Political and Business Dynasties:
a Social Gradient in Returns to Elite Education

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Abstract

Dynasties constitute a visible sign of intergenerational persistence and raise questions about the legitimacy of the ruling elite. This paper uses data on graduates of elite colleges to explore the influence of political and business dynasties in France. I link nominative data on 103,309 graduates of 12 French *Grandes Écoles* born between 1931 and 1975 to their professional careers as politicians with national-level mandates or as board members of French firms. Identifying lineage through surnames, I find that sons of political and business leaders were substantially more likely than their graduate peers to pursue elite careers themselves, revealing a social gradient in returns to elite education. Political dynasties were particularly sizeable, although progressively declining. These dynasties also affected the composition of the French elite: fewer dynastical board members were graduates of top colleges than their first-generation colleagues. Yet, they were propelled much younger into top business and political positions.

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Keywords: Dynasties, Returns to College Education, Intergenerational Mobility, Elite Occupations, Politics, Business, *Grandes Écoles*.

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> "Two hundred families are the masters of the French economy and actually run French politics. [...] The two hundred families place their representatives in positions of power."
>
> Édouard Daladier, Prime Minister, Congress of the Radical Party, 1934, Nantes

1   Introduction

Political and business dynasties, such as the *Murdochs*, *Rockefellers*, or *Kennedys* in the United States, or the *Peugeots*, *Dassaults*, or *Le Pens* in France, constitute an ostentatious sign of intergenerational persistence. They raise questions about the legitimacy of the ruling elite, may feed social resentment, and influence voting behaviors (Lacroix et al., 2023). Moreover, the widening gap in economic (Piketty, 2014) and social (Savage, 2015) conditions between those in top positions and the rest of society makes understanding the path to the top of the social hierarchy more critical.

In earlier societies, legal mechanisms—such as the transmission of status among the aristocracy—played a pivotal role in ensuring familial continuity regarding high-ranking positions. In contemporary societies, widespread education and a competitive labor market are expected to democratize access to the upper echelons of the social hierarchy. Nevertheless, dynasties persist (Mocetti, 2016; Geys, 2017). One contributing factor is educational disparities, particularly in admissions to the most prestigious institutions (Chetty et al., 2020; Benveniste, 2023). However, there is no consensus on whether college degrees, in particular from elite institutions, level the playing field, particularly in terms of access to top positions.

In this paper, I analyze occupational dynasties in political and business positions with regards to graduates of elite colleges in France. I use registers from the most prestigious French higher education institutions matched with elite positions as political representatives and company board members. This reveals that among male top college graduates, sons of members of the political and business elites were 2.4 times more likely than their peers to pursue similar elite careers, engendering political and business dynasties. Sons of politicians were as much as 37 times more likely to follow in their father's footsteps, and sons of business

executives 8.5 times more likely. Estimated with school and cohort fixed effects, these findings are conditional on a given cohort's graduation from a given elite college. Since these colleges specialize in training political and business leaders, the differences between their graduates' career outcomes appear very great. This leads me to identify a "double dividend": on top of a greater likelihood of admission to elite colleges (Chetty et al., 2023; Benveniste, 2023), I show that children of the elite enjoy higher returns from these degrees on the labor market, evidence of a social gradient in returns to elite education. The second part of the paper documents the repercussions that these dynasties have on the composition of the French elite. It shows how dynastical political and business leaders are propelled much younger into top positions and how second-generation business leaders are more likely to bypass educational credentials that are usually pre-requisites for such positions.

There are two main reasons why France constitutes a very suitable context to study differing returns to elite education regarding access to the ruling elites. First, just as in the US with the Ivy League (Chetty et al., 2023) or in the UK with Oxford and Cambridge (Friedman et al., 2015), access to top positions in France essentially requires attendance at one of the leading *Grandes Écoles* (Suleiman, 1978; Bauer and Bertin-Mourot, 1987, 1997; Bourdieu, 1989). These are pluri-centenarian higher education institutions designed and explicitly dedicated to the education of the nation's leaders. Second, due to shared backgrounds in these small institutions, a high degree of interpenetration of the French political and business elites has been widely documented (Birnbaum et al., 1978; Kramarz and Thesmar, 2013).[1]

The data consist of a self-collected list of 103,309 graduates of 12 of the most prestigious French elite colleges (*Grandes Écoles* or GE), born between 1931 and 1975. These graduates are matched with the positions of 2,211 national politicians (Presidents, Ministers, and Members of Parliament) and 15,670 board members of French firms. By identifying lineage through surnames—a method increasingly used in the economics literature (Clark et al., 2014; Geys, 2017; Basso et al., 2021)—, the paper's methodology overcomes the scarcity of intergenerational data including familial links, especially for an elite population rarely

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[1]"Elite" remains polysemic and is often defined *ad-hoc*. In this paper, it includes politicians with national-level responsibilities and board members of French firms, as detailed in section 3.

surveyed on a representative basis. Building on the methodology developed in Benveniste (2023), I construct for each graduate the probability that his father belonged to the ruling elite. This probability is a function of the number of bearers of the same surname in the elite in the previous cohort and of the frequency of the surname in the French population at that time.[2]

Five main results are derived from a two-stage analysis. First, I confirm that France's elite colleges constitute the main means of entry to top positions in society, as 26.2% of those in elite occupations graduated from one of the 12 *Grandes Écoles*, against 0.33% of the overall French population. More importantly, my second finding is that dynasties reign over the French ruling elite, especially in politics: among elite college graduates born between 1931 and 1975, those with a father (born up to 1901) in top political or business positions were 2.4 times more likely than their peers to become a member of the French elite. This result holds through a series of robustness checks regarding sample choices or estimation methods, and points to a social gradient in returns to elite education.

Third, political dynasties have the most striking impact. Graduates whose fathers were in politics were 37 times more likely than their peers from the same cohort and the same *Grande École* to become national politicians, whereas they entered business careers on an even basis. Yet, business dynasties are also prominent: a graduate was 8.5 times more likely than his peers to become a business executive if his father was one. Nevertheless, the dynastical pattern has greatly reduced over time, especially in politics, which to my knowledge, has so far only been documented in the United States (Clubok et al., 1969; Dal Bó et al., 2009).

In the second stage, albeit not causal, I derive results suggesting that these dynasties are also characterized by (allegedly negative) selection on elite members' characteristics. This analysis uses a sample of 17,822 individuals holding elite positions, and yields a further two important findings. It shows that, fourth, sons of businessmen obtain their first business or political positions respectively 5.4 and 9.3 years younger than their first-generation colleagues. For sons of business executives, these figures rise to 8 and 11.2 years respectively.

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[2]This name-based methodology requires circumscribing the analysis to father-to-son transmissions, as women could not transmit their surnames to children born before 2003, and as they may have changed names across their life course by adopting or abandoning a spouse's name.

Although sons of politicians are not more likely to become board members than their peers, they do so 5.7 years earlier. Yet, they experience no acceleration regarding careers in national politics. Fifth, while this paper shows that elite colleges offer a ticket to top social positions, especially to children of political and business leaders, I also find that many dynastical business directors actually manage to bypass this traditional channel. They are twice less likely to have graduated from one of the 12 top colleges than non-dynastical business leaders. This implies that not only is there an elite college education differential, but dynastical reproduction also operates outside the main educational routes to top positions.

This study relates to two strands of the literature. The first concerns dynasties or occupational following, defined as children entering a parent's profession. This was described as a common feature of very diverse societies and political systems across time and space (Putnam, 1976).[3] Most previous assessments of the importance of political dynasties concern the United States.[4] In the private sector, legal status, employer, or occupation also run across generations.[5] Providing findings over several decades in a new context outside the US, the present paper is, to my knowledge, the first to study occupational following both for the political and the business elites, enabling comparisons between their magnitude and evolution.

Part of this literature also documents the non-neutrality of occupational following and dynasties, especially in contexts in which networks, nepotism, or capital constitute substi-

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[3]Occupational dynasties were documented for politicians (Clubok et al., 1969; Laband and Lentz, 1985; Dal Bó et al., 2009; Feinstein, 2010; Niess, 2012; Geys, 2017; Rossi, 2017), the liberal professions (Mocetti, 2016; Aina and Nicoletti, 2018), the legal professions (Laband and Lentz, 1992), physicians (Lentz and Laband, 1989), as well as the self-employed and entrepreneurs (Laferrere and McEntee 1996; Dunn and Holtz-Eakin, 2000; Fairlie and Robb, 2007; Sørensen, 2007; Colombier and Masclet, 2008; Lindquist et al., 2015).

[4]Clubok et al. (1969) provide historical estimates: the share of Congressmen's sons also serving in Congress was above 20% in the late 18th century and progressively fell to a still significant 5 to 7% in the 1950s, 7% also being found by Dal Bó et al. (2009) up to 1994. Laband and Lentz (1985) find similar magnitudes for the 1965 Congress (8% with parents in politics) and also show that dynastical politicians enter Congress younger, experience longer tenure, and are more likely to run re-election campaigns unopposed.

[5]Dunn and Holtz-Eakin (2000) find that Americans with a self-employed parent are twice as likely to be self-employed. Corak and Piraino (2011) show that by age 28, 40% of Canadian men born in 1963 had work experience in a company in which their father also worked. Finally, the concept of micro-classes (Weeden and Grusky, 2005) connected the extensive research on class mobility to occupational following by looking at occupation-level transmissions.

tutes for ability or productivity.[6] The transfer of firms' control within the family damages operating profitability (Bennedsen et al., 2007) and firms' value (Pérez-González, 2006; Villalonga and Amit, 2006), and leads to worse management practices (Bloom and Van Reenen, 2007). An exception in the literature is provided by Sraer and Thesmar (2007), who find that French family-managed firms are more profitable. Dynasties are also found to favor less skilled individuals (Basso et al. 2021 in the context of Italian lawyers; Geys 2017 for local Italian politicians). Moreover, heirs may exert less effort (Rossi, 2017). Unlike Geys (2017), who studies differences in years of schooling between dynastical and first-generation Italian municipal counselors—whose nepotistic practices may be less publicized or visible—, I focus on higher-level positions and better-known individuals and it is the quality of their education that I consider based on graduation from an elite institution.

The second strand of the literature I contribute to examines the role of education in intergenerational mobility, and in particular the equalizing effect of (top) college graduation. The tripartite relationship between Origin, Education, and Destination (the latter often measured via occupational attainment) was conceptualized with the "OED triangle" (Breen and Müller, 2020).[7] Educational inequality is widely documented across time and space, especially regarding admissions to elite higher education institutions, including the French *Grandes Écoles* (Bourdieu, 1989; Falcon and Bataille, 2018; Benveniste, 2023). Scholars also showed that admissions to these elite institutions translate into high returns on the labor market (Hoekstra, 2009; Wakeling and Savage, 2015; Anelli, 2020; Chetty et al., 2023). In particular, a degree from certain institutions usually constitutes a prerequisite for top political and business occupations (Bovens and Wille, 2017). Yet, conditionally on educational attainment, residual social inequalities remain on the labor market (Bernardi and Ballarino, 2016).

Importantly, this paper focuses on graduates of elite institutions. The literature has approached the residual effect of social origin on destination across different levels of education,

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[6]Using Swedish register data, Folke et al. (2017) show that politicians extract advantages for their children and not for their siblings, which confirms that the intergenerational perspective is the most relevant.

[7]Social Origin (O) influences the level and quality of Education (E), which translates to the labor market Destination (D) through returns to Education. There also remains a residual direct effect of social Origin on Destination, which is net of the average returns to Education. Therefore, another way of presenting the direct Origin-Destination association is that it constitutes a social gradient in returns to education.

leading to some debate. One view holds that returns to education are equal among college graduates, as opposed to those finding a U-shaped pattern of parental influence on careers across the educational distribution.[8] Although Chetty et al. (2020) document very unequal admissions to 12 US elite colleges depending on parental income, they find that most of the intergenerational income elasticity is due to differences in the colleges attended, while residual differences in returns to education within colleges are rather small. If admissions remain socially selective, attending an elite college should be "equalizing". Yet, on the contrary, Zimmerman (2019) shows that graduation from top Chilean colleges increases mean income for affluent students, but not for their underprivileged peers. The present paper contributes to this ongoing debate and extends this literature to attainment of top positions by showing that graduation from French elite colleges does not equalize prospects of reaching the political or the business elite.

The rest of the paper is organized as follows. Section 2 discusses the mechanisms of occupational following. Section 3 describes the data on elite positions and *Grande École* graduates. I present the matching of the nominative datasets and I produce descriptive statistics to document the central role of the *Grandes Écoles* in access to elite positions in France. Section 4 details how surnames are used and explains the econometric specification. Section 5 provides the main results on dynasties in the French elite and presents robustness checks. Section 6 extends the analysis with heterogeneity across time and across types of positions (i.e., for political *vs.* business elites). Section 7 tackles the consequences of these dynasties, by looking at their association with age at first elite position and the degrees held by political and business leaders. Finally, section 8 provides concluding remarks.

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[8]An influential study by Hout (1988) claimed that there was no residual Origin-Destination association among American college graduates in the 1980s. While it constituted strong support for the meritocratic virtue of higher education, this was later contradicted. Notably, Torche (2011) used a finer definition of education level from the American Panel Study of Income Dynamics and showed that direct origin-occupation association is high among the poorly-educated, decreases for college graduates, but strengthens for those with advanced degrees. Falcon and Bataille (2018), using French cohorts born from 1918 to 1984, confirmed this U-shaped pattern across the educational distribution of parental influence on careers, which notably increases among *Grande École* graduates.

2 Mechanisms of occupational transmission

The literatures both on dynasties and on the mediating role of education in intergenerational mobility analyzed the mechanisms explaining the persistence of families at the top of the social hierarchy. Erikson and Jonsson (1998) postulate four main categories of channels for social-origin-dependent differences in returns to education: social networks, favoritism, aspirations, and differences in productivity. Evans and Jovanovic (1989) suggest that liquidity constraints, as opposed to inherited capital, also matter.[9]

Networks—and in particular family links—constitute decisive assets for entry into the labor market (Kramarz and Skans, 2014; Dustmann et al., 2016). In politics, this may help to raise campaign funds, or to hire efficient staff. For instance, Dal Bó et al. (2009) use a regression discontinuity on close elections, and explain the success of dynastical politicians and their tendency to run in their state of birth by pre-existing networks rather than differences in abilities. Aina and Nicoletti (2018) partition access to liberal professions into four successive necessary steps, viewing the more frequent completion of the required period of practice by children of liberal professionals as a sign of family networking. Yet, the frontier between social networking and sheer favoritism is often difficult to distinguish empirically.

Favoritism or nepotism typically arise in family businesses (Bennedsen et al., 2007), but have also been proven to influence careers in all types of companies (Gagliarducci and Manacorda, 2020), in politics (Geys, 2017), or even in medical schools (Lentz and Laband, 1989). Favoritism may include not only hiring choices (Gagliarducci and Manacorda, 2020) but also the direct inheritance of family businesses (Pérez-González, 2006; Bennedsen et al., 2007). The probability of inheriting increases with the level of heirs' expected benefits (Mocetti, 2016). Similar to favoritism is the degree of discrimination that may reward individuals fulfilling specific expectations, based on social norms, loyalty, homophily, or habit. This mechanism is revealed by Feinstein (2010), who compares winning and defeated candidates in elections and suggests that dynastic politicians benefit from "brand name advantages"

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[9]One important aspect is obviously an informational advantage and a family tradition that facilitate pursuing similar careers across generations. These dimensions are actually reflected in differing aspirations and differences in productivity when job-specific skills are transmitted within the family.

which survive controls on campaign expenditures, experience, time, and geographical covariates. This "name advantage" was previously suggested for politicians by Laband and Lentz (1983) in theory, or Dal Bó et al. (2009) empirically. For the private sector, this relates to the concept of "brand equity", i.e., the value of a brand (Aaker, 1991), for example suggested by the common use of "& sons" signs by craftsmen (Feinstein, 2010). On top of this name advantage, Laband and Lentz (1985) argue that a dynastical transfer of voter loyalty exists; this could presumably apply to customers or business partners (usually a network mechanism but one that features favoritism when loyalty and priors on trustworthiness are involved). Valuing or endorsement of specific social skills, tastes, or hobbies may also lead to homophilic behavior resembling favoritism.[10] Yet, the family circle may also be favored for reasons of efficiency, for instance the reduced need for monitoring (van Aaken et al., 2020).

Aspirations and preferences may also be intergenerationally transmitted. Jennings et al. (2009) show that this is the case for political views and partisanship. Among other traits, several studies highlight the transmission of risk aversion (De Paola, 2013; Dohmen et al., 2012). In addition, Guyon and Huillery (2021) find that conditional on test scores, socially underprivileged students aspire less to the best educational tracks than their more affluent peers. Two distinct factors are involved: disadvantaged students are less informed about educational opportunities, and they also under-estimate their ability to graduate from highly selective tracks. Beyond aspirations, the informational advantage of more affluent families may for instance lead to strategic selection of fields of study, decisive for career development (Duru-Bellat et al., 2008). As for preferences, Dunn and Holtz-Eakin (2000) find that intergenerational transmission of self-employment status runs along similar gender lines—daughters are influenced by their mothers, sons by their fathers—, which they interpret as a transmission of "entrepreneurial tastes or abilities".

Differences in productivity may also arise from the transmission of human capital. Laband and Lentz (1983) develop a model of occupational following and propose as the main channel the facilitated transmission of "job-specific" or "career-related" skills. Their typical

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[10]See Bourdieu (1979) for the theory, Hartmann (2000) for an application to the selection of French and German business leaders, and Rivera (2012, 2015) for a case study on hiring practices for elite positions in the United States.

example is farming families, for whom the workplace coincides with home and whose youngsters acquire specific expertise at an early age. They confirm this mechanism empirically for children of lawyers (Laband and Lentz, 1992), but not for children of medical doctors (Lentz and Laband, 1989). In politics, this family-transmitted knowledge may for example serve aspiring politicians as a route to early career positions in strategic localities. For the private sector, Fairlie and Robb (2007) studied American family firms in 1992 and showed that 51.6% of owners had a self-employed relative, 43.6% of whom worked in that family firm; they considered this as reflecting job-specific skill transfers. Working in the family business is associated with higher sales and profits, a higher probability of having employees, and fewer business cessations. Another literature dealing with potential differences in productivity compares the role of nature and nurture, the underlying idea being that biological attributes such as genes may make a difference to talent, ability, and productivity (see Sacerdote 2011). For example, Lindquist et al. (2015) study the intergenerational transmission of entrepreneurship using Swedish data on adoptions. They find that, while pre-birth factors matter (notably the entrepreneurship status of biological parents), post-birth factors (adoptive parents) are at least twice as important. Finally, a distinctive aspect of productivity concerns the ability to build one's own social network, which may differ with social origin (Marmaros and Sacerdote, 2006). Zimmerman (2019), for instance, shows that among graduates of Chilean elite institutions, affluent peers are more likely to enter management in the same firm, whereas there is no such network effect among less privileged graduates.

As financial investment is needed to launch a business, Evans and Jovanovic (1989) ultimately model choosing to become an entrepreneur. They show empirically that less affluent individuals are disadvantaged by liquidity constraints. The opportunity cost and actual cost of political campaigns imply that liquidity matters in politics as well. Yet, compared to the above factors, family financial capital is often found to be less of a mechanism in occupational following (Dunn and Holtz-Eakin, 2000; Fairlie and Robb, 2007).

3 Data

In this section, I first describe data on the political and business elites, which include individuals born over the period 1901-1975. Then, I present data on *Grande École* graduates born between 1931 and 1975.[11] The analysis is restricted to men, as surnames are used to track family lineage.[12,13] Restriction to males reduces sample size but not drastically, despite the fact that 27.0% of graduates over the period are women, though no more than 15.1% of politicians and 19.9% of business people.

3.1 Elite occupations

I proxy elite membership with two main types of positions: politicians elected to office or appointed at national level, and businessmen serving on the boards of French firms.

Political representatives at national level

I consider appointments as Minister or Secretary of State, and mandates as President of the French Republic, as *député* at the *Assemblée Nationale* (Member of Parliament), as Senator, and as French member of the European Parliament. The observational unit is individuals (not positions), and the sample includes politicians elected or appointed during the 5th

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[11]The 1975 restriction is motivated by the fact that people born more recently are often too young to have reached elite positions yet. The earlier limits are due to the unavailability of earlier data on board members.

[12]Nominative data on elite positions includes usual names, which are alternatively women's maiden or spouse names. Moreover, data on college graduates provide spouse names for only 21% of female graduates. Precisely matching graduates and elite members is thus only possible for males.

[13]Beller (2009) indicates that excluding women from the assessment of intergenerational mobility—as most studies do—is not trivial for estimations. However, the high level of homogamy among the French elite (Goux and Maurin, 2003; Bouchet-Valat, 2014; Frémeaux and Lefranc, 2020) means that fathers and mothers have similar characteristics, alleviating the issue.

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Republic, from 1958 to 2019, who were born between 1901 and 1975.[14,15]

Observations systematically include first and last names and terms in office, usually with gender and birthdate. For politicians who held several positions, I maximize observables making the best use of the different sources, e.g, when someone's birth date is reported in data on Ministers and gender in the Senate data. This is supplemented from a first-name gender propensity score constructed with reference to a census of births gendered by first name from the French National Statistical Institute. Birthdate and gender (where first names were gender-neutral) were checked ad-hoc via online biographies for 334 politicians.[16]

The sample is composed of 2,211 male politicians born between 1931 and 1975, of whom 278 served in the executive (President of the Republic, Minister, or Secretary of State), 1,534 had at least one mandate as *député*, 66 as Senator, and 241 as European Member of Parliament.[17] I also include 1,894 politicians born between 1901 and 1930 to identify the fathers of those born in the study period. Of these politicians, 67% served as *députés*, 35% as Senators, 13% as members of the executive, and 10% as European MPs.

Company board members

The composition of the boards of the major French firms is retrieved from *BoardEx* and *Mint Global (Orbis, Bureau van Dijk)*.[18] It includes information on board composition over the period 1995-2019 for 1,688 publicly traded and 391 non-traded firms. Observations on board members also include their first and last names and often their gender and birthdate. Details on the positions include the terms served and whether they involve executive functions. I consider as business executives those holding at least one executive position over their career.

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[14]Data on Presidents of the Republic were self-collected. Lists of Ministers and Secretaries of State come from the Archive of the Prime Minister. Data on French MPs, senators, and French European MPs were provided respectively by the Archive departments of the *Assemblée Nationale*, *Sénat*, and European Parliament.

[15]I could have included local politicians in the analysis, such as mayors of sizable cities, presidents of local entities like regions or *départements*. However, national politicians are more homogeneous and anyway, many of the most important local politicians also undertake national functions.

[16]See footnote 25, which reports all online sources exploited, including for that specific purpose.

[17]Naturally, many occupied several types of positions, with as many as 90% of members of the executive also having a parliamentary mandate.

[18]These sources are well-established in the academic literature (Adams and Kirchmaier, 2016; Ahn, Daniel P. and Ludema, Rodney, 2017). Although not perfectly explicit, they cover the largest French firms.

Additional information on gender is obtained via the first-name gender propensity scores. Birthdates are however missing for 35.2% of male board members. This information would be difficult to complete ad-hoc due to the larger volume and greater differences in visibility of business executives than of politicians. The analysis is restricted to observations with complete data.[19]

The cohorts, born between 1931 and 1975, include 15,670 male directors, of whom 3,976 are executives (25.4%). Combining sources improves the coverage of board positions, as 43% of the sample are directors registered both in *BoardEx* and *Mint Global*, while 36% are mentioned in *Mint* alone, and 21% in *BoardEx* alone. Whereas data on the political elite include mandates and appointments from 1958 to 2019, board membership has only been covered since 1995. Although individuals commonly hold board positions after legal retirement age, this shift means that the distribution of birth years differs between political and business leaders. Indeed, the modal birth year for politicians is 1946, while it is 1964 for firm directors.

Figure 1 reports the number of individuals per birth year and position type. The vertical dashed line separates individuals born before 1931 (fathers only) from those born during the study period (1931 - 1975). The number of politicians per birth year is relatively stable, albeit with a continuous decrease since 1946. This is explained by two principal factors. First, the data concerns men only, and a slightly increasing share of political positions are occupied by women. Assuming the increased female presence does not alter dynastical transmission among men, this is not a concern, since estimates are computed within the sample of male graduates. The second factor is not restricted to politicians but also concerns businessmen: the data are subject to a life-cycle bias. Because they are younger, more recent cohorts are less likely to be observed in an elite position. I discuss the potential implications for the results in section 4.2. Data on businessmen is more time-varying. Notably, they include a limited number of business leaders (273) born before 1931. As further discussed below,

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[19]Looking at observables, business directors with missing birthdates appear of lower status than directors with complete information, notably for the share with executive functions (9.2% against 25.4%), or the number of positions per director (1.14 against 1.78). While this small selection regarding data provided by *BoardEx* and *Mint Global* does not seem a serious issue given the non-restrictive definition of top positions, it constitutes a source of measurement error, leading me to underestimate the presence of some surnames among the elite.

this makes measures on business dynasties subject to larger measurement errors for the first cohorts, when part of the sample is wrongly identified as not having a businessman father.

3.2 *Grande École* graduates

Graduate data were self-collected and cover 12 of the most prestigious *Grandes Écoles* (GE) over the period (Bourdieu, 1989). They include 112,936 courses of study followed by 103,309 distinct male graduates born between 1931 and 1975. Appendix Table B.1 reports by college the number of students per 5-year birth cohort. Colleges in the sample include *École Polytechnique*, *EM Lyon*, *ENA*, *ENS Cachan*, *ENS Ulm*, *ESCP*, *ESPCI*, *ESSEC*, *Mines Paris*, *Ponts et Chausées*, *Sciences Po Paris*, and *Télécom Paris*.[20] The main analysis pools graduates from all 12 institutions. As their graduates do not access the political and business elites in the same way (see section 3.3), I use college fixed effects in most specifications and I also explore the heterogeneity of results between colleges.

Grande École registers systematically include the first and last names of each graduate. 38% of the observations inform on middle names. About one-third provide gender, which I also supplemented from first names. The birth year of each graduate is approximated: as two-year post-secondary school studies are required before taking an admission examination, the standard age of admission to the *Grandes Écoles* is around 20. Therefore, students enrolling in 1951 are assumed to have been born in 1931, and those enrolling in 1970 to have been born in 1950. The birth year of students who pursued multiple studies is based on the first college they were admitted to.[21]

The scope and relative importance of the *Grandes Écoles* only marginally evolved over time. Appendix Table B.1 shows that the number of graduates per cohort is slightly increas-

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[20]Data were collected from alumni associations, college libraries, college archive departments, and from other public archive institutions. The present work adds *EM Lyon* and *ENS Cachan* to the list used in Benveniste (2023), in which a more detailed description of these institutions can be found. While data was not made available, the inclusion of *École Centrale Paris* and *HEC Paris* would have been beneficial, especially as the latter school plays a role in training the business elite (Vion et al., 2014), although much less than *Polytechnique*, *Sciences Po Paris*, or *ENA* (François and Lemercier, 2016).

[21]Admission to *ENA* differs in that it occurs after graduate studies. 60% of *ENA* students previously attended another GE from the sample, so their birth year can be identified; I assume that the remaining 40% also enrolled at an average age of 27.

ing at the beginning of the period, with a rising share of business schools. Yet, GE recruitment remained remarkably stable, especially when compared to the structural changes in universities over the period (Suleiman, 1978). Moreover, the relative stability of GE admission inequalities found in the literature is important for interpreting my results: had these institutions significantly widened their social horizons, this would have interacted with disparities in returns to education among their graduates, possibly widening the differential.[22]

3.3 Matching: the *Grandes Écoles* as the ticket to elite positions

I now describe the matching of the different nominative datasets of elite positions and graduates. I also provide descriptive statistics documenting the *Grandes Écoles*' predominance in the training of political and business leaders in France.

To ensure consistency between the different sources and properly identify individuals, I implement fuzzy matching on surnames and first names.[23] I first match all the different elite position datasets: politicians (members of the executive, MPs, Senators, and European MPs) and business directors (*BoardEx* and *Mint Global*). These matches precede descriptive statistics in sub-section 3.1. Any match is discarded when birthdates or genders differ.[24] Fuzzy matchings also link the universe of political and business leaders to GE graduates. As graduates' precise date of birth is unknown, I discard matches with more than a 10-year (5-year) difference in birth years if the GE register birth year follows (precedes) that obtained from elite position data. It is indeed less common to be admitted to a college before age 15 than to enroll after age 25. The time windows may appear loose, but elite member – graduate

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[22]Using heterogenous GE samples, Albouy and Wanecq (2003) as well as Falcon and Bataille (2018) document a slightly decreasing and sometimes stable intergenerational reproduction over the 20th century. Using a GE sample almost identical to the present study, Benveniste (2023) shows the dynastical reproduction among graduates to be generally stable for all cohorts born since 1916.

[23]I use token and bigram fuzzy matchings to detect shortened and mis-spelled surnames.

[24]59 individuals hold positions both on company boards and in national politics. While the periods covered by the political and business samples are not fully congruent, 3% of the politicians appear to be involved in *pantouflage*, a practice where public agents work for the private sector—particularly common in France, especially among senior civil servants. Bauer and Bertin-Mourot (1997) argue that 47% of the 200 largest French firms' CEOs were appointed as a "State asset", i.e., coming from the civil service or having political connections.

matches are then scrutinized ad-hoc using online biographies.[25]

Table 1 provides descriptive statistics on elite members by five-year cohort: their number, average age on reaching elite positions, and share of GE graduates. The evolution of the number of positions was discussed in section 3.1. Rather than younger entry of individuals into politics and business over time, the decreasing pattern of first-position age points to a life-cycle bias in the data. Toward the end of the period, individuals are younger and therefore less likely to have already reached a top position in politics or business. Across cohorts, the average age of attainment of such positions is 49.6. By contrast, people born in the last cohort (1971-1975) were 44 to 48 years old in 2019 (the last year over which elite positions are observed). For the business elite, there is also selection on observables for the first cohorts: those still observed in office between 1995 and 2019 are longer-lasting. Business leaders born in 1931-1935 cannot be observed before 60 years old, in 1995. The businessmen of the first cohorts are therefore mechanically observed older at first position. They are also more likely to be graduates of a *Grande École*. No such selection exists for political representatives, whose positions are observed from 1958 to 2019.

With this caveat in mind but thanks to the rigorous matching of graduates with their careers, I confirm the *Grandes Écoles* as a route to elite positions in France. Whereas only 0.33% of the French population born between 1931 and 1975 studied in one of these 12 relatively small colleges, 26.2% of elite position holders are GE graduates. The share of GE graduates among politicians (16.0%) is lower than among business directors (27.6%). Yet, as many as 40% of politicians in the executive graduated from these 12 institutions, against 29.5% of business executives. The share of GE-graduate politicians is even increasing, a phenomenon previously described by Bourdieu (1981) as reflecting the rising importance of "professional politicians" as opposed to militants.

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[25]I discarded false positive matches due to homonyms by alternatively comparing (when provided) education, exact birth dates, maiden, or middle names, or known professional activities. I used *LinkedIn*, *Wikipedia* and *Who's who in France* entries, *lesbiographies.com*, *viadeo.journaldunet.com*, *marketscreener.com/business-leaders*, *dirigeants.bfmtv.com*, *dirigeant.societe.com*, *lemoniteur.fr* and *https://www.lsa-conso.fr/annuaire-professionnels-grande-consommation* websites, biographies published by the business newspaper *Les Échos*, or institutional biographies from company websites.

4 Empirical strategy

A challenge to the analysis may arise from the fact that having an elite-member father increases the prospects of admission to a *Grande École* (Bourdieu, 1989; Albouy and Wanecq, 2003; Benveniste, 2023), whose graduates are therefore partly selected. Yet, this does not constitute a serious threat, as those admitted without the advantage of an elite-member father are themselves highly positively selected and constitute a comparison group of very competitive individuals (Mare, 1993). Risk ratios of elite dynasties are therefore presumably downward-biased when measured among GE graduates, as compared to the whole French population. Another potential challenge concerns the scarcity of intergenerational data that include family links—especially for an elite population rarely surveyed on a representative basis. I overcome this issue by identifying lineage from surnames, a method increasingly used in the economics literature (Clark et al., 2014; Geys, 2017; Basso et al., 2021).

In this section, I first detail the construction of the main name-based independent variables reflecting the probability that a graduate's father held an elite position. In a second sub-section, I present the baseline specification to measure dynasties in occupations.

4.1 Surnames used to infer father's probability of elite status

Bearers of a given surname are, with rare exceptions, descendants of a father sharing the same surname.[26] Without proper information on family links, the likelihood of a direct father-son link for men of successive generations sharing a last name depends on its frequency. I therefore use a birth census per surname per cohort produced by the French National Statistics Institute.[27] Figure A.1 highlights a highly skewed distribution in France, with an abundance of rare surnames, making names a powerful and effective intergenerational tracker.

The census reports the number of births within French territory and is thus valid for

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[26]In France, surnames were hereditarily transmitted through the patriarchal line until two laws of 2003 and 2008 allowed a choice between father's and mother's names or a combination of both. Patronyms therefore constitute a reliable link between fathers and children born between 1931 and 1975.

[27]*Fichiers des noms patronymiques de 1891 à 1990*, edition 1999, INSEE (producer), ADISP (distributor).

surnames not associated with major immigration waves. This is why the analysis is restricted to GE graduates bearing "native" surnames.[28] In addition to being motivated by data considerations, this alleviates the issue of self-selection in migration, namely the fact that unobserved characteristics differ between natives and migrants (Borjas, 1987). Indeed, Meurs et al. (2006) document higher unemployment rates and reduced access to high-status occupations for immigrants and children of immigrants in 1999 in France.

I then construct for each GE graduate a 21-year time window for the father's probable birth year. In the middle of the 20th century, more than 90% of fathers were aged 20 to 40 at the birth of a child (whatever its order), with averages of 31.7 in 1946 and 29.5 in 1966 (Mazuy et al., 2015). The father of a graduate born in 1965 is assumed to have been born between 1925 and 1945 (21 complete years). For birth year y and surname S, I count the number of bearers of the same name born 20 to 40 years previously—with $y_f \in [y-40; y-20]$—, who are or were in type e elite (politics or business): $E_{S,y_f(y),e}$.

While the data do not provide a definite father–child link, I then define as explanatory variables at the surname–birth year level the probability of graduates having an elite-member father, by relating $E_{e,S,y_f(y)}$ to surnames' frequency in the population. To that end, I construct $N_{S,y_f(y)}$ the number of male births of bearers of surname S in the French population in the paternal cohort $y_f(y)$, i.e., 40 to 20 years before year y.[29] I finally compute for individual i (born with surname S in year y) the probability of his father (born with surname S in the year range $y_f \in [y-40; y-20]$) having held an elite position of type e as:

$$X_{S(i),y(i),e} = \frac{E_{S(i),y_f(y(i)),e}}{N_{S(i),y_f(y(i))}}$$

Table B.3 provides descriptive statistics on the explanatory variables for both types of elites together, and politicians and businessmen separately. $X_{S(i),y(i),e}$ takes the value 0 for

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[28]Appendix C. explains how "foreign" and "native" names are distinguished. All descriptive statistics in the paper are provided for "native" names. The difference remains however limited, e.g., 2,211 out of 2,333 politicians bear "native" names. I verify the robustness of the results to the inclusion of "foreign" names.

[29]In the census, the number of births is structured by decades for most surnames, or in a few cases only by 25-year cohorts. I therefore compute for each observation a weighted average depending on the number of years overlapping with each cohort or decade. For example, for total male births over 1925-1945, I sum the number of births for decades 1921-1930, 1931-1940 and 1941-1950 with factors $\frac{6}{10}$, 1, and $\frac{5}{10}$ respectively. I assume there are as many male and female births for each surname in each 21-year period, and therefore divide the outcome by two.

graduates i whose surnames have no bearer holding an elite position of type e born 20 to 40 years before them. It is otherwise the probability that their father did. I show in section 5 that results are robust to restriction to values of $X_{S,y,e}$ above different thresholds.

4.2 Baseline specification

The baseline specification is as follows:

$$Y_{i,e'} = \alpha + \beta X_{S(i),y(i),e} + \gamma GE_i + \theta c_i + \epsilon_i$$

In the paper, I investigate occupational dynasties. This involves *allocative inequality* regarding the attainment of specific positions, and not *within-occupation rewards inequality*, which for instance studies earnings inequality within occupations (Torche, 2011). The analysis reduces the time dimension to its intergenerational component. Indeed, $Y_{i,e'}$ is a dummy variable for access to elite e' anytime in the career of individual (graduate) i, whatever the tenure. Similarly, $X_{S,y,e}$ is the previously defined probability (dependent on surname S and birth year y) that the father held a position of type e at least once across his career. A first reason to focus on the intergenerational component is that my sample is not large enough to capture the dynamics of the dynastical advantage concerning the timing of positions. A second reason is that while political office data are very accurate, the coverage of business positions varies according to cohort. Entry and exit dates for board positions are also not always reliably provided by *BoardEx* and *Mint Global.* Considering elite membership as a career-long dimension is both convenient and reasonable, especially because my focus is on the intergenerational process and because careers in these elite positions are stable in France.[30] GE_i are *Grande École* fixed effects, which accommodate differing probabilities of reaching the elite according to college. Cohort fixed effects c_i capture variations over time in the sphere of elite positions within the data, notably time-varying coverage of the business elite and the life-cycle bias. I define 5-year birth cohorts from the first, 1931-1935, to the last, 1971-1975.

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[30] A drawback of this data structure is that I am not able to fully correct for life-cycle biases. As discussed in section 3.3, graduates from the more recent cohorts had less time to access an elite position. The inclusion of cohort fixed effects partly accounts for this, but more advanced techniques could be deployed if outcomes and age were observed at given times (Lefranc, 2018), while elite membership is only observed once.

Log-binomial models are used for the estimations. The exponential of parameters β therefore report, among GE graduates, risk ratios of reaching elite e' for sons of the elite as against others. Risk ratios above 1 reflect an increased probability of reaching an elite position (positive coefficients of row estimates), while any risk ratios below 1 would indicate a reduced probability (negative coefficients).

In the main analysis, I pool political and business elites: e and e' (for the independent and the dependent variables) are jointly defined as the two elites. In France, these two types of ruling elite are documented as being highly intertwined (Suleiman, 1978 using his own surveys; Birnbaum et al., 1978 with data from *Who's Who in France*; Bourdieu, 1989). The French practice of *pantouflage*, i.e., public agents working in the private sector, also supports this general definition of the French occupational elite. Heterogeneity analyses nonetheless distinguish between specific types of position e or e' (politicians, businessmen, or a subset of business executives). Additionally, evolution across time is investigated by grouping cohorts over three periods of 15 years: 1931-1945, 1946-1960, and 1961-1975. I add to the baseline specification interaction terms of the main independent variable and a vector of indicator variables P_i for the 15-year birth periods:

$$Y_{i,e'} = \alpha + \beta X_{S(i),y(i),e} + \beta_P X_{S(i),y(i),e} \times P_i + \gamma GE_i + \theta P_i + \epsilon_i$$

5   Main results

In this section, I measure among *Grande École* graduates the relative advantage that sons of the elite have in access to elite positions, pooling political and business elites. I then verify the robustness of estimates to distinct weighting methods and data choices.

The main result concerns dynastical access to the political and business elite for graduates born between 1931 and 1975. Table 2 reports risk ratios from log-binomial regressions for sons of the elite compared to other GE graduates. All specifications equally weight each five-year cohort to provide more meaningful results across time. This neutralizes variations in graduate cohort sizes across time, as documented in Appendix Table B.1. Column (2) introduces cohort fixed effects, which account for the time-varying coverage of data on elite positions.

Column (3) confines the analysis to the colleges, with the introduction of *Grande École* fixed effects. My preferred specification from column (4) combines *Grande École* and cohort fixed effects. The main finding is that those whose fathers were either political or business leaders were 2.4 times more likely than their peers to access these elite positions too.[31] In addition to their better prospects of being admitted to the *Grandes Écoles* documented by Benveniste (2023), the present paper shows that the children of the elite enjoy a double dividend, with higher returns to GE education.

Appendix Table B.5 shows the robustness of the result to different sample adjustments and estimation methods. Both the significance and the magnitude of point estimates are very similar to unweighted regressions, without mitigating the evolution of the number of graduates over time. As we observe fewer ancestors in the first cohorts—and virtually no business directors—I also confirm that results are robust to the exclusion of the first or first two cohorts (1931-1935 and 1936-1940). Likewise, estimates are robust to sample restrictions to more precisely tracked paternal elite status. For this test, I use observations with the probability of having a father in the elite as null, as well as over 0.10 or over 0.25. Finally, I show that results hold even without restricting the analysis to "native" surnames, for which we can more precisely track the number of births across generations.

6   Heterogeneity analysis

This section explores heterogeneity in intergenerational elite reproduction along two dimensions: type of elite—politics or business— and time. Additional heterogeneity analysis across colleges is presented in Appendix section D.

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[31]By way of comparison, using Swedish register data, Wittberg (2023) finds that among public-sector oriented degree-holders, children of public officials have about 5 percentage points higher probability of working in the public sector. In Italy, Scoppa (2009) finds that, controlling for educational attainment, children of male public officials have 11 percentage points higher likelihood of entering the public sector, corresponding to a 44% increase in their probability of such access.

6.1 Political versus business elites

Results of the main analysis rely on a comprehensive definition of the elite that pools political and business elites which are, however, not perfectly homogeneous.[32]

I therefore construct a matrix of intergenerational occupational reproduction which relates each type of elite position occupied by fathers to different risk ratios regarding their sons' reaching each type of elite position. Results are reported in Table 3, in which all specifications use an equal weight for each five-year cohort and include college and cohort fixed effects. The first line concerns sons of business directors. Compared to other *Grande École* graduates, they were almost 3 times more likely to become a business director too, about 5.6 times more likely to become a business executive, and up to 7.6 times more likely to become a national politician. Business executives provide their GE-graduate sons with even greater advantages over their peers. These sons were 4.8 times more likely to become business directors, and up to 8.5 times more likely to become business executives.[33] Interestingly, the likelihood of sons of politicians becoming business directors is comparable to that of other GE graduates.[34] By contrast, political dynasties are particularly powerful, with sons of political representatives as much as 37 times more likely to become a national politician. However, recall that partly missing data in the sample of business directors creates measurement errors, suggesting that estimates on business dynasties are downward biased. The actual gap in magnitude between political and business dynasties is thus likely to be smaller, although this bias probably does not entirely explain the difference.

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[32]Indeed, Bourdieu (1979) develops the concepts of economic and cultural capitals and ranks social agents within this typology. Businessmen and public officials are both well-endowed, but business leaders are associated more with economic capital and public officials with cultural capital. Bourdieu (1981) more particularly characterizes political leaders as having very specific codes not easily accessible to outsiders.

[33]Due to the smaller number of business executives and politicians, and to a limited number of sons of business executives becoming politicians, the convergence of this particular log-binomial estimation fails.

[34]The latter result contrasts with Gagliarducci and Manacorda (2020), who find that having a family member in political office in Italy results in higher earnings and employment in the labor market. However, they do not focus on elites as they cover all politicians from the local to the national level, and a representative sample of all jobs in the private sector through matched employer-employee data.

6.2 Evolution over time

This study highlights significant occupational following among the French elite for cohorts born between 1931 and 1975. I now consider how this evolves across cohorts. As the structure of the sample evolves over the period, I document the evolutions separately for business and political dynasties. Because my focus is on the general trend rather than short-term variations, and to increase statistical power, cohorts are grouped in three periods of 15 years: 1931-1945, 1946-1960, and 1961-1975. Table 4 reports regression estimates for business dynasties—columns (1) to (3)—and political dynasties—columns (4) to (6). All specifications include interaction terms for the probability of the father belonging to the elite with 15-year period indicator variables. Columns (1) and (4) incorporate 15-year period fixed effects. Columns (2) and (5) supplement this with *Grande École* fixed effects, and columns (3) and (6) also include the weighting scheme of the baseline specification.

Results suggest a decrease in elite dynasties over time. The most recent period (1961-1975) serves as a reference point. Columns (3) and (6) of Table 4—including the weighting scheme and all controls—report that among GE graduates, business and political dynasties were of comparable magnitude for those born in period 1961-1975: sons of business directors were 2.4 times more likely to follow in their fathers' footsteps, against 2.7 times higher likelihood that sons of the political elite would themselves enter politics. Compared to that last period, the magnitude of business dynasties did not differ significantly among graduates born in period 1946-1960 but was 3 times higher for those born between 1931 and 1945. Yet, recall that business directors from the earliest cohorts and their fathers were positively selected on observables, while those in the most recent period had less time to access elite positions. Although I include period fixed effects, this may explain part of the decreasing pattern observed for business dynasties.

The decline in political dynasties among elite graduates is much more pronounced.[35] Compared to the reference level for cohorts born between 1961 and 1975, political repro-

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[35]A weakening of political dynasties was also documented in the United States by Clubok et al. (1969) and Dal Bó et al. (2009). The former study reports the share of Congresspersons with legislator relatives falling from 24.2% in 1790 to 15.1% in the 1850s, 10% in 1920, and 5% in 1960. The latter provides similar insights, with dynastic legislators accounting for 11% over 1789-1858 and 7% over 1966-1994.

duction was 12.9 times higher for those born in period 1946-1960, and as much as 29 times higher for those born in the 1931-1945 period. This means that GE graduates born between 1931 and 1945 who had a father in politics were 77.8 times more likely than their peers to become national politicians. The probability fell by a factor of 2.25 for those born in period 1946-1960, who remained 34.7 times more likely to attain such a position. It fell more sharply for those born between 1961 and 1975, with 2.7 times higher probability than their peers of entering politics. Actually, political and business dynasties were of comparable magnitude in the most recent period. The clear difference in numbers of occupational dynasties between political and business elites—outlined in Table 3—is therefore driven by differences affecting cohorts born before 1960.[36]

7 Implications: less educated and experienced elite

I conclude this analysis by documenting the implications of political and business dynasties for the composition of the elite. To that end, I use the sample of 15,670 business directors and 2,211 political representatives and test two potential consequences: education in an elite institution and age at first position for members of a dynastical elite. The latter outcome was previously used in the literature, notably by Laband and Lentz (1985). As for education, Geys (2017) uses the penalty in years of schooling associated with dynasties, while this paper is the first to investigate how dynasties affect the likelihood of graduating from an elite college. This reveals how the usual educational pre-requisite for access to the elite can be bypassed by the dynastical elite.

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[36]Although their broader definition of occupational categories in social classes is not entirely comparable to my focus on elite occupations, results for France by Falcon and Bataille (2018) are consistent with these findings. They find a decreasing origin-destination association among *Grande École* graduates between cohorts born in periods 1918-1940 and 1950-1969. The study however underlines a clear increase for the subsequent cohort born in period 1970-1984, with which the present data only partly overlap.

7.1 Education in an elite college

To analyze the association of dynasties with education, I estimate separately for the business and the political elites the following equation:

$$E_i = \alpha + \gamma X_{S(i),y(i)} + \beta Z_i + \theta c_i + \epsilon_i$$

The binary dependent variable (E_i) indicates that individual i graduated from an elite college. It captures graduation from, alternatively, any of the *Grandes Écoles*, an engineering school, a business school, or a school of administration or research. $X_{S(i),y(i)}$ is the probability that the father of individual i held an elite position (in politics or in business). Controls Z_i are elite-type dependent dummy variables that identify the degree of elite status, i.e., politicians in the executive or business executives. As the analysis is restricted to men, there is no gender control. Cohort fixed effects c_i account for potential variations in the educational structure of the political or business elites across time.

We know that children of GE graduates are over-represented in the *Grandes Écoles* (Benveniste, 2023), and we can also expect a higher propensity to attend an elite college for sons of political and business leaders. Failing this, the advantage for sons of the elite would be even greater in the labor market than in GE admissions. Indeed, I find that business dynasties are associated with less graduation from elite colleges. Table 5 reports risk ratios of graduation from any of the *Grandes Écoles* (columns 1 and 2), an engineering school (columns 3 and 4), a business school (columns 5 and 6), or a school of administration or research (columns 7 and 8) for those whose father is in politics (odd columns) or business (even columns). Panel (a) applies to the sample of political representatives, and panel (b) to business directors.

Among national politicians, dynasties do not reduce the positive association between *Grande École* education and political careers: dynastical politicians are more likely to have graduated from these elite institutions. In particular, they are about 15 times more likely to be graduates of an engineering school. Still among politicians, however, the frequency of GE graduation does not differ significantly for sons of businessmen, although point estimates suggest they are more likely to attend business schools.

A more striking conclusion is reached by studying board members of French firms. Sons of politicians are more likely to have graduated from an administration or research school than their colleagues, while (not significantly) less likely to have graduated from engineering or business schools. This may suggest that college choice is more influenced by parental occupation than by career goals. But the most important findings concern dynastical businessmen (from father to son), who are twice less likely to have graduated from a *Grande École*, and even 7 times less likely to have graduated from an engineering school.

While *Grande École* education may not constitute a social objective *per se*, it usually serves as a validation process for access to top positions in France. Although specific assets (such as job-specific skills) may substitute for education, sons of the business elite bypassing the traditional *Grandes Écoles* route to the top suggests favoritism. Indeed, studying at a *Grande École* would not be detrimental to skills acquired elsewhere, and would be difficult to replace in educational terms. Moreover, this would prevent other candidates who are GE graduates from attaining these elite positions.

7.2 Age at first elite position

Finally, I investigate whether members of dynastical elites begin these careers at a different age from the first-generation elite, using the following descriptive equation:

$$A_i = \alpha + \gamma X_{S(i),y(i)} + \beta GE_i + \theta c_i + \epsilon_i$$

The dependent variable (A_i) is simply the age at which individual i attained his first elite position. $X_{S(i),y(i)}$ is again the probability of having a father in the elite. GE_i are *Grande École* fixed effects. Cohort fixed effects c_i are particularly important for the analysis of age at first position, due to the time-varying coverage of positions and the life-cycle bias previously discussed. OLS estimates are computed separately for individuals in politics and business, as well as for business executives only.

The average age at first position observed in the data is 49.6 years old (first and third quartiles are 43 and 56). Average entry into national politics happens slightly younger, at 47.8 years old [Q1: 41; Q3: 55], against 50 [Q1: 43; Q3: 56] for businessmen. Table 6

reports results on dynasties and age at first elite position. Dynastic politicians win their first election or obtain their first appointment at a comparable age to first-generation politicians.[37] Although sons of politicians do not attain business elite positions significantly more than other GE graduates (as shown in Table 3), when they do, it is 5.7 years younger.

Again, the most striking difference concerns sons of businessmen. Their access to elite positions is accelerated for all types of positions: they become national politicians 9.3 years younger than their non-dynastical peers, board members 5.4 years younger, and business executives 7.7 years younger. Sons of business executives are propelled even younger into top positions: 8 years younger onto company boards, 9 years to executive positions, and 11.2 years into national politics.

Might early attainment of elite positions simply entail having specific assets, or to what extent does it encompass favoritism? Graduates from the same elite college and the same cohort enter politics at 38 years of age if their father was a business executive, and 49 otherwise. Such a difference is hard to explain away with higher aspirations alone, or with skills better acquired through family education. Although the present analysis cannot provide a final answer, at least part of the difference probably arises from families' social networks, financial assets, or favoritism, rather than merely from differences in aspirations or abilities.

8   Conclusion

This paper investigates political and business dynasties in France for men born between 1931 and 1975. I first confirm the hegemony of the most prestigious colleges in enabling entry to elite positions both in the public and private sectors, namely national-level political functions or company board membership. Indeed, 26.2% of the elite sample graduated from 12 small colleges, which trained only 0.33% of the French population over the period. Yet, career opportunities for graduates of these top colleges differ. Those whose fathers served as political or business leaders were substantially more likely to enter the political and business elite too.

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[37]This may seem surprising, as anecdotal evidence sometimes reports precocious careers of children of politicians involving nepotistic practices (e.g., Turchi 2009); however, this may be more in local politics.

This constitutes evidence of a differential in returns to college education and contributes to the ongoing debate on college as an equalizer. While US elite colleges are socially segregated, outcomes among their graduates are comparable (Chetty et al., 2023). This papers shows that, in France, social inequalities do not solely operate regarding admission to top colleges, but are also reflected in a social gradient in occupational attainment among their graduates.

Indeed, not only do privileged families enjoy an advantage concerning *Grande École* admissions (Benveniste, 2023), but this paper uncovers their additional leverage in securing elite positions over generations. This constitutes what I refer to as a "double dividend": first in the educational system and then on the labor market. Moreover, further inequalities could well be involved. Indeed, using a web survey and including a wide range of controls (notably for level of education and degrees from *Oxford* or *Cambridge*), Friedman et al. (2015) show that, in Great Britain, the upwardly mobile reaching elite occupations earn £6,500 to £8,000 less per year.

Certain limitations regarding the data on business elites should be borne in mind. In particular, coverage varies across cohorts, which could affect some of my conclusions regarding intergenerational reproduction within the business elite. I may underestimate its importance relative to political dynasties, and its evolution is less precisely measured. Finally, due to data constraints, this analysis sets aside the increasing importance of women over the period, both in educational attainment and to a lesser extent in access to top positions. Bertrand et al. (2010) and Sullivan et al. (2018) suggest that gender gaps prevail among graduates of similar institutions, programs, and even fields of specialization. As occupational following was shown to run along similar gender lines, gender differences in the intergenerational transmission of elite status may be an important channel to study, notably to further explore gender gaps.

Finally, I also show that dynasties affect the composition of the French elite in ways that can be considered adverse. Dynastical businessmen are twice less likely to be a *Grande École* graduate, and up to 7 times less likely to hold an engineering GE degree. They are also appointed to the boards of French firms up to 9 years younger. It seems reasonable to argue that this constitutes a lack of experience in comparison to their peers. Although the data

does not allow me to draw firm conclusions, it is unlikely that individual ability through job-specific skills transfer within the family could compensate for almost a decade less experience so early in a career. Nonetheless, this does not necessarily make the dynastical elite less qualified or less efficient. They may still exploit more valuable networks or benefit from specific skills or assets transferred within the family. Echoing Geys (2017), these findings call for further assessment of the performance of second-generation members of the elite.

Further research could also extend the analysis to provide a more comprehensive understanding of the different routes to the top of the social hierarchy. If a degree from a prestigious institution is the principal track, children of the elite are either doing better even without such degrees or are simply being allowed to bypass these credentials. Nevertheless, the present work establishes that social origin constitutes a gatekeeper for top careers, even among elite graduates.

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Figure 1: Distribution of members of the elite by birth year and position type.
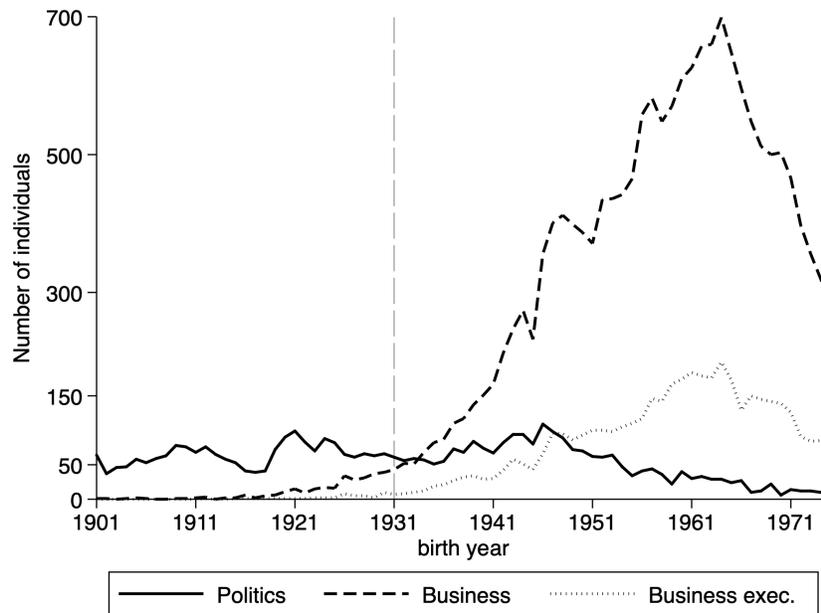
Notes: The curves plot the total number of individuals holding an elite position, by position type and by birth year from 1901 to 1975. *Business exec.* are businessmen with an executive role, a subset of all businessmen.

Table 1: Descriptive statistics by cohort on elite.

Birth cohort	All elite positions			Politicians			Business directors		
	Number of individuals	Average age at first position	Share who studied in a GE	Number of individuals	Average age at first position	Share who studied in a GE	Number of individuals	Average age at first position	Share who studied in a GE
all cohorts	17,822	49.6	26.2%	2,211	47.8	16.0%	15,670	50.0	27.6%
1931-1935	561	57.3	26.6%	283	50.4	13.1%	280	65.0	40.0%
1936-1940	906	56.6	26.6%	353	49.0	13.0%	563	62.1	35.0%
1941-1945	1,456	56.0	25.8%	415	47.8	14.0%	1,056	59.7	30.6%
1946-1950	2,275	54.5	27.1%	435	48.3	17.7%	1,852	56.1	29.5%
1951-1955	2,267	52.4	26.8%	267	48.2	15.7%	2,013	53.1	28.4%
1956-1960	2,853	50.3	25.6%	181	46.9	22.1%	2,674	50.6	25.8%
1961-1965	3,195	46.7	25.7%	144	44.9	15.3%	3,053	46.8	26.2%
1966-1970	2,552	43.4	25.1%	77	42.4	19.5%	2,477	43.4	25.2%
1971-1975	1,757	39.9	27.5%	56	40.9	28.6%	1,702	39.9	27.5%

Notes: This table reports by cohort the number of individuals holding elite positions, their average age on first holding such positions, as well as the share with a degree from one of the 12 *Grandes Écoles*. Appendix Tables B.2a, b and c break down the latter share by college.

Table 2: Main result. Among *Grande École* graduates, sons of the elite have better prospects of attaining an elite position.

Dependent variable	Dummy variable for attaining an elite position			
	(1)	(2)	(3)	(4)
Father in the elite	3.463***	3.182***	2.944***	2.408***
	(1.028)	(0.861)	(0.816)	(0.642)
Observations	103,309	103,309	103,309	103,309
Cohort weights	Yes	Yes	Yes	Yes
Cohort fixed effects		Yes		Yes
Grande École fixed effects			Yes	Yes

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors, clustered at the cohort level, are in parentheses. Each column displays estimates from a separate regression. Observations are graduates from the 12 *Grandes Écoles*. The table reports risk ratios from log-binomial estimations. Risk ratios above 1 reflect increased probability of reaching an elite position (positive coefficients of row estimates), while risk ratios below 1 would indicate reduced probability (negative coefficients of row estimates). Using a continuous variable as an independent variable—the probability of having a father in the elite—, estimates refer to the risk ratios for the independent variable at value 1, i.e., having a father in the elite. The weighting scheme used for all estimations ensures that each 5-year cohort has the same weight whatever its number of observations. Cohort fixed effects are dummy variables for each cohort, except cohort 1951-1955, which serves as a reference because it is the middle of the period of study. *Grande École* fixed effects are dummy variables for each GE, except *Sciences Po Paris*, which serves as a reference because it is the college with the most graduates. See Appendix Table B.4 for the estimated risk ratios associated with all control variables.

Table 3: Heterogeneity by type of elite: matrix of occupational dynasties by father's type of position – son's type of position.

Risk ratio for the son to reach

Father position	Business elite	Business executive	Political elite
Business elite	2.957*** (0.619)	5.612*** (1.902)	7.582** (7.218)
Business executive	4.761*** (2.588)	8.530*** (4.233)	-
Political elite	1.144 (0.378)	1.068 (0.714)	36.66*** (3.620)

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors, clustered at the cohort level, are in parentheses. All cells display estimates from separate regressions. All estimations include equal weights per 5-year cohort, as well as *Grande École* and cohort fixed effects. This heat matrix reports, for graduates of the 12 *Grandes Écoles*, their risk ratios for appointment or election to different types of positions (business, business executive, or politics) depending on their father's position type. The darker the cell, the higher the risk ratio.

Table 4: Heterogeneity across time of business or political dynasties.

Dependent dummy variable	Entering business			Entering politics		
	(1)	(2)	(3)	(4)	(5)	(6)
Father in business	2.473***	2.346***	2.379***			
	(0.493)	(0.444)	(0.468)			
Father in business						
× Period 1931-1945	1.050***	2.873***	3.042***			
	(460.7)	(1,134)	(1,249)			
× Period 1946-1960	1.245	0.943	0.918			
	(0.946)	(0.590)	(0.582)			
× Period 1961-1975	reference	reference	reference			
Father in politics				3.241***	2.623**	2.687**
				(1.229)	(1.194)	(1.191)
Father in politics						
× Period 1931-1945				19.36***	28.35***	28.95***
				(15.22)	(13.12)	(13.62)
× Period 1946-1960				10.78***	13.31***	12.90***
				(4.859)	(6.627)	(6.159)
× Period 1961-1975				reference	reference	reference
Observations	103,309	103,309	103,309	103,309	103,309	103,309
Cohort weights			Yes			Yes
Period fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Grande École fixed effects		Yes	Yes		Yes	Yes

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors, clustered at the cohort level, are in parentheses. Each column displays estimates from a separate regression. Birth cohorts are grouped in three periods of 15 years: 1931-1945, 1946-1960, and 1961-1975.

Table 5: Dynasties and holding an elite college degree.

(a) For those in the political elite.

Dependent variable: graduate of	any of the 12 Grandes Ecoles		any engineering school		any business school		any administration or research school	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Father in politics	3.404***		14.80***		0		2.986***	
	(1.082)		(11.45)		(0)		(0.925)	
Father in business		1.241		0		4.745		1.489
		(0.664)		(0)		(8.402)		(0.861)
Observations	2,211	2,211	2,211	2,211	2,211	2,211	2,211	2,211
Cohort weights	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cohort fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Positions controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

(b) For those in the business elite.

Dependent variable: graduate of	any of the 12 Grandes Ecoles		any engineering school		any business school		any administration or research school	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Father in politics	1.120		0.186		0.311		2.397*	
	(0.558)		(0.293)		(0.311)		(1.172)	
Father in business		0.488***		0.145**		0.787		0.451
		(0.115)		(0.121)		(0.360)		(0.281)
Observations	15,670	15,670	15,670	15,670	15,670	15,670	15,670	15,670
Cohort weights	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cohort fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Positions controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: *** p<0.01, ** p<0.05, * p<0.1. Estimates are risk ratios from log-binomial regressions. Standard errors, clustered at the cohort level, are in parentheses. Each column from each sub-panel displays estimates from a separate regression. Observations are individuals who held at least one elite position. Each 5-year cohort has the same weight, whatever the number of members of the elite. Cohort fixed effects are dummy variables for each cohort, except cohort 1951-1955, which serves as a reference. See Appendix Table B.6 for the estimated risk ratios associated with all control variables. Engineering schools include *ESPCI*, *Mines Paris*, *Polytechnique*, *Ponts et Chaussées*, and *Télécom Paris*. Business schools include *EM Lyon*, *ESCP*, and *ESSEC*. Schools of administration or research include *ENA*, *Sciences Po*, *ENS Ulm*, and *ENS Cachan*. None of the engineering school alumni whose fathers were in business, or business school graduates with fathers in politics, achieved positions in the political elite.

Table 6: Dynasties and age at first elite position.

Dependent variable	Age of entry into politics			Age of entry into business			Age on becoming a business executive		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Father in politics	0.956 (2.753)			-5.665*** (1.594)			0.614 (4.501)		
Father in business		-9.335*** (2.227)			-5.407** (1.747)			-7.739*** (2.074)	
Father in business (executive)			-11.22*** (0.407)			-7.982** (2.618)			-9.003** (3.205)
R^2	0.062	0.063	0.063	0.535	0.536	0.535	0.259	0.261	0.260
Observations	2,206	2,206	2,206	13,920	13,920	13,920	3,734	3,734	3,734
Cohort weights	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cohort fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Grande École fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors, clustered at the cohort level, are in parentheses. Each column displays estimates from a separate OLS regression. Observations are individuals who held at least one elite position. Each 5-year cohort has the same weight, whatever the number of members of the elite. *Grande École* fixed effects are dummy variables for each GE, except *Sciences Po Paris*, which serves as a reference. Cohort fixed effects are dummy variables for each cohort, except 1951-1955, which serves as a reference. R^2 among business directors are highly inflated by the inclusion of cohort fixed effects, due to time-varying data coverage documented in section 3. See Appendix Table B.7 for the estimated risk ratios associated with all control variables.

Online appendix

For Online Publication

A. Complementary figures

Figure A.1: Surnames' frequency in France (1901-1975).
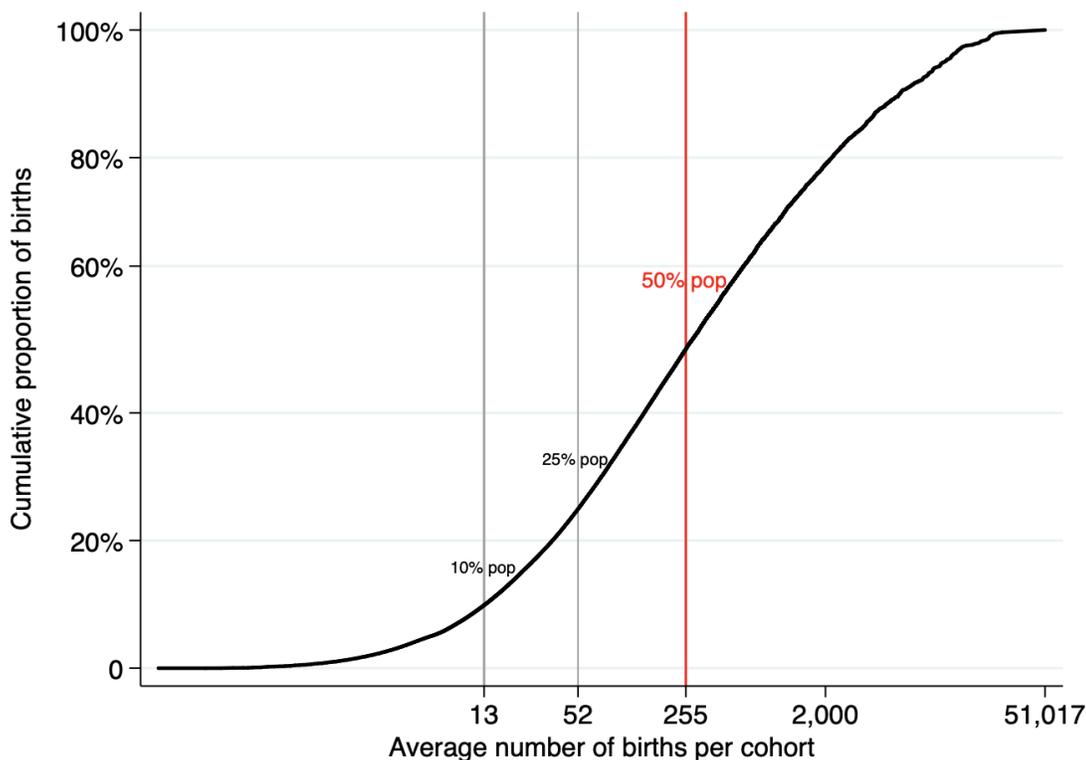
Notes: The figure is based on the number of births by surname per generation of 21 years over the period 1901-1975. I use a logarithmic scale for the abscissa to emphasize the importance of rare surnames. While the number of births per generation for a single surname goes up to 51,017 (*Martin*), the figure shows that surnames with less than 13 births per generation account for 10% of all births over the period (*10% pop* vertical line). Surnames with at most 52 births per generation account for 25% of the population (*25% pop* vertical line), whereas half of the population born between 1901 and 1975 had a surname with less than 255 births per generation (*50% pop* vertical line). This only includes "native" surnames, as defined in section 4.1. Including all surnames, the 10%, 25%, and 50% cut-offs would correspond to even rarer surnames, respectively an average of 11, 46, and 230 births per generation.

B.   Complementary tables

Table B.1: Number of graduates per cohort in each *Grande École.*

birth cohort	EM Lyon	ENA	ENS Cachan	ENS Ulm	ESCP	ESPCI	ESSEC	Mines Paris	Polytech -nique	Ponts et chaussées	Sciences Po Paris	Télécom Paris	all colleges
1931-1935	228	272	566	296	823	156	515	265	1,134	281	3,118	269	7,341
1936-1940	297	445	715	390	1,070	168	538	330	1,442	413	3,743	357	9,026
1941-1945	424	507	600	412	1,132	159	705	340	1,461	470	4,065	337	9,727
1946-1950	336	674	684	450	1,120	189	839	432	1,452	624	6,352	427	12,428
1951-1955	342	687	959	493	857	174	1,183	483	1,360	706	5,384	596	11,885
1956-1960	377	684	854	492	915	172	1,333	519	1,383	645	4,647	616	11,325
1961-1965	466	401	815	458	1,563	160	1,834	545	1,385	719	6,284	713	14,212
1966-1970	485	341	813	573	2,041	206	1,986	664	1,430	882	3,784	883	12,947
1971-1975	709	354	940	594	2,384	227	2,637	724	1,628	965	3,537	923	14,418
all cohorts	3,664	4,365	6,946	4,158	11,905	1,611	11,570	4,302	12,675	5,705	40,914	5,121	103,309

Notes: This table reports the number of male graduates for each of the 12 elite colleges as well as for the colleges as a whole, both by 5-year birth cohort and for all cohorts together. This restricts to "native" surnames as defined in section 4.1.

Table B.2: Share of *Grande École* graduates among the elite, by cohort and college.

(a) Both political and business elites.

Birth cohort	all schools	EM Lyon	ENA	ENS Cachan	ENS Ulm	ESCP	ESPCI	ESSEC	Mines Paris	Polytech-nique	Ponts et chaussées	Sciences Po Paris	Télécom Paris	Number of individuals
all cohorts	26.2%	1.1%	3.3%	0.3%	0.7%	2.7%	0.2%	3.6%	1.8%	6.1%	2.1%	10.5%	1.4%	17,822
1931-1935	26.6%	0.5%	5.5%	0.5%	0.7%	1.6%	0.0%	0.7%	1.2%	6.6%	1.6%	14.6%	1.4%	561
1936-1940	26.6%	1.0%	5.0%	0.2%	0.4%	1.0%	0.0%	1.1%	2.0%	8.1%	1.4%	14.7%	0.6%	906
1941-1945	25.8%	0.3%	5.3%	0.2%	0.7%	1.9%	0.1%	1.6%	1.9%	7.3%	1.6%	13.1%	0.4%	1,456
1946-1950	27.1%	0.5%	4.9%	0.4%	0.5%	1.7%	0.4%	2.4%	1.8%	5.6%	2.0%	14.2%	0.8%	2,275
1951-1955	26.8%	0.8%	4.3%	0.3%	0.6%	2.4%	0.3%	3.4%	2.2%	6.1%	2.5%	11.9%	1.5%	2,267
1956-1960	25.6%	1.2%	3.4%	0.5%	0.6%	2.0%	0.1%	4.4%	1.7%	6.3%	1.8%	10.3%	1.7%	2,853
1961-1965	25.7%	1.3%	1.9%	0.3%	0.7%	3.0%	0.3%	3.9%	1.8%	5.2%	1.7%	9.4%	1.8%	3,195
1966-1970	25.1%	1.0%	1.5%	0.2%	0.9%	4.4%	0.1%	4.6%	1.6%	6.0%	2.5%	6.9%	1.8%	2,552
1971-1975	27.5%	2.3%	1.5%	0.5%	1.0%	4.6%	0.2%	5.6%	1.8%	6.0%	2.9%	6.0%	1.3%	1,757

(b) Political elite.

Birth cohort	all schools	EM Lyon	ENA	ENS Cachan	ENS Ulm	ESCP	ESPCI	ESSEC	Mines Paris	Polytech-nique	Ponts et chaussées	Sciences Po Paris	Télécom Paris	Number of individuals
all cohorts	16.0%	0.2%	4.9%	0.2%	0.6%	0.5%	0.0%	0.6%	0.3%	1.3%	0.5%	12.3%	0.0%	2,211
1931-1935	13.1%	0.4%	4.6%	1.1%	0.0%	0.0%	0.0%	0.4%	0.0%	1.1%	0.7%	8.5%	0.4%	283
1936-1940	13.0%	0.6%	3.7%	0.0%	0.8%	0.0%	0.0%	0.3%	0.8%	2.5%	0.0%	8.8%	0.0%	353
1941-1945	14.0%	0.2%	5.1%	0.0%	0.7%	0.7%	0.0%	0.2%	0.5%	1.7%	0.5%	10.4%	0.0%	415
1946-1950	17.7%	0.2%	5.3%	0.2%	0.5%	0.5%	0.0%	0.2%	0.2%	0.9%	0.7%	14.5%	0.0%	435
1951-1955	15.7%	0.0%	6.0%	0.0%	0.4%	1.1%	0.0%	0.7%	0.4%	0.7%	0.4%	12.4%	0.0%	267
1956-1960	22.1%	0.0%	8.3%	0.6%	0.6%	1.1%	0.0%	1.1%	0.0%	1.1%	0.0%	18.8%	0.0%	181
1961-1965	15.3%	0.0%	2.8%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.6%	0.0%	144
1966-1970	19.5%	0.0%	2.6%	0.0%	1.3%	0.0%	0.0%	1.3%	0.0%	1.3%	1.3%	15.6%	0.0%	77
1971-1975	28.6%	0.0%	3.6%	0.0%	1.8%	1.8%	0.0%	7.1%	0.0%	0.0%	1.8%	21.4%	0.0%	56

(c) Business elite.

Birth cohort	all schools	EM Lyon	ENA	ENS Cachan	ENS Ulm	ESCP	ESPCI	ESSEC	Mines Paris	Polytech-nique	Ponts et chaussées	Sciences Po Paris	Télécom Paris	Number of individuals
all cohorts	27.6%	1.2%	3.1%	0.3%	0.7%	3.0%	0.2%	4.0%	2.0%	6.8%	2.3%	10.3%	1.6%	15,670
1931-1935	40.0%	0.7%	6.4%	0.0%	1.4%	3.2%	0.0%	1.1%	2.5%	12.1%	2.5%	20.7%	2.5%	280
1936-1940	35.0%	1.2%	5.9%	0.4%	0.2%	1.6%	0.0%	1.6%	2.8%	11.5%	2.3%	18.3%	0.9%	563
1941-1945	30.6%	0.4%	5.5%	0.3%	0.7%	2.3%	0.2%	2.2%	2.4%	9.4%	2.1%	14.5%	0.6%	1,056
1946-1950	29.5%	0.5%	5.0%	0.4%	0.5%	2.1%	0.4%	2.9%	2.1%	6.7%	2.3%	14.4%	1.0%	1,852
1951-1955	28.4%	0.9%	4.1%	0.3%	0.6%	2.5%	0.3%	3.7%	2.5%	6.8%	2.7%	12.0%	1.7%	2,013
1956-1960	25.8%	1.2%	3.0%	0.4%	0.6%	2.0%	0.1%	4.6%	1.8%	6.6%	1.9%	9.7%	1.8%	2,674
1961-1965	26.2%	1.4%	1.9%	0.3%	0.7%	3.2%	0.3%	4.1%	1.9%	5.5%	1.8%	9.2%	1.9%	3,053
1966-1970	25.2%	1.0%	1.5%	0.2%	0.8%	4.6%	0.1%	4.7%	1.7%	6.2%	2.5%	6.6%	1.8%	2,477
1971-1975	27.5%	2.4%	1.5%	0.5%	0.9%	4.7%	0.2%	5.5%	1.8%	6.2%	2.9%	5.6%	1.4%	1,702

Notes: These tables report by cohort the number of individuals holding elite positions, as well as the share with a degree from each of the 12 *Grandes Écoles*. Panel (a) covers both the political and business elites, panel (b) the political elite alone, and panel (c) the business elite alone. As some graduates obtain degrees from more than one college, shares by college in lines do not sum to the overall share for all schools.

Table B.3: Descriptive statistics on the explanatory variables $X_{S(i),y(i),e}$.

(a) Both political and business elites.

	Average	Average (among positive)	Obs. Total	Obs. Null values	Obs. 0.00 to 0.01	Obs. 0.01 to 0.05	Obs. 0.05 to 0.10	Obs. 0.10 to 0.25	Obs. 0.25 to 0.50	Obs. 0.50 to 1.00
All	0.0027	0.0183	103,309	88,171	12,855	1,463	295	257	131	137
1931-1935	0.0002	0.0057	7,341	7,117	213	8	1	1	0	1
1936-1940	0.0003	0.0053	9,026	8,545	467	7	1	5	0	1
1941-1945	0.0007	0.0080	9,727	8,850	834	22	4	11	4	2
1946-1950	0.0016	0.0132	12,428	10,942	1,378	49	15	22	15	7
1951-1955	0.0029	0.0222	11,885	10,323	1,264	198	41	27	12	20
1956-1960	0.0012	0.0080	11,325	9,686	1,508	83	17	21	5	5
1961-1965	0.0041	0.0231	14,212	11,688	2,006	362	57	48	16	35
1966-1970	0.0027	0.0124	12,947	10,158	2,498	182	41	34	21	13
1971-1975	0.0074	0.0300	14,418	10,862	2,687	552	118	88	58	53

(b) Political elite.

	Average	Average among positive	Obs. Total	Obs. Null values	Obs. 0.00 to 0.01	Obs. 0.01 to 0.05	Obs. 0.05 to 0.10	Obs. 0.10 to 0.25	Obs. 0.25 to 0.50	Obs. 0.50 to 1.00
All	0.0010	0.0102	103,309	93,222	9,174	607	121	94	47	44
1931-1935	0.0002	0.0058	7,341	7,119	211	8	1	1	0	1
1936-1940	0.0003	0.0053	9,026	8,547	465	7	1	5	0	1
1941-1945	0.0006	0.0067	9,727	8,886	808	16	4	8	3	2
1946-1950	0.0012	0.0112	12,428	11,045	1,299	38	14	14	12	6
1951-1955	0.0021	0.0181	11,885	10,533	1,133	150	27	19	12	11
1956-1960	0.0005	0.0047	11,325	10,088	1,177	43	6	7	2	2
1961-1965	0.0017	0.0151	14,212	12,636	1,344	166	28	19	7	12
1966-1970	0.0003	0.0028	12,947	11,542	1,349	42	7	6	1	0
1971-1975	0.0014	0.0128	14,418	12,826	1,388	137	33	15	10	9

(c) Business elite.

	Average	Average among positive	Obs. Total	Obs. Null values	Obs. 0.00 to 0.01	Obs. 0.01 to 0.05	Obs. 0.05 to 0.10	Obs. 0.10 to 0.25	Obs. 0.25 to 0.50	Obs. 0.50 to 1.00
All	0.0017	0.0202	103,309	94,485	7,487	815	167	173	93	89
1931-1935	0.0000	0.0005	7,741	7,736	5	0	0	0	0	0
1936-1940	0.0000	0.0003	9,026	9,011	15	0	0	0	0	0
1941-1945	0.0002	0.0202	9,727	9,648	67	7	0	4	1	0
1946-1950	0.0004	0.0171	12,428	12,164	237	11	1	11	3	1
1951-1955	0.0010	0.0236	11,885	11,363	444	41	14	12	3	8
1956-1960	0.0007	0.0081	11,325	10,495	758	37	12	17	4	2
1961-1965	0.0025	0.0204	14,212	12,480	1,475	165	29	29	12	22
1966-1970	0.0024	0.0134	12,947	10,645	2,068	140	32	29	20	13
1971-1975	0.0060	0.0280	14,418	11,343	2,418	414	79	71	50	43

Notes: *Obs.* stands for number of observations. The upper panel (a) provides statistics for the explanatory variables related to having a father in both types of elite, while the central panel (b) covers fathers in politics and the lower panel (c) fathers in business. Statistics for all cohorts together are reported, as well as for each five-year cohort. *Average among positive* computes the average of the variable among non-null values. I also report the number of observations, in total, with null values, as well as for different brackets.

Table B.4: Complementary results. Detailed estimates for the baseline regression.

Dependent variable	Dummy variable for attaining an elite position			
	(1)	(2)	(3)	(4)
Father in the elite	3.463***	3.182***	2.944***	2.408***
	(1.028)	(0.861)	(0.816)	(0.642)
College EM Lyon			1.636***	1.664***
			(0.222)	(0.247)
College ENA			4.503***	4.311***
			(0.617)	(0.578)
College ENPC ("Ponts")			1.427***	1.381***
			(0.0739)	(0.0713)
College ENS Cachan			0.267***	0.270***
			(0.0362)	(0.0378)
College ENS Ulm			0.849	0.848
			(0.0923)	(0.0937)
College ESCP			1.305***	1.350***
			(0.134)	(0.147)
College ESPCI			0.693*	0.726
			(0.137)	(0.146)
College ESSEC			1.831***	1.769***
			(0.0801)	(0.121)
College Mines Paris			2.028***	1.977***
			(0.127)	(0.0992)
College Polytechnique			2.455***	2.564***
			(0.138)	(0.128)
College Télécom Paris			1.073	1.024
			(0.101)	(0.0881)
Cohort 1931-1935		0.343***		0.353***
		(0.000563)		(0.00492)
Cohort 1936-1940		0.517***		0.518***
		(0.000810)		(0.00489)
Cohort 1941-1945		0.738***		0.727***
		(0.00103)		(0.00580)
Cohort 1946-1950		0.870***		0.881***
		(0.000746)		(0.00242)
Cohort 1956-1960		1.079***		1.032***
		(0.00134)		(0.00182)
Cohort 1961-1965		1.065***		1.126***
		(0.000766)		(0.0195)
Cohort 1966-1970		0.859***		0.864***
		(0.000384)		(0.0226)
Cohort 1971-1975		0.606***		0.601***
		(0.00141)		(0.0171)
Constant	0.0431***	0.0548***	0.0283***	0.0360***
	(0.00470)	(9.45e-05)	(0.00308)	(0.000984)
Observations	103,309	103,309	103,309	103,309
Cohort weights	Yes	Yes	Yes	Yes
Cohort fixed effects		Yes		Yes
Grande École fixed effects			Yes	Yes

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors, clustered at the cohort level, are in parentheses. This table provides detailed estimates for the main analysis presented in section 5. See the notes to Table 2 for additional explanations on the regressions. Cohort fixed effects are dummy variables for each cohort, except cohort 1951-1955, which serves as a reference. *Grande École* fixed effects are dummy variables for each college, except *Sciences Po Paris*, which serves as a reference.

Table B.5: Complementary results. Robustness analysis of the baseline regression to sample restrictions and to alternative estimation methods.

Dependent variable Independent variable	Dummy variable for attaining an elite position Probability of having a father in an elite position			
	no control	cohort controls	*Grande École* controls	cohort and GE controls
No weighting scheme	3.102***	3.030***	2.748***	2.456***
	(0.823)	(0.753)	(0.670)	(0.550)
Excluding the first cohort	3.164***	3.194***	2.693***	2.414***
	(0.922)	(0.873)	(0.729)	(0.650)
Excluding the first two cohorts	2.978***	3.229***	2.584***	2.566***
	(0.888)	(0.900)	(0.715)	(0.634)
$X_{S(i),y(i),e}$ only over 0.10	3.352***	3.152***	2.859***	2.386***
	(0.925)	(0.815)	(0.750)	(0.650)
$X_{S(i),y(i),e}$ only over 0.25	2.925***	2.772***	2.579***	2.208***
	(0.829)	(0.720)	(0.693)	(0.562)
Not excluding "immigrant" surnames	3.418***	3.193***	2.903***	6.318***
	(1.045)	(0.838)	(0.910)	(1.816)

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors, clustered at the cohort level, are in parentheses. Each cell displays an estimate from a separate regression. Estimates reported in the first line are computed with unweighted regressions, while all other estimates include the same weighting scheme as the baseline regression. The number of observations is as follows: still 103,309 in the absence of a weighting scheme, 95,968 when I exclude the first cohort, 86,942 when I exclude the two first cohorts, 88,696 when $X_{S(i),y(i),e}$ is floored at 0.10, 88,447 when it is floored at 0.25, and 122,075 when I also include "immigrant surnames". When restricting $X_{S(i),y(i),e}$ to a certain threshold, I withdraw from the sample observations with non-null values that are below the threshold, rather than considering them as null values.

Table B.6: Complementary results. Detailed estimates for regressions on dynasties and holding a *Grande École* degree.

(a) For the political elite.

Dependent variable: graduated from	any of the 12 Grandes Ecoles		any engineering school		any business school		any administration or research school	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Father in politics	3.404***		14.80***		0		2.986***	
	(1.082)		(11.45)		(0)		(0.925)	
Father in business		1.241		0		4.745		1.489
		(0.664)		(0)		(8.402)		(0.861)
Father in politics (executive)	3.622***	3.594***	5.959***	5.852***	1.016	1.025	3.541***	3.517***
	(0.450)	(0.453)	(2.064)	(2.079)	(0.594)	(0.616)	(0.481)	(0.481)
Cohort 1931-1935	0.873***	0.854***	1.744***	1.527***	0.344***	0.386***	0.795***	0.783***
	(0.0101)	(0.00357)	(0.139)	(0.0111)	(0.00527)	(0.0166)	(0.00784)	(0.00410)
Cohort 1936-1940	0.892***	0.872***	2.519***	2.211***	0.416***	0.464***	0.757***	0.745***
	(0.0101)	(0.00355)	(0.202)	(0.0199)	(0.00546)	(0.0201)	(0.00751)	(0.00417)
Cohort 1941-1945	0.863***	0.851***	1.610***	1.477***	0.601***	0.657***	0.808***	0.801***
	(0.00728)	(0.00609)	(0.108)	(0.0468)	(0.00819)	(0.0263)	(0.00763)	(0.00647)
Cohort 1946-1950	1.136***	1.119***	1.148***	1.034***	0.460***	0.502***	1.176***	1.164***
	(0.0100)	(0.00520)	(0.0600)	(0.0120)	(0.00750)	(0.0243)	(0.00867)	(0.00628)
Cohort 1956-1960	1.234***	1.212***	0.914	0.816***	1.144***	1.203***	1.352***	1.335***
	(0.0230)	(0.0229)	(0.0899)	(0.0362)	(0.0372)	(0.0501)	(0.0311)	(0.0292)
Cohort 1961-1965	0.966***	0.962***					1.099***	1.097***
	(0.00404)	(0.00347)					(0.00656)	(0.00657)
Cohort 1966-1970	1.078***	1.056***	2.096***	1.878***	0.647***	0.708***	1.024	1.008
	(0.0170)	(0.0159)	(0.215)	(0.0924)	(0.0187)	(0.0298)	(0.0179)	(0.0156)
Cohort 1971-1975	1.955***	1.915***	1.579***	1.564***	4.622***	4.842***	1.571***	1.547***
	(0.0623)	(0.0646)	(0.0817)	(0.0510)	(0.0562)	(0.140)	(0.0230)	(0.0221)
Constant	0.116***	0.119***	0.00648***	0.00746***	0.0206***	0.0183***	0.103***	0.105***
	(0.00652)	(0.00632)	(0.000914)	(0.00115)	(0.00167)	(0.00177)	(0.00567)	(0.00572)
Observations	2,211	2,211	2,211	2,211	2,211	2,211	2,211	2,211
Cohort weights	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cohort fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Position controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The second part of the table, as well as a guide to its reading, are on the next page.

(b) For the business elite.

Dependent variable: graduated from	any of the 12 Grandes Ecoles		any engineering school		any business school		any administration or research school	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Father in politics	1.120		0.186		0.311		2.397*	
	(0.558)		(0.293)		(0.311)		(1.172)	
Father in business		0.488***		0.145**		0.787		0.451
		(0.115)		(0.121)		(0.360)		(0.281)
Father in business (executive)	1.137**	1.139**	1.482***	1.485***	0.805**	0.805**	1.170*	1.172*
	(0.0697)	(0.0697)	(0.142)	(0.143)	(0.0685)	(0.0679)	(0.0970)	(0.0971)
Cohort 1931-1935	1.415***	1.411***	1.348***	1.347***	0.691***	0.693***	1.685***	1.672***
	(0.00431)	(0.00377)	(0.00809)	(0.00655)	(0.00307)	(0.00294)	(0.00936)	(0.00669)
Cohort 1936-1940	1.238***	1.235***	1.356***	1.356***	0.619***	0.620***	1.450***	1.439***
	(0.00254)	(0.000518)	(0.00257)	(0.00127)	(0.000944)	(0.000670)	(0.00636)	(0.00158)
Cohort 1941-1945	1.086***	1.084***	1.163***	1.163***	0.669***	0.670***	1.237***	1.228***
	(0.00301)	(0.00271)	(0.00569)	(0.00491)	(0.00238)	(0.00233)	(0.00622)	(0.00426)
Cohort 1946-1950	1.044***	1.043***	0.925***	0.925***	0.767***	0.768***	1.206***	1.200***
	(0.00171)	(0.000952)	(0.00238)	(0.00155)	(0.00140)	(0.00106)	(0.00413)	(0.00156)
Cohort 1956-1960	0.905***	0.904***	0.867***	0.867***	1.106***	1.107***	0.803***	0.799***
	(0.00176)	(0.00115)	(0.00175)	(0.00199)	(0.00130)	(0.00119)	(0.00305)	(0.00145)
Cohort 1961-1965	0.917***	0.918***	0.827***	0.831***	1.220***	1.223***	0.753***	0.751***
	(0.00263)	(0.00222)	(0.00304)	(0.00335)	(0.00281)	(0.00447)	(0.00373)	(0.00254)
Cohort 1966-1970	0.885***	0.887***	0.885***	0.892***	1.443***	1.448***	0.565***	0.565***
	(0.00191)	(0.00141)	(0.00194)	(0.00247)	(0.00162)	(0.00462)	(0.00232)	(0.00149)
Cohort 1971-1975	0.967***	0.973***	0.955***	0.971***	1.753***	1.760***	0.521***	0.522***
	(0.00116)	(0.00170)	(0.000590)	(0.00388)	(0.00132)	(0.00807)	(0.00156)	(0.00249)
Constant	0.275***	0.275***	0.0894***	0.0894***	0.0753***	0.0752***	0.131***	0.132***
	(0.00466)	(0.00473)	(0.00296)	(0.00288)	(0.00139)	(0.00137)	(0.00305)	(0.00308)
Observations	15,670	15,670	15,670	15,670	15,670	15,670	15,670	15,670
Cohort weights	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cohort fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Position controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: *** p<0.01, ** p<0.05, * p<0.1. The first part of the table is on the previous page. This table provides detailed estimates for all covariates in the analysis of *Grande École* graduates belonging to a dynastical elite. Summary results are presented in Table 5. Estimates report risk ratios from log-binomial regressions. Standard errors, clustered at the cohort level, are in parentheses. Each column displays estimates from a separate regression. Observations are individuals who held at least one elite position. Each 5-year cohort has the same weight, whatever the number of elite members. Cohort fixed effects are dummy variables for each cohort, except 1951-1955, which serves as a reference.

Table B.7: Complementary results. Detailed estimates for the regressions on dynasties and age at first position.

Dependent variable	Age of entry into politics			Age of entry into business			Age on becoming a business executive		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Father in politics	0.956			-5.665***			0.614		
	(2.753)			(1.594)			(4.501)		
Father in business		-9.335***			-5.407**			-7.739***	
		(2.227)			(1.747)			(2.074)	
Father in business (executive)			-11.22***			-7.982**			-9.003**
			(0.407)			(2.618)			(3.205)
College EM Lyon	-1.898	-1.899	-1.899	-0.960**	-0.897*	-0.969**	-2.128**	-1.962**	-2.147**
	(4.310)	(4.309)	(4.309)	(0.399)	(0.411)	(0.400)	(0.749)	(0.714)	(0.746)
College ENA	-5.919***	-5.918***	-5.923***	-3.256***	-3.292***	-3.289***	-1.659***	-1.686***	-1.669***
	(1.002)	(1.004)	(1.001)	(0.390)	(0.383)	(0.382)	(0.460)	(0.474)	(0.470)
College ENPC ("Ponts")	1.351	1.387	1.390	0.506	0.510	0.521	0.680	0.698	0.725
	(1.808)	(1.722)	(1.722)	(0.517)	(0.519)	(0.518)	(0.748)	(0.760)	(0.761)
College ENS Cachan	1.403	1.403	1.403	0.738	0.732	0.736	-3.933*	-3.908*	-3.959*
	(0.855)	(0.854)	(0.855)	(1.352)	(1.347)	(1.350)	(1.964)	(1.993)	(1.954)
College ENS Ulm	-5.332***	-5.345***	-5.339***	-2.280***	-2.281***	-2.279***	-1.268	-1.316	-1.290
	(1.221)	(1.223)	(1.221)	(0.563)	(0.561)	(0.562)	(0.845)	(0.830)	(0.838)
College ESCP	-0.465	-0.382	-0.422	-0.296	-0.286	-0.274	-0.585	-0.586	-0.576
	(1.925)	(1.973)	(1.960)	(0.464)	(0.462)	(0.463)	(0.835)	(0.828)	(0.843)
College ESPCI	-	-	-	-0.401	-0.417	-0.403	2.086	2.042	2.062
	-	-	-	(1.139)	(1.140)	(1.140)	(1.872)	(1.869)	(1.877)
College ESSEC	-1.158	-1.182	-1.175	-0.824	-0.844	-0.835	0.186	0.165	0.168
	(1.438)	(1.432)	(1.433)	(0.465)	(0.459)	(0.464)	(0.703)	(0.679)	(0.704)
College Mines Paris	-1.979	-1.999	-1.999	-1.834**	-1.852***	-1.846**	-1.263	-1.291	-1.278
	(2.469)	(2.465)	(2.465)	(0.549)	(0.550)	(0.551)	(0.707)	(0.710)	(0.707)
College Polytechnique	0.0812	0.0946	0.0946	-2.205***	-2.210***	-2.199***	-0.855	-0.875	-0.857
	(0.823)	(0.797)	(0.797)	(0.273)	(0.274)	(0.276)	(0.505)	(0.502)	(0.502)
College Télécom Paris	15.34***	15.32***	15.32***	0.00140	-0.0148	-0.00822	1.638	1.609	1.621
	(0.845)	(0.820)	(0.820)	(0.532)	(0.527)	(0.529)	(1.578)	(1.577)	(1.576)
Cohort 1931-1935	1.996***	1.919***	1.914***	12.14***	12.14***	12.15***	5.185***	5.117***	5.150***
	(0.0498)	(0.0263)	(0.0146)	(0.0290)	(0.0257)	(0.0260)	(0.0483)	(0.0383)	(0.0363)
Cohort 1936-1940	0.661***	0.585***	0.580***	9.112***	9.117***	9.124***	5.481***	5.419***	5.454***
	(0.0495)	(0.0313)	(0.0271)	(0.0285)	(0.0260)	(0.0258)	(0.0403)	(0.0272)	(0.0274)
Cohort 1941-1945	-0.467***	-0.539***	-0.544***	6.717***	6.721***	6.725***	2.671***	2.622***	2.636***
	(0.0344)	(0.0204)	(0.0159)	(0.0218)	(0.0193)	(0.0195)	(0.0481)	(0.0373)	(0.0402)
Cohort 1946-1950	0.0106	-0.0629**	-0.0674***	3.017***	3.026***	3.021***	0.456***	0.417***	0.422***
	(0.0389)	(0.0211)	(0.0130)	(0.0145)	(0.0129)	(0.0138)	(0.0416)	(0.0285)	(0.0265)
Cohort 1956-1960	-1.145***	-1.209***	-1.224***	-2.547***	-2.544***	-2.537***	-1.608***	-1.658***	-1.623***
	(0.0428)	(0.0373)	(0.0328)	(0.00959)	(0.0116)	(0.00997)	(0.0396)	(0.0344)	(0.0313)
Cohort 1961-1965	-3.503***	-3.563***	-3.575***	-6.368***	-6.337***	-6.350***	-3.620***	-3.654***	-3.631***
	(0.0404)	(0.0371)	(0.0356)	(0.0148)	(0.0111)	(0.0137)	(0.0511)	(0.0429)	(0.0409)
Cohort 1966-1970	-5.969***	-6.041***	-6.050***	-9.729***	-9.687***	-9.703***	-6.326***	-6.330***	-6.335***
	(0.0776)	(0.0563)	(0.0516)	(0.0164)	(0.0155)	(0.0153)	(0.0408)	(0.0285)	(0.0300)
Cohort 1971-1975	-7.303***	-7.307***	-7.355***	-13.26***	-13.19***	-13.23***	-10.02***	-9.963***	-10.02***
	(0.0733)	(0.0720)	(0.0732)	(0.0203)	(0.0241)	(0.0196)	(0.0354)	(0.0270)	(0.0347)
Constant	48.59***	48.66***	48.67***	53.48***	53.48***	53.47***	52.73***	52.81***	52.77***
	(0.0738)	(0.0592)	(0.0580)	(0.0544)	(0.0580)	(0.0564)	(0.115)	(0.102)	(0.0973)
R^2	0.062	0.063	0.063	0.535	0.536	0.535	0.259	0.261	0.260
Observations	2,206	2,206	2,206	13,920	13,920	13,920	3,734	3,734	3,734
Cohort weights	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cohort fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Grande École fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Standard errors, clustered at the cohort level, are in parentheses. This table provides detailed estimates for all covariates in the analysis of age at first position. Refer to notes to Table 6 for additional details.

C. Complementary information: identification of "foreign" surnames

This section generally reproduces Benveniste (2023)'s Appendix C.3. Foreign surnames are identified in two ways. First, I use the evolution of births by surname in the national census. Then, I compare the frequency of surnames among graduates to their frequency in the French birth records.

Using the complete birth census with 25-year generation divides, I qualify as "foreign" the 490,565 surnames with only one birth in the birth registers over the period 1891-1990. Out of the 786,531 remaining surnames, those for which no birth appears over the first two generations (1891 to 1940) are classified as foreign. I also consider surnames to be of foreign origin if the birth rate is 10 times higher in the last cohort (1966-1990), as compared to the mean of the first two cohorts (1891-1940), or where the birth rate is 10 times higher than in the previous cohort.

Finally, I compute by surname S a coefficient of variation of the number of births per cohort. A surname showing a wide-ranging number of births between cohorts is considered to be associated with immigration in a specific generation followed by children born in France over the next generations. I compute $CV^s_{1891-1990}$ for the four generations between 1891 and 1990.[38] Surnames with an average number of births per cohort μ^s_t above 30 and a coefficient of variation above 0.6 over period t are classified as foreign. These choices are based on visual inspection at different potential thresholds. Additionally, I use the *Grandes Écoles* data to classify a surname as foreign if there are more students in any given cohort than there are births in France of bearers of this surname.

The conditions imply that I consider as "native" surnames for which the immigration phase occurred at latest in the first cohort, between 1891 and 1915. In fact, surnames of foreign origin stemming from immigration before the period of study are considered native. Therefore, I literally study a stable set of surnames over the period, more than a "native" set of surnames *per se*.

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[38]$CV^s_t = \frac{\mu^s_t}{\sigma^s_t}$ where μ^s_t stands for the average number of births of bearers of surname S over time frame t and σ^s_t for the standard deviation.

D. Additional heterogeneity analyses: across colleges

The *Grandes Écoles* constitute the royal route to elite positions in French society. I show that there remains, however, a social gradient in returns to a GE degree. In this section, I investigate the potential heterogeneity of this result or of its magnitude across colleges.

I find that the social gradient among graduates in access to elite positions varies widely across *Grandes Écoles*. Table D.1 reports estimates of risk ratios from separate regressions on sub-samples for each of the 12 colleges. *Télécom Paris* is the only school for which the main finding is reversed: graduates whose fathers held elite positions actually had less likelihood of attaining such positions than their peers. This college-specific result is surprising but may be a statistical exception due to the small numbers of graduates and members of the elite among them. Results are not significant for *ESPCI* graduates, with a particularly small sample size. Point estimates suggest greater access to the elite for graduates with fathers in the elite for the 10 other colleges. Yet, differences are not significant for sons of political and business leaders graduating from *ENS Ulm*, *ESSEC*, *ENS Cachan*, or *Mines Paris*. By contrast, sons of elite members were significantly more likely than their peers to access political or business elite positions if graduating from *ESCP* (2.2 times), 3 times more likely if graduating from *Sciences Po Paris*, 3.4 for *Polytechnique*, as much as 5.8 for *ENA*, 6.5 for *EM Lyon*, and up to 10 times for *Ponts et Chaussées*.[39]

I conclude that some colleges manage to level the playing field and offer their graduates comparable opportunities but that graduates from a few other institutions—notably *Ponts et Chaussées*, *EM Lyon*, or *ENA*—have career opportunities that differ greatly according to their social origin.[40] The data do not allow me to untangle the precise mechanisms behind these differences. These may well involve both parental and graduate characteristics (which are, to some degree, still under the control of each college through admission procedures), as well as differences between colleges in curriculum, in specific preparation for labor markets, or in the reach and effectiveness of college networks in comparison to family ones.

Moreover, the proportions of politicians or businessmen trained in each *Grande École* differ, as documented in Appendix Table B.2. Businessmen are more frequently graduates of business and engineering schools, in particular *École Polytechnique* (Table B.2c). By contrast, 12.3% of politicians graduated from *Sciences Po Paris* and 4.9% from *ENA*, against only 1.3% from *Polytechnique*, the third most important college for a career in politics (Table B.2b). I therefore complete the analysis by investigating heterogeneity between political and business elites through a focus on the most important colleges for the training of each category.

Intergenerational political elite reproduction among *Sciences Po Paris* and *ENA* graduates, and business elite reproduction among *Polytechnique* graduates are reported in Ta-

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[39]Except for the statistical power and therefore their significance, these results do not relate to the importance of each college in training members of the elite (which is reported in Appendix Table B.2a).

[40]It is notable that admissions to *Ponts et Chaussées* and *ENA* are already among the most influenced by parental education (Benveniste, 2023), suggesting that a strong origin–destination association mediated by education may operate in conjunction with a high direct residual effect of origin on destination.

ble D.2. All estimations weight cohorts similarly. Even-numbered columns add cohort fixed effects. I find that an *ENA* graduate was 37.5 times more likely than his peers to attain a national political position during his career if his father had done so. Benveniste (2023) shows that those born between 1941 and 1990 were about 250 times more likely to be admitted to *ENA* if their father had also studied there. On top of this large admission inequality, I show that even when someone outside the elite gets admitted, a degree from *ENA* still does not provide career opportunities comparable to those of children of the elite. Similarly, *Sciences Po Paris* graduates whose fathers were in politics were 22.7 times more likely than their peers to follow in their paternal footsteps. By contrast, *Polytechnique* graduates whose fathers were business directors were about 3 times more likely than their peers to become business directors themselves. Though much lower, this is still a large difference as it occurs net of education in one particular elite institution. And if we consider a narrower definition, sons of business executives who graduated from *Polytechnique* were 9.5 times more likely than their peers to become business executives too.

Table D.1: Heterogeneity by college: risk ratios of attaining elite positions for sons of the elite.

Dependent variable	Dummy variable for attaining an elite position					
Subsample of graduates from	EM Lyon (1)	ENA (2)	ENS Cachan (3)	ENS Ulm (4)	ESPCI (5)	ESCP (6)
Father in the elite	6.490*** (2.179)	5.756*** (1.341)	1.908 (1.880)	1.227 (1.489)	3.97e-07 (6.35e-06)	2.191*** (0.637)
Observations	3,664	4,365	6,946	4,158	1,611	11,905
Cohort weights	Yes	Yes	Yes	Yes	Yes	Yes
Cohort fixed effects	No	No	No	No	No	No
Grande École fixed effects	N/A	N/A	N/A	N/A	N/A	N/A

Subsample of graduates from	ESSEC (7)	Mines Paris (8)	Polytech -nique (9)	Ponts et chaussées (10)	Sciences Po Paris (11)	Télécom Paris (12)
Father in the elite	1.898 (1.705)	2.214 (2.245)	3.376** (1.882)	9.965** (10.01)	3.009*** (1.102)	0.00858*** (0.0148)
Observations	11,570	4,302	12,675	5,705	40,914	5,121
Cohort weights	Yes	Yes	Yes	Yes	Yes	Yes
Cohort fixed effects	No	No	No	No	No	No
Grande École fixed effects	N/A	N/A	N/A	N/A	N/A	N/A

Notes: *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Standard errors, clustered at the cohort level, are in parentheses. Each column from each sub-panel displays estimates from a separate regression. The weighting scheme in this analysis is constructed for each college individually and ensures that each 5-year cohort has the same weight regardless of the evolving number of graduates from the college. Similar outcomes are found when including cohort fixed effects.

Table D.2: Heterogeneity by type of elite and college: risk ratios of entering the political elite for sons of politicians graduating from *ENA* or *Sciences Po Paris*, and risk ratios of entering the business elite for sons of businessmen graduating from *Polytechnique.*

Dependent dummy for entering:	Politics				Business		Executive business	
Subsample of graduates from	ENA		Sciences Po Paris		Polytechnique			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Father in politics	42.29***	37.50***	19.44***	22.69***				
	(10.37)	(2.122)	(7.157)	(5.243)				
Father in business					3.378*	3.029**		
					(2.205)	(1.672)		
Father in business (executive)							11.35***	9.509***
							(5.488)	(3.116)
Observations	4,365	4,365	40,914	40,914	12,675	12,675	12,675	12,675
Cohort weights	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cohort fixed effects	No	Yes	No	Yes	No	Yes	No	Yes
Grande École fixed effects	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Notes: *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Standard errors, clustered at the cohort level, are in parentheses. Each column displays estimates from a separate regression. The weighting scheme in this analysis is constructed per GE and ensures that each 5-year cohort has the same weight regardless of the evolving number of graduates from the college.