The Social Circuitry of High Finance: Universities and Intimate Ties Among Economic Elites

Charlie Eaton[a]* and Albina Gibadullina[b]

June 23, 2019

Abstract

We propose that prestigious private universities and other social organizations parallel to the economy provide a social circuitry that links economic elites despite growing complexity and fragmentation in economic structures such as corporate board interlocks. We use Zelizer's circuits of commerce to theorize how such parallel social organizations help construct and bound the identities, cultures, and networks which set economic elites apart. These elite structures could be particularly beneficial to financiers such as private equity and hedge fund managers who rely on private information and trust from intimate social ties to raise capital and undertake high risk investment strategies. We use an original dataset to test if financiers are more likely to hold degrees and trustee positions from the U.S. top 30 private and top 30 public universities. Among members of the Forbes 400 list of the wealthiest Americans in 1989, 2003, and 2017, we find that private equity and hedge fund managers Americans held elite private university degrees and trustee positions at several times the rate of others on the Forbes 400, including those deriving their wealth from the technology sector. Using data for all 5,162 top 60 universities' board members from 2003 to 2017, we find that financier shares of board seats increased faster at private universities that became more selective in undergraduate admissions. The overall findings suggest that prestigious universities are especially central to the organization of financial elites.

Keywords: Financialization, elites, higher education

Wordcount: 9,716 without references, tables, or figures.

[a]Department of Sociology, University of California, Merced; [b]Department of Geography, University of British Columbia

*Department of Sociology
University of California, Merced
5200 Lake Road
Merced, CA 95340
Email: ceaton2@ucmerced.edu

Introduction

Sociologists have renewed interest in how the organization of elites contributes to variations in economic inequality across societies and over time. Scholars have offered explanations relating to elite cohesion and power that appear contradictory on their surface. There is agreement that financiers have regained preeminence among economic elites, with a growing share of profits, income, and wealth accruing to financial organizations and financial managers (Kaplan and Rauh 2009; Krippner 2011; Tomaskovic-Devey and Lin 2011). In recent ethnographic and in-depth interview studies, researchers have shown that social homophily, intimate relationships, and access to private information have aided the investment bankers and fund managers whose fortunes have grown the most (Ho 2009; Neely 2018; Rivera 2016). Others have documented the resurgent political power of financiers and other economic elites in pushing financial deregulation and tax cuts (Hacker and Pierson 2010; Hertel-Fernandez 2019; Page, Seawright, and Lacombe 2018). Yet network analyses have shown a decline in the bank-based interlocks between corporate boards that were once thought to foster and deploy financier power and cohesion among economic elites (Davis and Mizruchi 1999; Mizruchi 2013; Mizruchi and Stearns 2006). How can we reconcile these accounts?

We propose that social organizations parallel to the economy provide a social circuitry among elites with particular benefits for financiers despite growing complexity and heterogeneity in financial markets and organizations (Lachmann 2011; Lin and Neely 2020; Pardo-Guerra 2019; van der Zwan 2014). Research on embeddedness has shown the value of social ties for economic activity (Granovetter 1985; Polanyi 2001; Uzzi 1999). But studies of embeddedness tell us less. about potential stratification in embedding ties. We draw on Zelizer's

circuits of commerce (2013) to theorize how parallel social organizations contribute to the identities, cultures, and networks which set economic elites apart.

Organizations such as philanthropic and cultural societies, sports clubs, and especially universities can provide valuable and underappreciated social ties for economic pursuits (Binder and Abel 2019; Binder, Davis, and Bloom 2016; Young 2017). But these social organizations, including private universities and their governing boards, are highly stratified (Barringer and Slaughter 2016; Chetty et al. 2017; Commodore 2018; Rall, Morgan, and Commodore 2019). As a result, parallel social organizations mostly foster links within social classes. At the same time, resources from this parallel social circuitry, including private information and trust, offer greater value to elites such as financiers, whose economic strategies and positions depend more on these resources (Appelbaum and Batt 2014; Mallaby 2010; Neely 2018).

Elites have been subjected to few large scale quantitative analyses of their social ties (Page, Bartels, and Seawright 2013; Page et al. 2018; Young 2017). We overcome this obstacle by harmonizing data from multiple sources to measure if prestigious higher education affiliations are more prevalent among financiers than other wealthy elites. First, we use data from the Forbes list of the richest Americans in 1989, 2003, and 2017. Second, we link the Forbes 400 data to an original database 5,162 individuals board members of the top U.S. universities in the 2017 Times Higher Education rankings. The board member data covers all board members who served on the top 22 private universities in the U.S. in 1989, or who served on the boards of the top 30 private or top 30 public universities from 2003 to 2017.

Results of our analyses confirm that financiers are increasingly dominant among the wealthiest Americans (Korom, Lutter, and Beckert 2017), growing from 12% of the Forbes 400 in 1989 to 25% in 2017. We also find support for the contention that elite social ties are more

valuable to those financiers who rely most on private information and intimate ties to raise capital and undertake high risk strategies such as hedge fund trading and private equity buyouts (Appelbaum and Batt 2014; Neely 2018). Within the Forbes 400, these types of financiers held BA, MBA, and JD degrees from elite schools at the highest rates across all years, increasing from 42% in 1989 to 65% in 2017 – nearly twice the rate for the Forbes 400 overall and for Forbes 400 members from technology firms which also depend on highly educated workforces. Led by private equity and hedge fund managers, financiers also occupied disproportionate and increasing shares of university board seats. Private equity and hedge fund managers were more than 3 times as likely to serve on top private university boards as other Forbes 400 billionaires after controlling for total wealth, inheritance, and year fixed effects. We also find that status prestige is particularly important to financiers by showing that their share of board seats increases as admissions rates decline between schools and over time. The results are robust across a variety of model specifications including longitudinal fixed effects models.

Together, we show that non-economic organizations and especially universities can sustain elite social ties even as connective financial institutions became more fragmented. In doing so, we help to bridge economic sociology, the sociology of education, and the sociology of elites. We elaborate our contributions as follows. First, we draw on the economic sociology explain how financial deregulation increased the size and complexity of finance, but also increased the value of social ties to financiers. Second, we synthesize Zelizer's circuits of commerce theory with research about how universities confer upon students and alumni the identities, networks, and cultural capital of America's higher circles. Based on this synthesis, we propose how prior study and board membership at top universities could provide elite social ties of increasing value to financiers. After presenting our data, methods, and results, we conclude

with an appraisal of their implications for future research on elite political action, financial accumulation, and educational stratification.

Social embeddedness, private information, and trust in high finance

The deregulation of financial markets since the 1980s has expanded the size and centrality of financial markets (Krippner 2011; Tomaskovic-Devey and Lin 2011). Steep cuts to capital gains taxes in the late 1970s simultaneously allowed both investors, investment managers, and recipients of investment to accumulate more wealth from their returns (Appelbaum and Batt 2014:32; Hacker and Pierson 2010:179). Loosened regulations and the flood of capital also allowed for the growth of new alternatives to previously dominant commercial banks. For example, independent private equity and hedge funds emerged to use newly allowed investment techniques with capital from wealthy individuals, university endowments, and pension funds. The new funds have less centrality in corporate board interlock networks than previously dominant commercial banks (Mizruchi 2013), raising questions about how they cultivate sources of private information and trust with investors.

Social embedding in corporate board interlock networks provided commercial banks with private information and trust that are thought to provide advantages in economic and investment transactions (Granovetter 1985; Uzzi 1999). Yet the business model and comparative success of private equity and hedge funds is thought to depend heavily on private information and trust between investors and investment managers (Appelbaum and Batt 2014; Cao and Lerner 2009; Mallaby 2010; Neely 2018). This presents a puzzle: how did these fragmented funds raise capital and outsmart markets if they lacked the board interlock ties of commercial banks?

Gone are the days of tycoons like J.P. Morgan who in the early 1900s exercised direct control over many industrial monopolies through what Brandeis called a money trust (1914). Mizruchi has argued, however, that commercial banks benefited from their connective role among corporate elites at least into the 1970s. Even after reforms restricted coordination between banks, major corporations routinely appointed commercial banking executives to their boards "to provide financial advice, to lend prestige to the firm, or to help secure access to capital" (Mizruchi 2013:124). Banks reciprocated with appointments to their own boards. This led financial institutions to remain the most central organizations in the interocking network of U.S. corporate boards. This gave commercial bankers the greatest access to the trust, private information, and cognitive range fostered by interlock networks (Mizruchi 2013:129).

Information transmission and cognitive range from interlock centrality is particularly beneficial to financiers because of their role as capital intermediaries for diffuse people, companies, and governments in an array of markets. U.S. commercial banks have been prohibited from owning stock in nonfinancial corporations as a condition of depository insurance since the financial crises of the 1930s (Mizruchi 2013). Nevertheless, commercial banks can utilize private information to assess credit risks and investment potential. These assessments valuable for managing portfolios for investors through banking trust departments and for making loans to businesses and individuals (Berger et al. 1995). Firm and industry specific knowledge can inform bank choices on individual investments and loans while economy-wide cognitive range can help a bank adjust for macroeconomic trends across a range of products and industries.

Starting in the 1980s, the centrality of commercial bankers in corporate board interlocks began to decline (Davis and Mizruchi 1999) as deregulation provided corporations with alternative sources of capital (Berger et al. 1995). Investment banks became more important to

corporate finance via the issuance of commercial paper (Fligstein and Habinek 2014). Wealthy individuals, college endowments, and pension funds meanwhile shifted much of their investment portfolios into private equity and hedge funds (Appelbaum and Batt 2014; Davis and Thompson 1994; Lerner, Schoar, and Wang 2008; Mallaby 2010). Neither investment banks nor private equity and hedge funds attained comparable centrality in corporate interlock networks. If these interlocks provided crucial information to financial managers, the new funds were flying blind.

Leverage, skin-in-the-game, and private information in private equity and hedge funds

While private equity and hedge fund managers lack the corporate interlock centrality of commercial banks, we argue that they have an even greater preoccupation with the kinds of social ties and private information that are expected from interlocks. This new generation of fund managers crave social ties and private information more strongly for three reasons. First, unlike commercial banks, they have a core business model that tries to use private information to outsmart public markets. Second, the compensation structure for the new fund managers differs from that of commercial bankers, giving them skin-in-the-game through the investment of their own equity and a large share of their investors returns. Third, the use of debt leveraging for investments intensifies the benefits of trust and reciprocity which can help a fund manager retain investors and staff even as leverage leads to greater swings between losses and returns.

The centrality of private information to private equity has been clear since a new generation arose via the hostile takeover movement of the 1980s (Davis and Thompson 1994). The original idea motivating private equity fund managers was public stock markets undervalued corporations because stock investors misperceived their value based on public information (Jensen and Meckling 1976). Either because they lacked private information or mis-interpreted

public information, stockholders allowed executives to expand into unprofitable industries, concede too much to labor unions, or forgo adoption of new technologies or efficiencies (Useem 1993). Financial deregulation made it easier for private equity investors to raise enough capital to buy a majority share in such undervalued corporations and take them private (Appelbaum and Batt 2014:22). Private equity investors then implemented the corporate restructuring that their private information suggested would increase the company's value.

A recent private equity transaction by Wilbur Ross illustrates the persistent importance of private information to the private equity business model. In 2002, Ross tapped insider knowledge of consideration by President George W. Bush of tariffs on Chinese steel to bolster the U.S. steel industry in 2002 (Appelbaum and Batt 2014:61). Ross proceeded to acquire the giant LTV Steel corporation in February. One month later, President Bush imposed a 30% tariff. Ross then sold his steel companies for earnings of $4.5 billion. Venture capitalists, who we consider part of the private equity sector, similarly draw on private information to assess potential investments in startups which are not subject to the same reporting requirements as publicly traded corporations (Gompers and Lerner 2001:161).

Taking off later in the 1980s, hedge funds differ from private equity in that they tend to invest in stocks and various types of derivatives rather than purchasing entire companies. This makes hedge fund investments more liquid. Nevertheless, hedge funds also trade on private information possessed by other economic and political elites (Gao and Huang 2016; Mallaby 2010). For example, Michael Lewis has traced how an array of hedge fund investors such as John Paulson decided to bet against mortgage backed securities (MBS) after learning through their social networks that MBS were based on gross misestimations of mortgage default risk (2011:105).

The salience of private information to private equity and hedge fund managers is also elevated by a compensation structure that gives them skin-in-the-game for their investments. The general partners (GPs) who co-own and manage funds typically provide 2% of the equity for their portfolios, but receive compensation in a 20% share of all returns from fund investments. The remaining equity managed by general partners is provided by limited partners (LPs) such as wealthy individuals and pension funds. This means that GPs can receive outsize returns if they are able to obtain and exploit private information for a successful investment. GPs also stand to lose their own equity if an investment goes bust (Appelbaum and Batt 2014). This compensation structure increases the value of private information to GPs relative to bankers earn through salaries and bonuses.

Finally, the aggressive use of debt to drive up fund returns increases the value of trust and reciprocity between fund managers, their staff, and their investors. Private equity and hedge fund bets can pay off at a previously uncommon scale because they yield returns not just from investors' capital, but also from the money borrowed by the fund using investor capital as collateral. The large amount of debt employed with these investments, however, also means that investors could suffer larger losses if the bets do not pan out. Even if returns even out over the longer run, fund managers have to prevent staff and investors from abandoning ship or declining to reinvest amid volatile swings between windfall profits and losses. For this reason, Neely has found that hedge funds can take a patrimonial form (2018). Funds are commonly founded with capital from a patron with longstanding social ties and trust with a fund manager. Fund managers also value social ties, trust, and loyalty in hiring and promotion choices.

Without the corporate interlock centrality of their commercial banking predecessors, how do private equity and hedge fund managers cultivate social ties with other economic elites and

obtain private information? Mizruchi has suggested that technological change and computerization made financiers less dependent on the information yielded by corporate interlock centrality (Mizruchi 2013). But even important accounts of financial automation suggest that the technologies of exchange still rest upon human organizations . We propose that the private equity and hedge fund managers have increasingly drawn on intimate, college-based ties that have long held exceptional value for financiers.

Elite universities and financiers' intimate ties

Given the unusual value of private information, trust, and loyalty for private equity and hedge fund managers, we expect that the wealthiest among them are more likely to have benefited from elite social ties than other members of the very rich. Theories of embeddedness help explain the value of these social ties (Granovetter 1985; Polanyi 2001; Uzzi 1999; Young 2017). Existing concepts of embeddedness, however, have less to say about potential closure and stratification in embedding ties. To theorize how universities may help to construct and bound the elite social ties of financiers, we draw on Zelizer's *circuits of commerce* (2013). We use this framework to conceptualize the importance of universities in producing and bounding the identities, cultures, and networks of financial elites.

Like the differentiation of ties by the transistors of electronic circuits, Zelizer's circuits of commerce differ from networks in that social identities and culture shape variations in the content of "incessantly negotiated" transfers between different participants in the circuit (Zelizer 2013:306). Within the circuit, relationships can vary in their intimacy and power asymmetries. We can see the flexibility and dynamism of social ties in Zelizerian circuits when financiers simultaneously employ highly intimate relationships with major investors and impersonal ties

with bond buyers, derivative traders, the staff of an acquired company, or the underlings of their own hierarchical financial organization (Pardo-Guerra 2019). Zelizer argues that intimate ties are by definition social relations that convey private information. Impersonal ties convey only widely available information. Zelizer proposes that financial traders form circuits with both intimate and impersonal ties by using financial transactions and messaging boards for negotiated exchanges of not only currencies, but also information and reputation (Cetina and Bruegger 2002; Zelizer 2013:305).

Universities in the social circuitry of finance

Universities construct elite social ties that could be wellsprings of private information and investor relationships for ascendant private equity and hedge fund managers. Yet scholars of embeddedness and circuits of commerce have given little attention to social and educational organizations like universities that are superficially more distant from economic activity. Perhaps because suitable measures are difficult to come by, few studies have considered how economic action may be shaped by diverse social structures such as residential neighborhoods, K-12 education, sports, popular culture, and leisure – or the colleges and universities through which all of these social structures intersect (Stevens, Armstrong, and Arum 2008). Instead, researchers have tended to measure embeddedness in the duration and multiplexity of economic ties such as the consistent patronage of a commercial bank for all of one's banking (Uzzi 1999).

Researchers have recently shown renewed interest in how relationships forged around elite private universities play an especially prominent role in high finance. Even as the power of the U.S. financial sector waned in the 1950s, Mills observed in *The Power Elite* that ties to the most prestigious private universities had long helped the nation's leading financiers to preserve

their position atop a power triangle of corporate executives, politicians, and generals (2000:106–7). Mills found that half of the 90 richest Americans at the time who had attended college had gone to the Ivy League, with almost a third having gone to Harvard or Yale (2000:106). Of the broader elite, he wrote, "They belong to the same associations at the same set of Ivy League colleges." But he also noted that the 10 top financiers of 1905 had sent 12 of their 15 sons to Harvard or Yale. The other three went to Amherst, Brown, and Columbia (Allen 1935). In a polemic against Wall Street, Lewis noted that 40% of Yale's graduating class of 1986 applied to work at a single investment bank, First Boston (2010). Rivera recently documented that this tradition remains alive and well in the Ivy League, with 70% of Harvard graduates typically applying to work for a top financial or consulting firm (Rivera 2016).

Qualitative investigations have found that the managers of elite financial firms intentionally recruit and associate themselves with the most prestigious universities precisely in order to delineate their elite status. Binder and her collaborators have shown that, in forging an elite identity, college students learn to desire prestigious jobs – especially in finance, consulting, and the technology sector (Binder and Abel 2019; Binder et al. 2016). Firms try to associate themselves with high status schools through corporate sponsorships and job recruitment rituals that Binder, Davis, and Bloom have referred to as "mutual status baptism" (2016). These joint rituals draw on processes that Binder and Abel have documented in which students at prestigious colleges engage in meaning making to define themselves as the right kind of an elite – one that is well rounded, open-minded, and generally better than "people who attend slightly less all-around-excellent institutions" (2019:4).

The interaction between financiers and elite universities in boundary making also has a self-reinforcing quality. Senior private equity and hedge fund managers migrated in large

numbers from the Ivy League-dominated investment banks of the 1970s and 1980s (Lewis 2011; Mallaby 2010). In turn, Neely found that hedge funds recruit overwhelmingly from their elite college alumni networks (2018). Investment managers told Neely that recruitment on the basis of social likeness helped their teams to weather long hours and the volatile ups-and-downs hedge fund investing. Rivera found similar practices at the investment banks where many financiers worked prior to founding the first private equity and hedge funds (Rivera 2016).

Neely has also documented that investment managers draw on heavily social ties, including those formed via prestigious college's alumni networks, to raise capital for their investments.(Neely 2018) Consistent with Neely's account, Yale alumnus and hedge fund billionaire Tom Steyer told the *New York Times* that he began his courtship of investment by the Yale endowment in his hedge fund after learning of fellow Yalie David Swensen's appointment to lead the school's endowment at a 1988 homecoming football game (Fabrikant 2007; Mallaby 2010:4587). Two years later, Swensen provided Steyer's Farallon Capital with $300 million, a third of its total investment capital.

Steyer's disclosure to the *Times* also illustrates the cultural role of universities in the transmission of private information through Zelizer's "incessant negotiated" intimate ties. Steyer only related the story of Yale's early investment in his fund as private information which could convey the status honor of his most important investor. "David told us: 'I don't see why we would give you any money. You might shut down after a bad year,'" Steyer told the *Times,* validating Swensen's shrewdness as a trail blazing investor. Swensen finally invested after Steyer "swore that he wouldn't shut down." Consecrating the intricate exchange of capital, private information, and reputation, the *Times* entitled the story with Steyer's interview, "For Yale's Money Man, a Higher Calling." The private and public relationship negotiations of Steyer

and Swensen illustrates how the transmission and payoffs of private information can be much more complex than when Ross anticipated the imposition of steel tariffs by the Bush administration.

There are then two processes working together. First, financiers engage in elite boundary making through their own college experiences and recruitment from prestigious universities. Second, ivory tower ties provide benefits for private equity and hedge funds in the forms of private information, trust, and access to capital. We argue that these joint process together draw more elite college graduates into high finance and amplify the economic advantages of their elite educational backgrounds. We therefor expect that the wealthiest private equity and hedge fund managers will tend to have elite private university degrees at higher rates than comparably wealthy Americans from other financial and non-financial economic sectors.

The University Board as a Nexus of Financier's Elite Ties

Once they have a high status job, former students further maintain their elite identities and connections through formal alumni networks and status signals ranging from sports fandom and social media profiles to collegiate apparel and bumper stickers (Lifschitz, Sauder, and Stevens 2014; Stevens et al. 2008). The governing boards of top universities, however, may offer one of the most exclusive and prestigious sites for financiers to continually negotiate their elite status and relationships after college (Barringer and Slaughter 2016). Parallel to the increasing wealth and power of financiers in the U.S. economy, Jenkins has shown that the top 23 private research universities increased the share of their board seats going to financiers from 20% in 1989 to 39% in 2014 (Jenkins 2015). We expect this overall growth in financiers on university boards is driven by increasing representation of private equity and hedge fund managers. We

also propose that this trend will be more pronounced at more elite universities because 1) they are the alma maters of the wealthiest financiers who can make the financial contributions expected of board members, and 2) because more elite university board seats will be seen as more valuable to financiers' pursuit of wealth and status.

Published work on university boards primarily takes the form of guides for university trustees (Chait, Holland, and Taylor 1991; Gale 1993; Ingram 1995; Kerr and Gade 1989). The authors of these guides emphasize the role of trustees in "preserving, reshaping when necessary, and achieving the institution's mission" (Grant Thorton 2016). Other primary responsibilities include selecting the president of the university, approving the university's budget, overseeing management of the endowment, and fundraising. Private university trustees also exercise the critical responsibility of selecting new board members to fill vacancies – a mechanism by which they reproduce themselves as an elite body. Having themselves forged elite identities and prestigious career goals in college, trustees are likely to continue this process on university boards and seek out ascendant economic elites to join their boards, thereby validating the elite status of current board members.

The top responsibility of fundraising by trustees, however, reveals how university boards are especially central organs for weaving and maintaining social ties between elites. For example, private equity billionaire Robert Bass joined Stanford's board in 1989 having previously attended its business school. By 1991, Bass had given $25 million to the university. Steyer similarly has given tens of millions of dollars to Stanford, where he served on the board from 2012 to 2017, as well as millions to Yale. Harvard alumnus and hedge fund investor John A. Paulson, who serves on the Dean's Advisory Board of Harvard Business School, gave the

university a record-setting $400 million donation in 2015, just a few years after he made billions by betting on the collapse of mortgage-backed securities.

Social scientists have shown that the giving of gifts is motivated by altruism, expected reciprocity, and social status accrued those who engage in visible acts of generosity (Barman 2017:275; Blau 2017; Richard 1970; Zelizer 2009). But even altruism is intensified when a donor can see herself in the recipients of a gift. Trustees mobilize gift giving as a powerful shared experience among elites – donating substantial sums themselves and personally asking other wealthy alumni to match their donations. Colleges typically also confer direct status benefits to those who do give by naming buildings, scholarships, and endowed chairs after the donor. Fundraising campaigns then reinvigorate deep ties and shared identities forged while elites attended their alma mater – a Latin phrase that translates directly as "nourishing mother." By donating to the college they once attended, elites then are financially supporting the same mother that once cared for them and who may well tend to their own children.

Scholars have found that similar processes occur in other philanthropic enterprises within high society (Beisel 1998; DiMaggio 1982). As Ostrower concluded from a study of 99 wealthy donors in New York, "Nonprofit organizations are focal points around which upper-class life revolves. Through their philanthropy, wealthy donors come together with one another and sustain a series of organizations that contribute to the social and cultural coherence of upper-class life" (1995).

Board members of top private universities have maintained the function of these schools as restricted guilds for training elites by preserving policies such as legacy admissions (Karabel 2005; Stevens 2009). The boards of top private schools have also maintained admission preferences for students who engage in upper class sports such as rowing, lacrosse, and sailing –

social backgrounds that elite financial firms also tend to favor when hiring (Rivera 2016). In addition to maintaining legacy admission policies, the board members and major donors of elite universities have been found to receive additional admissions preferences for their children. For example, Stanford admitted one of Bass's children in 1998 despite grades and an SAT score (1220) that were below the average for admitted students and lower than those of seven of her high school classmates who were denied admission (Golden 2006).

These social and organizational dynamics of university boards suggest that the increasing wealth of private equity and hedge fund managers would contribute to a growing representation on university boards from the 1990s and onward. Representation of these financiers may also be higher at more elite schools. There are two potential mechanisms for these tendencies. First, financiers could attain higher levels of representation at more elite schools because the processes of social closure described above will lead to alumni from the most elite schools making up a disproportionate share of the wealthiest private equity and hedge fund managers. This will provide a larger pool of financiers from which elite schools can cull board members with the greatest means to aid university fundraising.

Second, financiers could perceive more elite university board seats as more valuable to their pursuit of wealth and status. This mechanism should be observable indirectly in that private equity and hedge fund representation should increase faster within schools that have more positive trends in their prestige, which we can measure annually through their admission rates. Increases in prestige since 2000 will not boost the number of financiers who graduated from a school in earlier years and went on to earn enough wealth to make them a strong candidate for board membership. A relationship between increasing prestige and financier board membership

since 2000 would then reflect a particular attraction by private equity and hedge fund managers to the elite status and social ties that come with board membership.

Board membership and alumni trends may be quite different at public universities. Public universities have less exclusive social charges than private institutions as well as different governing board structures (Chetty et al. 2017; Eaton 2016; Nations 2018). Across public institutions nationally, approximately 50% of board seats are appointed by elected state governors (Madsen 1997; Toutsi 2010). In some states, such as Michigan and Wisconsin, voters directly elect their public university boards. Governors and other state-wide elected officials also commonly have automatic seats on public university boards. The remaining seats on public university boards go to representatives of constituencies through a representative election or deliberative process. Depending on the state, represented constituencies include students, staff, and faculty. While regional economic elites may gain disproportionate representation on such public boards, they are unlikely to be central structures in the social circuitry of finance.

Research Design

Sample selection and data collection

To analyze university-based ties among economic elites, we use an original database of the economic and educational affiliations of the 400 richest Americans in 1989, 2003, and 2017. This provides us with data at regular intervals since the initial rise of private equity and hedge funds in the 1980s. We also employ original data on the governing boards of the 30 top private and 30 top public universities from 2003 to 2017, as well as the 22 top private universities in 1989. Our data on the richest Americans originates with Forbes 400 list. We supplemented this data by coding the schools from which Forbes 400 individuals had bachelor, MBA, and law

degrees. We then coded the primary economic sector from which each Forbes 400 member attained their wealth and the particular type of financial firm affiliations for those who derived their wealth from finance.

We constructed the parallel dataset of university governing board members over time to analyze shifts in board membership. We gathered the names and primary economic affiliations for board members for all 30 private institutions in the top 200 of the Times Higher Education World University Rankings and all 30 public university systems that include a university in the top 250 of the Times Higher Education World University Rankings for 2016-2017 (see Appendix 1 for a full list).[1] Public university boards sometimes govern multiple institutions in the top 250, such as the University of California. We use these as natural cut off points because Times Higher Education does not assign specific rankings to schools above the ranking of 200. Rather, Times Higher Education groups schools into brackets of 50 for rankings above 200, such as 201 to 250 and 251 to 300. We include all public systems with schools in the 201 to 250 bracket in order to have an equal number of boards for public and private institutions in the sample. We use the Times Higher Education rankings so that analysis could easily be extended to institutions from outside of the U.S. in future studies. For each board, we collected data on board membership for each year beginning in 2001, the first year that full data is available for admissions rates, a central covariate in our analysis.

The data on individual trustees were collected using archived university web pages provided by the Wayback Machine (http://web.archive.org/). We currently have full board data for 29 of the 30 top private institutions from 2003 to 2017 and for all 30 institutions from 2008 to

[1] Though it is sometimes considered to be a "public related" institution, we consider University of Pittsburg to be a private institution because it has a self-selecting board that originate prior to the formalization of the school's relationship with the state of Pennsylvania.

2017. We have board data on all of the top 30 public systems from 2003 to 2017. Additionally, we harmonized Jenkins' (2015) board membership data for 22 private research universities in our sample. The Jenkins data is for 1989 and 2014 only. Harmonization with our database allows us to capture changes in Forbes 400 board membership and overall board composition between 1989 and when our annual time series begins in 2003.

We also linked our board membership data to annual data for indicators related to the prestige and exclusiveness of universities. We obtained this data for 2001 through 2017 from the Integrated Postsecondary Education Data System (IPEDS). We used the IPEDS "UnitID" for each campus to match data from IPEDS with our original dataset. Summary statistics for all variables are presented in Table 1. Individual-level data is first reported for Forbes 400 members. Summary statistics for board-level data are then broken out for by the public and private universities among the institutions for which we have data. We will discuss the variables in further detail before outlining our analytic procedures.

<TABLE 1>

Measures of Economic and Degree Affiliations

We use data on Forbes 400 degree holding and university board membership to assess potential industry and finance-based variation in university-based relationships among the very rich. We first coded the primary economic affiliation of each member of the Forbes 400 and each member of the boards of the 60 universities in our sample. Based on the provided biographies of university trustees on archived university web pages, we identified a primary organization for which the trustee worked or had an income-generating affiliation. In cases when such information was not available on university web pages, we used internet search engines to

identify board member economic affiliations via Bloomberg executive profiles and archived websites for the firms to which board members were affiliated. Following Jenkins's (2015) methodology, we coded each economic affiliation as finance or non-finance and were able to identify vocational backgrounds of 5,125 unique board members. We further broke down financial affiliations into private equity, hedge fund, and "other" types of financial organization. We then used board member affiliation data to calculate annual, board-level shares of board members and board officers primarily affiliated with 1) private equity, 2) hedge funds, 3) "other" financial organizations, and 4) non-financial organizations.

Ties leading to university board membership may originate during undergraduate or graduate study, before a career in finance or another field. We therefore also coded whether board members received a degree from the institution on whose board they serve. We also obtained Forbes data on each list members estimated wealth for each year of data and whether most of their wealth was inherited.

Measures of Prestige in University Ties

We are primarily interested in how ties to prestigious universities may provide benefits to private equity and hedge fund managers. To analyze these links among the Forbes 400, we coded the universities from which each Forbes 400 had received a degree. This allows us to measure whether each Forbes 400 member has a degree from an Ivy League institution, a longstanding category for university status in U.S. higher education. We use Ivy League degree holding over other status measures for degree-granting institutions because most Forbes 400 members received degrees prior years for which other comprehensive measures of prestige are available.

To analyze the links between financial affiliation and elite university ties involving university board membership, we use undergraduate admission rates as principal indicator of prestige for the university of board membership (Karabel 2005; Sauder and Espeland 2009; Stevens 2009). Undergraduate admissions data is available for all schools in our sample for 2001 onwards from IPEDS. Because public university boards commonly govern multiple universities, we use data for each public university board's highest ranked institution according to Times Higher Education rankings. For example, for the University of California system, our data on eliteness is for UC Berkeley. We use the admissions rates of the most selective institution within a system because the prestige of the system is likely to derive in large part from its most elite campus. We use admissions rate rather than published rankings such as Times Higher Education because it is measured more consistently over time for all U.S. postsecondary institutions, and because most ranking calculations turn heavily on admission rates. We present summary statistics in Table 1 for all covariates. This shows wide gaps in admissions rates between public and private universities, with top 30 public institutions admitting an average of 61% of applicants while private universities accepting 24%.

We obtained annual data from IPEDS to control for other potentially salient university characteristics. These controls include total undergraduate enrollment, the share of undergraduate enrollments from underrepresented race and ethnic groups, the share of students receiving means-tested federal grant aid, total university revenue, and total endowment assets.

Cross-Sectional and Longitudinal Data Analysis

We first present cross-sectional descriptive and regression estimates of economic affiliation, degree holding, and university board membership at the individual level for Forbes

400 members in 1989, 2003, and 2017. This helps us test the theorized relationships between the wealthiest fund managers, their educational background, and their ongoing university ties at regular intervals during the rise of private equity and hedge funds.

We subsequently present descriptive data on university board composition over time and on the bivariate relationship between university prestige and financier representation on university boards. These estimates should reflect both of the potential mechanisms that may be at play: 1) that the wealthiest financiers have attended the most exclusive universities at higher rates than other economic elites, and 2) that the particular value of prestige and ties to other elites will attract financiers to serve on more exclusive university boards at higher rates. We also assess the first mechanism by measuring the rate at which board members have degrees from the institution on whose board they serve.

To probe the second mechanism more deeply, we then turn to longitudinal panel models of the relationship between finance board shares and our indicator for university selectivity from 2003 to 2017. These models measure the relationship between board composition and admissions selectivity within schools over time. The intuition behind the models is that change in prestige reflected in admissions rates from 2003 to 2017 will not influence the share of alumni who graduated before 2003 and then went on to make financial fortunes. Because it takes time to amass a financial fortune, the vast majority of the potential pool of board members should hail from this pre-2003 period. The relationship between financier board shares and changes in admissions rates and prestige from 2003 onward should then mostly reflect whether increases in prestige attract financiers to serve at higher rates because of the perceived benefits for financiers' status and economic pursuits.

In order to better isolate a potential relationship between financier board membership and university prestige, we estimate panel models with university-level (UnitID) fixed effects, year fixed effects, and robust standard errors clustered by UnitID and year. These model specifications have the advantage of controlling for potential confounding but unobserved, time invariant factors (Morgan and Winship 2007). The models also control for total undergraduate enrollment, share of students who receive need-based federal grant aid, share of students from underrepresented race and ethnic groups, total revenue, and total endowment assets.

Results

Financiers and Elite University Ties in the Forbes 400

Financiers increased as a share of Forbes 400 members from 1989 to 2017 through wealth accumulation by private equity and hedge fund managers. Figure 1 presents the share of Forbes 400 members with technology, private equity and hedge fund, and other finance affiliations in 1989, 2003, and 2017. Figure 1 also presents the combined share of Forbes 400 members from private equity and hedge funds and other finance as the "total finance" share. For comparison purposes, we include Forbes 400 from the technology sector as another economic grouping that economists have suggested might particularly benefit from skills or aptitudes associated with elite education (Goldin and Katz 2009; Lerner et al. 2008). In 1989, 12.5% of Forbes 400 members were financiers with a majority of these financiers hailing from subsectors other than private equity and hedge fund investment. Financiers' overall share of the Forbes 400 increased to 21.25% in 2003 and 25% in 2017. The share of Forbes 400 members from financial subsectors other than private equity and hedge funds increased from 7.25% in 1989 to 10.75% in 2003. But the share of Forbes 400 members from other subsectors of finance then fell to 8.75%.

The share of Forbes 400 members from private equity and hedge funds meanwhile grew from 5.25% in 1989 to 10.5% in 2003 and 16.25% in 2017. The share for the technology comparison group increased from 4% in 1989 to 10% in 2003 to 13.75% in 2017.

<Figure 1>

Elite university degree holding was also higher among private equity and hedge fund managers across all years and increased between 2003 and 2017. Figure 2 shows that 42.9% of Forbes 400 private equity and hedge fund managers held bachelor degrees from top 30 private universities in 1989 compared to just 31% of other financiers, 31.2% of technology billionaires, and 26.3% of other Forbes 400 members. Top private university MBA degrees were held by 26.6% of private equity and hedge fund managers in 1989 compared to 13.8% of other financiers and just over 6% of technology and other Forbes 400 members. Elite private bachelor degree holding among private equity and hedge fund managers increased by 22 percentage points to 64.6% in 2017. Elite MBA holding among this group of financiers similarly increased 17 percentage points to 46.2% in 2017. In both cases, most of the increase occurred from 2003 to 2017. Elite degree holding rates remained flat for the other Forbes 400 groups except for a 5% bump in elite BA degrees among technology billionaires in 2017 and a 12 percentage point increase in MBA holding among other financers to just under 26% in 2003 and 2017. Forbes 400 members hold elite law degrees at much lower rates, possession of such degrees also became highest among financiers with 9.2% of private equity and hedge fund managers and 8.6% of other financiers holding such degrees in 2017.

<Figure 2>

Consistent with the perspective that elite university social ties provide economic value beyond the professional skills conferred by higher education, Forbes 400 members hold degrees

from top 30 public universities at much lower rates. Figure 3 shows that bachelor degree holding from these universities remained relatively flat across all three years, peaking at 19% for private equity and hedge fund managers in 2003, for tech at 22.5% in 2003, for other financiers at 17.1% in 2017, and for other Forbes 400 members at 15.3% in 2003. The highest rate of MBA holding from top 30 public institutions of any group in any year was 2.9% in 2003. The highest rate of law degree holding from top 30 public institutions was 4.8% for private equity and hedge funds in 1989 and 2003.

<Figure 3>

The results of logit models for university board membership by Forbes 400 members also provide evidence that financiers have particularly strong social ties involving elite private universities. These models suggest, however, that much of this relationship occurs through their high rates of elite university degree holding. Presented earlier, Table 1 shows that 13% of Forbes 400 members served on top 30 private university boards. We present odd ratios for 5 logit models in Table 2. The models estimate the probability that a Forbes 400 member will serve on a top 30 public or top 30 private university board based on financial sector affiliations and other covariates including controls for total wealth, inherited wealth, and year fixed effects.

<Table 2>

Models 1 through 4 show that financers are much more likely to serve on top 30 private university boards than other Forbes 400 members. First, Model 1 estimates that financiers are 2.45 times more likely to serve on private boards than other Forbes 400 members when controlling for inherited wealth and year fixed effects. Tech Forbes 400 members are not meaningfully more likely to serve on university boards. Model 2 then adds a control for Forbes reported net worth which has no meaningful estimated association and does not reduce or

weaken the estimated probability of financier board membership. Model 3 estimates separate probabilities of board membership for private equity and hedge fund managers versus other financiers. This reveals that private equity and hedge fund managers are 3.15 times more likely to serve on private boards than non-financial Forbes 400 members. Other financiers are estimated to be 1.76 times more likely to serve on these boards, but the estimate is slightly below a .1 confidence threshold.

Model 4 adds covariates for top 30 public and top 30 private bachelor degree holding and top 30 MBA holding. Indicators for public MBA holding are not included because no public MBA holders served on any public or private top 30 university boards in any year. Those Forbes 400 members with top 30 private bachelor degrees are estimated to be 8.74 times more likely to serve on top 30 private university boards than others. Those with top 30 private MBAs are 2.79 times more likely to serve on these boards. Adding these covariates reduces the estimated odds ratio for private equity and hedge fund managemers to 1.67 with significance just below the .1 confidence threshold. This indicates that financier probabilities for university board membership are largely elevated by their high rates of alumni status for top 30 private universities. Model 5 shows reports odds ratios for public university board membership in 2003 and 2017, the only years in which we have data for public university board membership. No coefficients are reported for finance affiliations or MBA holding because no Forbes 400 financiers or MBA holders served on public university boards in any years.

Financier Membership on University Boards and School Prestige

The logit models of Forbes 400 data suggest that financiers dominate elite private university boards largely because of their alumni status. Analyses of broader board data,

however, suggest that higher prestige also attracts more financiers to university boards. Consistent with their less exclusive social charges and appointment processes rooted in the broader democratic polity, public universities had few financiers on their boards (Chetty et al. 2017; Eaton 2017; Nations 2018).

The overall share of board members from finance increased steadily at top private universities from 1989 to 2017. Figure 4 presents the share of board members from finance for three groups of universities. First, lines with circled markers report board shares from finance for the top 22 private universities for which Jenkins collected 1989 data (2015). This shows that the share of board members from all of finance for these schools increased from 17% in 1989 to 29% in 2003, plateauing at 35% since 2014. Roughly half of this increase came from growth in private equity and hedge fund manager board membership which increased from 3% in 1989 to 9% in 2003 and to 18% since 2013. We only have full data for all top 30 private universities and top 30 public universities for 2003 onward. Top 30 private universities had equivalent average financier board shares in 2003 as the top 22 private institutions and increased only slightly slower from 2003 to 2017. Top 30 public university board shares from finance are shown to be flat with overall finance representation hovering between 7% and 10% with private equity and hedge fund representation ranging from 1% to 3%.

Consistent with our results using Forbes 400 data, board membership is highly associated with alumni status across different types of economic affiliations. Figure 5 reports the share of board members who were alumni by economic affiliations for top 30 private and top 30 public universities. Alumni status is most common among private equity and hedge fund managers with 85.5% of these private university board members and 87.5% of these public university board members holding non-honorary degrees from their board's institution. Among other financier

board members, 80% were alumni for the private universities and 72.7% were alumni for the public institutions. For non-finance board members, 73.3% were alumni on private boards and 65.3% were alumni on public boards. We do not have technology sector affiliation data for this larger broader data set on university board membership.

<Figure 6>

In addition to alumni links, we find that greater university prestige is associated with higher board representation. We first estimate this cross-sectionally using data from 2003 to 2017, the only years in which both board and admissions data are available. Figure 6 presents these estimates in separate panels for public and private universities for a 2003 to 2010 period and a 2011 to 2017 period. Each circle represents a university-year observation with schools plotted within each panel on the Y-axis according to the percent of their board members who are private equity or hedge fund managers. Schools are plotted on the X-axis according to their undergraduate admissions rate or according to the flagship admissions rate if they are a public system. The red line illustrates the best-fit line estimated using OLS regression for the relationship between financier board share and admissions rates.

<FIGURE 6>

The top row of panels in Figure 6 shows that public universities with less selective admission rates had fewer private equity and hedge fund managers in both periods. The bottom row of panels shows an even stronger negative association at private universities between financier board membership and admissions rates, especially in the period since 2011. When we add year fixed effects to a cross-sectional estimates of this relationship, 10 in the first period and -.06 in the second period for public universities. The estimated slope of the fitted regression line is -.09 in the first period and -.26 in the second period for private universities. In other words,

private equity and hedge fund board shares tended to be 2.6 percentage points higher when admissions rates were 10 percentage points lower than at other private universities in the 2011 to 2017 period. These estimates have a p-value of below .1 in the period before 2011 and below .05 in the period after 2010 based on robust standard errors clustered by school.

Longitudinal fixed effects models provide more robust evidence that prestige attracts elite financiers to university boards. Table 3 presents estimates for two panel fixed effects models for the share of university boards from private equity and hedge funds. Model 1 estimates the association with financier board shares for admissions selectivity while including controls student body size and composition, endowment size, and total university revenue as well as school and year fixed effects. Under these specifications, Model 1 estimates coefficient of -0.10 for the relationship between financier board share and university admissions rates. Model 2 adds an interaction term for public and private university ownership. This reveals that the estimated relationship occurs entirely through private universities with an interacted coefficient of -.25. In other words, financiers' board shares increased by 2.5 percentage points within schools over time for every 10 percentage point decline in admission rates. The p-values for these coefficients are less than .01 and less than .001 respectively. We do not report coefficients for control variables because they do not indicate statistically significant and consistent relationships across the two models.

<Table 2>

Conclusion

While we find much stronger links between financiers and elite universities than among other elites, we do not argue that top private universities caused the rising power and wealth of

private equity and hedge funds. As others have shown, the rise of private equity and hedge funds originated in the financial deregulation, tax cuts, and distributional struggles of the late 1970s and early 1980s (Hacker and Pierson 2010; Krippner 2011; Tomaskovic-Devey and Lin 2011).

The tight links between financiers and prestigious schools, however, provide structures by which private equity and hedge fund managers could access valuable private information and ties to other elites without the corporate board interlock centrality that commercial bankers once enjoyed (Davis and Mizruchi 1999; Mizruchi 2013). We build on prior studies that have shown how elite universities help to construct the identities and culture of financiers which bound and stratify access to these embedding ties (Binder and Abel 2019; Binder et al. 2016; Neely 2018; Rivera 2016). In doing so, we show how universities and other social organizations construct a parallel social circuitry for high finance which can help financiers pivot between intimate ties to investors and other economic elites and the impersonal relationships that are commonly associated with financial markets (Zelizer 2013).

The social closure that we have documented in high finance resembles how Mills characterized the real but penetrable boundaries of American elites in the 1950s. For the elite of that period, Mills wrote that, "the walls are always crumbling" and "that top floor is always being renovated" (2000:49). Mills stressed that in the U.S., "sheer, naked, vulgar money" allowed those who are not "high born" to buy themselves one of the remodeled penthouses atop the elite skyscraper. But he also saw that prestigious universities sometimes offered guest passes for male social climbers to enter high finance and obtain the vulgar money needed to buy a permanent residence among elites.

U.S. higher education, however, still offers few opportunities for those outside of America's already rich, upper middle class, and racially advantaged to renovate their way into

the financial elite. Chetty et. al. have shown that nearly all of the top 30 private universities in the U.S. enroll approximately the same share of student from households in the top 1% of the income spectrum as from the bottom 60% (2017). African American and Latino students have become even more underrepresented at elite schools than in 1980 (Clotfelter 2017; Jeremy Ashkenas, Haeyoun Park 2017). Even some members of the merely rich have been criminally prosecuted recently for employing elicit strategies to get their children into the most elite schools (Eaton 2019). With more applicants for the same number of admission slots, selective private universities remain, in sum, an improbable path to elite finance for those from under-represented communities.

Gender inequalities at private equity and hedge funds also point to other exclusionary processes that restrict access to pinnacles of wealth and income. Women from advantaged ethno-racial and class backgrounds have gained some forms of parity at elite schools but remain underrepresented among undergraduate and graduate students studying economics, business, and especially finance (Byrne 2017; Malkiel 2016). Investment banks, private equity funds, and hedge funds have also been shown to filter out even potential recruits from elite schools who lack social identities and cultural repertoires that reflect their current fund managers (Ho 2009; Neely 2018; Rivera 2016). Consistent with these exclusionary processes, white men have maintained more social closure in high finance than in other elite occupations – one 2011 study found that white men made up 97% of hedge fund managers (Neely 2018).We lack data on the racial and ethnic identities of Forbes 400 and university board members. But zero of the Forbes 400 non-inheriting rich from finance were women in any of the years for which we have data. Similarly, only 7% of private equity and hedge fund managers on university boards in our sample were women, compared to 27% of non-finance board members.

Financiers access and attraction to elite university board seats also raises questions about potential governance obstacles to increasing equity for underrepresented students at these institutions (Commodore 2018; Rall et al. 2019). The officialdom of elite U.S. universities have a storied tradition of resisting initiatives to expand access to underrepresented groups (Ahmed 2012; Kahlenberg 2010; Karabel 2005; Malkiel 2016; Stevens 2009). Given their position in the socially closed world of high finance, will the financiers who now make up pluralities on elite university boards support changes to legacy admissions or other policies that might increase enrollment and support underrepresented students?

The links between high finance and universities also present questions regarding the potential consequences of these ties for elite political power and the growing concentration of wealth in America. The rise of private equity and hedge funds flowed primarily from tax cuts and financial deregulation beginning in the late 1970s (Krippner 2011; Lin and Neely 2020; Tomaskovic-Devey and Lin 2011). Might the nexus of elite university and financial ties have played a role in political mobilizations to establish and defend these policies? Political scientists have shown that financial professionals tend to support tax cuts at much higher rates than other well compensated professionals, such as doctors and lawyers (Page et al. 2013). Others have shown that billionaires and their political networks have played a critical role in mobilizations for tax cuts and economic deregulation (Hacker and Pierson 2010; Hertel-Fernandez 2019; Page et al. 2018). The potential role of elite university and financial sector ties in such political combat warrant systematic investigation.

Finally, we have argued that financiers likely perceive more economic benefits than other elites from the parallel social circuitry of top private universities. But we do not directly observe the deployment of these ties in the financial projects of private equity and hedge fund managers

beyond the example provide earlier involving hedge fund manager Tom Steyer. Further studies could examine if these ties actually do provide advantages to fund manager, and under what conditions. Paradoxically, university endowments are the investment funds for which the most data are available on such investments and their performance. For this reason, Piketty used endowment data to assess if those possessing greater amounts of capital tend to receive higher rates of return on their investment (2014). Linking such data to our measures of university board membership by financiers could allow for an assessment of whether such ties helped university endowments to attain higher rates of return. Such inquiries might offer insights for whether elite social ties in fact bolster growing wealth concentration at the top among financiers.

References

Ahmed, Sara. 2012. *On Being Included: Racism and Diversity in Institutional Life*. Duke University Press.

Allen, Frederick Lewis. 1935. *The Lords of Creation*. New York: Quadrangle.

Appelbaum, Eileen and Rosemary Batt. 2014. *Private Equity at Work: When Wall Street Manages Main Street*. New York: Russell Sage Foundation.

Barman, Emily. 2017. "The Social Bases of Philanthropy." *Annual Review of Sociology* 43(1):271–90.

Barringer, Sondra N. and Sheila Slaughter. 2016. "University Trustees and the Entrepreneurial University: Inner Circles, Interlocks, and Exchanges." Pp. 151–71 in *Higher Education, Stratification, and Workforce Development Competitive Advantage in Europe, the US, and Canada,* edited by S. Slaughter and B. J. Taylor. New York: Springer International Publishing.

Beisel, Nicola Kay. 1998. *Imperiled Innocents: Anthony Comstock and Family Reproduction in Victorian America*. Vol. 67. Princeton University Press.

Berger, Allen N., Anil K. Kashyap, Joseph M. Scalise, Mark Gertler, and Benjamin M. Friedman. 1995. "The Transformation of the US Banking Industry: What a Long, Strange Trip It's Been." *Brookings Papers on Economic Activity* 1995(2):55–218.

Binder, Amy J. and Andrea R. Abel. 2019. "Symbolically Maintained Inequality: How Harvard and Stanford Students Construct Boundaries among Elite Universities." *Sociology of Education* 91(1).

Binder, Amy J., Daniel B. Davis, and Nick Bloom. 2016. "Career Funneling: How Elite Students Learn to Define and Desire '"Prestigious"' Jobs." *Sociology of Education* 89(1):20–39.

Blau, Peter. 2017. *Exchange and Power in Social Life*. Routledge.

Brandeis, Louis D. 1914. *Other People's Money and How the Bankers Use It*. New York: Frederick A. Stokes Company.

Byrne, John A. 2017. "MBA Programs Edging Closer to Gender Parity." *Poets and Quants*.

Cao, Jerry and Josh Lerner. 2009. "The Performance of Reverse Leveraged Buyouts." *Journal of Financial Economics* 91(2):139–57.

Cetina, Karin Knorr and Urs Bruegger. 2002. "Traders' Engagement with Markets." *Theory, Culture & Society* 19(5–6):161–85.

Chait, R. P., T. P. Holland, and B. E. Taylor. 1991. *The Effective Board of Trustees.* Vol. null. edited by null.

Chetty, Raj, John N. Friedman, Emmanuel Saez, Nicholas Turner, and Danny Yagan. 2017. *Mobility Report Cards: The Role of Colleges in Intergenerational Mobility*. Stanford, CA.

Clotfelter, Charles T. 2017. *Unequal Colleges in the Age of Disparity*. Harvard University Press.

Commodore, Felecia. 2018. "The Tie That Binds: Trusteeship, Values, and the Decision-Making Process at AME-Affiliated HBCUs." *The Journal of Higher Education* 89(4):397–421.

Davis, Gerald F. and Mark S. Mizruchi. 1999. "The Money Center Cannot Hold: Commercial Banks in the U. S. System of Corporate Governance." *Administrative Science Quarterly* 44(2):215–39.

Davis, Gerald F. and Tracy A. Thompson. 1994. "A Social Movement Perspective on Corporate Control." *Administrative Science Quarterly* 141–73.

DiMaggio, Paul. 1982. "Cultural Entrepreneurship in Nineteenth-Century Boston: The Creation of an Organizational Base for High Culture in America." *Media, Culture & Society* 4(1):33–50.

Eaton, Charlie. 2016. *Still Public: State Universities and the New U.S. Student Loan Coalitions*. Berkeley, CA.

Eaton, Charlie. 2017. "Still Public: State Universities and America's New Student-Debt Coalitions." *PS - Political Science and Politics* 50(2):408–12.

Eaton, Charlie. 2019. "How Wall Street Buys Ivy League Access." *Inside Higher Ed*, March 9.

Fabrikant, Geraldine. 2007. "For Yale's Money Man, a Higher Calling." *New York Times*, February 18.

Fligstein, Neil and Jacob Habinek. 2014. "Sucker Punched by the Invisible Hand: The World Financial Markets and the Globalization of the US Mortgage Crisis." *Socio-Economic Review*.

Gale, R. L. 1993. *Governing Independent Colleges and Universities: A Handbook for Trustees, Chief Executives and Other Campus Leaders*.

Gao, Meng and Jiekun Huang. 2016. "Capitalizing on Capitol Hill: Informed Trading by Hedge Fund Managers." *Journal of Financial Economics* 121(3):521–45.

Golden, Daniel. 2006. *The Price of Admission: How America's Ruling Class Buys Its Way into Elite Colleges--and Who Gets Left Outside the Gates*. Crown Publishing Group/Random House.

Goldin, Claudia Dale and Lawrence F. Katz. 2009. *The Race between Education and Technology*. Cambridge: Harvard University Press.

Gompers, Paul and Josh Lerner. 2001. "The Venture Capital Revolution." *Journal of Economic Perspectives* 15(2):145–68.

Granovetter, Mark. 1985. "Economic Action and the Problem of Embeddedness." *American Journal of Sociology* 91:481–510.

Grant Thorton. 2016. *Higher Education Board Guidebook*.

Hacker, Jacob S. and Paul Pierson. 2010. "Winner-Take-All Politics: Public Policy, Political Organization, and the Precipitous Rise of Top Incomes in the United States." *Politics & Society* 38(2):152–204.

Hertel-Fernandez, Alex. 2019. *State Capture: How Conservative Activists, Big Businesses, and Wealthy Donors Reshaped the American States--and the Nation*. Oxford University Press.

Ho, Karen. 2009. *Liquidated: An Ethnography of Wall Street*. Duke University Press.

Ingram, R. T. 1995. *Effective Trusteeship: A Guide for Board Members of Independent Colleges and Universities.* Vol. null. edited by null.

Jenkins, Gary W. 2015. "The Wall Street Takeover of Nonprofit Boards." *Stanford Social Innovation Review* 13(3):46–52.

Jensen, Michael C. and William H. Meckling. 1976. "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure." *Journal of Financial Economics* 3(4):305–60.

Jeremy Ashkenas, Haeyoun Park, Adam Pearce. 2017. "Even With Affirmative Action, Blacks and Hispanics Are More Underrepresented at Top Colleges Than 35 Years Ago." *New York Times*, August 24.

Kahlenberg, Richard D. 2010. *Affirmative Action for the Rich: Legacy Preferences in College Admissions*. Century Foundation Press New York, NY.

Kaplan, Steven N. and Joshua Rauh. 2009. "Wall Street and Main Street: What Contributes to the Rise in the Highest Incomes?" *The Review of Financial Studies* 23(3):1004–50.

Karabel, Jerome. 2005. *The Chosen: The Hidden History of Admission and Exclusion at Harvard, Yale, and Princeton*. Houghton Mifflin Harcourt.

Kerr, Clark and Marian L. Gade. 1989. *The Guardians: Boards of Trustees of American Colleges*

and Universities : What They Do and How Well They Do It. Washington, DC: Association of Governing Boards of Universities and Colleges.

Korom, Philipp, Mark Lutter, and Jens Beckert. 2017. "The Enduring Importance of Family Wealth: Evidence from the Forbes 400, 1982 to 2013." *Social Science Research* 65:75–95.

Krippner, Greta R. 2011. *Capitalizing on Crisis*. Harvard University Press.

Lachmann, Richard. 2011. "Coda: American Patrimonialism: The Return of the Repressed." *The ANNALS of the American Academy of Political and Social Science* 636(1):204–30.

Lerner, Josh, Antoinette Schoar, and Jialan Wang. 2008. "Secrets of the Academy: The Drivers of University Endowment Success." *Journal of Economic Perspectives* 22(3):207–22.

Lewis, Michael. 2010. *Liar's Poker*. New York: WW Norton & Company.

Lewis, Michael. 2011. *The Big Short: Inside the Doomsday Machine*. Penguin UK.

Lifschitz, Arik, Michael Sauder, and Mitchell L. Stevens. 2014. "Football as a Status System in US Higher Education." *Sociology of Education* 0038040714533353.

Lin, Ken-Hou and Megan Tobias Neely. 2020. *Divested: Inequality in Financialized America*. Oxford: Oxford University Press.

Madsen, H. 1997. *Composition of Governing Boards of Public Colleges and Universities*. Washington, DC: Association of Governing Boards of Universities and Colleges.

Malkiel, N. W. 2016. *"Keep the Damned Women Out": The Struggle for Coeducation*. Princeton University Press.

Mallaby, Sebastian. 2010. *More Money than God: Hedge Funds and the Making of the New Elite*. Kindle. A&C Black.

Mills, C. Wright. 2000. *The Power Elite*. Oxford: Oxford University Press.

Mizruchi, Mark S. 2013. *The Fracturing of the American Corporate Elite*. Cambridge, MA:

Harvard University Press.

Mizruchi, Mark S. and Linda Brewster Stearns. 2006. “The Conditional Nature of Embeddedness: A Study of Borrowing by Large U.S. Firms, 1973–1994.” *American Sociological Review* 71(2):310–33.

Morgan, Stephen L. and Christopher Winship. 2007. *Counterfactuals And Causal Inference: Methods and Principles for Social Research*. Cambridge, UK: Cambridge University Press.

Nations, Jennifer M. 2018. “Resisting the Market University: Political Challenges to the Locus of Authority in Public University Tuition Policy.” *Social Science History* 42(3):575–600.

Neely, Megan Tobias. 2018. “Fit to Be King : How Patrimonialism on Wall Street Leads to Inequality.” *Socio-Economic Review* 16(2):365–85.

Ostrower, Francie. 1995. *Why the Wealthy Give: The Culture of Elite Philanthropy*. Princeton: Princeton University Press.

Page, Benjamin I., Larry M. Bartels, and Jason Seawright. 2013. “Democracy and the Policy Preferences of Wealthy Americans.” *Perspectives on Politics* 11(1):51–73.

Page, Benjamin I., Jason Seawright, and Matthew J. Lacombe. 2018. *Billionaires and Stealth Politics*. University of Chicago Press.

Pardo-Guerra, Juan Pablo. 2019. *Automating Finance: Infrastructures, Engineers, and the Making of Electronic Markets*. Cambridge: Cambridge University Press.

Piketty, Thomas. 2014. *Capital in the Twenty-First Century*. Harvard University Press.

Polanyi, Karl. 2001. *The Great Transformation: The Political And Economic Origins Of Our Time*. Boston: Beacon Press.

Rall, Raquel M., Demetri L. Morgan, and Felecia Commodore. 2019. “Invisible Injustice: Higher Education Boards and Issues of Diversity, Equity, and Inclusivity.” Pp. 261–77 in *Diversity,*

Equity, and Inclusivity in Contemporary Higher Education. IGI Global.

Richard, Titmuss. 1970. "The Gift Relationship. From Human Blood to Social Policy."

Rivera, Lauren A. 2016. *Pedigree: How Elite Students Get Elite Jobs*. Princeton: Princeton University Press.

Sauder, Michael and Wendy Nelson Espeland. 2009. "The Discipline of Rankings: Tight Coupling and Organizational Change." *American Sociological Review* 74(1):63–82.

Stevens, Mitchell L. 2009. *Creating a Class: College Admissions and the Education of Elites*. Harvard University Press.

Stevens, Mitchell L., Elizabeth A. Armstrong, and Richard Arum. 2008. "Sieve, Incubator, Temple, Hub: Empirical and Theoretical Advances in the Sociology of Higher Education." *Annual Review of Sociology* 34:127–51.

Tomaskovic-Devey, Donald and Ken-Hou Lin. 2011. "Income Dynamics, Economic Rents, and the Financialization of the US Economy." *American Sociological Review* 76(4):538–59.

Toutsi, Cristin. 2010. *2010 Policies, Practices, and Composition of Higher Education Coordinating Boards and Commissions*. Washington, DC.

Useem, Michael. 1993. *Executive Defense: Shareholder Power and Corporate Reorganization*. Cambridge, MA: Harvard University Press.

Uzzi, Brian. 1999. "Embeddedness in the Making of Financial Capital : How Social Relations and Networks Benefit Firms Seeking Financing." 64(4):481–505.

Young, Cristobal. 2017. *The Myth of Millionaire Tax Flight: How Place Still Matters for the Rich*. Stanford University Press.

Zelizer, Viviana A. 2009. *The Purchase of Intimacy*. Princeton University Press.

Zelizer, Viviana A. 2013. *Economic Lives: How Culture Shapes the Economy*. Princeton:

Princeton University Press.

van der Zwan, Natascha. 2014. “Making Sense of Financialization.” *Socio-Economic Review* 12(1):99–129.

Table 1: Summary Statistics

Forbes 400 data		
N (individual-year obs)	1200	
	Mean (Std Dev)	
Wealth from PE / hedge funds	.11 (31)	
Wealth from other finance	.09 (.29)	
Wealth from tech	.09 (.29)	
Worth (2017$ in billions)	$3.25 B (7.00)	
Most wealth from inheritance	.34 (.48)	
Top 30 private BA	.31 (.46)	
Top 30 public BA	.14 (.35)	
Top 30 private MBA	.12 (..33)	
Top 30 public MBA	.01 (.08)	
Top 30 private board member	.13 (.33)	
Top 30 public board member	.01 (.08)	
School-level data	**Private**	**Public**
Institutions	30	30
N (school-year obs)	528	508
	Mean (sd)	**Mean (sd)**
Total board members	43.96 (17.07)	13.97 (6.20)
% PE / hedge fund board members	0.13 (0.13)	0.02 (0.05)
% Other finance board members	0.17 (0.07)	0.08 (0.09)
Acceptance rate	0.24 (0.14)	0.61 (0.16)
Total enrollment (log)	9.40 (0.60)	10.29 (0.44)
% Students receiving federal grant aid	0.15 (0.06)	0.20 (0.06)
% Students of underrepresented race or ethnicity	0.29 (0.07)	0.23 (0.09)

Table 2: Odds ratios for university board membership among Forbes 400

	(1) Top 30 Private		(2) Top 30 Private		(3) Top 30 Private		(4) Top 30 Private		(5) Top 30 Public	
inherited	0.59	*	0.58	**	0.55	**	0.68	^	0.75	
wealth	(0.12)		(0.12)		(0.12)		(0.15)		(0.60)	
technology	1.13		1.17		1.18		1.05		1.33	
	(0.48)		(0.50)		(0.51)		(0.47)		(1.63)	
finance	2.45	***	2.44	***						
	(0.65)		(0.65)							
worth in			0.99		0.99		0.99		0.72	**
billions			(0.01)		(0.01)		(0.01)		(0.08)	
private equity					3.15	***	1.65			
& hedge					(1.01)		(0.54)			
other finance					1.76		1.44			
					(0.69)		(0.60)			
Top 30 public							4.48	^	1.89	
BA							(3.68)		(1.87)	
Top 30 private							8.74	**	0.40	
BA							(6.57)		(0.48)	
Top 30 public							1.00			
MBA							(.)			
Top 30 private							2.79	***		
MBA							(0.84)			
N	1200		1200		1200		1200		800	

Exponentiated coefficients

^ p<.1, * p<.05, ** p<.01, *** p<.001

Notes: Worth is in 2017 dollars. All models include year fixed effects and are estimated with robust standard errors clustered at the individual-level.

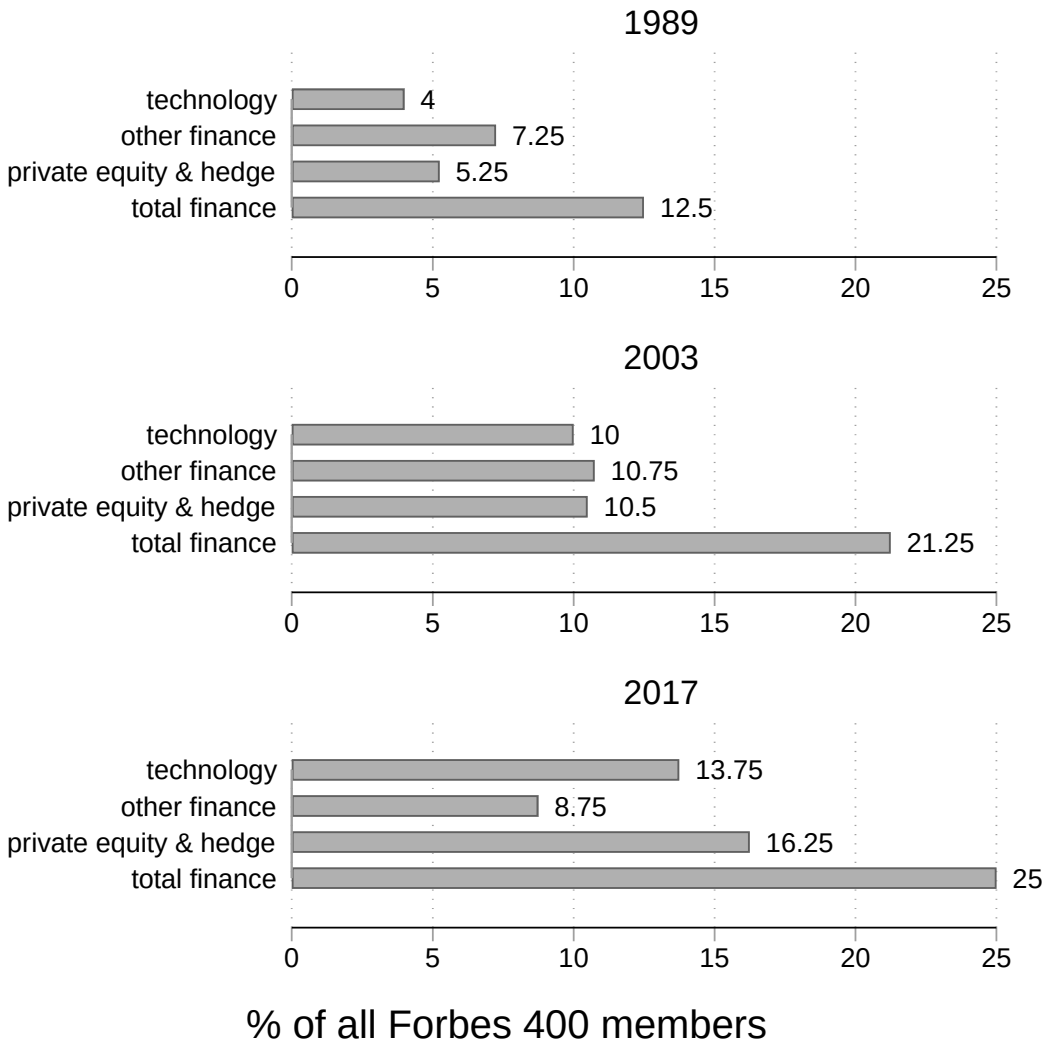
Table 3: Panel fixed effects estimates for share of board from private equity and hedge funds

	(1)	(2)	
Admissions rate	-0.101**	0.014	
	(0.033)	(0.032)	
Private X Admissions rate		0.000	
		(0.000)	
Public X Admissions rate		-.247	***
		(0.053)	
Schools	60	60	
School-year observations	846	846	

^ p<.1, * p<.05, ** p<.01, *** p<.001

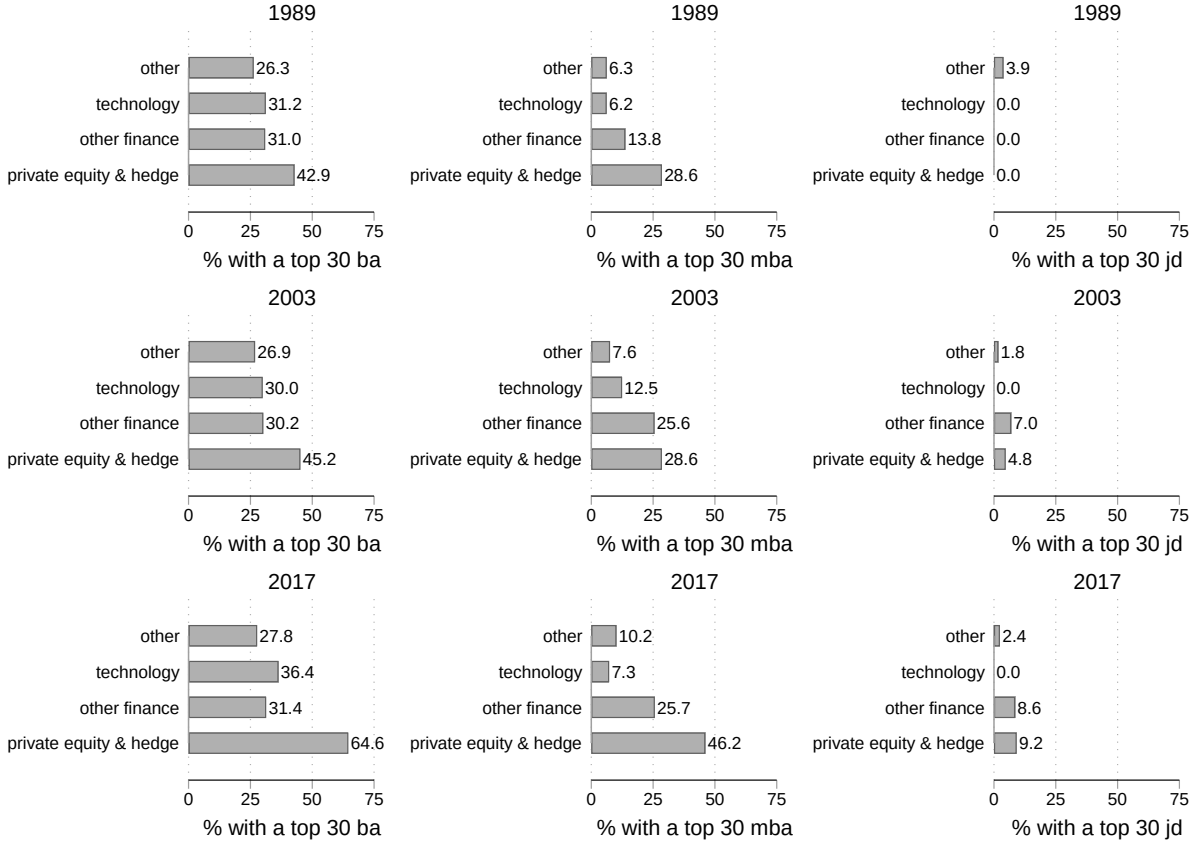
Notes: Both models include controls for student body size and demographic composition, total university revenue, endowment size, school fixed effects, and year fixed effects.

Figure 1: Percent of Forbes 400 members by source of wealth



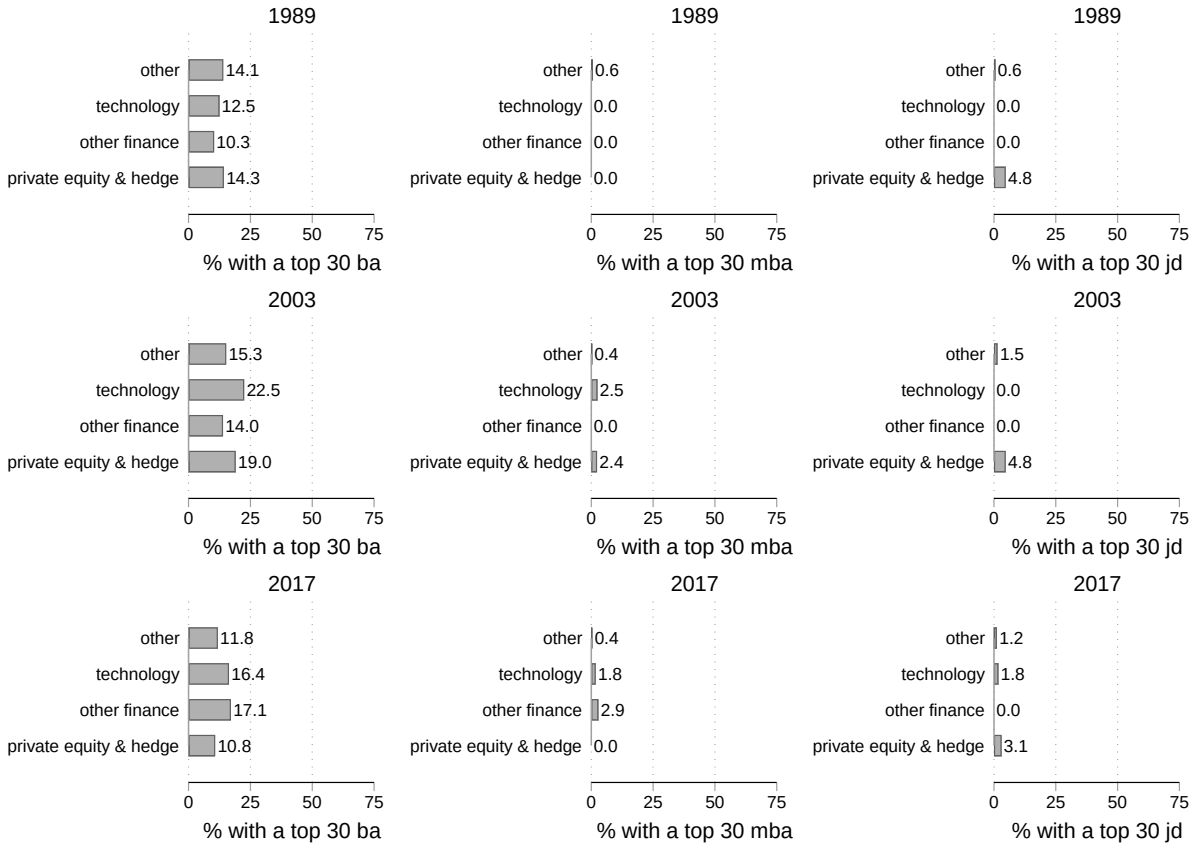
Notes: Data from the Forbes 400 list of the wealthiest U.S. residents and author gathered data on economic affiliations.

Figure 2: Shares of Forbes 400 billionaires with top 30 private university degrees



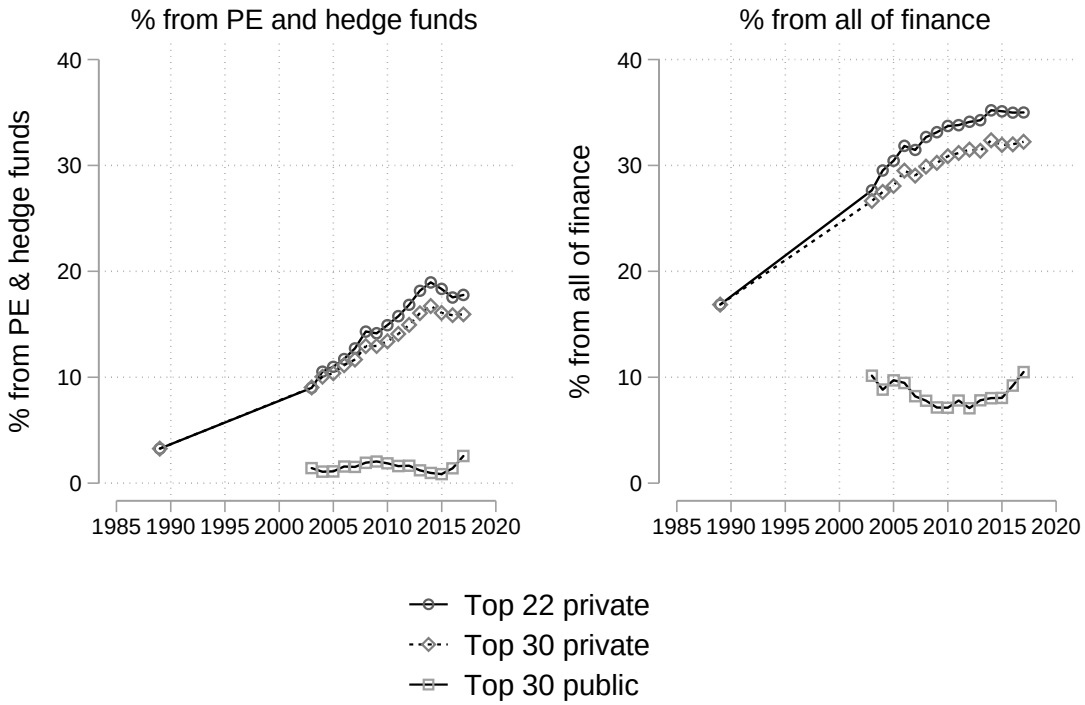
Notes: Data from the Forbes 400 list of the wealthiest U.S. residents and author gathered data on economic affiliations and degree holding.

Figure 3: Shares of Forbes 400 billionaires with top 30 public university degrees



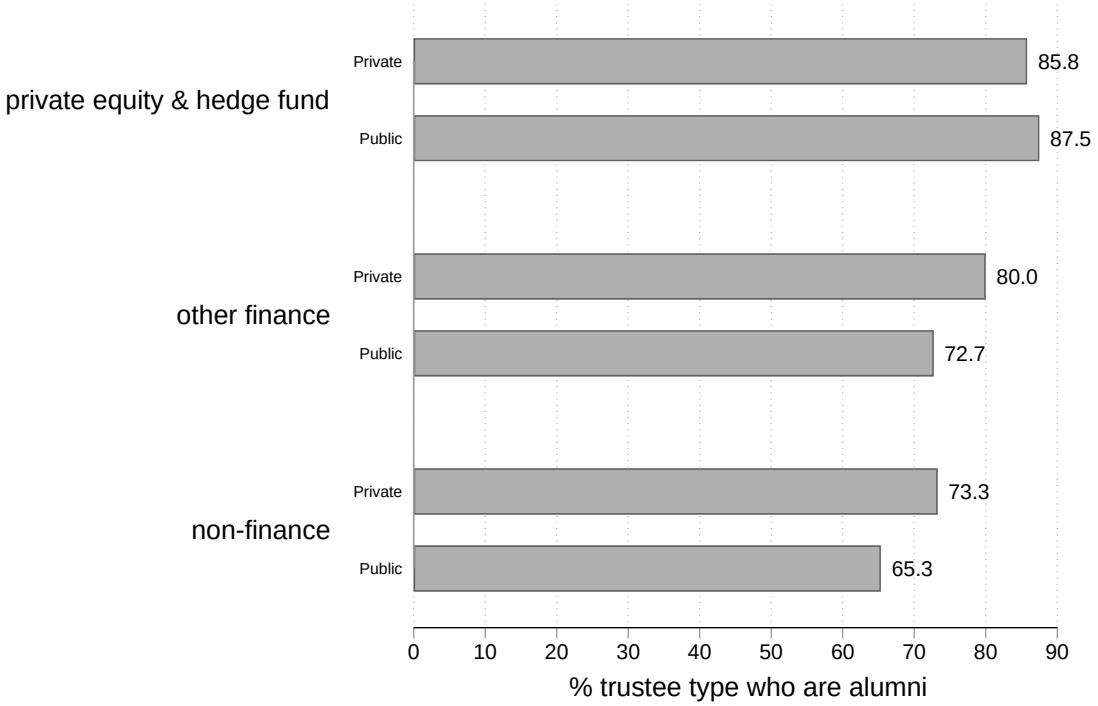
Notes: Data from the Forbes 400 list of the wealthiest U.S. residents.

Figure 4: Mean percentage of board members from finance



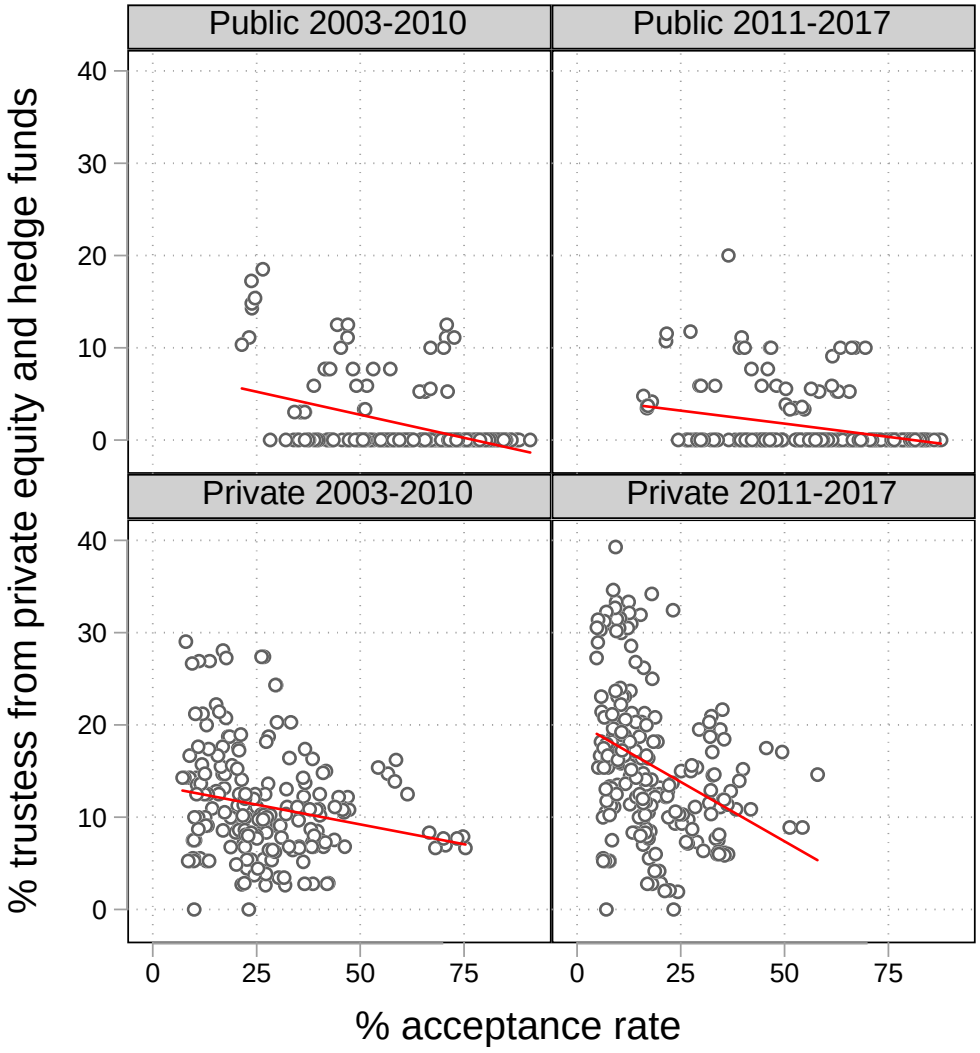
Notes: Data 2003 to 2017 from authors' original database of board members for top 30 public and top 30 private universities. Data for 1989 for the top 22 private universities is from the Jenkins study (2015).

Figure 5: Share of 2017 public and private university board members who are alumni by economic affiliation



Notes: Data from authors' original database of board members for top 30 public and top 30 private universities.

Figure 6: Trustees from finance and admissions selectivity by school type, years



Notes: Data from authors' original database of board members for the top 30 public and top 30 private universities. Acceptance rate data from IPEDs. Each circle represents one school-year observation. The line represents the OLS best fit line.

Appendix 1: List of university boards in the dataset

Private	Public
Name	**Name**
Boston University	Florida State University
Brandeis University	Indiana University
Brown University	Michigan State University
California Institute of Technology	North Carolina State University System
Carnegie Mellon University	Ohio State University System
Case Western Reserve University	Pennsylvania State University System
Columbia University	Purdue University
Cornell University	Rutgers University
Dartmouth College	State University of New York System
Duke University	Texas A & M University System
Emory University	The University of Texas System
Georgetown University	University of Arizona
Harvard University	University of California System
Johns Hopkins University	University of Cincinnati
MIT	University of Colorado System
New York University	University of Delaware
Northeastern University	University of Florida
Northwestern University	University System of Georgia
Princeton University	University of Hawaii
Rice University	University of Illinois System
Stanford University	Board of Regents, State of Iowa
Tufts University	University of Maryland System
University of Chicago	University of Massachusetts System
University of Notre Dame	University of Michigan
University of Pennsylvania	University of Minnesota System
University of Pittsburgh	University of North Carolina System
University of Rochester	University of South Florida
University of Southern California	University of Utah
Vanderbilt University	University of Virginia
Washington University	University of Washington
Yale University	University of Wisconsin System