

**THE SOCIAL CIRCUITRY OF HIGH FINANCE:
Universities and Intimate Ties Among Economic Elites**

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ABSTRACT

Financiers have regained preeminence among economic elites, accruing growing shares of income and wealth. Yet network analyses have shown a decline in the bank-based interlocks between corporate boards that were once thought to foster financier power and elite cohesion. We ask if social organizations parallel to the economy provide a circuitry that connects financiers to other elites, despite growing complexity and fragmentation in finance. We develop and test hypotheses that apply the theory to elite university social ties using original data on degree holding among the *Forbes* 400 wealthiest Americans and on the financial affiliations of all trustees on the boards of 60 top ranked U.S. universities.

Keywords: Financialization, elites, higher education, economic sociology

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; Lin and Neely 2020). 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 (Chu and Davis 2016; Mizruchi 2013; Mizruchi and Stearns 2006). How can we reconcile these accounts?

We propose that social organizations parallel to the economy help to organize a social circuitry (Wherry 2012; Zelizer 2013) that valuably connects financiers to other elites, despite growing complexity and heterogeneity in financial markets and organizations. Elite network ties and cultural markers from universities and other parallel social organizations are especially important for haute financiers as sources of capital, private information, and trust for making high risk investments (Appelbaum and Batt 2014; Lachmann 2011; Neely 2018). Research on embeddedness has shown the value of such social ties when they arise from repeated economic transactions (Granovetter 1985; Polanyi 2001; Uzzi 1999). But studies of embeddedness have given less attention to the important cultural and status meanings of ties involving parallel social organizations such as philanthropic and cultural societies, sports clubs, and universities.

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Via parallel social organizations, elites privately negotiate and publicly advertise who is in and who is out. Elites vie for social status in residential communities, philanthropic and cultural societies, preparatory schools, and especially universities (Binder and Abel 2019; DiMaggio and Garip 2011, 2012; Khan 2010; Mills 2000; Ostrower 1995; Young 2017). Universities provide social ties and status far beyond graduation day through alumni associations, college sports allegiances, and even bumper stickers. The highest status is reserved for university board members who typically donate and raise tens of millions of dollars for their alma mater (Barringer, Taylor, and Slaughter 2019). Reflecting the particular value of elite ties in high finance, qualitative researchers have recently shown that fund managers pay exceptional attention to college credentials and cultural polish in hiring, promotion, and raising funds (Ho 2009; Neely 2018; Rivera 2016).

Small in number and adept at protecting their privacy, elites have evaded large scale collection of data on their social ties (Harrington 2017; Page, Bartels, and Seawright 2013; Page et al. 2018; Young 2017). We overcome this obstacle by harmonizing data from multiple sources to test if financiers are more connected by prestigious higher education affiliations 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 containing 4,406 individual board members from the top U.S. universities according to the 2017 *Times Higher Education* rankings. The board member data cover all board members who served on the boards of 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.

Our analyses confirm that financiers are increasingly dominant among the wealthiest Americans (Korom, Lutter, and Beckert 2017) and are especially connected by university ties. Financiers grew from 12 percent of the *Forbes* 400 in 1989 to 25 percent in 2017. *Forbes* 400 members in management or ownership of private equity and hedge funds also held BA degrees from elite private schools at higher rates than other *Forbes* 400 members, increasing from 42 percent in 1989 to 65 percent in 2017. These high rates of elite degree holding are not only a function of greater financial profession requirements or rewards for skills that elite universities might provide or certify (Lerner, Schoar, and Wang 2008). For example, only 36 percent of technology sector affiliated members of the *Forbes* 400 held BA degrees from top private universities, despite deriving wealth from enterprises that highly reward postsecondary training (O'Mara 2005; Scott and Kirst 2017).

We further find evidence that financiers particularly value the prestige of elite university affiliations. First, private equity and hedge fund managers were more than three 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 financiers joined private university boards at higher rates if schools became more selective in admissions, suggesting that financiers are attracted to prestige.

Overall, we show that parallel social organizations, and especially universities, can sustain elite ties even as connective financial institutions became more fragmented. In doing so, we bridge economic sociology, the sociology of education, and the sociology of elites. We elaborate our contributions as follows. First, we explain how deregulation increased the size and complexity of finance, but also increased the value of social ties to financiers. Second, we synthesize Zelizer and Wherry's conceptions of social circuits with research about how universities provide students and alumni the identities, networks, and cultural fluency of America's higher circles. Based on this synthesis, we propose hypotheses for how alumni status and board membership with 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 research on educational equity at elite universities (Commodore 2018; Rall, Morgan, and Commodore 2019) and on other parallel social organizations that may obfuscate elite economic organization behind the veil of private life (Cottom 2020).

1. 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 in the U.S. (Krippner 2011; Tomaskovic-Devey and Lin 2011). Steep cuts to capital gains taxes in the late 1970s allowed 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. Independent private equity and hedge funds emerged as particularly powerful and profitable organizational alternatives by using newly allowed investment techniques to manage capital from wealthy individuals, university endowments, and pension funds.

Reflecting their growing power and wealth, private equity and hedge fund managers increased as a share of the *Forbes* 400 list of the wealthiest U.S. residents from 1989 to 2017. 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 percent of

Forbes 400 members were financiers, with a majority hailing from subsectors other than private equity and hedge fund investment. Financiers' overall share of the *Forbes* 400 increased to 21.25 percent in 2003 and 25 percent in 2017. The share of *Forbes* 400 members from financial subsectors other than private equity and hedge funds increased from 7.25 percent in 1989 to 10.75 percent in 2003, but then fell to 8.75 percent. Meanwhile, the share of *Forbes* 400 members from private equity and hedge funds grew from 5.25 percent in 1989 to 10.5 percent in 2003 and 16.25 percent in 2017. The share for the technology comparison group increased from four percent in 1989 to 10 percent in 2003 to 13.75 percent in 2017.

The new private equity and hedge 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 had provided commercial banks with private information and trust that are thought to provide advantages in economic and investment transactions (Granovetter 1985; Uzzi 1999). Private equity and hedge fund managers depend heavily on private information and trust between investors and investment managers despite their lack of corporate board interlock ties (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?

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 interlocking network of U.S. corporate boards and 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 are 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 are valuable for managing investor portfolios 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 et al. 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 of the past, 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 expected from interlocks. This new generation of fund managers craves 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, debt leveraging for investments intensifies the benefits of trust and reciprocity, which helps fund managers to retain investors and staff even as leverage amplifies swings between losses and returns. We will expand on how each of these organizational features reinforces the value of parallel social ties for fund managers.

The centrality of private information to private equity has been clear since a new generation of financiers arose via the hostile takeover movement of the 1980s (Davis and Thompson 1994). The original idea motivating private equity fund managers was that public stock markets undervalued corporations because stock investors misperceived corporate value based on public information (Jensen and Meckling 1976). Either because they lacked private information or misinterpreted 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 (Appelbaum and Batt 2014:61). Ross proceeded to acquire the giant LTV Steel corporation in February. One month later, President Bush imposed a 30 percent 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).

Despite differences in their investment practices from private equity, hedge fund managers also trade on private information that social ties can provide. 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).

Social ties also provide essential private information that private equity and hedge fund managers use to identify and solicit major investors. Neely documents this reliance on social ties for fund raising in an ethnographic and interview study of a major hedge fund (Neely 2018:377). One hedge fund manager told Neely of his firm's initial investors:

The client base was primarily some very large European families ... My partners were very, very wealthy European families that were plugged into that world. There was no way you or I or anybody was going to pick up the phone and call these families ... Wealthy French people don't take outgoing calls. It was very much a network effect.

Elite university networks similarly provide valuable private information needed to access potential wealthy investors. We detail cases involving universities shortly.

The salience of private information to private equity and hedge fund managers also is elevated by a compensation and tax structure that gives them skin-in-the-game for their investments. The general partners (GPs) who co-own and manage funds typically provide two percent of the equity for their portfolios. They stand to lose this equity if an investment goes bust (Appelbaum and Batt 2014). GPs, however, receive compensation in a 20 percent carried interest 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 outside returns in the tens of millions of dollars if they are able to obtain and exploit private information for a successful investment. Additionally, GPs pay a lower federal tax rate on this income of just 23.8 percent (20 percent tax on net capital gains plus 3.8 percent net investment income tax). This compensation structure increases the value of private information to GPs relative to what bankers earn through salaries and bonuses, which are taxed at the top federal rate of 37 percent.

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.

2. 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 and Wherry's conceptions of social circuits in commerce (Wherry 2012; Zelizer 2013). We use this framework to develop hypotheses about the prevalence and attraction of elite university ties among private equity and hedge fund managers.

Like the differentiation of ties by the transistors of electronic circuits, social circuits differ from networks in that social ties have varied cultural meanings that are "incessantly negotiated" via economic and social transactions between different participants in the circuit (Zelizer 2013:306). Within the circuit, relationships can vary in their intimacy and power asymmetries. But the meanings negotiated within each relationship shape the meanings of other relationships as part of the overall circuitry (Wherry 2012:22). We can see the flexibility and dynamism of social ties in social 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). Intimate ties are by definition social relations that convey private information. Impersonal ties convey only widely available information. Zelizer notes 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 not fully accounted for the role of 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). Wherry notes that the qualitative complexity of the cultural meanings involved has made circuits difficult to study quantitatively (Wherry 2012:21). 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 percent 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 percent 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 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, Davis, and Bloom 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 (2018) found that hedge funds recruit overwhelmingly from their elite college alumni networks. Investment managers told Neely that recruitment via alumni networks helped their teams to weather long hours and the

volatile ups-and-downs of 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).

There is also a public record of private equity and hedge fund managers using elite university ties as sources of private information for raising capital. These accounts complement Neely's documentation of hedge funds tapping elite social networks for initial capital. For example, 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 Yale 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 the "incessantly negotiated" intimate ties of social circuits. Steyer only related the story of Yale's early investment in his fund as private information that 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 trailblazing 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 the case described above in which Ross anticipated the imposition of steel tariffs by the Bush administration.

Public statements by university leaders also support the contention that elite university social ties transmit valuable private information about investment opportunities. For example, the *Times* reported in 2013 that Dartmouth had invested endowment capital in the private equity and hedge funds of current or former Dartmouth Trustees Stephen F. Mandel Jr, Russell L. Carson, Leon D. Black (Smith 2013). Dartmouth Trustee Todd J. Zywicki said each investment was presented to the university as a "special opportunity." Top private equity and hedge fund managers only present about such "special opportunities" to a small number of large dollar clients in part to closely guard their strategies and performance data as valuable private information that a competitor might exploit.

Echoing the value placed by Dartmouth leaders on private ties with elite financiers, University of Michigan leaders successfully lobbied the state to exempt its endowment from public disclosure requirements. University of Michigan Chief Investment Officer Erik Lundberg in 2018 explained the importance of secrecy around the information that flows between endowment managers and outside fund managers, including via university board members (Dolan and Jesse 2018). "The reality is nobody gives away their secrets," said Lundberg. If Michigan divulged the performance and fees of the funds it invested in, he argued that private equity and hedge fund managers would deny the university access to their highest yield investments "at a tremendous cost."

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 processes together draw more elite college graduates into high finance and amplify the economic advantages of their elite educational backgrounds.

The University Board as a Nexus of Elite Ties Among Financiers

On this basis, we offer six hypotheses:

Hypothesis 1: Within the *Forbes* 400, private equity and hedge fund managers will have elite private university degrees at higher rates than other *Forbes* 400 members.

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, 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 percent in 1989 to 39 percent in 2014 (Jenkins 2015).

We expect this overall growth in financiers on university boards is driven by the 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) more elite university board seats will be seen as more valuable to financiers' pursuit of wealth and status.

Recent scholarship shows that the most prestigious universities increasingly populate their boards with economic elites from the for-profit sector. University boards select the president of the university, approve the university's budget, oversee management of the endowment, and raise philanthropic donations for the university (Chait, Holland, and Taylor 1991; Gale 1993; Ingram 1995; Kerr and Gade 1989). 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. Using a mix of proprietary and public data for 54 top universities, Barringer et al. have shown that the most prestigious private universities increasingly draw their members from an inner circle of executives from the same large for-profit corporations (2019).

Others have documented that the dominance of economic elites on university boards has coincided with limited racial diversity among board members (Commodore 2018; Rall et al. 2019). Consistent with Jenkins (2015), Barringer and Slaughter also report that persons working in finance are the largest economic grouping on these boards, comprising 26 percent of members (2016). Given their especially large gains in wealth since the 1980s, we expect that private universities particularly added private equity and hedge fund managers to their boards.

University fundraising by trustees illustrates how financiers can use university boards to weave and maintain valuable social ties to a broader corporate elite. Barringer and Riffe (2018) find that 57 percent of trustees at Harvard and 95 percent of trustees at MIT had donated to their respective universities. Financiers are prominent among high profile donors. 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. After Bass' daughter was admitted to Harvard, Bass became co-chairman of the school's parent fundraising committee (Golden 2007). 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 (Lewin 2015).

Social scientists have shown that the giving of gifts is motivated by altruism, expected reciprocity, and social status accrued to 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 himself (in the case of hedge funds, 97 percent of managing partners are men) 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) 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 their growing representation on university boards from the 1990s and onward. Accordingly, we hypothesize:

Hypothesis 2: Private equity and hedge fund managers will surpass other financiers and economic elites in their share of board seats at the most prestigious universities.

There are two potential mechanisms for this predicted relationship between prestige and financier board members. First, more prestigious schools should have a larger pool of private equity and hedge fund managers to recruit for board service from their alumni. This would provide a larger pool of financiers from which elite schools can cull board members with the greatest means to aid university fundraising. This is consistent with Hypothesis 1 that more prestigious schools will have more alumni from high finance in the *Forbes* 400. To confirm this mechanism, we also need to validate that most university board members are alumni. We therefore propose:

Hypothesis 3: Most university board members, including from private equity and hedge funds, are alumni.

A second mechanism is that financiers could perceive greater value in elite university board seats than other wealthy elites. This mechanism flows from qualitative evidence that financiers particularly use private information from elite social ties for high reward investment strategies. If this is the case, private equity and hedge fund managers in the *Forbes* 400 will be more likely to serve on top 30 university boards than other members of the *Forbes* 400 with equivalent wealth and alumni status. We therefore hypothesize:

Hypothesis 4: Among *Forbes* 400 members, private equity and hedge fund managers will serve on top 30 university boards more often than other *Forbes* 400 members.

The attraction of university prestige should be observable indirectly in that private equity and hedge fund representation should increase faster within schools with increasing 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. We therefore hypothesize:

Hypothesis 5: Private equity and hedge fund managers' board seat shares will increase at universities where admission rates become more selective.

Board membership and alumni trends may be quite different at public universities. This could reflect that the university ties of fund managers are not only a function of the skills that elite universities might impart or certify. 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 percent of board seats are appointed by elected state governors (Madsen 1997; Toutsis 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. We therefore hypothesize:

Hypothesis 6: There will be no comparable relationships between financier degree holding, financier membership on university boards, and admissions selectivity at public universities.

3. RESEARCH DESIGN

Sample Selection and Data Collection

To analyze university-based ties among economic elites, we use an original database of 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 proprietary data purchased from the *Forbes* 400 list. We supplemented this data by coding the schools from which *Forbes* 400 individuals had obtained bachelor's, MBA, and law degrees. We also coded if *Forbes* 400 members had any ownership or executive affiliation with a private equity or hedge fund.

We constructed the parallel dataset of university governing board members to analyze shifts in board membership over time. We gathered data 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 (THE) 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 *THE* does not assign specific

rankings to schools below the ranking of 200. Rather, *THE* groups schools into brackets of 50 for rankings below 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 *THE* rankings so that our analysis could easily be extended to institutions from outside of the U.S. in future studies. The *THE* top 30 closely track the top 30 universities in other rankings. For example, the 2017 *U.S. News and World Report* rankings include all but two of our top 30 private universities and all but six of our top 30 public universities. For each board, we collected data on board membership for each year beginning in 2003, the first year that full data is available for admissions rates, a central covariate in our analysis.

Data on individual trustees were collected using archived university web pages provided by the Wayback Machine (<http://web.archive.org/>) and via electronic correspondence with university board staff and archivists. We currently have full board data for all of the 30 top private institutions from 2003 to 2017 except for Brown University for which we only have data available online from 2008 forward (despite multiple written inquiries to Brown officials). 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 used the same data sources as used for *Forbes* 400 coding in order to code if a board member was affiliated with any private equity fund, hedge fund, or other financial organization.

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 2003 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 that 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 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.

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 used *Forbes* 400 indicators for economic affiliations to the finance and technology sectors. Based on the provided biographies of university trustees on archived university web pages, we identified firms with which the trustee had a prior or existing ownership or executive role. The *Forbes* 400 provided equivalent firm affiliation data. 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 finance affiliation status of 4,406 unique board members. We further coded if each board member and *Forbes* 400 member had any ownership or executive role in a private equity fund or hedge fund. We then used board member affiliation data to calculate annual, board-level shares of board members and board officers 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 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 member had received a degree. This allows us to measure whether each *Forbes* 400 member has a degree from top 30 private or public university.

To analyze the links between financial affiliation and elite university ties involving university board membership, we use undergraduate admission rates as a principal indicator of prestige (Karabel 2005; Sauder and Espeland 2009; Stevens 2009). Undergraduate admissions data are available for all schools in our sample for 2003 onwards from IPEDS. We use undergraduate

admissions rates because rankings are derived in large part from admissions rates as a gauge of prestige. Admissions rates are also better suited than rankings as an interval-ratio variable for time-series regression analyses. This is in part because rankings are more static from one year to the next. 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 percent of applicants while private universities accept 24 percent.

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 statistics of economic affiliations and degree holding at the individual level for *Forbes* 400 members in 1989, 2003, and 2017. These statistics test Hypothesis 1 regarding the relationship between *Forbes* 400 status, high finance affiliations, and elite university alumni status.

We subsequently present descriptive data on bivariate relationships over time between university board appointments, university prestige, board member alumni status, and economic affiliations. The descriptive analyses provide preliminary tests of Hypotheses 2 through 6 regarding university board membership. 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 (Hypothesis 3), and 2) that the particular value of prestige and ties to other elites will attract financiers to serve on boards of more exclusive universities at higher rates (Hypotheses 4 and 5). We also assess the first mechanism by measuring the rate at which board members have degrees from the institutions on whose boards they serve (Hypothesis 3).

To probe the second mechanism more deeply, we first use a logit model to estimate the relationship between university board membership and private equity and hedge fund affiliations among the *Forbes* 400 (Hypothesis 4). We then turn to longitudinal panel models of the relationship between finance board shares and our indicator for university selectivity from 2003 to 2017 (Hypothesis 5). 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.²

4. RESULTS

University Degrees and Financiers in the Forbes 400

Private equity and hedge fund managers held elite degrees at higher rates than other *Forbes* 400 members in all years, with increased rates of elite degree holding in 2003 and 2017. These results support Hypothesis 1. Figure 2 shows that 42.9 percent of *Forbes* 400 private equity and hedge fund managers held bachelor's degrees from top 30 private universities in 1989 compared to just 31 percent of other financiers, 31.2 percent of technology billionaires, and 26.3 percent of other *Forbes* 400 members. Top private university MBA degrees were held by 26.6 percent of private equity and hedge fund managers in 1989 compared to 13.8 percent of other financiers and just over 6 percent of technology and other *Forbes* 400 members. Elite private bachelor's degree holding among private equity and hedge fund managers increased by 22 percentage points to 64.6 percent in 2017. Elite MBA holding among this group of financiers similarly increased 17 percentage points to 46.2 percent 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 five

percent bump in elite BA degrees among technology billionaires in 2017 and a 12 percentage point increase in MBA holding among other financiers to just under 26 percent 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 percent of private equity and hedge fund managers and 8.6 percent of other financiers holding such degrees in 2017.

Consistent with Hypothesis 6, *Forbes* 400 members hold degrees from top 30 public universities at much lower rates, even though public universities produce far more graduates. Figure 3 shows that bachelor's degree holding from these universities remained relatively flat across all three years, peaking at 19 percent for private equity and hedge fund managers in 2003, at 22.5 percent for tech in 2003, at 17.1 percent for other financiers in 2017, and at 15.3 percent for other *Forbes* 400 members in 2003. The highest rate of MBA holding from top 30 public institutions of any group in any year was 2.9 percent in 2017. The highest rate of law degree holding from top 30 public institutions was 4.8 percent for private equity and hedge funds in 1989 and 2003. Low rates of degree holding from top public universities also undercut the argument that private equity and hedge fund billionaires gain an advantage from skills rather than status and connections obtained through elite schooling. If skill acquisition was the key to success in high finance, we also would expect future financiers to gain these skills at top public universities.

Financier Membership on University Boards and School Prestige

We also find support for Hypothesis 2 that private equity and hedge fund representation would increase on top 30 private university boards. 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 percent in 1989 to 29 percent in 2003, plateauing at 35 percent since 2014. Roughly half of this increase came from growth in private equity and hedge fund manager board membership, which increased from three percent in 1989 to nine percent in 2003 and to 18 percent 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 in 2003 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 percent and 10 percent with private equity and hedge fund representation ranging from one percent to three percent.

Logit model tests validate Hypothesis 3 that private equity and hedge fund managers would be more likely to gain top 30 private university board seats than other economic elites in the *Forbes* 400. These models also conform with Hypothesis 4 that much of this relationship occurs through their high rates of elite university degree holding. Presented earlier, Table 1 shows that 13 percent of *Forbes* 400 members served on top 30 private university boards. Table 2 presents odds ratios for 3 logit models of board membership of *Forbes* 400 members in 2003 and 2017 (years for which we have full board data). 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.

Models 1 and 2 show that private equity and hedge fund managers are much more likely to serve on top 30 private university boards than other *Forbes* 400 members. First, Model 1 estimates that these financiers are 3.11 times more likely to serve on private boards than other *Forbes* 400 members when controlling for net worth, inherited wealth, and year fixed effects. Tech and other finance sector *Forbes* 400 members are not meaningfully more likely to serve on university boards. Model 2 adds covariates for top 30 public and top 30 private bachelor's degree and MBA holding and top 30 MBA holding. Those *Forbes* 400 members with top 30 private bachelor's degrees are estimated to be 3.35 times more likely to serve on top 30 private university boards than others. Those with top 30 private MBAs are 2.81 times more likely to serve on these boards.

Adding these covariates reduces the estimated odds ratio for private equity and hedge fund managers to 1.66 with significance just below the .1 confidence threshold. This indicates that financier probabilities for university board membership occur substantially through their high rates of alumni status with top 30 private universities. Model 3 reports odds ratios for public university board membership in 2003 and 2017. 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.

Rates of alumni status among all top 60 university board members also fit with Hypothesis 4 most board members will be alumni. 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 percent of these private university board members and 87.5 percent of these public university board members holding non-honorary degrees from their board's institution. Among other financier board members, 80 percent were alumni for the private universities and 72.7 percent were alumni for the public institutions. For non-finance board members, 73.3 percent were alumni on private boards and 65.3 percent were alumni on public boards. We do not have technology sector affiliation data for this broader data set on university board membership.

In addition to alumni links, we find that greater university prestige is associated with higher board representation. This supports Hypothesis 5 that increasing prestige attracts private equity and hedge fund managers to board service. 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.

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 cross-sectional estimates of this relationship, the coefficient for this relationship is $-.10$ in the first period and $-.05$ in the second period for public universities. The estimated slope of the fitted regression line is $-.11$ 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. The estimates for the private universities in both periods and the public universities in the second period have a p-value of below $.05$ based on two-tailed tests using robust standard errors clustered by school.

Longitudinal fixed effects models provide more robust evidence for Hypothesis 5 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 for 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 -0.11 for the relationship between financier board share and university admissions rates. Model 2 adds an interaction term for public versus private university status.

This reveals that the estimated relationship occurs entirely through private universities, with an interacted coefficient of $-.27$. In other words, financiers' board shares increased by 2.7 percentage points within schools over time for every 10 percentage point decrease in admission rates (note that decreasing admission rates indicate increasing selectivity). The p-values for these coefficients are less than $.01$ and less than $.001$ respectively. Coefficients for our other covariates do not indicate statistically significant and consistent relationships across the two models – conforming with research finding that acceptance rates are stronger markers of elite status for universities than measures of student class or ethno-racial diversity or lack thereof (Ahmed 2012; Sauder and Espeland 2009; Stevens 2009).

5. 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; Lin and Neely 2020; Tomaskovic-Devey and Lin 2011).

The social circuitry negotiated around private university affiliations, however, provides structures by which private equity and hedge fund managers transact valuable private information and connect to other elites – supplanting the corporate board interlock centrality that commercial bankers once enjoyed (Chu and Davis 2016; 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 the meanings and distribution of these 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. Via this circuitry, financiers can pivot between intimate ties to investors and other economic elites and the impersonal relationships that are commonly associated with financial markets (Wherry 2012; 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 Mills 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.

Outside of the overwhelmingly white upper middle class and already rich, however, U.S. universities still offer few opportunities to renovate one's 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 students from households in the top one percent of the income spectrum as from the bottom 60 percent (2017). African American and Latino students have become even more underrepresented at elite schools than in 1980 (Ashkenas, Park, and Pearce 2017; Clotfelter 2017). Even some members of the merely rich have been criminally prosecuted recently for employing illicit 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 the 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 percent 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 members affiliated with private equity and hedge funds were women in any of the years for which we have data. Similarly, only seven percent of private equity and hedge fund managers on university boards in our sample were women, compared to 27 percent 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). 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. Beginning in the late 1970s, the rise of private equity and hedge funds flowed primarily from tax cuts and financial deregulation (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.

One limitation of our analysis is that we do not directly observe the deployment of parallel social ties in the financial projects of private equity and hedge fund managers, beyond the examples involving hedge fund manager Tom Steyer and various Dartmouth trustees. Further studies could examine if these ties actually do provide advantages to fund managers, and under what conditions. Paradoxically, university endowments are the investment funds for which the most data are available on leveraged fund investments and their performance. For this reason, Piketty uses endowment data to assess if those possessing greater amounts of capital tend to receive higher rates of return on their investments (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.

Our findings also compliment theories about how obfuscatory privacy for elites coheres with the growing private surveillance of non-elites in the digital society (Cottom 2020; Zuboff 2019). Cottom notes that the expansion of privately owned digital networks has allowed the owners of those technologies to accumulate an unprecedented wealth of valuable private information. Yet elites can obfuscate their own activities and roles in this apparatus of private information, particularly when they own controlling interests in digital technologies. Within this framework, Cottom argues that digital society routinely removes information from the public sphere that is necessary for non-elites to advance "democratic appeals for access and equity" (2020:3). The managers of private equity, hedge funds, and their portfolio companies similarly are exempted from the disclosure requirements of publicly traded firms.

Their engagement in universities as a parallel social organization also locates some of their most important economic activity outside of firms' formal structures.

Our concept of a parallel social circuitry could also be extended to research involving economic sectors other than finance, and regarding social organizations other than universities. Such inquiries could address overarching comparative questions that are beyond our remit. For example, to what extent do people negotiate inclusive versus exclusive cultural meanings and network ties in different types of parallel social organizations such as country clubs or churches? How does participation in these different types of social organizations vary between economic strata and sectors, and with what consequences for economic life beyond the elite cohesion we have documented here? We hope that our analysis will encourage the further qualitative and quantitative study needed to understand such multifaceted links between negotiations of meaning and exchanges of resources in the economy and cosmetically adjacent social domains

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Table 1: Summary Statistics

Forbes 400 data set		
N (individual-year obs)	1,200	
	Mean	
	(Std Dev)	
PE / hedge funds affiliated	0.11	
	(0.31)	
Other finance affiliated	0.09	
	(0.29)	
Tech affiliated	0.09	
	(0.29)	
Worth (2017\$ in billions)	\$3.25 B	
	(7.00)	
Most wealth from inheritance	0.34	
	(0.48)	
Top 30 private BA	0.31	
	(0.46)	
Top 30 public BA	0.14	
	(0.35)	
Top 30 private MBA	0.12	
	(0.33)	
Top 30 public MBA	0.01	
	(0.08)	
Top 30 private board member	0.13	
	(.33)	
Top 30 public board member	0.01	
	(0.08)	
University board data set		
	Private	Public
Institutions	30	30
N (school-year obs)	440	447
	Mean	Mean
	(sd)	(sd)
Total board members	44.94	14.73
	(16.91)	(6.95)
% PE / hedge fund board members	13.69	1.52
	(7.32)	(3.47)
% Other finance board members	16.83	6.93
	(6.55)	(9.06)
% Acceptance rate	22.39	58.95
	(13.49)	(16.75)
Total enrollment (log)	9.44	10.40
	(0.59)	(0.29)
Total endowment assets (log)	22.11	21.54
	(0.99)	(3.90)
Total revenue (log)	21.44	21.37
	(0.82)	(0.61)
% Students receiving federal grant aid	15.09	20.18
	(5.31)	(6.80)
% Students of underrepresented race or ethnicity	31.37	22.30
	(7.66)	(8.53)

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

	(1)		(2)		(3)	
	Top 30		Top 30		Top 30	
	Private		Private		Public	
private equity / hedge fund	3.11 (0.98)	***	1.66 (0.55)			
other finance	1.65 (0.69)		1.36 (0.58)			
technology	1.24 (0.52)		1.10 (0.48)		1.35 (1.60)	
inherited wealth	0.67 (0.13)	*	0.72 (0.15)		1.27 (0.89)	
worth in billions (2017 \$)	0.99 (0.01)		0.99 (0.01)		0.84 (0.08)	^
Top 30 public BA			1.59 (0.70)		1.76 (1.73)	
Top 30 private BA			3.35 (0.99)	**	0.42 (0.51)	
Top 30 public MBA			1.65 (1.69)			
Top 30 private MBA			2.81 (0.87)	**		
<i>N</i>	800		800		800	

Two tail significance thresholds: ^ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

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

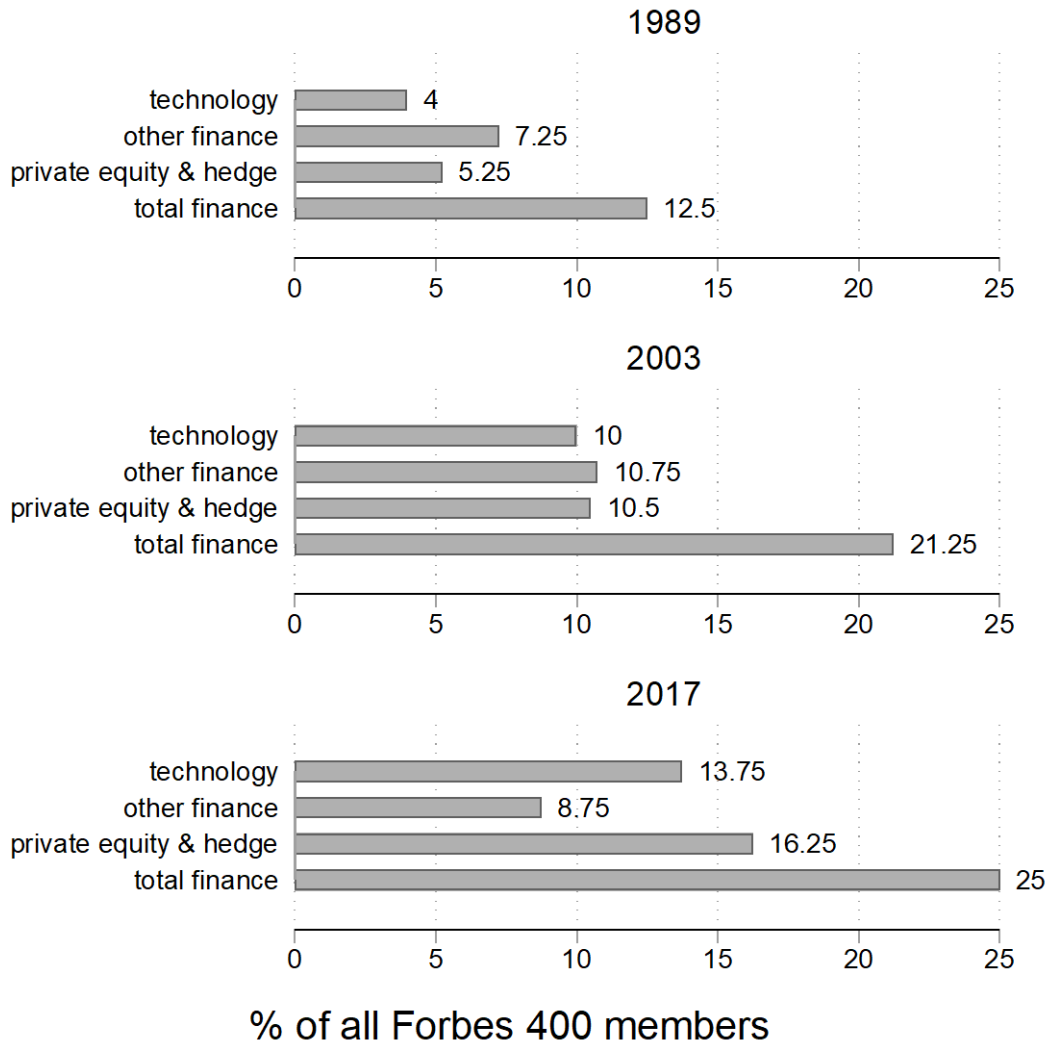
Table 3: Panel fixed effects estimates for share of board from private equity and hedge funds

	(1)	(2)	
Total enrollment (log)	3.195 (5.607)	1.400 (5.173)	
% students of underrepresented race/ethnicity	0.541 (3.746)	-0.819 (3.520)	
% students receiving federal grant aid	0.046 (0.044)	0.095 (0.050)	^
Total revenue (log)	1.159 (0.621)	0.898 (0.546)	^
Total endowment assets (log)	0.315 (0.211)	0.469 (0.199)	*
Admissions rate	-0.107 (0.035)	0.001 (0.034)	**
Private X Admissions rate		-.267 (0.061)	***
Schools	60	60	
School-year observations	846	846	

Two tail significance thresholds: ^ p<.1, * p<.05, ** p<.01, *** p<.001

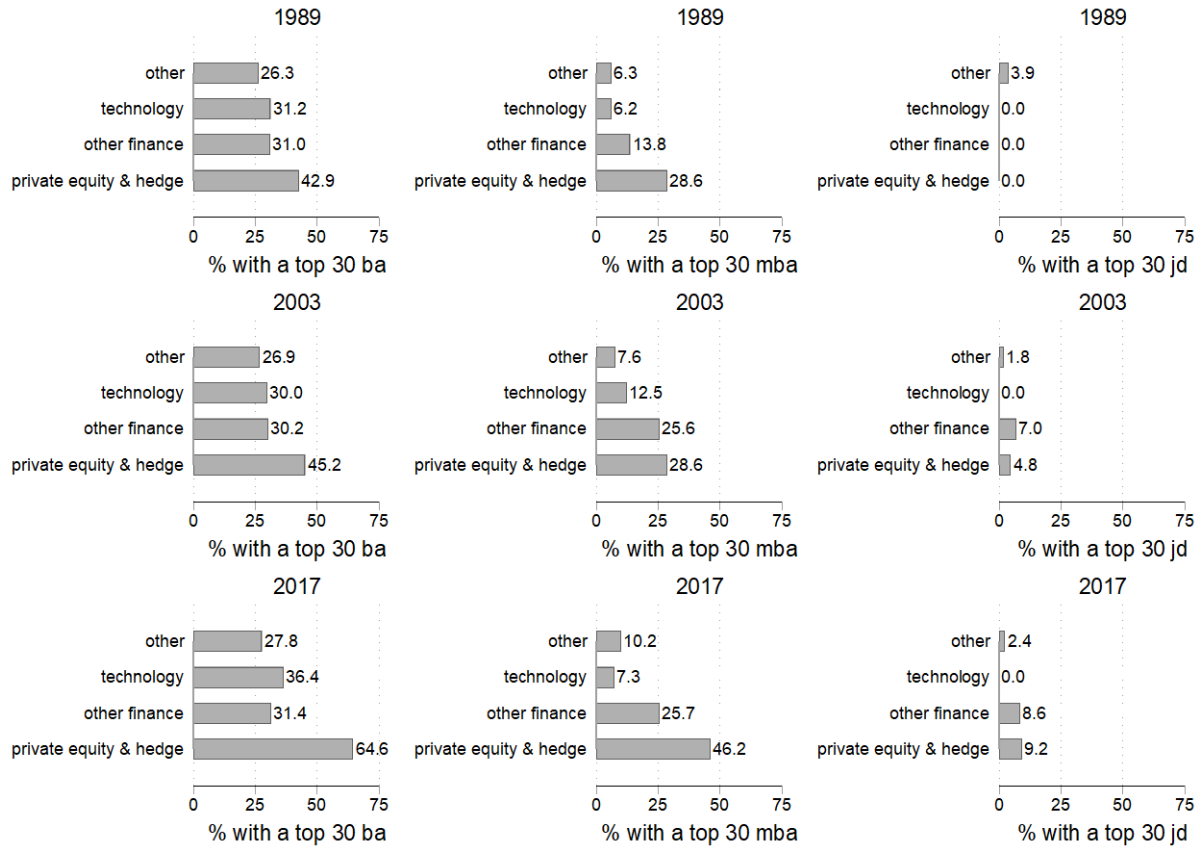
Notes: Both models include controls for student body size and demographic composition, total university revenue, endowment size, school fixed effects, and year fixed effects.

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



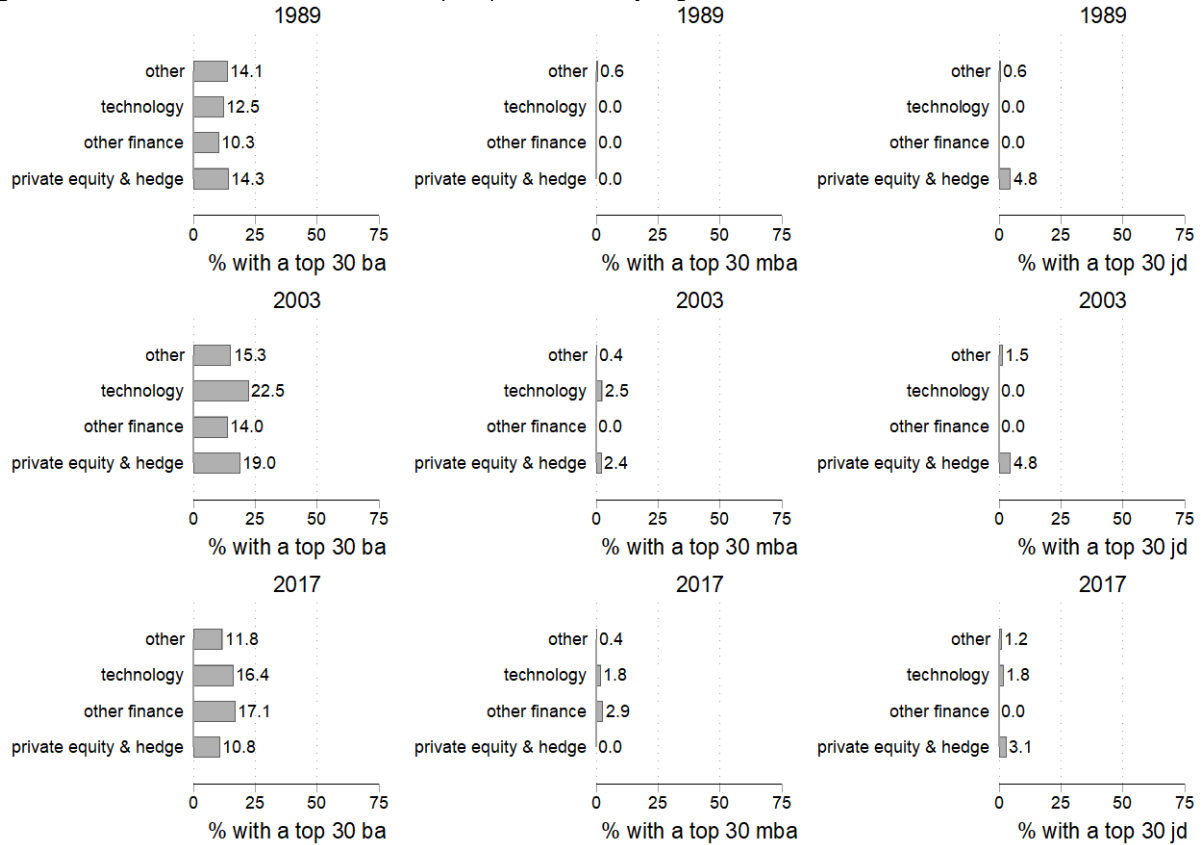
Notes: Data from the Forbes 400 list of the wealthiest U.S. residents and author gathered data on economic affiliations.

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



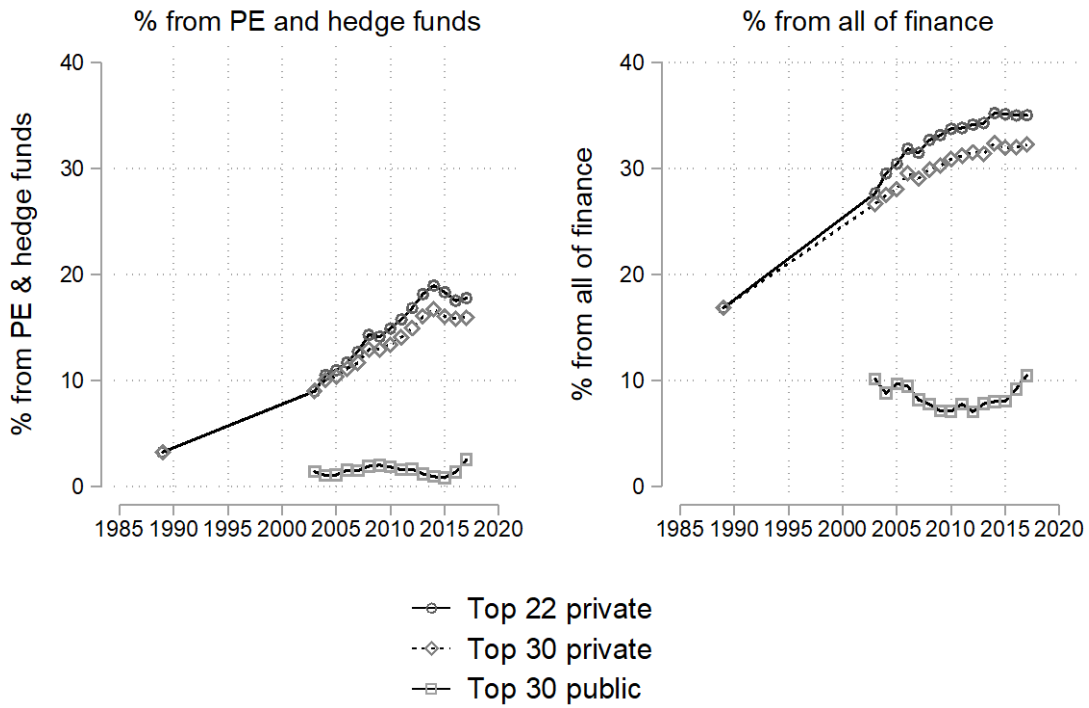
Notes: Data from the Forbes 400 list of the wealthiest U.S. residents and author gathered data on economic affiliations and degree holding.

Figure 3: Share of Forbes 400 members with top 30 public university degrees



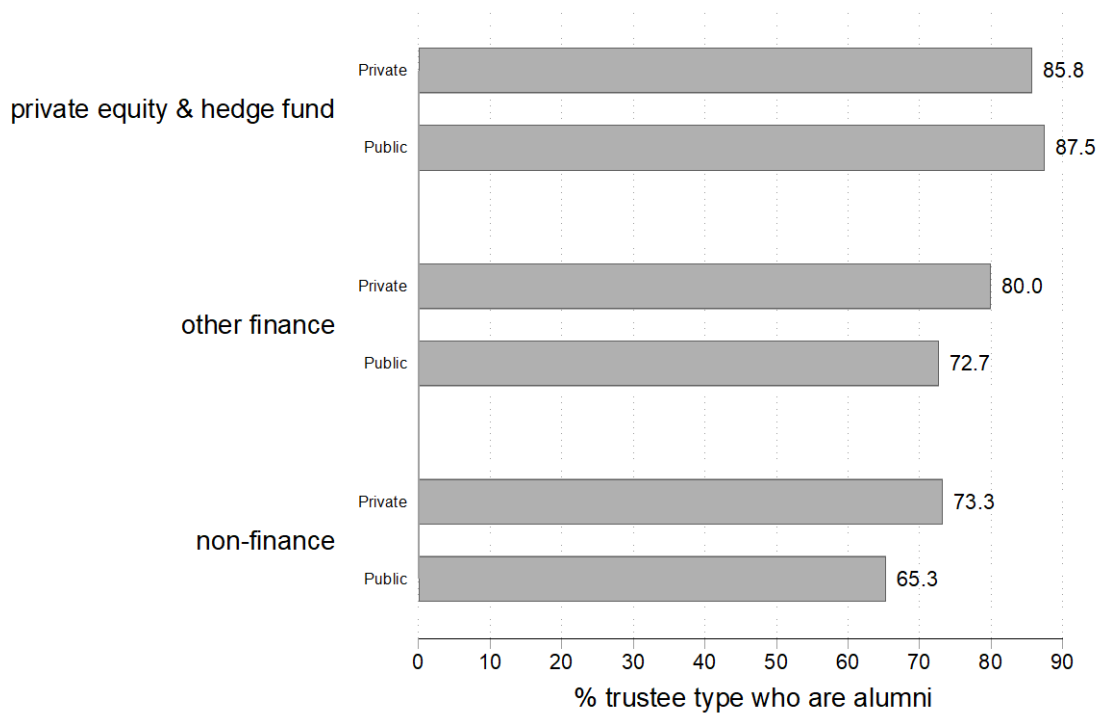
Notes: Data from the Forbes 400 list of the wealthiest U.S. residents.

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.

Table A.1: List of universities in the 2017 Times Higher Education top 30 by sector

Private	Public
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

¹ Though it is sometimes considered to be a “public related” institution, we consider University of Pittsburgh to be a private institution because it has a self-selecting board that originated prior to the formalization of the school’s relationship with the state of Pennsylvania.

² We provide replication code for all analyses in our GitHub repository. We also provide replication data excepting the proprietary data we use from *Forbes*.