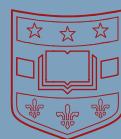


OLIN BROOKINGS COMMISSION
PRESENTS

*Bridging the Startup
Funding Gap
for Women, Black
and Latinx Entrepreneurs*

BROOKINGS



**WashU Olin
Business School**

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Executive Summary

Venture capital is the second-largest private capital class (after private equity) to hit \$1 trillion (Murgatroyd 2022) in assets under management in the United States. As an investment vehicle, the venture capital (VC) industry connects individuals and institutions with the opportunity to invest in nascent businesses—startup companies with a perceived unique innovation story and the potential to disrupt an entire industry or create an entirely new market. These companies hold out the promise of creating billions in enterprise value and employing thousands. For founders who conceive of these aggressive growth companies, the VC system can be a source of capital to drive their new companies forward. For investors, the system is high risk. Not every startup fulfills its promise and delivers outsized investment returns. But when they do, the rewards can be big.

By some measures, this nearly eight-decade-old system has been astonishingly successful in yielding financial success. PitchBook has previously highlighted companies that were initially venture-backed—companies such as Airbnb, Tesla, SpaceX, Slack, Instacart and Uber—are among the most financially valuable in the world (White et. al. 2019, Mathur 2021). They have created new markets, served new customers and, in many ways, changed the way we live our lives. Meanwhile, as those startups grew, they returned wealth to investors who made early bets on their prospects—and to the individuals who guided those decisions, the general partners at VC firms.

Yet throughout that history, stunning inequities have persisted within the venture capital industry. Since its inception, the industry has failed to include individuals who are women, Black or Latinx as company founders or general partners at VC firms. A strategy to equitably include these populations into this system has eluded the United States which, along with the entirety of

North America, captured 41% of global venture capital assets under management in mid-2022 (McKinsey 2023). As a result, billions in investment returns may be foregone every year. Emerging research suggests that diversity in VC general partnerships is associated with higher returns (Calder-Wang and Gompers 2021). Further, this research suggests that these higher returns come, at least in part, from investments in a more diverse portfolio of founders (NAIC 2023).

The WashU Olin Brookings Commission has examined how the United States can address some of the inequity in startup capital distribution—and why it should. How can we do better to address this systemic problem? How can institutional investors (LPs)—who fund the investments for venture capital firms—help address this problem? How can VC general partners—who make investment decisions on the allocation of those funds—help address this problem, particularly in light of the fact that women, Black and Latinx funders are underrepresented in the industry? To be clear, this work focuses on highlighting and framing the frictions that affect access to capital among founders who are women, Black or Latinx who seek capital for high-growth ventures.

This is the foundation for future work across stakeholders such as the general partners, limited partners (e.g., university endowments, public pension funds, nonprofit foundations), founders, individual investors, journalists, researchers, lawmakers and others.

Based on conversations with industry practitioners and available research in the field, the commission believes that if the venture capital community invested more frequently in business opportunities from women, Black or Latinx founders, its returns could significantly increase. The imperative for change is clear. Reversing this persistent problem—the exclusion of viable talent from the innovation landscape—not only has the potential to increase returns but also make the

system more equitable. With VC allocations in 2021 alone of \$330 billion (Q4 2021 Pitchbook-NVCA Venture Monitor), improving the share allocated to women, Black or Latinx founders has proven to be difficult. Consider these numbers:

- 2% of venture capital money was allocated to startups with an all-women founding team in the United States, even though women are 50.5% of the population (Chapman 2022).
- Despite being 13.6% of the U.S. population, Black founders received only about 1% of venture capital in 2020 and 1.4% in 2021 (Accenture 2022).
- While Hispanic or Latinx individuals make up 18.9% of the U.S. population, only about 2% of venture capital funding goes to these founders (Pardes 2022).
- And while our examination focused on women, Black and Latinx founders, we note that Native Americans, at 2.09% of the population, also get a disproportionately low share of VC funding at 0.013% (Crunchbase, n.d., Edwards 2021).

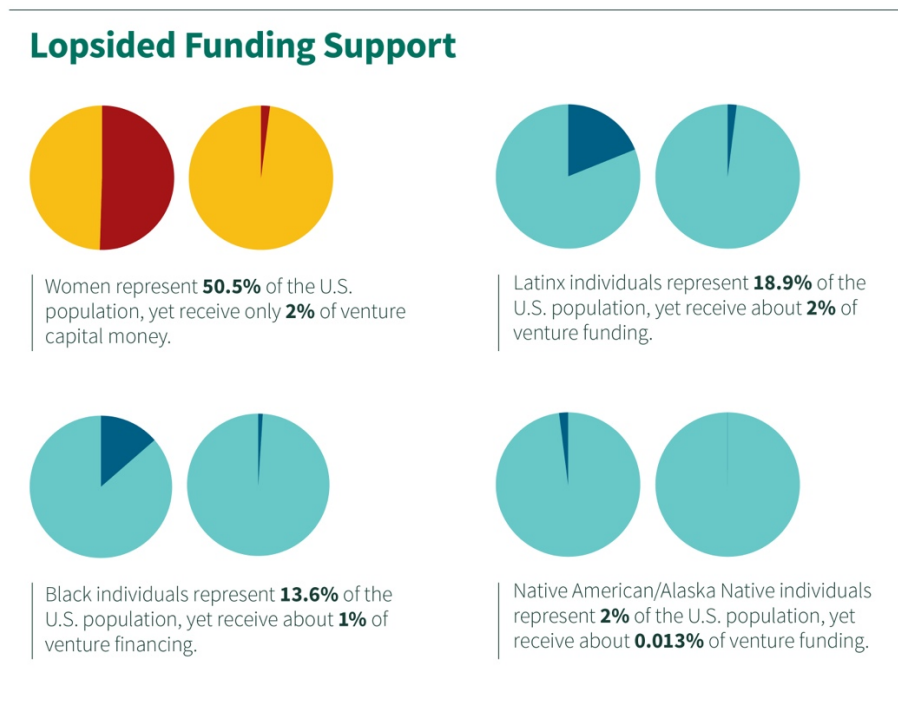


Figure 1: Lopsided Funding Support

To be sure, this inequity has not gone unnoticed. Numerous organizations, institutions and individuals have drawn attention to the problem and have created initiatives and

organizations to address it, including All Raise, Women Who Tech, Expert DOJO, Minority Venture Partners, The Refinery, the Tory Burch Foundation and others. Organizations such as these advocate for, invest in, mentor and promote underrepresented entrepreneurs.

Not only is this fund allocation problem true at the founder company level, but the problem also persists at the general partner venture capital allocator level. Limited partners, who fund venture capital firms, do not make substantial efforts to back teams of diverse VC general partners, even though research from the National Association of Investment Companies suggests general partnerships, which include women, Black or Latinx partners, outperform their peers (NAIC 2023).

To drive more equitable funding—as well as unlock the potential for greater innovation and further spur the economy—the WashU Olin Brookings Commission has identified what we believe to be some of the root causes of these inequities, which have been present since the inception of the VC industry. The commission has attempted to identify meaningful solutions to address the gap in startup funding.

With a focus on venture-backed startups, their founders and funders, the commission considered several alternatives aimed at promoting equity in startup funding. The commission collected and reviewed data and solicited industry input over the last 10 months to produce this report on closing the gender, racial, and ethnic funding gap in the venture capital sector.

Even though this asset class, venture capital, has funded impressive innovation, the industry can do even better by including talent that has the potential to outperform. A section of this paper will discuss how investors, policymakers and influencers can reverse some of the structural barriers that may be invisible to some but harm the overall system. We conclude with recommendations that focus on issues of data transparency, government incentives and greater

accountability among VCs and LPs to address inequality more effectively than existing approaches and have the potential to add to the nation's innovation output.

The world is missing out on...innovative companies by not investing more heavily in women and diverse entrepreneurs.

—Harlem Capital

Framing the Issues

As any entrepreneur knows, starting a business requires a substantial amount of money. Entrepreneurs most often rely on personal savings, loans and outside investments to launch their businesses. Others rely on grants. However, there is a category of funding reserved for companies with a unique innovation story and the potential to create or disrupt entire industries. Venture capitalists seek opportunities to invest in these high-potential companies at an early stage. It's a high-risk, high-reward opportunity for the VCs and their investors—limited partners such as foundations, retirement funds and endowments—who earn their reward when startups become successful companies. The VC system is a highly effective engine to fuel innovation for the investors, founders and consumers who benefit.

Of the roughly 4 million new businesses registered every year, 0.3% receive venture capital (National Venture Capital Association 2021). In 2022, about \$238 billion in VC funding was allocated (Pradeep et. al 2022), down from \$330 billion in 2021 (Q4 2021 Pitchbook-NVCA Venture Monitor).

What do investors get from the billions invested in these high-growth, big-swing innovation companies, these potential industry disruptors? Top-performing venture capitalists and their investors can earn internal rates of return exceeding 20%—sometimes exceeding 30% (AngelList 2023). Typically, these returns are driven by a very small number of companies with a venture capitalist's portfolio—sometimes only one or two. And these returns have generated wealth among founders who have become household names in the United States—names such as

Elon Musk, Jeff Bezos, Bill Gates, Eric Yuan, Jensen Huang, Vinod Khosla and Mark Zuckerberg. In addition to other investment vehicles, including real estate, hedge funds, private equity, etc., venture capital has served as a popular investment vehicle for endowments, pension funds and high-net-worth individuals (from which VCs draw their investment capital) (CBInsights 2020).

Note, of course, that the household names we mentioned are all white or Asian men. And as we will show, that is overwhelmingly the case among VC-backed founders. Meanwhile, among VC general partners—the decision makers who deploy capital—fewer than 3% are Black, Latinx or any other identity than white or Asian (Dayal 2022), and fewer than 22% are women.

There is more. The commission looked at VC allocations reported by Crunchbase from 2011 to 2021. In that analysis, the commission reviewed the number of startups funded and the dollar amounts allocated. That data shows significant funding differences among different-sized founding teams—and differences among teams with women founders. Again, in our analysis of this data, men are funded much more frequently than women. Indeed, 80% of funded startups have only men on their founding teams, while only 5% have all-female founding teams. Meanwhile, when women are funded, they received much less than men. Male-only teams received 91.5% of total VC dollars and averaged \$18 million raised. That's in contrast to teams with all women, who received 1.5% of total VC dollars and averaged \$5 million (Appendix B).

The Depth of the Inequity

In the United States, the struggle to raise capital is greater among Black, Latinx and women founders than among white and Asian male peers. These underrepresented founders are

often overlooked by venture capitalists or investors who seek a private equity stake in startups with strong growth potential.

Indeed, disproportionate representation exists on both sides of the funding equation. On the funding side, for example, among those working in the VC industry, 58% are white men, and “white men control 93% of the venture capital dollars,” according to Forbes (Edwards 2021). Among founders, out of the nearly \$330 billion in capital allocated in 2021, white or Asian men received nearly \$307 billion (also about 93%), leaving roughly \$23 billion for other founders.

Conversely, in 2021, with women representing 50.5% of the U.S. population, all-women founding teams received only 2% of venture capital funding for startups (Chapman 2022). And despite representing 13.6% of the population, Black or African American founders garnered only 1.4% of capital funds in that same year (Deffenbaugh 2022).

Venture Capital Investment in 2021

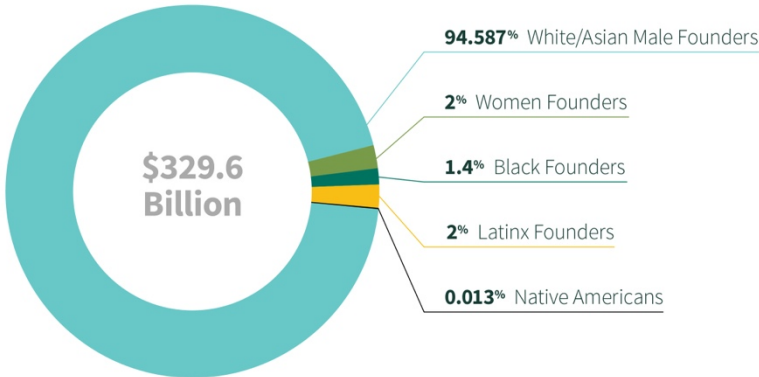


Figure 2: Venture Capital Investment in 2021

Wired magazine reported that Latinos or Hispanics make up 18.9% of the U.S. population; however, in 2021, only 2% of venture capital was allocated to them (Pardes 2022).

In 2021, a mere 0.013% of venture dollars were directed to Native Americans, even though they represent 2.09% of the population (Crunchbase, n.d.). That is only \$42 million of the nearly \$330 billion venture funds raised.

Women, Black or Latinx Founders: By the Numbers

As of December 2022, according to the U.S. Census Bureau, the nation's population slightly exceeded 333 million—including 164.8 million women of all ages (U.S. Census Bureau 2021). More than 100 million people in the U.S. are classified as ethnic and racial minorities—a bit below one in three people. With more than half of the population women and a third of the population minorities, both are vastly underfunded when starting a business. Despite this funding imbalance, women, Black or Latinx founders have had some measurable success in launching and operating enterprises in the nation.

Women Founders in the U.S.

It was not until October 25, 1988—only 35 years ago—that women entrepreneurs no longer needed a man to cosign their business loans (Guta 2018). The Women's Business Ownership Act, passed by Congress and signed into law by Ronald Reagan, abolished outdated laws that required the signature of a husband on business documents and disqualified women from applying for bank loans. As a result of this act, women entrepreneurs could apply for government contracts and benefit from policies and programs designed to support their business ventures (Seger 2017). Over the past 20 years, the number of women entrepreneurs has increased 114% in the U.S. (Ariella 2022)—though as the commission noted earlier, only a small percentage of these women would be candidates for venture capital funding. However, even though they now have more access to credit for business endeavors and are experiencing a boom in burgeoning businesses, women still continue to fall significantly behind men when it comes to receiving venture capital.

According to PitchBook, in 2021, women-only founding teams raised \$6.4 billion across 217 deals—roughly 2% of all capital funds distributed. In the same year, all-men teams received 82% of VC funds—or about \$272 billion. Women who cofounded businesses with a man raised more money, capturing 15.6% of total venture capital in 2021 (Mathur and Rubio 2022).

Black Founders in the U.S.

By 2002, 1.2 million of 12 million businesses in the U.S. were Black-owned. Over the next 11 years, Black entrepreneurship experienced its greatest growth: By the end of 2021, there were 3.12 million Black-owned businesses generating \$206 billion in annual revenue and supporting 3.56 million jobs (Perry et al. 2022). Despite this uptick in founders, for over a century, Black entrepreneurship has remained lower than white entrepreneurship. Seventy-seven percent of VC dollars go to companies with all-white founders, while less than 1% go to Black founders (Gupta 2022).

Latinx Founders in the U.S.

The Annual Latinx-owned Business Study—conducted by biz2credit during the period of July 31, 2021, to June 30, 2022—estimates there are 4.65 million Latinx-owned businesses in the U.S. today. Over the last 10 years, the number of Latinx business owners has grown by 35%, while the number of non-Latinx business owners has grown by 4.5%. Across the country, Latinx-owned businesses employ over 2.9 million people. In Latinx-owned businesses, employees have increased 55% since 2007, compared to 8% in non-Latinx-owned businesses (biz2credit 2022). Although Latinx startups have increased exponentially, Latinx founders face

challenges raising venture capital—securing only 2% of venture capital dollars, compared to 93% for white entrepreneurs (Edwards 2021).

Further Illustrating Systemic Inequity

For the past three years, the nonprofit organization Diversity VC has analyzed the distribution of venture capital financing to Black, Latinx and women founders. “What we found was that VC-backed startups were still disproportionately men (89.3%), white (71.6%), based in Silicon Valley (35.3%) and Ivy League-educated (13.7%),” said Diversity VC Chief Operating Officer Sarah Millar in the nonprofit’s 2022 edition of *The Equity Record*.

The study, which surveyed over 200 individual U.S. funds and was conducted in collaboration with Penn State University, also revealed that of the combined \$32 billion in assets under management included in its study, only about 1.9%, or \$582 million, were devoted to diversity, equity and inclusion (DEI) investments (Diversity VC 2022).

Separate studies revealed that:

- Among the \$238 billion in venture capital allocated in 2022, all-women teams received 1.9% (roughly \$4.5 billion), down from 2.4% (roughly \$7.9 billion) in 2021 (Rubio 2022).
- Black-founded companies raised just \$2.2 billion in 2022, down from \$4.2 billion in 2021 (Davis 2023).
- Latinx founders raised just over \$2 billion in 2022, down from \$6.6 billion in 2021 (Harlem Capital/Crunchbase 2023).
- The number of venture capitalists who prioritize funding multicultural-founded companies has declined from 43% to 32% (Morgan Stanley 2019).

Equity and Innovation, Not Proportionality

We believe the existing distribution of VC funds leaves too many women, Black and Latinx founders out of the innovation landscape, with consequences for both economic growth and fair income distribution.

Evidence suggests that improving diversity yields benefits on both sides of the deal—among founders and funders. In their book, *Better Venture: Improving Diversity, Innovation and Profitability in Venture Capital and Startup*, Erika Brodnock and Johannes Lehnard wrote, “Investors are missing opportunities for higher financial returns by undervaluing high-performing companies led by diverse groups or by overvaluing white-male-led firms.” (Brodnock and Lehnard 2023) And in a study that looked exclusively at gender diversity among venture capitalists entitled “And the children shall lead: Gender diversity and performance in venture capital,” researchers found an increase of 5% in gender diversity improved deal success rates by 4.7% (Calder-Wang and Gompers 2021).

Also on the funding side, a 2018 study documented a 1.5% increase in overall fund returns and nearly 10% more profitable exits (that is, the moment through a startup’s acquisition or initial public offering when VCs reap a return on their startup investments) by increasing their proportion of female partner hires by 10% (Gompers and Kovvali 2018).

Simply put, there is a woeful gap in startup funding for women and underrepresented founders. Against this backdrop, the WashU Olin Brookings Commission set out to define and examine the friction points within the system that contribute to the problem.

“If we continue down this path, we will continue to hinder the innovation that could be coming from 80% of our population.”

—Akeem Shannon, CEO, and founder of Flipstik

Why It Matters

The disparate funding distribution for woman-, Black- or Latinx-founded startups has consequences. As discussed earlier, the lopsided allocation of VC funds hinders innovative ideas from women (who are in the majority) and from racially diverse people who, collectively, are on their way to becoming the new majority. This imbalance also contributes to the wealth divide, furthering inequity. The commission further concludes that if no interventions are made, current industry conditions make it unlikely that inclusive entrepreneurial ecosystems will emerge.

Furthermore, the commission finds that the persistence of these inequitable practices within the industry leaves money and innovation on the table. Referring to the Gompers paper earlier, given an initial investment of \$1 billion increasing the internal rate of return (IRR) from 12% to 13.5% over a 10-year period—the typical lifetime of a fund—yields an increase in total profits of more than \$440 million. Some studies have suggested up to a 3.5% increase in IRR associated with management by more diverse teams (Calder-Wang and Gompers 2021). Thus, the potential benefits of prioritizing diverse teams of investors—viewed in this way—are staggering.

Hinders Innovation from the Growing Majority

Population projections from the U.S. Census Bureau confirm racial minorities are the primary demographic engine of future growth, displacing an aging, slow-growing and proportionately declining white population, according to William H. Frey, senior fellow with Brookings Metro. It is projected that by 2045 whites will make up 49.7% of the U.S. population—still the largest racial category but the minority against other racial categories

collectively. Comparatively, Latinos are projected to be 24.6% of the population, and Blacks 13.1%.

The inability of the VC industry (and all its component parts) to invest in innovative ideas from the growing majority population will hinder the development of innovative ideas. “If we continue down this path, what it means is that we’ll continue to hinder the innovation that could be coming from 80% of our population,” said commission member Akeem Shannon, CEO and founder of Flipstik. “So, we ask ourselves, while we’re falling behind internationally, why are 80% of our people sitting on the sidelines—and who are putting them there?”

Divides Wealth, Furthers Inequity

There is no doubt that venture-backed businesses can create wealth for entrepreneurs, their families, investors and communities — but not for those who are disenfranchised. These funding imbalances contribute to the nation’s wealth divide and further inequity. “It takes money to make money,” said commission member Charli Cooksey in reference to the racial wealth divide. Cooksey is the founder and CEO of WEPOWER, a nonprofit focused on building wealth with and in under-resourced communities via entrepreneurship and policy change. She points to the Kaufman Foundation’s report that it takes \$31,150 in 2008 dollars (nearly \$45,000 today) to start a business from the ground up (Ewing Marion Kauffman Foundation, n.d.) and notes how difficult it is for families that have significantly less household wealth to start a business from scratch.

Median household wealth in the U.S. in 2021 was \$46,774 for Black households, \$53,148 for American Indian and Alaskan Native households and \$57,981 for Latinx households—all of

which is significantly less than the median household wealth of \$74,932 for white households (U.S. Census Bureau 2022).

Inclusive Ecosystems Are Unlikely

The disparate distribution of venture funds makes inclusive entrepreneurial ecosystems unlikely, the commission concludes. As the VC system stands, the reason is twofold: first, allocators of risk capital (e.g., venture capital) tend to give funds to people who look like them; and second, allocators of risk capital tend to give funds to people who look like others who have been successful. The entrepreneurship ecosystem comes ready-made with a built-in feedback loop: success drives funding; funding drives success. A jump start is needed to get new people into the set of winners.

Arlan Hamilton, founder and managing partner of Backstage Capital, said investors have a blind spot when it comes to funding Black founders. “It is not about ‘helping’ founders. It’s about fueling an untapped ecosystem so that you may be lucky enough to reap the rewards in years to come,” said Hamilton in an article in WRAL Tech Wire (Allam 2018).

Missing Businesses, Missed Economic Opportunities

Approximately 2.6 million jobs were created in 2016 by startups funded by venture capital (U.S. Census Bureau, n.d.). And approximately 3.8 million jobs were created at VC-backed companies in 2020 (Chow and Brown 2022). The commission concluded that the missing businesses by founders who were women, Black or Latinx and did not receive startup funding would have created more jobs, thereby expanding the economy. “If we decided to invest in the

growing majority of our country, we could be creating jobs and investing in growing the economy, and this is good for everyone—not just marginalized communities,” said Shannon.

Downward Trends for Women and Underrepresented Minority Founders



All-women teams received **\$4.5 billion** (1.9%) of the venture capital allocated in 2022, down from **\$7.9 billion** (2.4%) in 2021.

Black-founded companies in the U.S. raised **\$2.2 billion** of the venture funds in 2022, down from **\$4.2 billion** in 2021.

Latinx-founded companies in the U.S. raised **\$250 million** of the venture funds in 2022 Q3, a sharp decrease from **\$2.3 billion** in 2021 Q3.

Figure 3: Downward Trends for Women and URM Founders

Data show that gender and racial funding gaps among firms impose a toll on the U.S. economy. In its 2016 report, “The Color of Entrepreneurship: Why the Racial Gap Among Firms Costs the U.S. Billions,” the Center for Global Policy Solutions estimates that in the U.S., 1.1 million businesses owned by people of color are being closed due to discrimination (Austin 2016). “These missing businesses could produce an estimated nine million more jobs and boost our national income by \$300 billion,” wrote report author Algernon Austin.

More than 4 million minority businesses have grown in the U.S. in the last 10 years, generating close to \$700 billion in annual revenue and supporting nearly 7.4 million jobs (Alvarez, Claes and Siraz, n.d.).

When it comes to average size, Black businesses generate about \$1 million a year in revenue, compared to \$6.5 million for non-Black businesses. Black businesses could conceivably increase their revenue by \$676 billion if they raised their average revenue to that of non-Black businesses (Perry, n.d.).

Missed Opportunity to Solve Female and Minority Problems

By not investing in businesses founded by women, Black or Latinx founders, investors are missing opportunities that solve women- and minority-focused problems. Diversifying investments allows investors exposure to new ideas, innovation and solutions to problems they wouldn't otherwise be able to access. "When you have founders who are from backgrounds that are different from the founders that we're typically seeing, they're tapping into problems that other people aren't thinking about. They know these problems the best because they've had lived experiences, and they have deep expertise in this area," says Lauren Usher, gBETA Social Impact Managing Director of gener8tor (Thompson and Merriweather 2021).

Several recent studies have documented a correlation between the background of innovators and the target audience of their innovations. For example, a 2021 Harvard study analyzed decades' worth of patent filings, finding that all-female inventor teams are 35% more likely than all-male teams to develop patents addressing women's health (Koning, Samila and Ferguson 2021).

IDEA Fund Partners Founder and Managing Partner Lister Delgado agrees that diversity fosters broad thinking when different perspectives are brought together and new ideas are generated. "And so, diversity is not just understanding a particular customer better, it's about thinking about innovation with a much broader perspective, whether that's product innovation or

business models. Diversity touches everything,” said Delgado. (Thompson and Merriweather 2021).

Considering the country’s growing diversity, the Olin Brookings Commission recognizes that doing nothing is too costly and will continue to ripple economically. A number of solutions have been considered by the commission to increase access to funding for aspiring founders who are women, Black or Latinx.

“They influence the way we think and act, and such irrational mental shortcuts can lead to all kinds of problems in entrepreneurship, investing, or management.”

— Jeff Desjardins on Biases

Friction Points

In the U.S., a shocking disparity exists in startup funding available to women, Black, Latino and Native American people looking to start business ventures. In its report, “Beyond the VC Funding Gap,” Morgan Stanley revealed that venture capital firms have not prioritized investing in startups founded by women, Black and Latinx founders, despite acknowledging opportunities with these entrepreneurs. In their encounters with these founders, venture capitalists apply rigid definitions of “fit” and rarely learn about the product, the market segment or the opportunity presented (Morgan Stanley 2019). The commission looked to identify contributing causes of the funding disparity before determining how to remedy it.

Drawing upon their own experiences—as well as input from both researchers supporting the commission and a diverse group of academicians who have studied the issue extensively—the commission identified and examined contributing factors to an inequitable distribution of venture capital funds to these underrepresented entrepreneurs.

While this effort revealed many factors, commission members agreed these friction points would be the focus of their examination: a lack of transparency about gender and race in the industry, a set of biases and industry practices that tend to reinforce the status quo, a preference for investments that follow well-established patterns, a lack of access to seed funds and startup capital, and a limited safety net and family support for emerging founders.

Data Transparency

Industry participants have long recognized that venture capital investors and venture capital recipients are disproportionately male and either white or Asian. In the past decade, information providers such as Crunchbase, PitchBook and Preqin have made it possible, although not easy, to begin to quantify differences in VC funding across race and gender. Media reports about the scale of inequity in the industry—along with shifting social attention to issues of race in the wake of George Floyd’s murder in 2020 and research suggesting that higher returns may be associated with greater gender and ethnic diversity (Brush, Davis and Greene 2014)—have begun to spur action within the community of venture capitalists and their investors.

Earlier in this paper, the commission noted its review of 10 years’ worth of Crunchbase data centered on the gender makeup of founding teams. The same analysis was not possible for Black or Latinx founders. Race-based data is unavailable without applying extraordinary supplemental research efforts, including hand-collected data, various survey methodologies or even artificial-intelligence-driven image recognition algorithms (Appendix C). These extraordinary efforts are what make possible stories in the trade press about inequitable VC allocations among founders who are women, Black or Latinx. This speaks to the issue of transparency.

This lack of transparency means limited partners—those individuals and institutions that provide funding for venture capital—may find it difficult to compare VCs across any measure of diversity, equity and inclusion. It means these LPs would find it difficult to see the breakdown of their investments by race and gender. It means journalists, researchers and lawmakers must rely on web-scraping, smart algorithms and hand-collected data to monitor the state of the industry and to document its changes.

An examination into the opacity of this type of information—in the context of investment banking—found its way to the halls of Congress in 2021. That year, the U.S. House Committee on Financial Services issued a report examining investment firms with assets totaling \$400 billion. Committee members asked the 31 firms to self-report data on diversity hiring, economic inclusion in their investments and similar categories. This came in the wake of George Floyd’s 2020 murder, after which 25 of those firms made public statements of support for increased diversity practices in hiring, investments, etc. Broadly speaking, the report found no substantial changes (House Financial Services Committee 2021).

All of this is problematic, in the commission’s view, because, as any business leader knows, “you manage what you measure.” Without standardized industry-wide measurement and reporting, how can anyone be held accountable for maintaining the status quo or rewarded for leading change? Likewise, it’s worth noting that founders could also use reliable, hard data to know who is likely to deal fairly with them.

Reinforcing the Status Quo

Sociology research describes a tendency for people to interact more frequently and more readily with others who share common characteristics such as race, gender, schooling, ethnic background, etc. (McPherson et. al. 2001; Gompers and Wang 2017; Milner 2013; Lazarsfeld and Merton 1954). They have a name for this type of bias: homophily. How does it relate to the existing system of venture capital allocation? In the industry, networks are critically important both for “getting the meeting” and for how a new startup team is evaluated (Stearns, n.d.).

“We found this term that captures the idea that birds of a feather flock together—that we are more likely to invest in people that look like us,” said commission member Andre Perry, a

senior fellow at the Brookings Institution. He noted that where a founder was raised or attended school also affects investment decisions. “There are social factors that influence who we contribute or invest in.”

Biases are shaped by what we learn from friends and family as children, institutions that influence our values and beliefs, and media such as television shows, movies and books. Biases are influenced by several parts of the brain and act as adaptive mechanisms that allow us to make decisions and take actions based on our prior experiences and knowledge (Staff 2022).

A prime example of this bias in action is the fact that women-founded startups receive much less funding as well as lower valuations than those founded by men—especially from male investors. In their study, “Tipping Points in Gender Representation: Evidence from The Startup Game,” University of Pennsylvania researchers Valentina Assenova and Ethan Mollick examined whether and how changes in the gender composition of venture capitalists and entrepreneurs might affect the emergence of a critical mass to address gender inequality (Assenova and Mollick 2022). According to the researchers, this tendency to seek out similar people among men is a key driver of gender inequality. Notably, these preferences become weaker with the rise in women’s representation.

Perry said the fact that venture capitalists are more likely to invest in people that are similar to them “does not capture all of the things in play. Clearly, racism, sexism and other social ills are a part. It’s just not whether or not you went to Harvard with someone or you went to Stanford or Allegany College.” (Perry, n.d.)

In 2017, women made up only 8.6% of venture capitalists, 8% of firm partners and 7% of board seats (Athanasia and Kersten 2022). Among all VC partners, only 2.7% are Black, 2.8% are Latinx and 1.8% represent other identities—while whites and Asians account for 65% and

27% of senior investment officials, respectively (Dayal 2022). Richard Kerby, a partner at Equal Ventures, conducted an analysis of about 1,500 venture capitalists in the U.S. and discovered that over 80% of them were men and 70% were white (Kerby 2019). In contrast, TechCrunch reports that 93% of VCs are male, and 90% are white.

Research (and personal experience among commission members) has also shown that reinforcing the status quo shows up in the way startup founders are vetted. During pitches, men are more likely to be asked “promotion” questions (“How big can your business be?”), while women are more likely to be asked “prevention” questions (“What are the risks to your business? Why might it fail?”) (Kanze and Huang et. al. 2018). One commission member, a startup founder, echoed this research from her personal experience, recalling the experience of being told she was not prepared—only to go on and raise millions for her startup in 18 months.

Meanwhile, in private conversations, white male investors report beliefs that investing in women and minority founders has reputational risk in addition to business risk. “My track record and my reputation is the most important thing that I have. I am worried that people in the community will question my judgment if I take a flier on a non-traditional founder and they fail.”

Following Well-Established Patterns

Representation by women and Black or Latinx founders is lacking in traditional venture capital industries, especially in sectors where VCs have proven expertise, experience and results, such as technology, medicine and science. In fact, in 2022, 80% of VC funding went to tech and pharma companies (National Venture Capital Association 2022). As VC communities focus on STEM and pharmaceutical industries, founders from other industries are often excluded. Earlier in this paper, the commission referenced recent studies correlating target markets with the

makeup of founding teams—evidence, for example, that male investors are less likely to see value in products whose customers are likely to be women.

Venture Capital Funds Invested by Sector

U.S. Venture Capital Investment Across Industries, Q4 2022

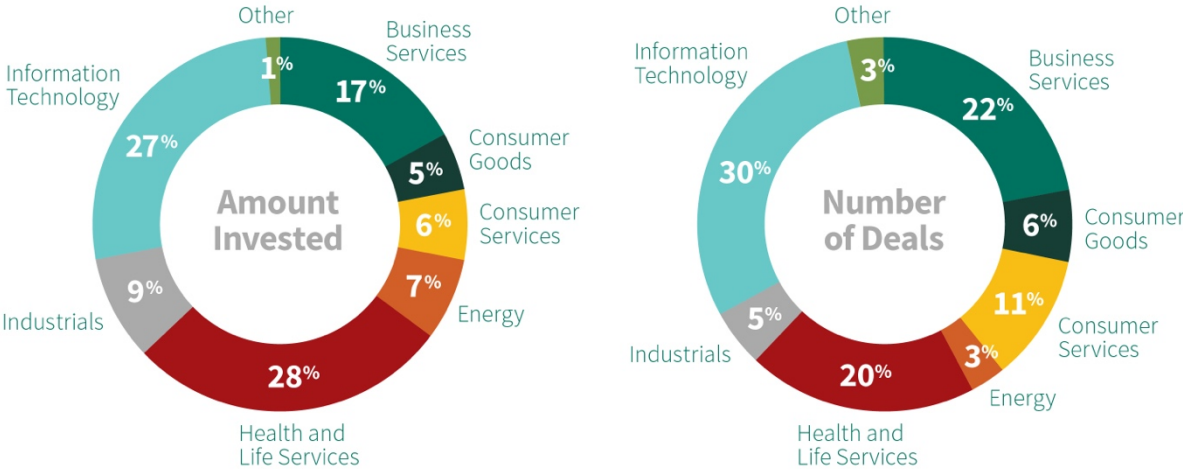


Figure 4: Venture Capital Funds Invested by Sector

Daniel W. Elfenbein, WashU Olin professor of organization and strategy, said this trend has industry experts and researchers asking the question, “Are there entrepreneurs who have businesses that compete and grow in sectors where VC dollars and VC attention are very limited?” Elfenbein, also a faculty convener supporting the commission, said if there are more customers who are women, Black or Latinx in consumer products, fashion or service sectors, the commission should ponder how to infuse more investment into these sectors.

This is played out in a 2022 study from Boston University entitled “Cultivating the Diversity Advantage: How Underrepresented Founders Develop Scalable Ventures,” a field study of 50 underrepresented founders in a competitive national fellowship program over an 18-month period.

According to one female Asian founder interviewed in the study, “We have so many things that investors are biased against, like the business, our target customer being mostly women, like suburban moms, the fact that we have a hardware component in our business, the fact that it’s a consumer hardware product, the fact that we are non-Ivy-League, like no education of note on the team, you know, so many things. It’s harder to pinpoint...which is which. I definitely feel the bias in aggregate.” The study’s authors were Cassie Li, Siobhan O’Mahony and Amisha Miller.

As noted earlier, VC funding is reserved for a special category of company with a unique innovation story, the potential to disrupt an industry or create new markets and employ thousands. A large share of these firms in recent years have focused on technology. Is it possible that technology, which is embraced wholeheartedly by VCs, will create the opportunity for every sector to have scalable businesses in the future? Through its interviews and research review, the commission learned that women, Black or Latinx founders frequently report hearing “that their business idea is not VC-investible.”

“If traditional venture capital is not the right model for all sectors—can other tools be used to scale to address the funding gap in these other sectors?” asked Elfenbein. “While the focus of our commission has been on broadening the access by women, Black or Latinx founders to VC, we should not ignore other ways to get these entrepreneurs the funds they need to grow their businesses successfully.”

Limited Access to Seed Funding

According to research discussed earlier in this paper, raising capital is more challenging for Black, Latino, Native American and women founders than for white and Asian men. Access

to seed money is critical to developing business ideas or establishing proofs of concept and conducting market research for many startups. Many successful entrepreneurs must bootstrap early iterations of their businesses using personal funds or money raised from friends and family. The wealth gap in the United States has been well documented. Lack of home equity, private savings or family wealth limits the investable capital available to many and raises the opportunity cost of engaging full time in entrepreneurial endeavors.

Cannot Afford to Fail

Building a scalable business—the sort of business VC investment requires—generally requires a full-time commitment. For women, who are disproportionately responsible for family management, the lack of affordable child care can render the commitment to an entrepreneurial endeavor impossible. Access to family planning resources has been shown to be important for women starting and committing to new businesses. The majority of entrepreneurial endeavors fail. Research shows that people have a tendency to attribute failure more to the individual (rather than the marketplace) when the individual is a woman, Black or Latinx. This can affect that individual's job opportunities once the entrepreneurial venture is terminated.

This is not to say women must be wealthy to succeed as entrepreneurs. Indeed, entrepreneurship may be the only option for individuals when unemployment is high, for example. This paper is not addressing general entrepreneurship, however, but the category of entrepreneurship that is ripe for the VC industry's attention. And in that context, non-wealthy founders who are women, Black or Latinx often lack the safety net to pursue their entrepreneurial dreams and often self-select out, as they cannot afford to fail.

In addition to child care, potential founders must be able to cover basic needs such as health care and housing. Cooksey said founders must consider all these factors as well as starting a business, which can be daunting. Additionally, many founders who are women, Black or Latinx do not have safeguards against hardship or adversity. Without an adequate safety net (such as savings or an emergency fund), these entrepreneurs are even more vulnerable to personal losses and business failure. “We need to make it safer for underrepresented entrepreneurs to take a risk on entrepreneurship, recognizing the huge return on investment for all of us in this country,” said Cooksey.

“For the industry to continue to flourish, inequitable behavior must end. It costs investors money, the investors themselves are diverse and the evidence has taught us that diverse venture capital general partnerships and businesses frequently outperform their industry peers.”

— Martin Hunt, commission member, CEO, Swanlaab USA Ventures

Proposed Solutions/Recommendations

As a commission, we now advance a set of recommendations intended to address these “friction points” and, in doing so, improve domestic innovation and equity. We recognize that some of these frictions are easier to address than others. Changing attitudes, preferences and beliefs is challenging and all the more challenging absent a crisis or external threat. While no such crisis exists, and no external threat is implied, the commission believes that the industry will be at great risk of regulation if the distribution of investments by race and gender 10 years hence looks similar to today. Among other policies that are viewed favorably by the industry, the current treatment of carried interest (a form of compensation paid to VC general partners—a share of the fund’s profits—based on meeting investment return targets) seems particularly vulnerable. We recommend:

Improving the Transparency of Funding Information

Businesses, leaders, investors and other stakeholders cannot change or improve anything they do not track. What gets measured gets done. Measuring representation among traditionally underrepresented communities transparently, without the need for extraordinary research measures and, to the extent possible, in a standardized way, would allow industry groups such as the National Venture Capital Association (NVCA) to enhance its reporting as a supplement or alternative to surveys completed by its members.

Accurate information would facilitate the creation of incentives by limited partners or government policymakers. It would open the possibility of publicly recognizing institutions that exhibit best practices, identifying them and highlighting solutions that may be adopted more broadly. A standardized dashboard, with associated comparative progress—a “report card,” for example—could be generated. Unfortunately, today, collecting and analyzing race and gender data in the VC system is very difficult. The rise of information intermediaries such as PitchBook and Crunchbase has made it easier for dedicated researchers to identify founders and impute their demographic information, but it is far from simple. PitchBook, for one, doesn’t collect gender or race data. Crunchbase has gender data—but only includes race data if founders choose the option to report it themselves. Apart from Crunchbase’s recent efforts toward greater inclusivity in gender identity in its product, we are unaware of data providers that include information for other potentially marginalized communities, such as LGBTQIA+ founders.

Today, collecting and analyzing race-based founder data requires researchers to: use image-recognition algorithms connected to a founder’s LinkedIn profile, use name-recognition algorithms or enlist teams of individuals to look manually at photos to confirm. We recognize that some founders do not wish to disclose their race or gender data for fear it will be used against them in some way. However, relying on algorithms risks yielding inaccurate data.

Our specific recommendations include:

- We encourage founders to report the composition of their founding teams by gender, ethnicity, sexual orientation and any other meaningful signals of identity. Create an option that allows founders to make the information public and individually identifiable or only available in aggregate reporting.

- PitchBook and Crunchbase should use built-in technology integrations with LinkedIn, if possible, for researchers to more easily produce empirical studies centered on diversity, equity and inclusion data.
- LPs should be asking VCs to collect the data from the founders they have invested in and, as a result, be intentional going forward.
- We urge the entrepreneurship community to work together with the venture community and limited partners to continue to build systems that deliver timely, accurate and comprehensive information about the demographics of those applying for and receiving venture funds. Since it is also important that the deal terms are not a function of gender, race or sexual orientation, we encourage these stakeholders to develop new data systems that enable the analysis of fairness across deals at different levels of analysis while recognizing the need not to disclose competitive information.

Opening the Door for Government Intervention

Venture capital has the potential to generate outsized returns. The industry does not seem to be able to self-regulate, nor does it have the incentive to do so. Banking, real estate and finance are sectors that operate under government regulation that address issues of equal access across demographic populations. Nonetheless, while the system itself doesn't broadly see opportunities to produce higher returns and spur more economic growth by adopting inclusive practices, we have cited research that suggests that to be the case—that money and innovation are being left off the table.

To be clear, the government provides benefits to the industry today.

- The general partners in venture capital firms receive management fees and a percentage of gains for their services. Those gains are called “carried interest” and are taxed at a 20% rate (long-term gain rate) as opposed to federal tax rates of 37% for the highest income bracket.¹ As it happens, this incentive survived a congressional challenge in mid-2022 thanks to the vote of a single senator (Rappeport 2022).
- Nonprofit foundations, pension funds and endowments benefit greatly from both favorable tax treatment as well as state and federal funding. These institutions (LPs) invest heavily in venture funds to gain diversification.
- MBDA, with elevated status under the Minority Business Development Act of 2021, can play an increasing role in government engagement with some high-growth/high-potential underrepresented businesses. This role potentially couples the agency’s deep experience base in the community to the area of venture capital access (more, Appendix D).
- SSBCI 2.0 provides an opportunity for states with agreements including capital access to ensure that founders who are women, Black or Latinx are truly receiving access to public dollars and benefiting/adding to the expected \$10/\$1 private/SSBCI leverage multiple planned for the program (more, Appendix D).

We recommend that government policymakers explore a selection of both “carrots” and “sticks” in the interest of driving greater equity into the VC system. Potential carrots worth

¹ Typical carry rates for venture capital funds are 20%. So, if a venture fund makes a profit of \$20 million on its investment, the total carry would generate \$4 million in payment to the fund. The carried interest incentive would currently save general partners in the fund \$680,000.

developing—in the form of tax incentives for both early investing and later-stage investing—could include:

- A tax credit on capital gains realized by VC organizations that can show that some portion (perhaps 30% or more) of their general partners are women, Black or Latinx and/or that their capital is deployed above some floor for the same population of founders.
- Expanded venture capital tax credits among states where such investment is common or explored on a federal level. Many states have tax credit programs spurring investments in local startups that fulfill a gap in their community—such as technology, life science, real estate or manufacturing—or ventures that create high-paying jobs and economic growth. In return for their investment, venture capitalists can receive credits against their income tax and other tax-related perks.
- A voucher system for women, Black or Latinx founders that would create a new tax-deductible investment vehicle, giving VCs a risk-free way to invest in women-, Black- or Latinx-founded startups.
- Aggressive enforcement of the provisions supporting equity and diversity measures when money is deployed through the CHIPS and Science Act (AIP 2022).
- A higher Child Tax Credit for women, Black or Latinx founders so those who care for children have more resources to afford child care.
- Incentives for lenders to offer revenue-based financing for women, Black or Latinx founders who don't qualify traditionally for venture-capital investment or bank financing but need capital to start or expand their business.

Likewise, we should suggest policymakers explore the following sticks:

- Consider requiring data transparency—especially when the LPs are government-funded institutions that are investing in venture capital.
- Consider an act similar to the Community Reinvestment Act related to banking.
- Consider creating a specific government agency to oversee the venture capital industry similar to the Securities and Exchange Commission (SEC), or that venture capital be regulated under the SEC.

Funding and Executing a PR/Awareness Campaign

Given that the system has not changed on its own, outside pressure appears necessary to gain the attention of the industry and the government. One strategy would be to spotlight the institutions whose money is being invested into venture capital. One-off press releases, the occasional publication of academic research and headlines in the trade press have not been enough to effect change. Everyone in the industry knows about this issue, but nothing has happened at a widespread level.

We recommend that groups such as [New Voices Fund](#), [All Raise](#), [Zeal Capital Partners](#), [Venture Forward](#) along with other similarly aligned organizations, work together to finance an advocacy group that amplifies data findings and public policy recommendations through ongoing media relations, social media campaigns and events/conferences exploring additional solutions and policy recommendations to influence policymakers.

- A public dashboard that provides accountability for limited partners, financial institutions, pension funds, venture capital firms, etc., related to their diversity

investments — ideally integrated with PitchBook and Crunchbase with support from the press and social media campaigns.

- A pledge VC firms can sign onto pledges akin to those they have recently joined in support of [Silicon Valley Bank](#) and [women’s reproductive rights](#). We note other examples such as [Base10’s VC diversity pledge](#), the [Black Founders Matter](#) pledge, the [Pledge 1%](#) diversity pledge and the “[diversity riders in term sheets](#)” pledge.
- Other PR and awareness initiatives such as a series of events and conferences dedicated to this issue and a well-managed digital campaign. Targeted events could bring together thought leaders and policy influencers in this space dedicated to exploring potential solutions — both carrots and sticks.
- Publicizing “diversity theater.” This is a phrase the commission heard in its exploration of the issues. The phrase captures the idea that organizations may speak a good game with regard to addressing equity and diversity through their public statements but may not follow through with their actions. The coalition of aligned organizations should fund a study to examine the state of institutional promises made compared to those honored in the wake of George Floyd’s 2020 murder.

Summation and Conclusion

The WashU Olin Brookings Commission has convened scholars and industry practitioners. It has heard from its own members, who have experience in the venture capital industry, as well as from those on both coasts of the United States—and indeed, globally—who have studied or worked within the system. The commission’s work began in September 2022 with the goal of identifying some of the root causes of the well-known, oft-reported practice of systematically excluding startup founders who are women, Black or Latinx from access to venture capital funding—a funding vehicle that has driven extraordinary innovation and wealth for nearly eight decades (Venture Forward 2023).

The facts have been reported and repeated thoroughly in the body of this paper, and they have persisted so consistently over the decades it is impossible to refute them. Startups with women founders get a minute fraction of the venture capital allocated annually, a share deeply out of proportion with the representation of women in the population. Women also make up a small share of those who make funding decisions. The same facts are true for Black founders and funders and for Latinx founders and funders. And while there are well-documented pockets of resistance to this ongoing inequity—organizations, institutions and individuals pushing to prioritize equity and inclusion in the system—they have been insufficient to break the pattern in any systematic and large-scale way.

And the root causes—the “friction points,” if you will—that have allowed these facts to remain unchallenged for decades? The commission has agreed they center on a lack of transparency about gender and race in the industry, a set of biases and industry practices that tend to reinforce the status quo, a preference for investments that follow well-established

patterns, a lack of access to seed funds and startup capital, and a limited safety net and family support for emerging founders.

The commission recognizes that some of these frictions will be challenging to address. Doing so involves changing attitudes, preferences and entrenched practices. And so, we have centered our recommendations in three broad areas, with ideas suggested within each: improving the transparency of funding information, opening the door to government intervention, and funding and executing a targeted and persistent PR/awareness campaign.

What gets measured gets done. It is time for this inequity to be consistently and persistently measured and reported. It is time for those with influence to be held accountable for addressing it—and to hold others accountable. It is time for this to get done.

Olin Brookings Commission

The Olin Brookings Commission is a three-year initiative that brings together policy experts, industry leaders, Brookings Institution scholars and Washington University's Olin Business School faculty. The commission's primary objective is to examine ways to improve quality of life by addressing universal issues.

Underwriting the commission's work is The Bellwether Foundation Inc., a St. Louis-based charitable organization that supports innovative programs.

Each year, the commission focuses on a different issue. In its first year, 2021-2022, a six-member commission addressed ways to curb [the U.S. opioid crisis using artificial intelligence](#) (Olin Brookings Commission 2022).

This year, a new eight-member commission considered various measures to address the funding gap for founders who are women, Black or Latinx.

Composed of founders, policy influencers and investors, this commission distilled research that showed how inequity in startup capital distribution shortchanges not only underrepresented founders but also the entire innovation ecosystem.

The commission explored solutions aimed at democratizing startup funding and developed policy recommendations to ensure solutions are successfully implemented.

By supporting the commission's work, WashU's research team and faculty members with expertise in business, entrepreneurship, leadership, and diversity and equity played an integral role in this year's effort. The 2022-2023 Olin Brookings Commission includes the following members (Olin Brookings Commission 2022).

Commission Members

[Lori Coulter](#) is cofounder and CEO of Summersalt

[Morgan DeBaun](#) is founder and CEO of Blavity Inc. and an advisory board member for the Black Economic Alliance

[Akeem Shannon](#) is CEO and founder of Flipstik

[Charli Cooksey](#) is founder and CEO of WEPOWER

[Andre Perry](#) is a senior fellow at the Brookings Institution

[Martin Hunt](#) is CEO of Swanlaab USA Ventures

Faculty Conveners/PhD Students

[Doug Villhard](#) is a professor of practice in entrepreneurship and academic director for entrepreneurship

[Daniel Elfenbein](#) is a professor of organization and strategy

[Dedric Carter](#) is Olin's professor of practice in entrepreneurship and WashU's vice chancellor for innovation and chief commercialization officer

[Gisele Marcus](#) is a professor of practice

[Ming zhu Wang](#) is a sixth-year Olin PhD student in strategy and entrepreneurship

[Aditi Vashist](#) is a fifth-year PhD student in organizational behavior

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Appendix A: Glossary

Aggressive-growth ventures: Ventures with strong innovation capabilities (and often technology-based) designed to transform an industry or create a new market typically at the national and international level.

Allocation: The amount a person, fund or entity invests in a given company over a period of time. Thus, reports show that total assets under management in North America in 2021 reached \$1 trillion, but the total allocated that year was \$330 billion.

Angel investor: A wealthy private investor focused on financing small business ventures in exchange for equity (shares in the company). Unlike a venture capital firm that uses an investment fund, angels use their own net worth.

Assets under management: The total market value of all the investments a person or entity is managing on behalf of clients.

Crowdfunding: A financing method in which money is raised through soliciting relatively small individual investments or contributions from a large number of people.

Early stage: The early phase of a company's life. This term is used to indicate the phase after the seed (formation) stage but before the phase in which the company starts generating revenues.

Entrepreneur support organizations: Companies that mentor, train and sometimes fund entrepreneurs.

Equity: Ownership in a company, usually represented by common shares and preferred shares. Equity is equal to assets less liabilities.

Founder: A person who participates in the creation of a company.

Hedge fund: A fund supported by a limited partnership of investors who may use high-risk methods (e.g., investing with borrowed money) to generate what it hopes will be large returns.

Initial public offering (IPO): A company's first sale of shares to the public, also referred to as going public. An IPO is one of the ways in which a company can raise additional capital for further growth. This event may also represent an "exit" for venture capital investors.

Internal rate of return (IRR): The interest rate at which a certain amount of capital today would have to be invested to grow to a specific value at a specific time in the future.

Investment series A: An investment in a privately held startup company after it has shown progress in building its business model and demonstrates the potential to grow and generate revenue. It often refers to the first round of venture money a firm raises after seed and angel investors.

Investment series B: The second round of funding for a company that has met certain milestones and is past the initial startup stage. Series B investors usually pay a higher share price for investing in the company than Series A investors.

Investment series C: An injection of capital into the meat of successful businesses in an effort to receive more than double that amount back. Series C funding is focused on scaling the company, growing as quickly and as successfully as possible. One possible way to scale a company could be to acquire another company.

Later stage: The later phase of a company's life. In this phase, the company has proven its concept, achieved significant revenues, and is approaching cash flow break-even or positive net income. A later stage company is typically about six to 12 months away from a liquidity event such as an IPO or strategic takeover.

Lead investor: The firm or individual that organizes a round of financing and usually contributes the largest amount of capital to the deal.

Limited partner (LP): An entity that invests money in a partnership but has restricted voting power on company business and no day-to-day involvement in the business. In this context, LPs may include institutional investors such as endowments, retirement funds, foundations or high-net-worth individuals who seek aggressive returns by investing in venture capital funds.

Pattern matching: The use by an investor of patterns or experience from the past to make decisions about a current investment. You can think of it as reasoning by analogy or using the benefit of experience to recognize similar situations.

Private equity: A form of financing in which capital is invested in a company in exchange for equity—or an ownership stake—in that company.

Venture capital (VC): Capital invested in a project in which there is a substantial element of risk, typically a new or expanding business. A venture capitalist is a private equity investor who provides capital to companies with high-growth potential in exchange for an equity stake.

Appendix B: VC Funding, Women on Founding Teams

Count of U.S.-Based Startups That Received VC Funding from 2011 to 2021

Founding Team Size	0 women	1 woman	2 women	3 women	4 women	5 women or more
1	20,737	2,683				
2	20,714	3,560	672			
3	9,366	1,575	311	87		
4	3,060	623	134	31	9	
5 or more	1,177	256	85	22	6	4

Only male founder(s): 55,054 (80.3%)

At least one woman: 10,058 (14.7%)

Teams with all women: 3,455 (5%)

Total Funds Received by Team Composition, 2011-2021 (billions)

Founding Team Size	0 women	1 woman	2 women	3 women	4 women	5 women or more
1	\$245,745	\$12,310				
2	\$395,512	\$24,770	\$3,865			
3	\$241,865	\$16,991	\$2,652	\$296		
4	\$100,859	\$9,141	\$1,740	\$217	\$31	
5 or more	\$56,599	\$5,035	\$1,368	\$261	\$535	\$5

Only male founder(s) \$1,040,581 91.60%

At least one woman \$79,217 7.00%

Teams with all women \$16,507 1.40%

Average Funds Received by Team Composition, 2011-2021 (millions)

Founding Team Size	0 women	1 woman	2 women	3 women	4 women	5 women or more
1	\$11.85	\$4.59				
2	\$19.09	\$6.96	\$5.75			
3	\$25.82	\$10.79	\$8.53	\$3.40		
4	\$32.96	\$14.67	\$12.99	\$6.99	\$3.46	
5 or more	\$48.09	\$19.67	\$16.10	\$11.88	\$89.23	\$1.33

Only male founder(s) \$18.90

At least one woman \$7.88

Teams with all women \$4.78

Count of VC-Funded Startups vs. Expectation (red) If Gender Were Random

Founding Team Size	0 women	1 woman	2 women	3 women	4 women	5 women or more
1	20,737 (11,710)	2,683 (11,710)				
2	20,714 (6,236)	3,560 (12,473)	672 (6,236)			
3	9,366 (1,417)	1,575 (4,252)	311 (4,252)	87 (1,417)		
4	3,060 (241)	623 (964)	134 (1,446)	31 (964)	9 (241)	
5 or more	1,177 (48)	256 (242)	85 (484)	22 (484)	6 (242)	4 (48)

Source: Crunchbase

Appendix C: Challenges in Identifying Race or Ethnicity in VC Studies

Diversity, equity and inclusion initiatives are becoming increasingly important in the startup ecosystem; however, the accurate identification of race and ethnicity of VCs and startup founders remains a significant challenge, which in turn creates barriers to conducting empirical research that relies on accurate and comprehensive data on race and ethnicities of VCs and startup founders. In part, these challenges may arise from data privacy concerns and bias in data generating processes.

For instance, founders or investors may select out of reporting their demographic information to data providers such as Crunchbase, which relies on reported data provided by their Diversity Spotlight partners, venture partners, their community network and new sources (Source), and thus introduce selection bias into the data generating process. Other data providers, such as PitchBook, which does not track race or ethnicity data related to founders and investors operating within the capital market ecosystem (Knickerbocker 2023), currently do not seem to provide the option for investors and founders to self-report their race or ethnicity to appear in their commercial databases, which makes it hard for researchers to study disparities in funding access and outcomes for different racial and ethnic groups using their data.

Indeed, a 2019 report on diversity in the asset management industry coauthored by Professor Josh Lerner of Harvard Business School and funded by the Knight Foundation notes that “data collection on PE [...] diversity is still in its infancy” (Bella 2019). Media articles that report statistics on race in VC often reference data from PitchBook or Crunchbase reports that are developed by the data providers’ own research teams (Chapman 2022, Ross 2022, Pardes 2022).

Given the challenges in accessing systematic data on race of VCs and startup founders, and the well-known limitations of name-classification algorithms in correctly identifying an individual's race, how do studies that make claims about race in VC and the startup ecosystem construct their datasets? Apart from reports published by research teams at Crunchbase and PitchBook, studies of race in private equity have relied on hand-compiled lists of diverse asset managers (Bella 2018), publicly available data from funding announcements, VC firm websites, and the public social media profiles of the founders (Stofer 2017), hand-collected data (Kerby 2018), and various survey methodologies (Deloitte 2021, Dayal 2022) to identify racial minority VCs and founders. More recently, researchers have applied image recognition algorithms to photographs of VCs and founders to impute their race.

For instance, in a 2020 study funded by the Kauffman Foundation analyzed firms in Crunchbase that received venture capital in the years from 2000 to 2018 and classified founders and executives whose profile pictures were available using a publicly available pre-trained demographic model (West 2020). A recent NBER article, presented at our commission's conference in Washington, D.C., illustrates the current state of the art in terms of imputing race from large-scale datasets on startup founders. Cook, Marx and Yimfor (2023) use PitchBook data linked to founders' LinkedIn profiles to identify their race based on their profile pictures, first applying an image-processing algorithm to classify founders by skin tone, followed by a name classification algorithm to distinguish between races with similar skin tones, and finally conducting a clerical review to the classification process to reduce errors (Cook 2023). Email correspondence with two of the authors confirms that apart from [Gompers and Calder-Wang \(2017\)](#), most prior work on race in VC and entrepreneurship in the U.S. context has been non-

academic in nature and has generally relied on Crunchbase Diversity Spotlight and hand-collected data from public sources or surveys.

The increasing significance of diversity, equity and inclusion initiatives in the startup ecosystem has highlighted the necessity for accurate and comprehensive data on the race and ethnicities of VCs and startup founders to generate high-quality empirical research in this area. As these issues become increasingly salient, it is crucial for data providers, researchers, and various stakeholders to collaborate and refine data collection methods to ensure a more accurate representation of race and ethnicity in the startup ecosystem.

Appendix D: SSBCI, MBDA and the Opportunities Ahead

The last few years have been a time of significant federal government investment in infrastructure for venture creation. Building on the success of the State Small Business Credit Initiative (SSBCI) originally launched in 2010 (i.e., SSBCI 1.0), the federal government has reauthorized SSBCI (i.e., SSBCI 2.0) under the American Rescue Plan Act. This reauthorization provides \$10 billion to the U.S. Treasury Department “to support small business and empower them to access capital needed to invest in job-creating opportunities (Treasury 2023).” One of the stated missions of SSBCI 2.0 is to democratize access to capital across the country, including in underserved communities.

Treasury has undertaken this mission by working with each state, the District of Columbia, territories and tribal governments to develop memoranda of understanding (MOU) to govern the distribution of funds over the next decade. The SSBCI 2.0 program is intended to develop \$10 of private investment for every \$1 of SSBCI funds; hence, there is the potential of a \$100 billion impact on democratization of capital. These funds have been accompanied by the Socially and Economically Disadvantaged Individuals (SEDI) funds, which provide resources for small economically disadvantaged businesses. Some of these organizations fit the characteristics for underrepresented entrepreneurs as outlined in this paper, though the cross-section with high-growth and scalable may likely yield a smaller set. SSBCI 2.0 has, as a tenet, increased outreach and access.

Additionally, after more than 50 years of existence, the Minority Business Development Agency (MBDA), established in 1969, was moved from an agency of annual funding to an agency with permanent status (a recurring budget) under the authority of the Minority Business Development Act of 2021 (MBDA 2023). With that transition came an elevation of the agency

head to the status of undersecretary of commerce for minority business development (Commerce 2022). The newly repositioned MBDA allows a strategic view within the agency that may not have been possible in prior years given the uncertainty of temporary status. Moreover, the funding allocated to the MBDA to administer for technical assistance and business support (about \$100 million) is a substantial movement in concert with SSBCI 2.0 that can provide resources to some high-growth and high-potential organizations.

The potential impact of the SSBCI 2.0 funding, the opportunities available through the stability of the MBDA permanent status, and the elevation of the agency head within the Department of Commerce position the MBDA to play an increased role in government engagement in the issues related to women and underrepresented entrepreneurs in venture capital. While the MBDA does not currently work in the venture capital space, its network and experience in educating around access to capital will be an asset to an ultimate solution for addressing the funding gap in the underserved entrepreneur population.