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Victor Gay, Paula Eugenia Gobbi and Marc Goñi

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Centre for Economic Policy Research
33 Great Sutton Street, London EC1V 0DX, UK
Tel: +44 (0)20 7183 8801
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JEL Classification: D10, J10, K11, N33, O10

Keywords: Demographic transition, Fertility, Inheritance

Victor Gay - victor.gay@tse-fr.eu
Toulouse School of Economics, IAST

Paula Eugenia Gobbi - paula.eugenia.gobbi@ulb.be
ECARES, Université Libre De Bruxelles and CEPR

Marc Goñi - marc.goni@uib.no
University Of Bergen and CEPR

Revolutionary Transition: Inheritance Change and Fertility Decline*

Victor Gay† Paula E. Gobbi‡ Marc Goñi§

November 14, 2023

Abstract

We test Le Play's (1875) hypothesis that the French Revolution contributed to France's early fertility decline. In 1793, a series of inheritance reforms abolished local inheritance practices, imposing equal partition of assets among all children. We develop a theoretical framework that predicts a decline in fertility following these reforms because of indivisibility constraints in parents' assets. We test this hypothesis by combining a newly created map of pre-Revolution local inheritance practices together with demographic data from the Henry database and from crowdsourced genealogies in Geni.com. We provide difference-in-differences and regression-discontinuity estimates based on comparing cohorts of fertile age and cohorts too old to be fertile in 1793 between municipalities where the reforms altered and did not alter existing inheritance practices. We find that the 1793 inheritance reforms reduced completed fertility by half to one child, closed the pre-reform fertility gap between different inheritance regions, and sharply accelerated France's early fertility transition.

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†Department of Social and Behavioral Sciences, Toulouse School of Economics, University of Toulouse Capitole. Email: victor.gay@tse-fr.eu.

‡Université libre de Bruxelles (ECARES) and CEPR. Email: paula.eugenia.gobbi@ulb.be

§University of Bergen and CEPR. Email: marc.goni@uib.no.

1 Introduction

The demographic transition is a critical stage in the development of any society. Historically, sustained economic growth began only after large segments of the population limited their fertility. Low fertility rates prevented gains in output from being largely offset by rapid population growth, paving the way for modern economic growth (Galor 2012).[1]

Because of its importance for the economy and society, a large literature has studied the causes of modern and historical fertility transitions (Guinnane 2011). Most work by economists highlights changes in the economic incentives for having children based on the trade-off between the quantity and the quality of children (Becker and Lewis 1973). Under this framework, the fertility transition emerged as a result of technological progress and increased demand for education after the Industrial Revolution (Galor and Moav 2002; Delventhal, Fernández-Villaverde, and Guner 2021). Alternatively, other changes concomitant to industrialization have been linked to the decline in fertility, such as health improvements (Cervellati and Sunde 2015), advances in contraception technology, or changes in social norms about their use (Beach and Hanlon 2022).

Although some of these factors played an important role in England, where the Industrial Revolution preceded the fertility transition, they cannot rationalize why the first large-scale fertility transition started in eighteenth-century France, more than 50 years before industrialization, and subsequently spread to neighboring countries (Perrin 2022). Figure 1 illustrates France's early fertility decline by showing the crude birth rate, the Princeton I_g index of marital fertility, and women's completed fertility at age 40 from 1700 to 1850. These three measures indicate that fertility had been slowly declining through the eighteenth century, long before France's industrialization in the 1850s. As a result, a recent literature has linked France's early fertility decline to deep-rooted social norms, culture, or religiosity (Spolaore and Wacziarg 2022; Blanc 2023b) rather than to sharp changes in economic incentives following the Industrial Revolution. That said, some crucial features of the French fertility transition remain unexplained. Most notably, Figure 1 also shows that a sharp reduction in fertility began shortly after the French Revolution. The speed of this change is difficult to rationalize with deep-rooted, slowly-evolving cultural factors; while its timing seems to rule out economic factors linked to industrialization.

[1] In the twentieth century, all developing countries that reached medium income levels first experienced a drop in fertility (Chesnais 1992), with the exception of oil producing countries.

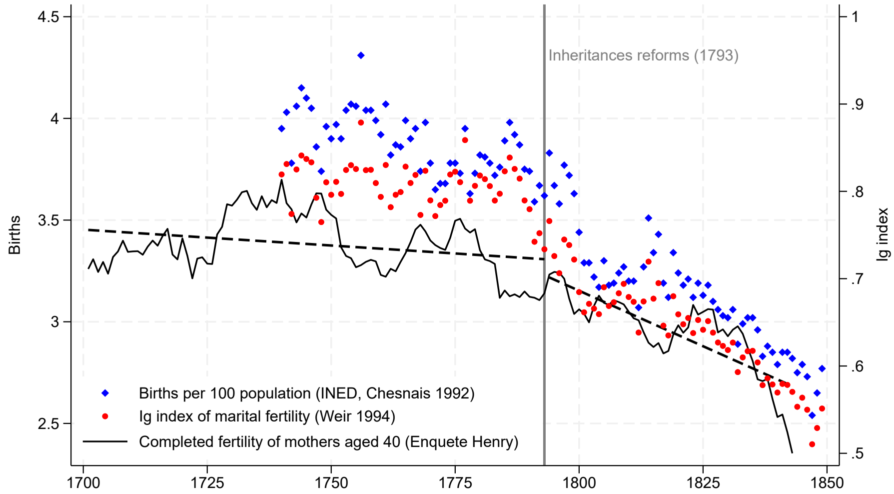


Figure 1: Fertility decline in France, 1700–1850.

Notes: I_g is the number of legitimate births relative to the expected number of births in a Hutterite population with the same number and age structure of married women; completed fertility is a 5-year moving average plotted at the year mothers were aged 40; dashed lines are fitted values before and after 1793.

In this article, we offer a novel explanation for the sharp fertility decline in late eighteenth-century France illustrated in Figure 1. Instead of changes associated with the Industrial Revolution or cultural factors, we show that institutions affected the economic incentives for having children. Specifically, we revisit the longstanding hypothesis of Le Play (1875), which links France's early fertility decline to the new laws on inheritance established during the French Revolution. Despite the many reforms introduced during the Revolution, only the reforms on inheritance have received attention in the literature as a potential drivers of fertility decline. Motivated by the equality principle, a series of reforms introduced in 1793 abolished the right to testate, that is, the right of parents to nominate a unique heir (henceforth, impartible inheritance). Before the reform, different inheritance rules applied across the country, as inheritance in *Ancien Régime* France was regulated by a myriad of local customary and written laws. The 1793 reforms effectively harmonized inheritance across France, imposing equal partition of assets among all children (henceforth, partible inheritance), including women. Le Play argued that the laws of the Revolution, particularly the 1793 inheritance reforms, led to the dissolution of traditional and fecund families and, hence, contributed to France's early fertility decline.

We test Le Play's hypothesis by examining whether these legal changes on inheritance affected fertility decisions. To do so, we create a new atlas mapping the

141 different customs and laws that regulated inheritance across France's territory before the Revolution. This enables us to identify, at a highly-disaggregated level, which areas were treated by the 1793 reforms and which already had an inheritance system that was compliant with the new rules. We then link this information to individual-level demographic data from the *Enquête Louis Henry* (Séguy 2001) and from online genealogies in geni.com (henceforth, Henry and Geni datasets, respectively), and re-construct the completed fertility, childlessness rate, and age at marriage of women affected by the 1793 inheritance reforms. Our main identification strategy is a difference-in-differences (DD) approach based on comparing cohorts of fertile age to cohorts too old to be fertile in 1793 between municipalities where the reforms altered and did not alter the existing inheritance system. We also augment our analysis with a regression-discontinuity difference-in-differences (RD-DD) design that compares women born very close to, but on opposite sides of the border delimiting judicial districts with different inheritance rules, before and after the reforms that harmonized inheritance laws across this border.

Consistent with Le Play's hypothesis, we find that the 1793 inheritance reforms, which abolished impartible inheritance and promoted more equality within families, substantially reduced the economic incentives for having children. For every additional fertile year of exposure to the reforms, women in affected areas reduced their completed fertility by 1 percent. Over the entire fertility cycle, the effect correspond to a reduction by roughly 0.7 children, or by 24 percent relative to the number of surviving children that women had, on average, in treated areas before the reforms (2.92). This magnitude is similar to the pre-reform fertility gap between areas with different inheritance systems. Our estimates are similar and not statistically different across our DD and RD-DD estimation strategies and using data obtained from very different methodologies: the family reconstruction method (Henry dataset) and crowdsourced genealogies (Geni dataset). Results are also consistent along the extensive and intensive margins of fertility: while before 1793, childlessness was lower and the fertility of mothers higher under impartible inheritance, the 1793 inheritance reforms contributed to close these pre-existing fertility gaps. Taken together, our results imply that, by abolishing impartible inheritance, the 1793 inheritance reforms brought large areas of the country to the low-fertility regime that was predominant where inheritance was already egalitarian before the reforms, thus accelerating the decline in fertility in late eighteenth-century France.[2]

[2]We do not claim that the French Revolution was the only cause for the fertility transition. There were forces limiting fertility before then, e.g., secularization. That said, the harmonization

Despite the numerous discussions around Le Play's hypothesis among social scientists, data limitations have until now prevented a conclusive verdict (Chesnais 1992, p. 339). An important contribution of this article is to reconstruct the geography of inheritance practices in Ancien Régime France. In particular, we provide the first complete map of inheritance rules over France's territory at the onset of the Revolution at the highly-disaggregated judicial district level. We proceed in three steps. First, based on Brette's (1904a) *Atlas des Bailliages*, we georeference and vectorize the boundaries of the 435 judicial districts in which different customary rules applied. Second, we match these districts to their relevant customary law, most of which were codified during the sixteenth century (Grinberg 2006). Third, we classify inheritance customs into partible and impartible inheritance, and into rules that excluded women from inheritance and rules that included them. To do so, we primarily use the *Nouveau Coutumier Général* (Bourdot de Richebourg 1724), which provides the text of each custom. This database enables us to link inheritance rules before the Revolution to individual-level data on fertility from the Henry and Geni datasets.

The empirical setting that we examine offers a number of advantages. The timing of the reforms was unexpected, as inheritance was not at the core of popular grievances raised for the Estates General of 1789 in the *cahiers de doléances* (Goy 1988). Likewise, concerns about fertility were not instrumental for policy makers when the reforms were enacted. Revolutionaries instead aimed at enforcing the equality principle (Shaffer 1982), unifying the legal system across France (Hyslop 1934), and ensuring that those who joined the Revolution could not be disinherited by their parents (Lataste et al. 1901, p. 681–3). In addition, the reforms were quickly upheld after 1793 as all offspring were generally set on receiving an equal share of the inheritance (Shaffer 1982). Family tribunals effectively enforced the new inheritance laws across France (Poumarède 2011; Desan 1997). Finally, there was substantial regional variation in the set of laws and customs that regulated inheritances prior to 1793, which we exploit in our DD and RD-DD strategies.

The first identifying assumption requires that, prior to the 1793 reforms, fertility followed common trends in areas with different inheritance systems. We show that fertility was slowly declining before 1793 in a parallel fashion across treated and non-treated areas. Second, our identification strategy requires that there exists no omitted time-varying and area-specific characteristic correlated with both pre-reform inheritance systems and individual fertility. The biggest threat is that, in

of inheritances in 1793 spread the incentives for limiting fertility from pre-reform egalitarian-inheritance areas to the rest of the country, thus accelerating the fertility decline across France.

Malthusian societies, good economic conditions are associated with high fertility, and that the economy might have evolved differently across areas with different inheritance systems. We control for local trends in economic conditions proxied by local wheat prices. Besides, we account for the possibility that fertility followed different trends in municipalities that varied along a range of religious, political, and economic-geography characteristics. Third, the validity of our augmented RD-DD estimates rests on the assumption that unobservable factors vary smoothly over space. We test for the validity of this assumption by checking for differences in observable characteristics between areas with different inheritance rules. We document that, by 1793, areas affected and not affected by the inheritance reforms were balanced on numerous individual- and local-level covariates. This finding is consistent with the historical origins of France's different inheritance systems, which were rooted in the laws of the Germanic peoples that ruled different parts of the territory after the fall of the Roman Empire, and, therefore, unrelated with environmental or structural factors.

To understand the mechanisms behind our main results, we develop a model that formalizes Le Play's hypothesis. Our model predicts that a reform abolishing impartible inheritance can reduce the economic incentives for having children under indivisibility constraints in the assets passed down as inheritance, e.g., land. At the eve of the Revolution, France was populated by small farmers living close to subsistence levels (de Brandt 1901; Allen 1992). Such farming is characterized by indivisibility constraints: further dividing landholdings can result in production falling below the subsistence level. Under impartible inheritance, land is passed down unbroken, ensuring that it remains productive even under a high fertility within the extended family. In contrast, under partible inheritance, individuals have an economic incentive to curve family size to avoid the fragmentation of land among many heirs and production falling below the subsistence threshold. A reform extending the right to inherit to all children multiplies the number of heirs and, hence, exacerbates these economic incentives for having fewer children.

We perform several robustness checks and extensions to our analysis. First, we examine a companion mechanism through which the 1793 reforms reduced fertility: the extension of the right to inherit to women. In addition to increasing the number of heirs, the right to inherit improves a woman's outside option to and postpones their entrance into marriage (de Moor and van Zanden 2010). Our DD and RD-DD estimates suggest including women in inheritances and abolishing impartible inheritance had similar effects on fertility. Second, we conduct permutation tests that reshuffle the exposure to the 1793 inheritance reforms across women and municipalities. Third, because one additional fertile year may have a different effect at age 15 than at age 30, we allow for non-linear treatment effects across cohorts and show that the amount of treatment heterogeneity needed to explain away our baseline estimate is implausibly large (de Chaisemartin and d'Haultfoeuille 2020). Fourth, we show that results are not driven by outlier municipalities. Fifth, we rule out that our results are driven by migration or by changes in mortality associated with the demographic transition. Sixth, we run a placebo test for cohorts who had all their children before the 1793 inheritance reforms. Seventh, we show that our results are robust to alternative definitions of the sample, treatment, outcome variable, and control group. Eighth, we apply the first-name repetition technique of Cummins (2020) to adjust for under-reported children deaths in the Henry database. Ninth, extend our specification to account for terrain characteristics affecting the value of the land, such as climatic and soil suitability for different crops (Galor and Özak 2016) and ruggedness (Nunn and Puga 2012). Finally, we conduct a range of robustness checks for our RD-DD estimates, including different choices of the bandwidth around the border, and alternative specifications for the running variable, kernel functions, samples, and border-segment fixed effects. All these robustness checks support our main finding that the egalitarian inheritance laws of 1793 reduced fertility in treated areas, and that areas with different inheritance rules before the reforms converged to a low-fertility regime.

Relative to the existing literature, we make the following contributions. First, we study a novel and overlooked determinant of fertility choices: legal institutions regulating inheritance. Second, we are the first to provide empirical support for Le Play's hypothesis. Third, we provide a complete and highly disaggregated atlas of inheritance customs and laws in Ancien Régime France. And fourth, our study sheds new light to the economic consequences of inheritance systems.

Although the literature on fertility determinants is vast, legal factors are overlooked (Doepke et al. 2022). Since Becker and Lewis (1973)'s seminal quantity-quality tradeoff theory, human capital is widely studied to understand fertility differences over time or across individuals.[3] Under this framework, the rise of skilled labor and urbanization can reduce fertility (Baudin and Stelter 2022; Ager, Herz, and Brueckner 2020). Alternatively, health improvements and a decline in child mortality (Sah 1991; Bar and Leukhina 2010; Bhattacharya and Chakraborty 2012; Herzer, Strulik, and Vollmer 2012; Cervellati and Sunde 2015), female empower-

[3] Galor and Weil (2000), Galor and Moav (2002), Murtin (2013), Murphy (2015), de la Croix and Perrin (2018), Vogl (2016), Baudin, de la Croix, and Gobbi (2020).

ment (de la Croix and Vander Donckt 2010; Brée and de la Croix 2019; Hazan, Weiss, and Zoabi 2022), old-age security (Boldrin, De Nardi, and Jones 2015; Rossi and Godart 2022), cultural transmission from migrants (Daudin, Franck, and Rapoport 2019), as well as information and usage of family planning methods (Cavalcanti, Kocharkov, and Santos 2020; Beach and Hanlon 2022) have also been considered as triggering factors for fertility reductions. However, France's early fertility transition is at odds with most of these explanations, as human capital (Blanc and Wacziarg 2020), health improvements (Brée and de la Croix 2019; Perrin 2022), or advances in contraception are unlikely to have contributed to the initial phases of France's fertility decline. In contrast, deep-rooted cultural factors and secularization have been highlighted for France' s early fertility decline (Blanc 2023b; Spolaore and Wacziarg 2022). Closer to this article, Cummins (2013) shows that the French fertility transition started in places where inequality was low, and Weir (1984) and Rosental (1991) argue that the French Revolution and the introduction of the Civil Code drove France's fertility decline. Our article analyzes a novel factor, legal institutions on inheritance, hence bringing this new piece to the unresolved puzzle of France's fertility transition.

In addition, this paper provides the first empirical test of Le Play's hypothesis. Formulated in 1884, Le Play's hypothesis was the first theory on France's demographic transition. Social scientists have been skeptical about the possibility that the French Revolution and the inheritance reforms contributed to the fertility decline (Chesnais 1992, p. 338).[4] However, as Chesnais (1992, p. 339) acknowledges, empirical evidence for or against Le Play's hypothesis is lacking. The main reason is that there exists no complete, local-level atlas of inheritance customs and laws before the Revolution. One of our contributions is to construct such an atlas. Beyond this article, our novel atlas will enable scholars to delimit customary regions in Ancien Regime France and study the legacies of historical customs. We provide more details on our customary atlas and on the spatial distribution of judicial districts in Gay, Gobbi, and Goñi (2023a, 2023c).

Finally, we contribute to the literature studying how inheritance systems af-

[4] Le Play's hypothesis has been subject to two main critiques: first, in south-west France fertility was relatively low before the Revolution. The critique is based on the misconception that primogeniture predominated everywhere in the South. Our inheritance atlas, as well as Zink (1993)'s map for the south west, show that this region was divided equally into areas with impartible and partible inheritance (see Figure 4). Moreover, we use granular Geni data—which includes the south-west—to corroborate Le Play's hypothesis. Second, other countries adopted similar inheritance reforms without experiencing fertility drops (Chesnais 1992, p. 338). We believe that this critique lacks empirical support. That said, our model rationalizes why similar reforms will reduce fertility where landownership is sufficiently fragmented (e.g., France) but will not affect fertility where landownership is concentrated (e.g., England, Prussia).

fect fundamental economic outcomes. In the long run, inheritance systems shape income and wealth inequality (Piketty 2011). Bartels, Jäger, and Obergruber (2022) show that, in Germany, locations with egalitarian inheritance later exhibited higher income, education, labor productivity, and entrepreneurship. Inheritance rules can also affect gender gaps and education (Bertocchi and Bozzano 2015), or pension systems (Galasso and Profeta 2018). However, despite Habakkuk (1955)'s work, the literature has mostly overlooked the effects of inheritance rules on family decisions and fertility.[5] As for short-term effects, several studies have analyzed inheritance laws that extend rights to women or forbid dowries in developing countries.[6] France was the first country to pass a national law on inheritance. We shed new light to the potential consequences of large-scale inheritance reforms by studying its effects on the fertility transition.

2 Historical background

2.1 Inheritance in Ancien Régime France

In pre-industrial societies, inheritance was a key aspect of people's lives. It determined their wealth as well as their ability to marry and sustain a family. At the eve of the Revolution, France was predominantly populated by small landholding farmers (de Brandt 1901; Allen 1992). Between 40 and 80 percent of households owned their land.[7] Hence, inheritance rules on non-movable goods were an important factor in the economic decisions of much of the French population.

Much as other aspects of daily life, inheritance practices in Ancien Régime France were regulated by a combination written laws and customs. Written laws emanated from Roman Law (the Justinian Code) and were prevalent mostly in the South.[8] Customs represented a set of long-established local rules that emerged from traditional practices (Gilissen 1979; Zink 1993). Customs were initially oral. Although some were written by the twelfth century (e.g., the custom of Nor-

[5] Exceptions are Gobbi and Goñi (2020) and Casari, Lisciandra, and Tagliapietra (2019).

[6] See Deininger, Goyal, and Nagarajan (2013), Roy (2015), Anderson and Genicot (2015), or Bahrami-Rad (2021) for India, Aldashev et al. (2012) and La Ferrara and Milazzo (2017) for Ghana, Harari (2019) for Kenya, and Estudillo, Quisumbing, and Otsuka (2001) for the Philippines.

[7] de Brandt (1901, p. 56) estimates that there were 4.6 million landowners in France. Out of a population of 28.6 million in 1785 (Lepetit et al. 1995), and assuming households of five members (Dupâquier 1979), at least 80 percent of the population owned their property. Alternatively, the TRA database (Bourdieu, Kesztenbaum, and Postel-Vinay 2013) suggests that, in the eighteenth century, 73.6% of males left some inheritance, and 42.5% to 69.9% of males passed down non-movable assets as inheritance (own calculations, see Appendix C).

[8] Appendix Figure B3 displays the division of France between written and customary law regions based on Klimrath (1837) and Gay, Gobbi, and Goñi (2023c).

mandy), most customs were codified during the late fifteenth and sixteenth centuries, after Charles VII's Ordinance of Montils-lès-Tours in 1454. One of the main objective of this reform was to improve the efficiency of the judicial system by recording customs and thereby fixing their content as well as their territory of application (Grinberg 2006, p. 66).[9]

Ancien Régime France was composed of a mosaic of inheritance rules. While Roman law gave complete freedom to assign a unique heir through a testament, customary laws contained specific inheritance provisions. Despite their complexity, inheritance systems can be classified into two categories: partible and impartible systems. Under partible inheritance, family wealth was divided among offspring (Yver 1966).[10] Under impartible inheritance, parents could favor one child over other offspring. It took the form of primogeniture, ultimogeniture, or unigeniture, where most of the inheritance was received by a single heir, respectively, the first-born, last-born, or one offspring regardless of birth order. This was done to prevent the family wealth from breaking down and diluting among descendants. Inheritance systems further varied in whether women had the right to inherit or not. Under systems that excluded women, women were generally entitled to a dowry upon marriage—they sometimes had the right to inherit in absence of a male heir. One of the justifications for excluding women was, again, to prevent the family wealth to dilute between patrilineal and matrilineal descendants.

The origins of these different inheritance systems are not well understood. The prevailing theory is that impartible inheritance arises in farming economies where land is the primary source of wealth and is subject to indivisibilities (Bertocchi 2017). Our theoretical framework incorporates this theory to explain how inheritance rules affect fertility decisions (see Section 3). Other explanations for the emergence of impartible inheritance highlight concerns over mortality and the lineage's survival (Chu 1991), economic uncertainty (Grieco and Ziebarth 2015), housing markets, and limited access to wood to build new houses (Zink 1993).

Motivated by these theories, we check for balancedness between inheritance

[9]Customary laws were prevalent in most of occidental Europe. Italy had the *Slendor consuetudinum civitatis Venetorum* (Venice), the *Constitutum usus* (Pisa), or the *Consuetudines Neapolitanae* (Naples). In Germany, the *Sachsenspiegel*—the Saxony customs written by Eike von Repgow in 1220–35—inspired other *Rechtsbücher* (books of law), e.g., the *Deutshchenspiegel* or the *Schwabenspiegel*.

[10]Partible systems of strict equality had specific rules ensuring equality. For instance, during the inheritance process the offspring making the batches was assigned the last remaining batch. Married offspring had to return any donation they had received from the family upon marriage, such as a dowry. Partible systems of option allowed married offspring to chose: they could either return the donations received upon marriage and be included in the inheritance, or keep their donations and be excluded from the inheritance.

areas across an extensive set of covariates—including some of the hypothesized determinants of impartible inheritance. We show below that areas with different inheritance rules appear balanced across climatic and soil characteristics affecting land's importance as a source of wealth and its indivisibilities, across measures of mortality determining the lineage's survival, and across proxies of uncertainty in the timing of inheritances (Table 1). This finding is consistent with the dominant view on the origins of the different legal systems in Ancien Régime France. These origins were rooted in the laws of the peoples—namely the Burgundians, Visigoths, Salian Franks, and Ripuarian Franks—that moved across the territory upon the fall of the Western Roman Empire in 476 (Chénon 1926), and hence, are uncorrelated with late eighteenth-century factors and with the determinants of the sharp fertility decline after 1793.[11]

2.2 The 1793 inheritance reforms

The 1793 inheritance reforms came unexpectedly to the French population. Inheritance was not amongst the main popular grievances in the years leading to the French Revolution. For example, the *cahiers de doléances* in the preparation of the Estates General of 1789 seldom mentioned the issue: of the 571 cahiers analyzed by Goy (1988), only 8 mentioned inheritance rules. Because they were rooted in local traditions, inheritance rules were accepted and abode by.

Despite the lack of public demand for inheritance reforms, the Revolution dramatically altered the status quo, shattering regional differences in inheritance rules that had prevailed for centuries. The most substantial changes were brought about by a series of decrees throughout 1793, resulting in the Loi de Nivôse, an II (January 6, 1794). By abolishing testamentary rights, the law abolished impartible inheritance entirely and established partible and egalitarian inheritance across all offspring, including women, throughout the territory.[12]

Three elements help explain why the revolutionaries harmonized inheritance rules. First, equality concerns were central to the Revolution, as its primary objective was to abolish privileges and eradicate inequalities (Shaffer 1982). Second,

[11] If inheritance systems are caused by unobserved environmental factors, the RD estimates using Geni data will be consistent insofar as these factors vary smoothly at judicial district borders.

[12] The text of this law is available in the *Lois et Actes du Gouvernement, Tome VIII* (pp. 214–29) at https://gallica.bnf.fr/ark:/12148/bpt6k56370f/f219. Prior to the Loi de Nivôse, the abolition of primogeniture for the nobility on March, 1790, or the establishment of partible inheritance for intestate successions on April 1791, were already in place. These initial reforms, had negligible consequences for most, as intestate successions were uncommon in impartible inheritance regions.

the administrative geography was highly fragmented at the eve of the Revolution, akin to an incoherent accumulation of heterogeneous layers, which precluded any efficient management of the territory (de Tocqueville 1856). The legal system was no exception, as nearly each parish was subject to a different set of legal rules.[13] Hence, another objective of the Revolution was to wipe the administrative slate clean and construct the bases of a rational administration of the territory, for instance through the unification of legal systems (Hyslop 1934; Shaffer 1982; Chambru, Henry, and Marx 2021). Third, there was mounting concerns that those who joined the Revolution would be disinherited by their parents (Lataste et al. 1901, p. 681–3).[14] Altogether, these three elements lead to the 1793 reforms that opened a new era for inheritance practices.

The consensus in the historiography is that the population quickly abode by the new rules. Indeed, offspring felt they had a right to an equal share in the family patrimony and were soon eager to protect their new rights (Shaffer 1982, p. 95). Family tribunals ensured the enforcement of the new law (Poumarède 2011). And in the late 1790s, disputes over inheritance were the most common cases these tribunals had to resolve (Desan 1997).

The 1793 inheritance reforms might have changed the distribution of land across the country. This is important for our conceptual framework in Section 3, which suggests that inheritance affects fertility through indivisibility constraints in agricultural land. Although no study to date precisely quantifies the effects of these reforms on the distribution of land, qualitative evidence suggests that after the Revolution, the number of landowners increased while the average plot size decreased. As a result, the number of self-sufficient farmers declined: "It occurred that the properties became too small for being able to survive from what could be produced from them" (Sagnac 1903, p. 465).

3 Conceptual framework

Based on the observations of Le Play (1875), we propose a parsimonious model of endogenous fertility under different inheritance rules. We show that when production is characterized by a minimum land input threshold, fertility is higher

[13] Voltaire (1829, pp. 229–30) writes: "There are, it is said, one hundred and forty-four customs in France which have the force of law; these laws are almost all different. A man who travels in this country changes laws almost as many times as he changes horse post [9–12 kilometers]."

[14] For instance, March Philippeaux, a representative at the National Convention of 1793, declared: "There are a hundred thousand younger sons waiting for this law to fly at the borders, but the fear of being reduced to poverty, by being disinherited from their parents, who have only this means to take revenge for their patriotism, prevents them from leaving."

under impartible inheritance than under partible inheritance.

Le Play's hypothesis. Frédéric Le Play (1806–82) was one of the first social scientists to link inheritance rules and family organization. He claimed that extended and high-fertility families prevailed where generations succeeded one another within an undivided family house. The father's testament, in which he named the heir, was "the supreme law of the family" (Le Play 1875, p. 30). It ensured that the heir's priority was the conservation of house and lineage. In contrast, nuclear families prevailed where inheritance was partitioned among all offspring. Each offspring's share of inheritance allowed them to form their own household and live independently. The abolition of testamentary rights in 1793 disrupted the long-established equilibrium of fecund families. These reforms destroyed the *pater-familias* authority that enabled extended families to perpetuate (Le Play 1875, p. 75–6). A key mechanism on how the Revolution "destroyed" the extended, fecund family (Le Play 1875, p. 26) was the fragmentation of land under the new inheritance laws. By partitioning family domains, the inheritance laws made it impossible for large, traditional families to cohabit and to sustain a high fertility. We next formalize Le Play's hypothesis and derive testable implications.

Model Setup. Consider an economy populated by adults who make decisions for their household. Households differ with respect to the inheritance rule i of the location they live in. A share θ of households lives under the impartible inheritance rule, while $1-\theta$ lives under the partible inheritance rule. Adults care about household consumption, c, and the total endowments of their children. Their utility function is given by:

$$u(c_i, n_i) = \ln c_i + \beta \ln \left(n_i y_i'\right), \tag{1}$$

where $n \geq 1$ is the number of children of the household, and y', the children's income. $\beta > 0$ is the weight attached to utility derived by the next generation. We assume a "warm glow" type of altruism whereby households care directly about their children's endowments, as in de la Croix and Doepke (2003).

Consumption depends on the number of children that a household decides to have and on the household's income:

$$c_i = (1 - \phi n_i) y_i, \tag{2}$$

where $\phi \in (0, 1)$ is a fixed cost of raising children and y is the household's income, which depends on household production.[15]

Total household production is determined by the size of the land, L, and labor, N. These two inputs are combined using a Stone-Geary production function f:

$$f(L, N_i) = \begin{cases} 0 & \text{for } L \leq \bar{L} \\ \left(L - \bar{L}\right)^{1-\alpha} N_i^{\alpha} & \text{otherwise,} \end{cases} \tag{3}$$

where $\alpha \in (0, 1)$ is the relative importance of labor with respect to productive land and $\bar{L} > 0$, a fixed amount of land required for the land to be productive. This threshold captures land indivisibilities behind our main hypothesis, i.e., that is unlikely that a positive level of agricultural output is obtained with only a miniscule amount of land input. Stone-Geary technology is natural in agricultural economics (Beattie and Aradhyula 2015). In our historical setting, the existence of a land threshold is consistent with the reactions of the French farmers who blamed the forced partition of properties in the aftermath of the Revolution for pushing families into ruin (de Brandt 1901, p. 93).

We now introduce the two types of inheritance rules: partible ($i = P$) and impartible ($i = I$) inheritance. This distinction follows two assumptions. First, we assume that there is no functioning land market so that land can only be acquired by a bequest, L'_i. This is a simplifying assumption to the fact that transaction costs over property were formidable (Finley, Franck, and Johnson 2021). Second, we follow Le Play's hypothesis that inheritance and the structure of households go hand in hand. That is, that partible inheritance is associated to nuclear families, impartible inheritance, to extended families, and that the family is the main source of labor. In detail, under partible inheritance, land is transmitted equally to each child who forms a new household. Each child is hence a laborer on their own plot of land. Income is equal to the output of the production. Under impartible inheritance, land remains constant across generations. The household consists of an extended family, which includes the heir as well as his siblings, n_I, who serve as laborers in the family farm, N'_I.[16] Total production is shared among all the

[15] Assuming a budget constraint of the type $c_i = y_i - \phi n_i$, where children represent a direct cost in terms of consumption, leads to equivalent predictions.

[16] We assume that all the offspring stay at the family farm. Assuming that a certain number, μ, of them leave the household does not change the results. Indeed, the optimal fertility under impartible inheritance assuming that $N'_I = n_I - \mu$ is increasing in μ. Hence, accounting for the possibility of leaving the household makes the impartible-partible fertility differentials larger.

adults of the extended family.[17] This implies that

$$L'_P = \frac{L}{n_p},\ N_p = 1,\ y'_P = f\left(\frac{L}{n_p}, 1\right),\ L'_I = L,\ N'_I = n_I,\ \text{and}\ y'_I = \frac{f(L, n_I)}{n_I}\ . \quad (4)$$

Before solving the model, we make the following assumption ensuring that fertility is above one in the interior case:

Assumption 1 *The cost of a child is relatively low:*

$$\phi < \frac{\alpha\beta}{\alpha\beta + 1}\ . \quad (5)$$

Assumption 1 reflects the fact that, in pre-industrial societies, fertility was higher than in modern societies and above replacement rates (Chesnais 1992, p. 122).

Equilibrium. The equilibrium fertility decisions under impartible and partible inheritance rules are given by n_I^* and n_P^*, respectively. These are the optimal fertility choices that maximize the utility function in Equation (1) subject to the budget constraint in Equation (2), the production function in Equation (3), the inheritance rules (4), and the condition $n \geq 1$.[18] In detail, n_I^* and n_P^* depend on the amount of land:

$$\text{If } L \leq \bar{L};\quad n_I^* = n_P^* = 1. \quad (6)$$

$$\text{If } \bar{L} < L < \tilde{L};\quad n_I^* = \frac{\alpha\beta}{(1+\alpha\beta)\,\phi}\quad \text{and}\quad n_P^* = 1. \quad (7)$$

$$\text{If } L \geq \tilde{L};\quad n_I^* = \frac{\alpha\beta}{(1+\alpha\beta)\,\phi}\quad \text{and}\quad n_P^* = \frac{\beta\bar{L} + (1+\alpha\beta)\phi L - \sqrt{\Delta}}{2(1+\beta)\phi\bar{L}}, \quad (8)$$

where $\tilde{L} \equiv \dfrac{((1+\beta)\phi - \beta)\,\bar{L}}{\phi - \alpha\beta(1-\phi)}$ and $\Delta \equiv (\beta\bar{L} + (1+\alpha\beta)\phi L)^2 - 4\alpha\beta(1+\beta)\phi\bar{L}L.$

The model's equilibrium is illustrated in Figure 2. It shows the relationship between fertility and land under partible and impartible inheritance. When the landholdings transmitted across generations is below $\bar{L}$, land is unproductive and the number of children is restricted to the minimum independently of the inheritance regime. When landholdings are large enough to be productive, but small enough such that the indivisibility constraints are binding, i.e., $\bar{L} < L < \tilde{L}$, fertility is higher under impartible than under partible inheritance and the gap is

[17] Note that we do not need to specify how the total production is shared as households care about total output and not its distribution (Equation 1).

[18] The details for solving the maximization problem are shown in Appendix D.

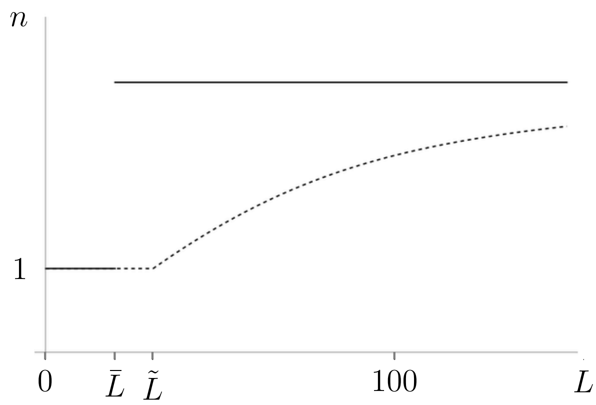


Figure 2: Relationship between fertility and land under partible (dotted line) and impartible inheritance (solid line), with $\alpha = 0.3$, $\beta = 0.9$, $\phi = 0.12$, and $\bar{L} = 30$.

at its maximum. The reason is that, under partible inheritance, dividing such landholdings among several heirs can result in production falling below the subsistence level, which provides a powerful incentive to limit fertility. In contrast, under impartible inheritance, land is passed down unbroken, ensuring the maintenance of a productive land even when fertility is high. The partible-impartible fertility gap becomes smaller as the amount of land increases, i.e., in the $L \geq \tilde{L}$ region. This is because, as the size of the landholdings increase, the indivisibility constraint is less binding, in the sense that landholdings will remain above the productive threshold. That said, the incentive to limit fertility in order to avoid the fragmentation of land still exists, and the fertility gap between impartible and partible households remains positive.

Proposition 1 generalizes the equilibrium and derives a testable implication for the empirical analysis.

Proposition 1 *Fertility is higher under impartible inheritance than under partible inheritance.*

Proof: When $L \leq \bar{L}$, $n_I^* = n_P^* = 1$. When $\bar{L} < L < \tilde{L}$ $n_P^* = 1$ and $n_I^* > 1$ by Assumption 1. When $L \geq \tilde{L}$, $n_I^* - n_P^* > 0$. ■

The Revolution abolishes impartible inheritance. Hence, the share of households under impartible inheritance, θ, becomes nil and the average fertility in the economy equal to n_P^*.

4 Data

4.1 Inheritance rules in Ancien Régime France

We construct an atlas of inheritance customs and laws in France at the eve of the Revolution. First, we create a shapefile of judicial districts as of 1789. Second, we identify the customs and written laws that regulated inheritance in each judicial district before the 1793 inheritance reforms. And third, we code and classify the inheritance rules that applied before the 1793 reforms.

4.1.1 The geography of judicial districts

We start by creating a shapefile of the judicial districts within which inheritance rules applied.[19] Because the administration of the judicial system was not centralized before the Revolution, its geography remained inherently uncertain. Nevertheless, the *convocation* of the Estates General of 1789 provides us with a unique glimpse into its structure at the eve of the Revolution, as the royal authority designated judicial districts as the relevant constituencies for the elections of representatives to the Estates. Based on the archives of convocation, Brette (1904a) developed a large-scale atlas of the 435 judicial districts that served as electoral constituencies in this context: the *Atlas des Bailliages ou Juridictions Assimilées ayant Formé Unité Électorale en 1789.*[20] To construct a shapefile of judicial districts, we first georeference all 32 maps of this atlas using the projection of IGN's shapefile of contemporaneous municipalities.[21] From there, we leverage the precision of these historical maps: because they were drawn onto a map of the country at a 1:320,000 scale (the *Carte du dépôt de la guerre*), the names of municipalities are readable on the maps. As a result, we are able to manually attribute a specific judicial district to each of France's municipalities.[22] The resulting shapefile is displayed on the left-hand side of Figure 3.[23]

[19]Despite performing the same functions, judicial districts had different denominations across the territory. While the term "bailliages" was the more widespread, the term "sénéchaussées" was more common in the south. For more details on the construction of this shapefile and on the functioning of these jurisdictions, see Gay, Gobbi, and Goñi (2023a). This shapefile is openly available on the Harvard Dataverse (Gay, Gobbi, and Goñi 2023b).

[20]Appendix Figure B1 displays the original map of the *généralité* of Amiens from the *Atlas des Bailliages*.

[21]IGN is France's National Geographic Institute. We use IGN's shapefile of municipalities in 2021 geography, the `ADMIN EXPRESS 2021`, which follows a Lambert-93 projection (IGN 2021).

[22]Given the thickness of judicial district boundaries on the maps, the multiple colors they contain, and the unavoidable uncertainty due to distortions of their original projection, an automatic vectorization method would have resulted in an inaccurate output.

[23]The territory of the kingdom of France as of 1789 broadly corresponds to the current territory of mainland France with three main exceptions: the Duchy of Savoy, the County of Nice, and

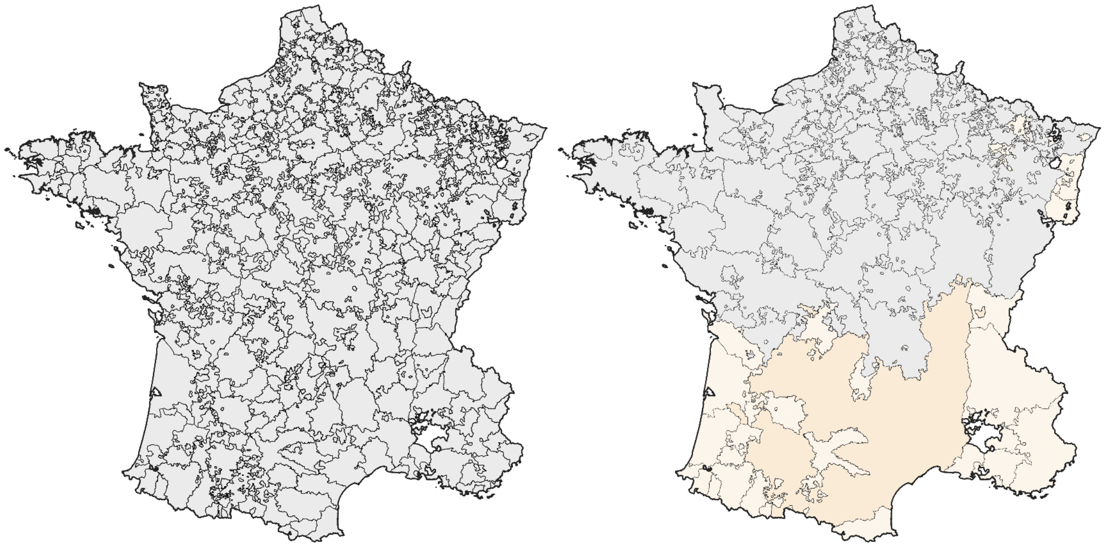


Figure 3: Judicial districts and customs in Ancien Régime France.

Notes: The left panel displays the spatial distribution of judicial districts in 1789. The right panel displays the spatial distribution of customs in Ancien Régime France, where customary-law areas are in gray, written-law areas in dark beige, and areas where both co-existed in light beige. Shapefiles are from Gay, Gobbi, and Goñi (2023b, 2023d).

4.1.2 The geography of customs

In a second step, we create a shapefile of customary and written-law regions.[24] To do so, we record the custom or written law relevant to each judicial district through various sources. For roughly half of districts, Brette (1904b, 1915) recorded the custom that prevailed therein. Unfortunately, Armand Brette could only cover half of the territory by the time of his death in 1912. For most of the remaining judicial districts, we resort to the original source he used: the *Nouveau Coutumier Général* (Bourdot de Richebourg 1724), which provides the original texts of most customs and the districts they were associated to. To cover the few remaining judicial districts, we use a host of secondary sources, among which Zink (1993) for the south-west and Joignon (1989) for the region of Lorraine.

Our final dataset includes 141 customs. The right-hand side of Figure 3 displays the resulting distribution of customary regions in gray and written-law regions in beige. France was broadly divided into two legal regimes. In the north, customary law prevailed. This part of the country, denominated *Pays de droit coutumier*,

the Comtat Venaissin. Moreover, we do not include the island of Corsica as it integrated the French empire during the Revolution.

[24] For more details on the construction of this shapefile and the historical origins of customs, see Gay, Gobbi, and Goñi (2023c). This shapefile is openly available on the Harvard Dataverse (Gay, Gobbi, and Goñi 2023d).

exhibited substantial local variation in customs. In contrast, Roman law prevailed in the south. Specifically, this part of the country, denominated *Pays de droit écrit*, followed the *corpus iuris civilis* of Justinian.[25] In some area, customary and written law coexisted. In practice, however, written law was often only supplementary to customary law therein and applied only when a relevant customary rule was absent (Olivier-Martin 1948; Poumarède 1972, p. 111).[26] In particular, these regions followed customary law regarding inheritance (Poumarède 1972). As a result, our dataset presents some differences with previous work. In particular, Klimrath's (1837) customary map exhibits a broader written-law region, especially in the south-west.[27]

4.1.3 The geography of inheritance

In a third step, we classify the specific rules on inheritance. To do so, we resort to the *Nouveau Coutumier Général* (Bourdot de Richebourg 1724). For customs not listed in this source, we directly use the original Ancien Régime documents that codified the custom.[28]

We classify inheritance rules relative to each custom or written law along the two dimensions described in Section 2.1: partible versus impartible inheritance, and systems that included versus excluded women from inheritance. Following this twofold classification, we generate a shapefile of inheritance systems for Ancien Régime France. This is the first map of inheritance practices that covers the entire territory of France, as other work has focused on specific areas: Yver (1966) for the north, Zink (1993) for the south-west, and Joignon (1989) for Lorraine. Moreover, while previous work has focused exclusively on the partible versus impartible dimension, we provide the first map that also displays inheritance systems that included versus excluded women.

Figure 4 displays our map of inheritance systems, highlighting the geographic distribution of partible (light and dark blue) versus impartible (light and dark red) inheritance systems. In general, the south-east was under impartible inheritance whereas the north-west was under partible inheritance. The north had both areas

[25] Le Bris (2019) studies the consequences of these two regimes in the long run. He finds that Roman law lead to higher economic development than customary law.

[26] These "mixed" areas included the Basque country, Provence, and Dauphiné in the south (Poumarède 1972; Zink 1993) and some judicial districts in Lorraine and Alsace (Ganghofer and Levresse 1977; Joignon 1989).

[27] We display Klimrath's (1837) original map in Appendix Figure B2. In Appendix Figure B3, we provide a comparison of Klimrath's (1837) division of France into written-law and customary-law country and ours (Gay, Gobbi, and Goñi 2023c).

[28] See Appendix Table A1 in Gay, Gobbi, and Goñi (2023c) for the complete list of the 13 additional primary sources we mobilize.

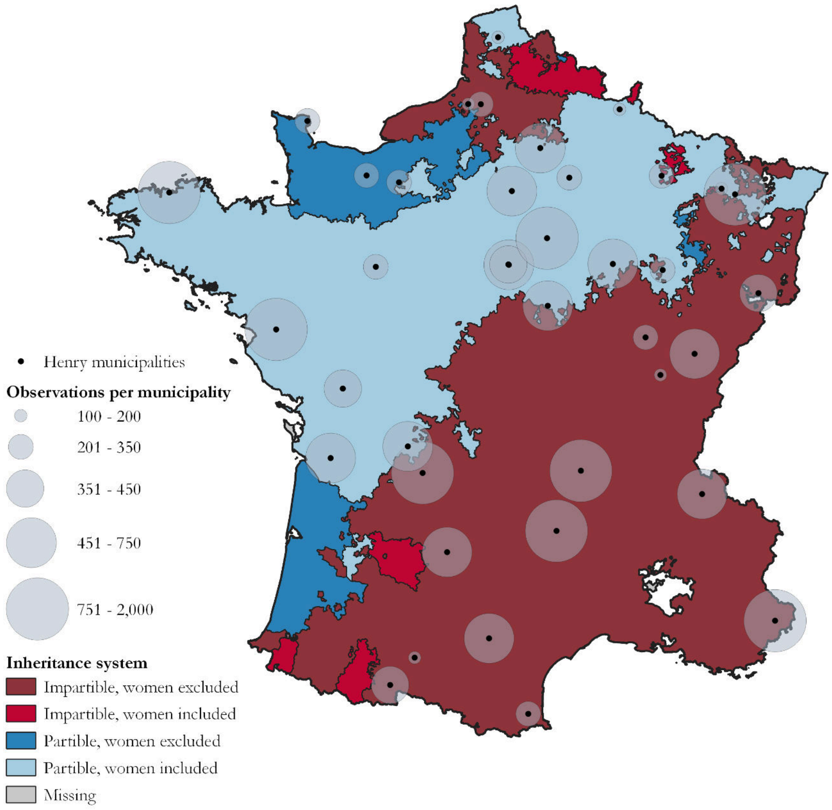


Figure 4: Inheritance in Ancien Régime France.

Notes: This map displays the distribution of inheritance systems prevalent in Ancien Régime France together with the locations of municipalities in the Henry dataset.

under partible inheritance and areas under impartible inheritance. These countrywide patterns are consistent with previous work on specific areas of France (Yver 1966; Joignon 1989; Zink 1993). Moreover, there is a strong spatial correlation between areas where women were excluded from inheritance and areas under impartible inheritance. This is intuitive as the rational behind these two inheritance systems was similar: to prevent the family wealth from diluting among many descendants in impartible systems and between patrilineal and matrilineal descendants in systems excluding women. That said, the overlap is not perfect: for instance, in the south-west and in Normandy, women were excluded from inheritance though partible inheritance prevailed therein. This geography of inheritance was stable from the codification of the customs in the fifteenth century up to the Revolution (Gilissen 1979, p. 250).

4.2 Fertility from the *Enquête Louis Henry*

Our main individual-level fertility data are from the *Enquête Louis Henry*, which was developed by French historical demographers led by Louis Henry between 1958 and 1989 (Fleury and Henry 1958; Séguy 2001). This database was generated through the method of reconstitution of families. This technique reconstitutes families by linking public records of three major events—birth, marriage, and death—within and between individuals. Henry used parish and hospital public records for the pre-revolutionary period and civil registers after 1792. The high quality of the Henry database is well known among historical demographers, as reflected by the extensive number of studies using this data—see Renard (1997) for a comprehensive bibliography of more than three hundred studies.

We use the nominative part of the Henry database, which contains individual-level information on fertility for 34,812 women born between 1604 and 1803 in 39 rural municipalities.[29] Figure 4 displays the locations of these municipalities. Our baseline sample consists of 20,332 women born between 1700 and 1803. We consider women born in the eighteenth century as this provides a balanced sample of cohorts affected and not affected by the 1793 inheritance reforms: 52.9 percent of women in our sample were of fertile age after 1793 (aged 15–40) and 47.1 percent completed their fertile cycle before 1793 (aged over 40). In the robustness checks, we restrict the sample to a 30-cohort window before and after the reforms.

The Henry database lists the total number of births over a woman's lifetime and the death year of children who died young.[30] We use this information to construct three fertility variables: completed fertility, completed fertility of mothers, and childlessness indicators. These variables consider net fertility, that is, they are restricted to children who survived until six years old. In the robustness analysis, we correct for potential underreporting of children deaths. We consider net fertility because child mortality was high until the 1800s—1–1.5 children per mother would not reach the age of six (Houdaille 1984). Appendix Figure B5 illustrates this by comparing crude and net fertility for mothers born between 1650 and 1803. The figure also suggests that, for both crude and net measures, a sharp fertility decline started for cohorts born in the 1750s, i.e., for cohorts who became fertile after the 1793 inheritance reforms. In addition, the Henry database includes years of birth,

[29] Henry considered a random sample of 400 municipalities for the anonymous part of the database, and a 1-in-10 random draw for the nominative part. The nominative dataset contains 41 municipalities. We exclude Massongy (Haute-Savoie), which was outside of France in 1789, and Suze-sur-Sarthe, which contains only a few observations.

[30] Appendix Figure B4 shows an entry for a couple married in 1754 that had seven children.

marriage, and death, literacy indicators based on whether marriage certificates were signed, whether different relatives were alive at the time of the couple's marriage, and the accuracy of each entry. The latter comprises ten categories based on the availability of birth and marriage dates (see Appendix Table A2).

Appendix Table A1 provides summary statistics for our baseline sample. Our main variable of interest, net completed fertility, has a sample average of 2.35 children. The completed fertility of mothers is 3.19, while one in four women were childless. The mean age at marriage was about 26 for women. Their husbands were 3.44 years older. On average, the fertile cycle spanned ten years, from age 26 (first birth) to 35 (last birth). The sample is balanced in terms of inheritance: 41 percent of women were born in municipalities with impartible inheritance before the 1793 reforms, and 59 percent, in muncipalities with partible inheritance. Literacy was low, with only 18 percent of women signing their marriage certificate. Roughly half of parents-in-law were alive at time of marriage of their children, suggesting that family wealth was passed down around this time.

4.3 Fertility from online genealogies in `geni.com`

We complement our fertility data with information from crowdsourced genealogies available in `geni.com`, a MyHeritage Company. The main advantage of this crowdsourced data relies in its sheer size—the underlying database we use contains over 153 million observations. Genealogical data contains information on the timing and locations of birth, baptism, marriage, death, and burial, as well as family linkages relative to an individual's parents, spouses, and children.[31] From these linkages, we are able to reconstruct individuals' family trees and measure their fertility.

To construct our sample, we keep profiles of individuals who were born in France between 1700 and 1810.[32] Next, we assign to each profile the latitude and longitude of their location of birth using the GeoNames database and manually check that this location corresponds to their municipality of birth.[33] Based on their municipality of birth, we then assign a historical inheritance rule to each individual.

[31]See Alburez-Gutierrez et al. (2023) for a description of the database.

[32]To do so, we search for words that can refer to France in the variables containing the birth and baptism location information, e.g., "francia" or "frankrijk."

[33]We perform this verification as follows: first, we project the points georeferenced automatically through GeoNames (`https://www.geonames.org`) onto IGN's (2021) shapefile of France's municipalities. Then, we attribute the municipality information relative to where each point is located. Finally, we manually compare the resulting information from that based on GeoNames. The accuracy rate of the automatic georeferencing is close to 70 percent. We correct the remaining inaccuracies manually.

Next we attribute a number of children to each profile based on their family linkages. When measuring fertility, genealogical data often suffer from substantial bias as most users provide information on their direct ancestors (their parents, grandparents, great-grandparents,...) but not on their collateral ancestors (uncles, granduncles, great-granduncles,...). Reconstructing fertility histories from the resulting sample population therefore results in an over-representation of families with single children. To overcome this concern, we follow the horizontal restriction proposed in Blanc (2023a) and keep an observation, t, if at least one of the four preceding generations $(t-1, t-2, t-3, t-4)$ has more than one recorded offspring. Applying the horizontal restriction, our Geni sample contains 11,649 women born in France between 1700 and 1810 spread over 2,966 different locations (see Figure 8). Hence, despite their potentially lower quality relative to the Henry data, the Geni data provide us with a broader coverage of the territory. These women had on average 3.55 children who survived to six years old.

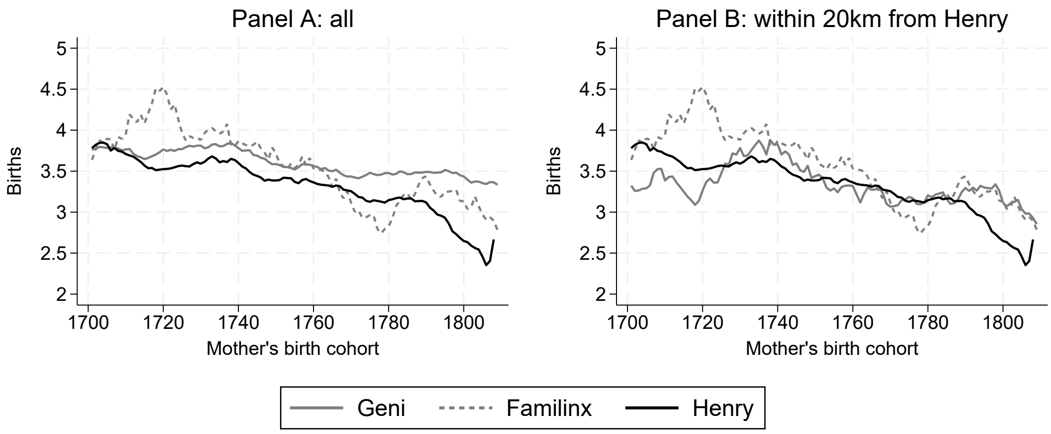


Figure 5: Trends in completed fertility of mothers, Geni vs. Henry.

Notes: This figure plots the completed net fertility of mothers, i.e., the number of children who survived to six-years old, based on the Geni (gray), Familinx (dashed) and Henry (black) databases. Panel A uses the full Geni sample. Panel B restricts the Geni sample to locations within 20 kilometers to the municipalities in the Henry database. Moving averages include a mother's birth year, five lags, and five forward years. Geni and Familinx samples apply the horizontal sample restriction (Blanc 2023a).

Figure 5 displays the completed fertility of mothers, i.e., the number of children who survived to six years old, between 1700 and 1810. It is based on three databases: Geni (gray), Familinx (dashed gray) and Henry (black). The Familinx database is a sub-sample of the Geni database scrapped by Kaplanis et al. (2018) and used in Blanc (2023a). In Panel A, the Geni sample consists in all women (i) born in France, (ii) to whom we could assign a latitude and a longitude given the birth location, and (iii) whose genealogy satisfies the horizontal restriction. In

Panel B, this sample is restricted to women in locations within 20 kilometers from the municipalities in the Henry database. The figure shows that fertility levels and trends are consistent across these different data sources.

4.4 Other variables

Our analysis further includes a host of municipality-level variables. This section describes the original variables we construct and briefly summarizes those we draw from existing sources. We provide the details in Appendix E and descriptive statistics in Appendix Table A1.

First, we construct two new variables of religiosity at the municipality level: the proximity to Church authorities (*évêchés*) and the proportion of marriages during lent and advent. The latter exploits the fact that the Catholic Church did not perform marriages during lent and advent. In contrast, the new civil marriage contract introduced in 1792 imposed no such calendar restrictions. Hence, marriages enacted during lent and advent were mostly civil marriages, so that their prevalence or absence indicates how religious or secularized a given municipality was. Based on the 6,472 marriage dates after 1792 available in the Henry database, we construct a religiosity index R for each municipality m as follows:

$$R_m = \frac{\text{Lent and advent marriages}}{\text{All marriages}} \times \frac{365.25}{46 + \text{days advent}} \,. \tag{9}$$

This index is the proportion of lent and advent marriages in municipality m relative to the proportion predicted by a random distribution of marriages throughout the year.[34] Larger values indicate lower religiosity (or higher secularization). Because lent and advent marriages were only possible after the introduction of the civil marriage in 1792, our index captures variation in religiosity across municipalities around the time of inheritance reforms. Appendix Figure B6 displays a time series for the religiosity index calculated separately for each year from 1700 to 1815. Lent and advent marriages sharply increased after 1792, from a 1/5- to a 3/4-proportion of the expected number had marriages been evenly distributed throughout the year. The increase was parallel in municipalities with different inheritance systems (see Table 1 and Appendix Figure B7 for balance tests).

Second, we proxy for local economic conditions with municipality-by-decade

[34] 365.25 is the average number of days in a year, 46 is the number of days of lent—including Sundays—and advent varies from 21 to 28 days. We calculate the lent dates in 1700–1819 from tlarsen2.tripod.com and advent dates based on which day of the week November 30 was in each year. Because the advent period comprises four Sundays before Christmas, starting on the closest Sunday to November 30, it varies from 21 to 28 days.

wheat prices computed based on Ridolfi (2019)'s raw price series.[35] For each woman in the Henry database, we assign the average wheat price in her municipality during the decade following her 15th birthday, i.e., the beginning of her fertile cycle. Third, we measure support for the Revolution by the proximity to political societies in 1793 and proximity to rebellions against State authorities in the decade preceding the Revolution (Gay and Hamon 2023). Political societies played a critical role in the diffusion of the ideas of the Revolution: the eminent Saint-Just qualified these societies as "temples for the principle of equality" (Boutier, Boutry, and Bonin 1992, p. 10). In addition, support for the Revolution was stronger in locations that experienced rebellions against State authorities (Nicolas 2002). Fourth, for each municipality, we construct the proximity to administrative centers for tax collection, legal authorities, and territorial administration.[36] Fifth, to measure the access to economic and information networks, we construct the distance to the closest paved road and horse post—the network of horse posts was instrumental in the monarchy's apparatus for disseminating information and enabled the integration of peripheral areas into national networks (Arbellot 1973; Bretagnolle and Franc 2020).

5 Empirical strategy

5.1 Difference-in-differences specification

Our aim is to assess the effect of the 1793 inheritance reforms on women's fertility. Our identification strategy consists in a difference-in-differences approach based on comparing cohorts of women who were fertile in 1793 to cohorts of women who were too old to be fertile in 1793, between municipalities where the reforms altered versus did not alter the inheritance system. Our main specification is:

$$Y_{icm} = \alpha + \beta \ I_m \times F_c + \gamma \ I_m + \mu_c + \mathbf{X}_i'\theta + \epsilon_{icm} \ , \tag{10}$$

where Y_{icm} denotes the completed fertility recorded at the end of the reproductive life of women i born in municipality m in cohort c; μ_c are fixed effects for birth cohorts; and I_m is an indicator variable for the treatment group, i.e., municipalities with impartible inheritance rules that, after 1793, were abolished by the reforms. The variable of interest, $I_m \times F_c$, is the interaction between the treatment group indicator in municipality m and the length of exposure to the 1793 reforms for

[35] We are grateful to Leonardo Ridolfi for sharing his raw price series with us.

[36] All the locations of administrative centers are collected from Nordman, Ozouf-Marignier, and Laclau (1989, pp. 74–80) and displayed in Appendix Figure D2.

women in cohort c. Specifically, F_c is the remaining number of fertile years after 1793 for women in cohort c. We consider a woman's fertile cycle to be between ages 15 and 40. Hence, F increases linearly from 0 for cohorts aged 40 or more in 1793 – that is, for women who completed their fertile cycle before the reforms – to 25 for cohorts aged 15 or less in 1793—that is, for women whose entire fertile cycle occurred after the reforms. The parameter β captures the effect of the 1793 inheritance reforms on fertility. This effect includes the reduced economic incentives for having children to avoid the fragmentation of land (see Proposition 1).

In extended specifications, vector $\mathbf{X}_i$ includes a rich set of individual-level controls that are potentially correlated with fertility: literacy indicators for women and their husbands, the accuracy of the Henry form, and whether the parents and in-laws were alive when the couple married—a proxy for whether the husband had already received an inheritance. We also include husband's birth cohort fixed effects or, alternatively, the age difference between spouses. We account for serial correlation in the outcomes by clustering standard errors at the municipality level.

5.2 Identifying assumptions

Parallel trends. The identifying assumption in our difference-in-difference strategy is that average outcomes in municipalities that were under different inheritance systems prior to the reforms followed parallel trends before 1793. This assumption would be violated if fertility was already declining in impartible-inheritance municipalities relative to that in partible-inheritance ones among cohorts that had completed their fertile cycle by 1793.

Figure 6 provides support for the parallel trends assumption in our setting. It compares average fertility across municipalities that were initially under partible and impartible inheritance systems. For cohorts that completed their fertile cycle before the 1793 reforms, trends are declining in a parallel fashion: while average fertility was lower by about 0.3 children for women born in the mid-eighteen century relative to women born in the early 1700s – a pattern consistent with previous evidence on the early decline in birth rates in France[37] – we observe no systematic difference in this early fertility decline between areas that were initially under partible versus impartible inheritance. Indeed, we observe a constant fertility gap between both areas throughout the first half of the eighteen century, as average fertility was higher in areas under impartible inheritance by about 0.7 children for both women born in the early 1700s (3 versus 2.3 children) and women born in the early 1750s (2.7 versus 2 children)—the last cohorts to complete the fertile cycle

[37]See, e.g., van de Walle (1986), Guinnane (2011), and Blanc (2023a).

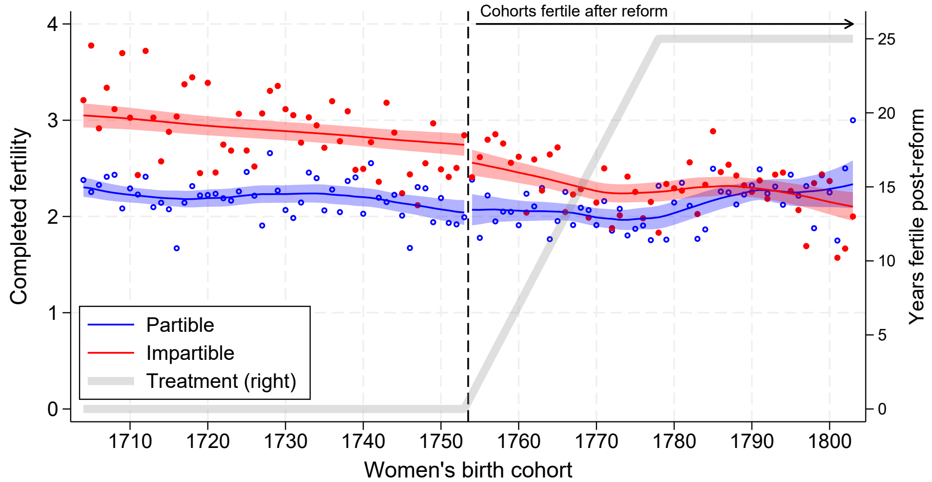


Figure 6: Trends in completed fertility by cohort across inheritance system.

Notes: Each dot represents the average completed fertility of a given birth cohort. Pre- and post-reform trends (lines) and 95% confidence intervals (shaded areas) are calculated from a local polynomial regression on each side of the 1753 birth cohort. Colors correspond to areas with different pre-reform inheritance systems. The vertical dashed line indicates the cohort who completed her fertile cycle immediately before the 1793 inheritance reforms, i.e., who were aged 40 in 1793. The gray line shows the remaining fertile years after the 1793 inheritance reforms for each cohort (right axis).

before the 1793 reforms. Among cohorts that were fertile after the 1793 reforms, the figure shows a steeper fertility decline in areas where the reforms removed impartible inheritance than in areas that already were under partible inheritance: the fertility gap closes from the aforementioned 0.7 children to 0 for women born after 1790—the cohorts which entire fertile cycle occurred after the reforms.

Altogether, this provides some initial evidence that the 1793 reforms, by establishing partible inheritance across France, contributed to the fertility decline.

Specifications with flexible trends. In addition to the parallel trends assumption, our identification strategy requires that there exists no omitted time-varying and municipality-specific characteristics correlated with both pre-reform inheritance systems and individual fertility. The most serious threat to this assumption is that before industrialization, good economic conditions were associated with high fertility, and that these economic conditions might have evolved differently across areas with different initial inheritance systems. To address this concern, we report specifications that control for trends in economic conditions captured by municipality-specific decade-average wheat prices from Ridolfi (2019).

Formally, we consider the following extended specification:

$$Y_{icm} = \alpha + \beta\ I_m \times F_c + \gamma\ I_m + \mu_c + p_{mc} + \mathbf{X}_i'\theta + \sum_t \mathbf{1}[c = t] \times \mathbf{Z}_m'\delta_t + \epsilon_{icm}\ , \quad (11)$$

where p_{mc} is the logarithm of the average wheat price in municipality m in the decade when a woman in cohort c entered her fertile cycle, i.e., at age 15.

Besides trends in economic conditions, Equation (11) further accounts for the possibility that fertility followed different trends in areas that varied along religious, political, and economic-geography characteristics. We do so by including a vector $\mathbf{Z}_m$ of such characteristics measured at the municipality level before 1793 and interacted with indicators for each birth cohort, $\mathbf{1}[c = t]$. That is, we allow for flexible trends in fertility along these characteristics.

First, we consider religious characteristics. Religiosity and secularization are strong predictors of fertility in pre-industrial France (Blanc 2023b). If religiosity differed systematically across areas with different pre-reforms inheritance systems, fertility could have evolved differently even in the absence of the 1793 inheritance reforms. To account for this possibility, we include an interaction between birth-cohort indicators and our two newly-constructed municipality-level proxies for religiosity: distance to the closest Church administrative center before the Revolution (*évêchés*) and the proportion of marriages enacted during lent and advent, when the Catholic Church did not perform marriages (see Section 4.4 for details).

Second, we consider local political factors that may be correlated with the support for the Revolution, the adherence to the equality principle that inspired inheritance reforms, and the availability of information about the reforms itself and other revolutionary events. To capture such local political factors, we use two municipality-level proxies: the distance to the closest political society and the distance to the closest rebellion against State authorities in the decade preceding the Revolution. As discussed in Section 4.4, political societies were closely knitted with the ideas of the Revolution, especially with the equality principle, and had access to thorough information about revolutionary events (Boutier, Boutry, and Bonin 1992). Moreover, support for the Revolution was relatively stronger in locations that contested State authorities in the run-up of the Revolution between 1779 and 1789 (Nicolas 2002). As before, we interact these two variables with birth cohort indicators. This allows for the possibility that fertility followed heterogeneous trends across municipalities with different levels of support for the Revolution, adherence to the equality principle, and information regarding the revolutionary reforms.

Third, we consider institutional and economic-geography factors by including the location of each municipality with respect to the most relevant legal, fiscal, and territorial administrative centers as wells as paved roads and horse posts at the time of inheritance reforms. Distance to the judicial district seat is most relevant in our setting, as legal cases related to inheritances were resolved there. In addition, municipalities in the vicinity of a tax collection or a territorial administrative center could potentially benefit from better access to public infrastructures, markets, innovation, and economic development. Finally, municipalities close to paved roads or a horse post also benefited from better economic and information networks. Our extended specification, hence, accounts for the possibility that fertility followed different trends across municipalities with different economic-geography and access to these administrative centers.

Balancedness. In addition, we show that, before the 1793 reforms, a wide range of individual- and municipality-level characteristics were balanced across areas with different inheritance systems. The only characteristic that differed systematically was fertility. Panel A of Table 1 shows that, before the harmonization of inheritance rules, there was a large fertility gap between partible- and impartible-inheritance areas. Women subject to impartible inheritance had, on average, 0.7 more children than women subject to partible inheritance (2.9 relative to 2.2).

In contrast to the difference in fertility, we find no significant differences for 9 of the 11 individual-level characteristics across areas with partible and impartible inheritance, and for all 11 variables across areas that included or excluded women. Before the reforms, the mortality of wives and husbands did not vary significantly across areas with different inheritance systems: age at death was 57–8 for wives and 60–2 for husbands, and 12–4 percent of women died before completing their fertile cycle. Similarly, Appendix Table A3 uses a sample of children born in 1700-1803 to show that child mortality did not evolve differently after 1793 in areas with different inheritance rules. This alleviates the concern that, because mortality and fertility often go hand-in-hand in demographic transitions, the fertility decline after the 1793 reforms simply reflects differences in mortality across inheritance areas. Similarly, we find no significant differences in the probability that a woman's parents or in-laws were alive at the time of her marriage. This suggests that the uncertainty surrounding the timing of inheritances was balanced. Altogether, the reform treatment is orthogonal to concerns over mortality or uncertainty—two hypothesized historical determinants of the emergence of impartible inheritance (Chu 1991; Grieco and Ziebarth 2015). Importantly, the accuracy of the data,

Table 1: Balancedness of pre-reform characteristics.

	(1)	(2)	(3)	(4)	(5)	(6)
	partible	impartible	diff.	women included	women excluded	diff.
A. Individual covariates before the reforms						
Completed fertility	2.21	2.92	0.71***	2.22	2.84	0.62***
	(2.29)	(2.76)	[0.15]	(2.28)	(2.72)	[0.16]
Wife's age at death	57.31	58.16	0.86	56.96	58.51	1.55
	(17.14)	(17.56)	[1.65]	(17.08)	(17.57)	[1.56]
Husband's age at death	59.85	61.59	1.74	59.72	61.59	1.87
	(15.65)	(15.66)	[1.32]	(15.53)	(15.80)	[1.27]
Wife died before 40	0.13	0.12	−0.01	0.14	0.12	−0.02
	(0.34)	(0.33)	[0.02]	(0.34)	(0.32)	[0.02]
Wife's mother alive at marriage	0.52	0.44	−0.08	0.51	0.47	−0.04
	(0.50)	(0.50)	[0.06]	(0.50)	(0.50)	[0.06]
Husband's mother alive at marriage	0.47	0.39	−0.08	0.45	0.41	-0.04
	(0.50)	(0.49)	[0.05]	(0.50)	(0.49)	[0.05]
Wife's father alive at marriage	0.43	0.40	−0.03	0.42	0.41	−0.01
	(0.49)	(0.49)	[0.05]	(0.49)	(0.49)	[0.05]
Husband's father alive at marriage	0.38	0.35	−0.03	0.38	0.36	-0.01
	(0.49)	(0.48)	[0.04]	(0.48)	(0.48)	[0.04]
Known birth year	0.63	0.63	0.00	0.63	0.63	−0.00
	(0.48)	(0.48)	[0.06]	(0.48)	(0.48)	[0.05]
Known union end date	0.72	0.68	−0.04	0.73	0.67	−0.06
	(0.45)	(0.47)	[0.04]	(0.44)	(0.47)	[0.03]
Literacy	0.17	0.07	-0.10*	0.16	0.09	−0.06
	(0.38)	(0.25)	[0.05]	(0.36)	(0.29)	[0.06]
Literacy of husband	0.40	0.23	−0.16*	0.37	0.29	-0.08
	(0.49)	(0.42)	[0.09]	(0.48)	(0.45)	[0.10]
Observations	6,405	4,347	10,752	5,870	4,882	10,752
B. Municipality-level covariates						
Wheat price (log)	0.67	0.73	0.06**	0.68	0.71	0.04
	(0.06)	(0.11)	[0.03]	(0.05)	(0.12)	[0.03]
Religiosity index	0.56	0.51	−0.06	0.56	0.53	−0.03
	(0.29)	(0.28)	[0.09]	(0.30)	(0.28)	[0.09]
Distance religious center (Eveche)	29.71	26.30	−3.42	27.59	29.25	1.66
	(16.85)	(20.11)	[6.20]	(16.84)	(19.56)	[5.86]
Distance legal center (Judicial district seat)	13.32	15.88	2.56	12.65	16.05	3.40
	(9.66)	(10.21)	[3.28]	(10.11)	(9.47)	[3.13]
Distance territorial admin. (subdeleg.)	13.82	12.02	−1.80	13.68	12.55	−1.13
	(5.73)	(7.52)	[2.26]	(6.01)	(6.98)	[2.09]
Distance tax center (Recette)	17.14	19.18	2.04	16.38	19.56	3.18
	(7.92)	(12.92)	[3.69]	(8.21)	(11.63)	[3.24]
Distance political society	5.58	5.38	−0.19	5.80	5.19	−0.62
	(3.73)	(3.18)	[1.12]	(4.03)	(2.87)	[1.12]
Distance rebellion in 1779–89	26.80	16.95	−9.86*	26.76	19.06	−7.70
	(19.91)	(12.72)	[5.22]	(18.57)	(16.92)	[5.68]
Distance paved road	1.61	2.32	0.71	1.74	2.04	0.30
	(1.80)	(2.26)	[0.69]	(1.94)	(2.08)	[0.65]
Distance horse post	9.75	17.12	7.37**	9.23	16.12	6.89**
	(5.91)	(12.25)	[3.36]	(5.82)	(11.30)	[2.90]
Average caloric suitability of land	1823	1985	162	1902	1868	−34.4
	(340.2)	(347.5)	[113.1]	(304.6)	(395.9)	[113.5]
Terrain ruggedness (in 100s of meters)	0.28	0.31	0.04**	0.28	0.30	0.02
	(0.06)	(0.04)	[0.02]	(0.06)	(0.05)	[0.02]
Observations	24	15	39	20	19	39

Notes: This table reports means of various pre-reform covariates in areas with different inheritance systems. In Panel A, the sample is 10,752 women in the Henry dataset who completed their fertile cycle before the 1793 reforms. In Panel B, the sample are the 39 municipalities in the Henry dataset. Age at death missing for ca. 30 percent of wives and for ca. 40 percent of husbands. Known birth year if recovered from parish records or from age at the General Population Census. Standard deviations in parenthesis; Standard errors in brackets are clustered by municipality in Panel A and are robust-standard errors in Panel B; *p<.05; **p<.01; ***p<.001.

proxied by whether the date of birth and of marriage is known, is also virtually the same across areas with different inheritance rules. Finally, a woman living in an area under partible inheritance or in an area where women could inherit was slightly more likely to be literate and marry a literate man, but these differences are small and only marginally significant. Nevertheless, we include literacy indicators in our baseline set of covariates.

Panel B of Table 1 shows that municipalities with different inheritance systems were also comparable in terms of religiosity: the proportion of lent and advent marriages is balanced across municipalities where the inheritance rules were affected and not affected by the 1793 reforms. Similarly, variables capturing political support for the Revolution and the municipalities' distance to religious, legal, fiscal, and territorial centers are not systematically different across the pre-reform inheritance borders. The only exceptions are that wheat prices were marginally higher, rebellions 10 kilometer closer, and horse posts 7 kilometer further away in municipalities under impartible inheritance. Although it is unlikely that these small differences can explain away the steeper fertility decline in impartible areas after the abolition on impartiblle inheritance, we include all these variables in the set of covariates for our flexible-trends specification. Finally, we consider climatic and soil characteristics affecting the output of the land. In detail, we show that the average caloric suitability index (Galor and Özak 2016), which is based on climatic and soil suitability for post-1500 crops, is balanced across areas with partible and impartible inheritance. We also document a small 4-meter difference in terrain ruggedness (Nunn and Puga 2012). This balancedness result is important for two reasons: First, because land indivisibilities – the central mechanism in Le Play's hypothesis and in our model – are strongly associated with climatic and soil characteristics. Second, because these characteristics are important determinants of the role of land as a source of wealth, which in turn is one of the hypothesized historical determinants of impartible inheritance (Bertocchi 2017).

The 1793 inheritance reforms. Finally, identification of the effect of the 1793 inheritance reforms on fertility decisions relies on (i) regional variation in pre-reform inheritance systems; (ii) a relatively rapid take-up of the reforms; and (iii) the passing of the reforms being exogenous to fertility choices.

First, there was substantial regional variation in the set of laws and customs that regulated inheritances before the 1793 reforms (see Figure 4 and Section 2.1). And although systems of impartible inheritance were more prevalent in the south than in the north of the country, there was significant variation in inheritance rules within these broad areas. For instance, the southern administrative centers of Marmande, Meilhan, Villandraut, and Langon, despite being within a 20-kilometer radius, each had a different inheritance system: impartible inheritance that included (Marmande) or excluded women (Meilhan) and partible inheritance that included (Langon) or excluded women (Villandraut) (see Appendix Figure B8). Similarly, there was substantial variation in inheritance systems in the north-east. Importantly, such widespread heterogeneity in inheritance systems before the Revolution is reflected in the sample of municipalities covered by the Henry database (Figure 4). Among our sample of 20,332 women, 41 percent lived in municipalities with pre-reform impartible inheritance (Appendix Table A1).

Second, our identification strategy relies on a relatively rapid take-up of the 1793 inheritance reforms. As discussed in Section 2.2, the historiography highlights how the harmonization of inheritance rules was quickly upheld after it passed in 1793. All offspring, including women, were generally set on receiving an equal share of the inheritance (Shaffer 1982) and family tribunals effectively enforced the new inheritance laws across France (Poumarède 2011; Desan 1997).[38]

Third, our identification strategy relies on the exogeneity of the reforms to fertility decisions. The historical evidence strongly supports this assertion (Section 2.2). Inheritance reforms were unanticipated and not at the core of the popular grievances raised during the Estates General of 1789 (Goy 1988). In addition, concerns about fertility were not instrumental for policy makers upon designing the inheritance reforms. Instead, the revolutionaries' objectives were to enforce the equality principle (Shaffer 1982), unify the legal system across the territory (Hyslop 1934; Shaffer 1982), and ensure that those who joined the Revolution would not be disinherited by their parents (Lataste et al. 1901, p. 681–3).

6 Empirical results

6.1 DD estimates

In this section, we analyze the effects of the 1793 inheritance reforms on fertility decisions. The theoretical framework in Section 3 predicts that abolishing impartible inheritance would alter economic incentives of having children in areas under impartible inheritance prior to the reform. Because of indivisibility constraints in assets passed down as inheritance such as land, we expect women who were fertile

[38] We study the effect of the reforms on completed fertility, an outcome that for some cohorts was realized over 25 years after the reforms. Hence, even if the take-up of the inheritance reforms was slower than suggested by the historiography, our estimates would capture its effect on the fertility decisions of our later cohorts.

after 1793 to limit their fertility in order to avoid the fragmentation of the land.

Table 2 reports the results from estimating Equation (10). In Panel A, the dependent variable is completed fertility, i.e., the number of children surviving until age 6 ever born to a woman. The coefficient on the treatment group (*Impartible*) captures the pre-reform fertility gap between areas with impartible and partible inheritance. Consistent with the descriptive evidence of Section 5, fertility was higher by 0.682–0.748 children in municipalities with impartible inheritance. The coefficient on the main variable of interest (*Impartible* $\times$ *Years fertile post-reform*) captures the effect of the 1793 inheritance reforms. In all specifications, we find a large negative and significant effect of abolishing impartible inheritance on completed fertility. The magnitude of this effect is sizable: every additional fertile year of exposure to the 1793 reforms is associated with a reduced completed fertility of 0.024–0.028 children. Given a sample average of 2.35, this effect corresponds to a 1-percent decrease per year of exposure. Over the entire fertility cycle, it corresponds to a reduction in completed fertility of 0.60–0.70 children.

The estimated coefficients are similar across all specifications. Column (1) considers a simple specification with cohort fixed effects which, when taken together with the fixed effect for treated areas, account for average differences in completed fertility across birth cohorts and treated areas. In columns (2)–(6), we consider a broader set of individual-level controls that are potentially correlated with fertility. In column (2), we add fixed effects for husband's birth cohorts. These fixed effects capture husband-specific differences in fertility over time, as well as differences in fertility among women of the same cohort but married to men of different ages. In column (3), we further control for each spouse's literacy, i.e., whether they signed their marriage certificate. Literacy is a relevant proxy for human capital which, in turn, was a strong predictor of fertility during the eighteenth century (Becker, Cinnirella, and Woessmann 2010). In column (4), we control for the accuracy of the data through fixed effects for each of the ten form types used by Louis Henry. The ten form types are based on the availability of birth and marriage dates—see Appendix Table A2. In column (5), we include four indicator variables for whether a woman's father, mother, father-in-law, and mother-in-law were alive upon her marriage. These variables capture family-specific health conditions as well as genetic health endowments transmitted across generations from both the maternal and paternal lines. In addition, whether the father-in-law was alive captures whether the husband had already received an inheritance upon marriage, which could trigger income effects affecting fertility. In column (6) we control for the age difference between spouses to capture differences in bargaining power be-

Table 2: Difference-in-differences estimates for the effects of abolishing impartible inheritance: Henry data.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A. Dep. Variable is completed fertility							
Impartible	0.705***	0.746***	0.741***	0.748***	0.682***	0.743***	.
	(0.153)	(0.158)	(0.165)	(0.151)	(0.137)	(0.165)	
Impartible	−0.024***	−0.026***	−0.026***	−0.024***	−0.025***	−0.028***	−0.027***
× Years fertile post-reform	(0.006)	(0.007)	(0.007)	(0.006)	(0.007)	(0.008)	(0.007)
Observations	20,332	20,261	20,261	20,260	20,238	17,806	20,238
Adjusted R-squared	0.020	0.059	0.059	0.144	0.182	0.167	0.197
Panel B. Dep. Variable is completed fertility of mothers							
Impartible	0.774***	0.783***	0.805***	0.811***	0.773***	0.783***	.
	(0.181)	(0.180)	(0.189)	(0.180)	(0.170)	(0.189)	
Impartible	−0.020***	−0.021**	−0.021**	−0.021***	−0.022**	−0.022**	−0.024***
× Years fertile post-reform	(0.007)	(0.008)	(0.008)	(0.008)	(0.008)	(0.009)	(0.008)
Observations	15,013	14,969	14,969	14,968	14,950	13,697	14,950
Adjusted R-squared	0.030	0.045	0.046	0.066	0.085	0.082	0.112
Panel C. Dep. Variable is =1 if childless							
Impartible	−0.038*	−0.048***	−0.041**	−0.044***	−0.040**	−0.043***	.
	(0.021)	(0.017)	(0.017)	(0.014)	(0.016)	(0.015)	
Impartible	0.003***	0.003***	0.003***	0.003***	0.003***	0.004***	0.003***
× Years fertile post-reform	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Observations	20,332	20,261	20,261	20,260	20,238	17,806	20,238
Adjusted R-squared	0.005	0.043	0.045	0.179	0.215	0.197	0.222
Cohort FE	Y	Y	Y	Y	Y	Y	Y
Cohort FE of husband	.	Y	Y	Y	Y	N	Y
Literacy (0/1)	.	.	Y	Y	Y	Y	Y
Literacy of husband (0/1)	.	.	Y	Y	Y	Y	Y
Accuracy of Henry form FE	.	.	.	Y	Y	Y	Y
Father alive at marriage (0/1)	.	.	.	.	Y	Y	Y
Mother — " —	.	.	.	.	Y	Y	Y
Husband's father — " —	.	.	.	.	Y	Y	Y
Husband's mother — " —	.	.	.	.	Y	Y	Y
Spouses' age difference	.	.	.	.	.	Y	N
Municipality FE	.	.	.	.	.	.	Y
N clusters	39	39	39	39	39	39	39

Notes: The sample is women born in 1700–1803 in the Henry database. The dependent variable is the number of children ever born to all women (Panel A), to mothers (Panel B), and the probability to be childless (Panel C). All variables consider "net" fertility, i.e., they are based on the number of children surviving until age 6. Literacy (and Literacy of husband) is = 1 if the woman (her husband) signed the marriage certificate. Accuracy of Henry form includes FE for each categories in Appendix Table A2. Standard errors in parentheses are clustered by municipality; *p<.05; **p<.01; ***p<.001.

tween husbands and wives (Doepke and Kindermann 2019).[39] Finally, in column (7) we replace the indicator for the treatment group, i.e., for areas with impartible inheritance prior to the reforms, with the full set of municipality fixed effects. This two-way fixed-effects specification controls for time-invariant unobservable factors affecting average differences in fertility across municipalities. Overall, estimates remain nearly unchanged throughout specifications.

[39] Controlling for the age difference requires removing husbands cohort fixed effects. The number of observations in column (6) is reduced because using husbands cohort fixed effects allows us to group husbands with missing birth years into a single group, whereas including the spouses' age difference produces missing values that are dropped from the regression.

Panels B and C of Table 2 report separate estimates for the effect of abolishing impartible inheritance on the intensive and extensive margins of fertility. The dependent variable is the completed fertility of mothers in Panel B, and an indicator variable equal to one if a woman was childless in Panel C. As before, both variables measure net fertility by excluding children who did not survive until age 6. Before 1793, women in municipalities under impartible inheritance had higher fertility on both margins: the fertility of mothers was higher by 0.773–0.811 children and the rate of childlessness was lower by 3.8–4.8 percentage points. By abolishing impartible inheritance, the 1793 inheritance reforms significantly decreased fertility in treated municipalities, contributing to close the pre-reform gap along both margins: each additional fertile year of exposure to the reforms reduced mothers' completed fertility by 0.020–0.022 children and increased women's likelihood to be childless by 0.3–0.4 percentage points. Over the entire fertility cycle, this effect corresponds to a reduction in completed fertility of mothers by 0.50–0.55 children, more than 70 percent of the partible-impartible fertility gap that existed prior to the reforms. This suggests that the 1793 inheritance reforms accelerated the fertility decline in the late-eighteenth century, bringing impartible-inheritance areas towards the low-fertility regime that predominated in partible-inheritance areas before the reform.

Next, we show that these effects are driven by the 1793 reforms and not by heterogeneous trends in fertility across different areas of the country. Table 3 reports the results from estimating Equation (11). This extended difference-in-differences specification allows fertility to follow different trends over time in each municipality depending on their local economic, religious, political, and economic-geography characteristics. In column (1), we include municipality-level wheat prices by decade to account for the fertility effects of time-varying and municipality-specific economic conditions. In column (2), we consider our two proxies for religiosity: the distance to the closest Church administrative center before the Revolution and the proportion of marriages during lent and advent in each municipality after the introduction of civil marriage in 1792. The interaction of these variables with cohort fixed effects captures the possibility that cohorts in more religious or secular municipalities could have been on a different trajectory relative to the demographic transition. Likewise, in column (3), we include local political factors interacted with cohort fixed effects. As explained in Section 5, municipalities near a political society might have had better access to information about revolutionary reforms and a stronger adherence to the equality principle, which was at the heart of the 1793 inheritance reforms. In turn, the distance to the closest rebellion against

Table 3: Flexible-trend difference-in-differences' estimates for the effects of abolishing impartible inheritance: Henry data.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. Variable:	Completed fertility	Completed fertility	Completed fertility	Completed fertility	Completed fertility of mothers	= 1 if childless	Age at marriage
Impartible	0.658***	0.674***	0.779***	0.516***	0.586***	−0.040	−0.611
	(0.147)	(0.155)	(0.138)	(0.151)	(0.159)	(0.029)	(0.803)
Impartible	−0.026***	−0.026***	−0.029***	−0.031***	−0.031***	0.004***	0.073**
× Years fertile post-reform	(0.007)	(0.007)	(0.006)	(0.009)	(0.010)	(0.001)	(0.028)
Observations	20,238	20,238	20,238	20,238	14,950	20,238	20,237
N clusters	39	39	39	39	39	39	39
Adjusted R-squared	0.182	0.183	0.188	0.197	0.107	0.222	0.328
Cohort FE	Y	Y	Y	Y	Y	Y	Y
Cohort FE of husband	Y	Y	Y	Y	Y	Y	Y
Individual-level controls	Y	Y	Y	Y	Y	Y	Y
Local wheat price in decade	Y	Y	Y	Y	Y	Y	Y
Cohort FE							
× Religiosity index	.	Y	Y	Y	Y	Y	Y
× Distance religious center	.	Y	Y	Y	Y	Y	Y
× Distance political society	.	.	Y	Y	Y	Y	Y
× Distance rebellion	.	.	Y	Y	Y	Y	Y
× Distance legal center	.	.	.	Y	Y	Y	Y
× Distance fiscal center	.	.	.	Y	Y	Y	Y
× Distance admin. center	.	.	.	Y	Y	Y	Y
× Distance paved road	.	.	.	Y	Y	Y	Y
× Distance horse post	.	.	.	Y	Y	Y	Y

Notes: The sample is women born in 1700–1803 in the Henry database. The dependent variable is the number of children ever born to all women (columns (1)–(4)), to mothers (column (5)), the probability to be childless (column (6)), and age at marriage (column(7)). All variables consider "net" fertility, i.e., they are based on the number of children surviving until age 6. All specifications include cohort FE and the full-set of individual-level controls in Table 2: literacy indicators for women and their husbands; accuracy of the Henry form fixed effects; and fixed effects for whether a woman's father, mother, father-in-law, and mother-in-law was alive when the couple married. The remaining covariates capture flexible trends in fertility by municipality-level economic, religious, political, and economic-geography characteristics (see Section 5 for detailed descriptions). Standard errors in parentheses are clustered by municipality; *p<.05; **p<.01; ***p<.001.

State authority in the decade preceding the Revolution captures the local support to the Revolution prior to the 1793 reforms. Hence, this specification accounts for the possibility that fertility followed different trends across municipalities with different information on the reforms, adherence to the equality principle, and general support for the Revolution. Finally, in column (4), we add distances to the closest legal, fiscal, and territorial administrative centers prior to the Revolution, and to the closest paved road and horse post, interacted with birth cohort fixed effects. This accounts flexibly for municipality-specific economic-geography prior to the Revolution, such as access to Ancien Régime administrative centers, proximity to the courts where inheritance disputes were resolved, or economic and information networks, that could affect women's fertility differently across birth cohorts.

Our estimates of interest are stable across specifications. Estimates in columns (1)–(4) imply that each additional fertile year of exposure to the 1793 inheritance reforms reduced completed fertility by 0.026–0.031 children, amounting to a cumulative decrease of 0.65–0.78 children over a woman's entire fertility cycle. This effect is very similar to that found in our baseline specification and to the estimates for the pre-reform fertility gap between areas with partible and impartible inheritance. In addition, columns (5) and (6) present estimates from this extended specifications with flexible trends for the completed fertility of mothers and childlessness rates. As before, they are similar in magnitude to our baseline estimates. In addition, Appendix Table A5 shows similar estimates with flexible trends from a two-way fixed-effects specification, that is, replacing the indicator for the treatment group with municipality FE. Overall, our main conclusions are robust to allowing fertility to follow different trends in municipalities that differed in economic conditions, religiosity, political factors, and economic geography. This suggests that our estimates effectively reflect local changes in fertility resulting from the 1793 inheritance reforms.

Finally, column (7) of Table 3 shows that these reductions in fertility were partly achieved by delaying age at marriage, an important preventive check in pre-industrial societies (Cinnirella, Klemp, and Weisdorf 2017). Abolishing impartible inheritance is associated with an increase in age at marriage by 1.8 years for cohorts whose entire fertility cycle was after the reforms. Appendix Table A3 shows that other fertility-control strategies were also used to reduce fertility in response to the inheritance reforms: delaying age at first birth, increasing the years between marriage and first birth and the minimum spacing between consecutive births, and reducing the span between first and last birth. In contrast, Appendix Table A4 shows that the differential fertility decline in impartible areas after the reforms was not the result of increased children's mortality rates.

Taken together, our results suggest that the 1793 inheritance reforms contributed to the large fertility decline in late-eighteenth century France. Indeed, the effect of the reforms over a woman's entire fertility cycle (0.60–0.70 children) is almost identical to the pre-reform fertility gap between areas with impartible and partible inheritance (0.68–0.75). This shows that the harmonization of inheritance rules led to a fertility convergence between regions of France. In other words, the sudden abolition of impartible inheritance in 1793 brought large impartible-inheritance areas of France (covering roughly half of the country) to the low-fertility regime that prevailed in partible-inheritance areas, and hence, contributed to accelerate France's fertility transition. In order to illustrate the magnitude of this acceleration in the fertility transition, Figure 7 shows the observed trends in completed fertility from 1650 to 1803, alongside the counterfactual fertility trends in the absence of the inheritance reforms. The latter is based on the estimates of the full specification in Table 3, Column (4). The figure shows that, in the absence of the inheritance reforms and the convergence in fertility between partible and impartible regions, France's fertility decline would have been substantially less pronounced in the late-eighteenth century.

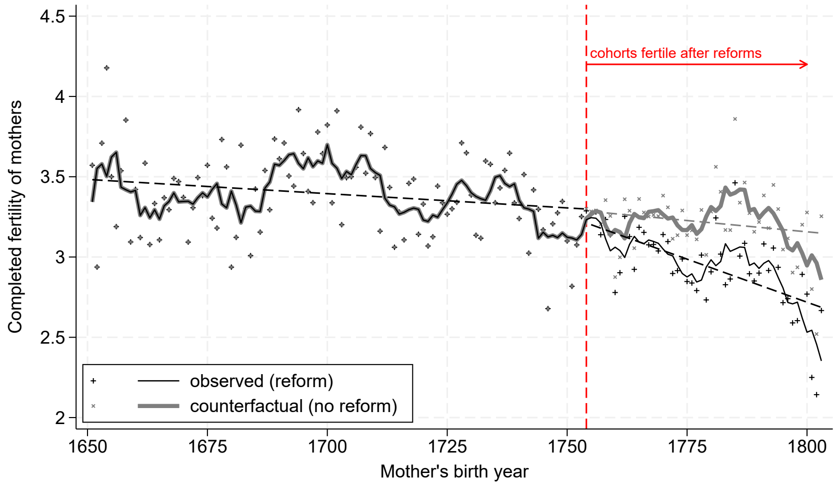


Figure 7: Counterfactual fertility in the absence of inheritance reforms.

Notes: Symbols represent the average completed fertility by each birth cohort (+ for observed, × for counterfactual); Solid lines plot 5-year moving averages (black for observed, gray for counterfactual); Dashed lines are fitted values before and after 1753 (black for observed, gray for counterfactual); the vertical line indicates the 1753 cohort—the last to complete her fertile cycle before the reforms. Counterfactual fertility based on estimates in Table 3, Column (4).

6.2 DD extensions and robustness

In this section, we discuss an alternative channel – female inheritance – and introduce additional robustness checks to further support the validity of our results. Details on the robustness are reported in Appendix F.

Female inheritance. The 1793 inheritance reforms, in addition to abolishing impartible inheritance, also extended the right to inherit to women.[40] The mechanism proposed in Section 3 of fertility limitation to avoid land fragmentation is exacerbated by including women in inheritances, as this roughly doubles the number of heirs. A companion mechanism could emerge from the fact that the reforms changed single women's lifetime earnings relative to men's.[41]

[40]The Revolution did not extend other rights to women, as pointed by Citoyenne Le Franc of Caen: "You have only passed one law beneficial to women, the law of 17 Nivôse" (Desan 1997).

[41]The inclusion of women in the inheritance in France was probably the first right granted to women in history (Tertilt et al. 2022, Figure 2). However, differently from granting married

Pre-reform systems that excluded women typically provided them a dowry upon marriage.[42] While dowries were conditional on marriage, inheritance was not. Hence, marriage was no longer a requirement to receive a share of the family's assets. Access to inheritance gave women the means to support themselves, relaxed the fear of becoming a spinster, and reduced the incentives to secure a marriage as soon as possible (de Moor and van Zanden 2010). Formally, a positive income shock in the lifetime budget constraint of a single woman improves her outside option in the marriage market. A better outside option should lead women to postpone entrance into marriage. Since age at marriage is a key determinant of fertility in pre-industrialized societies (Cinnirella, Klemp, and Weisdorf 2017), fertility should decline after an increase in the outside option.

In order to test such hypothesis, we repeat the empirical analysis of Section 6.1 but with a treatment, I_m, indicating municipalities with pre-reform inheritance that excluded women in Equations (10) and (11). Appendix Figure B9 shows that prior to the 1793 inheritance reforms, fertility followed parallel trends where women were included and excluded from inheritances: For cohorts that completed their fertile cycle before 1793, fertility was higher in areas that excluded from inheritance by about 0.5–0.6 children, a fertility gap that fluctuated but remained largely constant for all cohorts born in the first half of the eighteen century. For cohorts that were fertile after the 1793 reforms, fertility declined more steeply in areas that had initially excluded women than in areas where women were already included in the inheritance. This implies a convergence in fertility, with the aforementioned fertility gap closing to 0 for women born in the 1770s. In addition, columns (4)–(6) of Table 1 show that, before 1793, most individual- and municipality-level covariates were balanced across areas that included versus excluded women from inheritance.

Appendix Table A6 presents estimates for the effects of including women in inheritances from a regression of Equation (10)'s form. In Panel A, we analyze the effects on marriage incentives by looking at women's age at marriage as dependent variable. Column (1) reports estimates including only cohort fixed effects for women and their husbands. Column (2) adds the full set of individual-level controls described above. Column (3) presents results of estimating Equation (11), which allows fertility to follow different trends across municipalities with different

women economic rights (Hazan, Weiss, and Zoabi 2022), inheritance rights alone did not improve women's bargaining power within a marriage. When married, women's inheritance was dissolved into the couples assets, which until 1965 were managed by the husband.

[42] Dowries represented an insurance—either to the bride in case the marriage broke, or to the bride's family in case the bride died before her parents.

characteristics. The estimated effect of the 1793 inheritance reforms (*Women excluded* $\times$ *Years fertile post-reform*) is positive in all specifications, suggesting that extending the right to inherit to women delayed their age at marriage. Estimates' magnitudes are stable and meaningful across the specifications: every additional fertile year of exposure to the reforms increases a woman's age at marriage by 0.041–0.052 years. Over the entire fertility cycle, this effect corresponds to a delay in age at marriage of 1.0–1.3 years.

Next, we examine the consequences for fertility of the delay in age at marriage induced by including women in inheritances. Panels B and C of Table A6 report estimates with the completed fertility of women and their probability to be childless as the dependent variable. Baseline effects reported in column (1) suggest that exposure to the 1793 reforms that extended the right to inherit to women reduced their completed fertility and increased their likelihood of being childless. Estimates are not significantly affected by the inclusion of individual-level controls and the full set of flexible trends in columns (2) and (3). Specifically, we find that, every additional fertile year of exposure to the right to inherit reduced a woman's completed fertility by 0.025–0.031 children and increased her probability to be childless by 0.3–0.4 percentage points. Over the entire fertility cycle, this effect corresponds to a reduction of 0.63–0.78 children in completed fertility and of 7.5–10.0 percentage points in the childlessness rate. Overall, these results suggest that giving inheritance to women can also reduce fertility by decreasing women's financial incentives to secure an early marriage.

Permutation tests. Appendix Figure E1 reports 10,000 β-coefficients from:

$$Y_{icm} = \alpha + \beta \ I_{\widetilde{m}} \times F_c + \gamma \ I_{\widetilde{m}} + \mu_c + p_{mc} + \mathbf{X}_i'\theta + \sum_t \mathbf{1}[c = t] \times \mathbf{Z}_m'\delta_t + \epsilon_{icm} \ , \quad (12)$$

where Y_{icm} is completed fertility and m and $\widetilde{m}$ index true and reshuffled municipalities, respectively. The main variable of interest, $I_{\widetilde{m}} \times F_c$, is the interaction between the reshuffled pre-reform inheritance system and the "true" post-reform fertile years for women i in cohort c. In addition, we report results that also reshuffle our set of municipality-level flexible trends, p_{mc} and $\mathbf{Z}_m$. Estimated coefficients in the placebo regressions have a distribution centered around zero. This suggests that our main results are not due to random chance or to general trends in fertility, but that they effectively reflect the differential fertility impact of the 1793 inheritance reforms in areas affected and not affected by the reforms.

Heterogeneous treatment effects. Our measure of exposure to the reforms corresponds to the remaining fertile years after 1793. We perform two exercises to account for the possibility that the treatment effect may not be constant across cohorts. First, we estimate Equation (11) replacing our continuous measure of reform exposure, F_c, with a set of indicator variables. This allows for non-linear treatment effects for different cohorts. Results are shown in Appendix Figure E2. The effect size is smaller for cohorts with only up to 10 fertile years after the reforms than for younger cohorts more exposed to the reforms, although the estimates are not statistically different. Second, using insights from de Chaisemartin and d'Haultfoeuille (2020) that two-way fixed-effect estimators consist of a weighted average of heterogenous average treatment effects, we show in Appendix F that the amount of treatment heterogeneity needed to explain away our baseline estimate is implausibly large.

Sensitivity to outliers. Our estimation strategy exploits local variation across municipalities where the reforms altered and did not alter the existing inheritance system. Because the Henry database contains a sample of 39 municipalities, we show that our results are not driven by outlier municipalities. Appendix Figure E3 shows that our baseline estimates for the effect of the 1793 inheritance reforms on completed fertility are indistinguishable from estimates obtained by sequentially omitting one of the 39 municipalities in the Henry database.

Placebo test. We provide further validation of the parallel trends assumption by conducting a placebo reform on cohorts that had all their children before the 1793 inheritance reforms. Appendix Table E1 shows that the coefficient on the treatment group is not statistically significantly different from zero. This further suggests that our baseline estimation captures the effect of the 1793 inheritance reforms and not that of pre-trends in completed fertility.

Alternative sample, treatment, and control group. Appendix Table E2 examines the robustness of our results to: (*i*) restricting the sample to women born between 1720 and 1780, (*ii*) extending the treatment to women aged up to 45 in 1793, and (*iii*) restricting the control group to women in municipalities where the pre-reform system had *both* partible inheritance and women included in inheritances. The resulting estimates are almost identical to our baseline estimates suggesting that the large drop in completed fertility observed in eighteenth-century France was carried by cohorts who were 15 to 40 years old during the reforms in areas where the inheritance system was altered.

Migration and mortality. Because the Henry database was constructed through the family reconstitution method, diverging emigration trends across pre-reform inheritance systems could bias our fertility estimates. This same logic can be extended to changes in mortality rates. Appendix Table E3 addresses this concern by showing that our results are robust to restricting the sample to women who were alive at age 40, i.e., whose records were not missed because of emigration, and to including municipality-specific trends in mortality.

Adjusted fertility using the first-name repetition technique. The Henry dataset under-reports children deaths (Houdaille 1984). To show that our results are not driven by these omissions, we apply the first-name repetition technique of Cummins (2020) to construct adjusted fertility measures. The technique is based on the fact that parents often used the name of a deceased child to name a newborn. Appendix Tables E4 and E5 show that our results are robust to using these alternative measures.

Soil, climate, and terrain characteristics. Climate conditions and the soil suitability for different crops can determine the importance of land as a source of wealth – a hypothesized historical determinant of impartible inheritance (Bertocchi 2017) – as well as the land indivisibilities—the key mechanism highlighted by LePlay and our model. In Section 5, we have shown that Galor and Özak (2016)'s post-1500 caloric yield index, based on soil and climatic suitability for different crops, is balanced across areas with different inheritance systems, and that there is only a 4-meter difference in terrain ruggedness (Nunn and Puga 2012). Appendix Table E6 presents an additional robustness test. We extend our specification and allow fertility trends to differ across municipalities with different post-1500 caloric yield index and terrain ruggedness. Our main estimates on the effect of the inheritance reforms are robust.

7 Spatial regression discontinuity with Geni data

We extend our analysis using crowdsourced genealogies in `Geni.com`. The substantial spatial coverage of individuals in the Geni dataset enables us to implement a spatial regression discontinuity design to account for unobservable characteristics that vary smoothly across space—e.g., soil characteristics, land values, historical experiences, the north-south divide in Roman law, or how much the rule of law prevailed in remote areas. Using this data is also appealing because, unlike with the Henry data, it covers the south-west of France, an area often used to question Le Play's hypothesis. Finally, it can also be used to validate our results with data obtained from two very different methodologies: the family reconstruction method (Henry dataset) and crowdsourced genealogies (Geni dataset).

7.1 RD-DD empirical strategy

We use a regression discontinuity difference-in-differences (RD-DD) design to study the effect of the 1793 inheritance reforms on fertility. We restrict our Geni sample (1700–1810) to mothers born close to a border between judicial districts, where one district had partible and the other impartible inheritance prior to the reforms. Figure 8 illustrates this setup and the 5,692 mothers scattered over 1,294 birth locations within 30 kilometers of the border between contiguous districts. The RD-DD strategy exploits the fact that women living close to, but on opposite sides of these district borders were subject to different inheritance rules before 1793, and to the same partible inheritance rule after 1793. Specifically, we compare the fertility gap at the border for cohorts who were fertile before versus after the 1793 reforms. The benefit of this strategy is that it accounts for unobservable factors that vary smoothly across space and differences-out time-invariant unobservables as well as general trends.

The basic regression-discontinuity (RD) setup motivates estimating the following equation:

$$\begin{aligned} Y_{icm} \;=\; \alpha \;+\; \beta \mathbf{1}\left[d_m \geq 0\right] \;+\; \phi_b \;+\; \mu_c \;+& \\ \mathbf{1}\left[d_m \geq 0\right] \times f_I(d_m, B_I) + \mathbf{1}\left[d_m < 0\right] \times f_P(-d_m, B_P) + \epsilon_{icm}, & \quad (13) \end{aligned}$$

where Y_{icm} is the completed fertility of mother i, born in cohort c, in municipality m, in a 50-kilometer segment b along the inheritance border. As before, it excludes child deaths before age 6. d_m is the distance to the border, with positive values for impartible- and negative values for partible-inheritance areas; $\mathbf{1}\left[d_m \geq 0\right]$ is an indicator variable equal to one for municipalities with impartible inheritance prior to the reforms; μ_c and ϕ_b are fixed effects for cohorts and border segments; and f_I and f_P are unknown polynomial functions with parameter vectors B_I and B_P, which capture location-specific factors on both sides of the inheritance border (I and P) which can affect fertility. We use triangular kernel functions and polynomial fits of order 1 (linear) and 2 (quadratic). We avoid higher-order polynomials to limit the overfitting bias (Gelman and Imbens 2019). The sample includes mothers whose Geni record satisfies the horizontal restriction explained in Section 4.3 and who were born between 1700 and 1810 close to the partible-impartible border. We follow Calonico, Cattaneo, and Titiunik (2014) and use mean squared

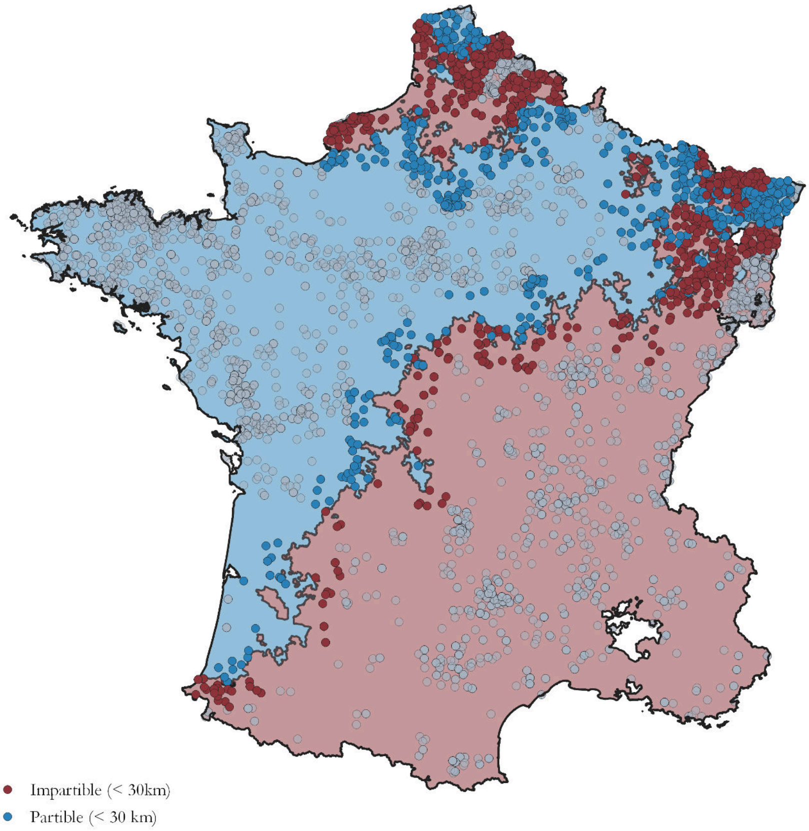


Figure 8: Locations in RD setting, Geni.com.

Notes: This figure displays the geo-located birthplace of women born in France (1700–1810) whose Geni record satisfies the horizontal sample restriction. Colored dots are within 30 kilometers of a partible-impartible inheritance border.

error (MSE) optimal bandwidths. The coefficient β captures the discontinuity in completed fertility at the border. We provide estimates of β for two sub-samples: For cohorts who completed their fertile cycle before the reforms, i.e., over 40 in 1793, we expect higher fertility in impartible areas, $\beta > 0$. For cohorts who were fertile after the reforms harmonized inheritance systems across France, i.e., below 40 in 1793, we expect fertility differences at the border to disappear, $\beta \approx 0$.

One complication with the RD design in our setting is that the exposure to the reforms is not dichotomous, but varies by each cohort's remaining number of fertile years after 1793. To address this, we pool the two sub-samples described above and augment the RD setup with a difference-in-differences model that incorporates a "treatment intensity" measure.[43] Specifically, we extend Equation (13) by interacting our treatment intensity measure $F_c = \{0, 1, ..., 25\}$, the remaining number

[43]Ideally, we would estimate Equation (13) separately for each cohort. Unfortunately, there is not enough precisely geo-located observations in Geni.com to perform such exercise.

of fertile years after 1793 for women in cohort c, with $\mathbf{1}[d_m \geq 0]$, the treatment group indicator:

$$Y_{icm} = \alpha + \beta \mathbf{1}[d_m \geq 0] \times F_c + \gamma \mathbf{1}[d_m \geq 0] + \phi_b + \mu_c + \mathbf{Z}'_{mc}\delta_c + \sum_{s=1}^{2} \mathbf{1}[S_c{=}s] \times \left\{ \mathbf{1}[d_m{\geq}0] \times f_I(d_m, B_{Is}) + \mathbf{1}[d_m{<}0] \times f_P(-d_m, B_{Ps}) \right\} + \epsilon_{icm}. \quad (14)$$

This specification follows Avdic and Karimi (2018) and interacts the unknown polynomial functions f_I and f_P with $\mathbf{1}[S_c{=}s]$, an indicator variable for each of the two sub-samples, $s = \{1, 2\}$. Hence, Equation (14) is essentially a fully interacted version of Equation (13), which allows the location-specific factors on both sides of the inheritance border to affect fertility differently for cohorts who completed their fertile cycle before 1793 ($s = 1$), and cohorts who were fertile after 1793 ($s = 2$). The vector $\mathbf{Z}_{mc}$ includes an analogous set of flexible trends as before, allowing fertility to follow different trajectories in areas that varied by local economic, religious, political, and economic-geography characteristics.[44]

Our RD-DD approach requires two identifying assumptions. The first is that unobservables vary smoothly across borders. We evaluate this assumption by conducting a balancing test for our full set of covariates. Appendix Table A7 reports estimates of β from Equation (13) using as dependent variables municipality-level wheat prices at the decade when each woman started her fertile cycle, the département-level share of refractory clergy, and an indicator variable equal to one if the municipality was within 15 kilometer of, respectively, a political society, a rebellion against the state in 1779–89, a religious, legal, fiscal, and territorial administrative center, a paved road, and a horse post. For each of these 10 variables, the RD estimate on the impartible indicator is small and, for 9 of 10 variables, is not statistically different from zero. Similarly, Appendix Figure B10 illustrates that there is no discontinuity at the border for any of these covariates capturing local economic, religious, political, and economic-geography factors. The second assumption is that, before the reforms, fertility followed parallel trends in areas

[44] We proxy for religiosity with the département-level share of refractory clergy who refused the oath of loyalty to the State in 1791 (Tackett 1982), interacted with cohort fixed effects. In addition, because the RD-DD specification already accounts flexibly for running variables in distance, we now consider dichotomous, rather than distance-based, location variables. In detail, we consider the interaction between cohort fixed effects and an indicator variable equal to one if the municipality was within 15 kilometers of, respectively, the religious, legal, fiscal, and territorial seat of their administrative division, a political society, a rebellion against the state in 1779–89, a paved road, and a horse post. We use 15 kilometers as it is close to the MSE bandwidth for our RD and RD-DD specifications. Results are robust to defining these variables within 5-, 10-, 20-, or 25-kilometer windows or as distances as in Section 6.

with impartible and partible inheritance. In Section 5, we already presented evidence supporting the common trends assumption using the Henry data. Appendix Figure B11 uses Geni data. For cohorts who completed their fertile cycle before the 1793 reforms, we observe a similar fertility gap as before, and that fertility evolved in a parallel fashion in areas under partible and impartible inheritance.

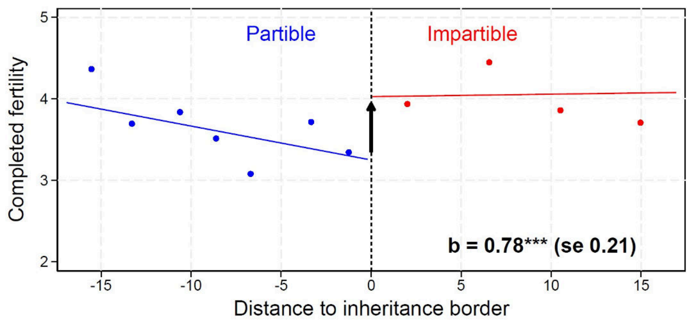
7.2 RD-DD estimates

We begin our analysis by presenting graphic evidence on the relationship between inheritance rules and fertility. Figure 9 plots the completed fertility of mothers around the partible-impartible inheritance border that existed before and after the reforms. Each dot represents completed fertility within a bin, partialled out of cohort and border segment fixed effects, for a number of bins based on the IMSE-optimal evenly-spaced selector. Lines shows a linear local-polynomial fit within an MSE-optimal bandwidth. A discontinuity at the border is apparent only for the pre-reform sub-sample (Panel A). For the post-reform sub-sample who were fertile after the harmonization of inheritance rules, we find no evidence of a discontinuity at the same locations (Panel B). Estimates of Equation (13) for the pre-reform and post-reform sub-samples are also shown in Figure 9. The RD estimate for women who completed their fertile cycle before the reforms is 0.78, suggesting that impartible inheritance is associated with an increase in almost one child over a mother's entire fertility cycle. This is consistent with the magnitude of the pre-reform partible-impartible fertility gap documented in Sections 5 and 6 using Henry data. In contrast, the RD estimate for women who were fertile after the reforms is 0.13, close to zero and not statistically significant (Panel B). This provides additional evidence that the 1793 inheritance reforms led to a convergence in fertility across the partible-impartible regions in France.

We next turn to the full RD-DD estimates. Table 4 presents estimates of β and γ from Equation (14) using linear (columns (1)–(2)) or quadratic polynomials (columns (3)–(4)). In addition, columns (2) and (4) include the full set of flexible trends by local economic, religious, political, and economic-geography characteristics. All bandwidths are based on the MSE optimal selector.

We find that impartible inheritance was associated with a higher completed fertility of mothers by 1.0–1.1 children before the reforms. The abolition of impartible inheritance in 1793 reduced fertility by 0.03–0.05 children per year of exposure to the reform, or by 0.75–1.25 children over a mother's entire fertile cycle. These estimates suggest a sharp discontinuity in fertility at the inheritance border, of about one child, which vanishes almost entirely after a full fertile cycle

Panel A. Cohorts fertile before the reforms ($F = 0$)



Panel B. Cohorts fertile after the reforms ($F > 0$)

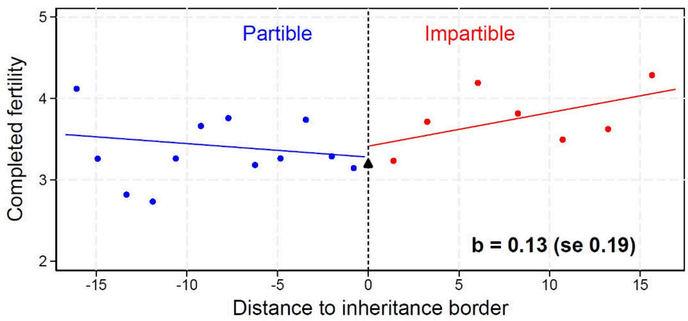


Figure 9: Fertility and distance to inheritance border.

Notes: This figure displays RD plots and estimates from Equation (13). The sample is mothers in Geni satisfying the horizontal restriction and who were born in France (1700–1810) within ca. 15km of the inheritance border. Panel A is for cohorts who completed her fertile cycle before 1793; Panel B is for cohorts who were fertile after 1793. Completed fertility is the number of children ever born to mothers, excluding child deaths before age 6. The border is normalized at 0, with positive values for impartible inheritance. Circles show average fertility within bins, where fertility is partialled out of cohort and border segment fixed effects, and bins are based on the IMSE-optimal evenly-spaced selector. Lines show a polynomial fit of order 1. The bandwidth ca. 15km is based on the MSE optimal bandwidth selector; *p<.05; **p<.01; ***p<.001.

(25 years) after the reforms harmonized inheritances. Compared to the DD estimates of Section 6.1, the RD-DD estimates are larger in magnitude. This suggests that our difference-in-differences strategy using nationwide comparisons provides lower-bound estimates for the effect of the inheritance reforms on fertility, and that the unobservable factors captured by the regression discontinuity setup lead to an attenuation bias. Finally, RD-DD estimates are similar across specifications using linear or quadratic polynomial fits, and allowing fertility to follow different trends by local economic, religious, political, and economic-geography factors.

Table 4: Spatial regression-discontinuity estimates: Geni data.

	(1)	(2)	(3)	(4)
	Dep. Variable: completed fertility			
Impartible	1.036***	1.010***	1.101***	0.967***
	(0.308)	(0.321)	(0.334)	(0.314)
Impartible	−0.037**	−0.054***	−0.040***	−0.032**
× Years fertile post-reform	(0.016)	(0.016)	(0.014)	(0.014)
Observations	3,954	3,794	6,131	5,666
N clusters	931	875	1,390	1,270
Mean dep. variable	3.75	3.80	3.63	3.65
Cohort FE	Y	Y	Y	Y
Border segment FE	Y	Y	Y	Y
Flexible trends	.	Y	.	Y
Order polynomial	linear	linear	quadratic	quadratic
Kernel	triangular	triangular	triangular	triangular
MSE-optimal bandwidth	16.97 km	18.85 km	35.06 km	41.78 km

Notes: This table reports estimates of Equation (14). The sample is mothers born in France (1700–1810) whose Geni record satisfies the horizontal restriction, and born within a MSE-optimal bandwidth on each side of the inheritance border. We use local-polynomial fits of orders 1 and 2, and triangular kernel functions for local-polynomial estimation. The dependent variable is the number of children ever born to mothers, excluding child deaths before age 6. Flexible trends include municipality-level wheat prices by decade, the municipality-level share of refractory clergy × Cohort FE; and an indicator variable for religious centers within 15 kilometer × Cohort FE, for political societies within 15 kilometer × Cohort FE, for rebellions against the state in 1779–89 within 15 kilometer × Cohort FE, for legal centers within 15km × Cohort FE, for fiscal centers × Cohort FE, for territorial administrative centers × Cohort FE, for paved roads × Cohort FE, and for horse posts × Cohort FE; Standard errors in parentheses are clustered by municipality; *p<.05; **p<.01; ***p<.001.

7.3 RD-DD extensions and robustness

Here we examine the sensitivity of our RD-DD estimates to a range of robustness checks and extensions. First, Appendix Table A8 considers alternative bandwidths. Instead of using the computationally-intensive MSE optimal bandwidths, we restrict our sample to mothers born within 15, 20, 25, and 30 kilometers on each side of the inheritance border. Both for linear and quadratic polynomial specifications, the results are robust to the choice of bandwidth. Second, Appendix Table A9 examines different specifications of Equation (14). In Panel A, we use two-dimensional running variables in latitude, longitude, and their interaction. In

Panel B, we use as running variables the distance to the border interacted with 26 indicator variables for cohorts with 0–25 remaining fertile years after the reforms. In Panel C, we use a uniform kernel. In Panels D and E, the sample is analogous to that of the Henry data: respectively, eighteenth-century cohorts and municipalities which were not an administrative center of département. In Panel F, we use 100-kilometer border-segment fixed effects. The estimated effect of the reforms on fertility remains negative and similar in magnitude, and is precisely estimated in almost all specifications.

Third, we study a companion mechanism for why the 1793 inheritance reforms reduced fertility: the extension of the right to inherit to women. We estimate our RD-DD setup on mothers born close to, but on opposite sides of the border between judicial districts that included and excluded women from inheritance, before and after extending the right to inherit to them. The substantial spatial variation in the Geni dataset enables us to exploit the fact that this border does not perfectly overlap with the partible-impartible border (see Figure 4). Appendix Figures B12 and B13 and Table A10 present the RD setup, RD plots, and RD-DD estimates from Equation (14). To further disentangle the effect of including women from that of abolishing impartible inheritance, the table restricts the control group to municipalities unaffected by either of the two reform treatments, i.e., municipalities with partible inheritance including women prior to 1793. We find that extending the right to inherit to women reduced completed fertility by 0.05–0.06 children per year of exposure to the reforms, a similar magnitude to the effect of abolishing impartible inheritance. This is consistent with the fact that these two treatments of the reform increased the number of heirs, reducing the economic incentives for having children to avoid the fragmentation of landholdings.

8 Conclusion

The revolutionary change in inheritance laws in 1793 was one of the causes of the French demographic transition. France was the first country to experience a demographic transition, at least a century before any other European country. We show that legal institutions crucially reduced the economic incentives for having children. The egalitarian inheritance practices imposed during the Revolution had a strong causal effect on the fertility of the affected regions. This effect remains even after controlling for other potential determinants of the fertility decline, such as human capital, secularization, changes in economic conditions, distance to administrative centers or information networks, exposure to political pressure or rebellions linked to the French Revolution. Results are also robust to using data obtained from very different methodologies: the family reconstruction method and crowdsourced genealogies.

France's demographic transition was not only the first but was also among the longest in the world. Hence, multiple factors beyond inheritances contributed to the decline in fertility, either at the beginning, or at later stages of the transition. Yet, traditional explanations for the demographic transition in the literature cannot be reconciled with key features of the French case: Its early timing is at odds with theories based on industrialization, human capital, and the quantity-quality tradeoff; while the sharp fertility decline observed in the late eighteenth-century fertility decline cannot be rationalized with slowly evolving cultural norms. Changes in inheritance rules had been seen as a plausible driver of fertility decline since Le Play (1875) first put forward his theory, but empirical support to prove it was lacking. Our study offers the first evidence supporting this long-standing hypothesis. In so doing, we bring legal institutions at forefront of the puzzle of the French demographic transition and provide an explanation that is consistent with both the timing and the sharp nature of the French fertility decline.

Our results may also have important implications for the diffusion of the demographic transition from France to the rest of Europe. The Napoleonic invasions contributed to the propagation of egalitarian inheritance laws devised by the French revolutionaries to neighboring countries. In fact, by the 1850s, most European countries had introduced egalitarian inheritance laws. Whether this was also responsible for their demographic transitions remains an open question.

Beyond providing support for Le Play's theory of fertility decline in eighteenth-century France, this article unveils an important contributor to modern fertility transitions: legal institutions. Legal factors have been overlooked as potential determinants of fertility decline (Doepke et al. 2022). Our finding that legal institutions regulating inheritance can have substantial effects on fertility may be relevant for boosting fertility transitions in developing countries, in particular for those experiencing stalls. The extent to which inheritance reforms towards more equality can help grasping the benefits of a demographic dividend in developing countries is an intriguing question for future research.

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Online Appendix

Appendix A. Tables

Table A1: Summary statistics for women born in 1700–1803.

	Mean	Std. deviation	Observations
Outcomes and treatment			
Completed fertility (net)	2.35	2.37	20,332
Completed fertility of mothers (net)	3.19	2.22	15,013
Childlessness	0.26	0.44	20,332
Completed fertility (gross)	3.38	3.20	20,332
Age at marriage	26.45	7.82	20,331
Age at first birth	26.51	5.61	14,964
Age at last birth	35.29	6.63	14,888
Birth year	1749.35	27.58	20,332
Birth year (husband)	1748.14	28.22	17,829
Partible inheritance before reform	0.59	0.49	20,332
Impartible inheritance before reform	0.41	0.49	20,332
Women excluded in inheritance before reform	0.46	0.50	20332
Women included in inheritance before reform	0.54	0.50	20332
Individual-level controls			
Wife's mother alive at marriage	0.56	0.50	20,332
Husband's mother alive at marriage	0.50	0.50	20,332
Wife's father alive at marriage	0.47	0.50	20,332
Husband's father alive at marriage	0.41	0.49	20,332
Literacy	0.18	0.39	20,332
Literacy of husband	0.39	0.49	20,332
Accuracy of Henry form	14.74	4.68	20,332
Age difference (husband-wife)	3.44	8.27	17,829
Municipality-level controls			
Wheat price (log)	0.95	0.30	20,332
Religiosity index	0.49	0.28	20,332
Distance to religious center	27.65	16.73	20,332
Distance to political society	6.24	4.80	20,332
Distance to rebellion in 1779–1789	23.32	18.47	20,332
Distance to legal center	13.12	10.02	20,332
Distance to tax center	17.04	11.33	20,332
Distance to territorial administration	12.10	7.70	20,332
Distance to paved road	1.72	1.98	20,332
Distance to horse post	12.12	9.41	20,332

Notes: This table shows summary statistics for women in the Henry sample born between 1700 and 1803. Gross fertility includes all children ever born; net fertility considers children who survived until age 6. Accuracy of Henry's form takes 10 values (in the range 11–15 and 21–25) depending on the availability of a) the woman's birth date and b) the end date of the marriage (see Appendix Table A2). Distances in kilometers.

Table A2: Accuracy of Henry's forms (*fiche*)

Value	Henry form	Woman's birth date	Marriage end date
11	MF1	Known	Known
21	MO1	Known	Unknown
12	MF2a	Calculated based on age at marriage	Known
22	MO2a	Calculated based on age at marriage	Unknown
13	MF2b	Calculated based on age at death	Known
23	MO2b	Calculated based on age at death	Unknown
14	MF3	Unknown	Known
24	MO3	Unknown	Unknown
15	MF	Calculated based on age at General Population Census	Known
25	MO	Calculated based on age at General Population Census	Unknown

Source: Codebook of the nominative part of the Henry database.

Table A3: Fertility control mechanisms.

	(1)	(2)	(3)	(4)	(5)
Dep. Variable:	Age at marriage	Age at first birth	Time to first birth (years)	Years between first and last birth	Birth spacing (min)
Impartible	−0.611	−0.325	−0.514**	1.419***	−0.156
	(0.803)	(0.554)	(0.238)	(0.469)	(0.111)
Impartible × Years fertile post-reform	0.073**	0.058**	0.021**	-0.073***	0.014**
	(0.028)	(0.024)	(0.008)	(0.027)	(0.007)
Observations	20,237	13,954	13,969	11,555	9,435
N clusters	39	39	39	39	39
Adjusted R-squared	0.328	0.192	0.026	0.144	0.015
Cohort FE	Y	Y	Y	Y	Y
Cohort FE of husband	Y	Y	Y	Y	Y
Individual-level controls	Y	Y	Y	Y	Y
Flexible trends	Y	Y	Y	Y	Y

Notes: This table examines five mechanisms used to control fertility: age at marriage (column 1), age at first birth (column 2), years between marriage and first birth (column 3), years between first and last birth (column 3), and minimum years between two births (column 4). All variables are based on a mother's completed fertility, excluding infant deaths before age 6. The sample is women born in 1700–1803 in the Henry database. In columns 2 and 3, the sample is restricted to mothers. In columns 5 and 6, the sample is restricted to couples who completed their fertility cycle (i.e., died after age 40) and who had at least two children. Individual-level controls are those in the full-specification in Table 2; Flexible trends include all trends in the full-specification in Table 3; Standard errors in parentheses are clustered by municipality; *p<.05; **p<.01; ***p<.001.

Table A4: The abolition of impartible inheritance and the probability to die as a child.

	(1)	(2)	(3)
Panel A. Dep. Variable is child died before age 6			
	all	girls	boys
Impartible × Child born after reforms	−0.038	−0.070	−0.048
	(0.035)	(0.043)	(0.042)
Adjusted R-squared	0.118	0.110	0.109
Mean dep. variable	0.314	0.300	0.317
Panel B. Dep. Variable is child died before age 6, using first-name repetition technique			
	all	girls	boys
Impartible × Child born after reforms	−0.019	−0.043	−0.037
	(0.033)	(0.046)	(0.042)
Adjusted R-squared	0.116	0.137	0.138
Mean dep. variable	0.398	0.395	0.406
Cohort FE of child	Y	Y	Y
Parents FE	Y	Y	Y
Observations	50,385	22,048	23,563
N clusters	39	39	39

Notes: This table presents estimates of $y_{i,t,p} = I_p \times post_t + \mu_t + \mu_p + e_{i,t,p}$, where i denotes children, t their birth year, and p their parents. I_p is a dummy variable equal to one if the child's parents were born in an impartible municipality, $post_t$ is a dummy variable equal to one if the child was born after the 1793 inheritance reforms, and μ_t and μ_p are birth year and parent fixed effects. The interaction $I_p \times post_t$ captures the differential probability to die as a child in partible vs. impartible areas after the 1793 reforms, net of cohort factors and of genetic, social, or environmental factors affecting fertility at the family level. In Panel A, the dependant variable, $y_{i,t,p}$, is a dummy variable equal to one if child i died before age 6. In Panel B, the dependant variable, $y_{i,t,p}$, is a dummy variable equal to one if child i died before age 6 or if he/she is not linked to a death record and his/her first name is the same as that of a younger sibling—an indication for child mortality (Cummins 2020). The sample is 50,385 children (column 1), 22,048 girls (column 2), and 23,563 boys (column 3) born in 1700–1803 from the Henry database; Standard errors in parentheses are clustered by municipality; *p<.05; **p<.01; ***p<.001.

Table A5: Flexible-trend two-way fixed-effects estimates for the effects of abolishing impartible inheritance: Henry data.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. Variable:	Completed fertility	Completed fertility	Completed fertility	Completed fertility	Completed fertility of mothers	= 1 if childless	Age at marriage
Impartible	−0.027***	−0.028***	−0.031***	−0.029***	−0.028***	0.004***	0.060**
× Years fertile post-reform	(0.007)	(0.006)	(0.006)	(0.008)	(0.010)	(0.001)	(0.028)
Observations	20,238	20,238	20,238	20,238	14,950	20,238	20,237
N clusters	39	39	39	39	39	39	39
Adjusted R-squared	0.197	0.198	0.200	0.204	0.118	0.229	0.353
Cohort FE	Y	Y	Y	Y	Y	Y	Y
Municipality FE	Y	Y	Y	Y	Y	Y	Y
Cohort FE of husband	Y	Y	Y	Y	Y	Y	Y
Individual-level controls	Y	Y	Y	Y	Y	Y	Y
Local wheat price in decade	Y	Y	Y	Y	Y	Y	Y
Cohort FE							
× Religiosity index	.	Y	Y	Y	Y	Y	Y
× Distance religious center	.	Y	Y	Y	Y	Y	Y
× Distance political society	.	.	Y	Y	Y	Y	Y
× Distance rebellion	.	.	Y	Y	Y	Y	Y
× Distance legal center	.	.	.	Y	Y	Y	Y
× Distance fiscal center	.	.	.	Y	Y	Y	Y
× Distance admin. center	.	.	.	Y	Y	Y	Y
× Distance paved road	.	.	.	Y	Y	Y	Y
× Distance horse post	.	.	.	Y	Y	Y	Y

Notes: The sample is women born in 1700–1803 in the Henry database. The dependent variable is the number of children ever born to all women (columns 1–4), to mothers (column 5), the probability to be childless (column 6), and age at marriage (column(7)). All variables consider "net" fertility, i.e., they are based on the number of children surviving until age 6. All specifications include cohort FE, municipality FE, and the full-set of individual-level controls in Table 2: literacy indicators for women and their husbands; accuracy of the Henry form fixed effects; and fixed effects for whether a woman's father, mother, father-in-law, and mother-in-law was alive when the couple married. The remaining covariates capture flexible trends in fertility by municipality-level economic, religious, political, and economic-geography characteristics (see Section 5 for detailed descriptions). Standard errors in parentheses are clustered by municipality; *p<.05; **p<.01; ***p<.001.

Table A6: Effects of including women in inheritances: Henry data.

	(1)	(2)	(3)
Panel A. Dep. Variable is age at marriage			
Women excluded	−1.206**	−0.874	0.426
	(0.537)	(0.572)	(0.574)
Women excluded × Years fertile post-reform	0.041**	0.052***	0.045*
	(0.016)	(0.018)	(0.025)
Observations	19,782	19,760	19,760
Adjusted R-squared	0.101	0.270	0.296
Panel B. Dep. Variable is completed fertility			
Women excluded	0.679***	0.587***	0.311**
	(0.160)	(0.137)	(0.131)
Women excluded × Years fertile post-reform	−0.029***	−0.025***	−0.031***
	(0.007)	(0.006)	(0.008)
Observations	20,261	20,238	20,238
Adjusted R-squared	0.056	0.179	0.197
Panel C. Dep. Variable is =1 if childless			
Women excluded	−0.030	−0.019	0.011
	(0.018)	(0.016)	(0.023)
Women excluded × Years fertile post-reform	0.004***	0.003***	0.003***
	(0.001)	(0.001)	(0.001)
Observations	20,261	20,238	20,238
Adjusted R-squared	0.043	0.215	0.223
Cohort FE	Y	Y	Y
Cohort FE of husband	Y	Y	Y
Individual-level controls	.	Y	Y
Flexible trends	.	.	Y
N clusters	39	39	39

Notes: The sample is women born in 1700–1803 in the Henry database. The dependent variable is age at marriage (Panel A), the number of children ever born to all women (Panel B), and the probability to be childless (Panel C). Fertility variables are based on the number of children surviving until age 6. Individual-level controls are those in the full-specification in Table 2: literacy indicators for women and their husbands; accuracy of the Henry form fixed effects; and fixed effects for whether a woman's father, mother, father-in-law, and mother-in-law was alive when the couple married. Flexible trends include all trends in the full-specification in Table 3: municipality-level wheat prices by decade; municipality-level religiosity index × Cohort FE; distance to closest religious center × Cohort FE; distance to the closest political society × Cohort FE; distance to rebellion against the state in 1779–1789 × Cohort FE; distance to the closest legal center × Cohort FE; distance to closest fiscal center × Cohort FE; distance to the closest territorial administrative center × Cohort FE; distance to paved road × Cohort FE; and distance to horse post × Cohort FE. Standard errors in parentheses are clustered by municipality; *p<.05; **p<.01; ***p<.001.

Table A7: Covariate balance test for spatial regression-discontinuity analysis using Geni data.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
			= 1 if within 15 km there is a							
	wheat price	refractory clergy	religious center	political society	rebellion 1779–1789	legal center	admin center	tax center	paved road	horse post
Panel A. Linear polynomial										
RD estimate	-0.004	0.366	0.024	0.013	0.014	0.020	0.046	0.082**	-0.000	0.011
	(0.004)	(0.861)	(0.021)	(0.012)	(0.028)	(0.032)	(0.032)	(0.032)	(0.000)	(0.015)
Observations	14,399	1,243	1,372	1,372	1,372	1,372	1,372	1,372	1,372	1,372
N clusters	1,398	.	.	.	.	.	.	.	.	.
MSE bandwidth	16.97	16.97	16.97	16.97	16.97	16.97	16.97	16.97	16.97	16.97
Panel B. Quadratic polynomial										
RD estimate	-0.005	0.818	0.024	0.009	-0.022	0.005	0.027	0.088**	0.000	0.002
	(0.005)	(0.934)	(0.025)	(0.011)	(0.031)	(0.035)	(0.035)	(0.035)	(0.000)	(0.017)
Observations	21,704	1,779	2,053	2,053	2,053	2,053	2,053	2,053	2,053	2,053
N clusters	2,069	.	.	.	.	.	.	.	.	.
MSE bandwidth	35.06	35.06	35.06	35.06	35.06	35.06	35.06	35.06	35.06	35.06
Border segment FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cohort FE	Y	Y	.	.	.	.	.	.	.	.
Kernel	triangular	triangular	triangular	triangular	triangular	triangular	triangular	triangular	triangular	triangular
Unit of observation	Individual	Locality	Locality	Locality	Locality	Locality	Locality	Locality	Locality	Locality

Notes: This table reports RD estimates of β Equation (13) for a set of balancing variables using a linear (Panel A) and quadratic (Panel B) polynomial. In column 1, the unit of observation is mothers whose Geni record satisfies the horizontal restriction and who were born in France (1700–1810) within the MSE-optimal bandwidth on each side of the inheritance border. In columns 2-10, the unit of observation is their birthplaces. All specifications use triangular kernel functions and include cohort and border segment fized effects; Standard errors in parentheses are clustered by municipality; *p<.05; **p<.01; ***p<.001.

Table A8: Sentitivity to bandwidth choice for spatial regression-discontinuity analysis using Geni data.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	15km bandwidth	15km bandwidth	20km bandwidth	20km bandwidth	25km bandwidth	25km bandwidth	30km bandwidth	30km bandwidth
Panel A. Linear polynomial								
Impartible	0.973***	0.977***	1.072***	0.996***	1.066***	0.967***	1.067***	0.894***
	(0.321)	(0.371)	(0.306)	(0.316)	(0.302)	(0.303)	(0.293)	(0.292)
Impartible	−0.034**	−0.055**	−0.039***	−0.052***	−0.037***	−0.041***	−0.036***	−0.033**
× Years fertile post-reform	(0.017)	(0.020)	(0.015)	(0.016)	(0.014)	(0.015)	(0.013)	(0.013)
Panel B. Quadratic polynomial								
Impartible	0.507	0.501	0.687*	0.683*	0.955***	0.758**	1.088***	0.919***
	(0.404)	(0.516)	(0.366)	(0.407)	(0.345)	(0.370)	(0.340)	(0.343)
Impartible	−0.025	−0.040*	−0.036**	−0.044**	−0.042***	−0.046***	−0.042***	−0.042***
× Years fertile post-reform	(0.019)	(0.023)	(0.017)	(0.018)	(0.016)	(0.016)	(0.015)	(0.015)
Cohort FE	Y	Y	Y	Y	Y	Y	Y	Y
Border segment FE	Y	Y	Y	Y	Y	Y	Y	Y
Flexible trends	.	Y	.	Y	.	Y	.	Y
Observations	3,176	2,716	4,476	4,002	4,973	4,437	5,692	5,091
N clusters	872	751	1,024	896	1,176	1,024	1,294	1,121

Notes: This table reports estimates of Equation (14) for different bandwidths. The sample is mothers born in France (1700–1810) within 15, 20, 25, 20, and 35 km on each side of the inheritance border and whose Geni record satisfies the horizontal restriction. All specifications use local-polynomial fits of order 1 and triangular kernel functions for local-polynomial estimation. The dependent variable is the number of children ever born to mothers, excluding children who died before age 6. Flexible trends include municipality-level wheat prices by decade, the municipality-level share of refractory clergy × Cohort FE; and an indicator variable for religious centers within 15km × Cohort FE, for political societies within 15km × Cohort FE, for rebellions against the state in 1779–1789 within 15km × Cohort FE, for legal centers within 15km × Cohort FE, for fiscal centers × Cohort FE, for territorial administrative centers × Cohort FE, for paved roads × Cohort FE, and for horse posts × Cohort FE; Standard errors in parentheses are clustered by municipality; *p<.05; **p<.01; ***p<.001.

Table A9: Sentitivity to additional RD-DD specifications using Geni data.

	(1)	(2)	(3)	(4)
Panel A. Two-dimensional running variable in latitude, longitude, latitude × longitude				
Impartible	−0.044**	−0.050*	−0.039**	−0.025
× Years fertile post-reform	(0.022)	(0.029)	(0.016)	(0.019)
N observations / clusters	3,176 / 872	2,716 / 751	5,692 / 1,294	5,091 / 1,121
Bandwidth	15 km	15 km	30 km	30 km
Panel B. Running variable in distance varies by years fertile post-reforms				
Impartible	−0.028	−0.062***	−0.036*	−0.051**
× Years fertile post-reform	(0.020)	(0.020)	(0.021)	(0.020)
N observations / clusters	3,954 / 931	3,794 / 875	6,131 / 1,390	5,666 / 1,270
Bandwidth	16.97 km	18.85 km	35.06 km	41.78 km
Panel C. Uniform kernel				
Impartible	-0.044***	-0.044***	-0.034***	-0.026*
× Years fertile post-reform	(0.017)	(0.016)	(0.012)	(0.014)
N observations / clusters	2,644 / 754	3,686 / 844	6,350 / 1,442	5,552 / 1,226
Bandwidth	12.59 km	17.73 km	37.57 km	37.48 km
Panel D. Eighteenth-century cohorts (as in Henry)				
Impartible	−0.036**	−0.052***	−0.035**	−0.029*
× Years fertile post-reform	(0.017)	(0.019)	(0.015)	(0.015)
N observations / clusters	3,667 / 877	3,383 / 809	5,603 / 1,327	5,003 / 1,159
Bandwidth	17.63 km	19.43 km	37.37 km	40.81 km
Panel E. Rural municipalities (as in Henry)				
Impartible	−0.025	−0.053***	−0.032**	−0.031**
× Years fertile post-reform	(0.015)	(0.017)	(0.014)	(0.015)
N observations / clusters	3,825 / 844	3,743 / 823	5,913 / 1,321	5,362 / 1,171
Bandwidth	17.48 km	19.97 km	37.03 km	42.64 km
Panel F. 100-kilometer border-segment fixed effects				
Impartible	−0.034**	−0.044***	−0.038***	−0.029**
× Years fertile post-reform	(0.016)	(0.016)	(0.014)	(0.014)
N observations / clusters	3,873 / 928	3,993 / 908	5,843 / 1,345	5,621 / 1,267
Bandwidth	16.23 km	19.5 km	31.74 km	39.89 km
Cohort FE	Y	Y	Y	Y
Border segment FE	Y	Y	Y	Y
Flexible trends	.	Y	.	Y
Order polynomial	linear	linear	quadratic	quadratic

Notes: This table reports estimates of β from Equation (14) under different specifications. Panel A considers a two-dimensional running variable. The linear polynomial is $x + y + x \cdot y$, and the quadratic polynomial is $x + y + x \cdot y + x^2 + y^2 + x^2 \cdot y + x \cdot y^2$, where x is longitude and y is latitude. Panel B considers running variables in distance to the border interacted with 26 indicator variables for cohorts with 0, 1 ... 25 years fertile after the reforms. Panel C uses a uniform kernel. Panels D and E restrict the sample to that used in the design of the Enquête Henry: respectively, 18C cohorts from rural municipalities (i.e., not administrative centers of 19C-départements). Panel F uses 100-km border-segment fixed effects. The base sample and flexible trends are as in Table 4. All specifications use MSE-optimal bandwidths (except A) and triangular kernels (except C). The dependent variable is the number of children ever born to mothers, excluding infant deaths before age 6; Standard errors in parentheses are clustered by municipality; *p<.05; **p<.01; ***p<.001.

Table A10: Spatial regression-discontinuity estimates for the effects of including women in inheritances: Geni data.

	(1)	(2)	(3)	(4)
	Dep. Variable: completed fertility			
Women excluded	1.424***	1.393***	1.513***	1.507***
	(0.351)	(0.372)	(0.400)	(0.411)
Women excluded	−0.051***	−0.058***	−0.054***	−0.056***
× Years fertile post-reform	(0.015)	(0.016)	(0.015)	(0.016)
Cohort FE	Y	Y	Y	Y
Border segment FE	Y	Y	Y	Y
Flexible trends	.	Y	.	Y
Order polynomial	linear	linear	quadratic	quadratic
Kernel	triangular	triangular	triangular	triangular
MSE-optimal bandwidth	18.05	22.89	25.33	33.22
Observations	3,863	4,037	4,564	4,882
N clusters	878	876	1,049	1,067
Mean dep. variable	3.76	3.77	3.69	3.73

Notes: This table reports estimates of Equation (14). The sample is mothers born in France (1700–1810) whose Geni record satisfies the horizontal restriction, and born within a MSE-optimal bandwidth on each side of the inheritance border. We use local-polynomial fits of orders 1 and 2, and triangular kernel functions for local-polynomial estimation. The control group is restricted to municipalities with partible inheritance, including women (i.e., municipalities affected by none of the two reform treatments). The dependent variable is the number of children ever born to mothers, excluding infant deaths before age 6. Flexible trends include municipality-level wheat prices by decade, the municipality-level share of refractory clergy × Cohort FE; and an indicator variable for religious centers within 15km × Cohort FE, for political societies within 15km × Cohort FE, for rebellions against the state in 1779–1789 within 15km × Cohort FE, for legal centers within 15km × Cohort FE, for fiscal centers × Cohort FE, for territorial administrative centers × Cohort FE, for paved roads × Cohort FE, and for horse posts × Cohort FE; Standard errors in parentheses are clustered by municipality; *p<.05; **p<.01; ***p<.001.

Appendix B. Figures

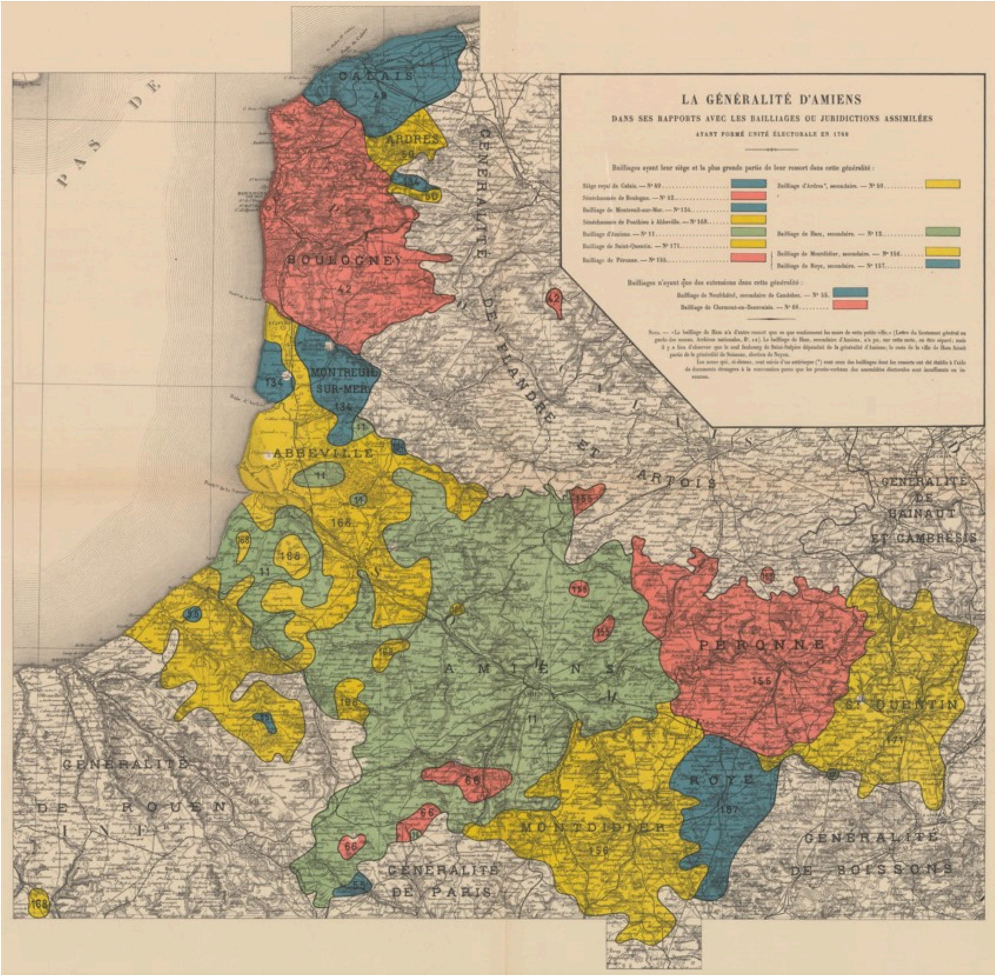


Figure B1: Bailliages of the Généralité of Amiens in 1789

Notes: Map reproduced from Brette (1904).

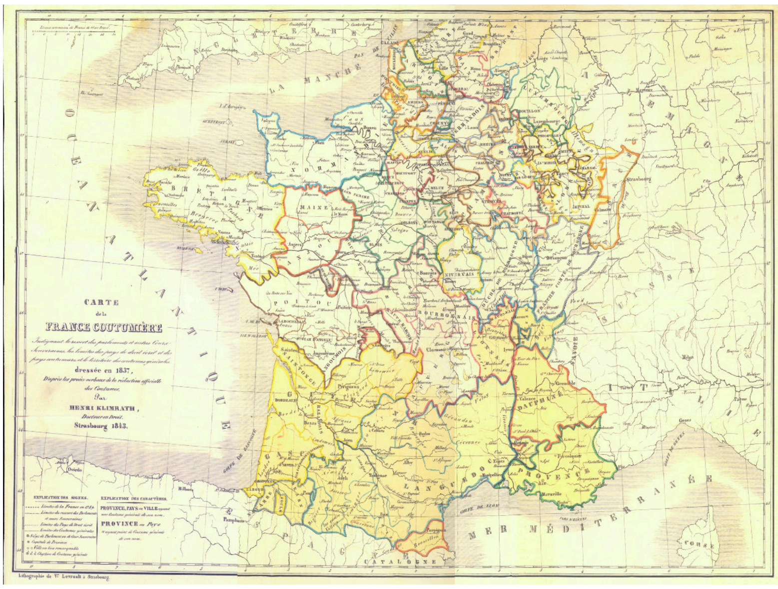


Figure B2: Customary Boundaries based on Klimrath (1843)

Notes: This figure reproduces the original map of customary boundaries in Klimrath (1843). It is available from Fourniel and Vendrand-Voyer (2017).

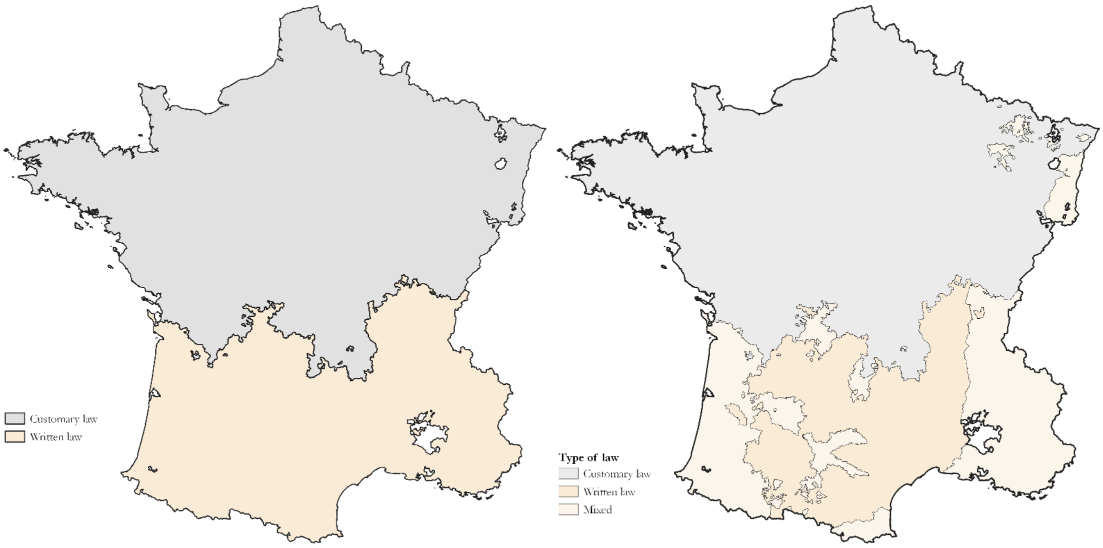


Figure B3: Written-Law and Customary-Law Country.

Notes: The left panel displays the division of France into a written-law (brown) and customary-law (gray) country based on Klimrath (1843). The left panel displays the same division based on Gay, Gobbi, and Goñi (2023a, 2023b).

NOMS
Mari : LHERMITTE Prénom : x Yves Fils : Olivier, Ma COZRONER
Femme : LE MORIN Prénom : x Vincente Fille : Guil, Yves HENRY

PROFESSION 14 900

MARIAGE n°	célébré à	Rang du mariage	Age au mariage	Dates de mariage	Dates de fin d'observ.	Durée	Age en fin d'observ.	Remariage le	Prénom et NOM du nouveau conjoint
	GUIMAËC (Finistère)			30.7.1754					

	né à	demeurant à	Rang du mariage	Age au mariage	de naissance	de décès	Age	Durée du veuvage en mois	Lieu du décès
MARI	x	Locquirec	1	28	1726				
FEMME	x	d	1	28	7.4.1726				

Groupe	Durée (ans)	Nbre de nais.	Age de la mère	Durée de mariage	Intervalle en mois	Sexe	Rang	NAISSANCES Date	DÉCÈS Date	s. m.	Age	MARIAGES Date	Age	Prénom	Prénom et NOM du conjoint
			29	1	13	m	1	23.9.1755		12				Guil	
15-19			30	2	16°	m	2	26.1.1757		11				Olivier	
20-24			33	5	34°	f	3	19.12.1759		9				Ma	
25-29			35	7	24°	m	4	5.1.1762		6				Yves	
30-34			37	9	26°	m	5	25.3.1764		4				Jo-Ma	
35-39			40	11	24°	x	6	23.4.1766	23.4.1766		od			x	
40-44			42	14	28'	f	7	12.9.1768						Ma	
45-49							8								
							9								
0-4							10								
5-9							11								
10-14							12								
15-19							13								
20-24							14								
25-29							15								
30-34															
Total		7													
Garçons															
Filles															

ENFANTS

OBSERVATIONS

GUIMAËC (Finistère)

Pallas Malakoff. 100.000 ex.

Figure B4: Example of an entry in the nominative part of the Henry database.

Notes: Extract reproduced from Séguy (2001).

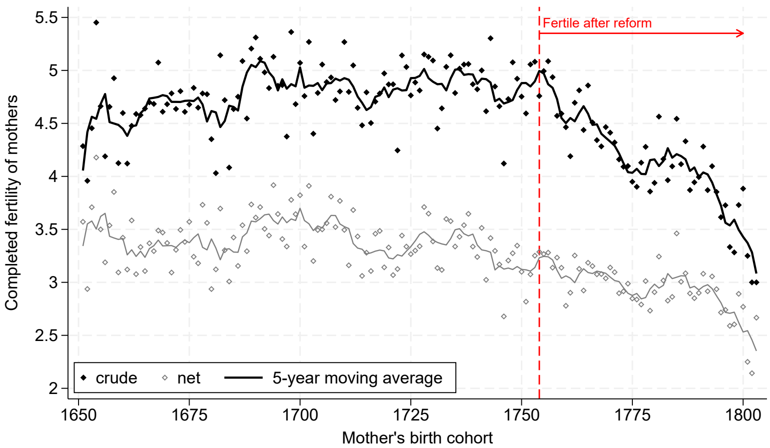
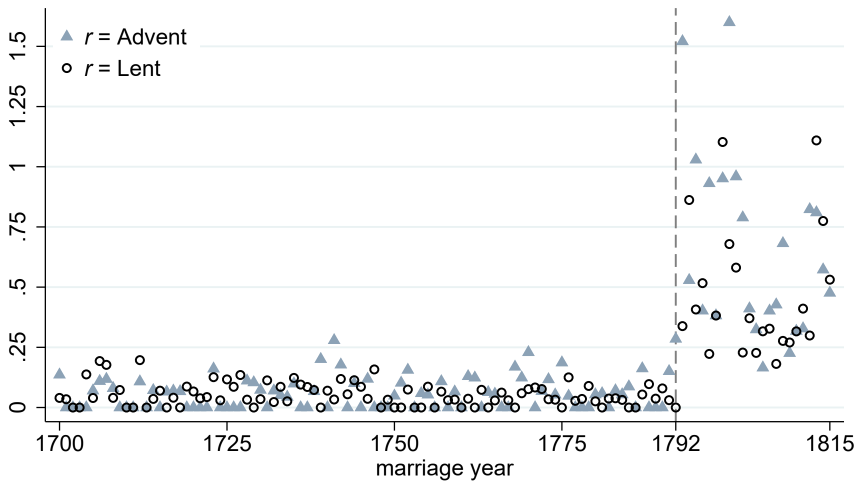
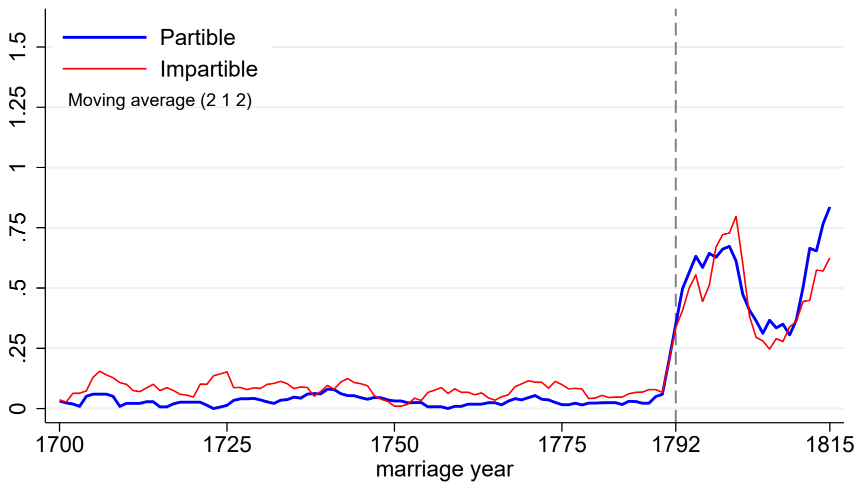


Figure B5: Demographic transition, Henry database.

Notes: This figure plots the completed fertility of 20,043 mothers born between 1650 and 1800 based on the Henry database. Gross completed fertility considers all children ever born; net completed fertility considers children who survived at least until six years old. Moving averages include a mother's birth year, two lags, and two forward years. The vertical line indicates the cohort who completed her fertile cycle immediately before the 1793 inheritance reform, i.e., who were aged 40 in 1793.



(a) $\dfrac{r \text{ marriages}_{m,t}}{\text{All marriages}_{m,t}} \times \dfrac{365.25}{\text{days } r_t}$



(b) $\dfrac{\text{Lent + Advent marriages}_{m,t}}{\text{All marriages}_{m,t}} \times \dfrac{365.25}{46 + \text{days advent}_t}$

Figure B6: Lent and advent marriages between 1700 and 1815.

Notes: In the formulae, m indexes municipalities and t years of marriage. Panel (a) shows yearly averages of $\frac{r \text{ marriages}_{m,t}}{\text{All marriages}_{m,t}} \times \frac{365.25}{\text{days } r_t}$ for r=lent and r=advent; and Panel (b) a 5-year moving average of $\frac{\text{Lent + Advent marriages}_{m,t}}{\text{All marriages}_{m,t}} \times \frac{365.25}{46+\text{days advent}_t}$ in municipalities with pre-reform partible (blue) and impartible (red) inheritance. The vertical dashed line indicates the year 1792, when civil marriage was introduced.

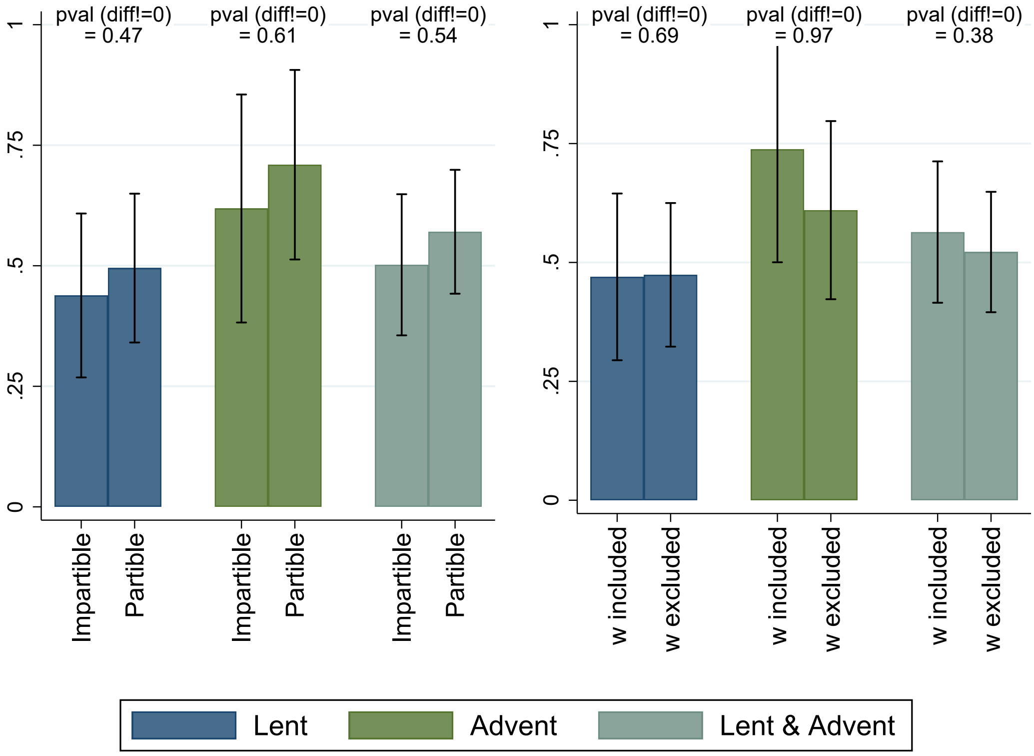


Figure B7: Balancedness on the religiosity index.

Notes: This figure shows means and 95 percent confidence intervals for R_m in equation (9), estimated separately in municipalities (m) with pre-reform impartible vs. partible inheritance, and municipalities with pre-reform inheritance systems that included vs. excluded women; R_m is calculated based on lent marriages only (blue), advent marriages only (green), and lent and advent marriages (turquoise). Estimates are based on 6,472 marriages celebrated between 1792 and 1815 in the 39 municipalities in the Henry database.

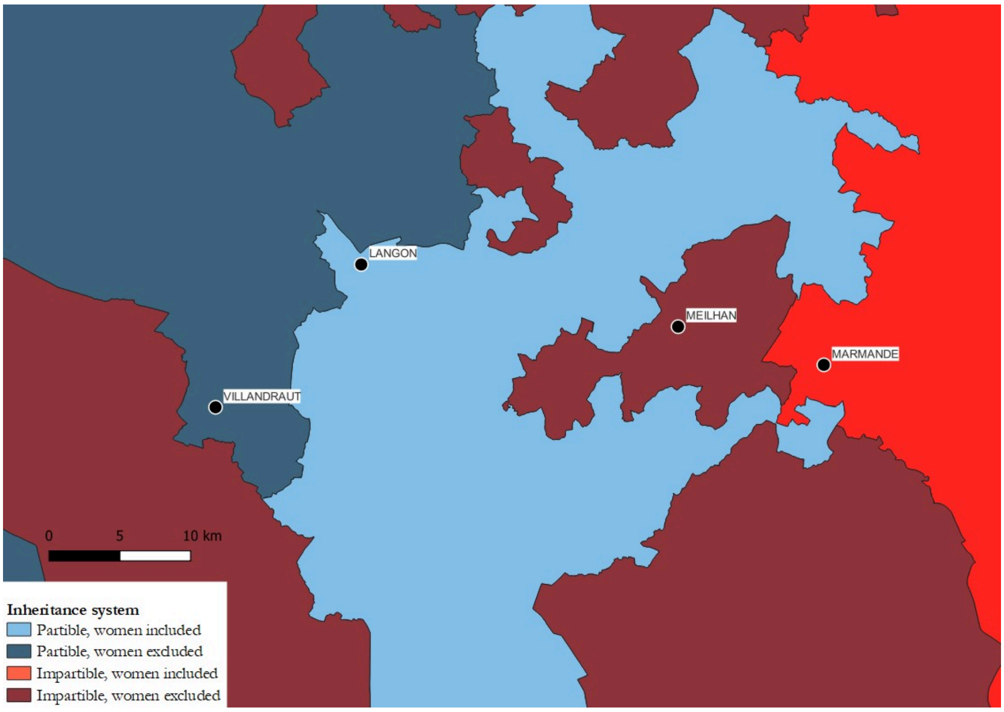


Figure B8: Inheritance systems in four administrative centers.

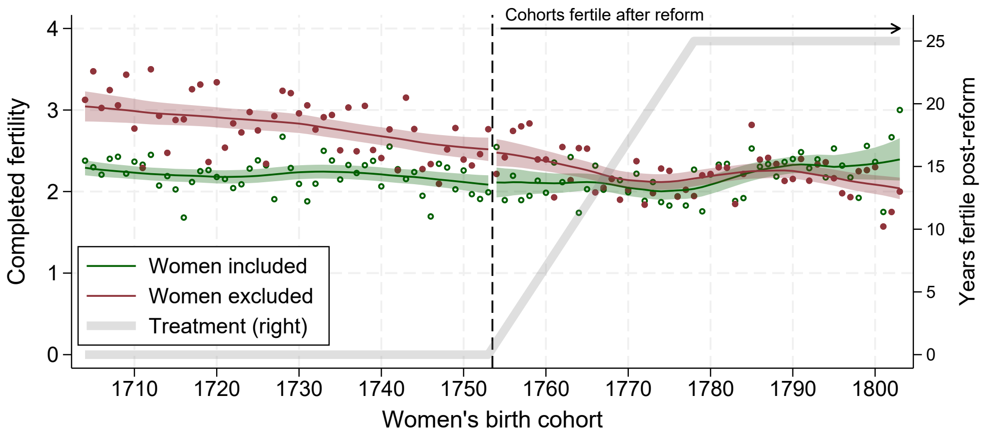


Figure B9: Trends in completed fertility by inheritance system.

Notes: Each dot represents the average completed fertility of a given birth cohort. Pre- and post-reform trends (lines) and confidence intervals (shaded areas) are calculated from a local polynomial regression on each side of the 1753 cohort. Colors correspond to areas with different pre-reform inheritance systems. The vertical dashed line indicates the cohort who completed her fertile cycle immediately before the 1793 inheritance reforms; i.e., who were aged 40 in 1793. The gray line shows the remaining fertile years after the 1793 inheritance reforms for each cohort (left axis).

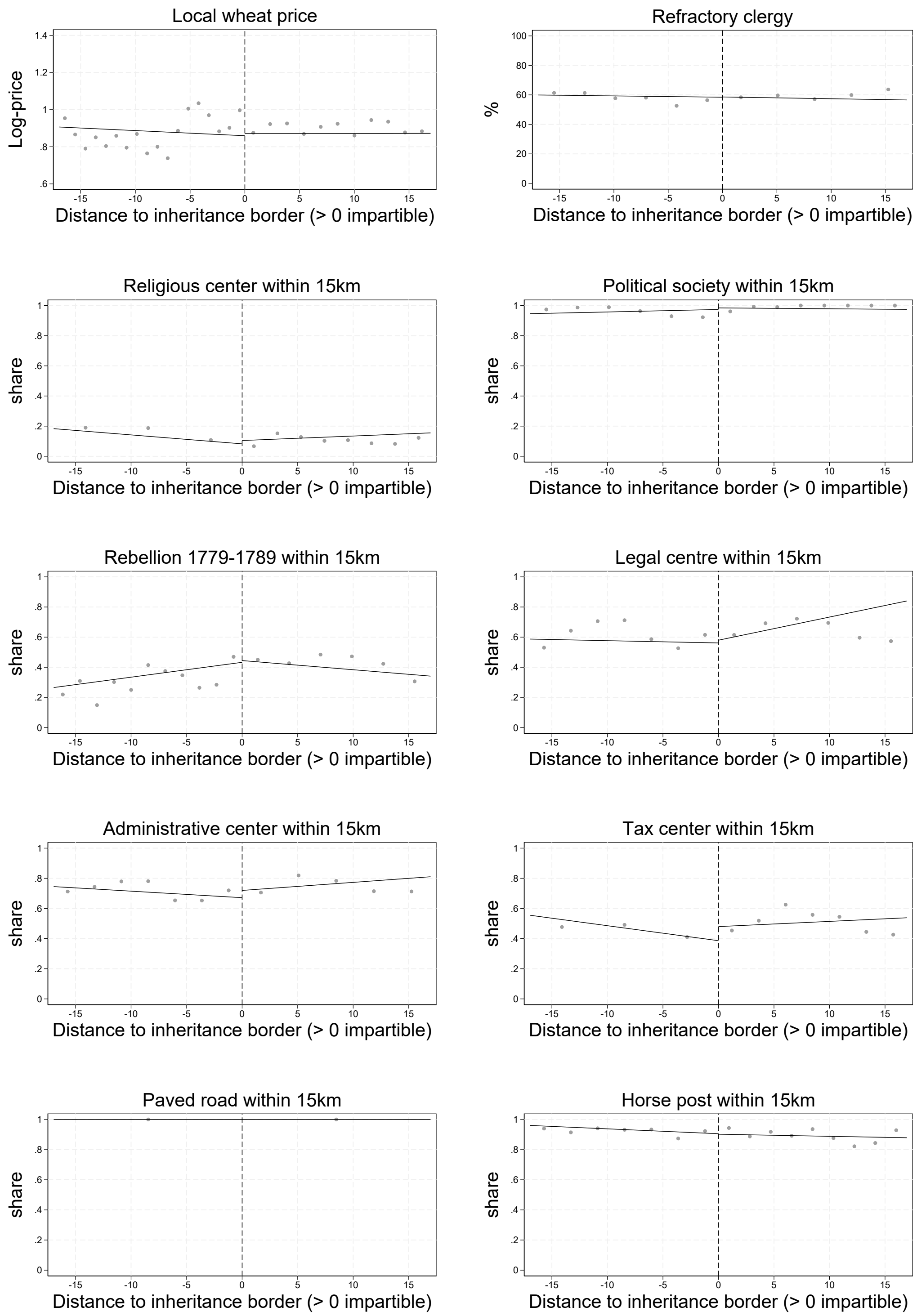


Figure B10: Balance RD plots.

Notes: This figure shows RD plots for various covariates, akin to Figure 9. The border is normalized at 0, with positive values for impartible areas. Circles show average values of each covariate within bins, where the number of bins are based on the IMSE-optimal evenly-spaced selector. Lines show a polynomial fit of order 1. The bandwidth ca. 15km is based on the MSE optimal bandwidth selector. The unit of observation is mothers born in France (1700–1810) within ca. 15km of the inheritance border and whose Geni record satisfies the horizontal restriction (first panel), or their birthplaces (remaining panels).

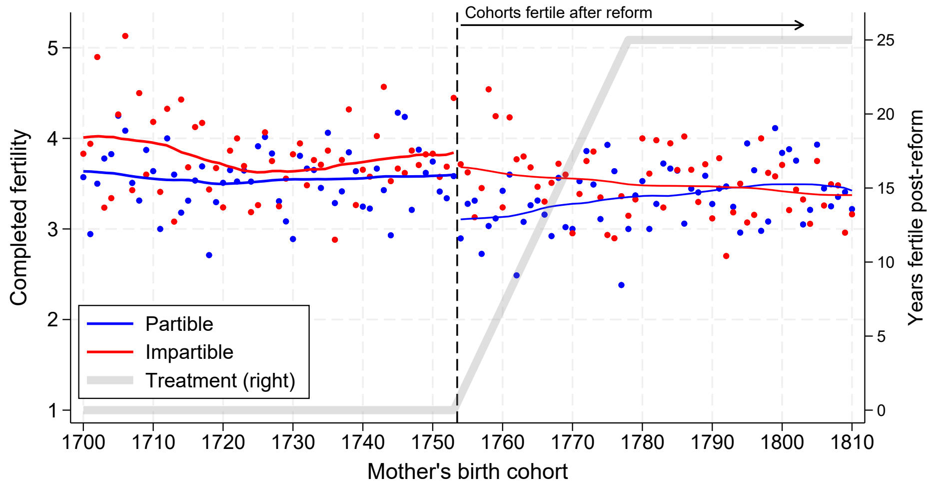


Figure B11: Trends in completed fertility under partible and impartible inheritance, Geni.com.

Notes: Dots represent the average completed fertility of mothers by birth cohorts. Pre- and post-reform trends (lines) are calculated from a local polynomial regression on each side of the inheritance border. The vertical dashed line indicates the cohort who completed her fertile cycle immediately before the 1793 inheritance reforms; i.e., who were aged 40 in 1793. The gray line shows the remaining fertile years after the 1793 inheritance reforms for each cohort (right axis).

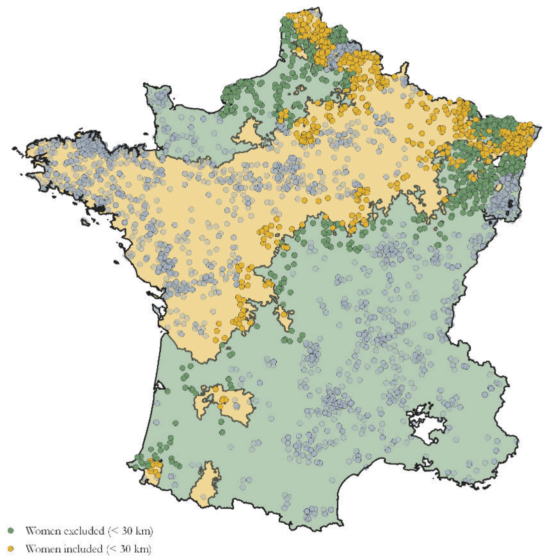
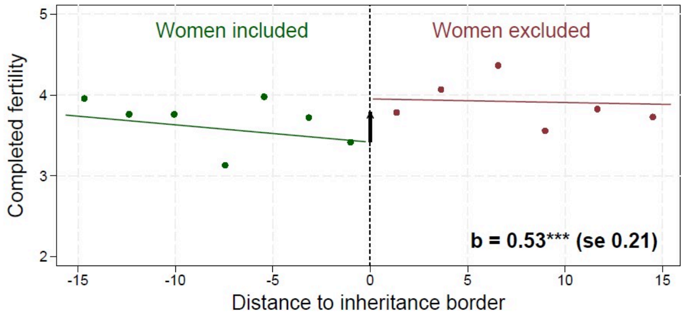


Figure B12: Locations in RD setting for women's right to inherit, Geni.com.

Notes: This figure displays the geo-located birthplace of women born in France (1700–1810) whose Geni record satisfies the horizontal sample restriction. Colored dots are within 30 kilometers of a women included-excluded inheritance border.

Panel A. Cohorts fertile before the reforms ($F = 0$)



Panel B. Cohorts fertile after the reforms ($F > 0$)

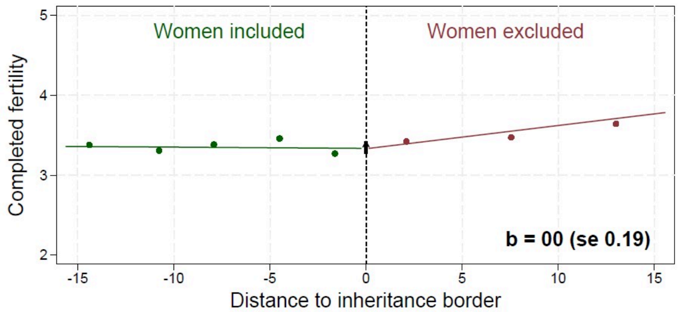


Figure B13: Fertility and distance to border determining women's right to inherit.

Notes: This figure displays RD plots and estimates from Equation (13). The sample is mothers in Geni satisfying the horizontal restriction and who were born in France (1700–1810) within ca. 15km of the inheritance border. Panel A is for cohorts who completed her fertile cycle before 1793; Panel B is for cohorts who were fertile after 1793. Completed fertility is the number of children ever born to mothers, excluding infant deaths before age 6. The border is normalized at 0, with positive values for areas that excluded women from inheritances. Circles show average fertility within bins, where fertility is partialled out of cohort and border segment fixed effects, and bins are based on the IMSE-optimal evenly-spaced selector. Lines show a polynomial fit of order 1. The bandwidth ca. 15km is based on the MSE optimal bandwidth selector; *p<.05; **p<.01; ***p<.001.

Appendix C. Historical context: estimates of land ownership based on the TRA database

de Brandt (1901, p. 56) estimates that 80 percent of French households owned their land at the eve of the Revolution. Such estimate can however be an overestimation of reality since it is based on counting owners in a municipality and then aggregating them all, which double counts owners of large, or several, plots of land.

More accurate estimates can be obtained through the TRA database (Bourdieu, Kesztenbaum, and Postel-Vinay 2013). These data are based on marriage civil records and succession acts between 1793 and 1902 for individuals whose surname starts by the letters "Tra". The choice of such three letters was carefully selected based on the stability of surnames, having a good regional representation, and the tractability of the sample size.

The individual sample of the TRA database recomposes the wealth at death based two sources: the *Tables de Successions et Absences* (TSA) that contain for all deceased individuals some information on their belongings, and the *Registres de mutations par décès* (RMD) that contains the details of the wealth composition for those who have some. Based on these primary sources, 73.6% of TRA male individuals born in the eighteenth century who died after the age of 30 left some inheritance. Among these, there is information on whether the succession contained non-movable assets for 62.5% of them (of which 92.1% left non-movable assets). Hence, the overall share of the population who dies with non-movable assets depends on whether we assume that, among the 47.5% for whom we do not have the information on whether they left non-movable assets or not, either none of them had non-movable assets or they all had non-movable assets. The share of individuals under each assumption is 42.5% and 69.9% respectively.

Appendix D. Maximization problems

Maximization problem under impartible inheritance. The maximization problem under impartible inheritance writes as follows

$$\max_{n_I} \quad \ln\left((1-\phi n_I)y_I\right) + \beta \ln\left(\left(L-\bar{L}\right)^{1-\alpha} n_I^{\alpha}\right) ,$$

which can be rearranged as

$$\max_{n_I} \quad \ln\left(1-\phi n_I\right) + \ln\left(y_I\right) + \alpha\beta \ln\left(n_I\right) + (1-\alpha)\beta \ln\left(L-\bar{L}\right) ,$$

and is only defined for $0 < n_I < \frac{1}{\phi}$.

The first order condition writes as follows,

$$-\frac{\phi}{1-\phi n_I} + \frac{\alpha\beta}{n_I} = 0 \tag{1}$$

$$\iff n_I^* = \frac{\alpha\beta}{(1+\alpha\beta)\,\phi} \ ,$$

where n_I^*, is the solution to the maximization problem with impartible inheritance. Taking the derivative of Equation (1) with respect to n_I, we have

$$-\frac{\phi^2}{(1-\phi n_I)^2} - \frac{\alpha\beta}{n_I^2} < 0 \ ,$$

which satisfies the second order condition for a maximum.

Maximization problem under partible inheritance. The maximization problem under partible inheritance writes as follows

$$\max_{n_P} \quad \ln\left((1-\phi n_P) y_P\right) + \beta \ln\left(n_P \left(\frac{L}{n_P} - \bar{L}\right)^{1-\alpha}\right) \ ,$$

which can be rearranged as

$$\max_{n_P} \quad \ln\left(1-\phi n_P\right) + \ln\left(y_P\right) + \alpha\beta \ln\left(n_P\right) + (1-\alpha)\beta \ln\left(L - \bar{L} n_P\right) \ ,$$

and is only defined for $0 < n_P < \min\left\{\frac{1}{\phi}, \frac{L}{\bar{L}}\right\}$.

The first order condition writes as follows,

$$-\frac{\phi}{1-\phi n_P} + \frac{\alpha\beta}{n_P} - \frac{(1-\alpha)\beta\bar{L}}{L-\bar{L}n_p} = 0 \tag{2}$$

$$\iff \frac{\alpha\beta}{n_P} - \left(\frac{\phi}{1-\phi n_P} + \frac{(1-\alpha)\beta\bar{L}}{L-\bar{L}n_p}\right) = 0$$

$$\iff \alpha\beta(1-\phi n_P)(L-\bar{L}n_p) - n_P\left[\phi(L-\bar{L}n_p) + (1-\alpha)\beta\bar{L}(1-\phi n_P)\right] = 0 \ .$$

Where the left hand side of the first order condition is a second order polynomial and is negative for $n_P = \min\left\{\frac{1}{\phi}, \frac{L}{\bar{L}}\right\}$. This implies that out of the two solutions to Equation (2) (respectively below and above $\min\left\{\frac{1}{\phi}, \frac{L}{\bar{L}}\right\}$), only the one below, denoted n_P^*, is a solution to the maximization problem and equal to

$$n_P^* = \frac{\beta\bar{L} + (1+\alpha\beta)\phi L - \sqrt{(\beta\bar{L} + (1+\alpha\beta)\phi L)^2 - 4\alpha\beta(1+\beta)\phi\bar{L}L}}{2(1+\beta)\phi\bar{L}} \ .$$

Taking the derivative of Equation (2) with respect to n_P, we have

$$-\frac{\phi^2}{(1-\phi n_P)^2} - \frac{\alpha\beta}{n_P^2} - \frac{(1-\alpha)\beta\bar{L}^2}{(L-\bar{L}n_p)^2} < 0 \ ,$$

which satisfies the second order condition for a maximum.

Appendix E. Control variables

Our analyzes include a host of municipality-level control variables to capture local economic conditions as well as local support to (and information about) the Revolution: decade-average wheat prices; proximity to administrative centers for tax collection, legal authorities, territorial administration, and Church authority; proximity to political societies in 1793; proximity to rebellions against State authorities that occurred in the decade preceding the Revolution; proximity to paved roads as well as the postal network; land suitability for agriculture and terrain ruggedness. This appendix provides details on their content and sources.

Wheat prices. To capture local economic conditions, we attribute a decade-average wheat price to each municipality based on 8,616 quotes (in *sous tournois* per liter) over 117 locations in France between 1700 and 1800, collected from 51 secondary sources by Ridolfi (2019).[1] Specifically, we first compute decade-average wheat prices in each of these locations. We then generate decade-specific rasters of wheat prices through spatial interpolations over a 135-by-146 grid dividing France's territory, where we use an inverse-probability weighting procedure. Finally, we compute spatially weighted averages for each municipality polygon—Appendix Figure D1 displays the corresponding raster for prices in the 1780s along with the locations of price quotes and municipalities in the Henry database. In the analysis dataset, we attribute the resulting wheat price to the decade in which a woman in our sample reached 15 years old, i.e., the beginning of her fertile cycle.

Distances to administrative centers. Our analysis flexibly controls for the proximity of municipalities in the Henry database to various administrative cen-

[1]We are grateful to Leonardo Ridolfi for sharing his raw price series data with us.

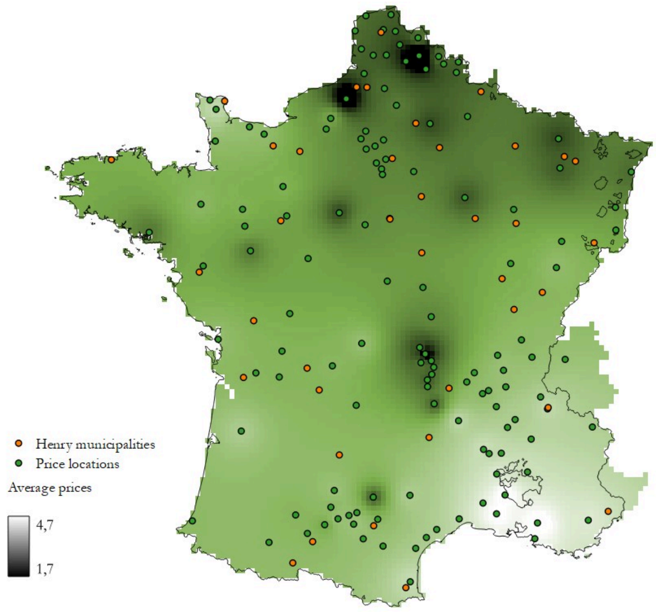
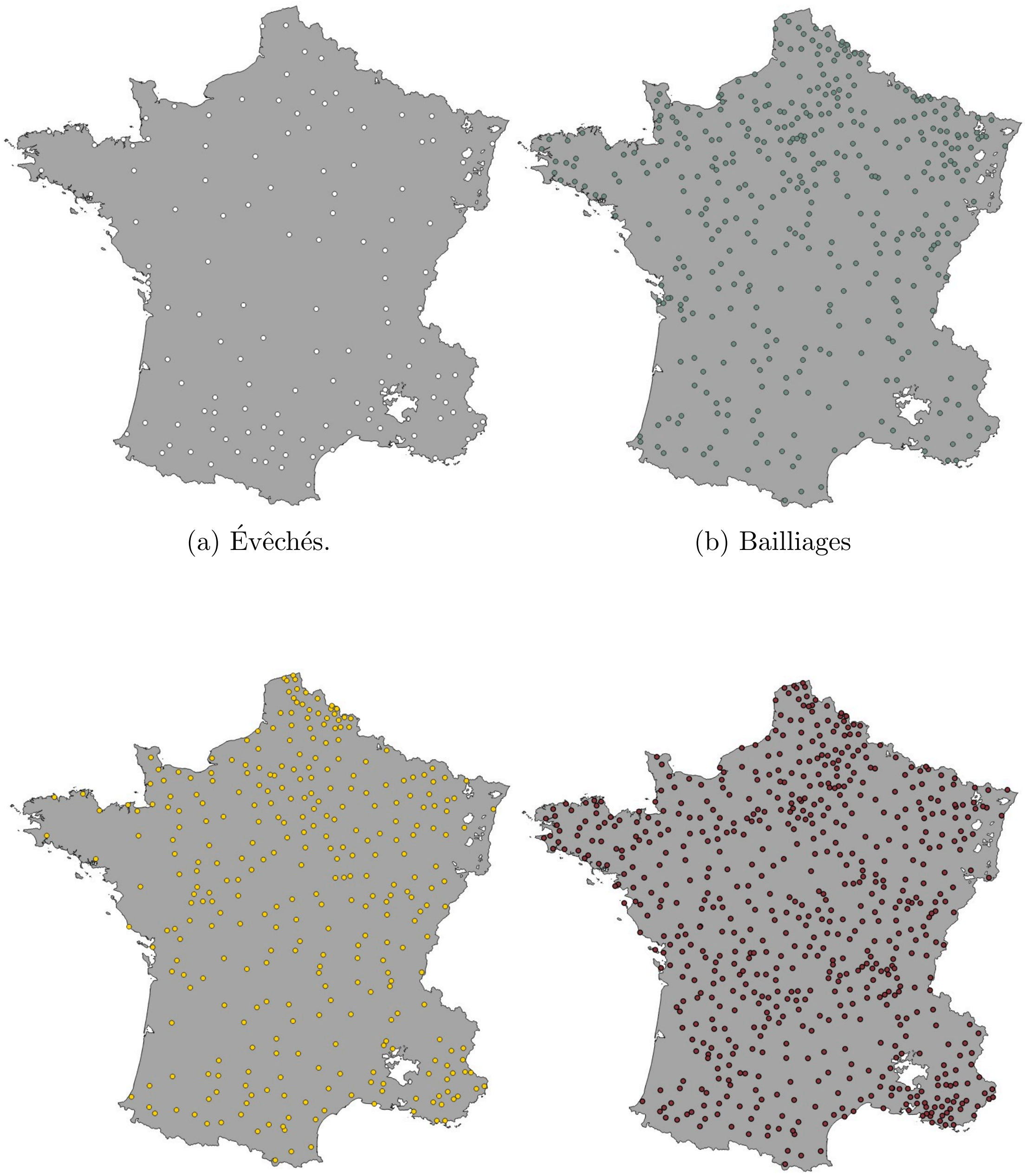


Figure D1: Raster map of wheat prices in the 1780s.

Notes: Raster map based on wheat price quotes from Ridolfi (2019). Prices are in *sous tournois* per liter.

ters. In particular, for each municipality, we calculate the distance to the closest center for Church administration (*évêché* capitals), judicial district seat (*bailliage* capitals), tax collection (*recettes des finances* capitals), and territorial administration (*subdélégation* capitals). We collect the locations of these administrative centers from Nordman, Ozouf-Marignier, and Laclau (1989, pp. 74–80) and display their spatial distributions in Appendix Figure D2.

Political societies. To capture the local adherence to the principles of the Revolution and the availability of information about revolutionary events, we control for the proximity of municipalities to a political society (*société politique*) in 1793. Between 1789 and 1793, about six thousand political societies were created. These were associations in which citizens met to discuss political affairs, social issues, and the reforms passed by the National Convention—including the 1793 inheritance reforms. They played a critical role in the diffusion of the ideas of the Revolution: the famous eminent Saint-Just qualified these societies as "temples for the principle of equality" (Boutier, Boutry, and Bonin 1992, p. 10). These were also groups that had privileged access to information regarding the events of the Revolution, for instance through the *Bulletin de la Convention*, which was sent to all political societies. We gather the locations of these political societies from Boutier, Boutry, and Bonin (1992, pp. 77–101) and display their distribution in



(a) Évêchés. (b) Bailliages

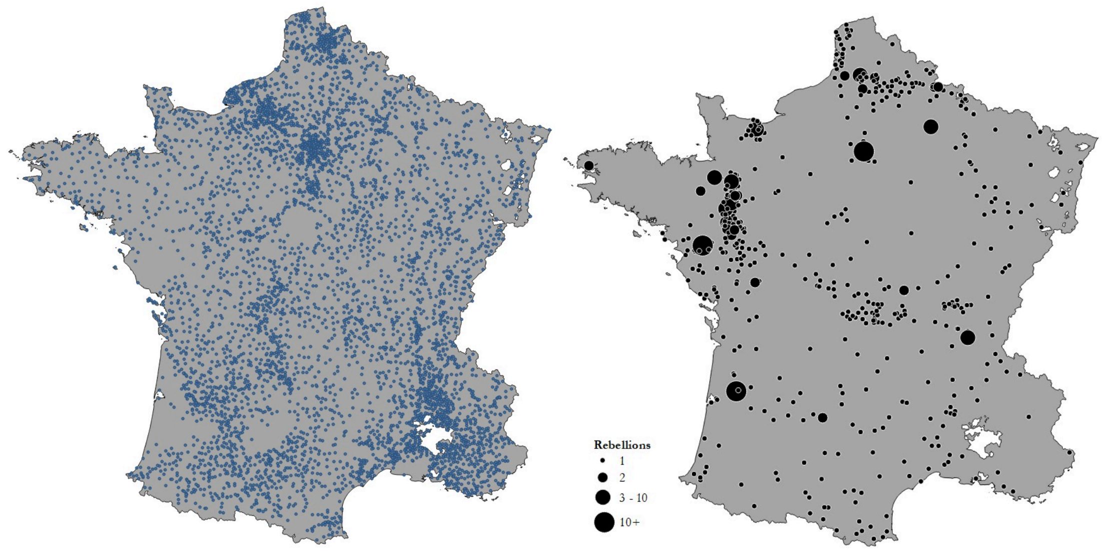
(c) Recettes des finances (d) Subdélégations

Figure D2: Spatial distribution of administrative centers in 1789.

Notes: This figure displays the locations of évêché centers in Panel (a), bailliage centers in Panel (b), recettes des finances centers in Panel (c), and subdélégation centers in Panel (d). Data are from Nordman, Ozouf-Marignier, and Laclau (1989, pp. 74–80).

Panel (a) of Appendix Figure D3.

Rebellions against State authorities. To further capture the extent of local support for the Revolution, we consider the proximity of municipalities in the Henry database to rebellions against State authorities that occurred in the decade



(a) Political societies (1789–1793)

(b) Rebellions (1779–1789)

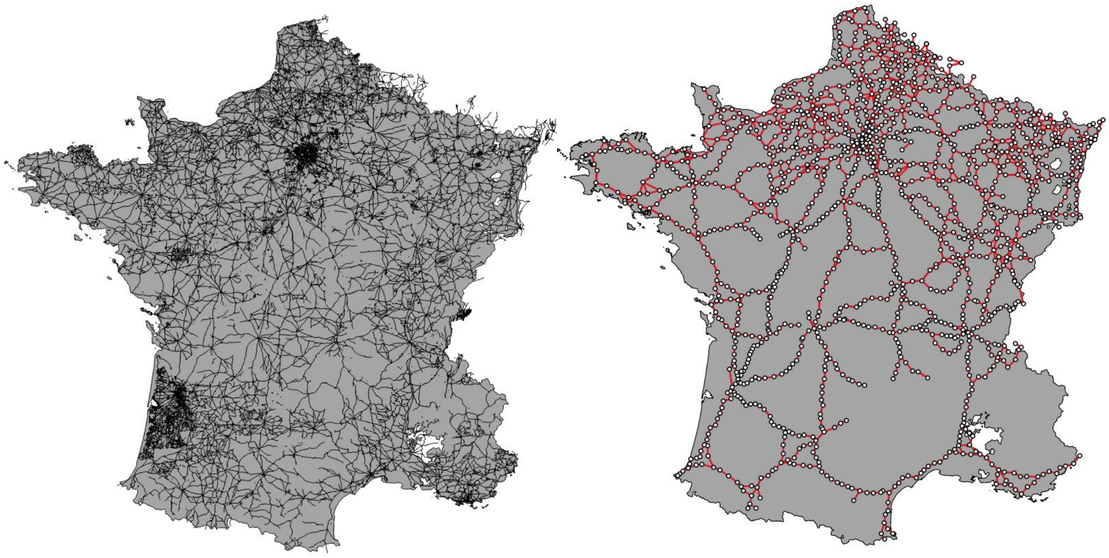
Figure D3: Spatial distribution of political societies and rebellions.

Notes: In Panel (a), this figure displays the spatial distribution of political societies created between 1789 and 1793 based on Boutier, Boutry, and Bonin (1992, pp. 77–101). In Panel (b), it displays the spatial distribution of 734 rebellions against State authorities across 510 municipalities from Gay and Hamon (2023), based on archival material assembled by Nicolas (2002).

preceding the Revolution—the historiography highlights that support for the Revolution was relatively stronger in locations where such rebellions occurred (Nicolas 2002). Here, we use the *Rebellions in France* database constructed by Gay and Hamon (2023) based on archival material assembled by Jean Nicolas over the course of 30 years (Nicolas 2002). In particular, we extract the 734 rebellions that occurred over 510 locations between 1779 and 1789 and that concerned disputes over State taxation, the judiciary, or the military. We display the distribution of these rebellions in Panel (b) of Appendix Figure D3.

Paved roads To capture the proximity of municipalities with respect to economic and information flows, we control for the proximity to a paved road. We display the distribution of such roads in Panel (a) of Appendix Figure D4. The shapefile of this paved roads network is from Perret, Gribaudi, and Barthelemy (2015), which proceeded with a manual vectorization of Cassini's map of France surveyed between 1756 and 1789 (de Dainville 1955; Pelletier 1990).

Postal network To further capture the proximity of municipalities with respect to information networks, we control for the proximity to a horse post in the 1780s. We display the distribution of horse posts in Panel (b) of Appendix Figure D4.



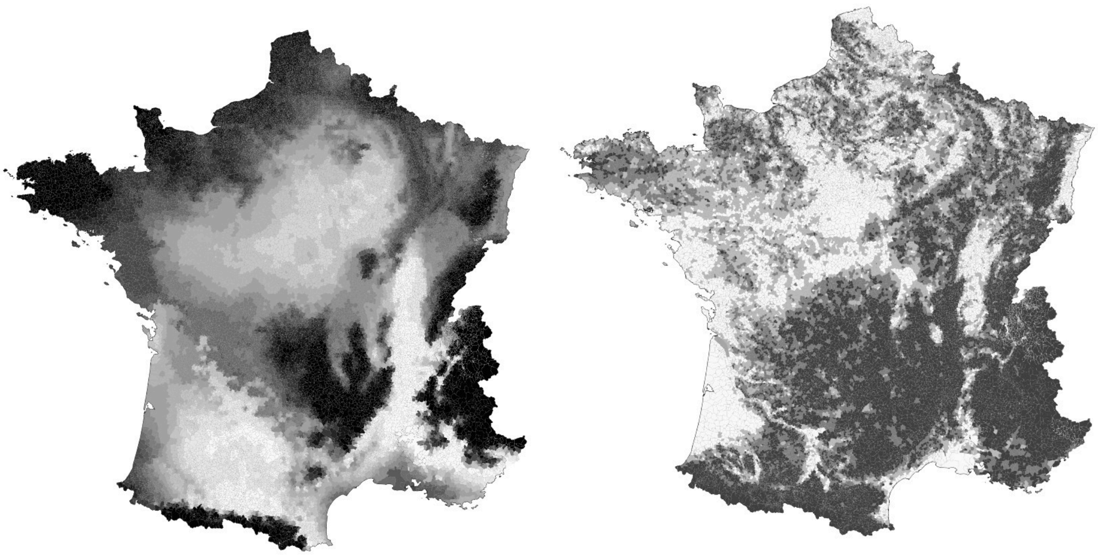
(a) Paved roads (late 1700s) (b) Horse posts network (1780s)

Figure D4: Spatial distribution of paved roads and horse posts.

Notes: In Panel (a), this figure displays the spatial distribution of paved roads in the late eighteenth century based on Perret, Gribaudi, and Barthelemy (2015). In Panel (b), it displays the spatial distribution of horse posts (white dots) as well as postal roads linking these posts (red lines). The network of horse posts in 1780 was vectorized based on the *Livre de poste* of 1780.

This network of horse posts was first created in the sixteenth century, then gradually expanded over time, especially in the eighteenth century as close to 1,800 posts existed in the mid-1780s. This network was instrumental in the monarchy's apparatus for disseminating information through a tight network of postal relays that enabled the integration of peripheral areas into national networks (Arbellot 1973; Bretagnolle and Franc 2020).

Land characteristics To capture geographical features of the land, we calculate two different measures at the level of municipalities: land suitability for agriculture and terrain ruggedness. More precisely, we use the post-1500 average caloric suitability index developed by Galor and Özak (2016) and the terrain ruggedness index developed by Nunn and Puga (2012), where we average raster values across cells within municipalities—see Appendix Figure D5.



(a) Caloric suitability

(b) Terrain ruggedness

Figure D5: Land characteristics.

Notes: In Panel (a), this figure displays the post-1500 average caloric suitability index developed by Galor and Özak (2016) after the discretization of the raster file to polygons representing France's municipalities. Darker areas indicate lower caloric suitability. In Panel (b), it displays the average terrain ruggedness based on the data of Nunn and Puga (2012) after the discretization of the raster file to polygons representing France's municipalities. Darker areas indicate higher terrain ruggedness.

Appendix F. Robustness of DD results

Here, we report the details, tables and figures of our robustness analysis summarized in Section 6.2.

F.1 DD robustness details

Permutation tests. We use a permutation test to reshuffle exposure to the 1793 inheritance reforms across municipalities. Specifically, we reshuffle the pre-reform inheritance system across the 39 municipalities included in the Henry database. That is, we reshuffle whether the reforms altered the inheritance system in each municipality or not, keeping the total share of municipalities under each pre-reform inheritance system fixed.

Figure E1 reports 10,000 β-coefficients from estimating Equation (12). Panel A reports permutation tests for the effect of abolishing impartible inheritance; Panel B, for the effect of including women in inheritances. Panels C and D report analogous permutation tests where we also permute municipality-level wheat prices, $p_{\widetilde{m}c}$, and the vector of municipality-level religiosity, political factors, and economic geography, $\mathbf{Z}_{\widetilde{m}}$. Our true estimate from Equation (11) is plotted as a vertical line in the histograms.

Estimated coefficients in the placebo regressions have a distribution centered around zero. The percentage of placebo coefficients that are larger in magnitude than the true estimate is only 0.14 percent for the effect of abolishing impartible inheritance (Panel A) and 0.08 percent for the effect of including women in inheritances (Panel B). Similarly, only 0.35 percent and 0.07 percent of the placebo coefficients are larger than the true estimates when permuting both the pre-reform inheritance system and the set of flexible time trends across municipalities (Panels C and D).

Heterogeneous treatment effects. Our estimation strategy compares cohorts of fertile age to cohorts too old to be fertile in 1793 between areas where the reforms altered and did not alter the inheritance system in place. Because our measure of exposure to the reforms corresponds to the remaining fertile years after 1793, the treatment effect may not be constant across cohorts, e.g., one additional fertile year may have a different effect at age 15 than at age 30. To account for this possibility, we perform two exercises. First, we estimate Equation (11) replacing our continuous measure of reform exposure, F_c, with a set of indicator variables for women with 1–5, 6–10, 11–15, 16–20, 21–24, and 25 fertile years after the reforms.

Figure E2 shows that relative to women who completed their fertile cycle before 1793, women exposed to the reforms had a lower completed fertility by 0.6–0.7 children. The impact of the reform is similar for abolishing impartible inheritance and including women in inheritances. The effect size is smaller for cohorts with only up to 10 fertile years after the reforms than for younger cohorts more exposed to the reforms, although the estimates are not statistically different. The effect size for older cohorts is biologically plausible and consistent with the demography literature showing that, at the start of the demographic transition, women at the end of their reproductive cycle limited their fertility by not having their "last child" (Knodel 1987; Cinnirella, Klemp, and Weisdorf 2017).

Second, we use insights from de Chaisemartin and d'Haultfoeuille (2020) that two-way fixed-effect estimators consist of a weighted average of heterogenous average treatment effects (ATEs). Because weights may be negative, these estimators may be negative even when all ATEs are positive. There are only two groups in our estimation: a treatment group where the reforms altered inheritance rules and a control group where they did not. That said, our measure of exposure to the reforms – the remaining fertile years after 1793 – takes on 25 values. Out of the resulting 50 weights, only 8 are negative. The amount of treatment heterogeneity needed to explain away our baseline estimate is implausibly large. For instance, if all ATEs were to average 0, we would only obtain our estimate of 0.024 (Panel A of Table 2, column 1) if the standard deviation of heterogeneous ATEs was 0.56. To see that this number is implausible, note that it would imply that the heterogeneous ATEs would be in the interval $[-0.1, 0.1]$ under a uniform distribution and that 95 percent would be in the interval $[-0.11, 0.11]$ under a normal distribution. This means that, in some cohorts, the heterogeneous ATEs would have to be more than four times larger than our estimated effect. In other words, we would have observe cohorts reducing their completed fertility by more than 2.5 children, equivalent to reducing the fertility of the average woman below 0.[2]

[2]We cannot report de Chaisemartin and d'Haultfoeuille (2020)'s DiD_M because our treatment is always zero in the control group and increases by one unit with every cohort in the treated group. Hence, the DiD_M would only compare two cohorts with very limited exposure to the reform: the cohorts aged 39 and 40 in 1793. To see why, note that the DiD_M compares the outcome evolution among *switchers*, the groups whose treatment changes from d to some other value between $t-1$ and t, to the outcome evolution among *non-switchers*, the control groups whose treatment is equal to d in $t-1$ and t. In principle, it does so for all treatment values d, but since here the control group always has a treatment equal to 0, only $d = 0$ would be considered. Because treatment values only increase by one unit with every cohort, looking only at $d = 0$ implies that the switchers comprise only one cohort: the cohort aged 39 in 1793 whose treatment increased from 0 to 1 in impartible areas and remained at 0 in partible areas. Finally, because the DiD_M only compares consecutive cohorts, it would only report the fertility change between the switchers' cohort aged 39 in 1793 and the previous cohort aged 40 in 1793.

Placebo test. We conduct a placebo test using cohorts that had all their children before the 1793 inheritance reforms. Specifically, we define the placebo sample and treatment as in our baseline specification, but for this set of cohorts whose fertility was unaffected by the actual reforms. First, we identify the cohorts that had all their children before 1793. Although the average woman did not have children above age 40 (Appendix Table A1), the 1739 cohort was the last full cohort that had all their children before the 1793 reforms. Second, we construct a placebo sample of 103 cohorts. We include the aforementioned cohort and the 102 preceding cohorts. We do this to match the number of cohorts in our baseline sample—103 cohorts born between 1700 and 1803. Third, we assume that a placebo reform was passed. Since our baseline specification uses a reform that was passed 10 years before the birth of the last cohort in the baseline sample, we assume that the placebo reform was passed 10 years before the birth of the last cohort in the placebo sample. Figure E4 visually compares the placebo sample and treatment to that in our baseline specification. Fourth, we estimate Equations (10) and (11) using this placebo sample and reform. In the absence of pre-trends, the placebo reform should not significantly affect the completed fertility of women in impartible-inheritance areas relative to those in partible-inheritance areas (or in areas where women were excluded versus included from inheritances).

Table E1 presents the results from this placebo exercise. In Panel A, the coefficient on the treatment group (Impartible) is not statistically significantly different from the pre-reform fertility gap between partible and impartible areas (see Sections 5, 6.1, and 6.2), illustrating that this gap remained constant up to 1793. Importantly, the coefficient on the interaction between impartible areas and the years fertile after the placebo reform is close to and not significantly different from zero. Panel B presents similar results for the placebo test comparing areas excluding versus including women in inheritances. Altogether, this suggests that our baseline estimation captures the effect of the 1793 inheritance reforms and not that of pre-trends in completed fertility.

Alternative sample, treatment, and control group. Table E2 examines the robustness of our results to alternative definitions of the sample, treatment, and control group. The table presents estimates of Equations (10) and (11) using completed fertility as the dependent variable. In Panel A, we restrict the sample to women born between 1720 and 1780 instead of using all women born in the eighteenth century (1700–1803). That is, we restrict the sample to cohorts whose fertile cycle was closer to the 1793 inheritance reforms. Note that the 1753 cohort was the last cohort that completed its fertile cycle before 1793. Hence, we now derive our estimates by comparing the completed fertility of about 30 cohorts of fertile age to about 30 cohorts too old to be fertile when the inheritance reforms were passed. The resulting estimates are almost identical to our baseline estimates. This further suggests that the large drop in completed fertility observed in eighteenth-century France was carried by cohorts of fertile age during the reforms in areas where the inheritance system was altered.

In Panel B, we consider an alternative definition of our treatment variable. Note that we capture the effects of the 1793 inheritance reforms through $I_m \times F_c$, the interaction term between the pre-reform inheritance system in municipality m and the length of exposure to the reforms for women in cohort c. So far, F_c is the remaining fertile years after 1793, based on a 25-year fertile cycle between ages 15 and 40. Although, in our sample the average woman had her last child at age 35 (with a standard deviation of 6 years), some women had children beyond age 40. Here, we consider instead a 30-year fertile cycle between ages 15 and 45 which encompasses 97 percent of all births. Specifically, the years fertile in the post-reform period, F_c, is now equal to 0 for cohorts aged 45 or more in 1793, equal to $f \in \{1, \ldots, 29\}$ for cohorts aged $45 - f$ in 1793, and equal to 30 for cohorts aged 15 or less in 1793 (see Figure E5). We do not find significant differences between these and our baseline estimates. This suggests that the fertility changes induced by the reforms were concentrated around ages 15 to 40.

In Panel C, we redefine the control group to account for the fact that the 1793 inheritance reforms contained two treatments: abolishing impartible inheritance and including women in inheritances. Instead of comparing women in municipalities with pre-reform impartible (treatment group) and partible (control group) inheritance, we now restrict the control group to women in municipalities where the pre-reform system had *both* partible inheritance and women included in inheritances. We use the same restricted control group to estimate the effect of including women in inheritances (columns (4)–(6)). Our estimates are unchanged, suggesting that the control group in the baseline specification was unaffected by anyone of the two treatments in the reform. That said, the Henry database does not allow to fully disentangle the effect of abolishing impartible inheritance from the effect of including women in inheritances. The reason is the strong spatial correlation between areas where inheritance is impartible and excludes women.

Migration and mortality. As explained in Section 4.2, the Henry database is based on the family reconstitution method. This technique reconstitutes families by linking records of birth, marriage, and death within and between individuals. A well-known limitation of the family reconstitution method is that families that emigrate from their parish of birth are difficult to trace later in life. Such emigration can underestimate the completed fertility of women. Similarly, a woman's completed fertility may be underestimated if she died before completing her fertile cycle. Because the early stages of the demographic transition were characterized by changes in mortality, this potential issue is particularly relevant in our setting. If emigration or mortality evolved differently across areas with different pre-reform inheritance systems, our estimates would be biased.

Table E3 shows that this is not the case. It reports results from extended specifications of Equation (11), where samples are restricted to account for the emigration- and mortality-biases described above. Panel A shows the effect of abolishing impartible inheritance on completed fertility, and Panel B, the corresponding effect of including women in inheritance. We restrict the sample to women who were alive at age 40 (column (2)) and to women who were alive and whose husbands were alive at age 40 (columns (3)–(5)). Because the Henry database retrieves death dates from parish and hospital records – especially before 1792 – this restriction effectively captures women whose records were not missed because of migration. Similarly, completed fertility is not underestimated because we are certain that these women completed their fertility cycle before dying. In addition, we include municipality-specific trends in mortality to account for its local evolution in the early stages of the demographic transition: we add the average longevity by municipality and birth decade (column (4)) and the share of women that reached age 40, i.e., who completed their fertile cycle, by municipality and birth decade (column (5)). Across these different specifications, we find very similar effects to our baseline results. These results suggest that our estimates capture the local effects of the 1793 inheritance reforms on completed fertility and that they are not biased by migration patterns or by changes in mortality associated with the demographic transition.

Adjusted fertility using the first-name repetition technique. Our main measure of completed fertility is the number of children surviving until age 6 ever born to a woman. However, it has been documented that the Henry dataset underreports infant deaths from the burial registers (Houdaille 1984). To show that our results are not driven by these omissions, we apply the first-name repetition technique of Cummins (2020) to construct adjusted fertility measures. This technique is based on the fact that, in pre-industrial Europe, it was not uncommon that parents of a deceased child would name a newborn with the same first name. Hence, repeated first names within a family can be used to infer child mortality even when these children are not linked to a death record. We calculate the adjusted completed fertility as $N_{born} - N_{dead} - N_{RN}$, where N_{born} are the children born to a parental union, N_{dead} the number dying before age 6, and N_{RN} the number of repeated first names that are not linked to a death record. To calculate N_{RN}, we use the information in Henry on the first three characters of children's first name. Tables E4 and E5 present our main estimates based on Equations (10) and (11), using this adjusted fertility measure. Reassuringly, we find robust estimates for the effect of the 1873 inheritance reforms on adjusted completed fertility (Panel A), adjusted completed fertility of mothers (Panel B), and adjusted childlessness (Panel C).

F.2 DD robustness tables

Table E1: Placebo test.

	(1)	(2)	(3)
	Dep. variable: completed fertility		
Panel A. Placebo reform abolishing impartible inheritance			
Impartible	1.069***	1.066***	0.889***
	(0.215)	(0.235)	(0.237)
Impartible	−0.010	−0.010	0.001
× Years fertile post-placebo reform	(0.010)	(0.009)	(0.009)
Observations	14,618	14,596	14,596
Adjusted R-squared	0.080	0.156	0.181
Panel B. Placebo reform including women in inheritances			
Women excluded	0.917***	0.850***	0.364
	(0.217)	(0.245)	(0.233)
Women excluded	−0.006	−0.005	0.012
× Years fertile post-placebo reform	(0.009)	(0.009)	(0.007)
Observations	14,618	14,596	14,596
Adjusted R-squared	0.075	0.150	0.176
Cohort FE	Y	Y	Y
Cohort FE of husband	Y	Y	Y
Individual-level controls	.	Y	Y
Flexible trends†	.	.	Y
N clusters	39	39	39

Notes: The placebo sample and treatment are equivalent to those used in our baseline estimation, but for to cohorts who had all their children before the 1793 reforms. See Section 6.2 for details. Completed fertility is based on the number of children surviving until age 6. Individual-level controls are those in the full-specification in Table 2; †Flexible trends include all trends in the full-specification in Table 3 except for municipality-level wheat prices by decade, which are not available for the earlier cohorts in the placebo sample; Standard errors in parentheses are clustered by municipality; *p<.05; **p<.01; ***p<.001.

Table E2: Alternative definitions of sample, treatment, and control group.

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent Variable: Completed fertility					
Panel A. Alternative sample: women born in 1720-80						
Impartible	−0.020**	−0.017**	−0.030***	.	.	.
× Years fertile post-reform	(0.009)	(0.008)	(0.009)			
Women excluded	.	.	.	−0.023**	−0.017**	−0.028***
× Years fertile post-reform				(0.008)	(0.008)	(0.009)
Adjusted R-squared	0.056	0.192	0.208	0.054	0.190	0.208
Observations	13,239	13,222	13,222	13,239	13,222	13,222
N clusters	39	39	39	39	39	39
Panel B. Alternative treatment: Years fertile post-reform based on 30-year fertile cycle (ages 15 to 45)						
Impartible	−0.022***	−0.021***	−0.027***	.	.	.
× Years fertile post-reform (alt.)	(0.006)	(0.006)	(0.007)			
Women excluded	.	.	.	−0.024***	−0.022***	−0.027***
× Years fertile post-reform (alt.)				(0.006)	(0.006)	(0.007)
Adjusted R-squared	0.059	0.182	0.197	0.056	0.179	0.197
Observations	20,261	20,238	20,238	20,261	20,238	20,238
N clusters	39	39	39	39	39	39
Panel C. Alternative control group: Municipalities with pre-reform partible inheritance & including women						
Impartible	−0.028***	−0.026***	−0.036***	.	.	.
× Years fertile post-reform	(0.007)	(0.007)	(0.009)			
Women excluded	.	.	.	−0.029***	−0.025***	−0.031***
× Years fertile post-reform				(0.007)	(0.006)	(0.008)
Adjusted R-squared	0.054	0.177	0.195	0.056	0.179	0.197
Observations	19,167	19,144	19,144	20,261	20,238	20,238
N clusters	35	35	35	39	39	39
Pre-reform partible/wom. excluded FE	Y	Y	Y	Y	Y	Y
Cohort FE	Y	Y	Y	Y	Y	Y
Cohort FE of husband	Y	Y	Y	Y	Y	Y
Individual-level controls	.	Y	Y	.	Y	Y
Flexible trends	.	.	Y	.	.	Y

Notes: This table reports estimates of the effect of abolishing impartible inheritance and of including women in inheritances on completed fertility under alternative definitions of the sample, the treatment, and the control group. In Panel A, the sample is restricted to cohorts born between 1720 and 1780, i.e., who entered or exited their fertile cycle immediately around the time of the reforms. In Panel B, we consider a 30-year fertile cycle between ages 15 and 40 for women. Hence, we re-define the "Years fertile post-reform (alt.)" as equal to 0 for cohorts aged 45 or more in 1793, equal to f for cohorts aged 45-f in 1793, and equal to 30 for cohorts aged 15 or less in 1793—that is, for women whose entire twenty-five-year fertile cycle was after the reforms. In Panel C, the control group is restricted to women in municipalities where the pre-reform inheritance system had *both* partible inheritance and women included in inheritances. Individual-level controls are those in the full-specification in Table 2; Flexible trends include all trends in the full-specification in Table 3; Standard errors in parentheses are clustered by municipality; *p<.05; **p<.01; ***p<.001.

Table E3: Robustness to migration and changes in mortality.

	(1)	(2)	(3)	(4)	(5)
Sample:	baseline sample	women alive at 40	spouses alive at 40	spouses alive at 40	spouses alive at 40
Panel A. Effect of abolishing impartible inheritance on completed fertility					
Impartible	0.516***	0.539***	0.524***	0.517***	0.535***
	(0.151)	(0.164)	(0.173)	(0.165)	(0.169)
Impartible × Years fertile post-reform	−0.031***	−0.031***	−0.032***	−0.032***	−0.032***
	(0.009)	(0.009)	(0.009)	(0.008)	(0.008)
Adjusted R-squared	0.197	0.239	0.261	0.261	0.261
Panel B. Effect of including women in inheritances on completed fertility					
Women excluded	0.311**	0.293**	0.294**	0.306**	0.319**
	(0.131)	(0.141)	(0.142)	(0.136)	(0.142)
Women excluded × Years fertile post-reform	−0.031***	−0.031***	−0.033***	−0.034***	−0.034***
	(0.008)	(0.008)	(0.008)	(0.007)	(0.007)
Adjusted R-squared	0.197	0.238	0.261	0.261	0.261
Cohort FE	Y	Y	Y	Y	Y
Cohort FE of husband	Y	Y	Y	Y	Y
Individual-level controls	Y	Y	Y	Y	Y
Flexible trends	Y	Y	Y	Y	Y
Municipality trends in longevity	.	.	.	Y	Y
Municipality trends in share wom. who completed fertility cycle	.	.	.	.	Y
Observations	20,238	17,955	16,946	16,861	16,861
N clusters	39	39	39	39	39

Notes: This table reports estimates of Equation (11) on the Henry database of women born in 1700–1803 in column (1), who were alive at the end of their fertile cycle in column (2), and whose husbands were also alive at the end of their fertile cycle in columns (3)–(5). The dependent variable is the number of children ever born to all women, based on the number of children surviving until age 6. The last columns include municipality-specific, time-varying trends by birth decade on longevity in column (4) and on the share of women who died after completing their fertile cycle in column (5). Individual-level controls are those in the full-specification in Table 2: literacy indicators for women and their husbands; accuracy of the Henry form fixed effects; and fixed effects for whether a woman's father, mother, father-in-law, and mother-in-law was alive when the couple married. Flexible trends include all trends in the full-specification in Table 3: municipality-level wheat prices by decade; municipality-level religiosity index × Cohort FE; distance to main religious centre × Cohort FE; distance to political society × Cohort FE; distance to rebellion against the state in 1779–1789 × Cohort FE; distance to legal center × Cohort FE; distance to fiscal center × Cohort FE; distance to territorial administrative center × Cohort FE; distance to paved road × Cohort FE; and distance to horse post × Cohort FE. Standard errors in parentheses are clustered by municipality; *p<.05; **p<.01; ***p<.001.

Table E4: Adjusted fertility using the first-name repetition technique (1/2).

	(1)	(2)	(3)
Panel A. Dep. Variable is Adjusted completed fertility			
Impartible	0.502***	0.474***	0.352***
	(0.145)	(0.117)	(0.122)
Impartible × Years fertile post-reform	−0.022***	−0.021***	−0.024***
	(0.006)	(0.005)	(0.007)
Adjusted R-squared	0.049	0.175	0.190
Observations	20,261	20,238	20,238
Panel B. Dep. Variable is Adjusted completed fertility of mothers			
Impartible	0.481**	0.514***	0.379**
	(0.180)	(0.161)	(0.143)
Impartible × Years fertile post-reform	−0.017***	−0.019***	−0.023***
	(0.006)	(0.007)	(0.008)
Adjusted R-squared	0.029	0.072	0.095
Observations	14,969	14,950	14,950
Panel C. Dep. Variable is Adjusted childlessness			
Impartible	−0.076***	−0.065***	−0.048*
	(0.020)	(0.017)	(0.025)
Impartible × Years fertile post-reform	0.004***	0.004***	0.005***
	(0.001)	(0.001)	(0.001)
Adjusted R-squared	0.043	0.193	0.200
Observations	20,261	20,238	20,238
Cohort FE	Y	Y	Y
Cohort FE of husband	Y	Y	Y
Individual-level controls	.	Y	Y
Flexible trends	.	.	Y
N clusters	39	39	39

Notes: This table examines the robustness of our results to adjusting fertility variables using the first-name repetition technique. The dependent variable is the number of children ever born to all women (Panel A), to mothers (Panel B), and the probability to be childless (Panel C), all based on the number of children surviving until age 6. To correct for infant death omissions in the Henry dataset, we apply the first-name repetition technique. This technique is based on the fact that it was not uncommon to name a newborn with the same first name as a deceased sibling. We calculate the adjusted completed fertility as $N_{born} - N_{dead} - N_{RN}$, where N_{born} are the children born to a parental union, N_{dead} the number dying before age 6, and N_{RN} the number of repeated names that are not linked to a death record. The sample is women born in 1700–1803 in the Henry database. Individual-level controls are those in the full-specification in Table 2; Flexible trends include all trends in the full-specification in Table 3; Standard errors in parentheses are clustered by municipality; *p<.05; **p<.01; ***p<.001.

Table E5: Adjusted fertility using the first-name repetition technique (2/2).

	(1)	(2)	(3)
Panel A. Dep. Variable is Adjusted completed fertility			
Women excluded	0.484***	0.423***	0.248**
	(0.143)	(0.116)	(0.105)
Women excluded × Years fertile post-reform	−0.025***	−0.022***	−0.026***
	(0.005)	(0.005)	(0.006)
Adjusted R-squared	0.049	0.174	0.190
Observations	20,261	20,238	20,238
Panel B. Dep. Variable is Adjusted completed fertility of mothers			
Women excluded	0.512***	0.504***	0.376***
	(0.173)	(0.155)	(0.127)
Women excluded × Years fertile post-reform	−0.019***	−0.020***	−0.025***
	(0.006)	(0.006)	(0.006)
Adjusted R-squared	0.030	0.072	0.096
Observations	14,969	14,950	14,950
Panel C. Dep. Variable is Adjusted childlessness			
Women excluded	−0.063***	−0.050***	−0.012
	(0.021)	(0.017)	(0.020)
Women excluded × Years fertile post-reform	0.005***	0.004***	0.004***
	(0.001)	(0.001)	(0.001)
Adjusted R-squared	0.043	0.192	0.200
Observations	20,261	20,238	20,238
Cohort FE	Y	Y	Y
Cohort FE of husband	Y	Y	Y
Individual-level controls	.	Y	Y
Flexible trends	.	.	Y
N clusters	39	39	39

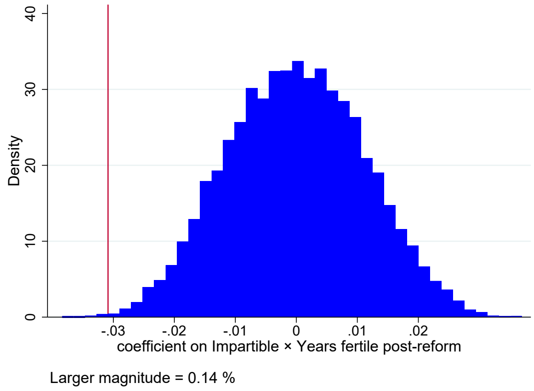
Notes: As in table above; Standard errors in parentheses are clustered by municipality; *p<.05; **p<.01; ***p<.001.

Table E6: Robustness controlling for soil, climate, and terrain characteristics.

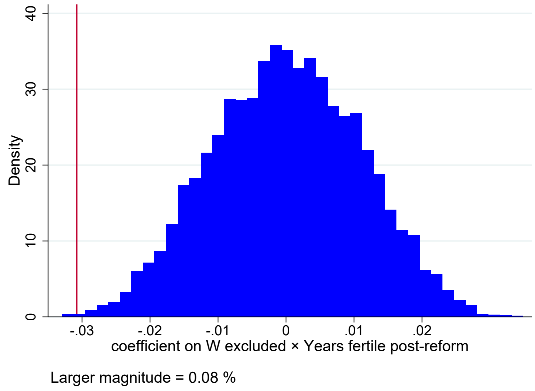
	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent Variable: Completed fertility					
Panel A. Controlling for land's caloric yield index, based on soil and climatic suitability for post-1500 crops						
Impartible	−0.031***	−0.031***	−0.030***	.	.	.
× Years fertile post-reform	(0.009)	(0.009)	(0.009)			
Women excluded	.	.	.	−0.031***	−0.031***	−0.032***
× Years fertile post-reform				(0.008)	(0.008)	(0.007)
Adjusted R-squared	0.197	0.197	0.197	0.197	0.197	0.197
Observations	20,238	20,238	20,238	20,238	20,238	20,238
Caloric suitability of land	.	Y	Y	.	Y	Y
Caloric suitability of land × Cohort FE	.	.	Y	.	.	Y
Panel B. Controlling for terrain ruggedness						
Impartible	−0.031***	−0.029***	−0.021**	.	.	.
× Years fertile post-reform	(0.009)	(0.008)	(0.008)			
Women excluded	.	.	.	−0.031***	−0.028***	−0.023***
× Years fertile post-reform				(0.008)	(0.007)	(0.007)
Adjusted R-squared	0.197	0.199	0.200	0.197	0.200	0.201
Observations	20,238	20,238	20,238	20,238	20,238	20,238
Terrain ruggedness	.	Y	Y	.	Y	Y
Terrain ruggedness × Cohort FE	.	.	Y	.	.	Y
Panel C. Controlling for both caloric yield index and ruggedness						
Impartible	−0.031***	−0.029***	−0.021**	.	.	.
× Years fertile post-reform	(0.009)	(0.008)	(0.008)			
Women excluded	.	.	.	−0.031***	−0.028***	−0.023***
× Years fertile post-reform				(0.008)	(0.007)	(0.007)
Adjusted R-squared	0.197	0.199	0.200	0.197	0.200	0.201
Observations	20,238	20,238	20,238	20,238	20,238	20,238
Caloric suitability of land	.	Y	Y	.	Y	Y
Terrain ruggedness	.	Y	Y	.	Y	Y
Caloric suitability of land × Cohort FE	.	.	Y	.	.	Y
Terrain ruggedness × Cohort FE	.	.	Y	.	.	Y
Pre-reform partible inheritance FE	Y	Y	Y	.	.	.
Pre-reform women excluded FE	.	.	.	Y	Y	Y
Cohort FE	Y	Y	Y	Y	Y	Y
Cohort FE of husband	Y	Y	Y	Y	Y	Y
Individual-level controls	Y	Y	Y	Y	Y	Y
Flexible trends	Y	Y	Y	Y	Y	Y
N clusters	39	39	39	39	39	39

Notes: This table reports estimates of the effect completed fertility of abolishing impartible inheritance and including women, based on extended specifications controlling for land characteristics. Panel A considers Galor and Özak (2016)'s post-1500 caloric yield index in each municipality, which is based on soil and climatic suitability for different crops. Panel B considers the average value of Nunn and Puga (2012)'s terrain ruggedness index within a municipality's borders. Panel C considers both of these characteristics. Columns 1 and 4 report baseline estimates from the full flexible-trends specification in Equation (11). Columns 2 and 5 add land characteristics in levels. Columns 3 and 6 the interaction between cohort FE and land characteristics, hence allowing fertility to follow different trends in municipalities with different land characteristics. All specifications include an indicator for areas treated by the reform (pre-reform partible areas in columns 1-3, areas that excluded women from inheritances in columns 4-6); birth cohort FE; birth cohort FE of husbands; all individual-level controls from the full-specification in Table 2, column (5); and all flexible trends from the full-specification in Table 3, column (4); Standard errors in parentheses are clustered by municipality; *p<.05; **p<.01; ***p<.001.

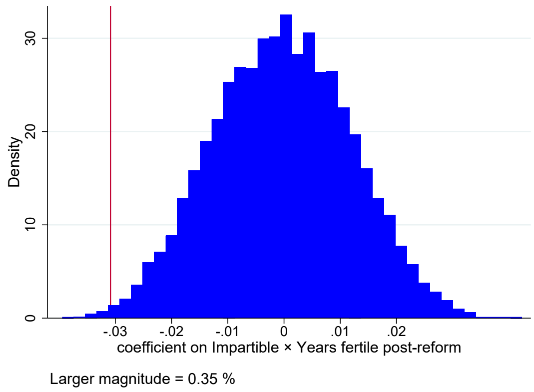
F.3 DD robustness figures



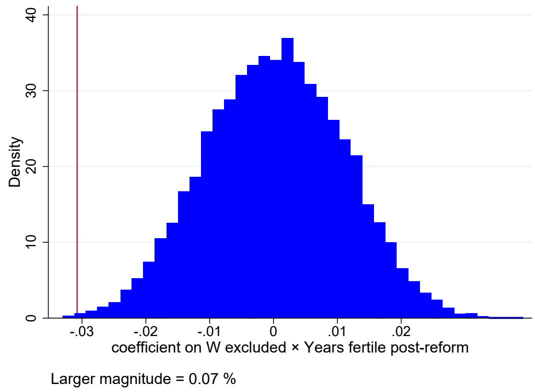
(a) Panel A



(b) Panel B



(c) Panel C



(d) Panel D

Figure E1: Permutation tests.

Notes: This figure plots 10,000 estimated coefficients for β in Equation (12), where we reshuffle the pre-reform inheritance system across the 39 municipalities in the Henry sample. In Panels A and B, the procedure only reshuffles the pre-reform inheritance system; In Panels C and D the procedure also reshufles the municipality-level characteristics used to estimate flexible trends. The dependent variable is the completed fertility of women, excluding children who did not survive until age 6. The vertical line indicates the "true" estimate from Equation (11).

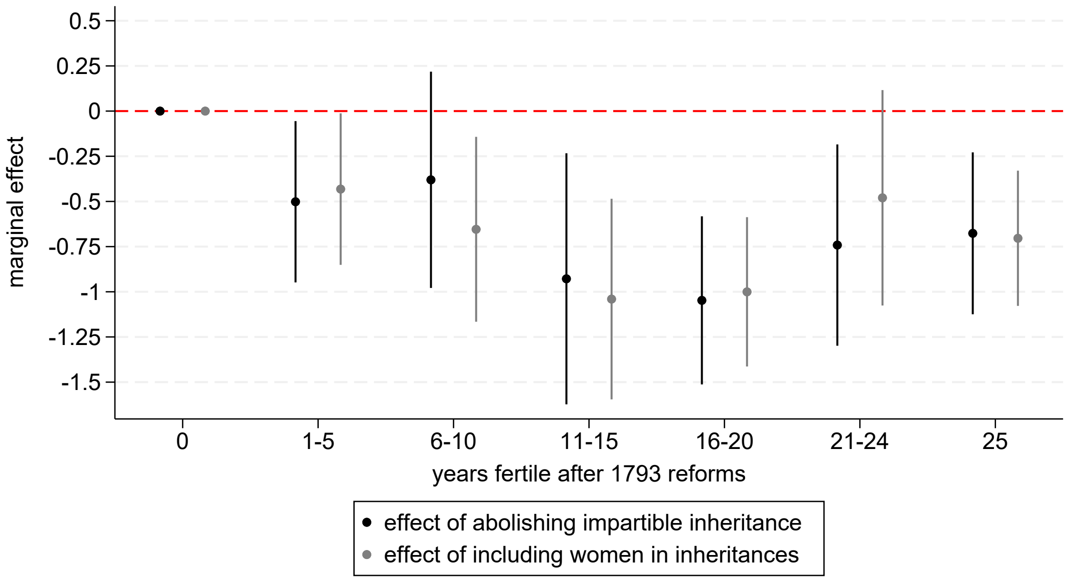


Figure E2: Non-linear effects of the 1793 reforms on completed fertility.

Notes: This figure shows estimates and 95 percent confidence intervals for the set of β_f in a regression of the form of Equation (11), where the continuous measure of reform exposure for different cohorts, F_c, is replaced with a set of indicator variables for women who had 1–5, 6–10, 11–15, 16–20, 21–24, and 25 remaining fertile years after the 1793 reforms, i.e., $Y_{icm} = \alpha + \sum_{f \in \{1\text{-}5;\ 6\text{-}10;\ 11\text{-}15;\ 16\text{-}20;\ 21\text{-}24;\ 25\}} \beta_f \ I_m \times \mathbf{1}[F_c \in f] + \gamma \ I_m + \mu_c + p_{mc} + \mathbf{X}_i'\theta + \sum_t \mathbf{1}[c = t] \times \mathbf{Z}_m'\delta_t + \epsilon_{icm}$. Individual-level controls, $\mathbf{X}_i$, include the full set of controls in Table 2, column (5); p_{mc} and $\sum_t \mathbf{1}[c = t] \times \mathbf{Z}_m'\delta_t$ capture our flexible-trends specification and include all trends in the full specification in Table 3.

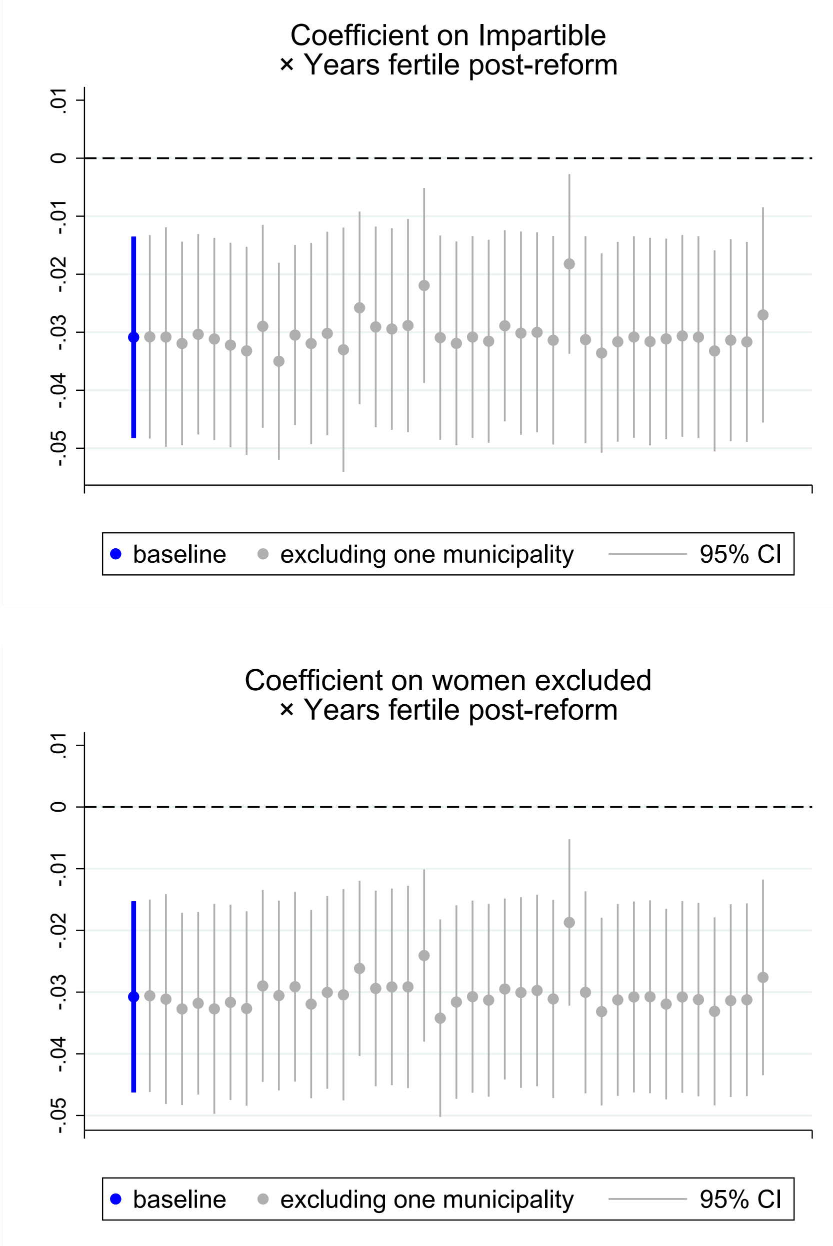


Figure E3: Sensitivity of main estimates to outliers.

Notes: This figure shows estimates and 95 percent confidence intervals for the effect of abolishing impartible inheritance (top panel) and of including women in inheritances (bottom panel) on women's completed fertility. Estimates and confidence intervals are derived from the full-specification of Equation (11), estimated using the full sample (blue) and samples that sequentially omitting one of the 39 municipalities in the Henry database (gray).

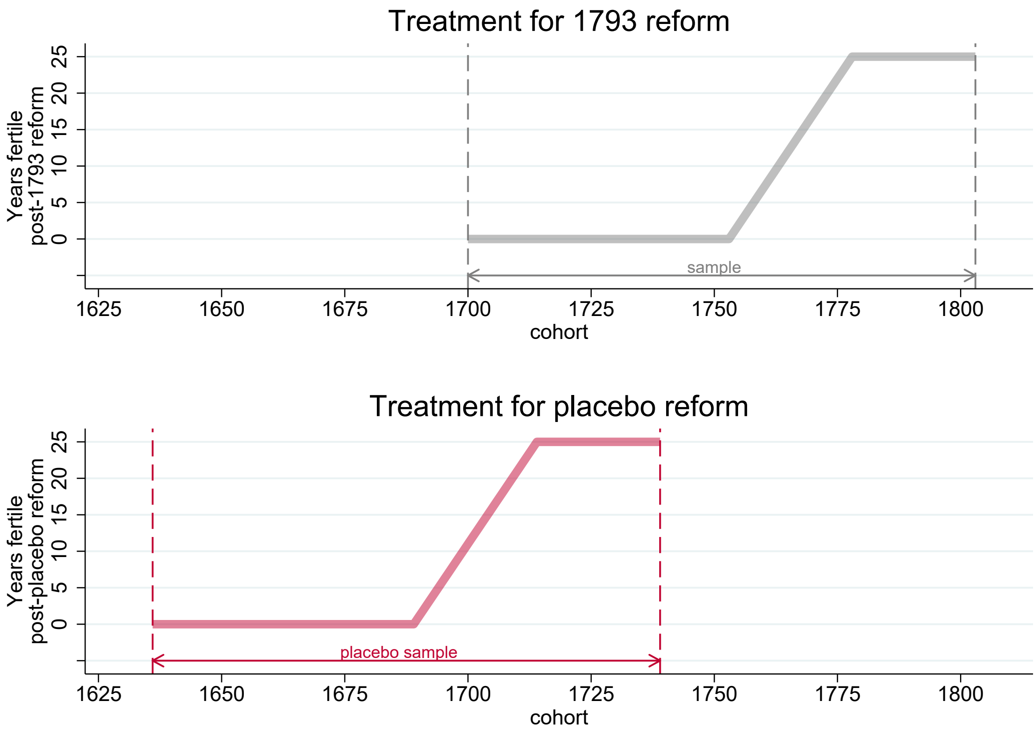


Figure E4: Baseline versus placebo exercise

Notes: The placebo sample and treatment are equivalent to those used in our baseline estimation, but for cohorts who had all their children before the 1793 reforms. See Section 6.2 for details.

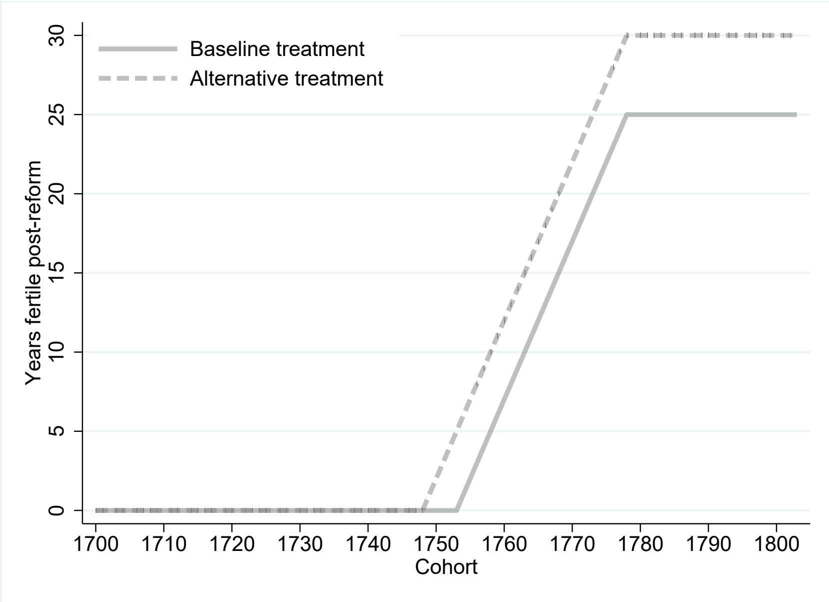


Figure E5: Alternative definitions of treatment.

Notes: Baseline treatment (solid line) are years fertile post-reform, based on a 25-year reproductive cycle between ages 15 and 40. Alternative treatment (dashed line) are years fertile post-reform, based on a 30-year reproductive cycle between ages 15 and 45.

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