) to (6) of table 5 in the cases of respectively columns (3) to (8) of the present table. The extra variables, possibly included in the full set, are listed in the last three lines of the present table. The sample size is 78.

Table 8: Endogenous Public Good Provision

	(1)	(2)	(3)	(4)	(5)	(6)
	1801-1851 sample			1861-1911 sample		
	The dependent variable is *Railway*					
Sericulture	- 0.165	- 0.126	- 0.138	- 0.356	- 0.397	- 0.404
	(0.085)**	(0.084)	(0.087)	(0.331)	(0.337)	(0.340)
Wheat	0.177	0.172	0.172	0.034	0.122	0.211
	(0.081)**	(0.077)**	(0.078)**	(0.302)	(0.320)	(0.318)
Arboriculture	- 0.022	- 0.011	- 0.028	0.126	0.085	- 0.043
	(0.081)	(0.079)	(0.081)	(0.274)	(0.282)	(0.298)
War		0.332	0.285		- 0.960	- 1.153
		(0.398)	(0.428)		(1.087)	(1.072)
Distance-to-Enemies			$-4.66E^{-6}$			- 0.00007
			$(6.86E^{-6})$			(0.00003)**
P-value for *Ruggedness* × 1861-1901 dummies	[0.45]	[0.86]	[0.74]	[0.92]	[0.93]	[0.99]
Estimation	Fixed Region Effects OLS					
R^2	0.71	0.76	0.77	0.76	0.77	0.79
Number of observations	78	78	78	78	78	78

Notes: 1. The entries are marginal effects, whereas the parentheses gather standard errors. *** labels significant at the 1% confidence level; **, 5%; *, 10%.
2. All specifications incorporate *Sericulture*, $Sericulture^2$, *Wheat*, $Wheat^2$, *Arboriculture*, and $Arboriculture^2$. The specifications in columns (2) and (5) (columns (3) and (6)) also include *War* and War^2 (*War*, War^2, *Distance-to-Enemies*, and $Distance\text{-}to\text{-}Enemies^2$). The marginal effects of *Sericulture*, *Wheat*, and *War* are calculated for a rise from their lowest values in the low political relevance group, i.e., respectively 0.01, 0.00, and 0 (0.00, 0.01, and 0) in the pre(post)-unitary sample. The marginal effects of *Arboriculture* and *Distance-to-Enemies* are calculated for a rise from their lowest values in the high and middle political relevance group, i.e., respectively 0.18 and 436.

APPENDIX (FOR ONLINE PUBLICATION)

I Establishing the Exogeneity of *War*

Next, we explain why *War* should be correctly considered exogenous.

Austro-Sardinian War

As soon as the revolutionaries expelled the Austrians from Milan in March 1848, the "Italian population enthusiastically supported [Charles Albert's] intervention" [Paoletti 2008, p. 96] since they knew that the Austrian army "could not get reinforcements [...] because of the revolution in Vienna" [Paoletti 2008, p. 96]. Mainly driven by the threat of internal unrests, Charles Albert then "moved his troops into Lombardy" [Killinger 2002, p. 107]. Yet, the Habsburgs soon tamed the turmoils and then defeated both the Savoys and their allies (Killinger, 2002). The truce was signed in August 1848. All in all, none of the pre-unitary elites shaped the fate of this conflict.

Roman Republic War

Even if Pope Pius IX had granted his own constitution on February 14 1848, the liberals expelled him in the aftermath of the truce the Kingdom of Sardinia reached with Austria and declared the Roman Republic in November 1848. This decision ignited the reactions of both the conservative elite and the Catholic powers who sought to restore the Pope's rule. In particular, "in a politically calculated attempt to win support of French Catholics, Louis Napoleon ordered his armies to restore the Pope to power" [Killinger 2002, p. 109]. Meanwhile, Austria defeated again the Kingdom of Sardinia in Novara on March 23 1849, reinstating its power over Italy. In June 1849 a French army invaded the Papal State and defeated the "weak and ill-equipped [Roman Republican army]" [Riall 2009, p. 23]. Again, none of the pre-unitary elites shaped the fate of this conflict.

Neapolitan and Italian-Roman Wars

In the aftermath of the 1848 unrests, the Bourbons "concentrated all [their effort] on domestic affairs. [The] army was now intended to be more of a large, well-armed constabulary force" [Paoletti 2008, p. 102]. After the royal forces crushed a revolt in Palermo, "Francesco Crispi, one of the revolutionaries, urged Garibaldi to intervene" [Paoletti 2008, p. 110] sure that the Bourbons could be overturned. Garibaldi assembled a group of volunteers, who departed from Genoa and reached Sicily in May 1860. Their arrival ignited a large scale revolt to which the Bourbons did not react because scared by "an interposition by US, French, and British" [Paoletti 2008, p. 110]. Garibaldi's swift conquest of Sicily worried the European powers and the Kingdom of Sardinia "that the guerrilla leader might move on Naples, Rome, and Venice" [Killinger 2002, p. 116]. Garibaldi's conquest of Naples confirmed these suspects and forced Victor Emanuel II to try to stop him before he could put the independence at jeopardy (Paoletti, 2008). With the French approval, the Kingdom of Sardinia's forces moved into the Papal State in September 1860 firing up the Italian-Roman War. The conflict ended a few months later with the Kingdom of Sardinia's conquest of Marche and Umbria and the meeting between Garibaldi and Victor Emanuel II, who was then proclaimed King of Italy (Killinger, 2002). All in all, both conflicts were guided by the expansionist decisions of the Kingdom of Sardinia, France, and England and only barely affected by the—lack of—adequate reactions by both the Kingdom of Two Sicilies and the Papal State.

Seven Weeks War

"In 1866, Prusso-Austrian competition for supremacy in Germany reached its zenith. Prussian chancellor Otto von Bismarck forced Austria to declare war on Prussia. [In] Bismarck's opinion [...], it was better to have Italy as an ally, because it prevented Austria from concentrating its

entire army against Prussia" [Paoletti 2008, p. 117]. Involved in this conflict, the Kingdom of Italy bore a series of grim defeats until Prussia's victory and the consequent armistice (Paoletti, 2008). Left alone on the battlefront, "Italy had no choice but accept [the end of the war], or face Austria alone" [Paoletti 2008, p. 118]. With the Peace of Prague, Italy gained Venice (Paoletti, 2008). All in all, the Kingdom of Italy did not control either the timing of the war nor any of its consequences.

II Case Study: The American Civil War Case

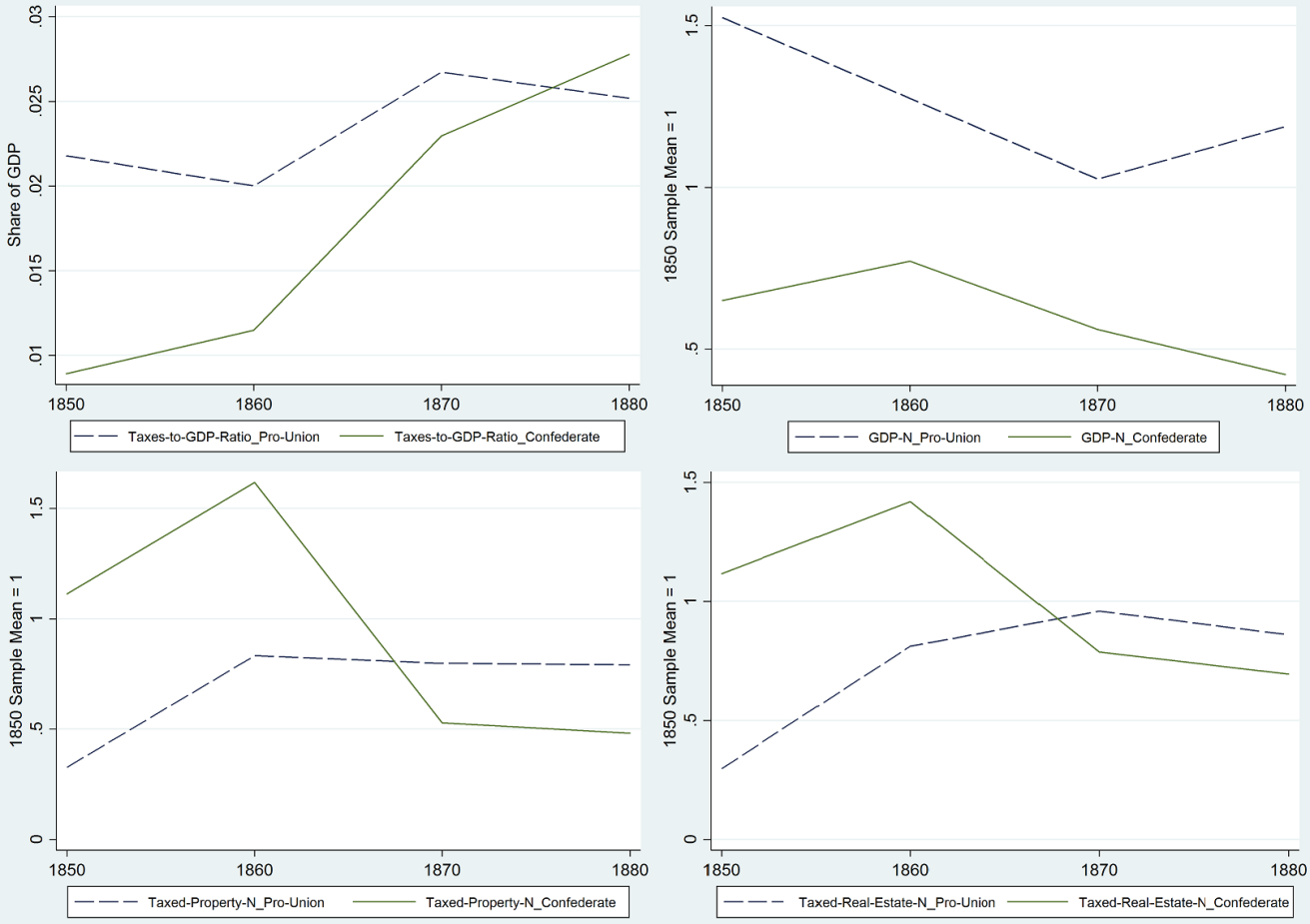
In the 1850s, slavery was source of mounting political tension between the Southern slave states and the abolitionist North, and accordingly the Republicans, dominant in the North, built the entire 1860 Lincoln's presidential campaign on a complete ban on slave-owning (Keller, 1977). Lincoln's election was then the final trigger to the secession of eleven Southern "Confederate" states—i.e., Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia—first and then a war between them and both the twenty-three states that remained loyal to the Union and the seven territories that fought on their side, i.e., Colorado, Dakota, Nebraska, Nevada, New Mexico, Utah, and Washington. The war brought about almost one million casualties (Foner, 1988), the murder of Lincoln, and the agreement among the winners that the "prewar leadership of the Southern slavocrats in national politics was permanently to be replaced in favor of the Northern direction" [Donald and Randall 1961, p. 535].

To this end, the new government opened the "Reconstruction Era" (1865-1877), i.e., a set of South-oriented policies usually divided in "Wartime," "Presidential," and "Radical" phases. While the first one identifies Lincoln's Emancipation Proclamation and the Union's seizure of the Confederate states, the second one refers to the new president Johnson's try to guarantee "the white South a virtual hand in regulating the region's internal affairs" [Foner 1988, p. 199]. This attempt to undermine the consequences of the war itself however pushed many Northern Republicans to advocate more stringent limitations of the white elite's power in the South (Keller, 1977).

Such a Radical phase of the Reconstruction era began as soon as the Republicans gained in 1866 the majority of the US Congress, was reinforced by Grant's election in 1868, and "affected every facet of Southern life" [Foner 1988, p. 346]. First and foremost, the ex-Confederate states were split into five military districts under martial law to formally enforce black vote but with the de facto aim to restrain the Southern elite's initiative [Foner 1988, p. 377]. Second, "property taxes rose steadily" [Foner 1988, p. 383] in the South as illustrated in the upper-left graph of figure I, which depicts the ratio of total taxes to GDP averaged for the ex-Confederate states and the pro-Union territories between 1850 and 1890. The Republicans justified these policies as necessary to achieve the coveted redistribution of land property from those white planters that, because of the heavier tax burden, were going to be expropriated of their estates towards blacks and poor whites (Foner, 1988). Yet, because of this last group's liquidity constraints Southern land were increasingly acquired by Northern landowners instead and, for instance, "by 1870, half of [Louisiana] estates had fallen into the hands of Northern investors" [Foner 1988, p. 399]. As a consequence, not only wealth inequality remained unaffected but the South also failed to keep "up with the phenomenal progress of the rest of the country" [Donald and Randall 1961, p. 548]. Figure I displays these patterns by showing the evolution over the 1850-1890 period of the GDP and the assessed valuations of taxed property and both taxed real estate and improvements across ex-Confederate states and pro-Union territories. As foreseen by our model, less politically relevant states bore the most penalizing tax policies and, as result, experienced the weakest economic development.

The Radical Reconstruction came to an end when the Democrats realized that "financial criticisms of Republican rule" [Foner 1988, p. 415] by the Northern voters would have brought them and the angered Southern masses together and so won the 1876 presidential election by proposing

Figure I: The Case of the American Civil War



Note: 1. "Taxes-to-GDP-Ratio" is collected from Secretary of the Interior (1850, 1860, 1870, 1880) and represents the ratio of total taxes to GDP. "GDP-N" is obtained from Lindert and Williamson (2013) and Klein (2013) and depicts the GDP in 1860 dollars per capita normalized in such a way that its 1850 mean is one. "Taxed-Property-N" ("Taxed-Real-Estate-N") is collected from Secretary of the Interior (1850, 1860, 1870, 1880) and represents the assessed valuation of taxed real and personal property (real estate and improvements) per capita in 1860 dollars normalized in such a way that its 1850 mean is one. The _Pro-Union (_Confederate) group includes Colorado, Nebraska, Nevada, New Mexico, North Dakota, South Dakota, Utah (Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, Virginia), and Washington (West Virginia).

the full integration of Southern states into American politics.[31] As a first step, the new government removed in 1877 the last Union troops from the South. Exactly as in the case of post-unitary Italy however, at that point the impact of extractive policies was permanent (Keller, 1977; Foner, 1988).

References

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[31] "If Southern economic interests had coincided with those of the rising industrial groups of the North, there would have been no Radical reconstruction" [Donald and Randall 1961, p. 543].

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Supplementary Tables

Table I: Summary of Variables

	Variable	Definition and Sources	(1) 1801-1851	(2) 1861-1911
Economic outcomes:	*Life*:	Ratio of life expectancy in years to its 1861 value. Source: Vecchi (2011).		1.166 (0.176)
	Height:	Ratio of height of conscripted workers in cm to its 1861 value. Source: Vecchi (2011).		1.007 (0.006)
	Log-Pop-Density:	Ratio of the logarithm of the population per square km to its 1861 value. Source: SVIMEZ (2011).		1.042 (0.034)
	VA-E:	Engineering sector value added in thousands of 1861 lire per capita over its 1861 value. Source: Ciccarelli and Fenoaltea (2013).		1.480 (0.583)
	VA-C:	Chemical industry value added in thousands of 1861 lire per capita over its 1861 value. Source: Ciccarelli and Fenoaltea (2013).		3.330 (4.944)
	VA-ME:	Metal-making industry value added in thousands of 1861 lire per capita over its 1861 value. Source: Ciccarelli and Fenoaltea (2013).		3.053 (7.075)
Policies:	*Land-Taxes-K*:	Land property tax revenues in 1861 lire per square km of arable land. Source: see text.	456.181 (342.565)	711.812 (384.877)***
	Distortion-LT-K:	Difference between *Land-Taxes-K* and the forecasted land property tax revenues in 1861 lire per square km of arable land.		132.841 (477.206)
Farming technology:	*Citrus*:	Normalized first principal component extracted from the land suitability for citrus trees ranging between 0 and 100 and the average growing season temperature in Celsius in the previous decade. Sources: Luterbacher et al. (2004), http://www.gaez.iiasa.ac.at	0.678 (0.200)	0.654 (0.200)
	Olive:	Normalized first principal component extracted from the land suitability for olive trees ranging between 0 and 100 and the average growing season temperature in Celsius in the previous decade. Sources: Luterbacher et al. (2004), http://www.gaez.iiasa.ac.at	0.453 (0.221)	0.432 (0.221)
Other drivers of extraction:	*War-C*:	Share of post-Vienna Congress years in which the regions was involved in external wars. Source: http://www.correlatesofwar.org	0.001 (0.003)	0.008 (0.003)***
	Distance-to-Enemies-P:	Average distance in km between the region's main city and Istanbul (Amsterdam, Copenhagen, and Istanbul) between 1801 (1816) and 1815 (1882) and between the region's main city and Amsterdam, Copenhagen, Istanbul, Lisbon, and Madrid otherwise.	1365.803 (156.292)	1465.145 (149.035)***

1. The last two columns report the mean and, in parentheses, the standard deviation of each variable in the pre- and post-unitary samples. *** labels a difference between the two means significant at 1% in a t-test with unequal variances; **, 5%; *, 10%.

Table II: High & Middle Versus Low Political Relevance Regions — Further Evidence

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	1801-1851			1861			1861-1911		
	H&M Political	Low Relevance	(1) - (2)	H&M Political	Low Relevance	(4) - (5)	H&M Political	Low Relevance	(7) - (8)
Life-L:				32.843	31.050	1.793	38.571	35.706	2.866
				(1.280)	(3.018)	(1.324)	(5.357)	(5.365)	(1.218)**
Height-L:				162.971	160.322	2.649	164.048	161.656	2.391
				(1.543)	(1.129)	(0.743)***	(1.590)	(1.385)	(0.337)***
Log-Pop-Density-L:	1.869	1.790	0.079	1.931	1.961	- 0.030	2.013	2.041	- 0.029
	(0.119)	(0.221)	(0.041)*	(0.411)	(0.343)	(0.209)	(0.398)	(0.346)	(0.084)
VA-E-L:				0.007	0.007	0.0005	0.011	0.009	0.001
				(0.001)	(0.001)	(0.0007)	(0.006)	(0.004)	(0.001)
VA-C-L:				0.0004	0.0006	- 0.0001	0.0015	0.0012	0.0003
				(0.0002)	(0.0003)	(0.0001)	(0.0017)	(0.0010)	(0.0003)
VA-ME-L:				0.0002	0.0002	0.00001	0.0010	0.0004	0.0007
				(0.0001)	(0.0002)	(0.0001)	(0.0019)	(0.0005)	(0.0003)**
Land-Taxes-K:	444.209	470.149	- 25.940	931.715	601.891	329.824	837.966	564.633	273.333
	(326.127)	(364.976)	(78.947)	(496.755)	(441.617)	(260.301)	(369.507)	(352.942)	(81.921)***
Distortion-LT-K:				- 94.120	507.439	- 601.558	- 167.690	483.460	- 651.151
				(293.988)	(340.597)	(177.993)***	(403.581)	(274.533)	(77.276)***
Citrus:	0.526	0.856	- 0.330	0.491	0.820	- 0.329	0.501	0.833	- 0.332
	(0.133)	(0.085)	(0.025)***	(0.139)	(0.093)	(0.065)***	(0.132)	(0.085)	(0.025)***
Olive:	0.291	0.642	- 0.351	0.261	0.612	- 0.351	0.269	0.622	- 0.353
	(0.100)	(0.165)	(0.032)***	(0.104)	(0.177)	(0.082)***	(0.099)	(0.165)	(0.031)***
War-C:	0.002	0.001	0.001	0.010	0.010	0.0002	0.0079	0.0077	0.0001
	(0.004)	(0.002)	(0.001)	(0.005)	(0.002)	(0.002)	(0.0038)	(0.0022)	(0.0007)
Distance-to-Enemy-P:	1340.222	1395.648	- 55.426	1277.333	1493.889	- 216.556	1364.406	1582.674	- 218.268
	(124.664)	(183.938)	(36.192)*	(78.501)	(111.630)	(54.380)***	(94.026)	(110.105)	(23.393)***
Number of observations	42	36		7	6		42	36	

Notes:
1. *Deposits-L*, *Life-L*, *Height-L*, *Log-Pop-Density-L*, *VA-C-L*, and *VA-ME-L* label respectively the level of deposits, the life expectancy, the height of conscripted workers, the logarithm of the population density, and the value added in the chemical and metal-making industries (see also table I).
2. Columns (1), (4), and (7) (columns (2), (5), and (8)) report the mean and, in parentheses, the standard deviation of each variable over the relevant period in the high and middle (low) political relevance group, whereas columns (3), (6), and (9) display the difference between the mean in the high and middle political relevance group and that in the low political relevance cluster over the relevant period and, in parentheses, its standard error. *** denotes a difference significant at the 1% confidence level based on a t-test with unequal variances; **, 5%; *, 10%. The high and middle (low) political relevance cluster includes Abruzzi, Emilia Romagna, Lombardy, Marche, Tuscany, Umbria, and Veneto (Apulia, Basilicata, Calabria, Campania, Lazio, and Sicily).

Table III: Employing Land Property Taxes per Square km of Arable Land

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
				The dependent variable is:				
	Land-Taxes-K		*Culture*	*Illiterates*	*GDP*	*GSP*	*VA-T*	*VA-M*
Sericulture	698.28	- 2043.43						
	(1453.05)	(2936.18)						
Wheat	- 693.91	- 3388.59						
	(1355.63)	(2027.16)*						
Arboriculture	- 1937.00	- 2476.05						
	(932.69)**	(3961.74)						
War	6137.48	7283.07	- 5.578	22.949	- 9.165	- 18.613	- 29.936	- 7.024
	(3916.00)	(16273.97)	(3.674)	(6.032)***	(9.194)	(8.330)**	(13.168)**	(10.539)
Distance-to-Enemies	0.26	0.44	- 0.0001	- 0.00004	0.0001	- 0.0004	- 0.0002	- 0.0002
	(0.16)	(0.14)***	(0.0001)*	(0.00005)	(0.0001)	(0.0001)**	(0.0001)	(0.0001)**
Distortion-LT-K			0.0001	0.0002	- 0.0005	- 0.0003	- 0.0013	- 0.0012
			(0.0002)	(0.0001)*	(0.0003)*	(0.0003)	(0.0005)**	(0.0003)***
Estimation				Fixed Region Effects OLS				
R^2	0.73	0.24	0.20	0.75	0.34	0.30	0.29	0.61
Number of observations	78	78	78	78	78	78	78	78

Notes:
1. While the first column is based on pre-unitary data, the other columns are built on post-unitary data.
2. The entries are marginal effects, whereas the parentheses gather standard errors allowing for clustering by region. *** labels significant at the 1% confidence level; **, 5%; *, 10%.
3. All specifications include the proxies for farming productivity—i.e., *Sericulture*, *Wheat*, and *Arboriculture*, whereas those in columns (1) and (2) (columns (3) to (8)) also incorporate *Sericulture*^{2}, *Wheat*^{2}, *Arboriculture*^{2}, *War*, *War*^{2}, *Distance-to-Enemies*, and *Distance-to-Enemies*^{2} (*War*, *War*^{2}, *Distance-to-Enemies*, and *Distortion-LT*).

Table IV: Alternative Proxies for Regional Productivity

	(1)	(2)	(3)	(4)
	1801-1851 sample		1861-1911 sample	
	The dependent variable is *Land-Taxes*			
Sericulture	0.585	- 2.188	- 12.387	- 14.177
	(10.585)	(8.029)	(11.415)	(10.775)
Wheat	- 1.924	0.172	- 10.824	- 9.912
	(6.608)	(5.973)	(10.172)	(9.825)
Citrus	- 3.972		9.484	
	(2.221)*		(12.011)	
Olive		- 9.636		0.977
		(3.406)***		(9.420)
War	- 11.335	- 6.096	86.308	71.156
	(30.214)	(32.073)	(90.928)	(89.638)
Distance-to-Enemies	0.001	0.0006	0.002	0.002
	(0.001)	(0.0008)	(0.001)*	(0.001)*
Estimation	Fixed Region Effects OLS			
R^2	0.30	0.35	0.44	0.45
Number of observations	78	78	78	78

Notes:
1. The entries are marginal effects, whereas the parentheses gather standard errors allowing for clustering by region. *** labels significant at the 1% confidence level; **, 5%; *, 10%.
2. All specifications incorporate *Sericulture*, *Sericulture*^{2}, *Wheat*, *Wheat*^{2}, *Arboriculture*, and *Arboriculture*^{2}, *War*, *War*^{2}, *Distance-to-Enemies*, and *Distance-to-Enemies*^{2}. The marginal effects of *Sericulture*, *Wheat*, and *War* are calculated for a rise from their lowest values in the low political relevance group, i.e., respectively 0.01, 0.00, and 0 (0.00, 0.01, and 0) in the pre(post)-unitary sample. The marginal effects of *Arboriculture* and *Distance-to-Enemies* are calculated for a rise from their lowest values in the high and middle political relevance group, i.e., respectively 0.18 and 436.

Table V: An Alternative Proxy for the Marginal Tax-collection Costs

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
				The dependent variable is:				
	Land-Taxes		*Culture*	*Illiterates*	*GDP*	*GSP*	*VA-T*	*VA-M*
Sericulture	1.001	2.004						
	(9.738)	(9.114)						
Wheat	- 2.808	- 16.690						
	(6.204)	(9.179)*						
Arboriculture	- 5.663	- 31.181						
	(2.863)**	(8.389)***						
War-C	- 13.672	648.881	52.911	52.824	- 28.775	- 89.343	- 86.455	- 106.349
	(114.461)	(212.566)***	(19.593)***	(22.765)**	(54.072)	(55.459)*	(45.146)**	(34.101)***
Distance-to-Enemies	0.001	0.0006	- 0.0001	- 0.00010	0.00002	- 0.0004	- 0.0004	- 0.0004
	(0.001)	(0.0005)	(0.0001)	(0.00003)***	(0.00005)	(0.0001)***	(0.0002)	(0.0001)***
Distortion-LT			0.017	0.021	- 0.082	0.015	- 0.019	- 0.156
			(0.025)	(0.044)	(0.086)	(0.077)	(0.065)	(0.070)**
Estimation	Fixed Region Effects OLS							
R^2	0.29	0.73	0.49	0.82	0.43	0.44	0.48	0.75
Number of observations	78	78	78	78	78	78	78	78

Notes:
1. While the first column is based on pre-unitary data, the other columns are built on post-unitary data.
2. The entries are marginal effects, whereas the parentheses gather standard errors allowing for clustering by region. *** labels significant at the 1% confidence level; **, 5%; *, 10%.
3. All specifications include the proxies for farming productivity—i.e., *Sericulture*, *Wheat*, and *Arboriculture*, whereas those in columns (1) and (2) (columns (3) to (8)) also incorporate *Sericulture*^{2}, *Wheat*^{2}, *Arboriculture*^{2}, *War*, *War*^{2}, *Distance-to-Enemies*, and *Distance-to-Enemies*^{2} (*War*, *War*^{2}, *Distance-to-Enemies*, and *Distortion-LT*).

Table VI: Endogenous Taxation and the Rise of the North-South Divide — Placebo

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
				The dependent variable is:				
	Land-Taxes		*Culture*	*Illiterates*	*GDP*	*GSP*	*VA-T*	*VA-M*
Sericulture	1.578	- 19.392						
	(6.447)	(15.168)						
Wheat	- 4.591	- 5.261						
	(4.270)	(16.246)						
Arboriculture	2.472	- 5.414						
	(4.409)	(16.967)						
War	- 13.073	- 2.422	- 15.405	14.999	- 4.113	0.979	- 19.834	13.120
	(25.268)	(130.331)	(6.917)**	(7.977)*	(9.537)	(10.012)	(26.637)	(12.636)
Distance-to-Enemies-P	- 0.001	- 0.007	- 0.0008	- 0.0004	- 0.00003	0.0006	- 0.0003	0.0002
	(0.001)***	(0.005)	(0.0005)	(0.0004)	(0.0003)	(0.0007)	(0.002)	(0.0009)
Distortion-LT-K			0.042	0.072	- 0.138	- 0.101	- 0.238	- 0.282
			(0.032)	(0.026)**	(0.041)***	(0.042)**	(0.120)*	(0.055)***
Estimation	Fixed Region Effects OLS							
R^2	0.42	0.47	0.27	0.82	0.47	0.30	0.25	0.68
Number of observations	78	78	78	78	78	78	78	78

Notes:
1. While the first column is based on pre-unitary data, the other columns are built on post-unitary data.
2. The entries are marginal effects, whereas the parentheses gather standard errors allowing for clustering by region. *** labels significant at the 1% confidence level; **, 5%; *, 10%.
3. All specifications include the proxies for farming productivity—i.e., *Sericulture*, *Wheat*, and *Arboriculture*, whereas those in columns (1) and (2) (columns (3) to (8)) also incorporate *Sericulture*^{2}, *Wheat*^{2}, *Arboriculture*^{2}, *War*, *War*^{2}, *Distance-to-Enemies*, and *Distance-to-Enemies*^{2} (*War*, *War*^{2}, *Distance-to-Enemies*, and *Distortion-LT*).

Table VII: Allowing for Spatial Correlation

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	The dependent variable is:							
	Land-Taxes		*Culture*	*Illiterates*	*GDP*	*GSP*	*VA-T*	*VA-M*
Sericulture	3.329	- 12.214						
	(6.554)	(8.090)						
Sericulture^2	- 3.985	-15.455						
	(4.679)	(17.373)						
Wheat	- 3.562	- 13.787						
	(4.538)	(5.497)**						
Wheat^2	4.339	39.441						
	(5.933)	(17.221)**						
Arboriculture	- 9.523	- 16.899						
	(4.125)**	(14.889)						
Arboriculture^2	12.519	31.377						
	(6.855)*	(10.685)***						
War	- 11.020	79.169	- 13.099	25.707	- 5.523	- 18.614	- 33.319	7.582
	(30.902)	(70.326)	(4.926)**	(5.373)***	(9.070)	(11.957)	(12.515)**	(10.036)
War^2	603.872	- 847.463	444.948	- 699.711	375.125	507.176	1125.584	- 216.378
	(483.087)	(2005.941)	(175.653)**	(152.567)***	(264.707)	(293.422)*	(423.743)**	(274.987)
Distance-to-Enemies	0.002	0.002	- 0.00012	- 0.00004	0.00010	- 0.0004	- 0.0003	- 0.0002
	(0.001)*	(0.001)**	(0.00004)***	(0.00003)	(0.00005)**	(0.0001)***	(0.0002)	(0.0001)**
Distance-to-Enemies^2	- 6.42E^{-7}	- 6.03E^{-7}						
	(3.90E^{-7})	(3.52E^{-7})*						
Distortion-LT-K			0.052	0.077	- 0.141	- 0.095	- 0.228	- 0.276
			(0.033)	(0.026)***	(0.031)***	(0.031)***	(0.103)**	(0.045)***
Estimation	Fixed Region Effects OLS							
Number of observations	78	78	78	78	78	78	78	78

Notes: 1. While the first column is based on pre-unitary data, the other columns are built on post-unitary data.
2. The entries are marginal effects, whereas the parentheses gather Conley's (1999) standard errors. *** labels significant at the 1% confidence level; **, 5%; *, 10%.
3. All specifications include the proxies for farming productivity—i.e., *Sericulture*, *Wheat*, and *Arboriculture*, whereas those in columns (1) and (2) (columns (3) to (8)) also incorporate *Sericulture*^{2}, *Wheat*^{2}, *Arboriculture*^{2}, *War*, *War*^{2}, *Distance-to-Enemies*, and *Distance-to-Enemies*^{2} (*War*, *War*^{2}, *Distance-to-Enemies*, and *Distortion-LT*).

Table VIII: Other Measures of Economic Development

	(1)	(2)	(3)	(4)	(5)	(6)
	The dependent variable is:					
	Life	*Height*	*Log-Pop-Density*	*VA-E*	*VA-C*	*VA-ME*
War	- 8.417	- 0.265	- 1.984	3.693	84.580	90.080
	(4.993)*	(0.210)	(1.066)*	(16.126)	(87.556)	(106.250)
Distance-to-Enemies	- 0.00010	5.72E^{-7}	0.00003	- 0.0001	- 0.0020	0.00005
	(0.00003)***	(1.97E^{-6})	(8.74E^{-6})***	(0.0001)	(0.0012)	(0.00151)
Distortion-LT	- 0.074	- 0.0029	- 0.016	- 0.460	- 2.190	- 2.017
	(0.028)**	(0.0008)***	(0.005)***	(0.112)***	(0.639)***	(0.826)**
Estimation	Fixed Region Effects OLS					
R^2	0.60	0.73	0.60	0.65	0.30	0.15
Number of observations	78	78	78	78	78	78

Notes: 1. The entries are marginal effects, whereas the parentheses gather standard errors allowing for clustering by region. *** labels significant at the 1% confidence level; **, 5%; *, 10%.
2. All specifications include *Sericulture*, *Wheat*, *Arboriculture*, *War*, *War*^{2}, *Distance-to-Enemies*, and *Distortion-LT-K*.