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## Introduction

# WEALTH AND INEQUALITY IN THE LONG RUN

How do economies marshal their wealth into productive capital? How are wealth and capital distributed among individuals and between the public and private sectors?

These are the broad questions we pose; finding answers requires a long-term view because successful economies sustain capital accumulation across generations, not for a decade or two. Capital accumulation leads to large increases in private wealth, which is not just a peripheral aspect but the very heart of our study. At the individual level, family wealth or the lack of it constrains opportunities for education and retirement. Scholars have also noted the connections among wealth inequality, political polarization, and public policy. Very high levels of inequality are often associated with limits on democracy and strict limits on progressive taxation, thus privileging private at the expense of public capital, and fee-based rather than tax-based public services (e.g., education and infrastructure). Therefore, any study of private wealth must be a study of the political economy of capital. Our analysis of two centuries of capital accumulation is made possible by the extraordinary records that survive in Paris and in France.

These records are useful well beyond thinking about important economic questions; they also inform the history of Paris and its relationship to France. The capital has always been at the center of most key political events even

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before the French Revolution and continuing to this day. As we shall see, Parisian wealth was consistently much larger and more unequally distributed than in the rest of the country. Paris was also a forerunner in economic transformations that appeared as new assets in the estates and new occupations of wealthy decedents in each period. These economic transformations include the rise of financial capitalism, aging, and the diffusion of pensions, as well as the impact of increases in public services. Political and economic trends and shocks are reflected, sometimes in dramatic ways, in the portfolios of Parisians. In many ways, change started in Paris, and other parts of the country followed a generation or more later. Finally, Paris has a unique history. The particular concentration of real estate ownership meant that small and medium fortunes were composed of other assets, unlike the countryside and most other cities in France and elsewhere.

Economists append "rich" to a person or place to denote either high income or high wealth. High-income societies have high wages. High wages, in turn, depend on abundant capital of many kinds, including human capital, physical capital, and financial assets. That capital has to be owned by someone. Rich societies have high levels of private wealth; they also have high levels of public property, a fact that underscores the role of state action in wealth accumulation. Many economists have thus devoted entire careers to questions of capital and the institutions and organizations that facilitate or hinder its accumulation. This is often a macroeconomic question because state action is critical for understanding why some societies grow wealthy and others do not. Nevertheless, the same issues arise in urban and regional economics.

In many economic growth and performance models, capital, not wealth, matters. To clarify that distinction, capital is either an input into production (as in a machine) or it directly produces valuable services (like a taxi). Wealth is a broader concept that includes capital and assets that produce only utility (like art). To illustrate this distinction, consider an individual whose wealth includes a home, business equipment, and a kilo of gold in a safe. The home is capital because it is producing housing services. The equipment is capital because it is an input into a productive activity. The gold may produce utility by reducing her fear of being without resources if the economy collapses, but it is not capital. It is just sitting in the safe. Yet the same wealth deposited in a bank becomes productive capital when lent out. We will use a definition of wealth that includes all assets, even those that do not produce income. We also define a narrower concept of productive capital: it leaves aside the kilo of gold and is narrower than capital because it does not count things

like home furnishings. In practice, we will analyze the evolution of wealth and productive capital separately.

The income distribution matters most obviously because of its implications for consumption and welfare. We also care about wealth because it can be used to sustain consumption when income is low, yet wealth has many other implications. Being wealthy beyond one's human capital implies having control of some assets. To be rich translates directly into power and independence. These connections have long been understood, even before the French Revolution, and made stark by Marx. The yeoman farmer, the artisan, the rentier, the industrialist, and the banker are all wealthy. They also have income. Income, particularly labor income, is bounded by the ages at which one enters and exits the labor force. It is also bounded by the finite time we have to work each month or year. Wealth does not have such bounds. A young child endowed with assets by his parents or grandparents is wealthy and thus has property income even though he does not work. A worker who retires can enjoy a pension and a house she bought. Moreover, the amount of wealth any individual can control does not have an obvious upper bound. One has to have income to live, but one does not have to have wealth, and the range of upper wealth levels is always far wider relative to its average than labor income. In short, whether one is interested in growth or distribution, accurate measurements of wealth and capital are necessary.

Although in some places, particularly in Southern Europe, registries known as cadasters and wealth tax rolls with detailed information on individuals' assets have survived from the late medieval to the early modern period, most societies have failed to record individual wealth except at death (Herlihy and Klapisch-Zuber 1985; Alfani 2023). Most such records are local, limited to a village, a town, and exceptionally to a small region. They offer an accurate representation of local wealth, particularly for real estate. The smaller the area surveyed, the bigger the problem for top wealth holders who often have estates in many locations. Moreover, in France, at least, some forms of aristocratic property were not recorded because they were not taxed. This makes an accurate measurement of top fortunes extremely challenging. As an alternative, scholars have relied heavily on probate records, private documents drawn up at the time of death that evaluate wealth. Probates are complicated because different societies have different rules for deciding when estates are probated and what wealth is detailed in the probates. Moreover, small estates with a single adult heir are unlikely to get probated. Both wealth registers and probates have the additional problem that they do not take the whole population into account, in particular those without wealth.

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Luckily, France has a more complete source for information on wealth over the long run than probate records. During the French Revolution, the legislature enacted an inheritance tax law that applied to the first franc of every estate. The tax remains in place today, and we have exploited its records. For this book, we collected thirty-two complete cross sections of estates in Paris. The reasons to focus on Paris are simple: the records are all in one location, and many top wealth holders resided in the capital in the past. To the individuals with estates, we add the population of individuals who died without an estate using published totals of deaths by age and sex for a full representation of wealth at death for each cross-section year. The dataset has a cross section every five years from 1807 to 1972, only skipping 1917 and 1967. We also have a complete enumeration of all estates in the top three deciles of 1977, the most recent set of records held by Paris archives as of 2024. The resulting dataset contains observations about the wealth at death of 776,162 Parisians, 248,892 of whom died with a positive estate. For a stratified sample of 46,380 individuals with a positive estate, we have collected full details on their personal and (if relevant) community assets. The asset details files contain 1,153,505 entries needed to establish the value of the sampled individual's estates (it also contains another 352,738 entries accumulated for individuals not in the sample). These datasets, along with a wide variety of other datasets, are available for further research (for details, see appendix 1).

The Parisian data show that between 1807 and 1912, private wealth grew rapidly, and so did the 1% wealthiest individuals' share of wealth. In contrast, during this period of wealth growth, the share of individuals dying with no estate was almost constant at 70%. Then, from 1912 to 1947, wealth fell precipitously, returning to a real level close to what we found in the 1820s. During these fateful decades, the wealth share of the top 1% fell from 65% to 55%, but the share of individuals leaving an estate rose to nearly half of all adults. After 1947, wealth rebounded, with the top 1% of wealth share stabilizing at about 50%, and the share of individuals leaving an estate continued its rise, reaching about 60%. At all times, Paris was much richer than the rest of France and also much more unequal (see chapter 10).

These broad results are consistent with the figures reported by Thomas Piketty (2001, 2013) and his arguments for France. Piketty participated in the initial stages of the present research (Piketty et al. 2006, 2014). Piketty (2001) used the tabulated data by inheritance bracket published by the tax administration at various points throughout the twentieth century to measure

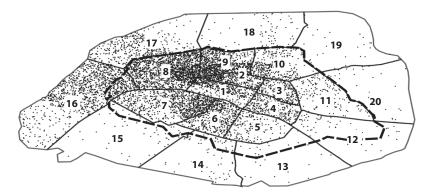


FIGURE 1.1. The quartier of residence of the top 1% richest decedents in Paris, 1807–1972. *Note*: Each dot represents a member of the 1% who died in one of our cross sections. Each decedent is randomly distributed within the quartier where he or she legally resided. Since 1860, Paris has had 20 arrondissements, each divided into four quartiers (neighborhoods). The dashed line delineates the boundary of the city before 1860. *Source*: Estates dataset (see appendix 1).

wealth inequality in France. Our complete individual-level Parisian records data show that published tabulations tend to underestimate top-end wealth concentration (see chapter 3). As a consequence, our estimates of top-end wealth concentration are even higher than those previously published, and the mid-twentieth century decline is more moderate, especially in Paris. More importantly, because we have individual data, we can carry out a variety of analyses to better understand how wealth and its distribution evolved. In particular, we can disentangle men's and women's wealth. It is also necessary to take into account who controls wealth because, in nearly all cases, married women surrendered the management of their assets to their husbands while maintaining separate ownership of their personal property (Bessière and Gollac 2022). Our data are rich enough to tally community property and personal assets and thus to measure the inherited wealth share for individuals who die married, extending work published earlier (Piketty et al. 2014). As we show, the inherited wealth share is large, and wealth is persistent across the generations. We also show that despite a high inherited wealth share, Paris had a lot of social and geographic mobility. Using the addresses of the richest centile among decedents, we can show that inequality was also severe within Paris. Figure I.1 distributes these very rich decedents within the quartiers as defined after the city doubled its size in 1860. (The old boundary is the dashed line in the figure.) The map shows most of the top centile of wealth holders

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concentrated in just a few of the 80 quartiers of the city over a century, even though those in the arrondissements numbered above 12 accounted for the majority of the population by 1900.

Overall, we draw one key conclusion about wealth and inequality. In many ways, private wealth is fragile; it is easy to destroy (real wealth per rich decedent fell by 59% between 1912 and 1922). Yet inequality is robust and hard to control (the top 5% share stayed the same between 1912 and 1922). Although the timing of the wealth decline from 1912 to 1947 coincides with the drop in wealth inequality highlighted by Piketty and his coauthors, in our view, two distinct phenomena are at work in World War I and during the interwar period. The first matters at the top; it involves difficult economic times, inflation, and taxation that hit the very rich harder than everyone else. These factors are the key drivers of the wealth decline. The effect of adverse economic shocks on inequality was muted, however, because the rich enjoyed systematically higher capital returns, and their portfolios had fewer bonds than the rest of the population. The second phenomenon involves an increasing fraction of individuals leaving bequests, driven by secular increases in age at death, income, and the rise of pension programs.

We also draw some important conclusions about the role of taxation in limiting inequality. For Paris, at least, the French estate tax regime had a limited impact on wealth distribution. However, more generally, the fiscal regime played an important role. After WWI, income taxes reduced the consumption value of capital income. Because capital was so concentrated in Paris, progressivity increased the fiscal burden of Paris more rapidly than that of the rest of the country. Although taxes began to rise around 1910 to pay for military expenses, they also changed the funding of public services from fee-for-service to open access. This second change had massive and direct benefits for the education and health of Parisians, particularly the poorer ones. This reduction in inequality is obviously not captured directly in any wealth-at-death statistic. Thus, we emphasize the importance of measuring the many different facets of inequality that matter to welfare.

## This Project in Context

Debates about the evolution of wealth and its distribution have a long history. Recent publications by Alfani (2023), Atkinson (2015), Piketty (2001, 2013), and Waldenström (2024) provide extensive discussions of those debates and how they have influenced efforts to measure income and wealth distribu-

tions. More closely related to our efforts, Soltow and Van Zanden (1998) and Alfani (2023) have sought to understand the extent to which inequality varied from the Middle Ages to the Industrial Revolution. Kuznets's (1955) inequality hypothesis is one of the main motivations for their work. This hypothesis focuses on sectoral inequality. It posits that inequality rises in periods of economic change because new sectors offer higher returns or incomes. Later in the process of change, inequality decreases once most of the capital or labor is in the new sectors. Another motivation of Alfani, and Soltow and Van Zanden, comes from the general decline in the skill premium observed in wages after the Black Death (1346). One last motivation involves the rise of new wealth forms, which could be held either more or less widely than the original asset (land), depending on local circumstances. Peter Lindert's work on English wealth (1986) is particularly important for us because land in England, like in Paris, was owned by very few people and was an important driver of total wealth inequality.

Among the key issues relevant to our project is the connection between economic growth and wealth accumulation by the poorer half of the population. In one view, prosperity lifts all boats. Others have suggested that structural or behavioral impediments limit wealth accumulation so that large parts of the population remain poor. A second issue involves public policy. Again, some scholars have argued that tax regimes should be used to reduce inequality, while others believe the cost of foregone prosperity is too high. A third issue involves the political ruptures necessary to move from a lowtax regime to a progressive one. Indeed, in societies like Paris that are very unequal, progressive taxation is required to improve the welfare and human capital of most of the population. Some view this process as driven by demographic change, while others argue that international relations and large economic shocks largely drove fiscal innovation. As noted earlier, private wealth's trajectory unfolds over generations, making the empirical evaluation of these broad questions difficult if one focuses only on a few decades. We start this introductory section, therefore, by considering the practical and empirical challenge of finding good sources to measure wealth and its distribution. We then discuss the specific attributes of the source we have chosen: fiscal records of wealth at death for Paris.

The dearth of longtime series has complicated the analysis of the intertwined issues of wealth and its distribution. States have largely eschewed the responsibility of tracking wealth and its distribution precisely. Government officials have taken the implicit position that the value of such data to public policy is less than the value of preserving individual privacy. Some

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governments have, to be sure, produced detailed surveys of wealth, like the United States' Survey of Consumer Finance. Unfortunately, such samples are too small to track the wealthy, partly because they are extremely unlikely to participate. Atkinson and Piketty championed using fiscal data, whose publication started at about the same time states instituted progressive income and estate taxes to measure wealth and income distributions. Together with a large group of scholars, they reconstructed the evolution of income and wealth distribution for many countries in the twentieth century (Atkinson and Piketty 2007; Piketty and Atkinson 2010). Thomas Piketty used the French estate tax data tabulations from 1902 to 1964 in his work on high-income French people (2001). The efforts of the scholars of this group, known as the World Inequality Lab, revitalized the study of longrun inequality (Alvaredo et al. 2018), and our book participates in that effort. At the same time, we have taken a radically different approach to these questions. First, we focus on wealth at death in Paris rather than the whole of France. Second, we collect individual-level data rather than tabulations. Therefore, as noted before, each measured estate is attached to the social characteristics of the decedent (including their age, sex, address, occupation, marital status, and type of heirs). We also collected the composition of their estates for large samples of decedents. Not only do we have detailed individual data, but we also follow the wealth of the capital's inhabitants over a long period—from the First Empire (1804–1815) to the Fifth Republic (1958-present). Our dataset thus covers the century before the French treasury began publishing tabulations in 1902 and another fifteen years after it stopped in 1964. The two centuries over which we have collected individual data allow us to provide a better sense of the dynamics of wealth and its distribution in France than the terse published tabulations previously used.

That said, Piketty was not the first to use French estate data, nor were we the first to use Parisian archival data. Adeline Daumard (1963, 1973) compiled two cross sections of all Parisian estates filed in a year (1821, 1847). Her pioneering work was part of a project to study social hierarchies launched by Ernest Labrousse in the 1950s. Later, Daumard added 1911 to parse wealth holdings' evolution across social categories. Carried out by hand, her effort was remarkable. Unfortunately, her results, while uncontested, did not spark further inquiry. Also, she grouped individuals by social categories in her published work, and her individual observations were lost.

Starting in the 1980s, a completely different project focused on 3,000 families chosen in the 1820s whose last names begin with the letters TRA and

whose descendants' civil records (births, marriages, and deaths) were traced to the 1960s. Bourdieu et al. (2014) collected the wealth at death of a large fraction of individuals in the TRA project and any other individuals whose last names started with the letters TRA they found. Their research, which continues, focuses heavily on the evolution of wealth as France became less rural. Their sample, however, seems to underrepresent large estates, particularly Parisian fortunes. Like Daumard's, our project focuses on Paris; like the TRA project, it spans the nineteenth and twentieth centuries. It links with Piketty's work because what happens in Paris—France's capital—matters for France.

Benjamin Franklin reportedly quipped that death and taxes are the only things that are certain. Both may be inevitable, but they are far from fixed. Moreover, where wealth is concerned, how the wealth at death relates to the wealth of the living requires some elaboration. Going back to Mallet (1908), Séailles (1910), Strutt (1910), Mallet and Strutt (1915), and Lampman (1962), economists have relied on multiplier techniques to compute the wealth of the living in a year from that of the dead. The basic intuition is that the wealth of the living in a year is the wealth of the deceased in the same year multiplied by the inverse of mortality risk. The only issue is how narrowly to define mortality risk (by age, or by age and sex, or by age, sex, and occupation). Our long-run study faces two challenges. First, the relationship between those who die and those who survive is influenced by immediate factors that are sometimes dramatic aggregate shocks. For Paris, these include, as we shall see, the cholera epidemic of 1832 and the deportation of Jews in 1942. Second, the relationship between wealth and death has evolved over two centuries. In 1807, as in 1847, most of the dead were of working age, and they died in relatively large numbers in every decade of age. After 1945, most of the people who died in Paris were retired. Although there were many individuals in Paris aged 20-29, few died so young. The same can be said about the "certain" taxes. While inevitable between 1807 and 1972, they were far from constant. Avoiding estate taxes may always have been desirable, but the incentive to escape the taxes was, on average, ten times higher after 1920 than before 1900. Again, we consider these changes in the tax regime to understand what wealth-at-death data tell us about wealth. These issues highlight the need for a quantitative and historical approach—one which we strive to provide in this volume—to the collection of evidence and the evolution of wealth, capital, and inequality.

The challenges of time and sample years are not specific to our study; they are inherent in any long-term study that seeks to understand both eco-

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nomic structure and change. They are also what makes such work important. Whether one comes at these issues from the left (seeking to find ways to improve the welfare of the general population) or the right (seeking to find ways to reduce state influence and allow markets to improve the productivity of wealth or, more bluntly, to preserve social order and the existing hierarchy), change over time is an essential element of what is at stake. Over two centuries, the level and distribution of wealth, its taxation, and the wealth at death we observe were all altered by financial market development, capital accumulation, urbanization, technological change, the politics of taxation, and public spending on education, health, and infrastructure. In each period, the level and distribution of wealth, as we shall see, also contributed to financial market development, capital accumulation, urbanization, technological change, and the politics of public policy. Wealth is a fully endogenous variable. Individuals and organizations can alter the level and characteristics of their wealth quickly. Organizations can do so by borrowing more or less, issuing additional equity claims, distributing or retaining net income, etc. National or local agencies can claim certain services as their monopoly or leave them to the market and, even then, choose to regulate them or not. Individuals have choices over the size of their bequests and who receives them. Individuals also decide where to live, whether to remain single or marry, and how many children to have. We thus implicitly face problems of causality. For instance, increasing longevity matters to changing the share of individuals who leave a bequest. At the same time, having wealth is beneficial for longevity. We chose not to attempt to purge the "endogenous" phenomena as is now popular in economics. Indeed, doing so would have forced us to focus on the shortrun evaluation of the impact of events when we are interested in long-run change. Instead, we make endogenous evolution one of our objects of study. This way, we hope to raise questions that matter well beyond Paris. As it turns out, the long span of time we examine allows us to decode many important questions because the timing of demand-side (individual) shifts often lags or precedes supply-side shifts (institutional change) by a decade or more. In Paris at least, two patterns recur time and again. First, private supply-side innovation did little to change the wealth distribution, though it mattered tremendously to wealth accumulation. Second, public intervention mitigated the welfare consequences of wealth inequality but its deployment depended on a political economy that involved France rather than the city. Time, it seems, is our great resolver.

## A Capital's Capital

Our effort to reconstruct private wealth and its distribution for Paris is connected to our long-term interest in what generally drives prosperity. Our previous research has considered the evolution of credit markets over several centuries (Hoffman et al. 2000, 2019) and how Paris played a preeminent role both before the French Revolution and after 1860. Credit markets were connected to wealth because mortgages were the primary form of outstanding debt. Those without real estate could not easily borrow, and the option to take on debt increased with real estate wealth. This was one of the reasons we became interested in wealth inequality. Rosenthal's work on the formation of businesses in Paris (Lamoreaux and Rosenthal 2005) also raised questions about inequality: Was entrepreneurship an important path to wealth? Were joint stock companies important to capital (and wealth) formation? Postel-Vinay's work on large-scale agriculture enterprises highlighted large landowners' financial connections to urban (especially Paris) credit markets (Moriceau and Postel-Vinay 1992). For all these reasons, developing additional evidence on the wealth of France and Paris seemed imperative if we seek to understand prosperity.

In imagining such a project, one might intuitively want to sample across France rather than focus on the capital city. A national sample would certainly have some desirable properties. However, we had to leave that option aside because of practical constraints. Outside Paris, France has about 90 départements, each with between 10 and 20 offices where estate taxes are paid. We would have run into a quandary: How could we ensure a representative sample at each wealth level? The first problem is that the rich are not randomly distributed across space. Moreover, as we will see, the range of wealth is very wide in the top centile and wider in the top thousandth of the distribution; thus, an accurate measure of their wealth shares requires that we capture nearly all the individuals in these sets. Rather than sample a few locations, we chose to focus on one place, the capital, which we knew was home to many very wealthy people. We also chose not to sample among the decedents but to consider all decedents of a given year. More precisely, unlike Daumard, who focused on all the estate declarations filed in a given year, independent of the year the individuals died, we collected the filings of all those who died in a given year. Until 1912, the two methods provide similar results. Once inflation set in during WWI, however, our approach provides more accurate estimates of wealth and inequality (see chapter 3 for

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more details). Paris has the advantage that its 57,000 volumes of estate records are all housed in its archives, and those volumes contain all the estate records from 1807 to 1960 and have only limited gaps from 1960 to 1977.

Studying a city over the long term also helps us understand the long-term dynamics of wealth today since the globe's population is now heavily urbanized. Those dynamics include both the importance of financiers' wealth and the capital demand of the cities themselves. Let us start with Paris's capital market. By the French Revolution, Paris had been France's capital and its largest and richest city for the preceding millennium. Paris has been the country's financial center for at least two hundred years since the decline of Lyon as a banking center. The French Revolution further concentrated legislative, judicial, and financial activity in Paris. Therefore, Paris is the core of various webs of French capital flows. The central bank, the Banque de France, was established there, and although it opened branches throughout the country, the discount policy was decided in Paris. All the key investment banks had their offices in the city. When universal branch banking diffused after 1870, the most important of these firms were also headquartered in the capital. Although there were stock exchanges in a half dozen cities in France by the mid-nineteenth century, the Paris Bourse dwarfed all the others, and it would progressively take over most of the trading in securities. That, in turn, gave Parisians access to a greater variety of investment options than most other people in France. In 1818, the first savings bank opened in Paris. Its success spurred the opening of similar institutions in hundreds of locations across the country. When postal savings were initiated, Paris again led the way.

Paris also featured prominently in France's participation in the massive international capital flow of the first golden age of capitalism (1870–1913), most famously related to the funding of the Suez and Panama Canal companies. The capital dominated both the registration of companies doing business abroad and their share and bond issues. The same can be said of colonial investment. Banks like the Crédit Foncier Algérien, the Banque d'Indochine, and many others were headquartered in Paris and issued their securities there. This is the reason why these capital flows would be visible in Parisians' portfolios. We also want to know how far down the wealth distribution foreign assets, such as the infamous Russian bonds repudiated in 1918, reached.

Financial modernization is a significant theme in economic history and development economics. Tracking its progress for France requires taking Paris into account. As we shall show, the new financial institutions just men-

tioned were successful because Parisians had a great demand for financial services and a great appetite for new investment opportunities. At the same time, Paris differed from the rest of France in savings opportunities.

Starting in the 1820s, Parisians had access to new forms of life-cycle savings, including insurance company policies (life policies and tontines). Then, in the second half of the nineteenth century, retirement programs spread, covering first the public sector, then railroads, and large industrial firms. The organizations that made retirement contributions for their workers early on were overrepresented in Paris. Thus, some inhabitants of the capital experienced new forms of life-cycle savings relatively early.

At the same time, some Parisians' desire for modern investment came from being denied access to real estate investment—the initial form of wealth for most households in most economies. Paris housed a large population within a small area in multifamily buildings. Most households rented. The city extended its territory in 1860, doubling in size. Yet the pattern of multifamily buildings let out to households continued with little change, and Paris remains extremely dense. Since the French Revolution and until the 1960s, when condominium associations diffused, less than 10% of its households could imagine owning real estate in the capital. Since then, individual apartment ownership has become more prevalent.

Paris also had a unique relationship with other forms of capital. The royal road system, and later railroads, were built as star systems with Paris at their center. As it grew, the city's demand for infrastructure rose as its leaders became ever more starkly aware of Paris's unhealthy environment. Improving water supply, building sewers, and paving streets were all expensive investments. However, French cities could only borrow or raise their tax rates if they secured the approval of the minister of finance. Because this approval was rarely granted, cities generally lacked capital and, instead of borrowing, resorted to concession systems to produce local services (which were then paid for by user fees). Paris was different because of its close relationship to political power and its significant revenues from excise taxes. The capital was managed by prefects named directly by the French executive, and the finance minister regularly approved their requests to borrow funds for infrastructure. Thus, Paris could sell massive bond issues to the public. The need for more real estate finance blossomed in the 1850s with the rebuilding of Paris under Baron Haussmann (prefect 1853–1870). A special bank was created: the Crédit Foncier de Paris. Promptly renamed the Crédit Foncier de France, it concentrated a huge share of its activities in Paris (Hoffman et al. 2000, chap. 11). Up to WWI, half of the value of all

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mortgages it granted were given out in Paris and backed by Paris properties. The mortgage-backed securities it sold to fund the mortgages were also issued in the city.<sup>3</sup>

Paris also has a unique place in France's economic history because large population flows were needed to sustain a city with high mortality and low fertility. As we shall see, most individuals who died in Paris were not born there. These migrants were mostly poor, came before marrying, and took on a variety of unskilled and semiskilled occupations. Other newcomers, like writers (Balzac or Zola), musicians (Berlioz or Chopin), engineers (Eiffel), and painters (Max Ernst), came to Paris with their talent. Some of the migrants made fortunes, while others died with little wealth. However, all contributed to the cultural life of the capital. Another set of individuals arrived as political entrepreneurs who used their political or military service as a springboard to wealth (examples include Napoleon's marshals or Adolphe Thiers). The last set of migrants comprised those who came with their wealth already established at various stages of life and were attracted to the city because of its economic opportunities or because of its social and political importance (for instance, the Roederer champagne family or the bankers Goudchaux, and Casimir Perier the prime minister).

Wealth requires us to consider reverse flows, like the Schneiders, a Parisian banking family that bought the Creusot iron works in the Saône-et-Loire. They funneled large amounts of capital they raised in Paris into their steel works. Their capital, in a sense, migrated from Paris to the provinces. The Wendels started their iron works in Lorraine and later moved to Paris. Securing capital and contracts for their business was one motivation for having a foot in the capital. Because Paris was so rich and unequal, the migrants mostly came from poorer and more equal places. Another dimension of Parisian exceptionalism is that a relatively large fraction of the individuals who died as residents in Paris and left a bequest did not have direct descendants.

In all these ways, Paris, over the past two hundred years, is a laboratory for thinking about today's global cities that include capitals like Beijing or Mexico City, but also other leading metropolises like New York City, Kolkata, São Paulo, or Milan. As noted above, today's global cities share many of the characteristics of Paris: they are rich and unequal. Global cities drive cultural and financial change, and the individuals who reside there greatly influence public policy. These cities have financial sectors of considerable size and scope. If capital matters, then global cities matter because they organize the flow of capital. In places like New York or London, the financial

industry is the principal engine of economic activity and attracts large numbers of migrants from within the country and abroad. In many global cities, the rise of social services has eliminated the urban penalty in life expectancy, which was long standard for all large cities. Moreover, they also often have access to a broader range of public capital and services than the rest of the country. More important, although much of the focus has been on national aggregates (for fiscal reasons), these hide tremendous geographic heterogeneity. That heterogeneity includes much higher levels of private wealth and public services in the top cities than elsewhere. It also reflects the fact that these places are highly unequal.

In some cases, one can quantify some of these differences among global cities over the past few decades. One could measure the importance of the financial sector or count the number of top corporations headquartered there. One could also measure their cultural amenities. However, a good measure of income and wealth distribution, including fine detail at the top, is almost always missing. The advantage of our hand-collected data is that we can compute wealth estimates for any desired group.

#### French Inheritance Taxation

The French Revolution created an inheritance tax through two laws. The first, enacted on December 5, 1790, recreated the system of taxation of private property transfers (including inheritances) that had prevailed under the Old Régime. A second law, enacted on December 12, 1798, organized the inheritance tax proper. As Daumard details, it took some time for the system to reach its steady state structure (1973, 4–6). By the end of the First Napoleonic Empire (1815), however, the key pieces were in place.

The French tax set in 1790 was an inheritance tax rather than an estate tax (as prevails in Great Britain and the United States). An estate tax is assessed on estates of a relevant size independent of who receives the estate. For 2024, US estate taxes will be paid on any part of an estate over \$13.6 million, and the lowest bracket is 18%. Inheritance taxes, in contrast, are assessed on the heirs. They thus vary depending on who receives the estate, and because the progressive schedule applies to each heir, the tax burden is reduced when there are more heirs. In France in 2024, heirs who are children, mothers, fathers, and grandchildren of the deceased each are exempted from the tax on the first 100,000 euros they receive, and the lowest rate is 5%. The top rate (estate value above 1.8 million euros) pays 45%. The exemption for wealth transmitted between siblings is about 15,000

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euros, and the lowest bracket is 35%. Nieces and nephews have an exemption of less than 8,000 euros, and the tax is 55%. Everyone else pays 60% with no exemption. To levy the tax, now and in 1807, estate declarations first established the total value of the estate and then detailed what went to different types of heirs.

When the inheritance tax was enacted in 1790, the only assets exempted were the bonds of the public debt, and the rates were low. Heirs in the direct line of descent (children and grandchildren) paid 1% on real estate and 0.25% on movables. Individuals not related to the deceased paid 10%. Over time, the tax evolved. In 1850, the exemption for public debt bonds was eliminated, and the 1% rate was applied to all assets in the direct line of descent. Progressive rates were imposed starting in 1902 (law of February 25, 1901). For more details on the period after 1901, see chapter 3.

Collecting the tax proved a challenge. France was divided into several thousand bureaus (about one per dozen municipalities by 1900). To simplify things, taxes on real estate were paid in the bureau that contained the asset. Taxes on movable wealth were due at the bureau of the individual's legal residence. Because progressivity required the consolidation of all assets, the 1901 law mandated that all assets be declared at the bureau where the deceased had his or her legal residence.

The administration faced several problems. To start, it had to find the individuals who had left estates. It then had to collect information about the values of bequests. Finally, it had to record these values and the taxes to be paid. It solved these by creating two record sets. First, the Tables de Successions et Absences (TSA) provided monthly lists by the first letter of the last name of every person who resided in the bureau or had real assets there. These tables were maintained until 1969. Each individual's details were then recorded on a personal sheet (*fiche*) and placed into a binder. For individuals with an estate, the TSA volumes and the fiches provide the date of their estate filings. This record set for Paris comprises 5,240 volumes, and we opened most of them to collect basic information about the deceased and where to find the estate.

A second set of volumes, the Registres de Mutations par Décès (RMD), contains the estate declarations. Before 1902, the clerks transcribed the estate declaration onto the registers once they had accepted the submission from the heirs' representative and computed the tax. After 1902, the heirs presented estate documents on preprinted forms, which the clerks marked up. They also calculated the tax owed on the last page of the declarations and then filed them in binders chronologically. The filings themselves come

in at 53,181 volumes for Paris alone; we opened roughly half of them (for more details, see chapter 2).

France has a marriage law with a default regime distinguishing between personal and community assets. Before 1965, real estate was a personal asset. All other assets the individual brought to a marriage went into the community. After 1965, the definition of personal assets changed, and all assets owned by a spouse before marriage or inherited during the marriage were recognized as that spouse's personal property. None of the individuals in our data married after 1965, yet they could depart from the default regime by writing a contract. Indeed, the law allows extensive deviation from that regime. Spouses have widows' portions and usufruct rights, either set by law or chosen as part of a marriage contract. France also has an inheritance law that limits testamentary discretion when there are children or other heirs in direct line of descent. Then, the estate must be divided into a number of shares equal to the number of children plus one, the reserve share. Before death, an individual can write a will to decide what to do with the reserve share. Each child or heir line has the right to one share of the estate.

Thus, an estate filing for someone who dies married begins with a gloss of the marriage regime and testamentary dispositions of the deceased. The filing then lists the heirs and their relation to the deceased, all of which would be unnecessary in an estate tax regime. These details provide us with the date and place of marriage, the existence and type of a marriage contract, and the spouse's place and date of birth (to establish the value of the life interest). We also have the list of children and individuals receiving bequests from the reserve share. The estate filing then proceeds to describe the deceased's personal property and some of the spouse's to establish their claims on the community property. The estate document continues with a list of community assets and their values. Having established the community's value and netted out various claims, the community is then divided, and the deceased receives his or her share, most often half. The estate is then computed by adding his or her share of the community to his or her personal assets (for more details, see chapters 2 and 7). Someone who dies single or unmarried has a simpler filing. It begins by establishing that the individual is not currently married. It continues with the list of heirs and finishes with the list of assets. That is all that is needed to establish a single individual's wealth.

What makes these records unique relative to many other types of wealth evaluation is that they are not just a static image of wealth at death. For those individuals who died married (52% of the sample), we also have access to an evaluation of their inherited assets (the personal property

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described above). These data are precious because they allow us to investigate issues of social mobility without dealing with matters of selective matching (as would attempts to match parents and children). A second feature of the filings is just as valuable. The tax authorities insisted that unpaid pension income be included in estates. That allows us to accurately measure who had pension or retirement income and how that changed over time. Our data is too coarse to capitalize the pensions, but it allows us to track the rise of life-cycle savings.<sup>5</sup>

Despite some lacunae, one of the most valuable uses of the data is a critical reevaluation of the thesis that a key aspect of modern finance and wealth management is the replacement of bequests with life-cycle savings. Elaborated by Franco Modigliani (Ando and Modigliani 1963), the hypothesis is that, in traditional societies, individuals relied on their children for old age security and "paid" for their services with bequests. When new financial products designed to meet the needs of retirees emerged, children were left free to move on to more rewarding occupations, and parents had more choices regarding how to spend their old age. Beyond the wealth and personal choice issues, Modigliani (1986), Ransom and Sutch (1986), and Sutch (1991), who tried to apply the theory to the United States, highlighted a virtuous cycle. Life-cycle savings suggest saving a constant rate of one's labor income to pay off debts from education and accumulate the capital needed for retirement. Those savings go into productive assets. Because life-cycle savings increase with labor income, they provide what is needed to keep the economy's capital growing over time. By contrast, in the view of Modigliani, bequests had a target aspect largely independent of the economy's demand for capital. In our view and, in the Parisian data, however, life-cycle savings are not a substitute for bequests but a complement. The reason is simple: given sufficient income and lifespan, many individuals want to insure for old age (engage in life-cycle savings) and transmit wealth to their offspring (save for bequest).

Paris is an ideal venue to examine this and other hypotheses about modernization. The revolution essentially wiped out financial savings, so the nineteenth century started with a relatively blank slate. Moreover, most Parisians were salaried or piece-rate workers forced to be "modern" since they had no business or farm to bequeath. As a result, policymakers and philanthropists alike sought to increase the savings rate of Parisian wage earners as early as the 1820s. They wanted workers to save more for reasons that combined welfare, fiscal, and political motivations. First, of course, individuals with savings would have better lives. In addition, they would

also be less likely to be on the dole and less likely to riot or, worse yet, become revolutionaries. Of course, by the 1930s, retirement programs had diffused significantly in Paris, creating a social process for life-cycle savings. However, it remains an important question to understand how social policy interacted with income and life expectancy over the long term to transform estates.

## Death and Wealth Distribution over the Long Term

The economic history of wealth and inequality drawn from estate tax records in Paris can be summarized in the four figures below. These show that a simple, unilinear modernization story explains very little about the path of wealth and its distribution. We learn a lot from starting around 1800 rather than 1900 when public tabulations became available. They also raise important questions that the chapters that follow will investigate.

Figure I.2 displays the total Parisian population and the number of deaths each year in large age categories up to 1977. Paris experienced massive growth in its population, including a jump around 1860 when it doubled its territory. Paris's population then stabilized near 3 million from 1910 to the early 1950s before entering a steep decline as the suburbs grew quickly. The city had lost almost a third of its inhabitants before its population stabilized at around 2.1 million from the 1980s to the present. Up to 1910, the city was a growing share of the French population. Since then, it has been a falling share, which matters when we consider Paris's share of French wealth and its role in French inequality. Deaths also tell a two-part story but with a different chronology. From 1817 to 1880, deaths were increasing in number and were highly volatile due to massive mortality shocks like the cholera epidemics of 1832 and 1849. Deaths among those younger than 20 accounted for 40% of all deaths, with infant deaths accounting for almost as many deaths as those aged 1-19. The elderly (aged 60 or more) accounted for a quarter of all deaths. The second regime began in the 1880s and featured declining total deaths, largely driven by a fall in deaths for those younger than 20, who accounted for about 2% of all deaths in the 1970s (and about 1% around 2010). Conversely, the share of individuals who died aged 60 or older grew over time, and by the 1970s, it accounted for 80% of all deaths (and those 80 or older nearly 40%). This broad demographic sketch has implications for wealth inequality because it takes time to accumulate wealth, and at the same time, living to be very old consumes resources. Moreover, as we shall see, there were large age differentials between rich and poor decedents.

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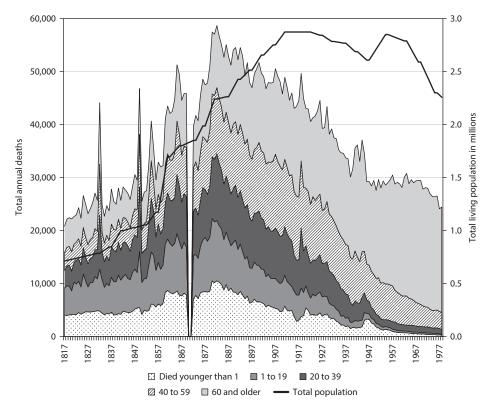


FIGURE 1.2. The population of Paris and deaths by major age group, 1817–1977. *Note*: There are partial death totals for 1870 and 1871; however, the death registration system did not operate for several months starting in November 1870, and we do not reproduce the partial tallies. For WWI, the figures omit Parisians who died in the trenches, while for WWII, the figures omit both war casualties and those who died in deportation. *Source:* ASVP and INED.

Figure I.3 shows that Paris experienced massive growth in wealth between 1807 and the end of the nineteenth century. This was followed by a precipitous decline from 1912 to 1947, with real wealth among those with an estate lower than what it had been at its early nadir in 1812. The average wealth of all decedents was only 20% higher in 1947 than in 1817. The post–World War II period saw a massive rebound in wealth, but by 1972 real wealth had only returned to 63% of the pre-WWI peak. Wealth is indeed fragile and takes time to rebuild. The period from 1807 to 1912 is broadly consistent with various arguments from Marx to Kuznets to Piketty. They see inequality increasing early in the development process. They also argue that wealth accrues principally to a few individuals well positioned

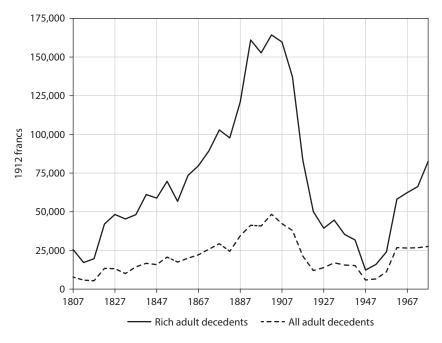


FIGURE 1.3. Average wealth at death of Parisians in 1912 francs, 1807–1972. *Source:* Estates dataset (see appendix 1).

in the process of change. The twentieth century tells an entirely different story, one that requires different economic arguments and a more nuanced historical approach.

Figure I.4 provides a summary of the distribution of wealth. At the bottom, we have the wealth held by every adult below the top decile. That share was less than 5% before WWI, but it increased slowly and steadily starting in the 1920s, reaching 13.5% in 1972. That allowed the top decile to hold about 90% of all the wealth over nearly the whole period. Within the top decile group, the bottom 9% (P90–98) had about 45% of all the wealth for most of the nineteenth century, and their share dropped a little between the last three decades before 1914 and post-WWII. The top centile (henceforth the very rich) controlled at least 50% of all wealth annually except in 1957. Its wealth share increased from about 50% in 1807 to more than 60% in 1914. From 1922 to 1972, it fell by about 9%. The top thousandth (henceforth the super rich) saw no change between the period of high inequality (1882–1912) and the post-WWI period. In both cases, they controlled 23% of the wealth. Thus, nearly all the decline in wealth concentration comes from a fall in the rest of the top centile.

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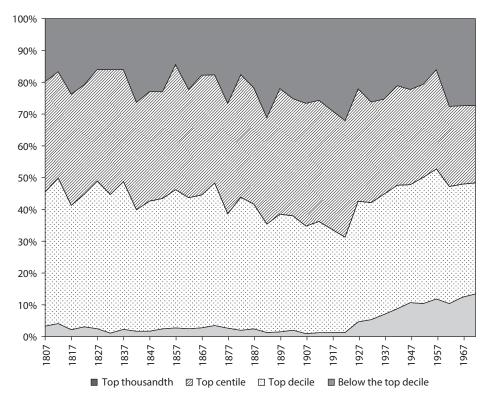


FIGURE 1.4. Wealth concentration in Paris, 1807–1972. *Note*: Figure I.3 is cumulative for the top three categories. The top centile is the sum of the top two areas: top thousandth and top centile. The top decile is the sum of the top three areas. *Source*: Estates dataset (see appendix 1).

To these very broad findings, we add two other dimensions of inequality. Figure I.5 displays the share of decedents with an estate, and the ratio of men's to women's wealth. Unlike wealth shares, which vary over the nineteenth century, the share of adults who die with an estate is essentially constant from 1807 to 1922. After 1922, the share of individuals leaving an estate began to increase and reached almost 60% by the 1970s. The growth of bequests coincides with the reduction of inequality and the broad diffusion of life-cycle savings programs (retirement, war pensions, etc.). This major innovation coincides neither with the mortality transitions of the 1880s nor with the wealth maximum of the 1900s; it has its own story. The figure also displays the ratio of the average estate of men versus women. Generally, men have larger estates than women, particularly from the 1820s to 1870s, when men's advantage is 60%. From 1882 to 1912, men were only 15% richer

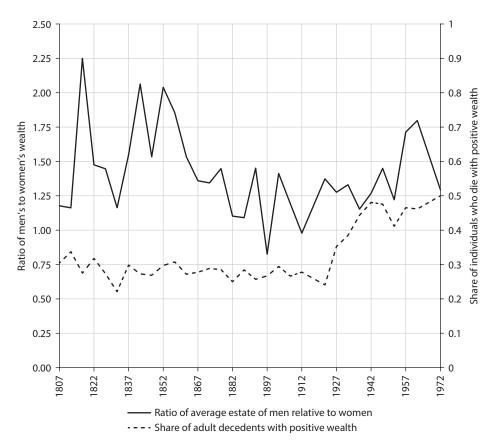


FIGURE 1.5. Other dimensions of wealth inequality in Paris, 1807–1972. *Source:* Estates dataset (see appendix 1).

than women. During the twentieth century, nearly all the advantages to men came from the higher share of men in the top 0.1% of the wealth distribution. Leaving the super rich out of the computation leaves men with an advantage of 3 to 5% over women.

The four figures above also show tremendous change over time and, at the same time, the fundamental structure of wealth inequality in Paris. Understanding change and structure led us to divide the book into two parts.

Chapters 1 to 6 are chronological. Their goal is to tell the story of wealth and inequality in Paris from 1807 to 1977 (the book's conclusion examines what we know about wealth and inequality since 1977). The first two chapters take on the period before WWI. Chapter 1 deals with the recovery of wealth at death and the growth of inequality following the end of the French

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Revolution. It focuses on the political nature of wealth inequality before 1870. Chapter 2 deals with the first golden age of capitalism and asks, among other questions, whether financial market development increases or reduces inequality. We devote chapter 3 to the fiscal transition that began with the law of 1901 and the rise of progressive taxation. Chapter 4 analyzes the dramatic wealth collapse of 1912–1947, while chapter 5 takes on the evolution of inequality during the same period. Chapter 6 deals with the post-WWII experience.

In the second, more thematic part—chapters 7 to 11—each chapter deals with an essential theme of the book over the whole period from 1807 to 1977. Chapter 7 deals with inherited wealth and mobility. Chapter 8 examines the super rich (the top 0.1%) to understand why their wealth share is so resilient. Chapter 9 takes on the problems of why so few people left an estate before 1927 and why small bequests increased rapidly thereafter. Chapter 10 seeks to put Paris in its French context, asking, among other questions, how a society as unequal as France maintained a low tax equilibrium for more than a century. This stability is astonishing after 1870, when universal suffrage and competitive elections should have favored redistribution. Chapter 11 returns to the spatial dimension of wealth. We argue that the spatial distribution of wealth within Paris is highly correlated with other dimensions of welfare; affluent neighborhoods have more good attributes and fewer bad ones, and poor neighborhoods are the reverse. However, the extent of those differences depends on public spending because the poor cannot afford to procure these attributes at market prices. In the twentieth century, a major component of the decline of inequality in Paris is, therefore, public spending on public services.

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