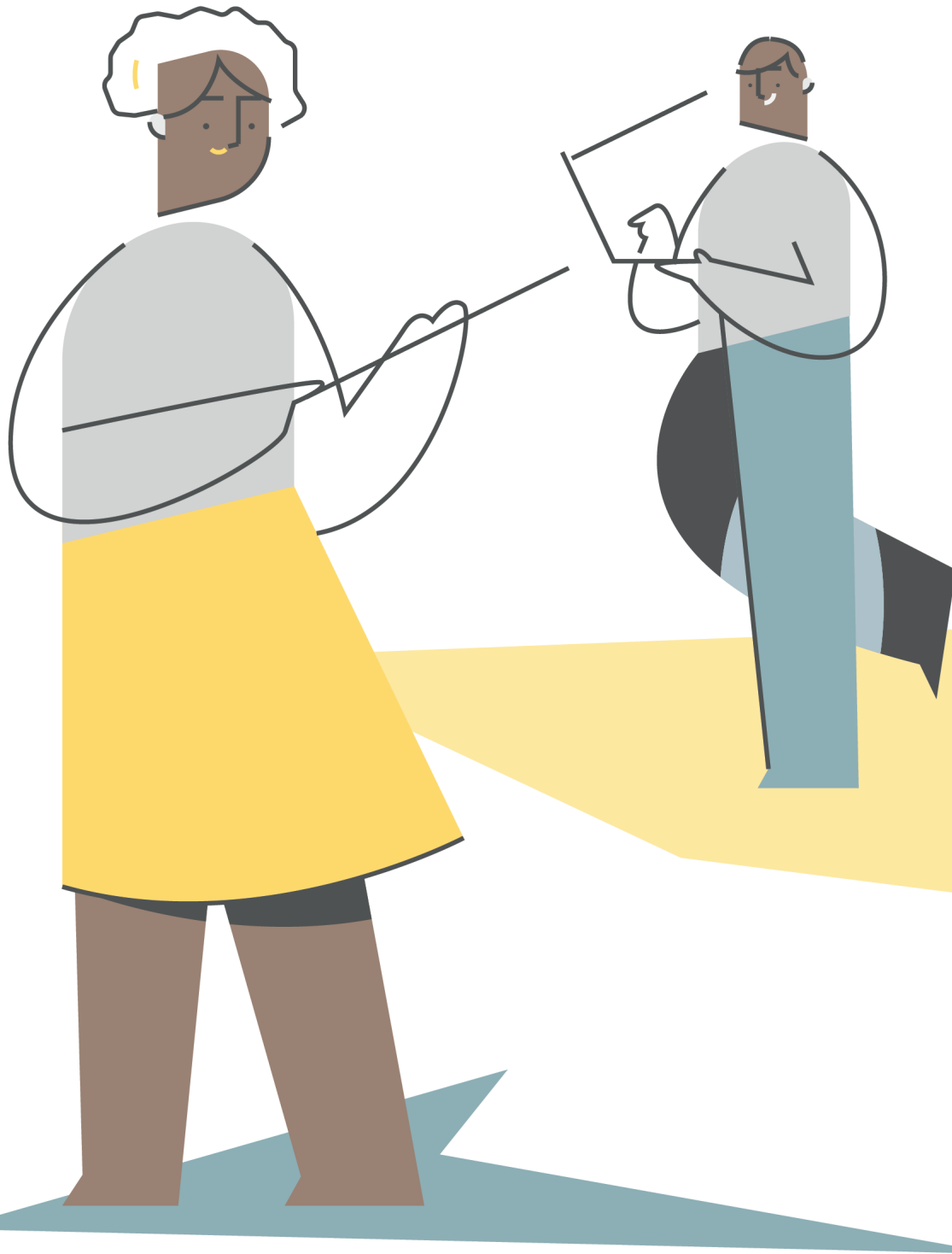


October 2021

In Search Of Equity

Exploring Africa's Gender Gap in Startup Finance



Public Disclosure Authorized

Public Disclosure Authorized

Acknowledgements

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Briter Bridges is a fast-growing market intelligence and research firm focused on underserved economies. Briter has built the largest collection of visual publications on Africa and underserved markets and regularly provides data and insights to corporates, development finance institutions, governments, and investors.



The World Bank's Africa Gender Innovation Lab produces rigorous research on what works, and what does not work, for women's economic empowerment and translates these insights into advice to policy makers and development partners.

Executive Summary

Is there a gender gap in financing Africa's early-stage ventures? And are there differences between female and male founders—such as the sectors they choose, or the ambitions they have—that could explain divergent funding paths? As start-up financing in Africa keeps climbing to new records, these questions are becoming more urgent. To find answers, we leveraged Briter Bridges' leading industry platform to comb through years of deal flow data and surveyed a random sample of 172 entrepreneurs operating across the continent.

Here is what we learned:

Female founders receive only a small fraction of the total investment in African technology (tech) firms. Our analysis of start-up financing deals since 2013 shows that only 3 percent of funding went to all-female founding teams, compared with 76 percent of funding that went to all-male teams. The amount of funding they received is disproportionately small because 11 percent out of the 2,400 companies for which demographic information was available are all-female teams. And, although investment in the African tech space has skyrocketed since 2013, the proportion going to all-female founding teams has changed very little.

Female founders are underrepresented in the sectors that attract the most financing. This underrepresentation is partly because there are more male than female founders are also more likely to operate in subsectors that attract less investment, such as edtech or healthtech. However, even when they work in sectors with high investor interest, all-female teams are still less likely to receive financing than all-male teams, and they receive smaller amounts if they do receive financing.

In our sample of 172 entrepreneurs, male and female founders followed different financing paths. Female founders in our sample were less likely to pitch for equity investments than male founders. Conversely, they were more likely to apply for bank loans, or to prefer growth from retained earnings. Among companies that raised external financing, however, those with all-male founding teams received higher amounts of both equity and debt.

A confidence gap separates female and male founders in our sample. Female survey respondents showed less confidence in their ability to pitch to investors and in their firms' ability to grow. This confidence gap is despite the fact that women entrepreneurs in the sample were more educated, had the same amount of professional experience as male founders, and experienced similar revenue changes in the previous year.

Female entrepreneurs pay it forward. Companies led by female founders in the survey were twice as likely to hire women, and four times as likely to employ female managers.

It is worth highlighting the limits of what our data can show. Although Briter Intelligence is among the most comprehensive and frequently updated databases on the tech industry in emerging markets, it cannot claim to be exhaustive. Demographic information is available for a substantial subset of founders, but not all, and financing deals are included only if they have been publicly disclosed. In the founder survey, a sample of 172 limited our analysis to reporting key differences. Also, the analysis cannot differentiate in every case if the differences between female and male founders are a cause or a conse-

quence of the financing gap—or neither. Still, we believe that our results provide valuable insights into Africa’s start-up scene as a whole and prepare the groundwork for additional research.

Our findings complement studies that have shown a gender gap in access to start-up finance in other parts of the world. And they point to similar drivers: female founders are generally underrepresented in the tech industry, they lead smaller firms, they are concentrated in lower-growth sectors, and they have (or show) less confidence in their abilities. However, the report’s insights also raise important new questions. Are female founders less likely to seek equity investments because they prefer organic growth and greater control, or because they are not adequately served by equity investors? Does gender bias—an issue raised by some of the entrepreneurs featured—play a role in this context? The report does not answer these questions, but it is hoped that future research—including some of our own ongoing studies—will fill in these blanks.

In the meantime, our findings hold some initial takeaways for practitioners who work to promote gender equity in Africa’s start-up ecosystems. Encouraging more women to launch entrepreneurial ventures may be at least as important as supporting those who already do—but the choice of sector matters. Traditional business training does not appear to be a priority for female founders who are already highly educated, while help with raising funds and talking to investors might close a gap. A more inclusive entrepreneurial culture — as well as financing options that go beyond traditional debt and equity — would help accommodate the diverse backgrounds and aspirations of founders. Most importantly, perhaps, initiatives to increase women’s access to

finance deserve to be at the top of everyone’s mind, given the size of the gender gap in start-up finance at the moment.



Industry data



1,112

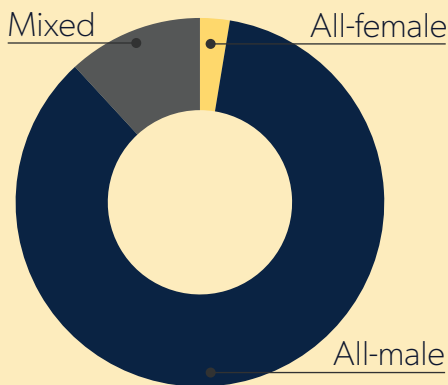
funded companies
operating in Africa.

\$1.7

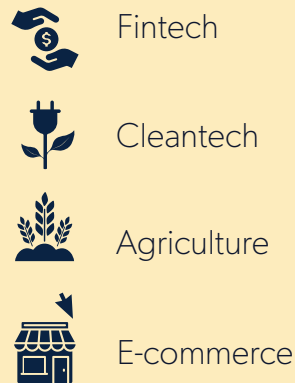
billion raised
across 1,585 deals
January 2013 - May 2021

* Excluding outliers (series B or \$20 million above rounds)

FUNDING BY TEAM



TOP FUNDED SECTORS



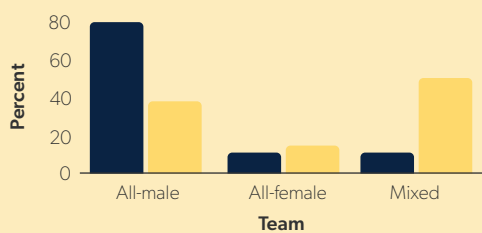
TOP FUNDED AFRICA HQ



Survey data

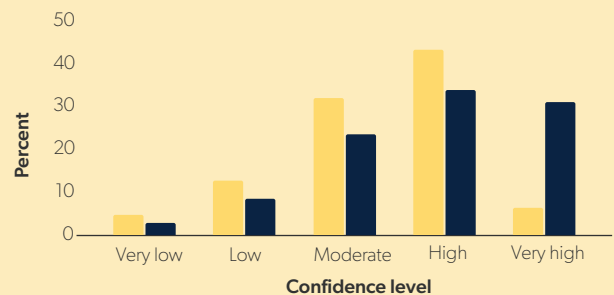
STUDY SAMPLE

■ Sampling frame ■ Survey participants



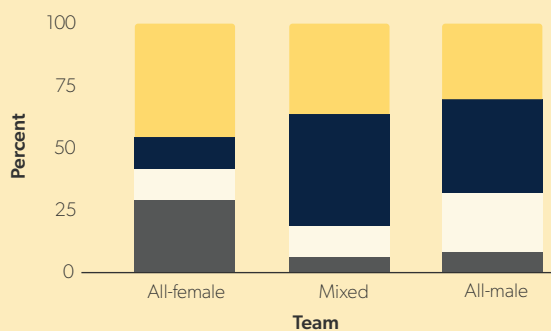
CONFIDENCE WITH PITCHING

■ Female ■ Male



FINANCING MIX OF COMPANIES

■ Neither debt not equity ■ Equity only
■ Debt and equity ■ Debt only



CONFIDENCE WITH PROFITABILITY

■ Female ■ Male

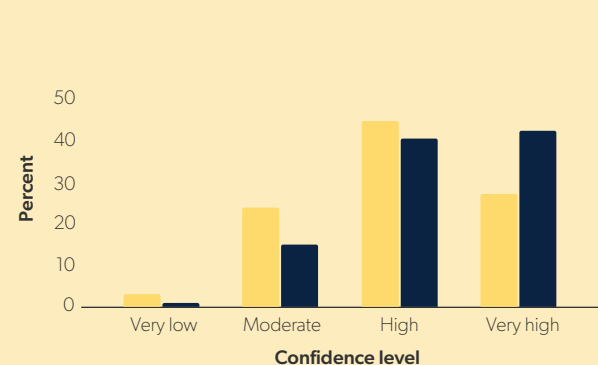


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1 | Introduction

Africa's start-up scene is booming, fueled by a rush of new funds from local and international investors alike. Yet, female founders risk losing out. Previous analysis by Briter Bridges (2020) suggests that male entrepreneurs accounted for a disproportionate share of early-stage venture financing in Africa in 2019–20. This is in line with IFC (2019) estimates that only 7 percent of total investment in emerging markets is going to female-led businesses.

Unequal access to start-up financing is problematic for several reasons. Most immediately, it presents an obstacle for female founders trying to grow their firms to their full potential. It also matters from the point of view of capital efficiency, with investors leaving money on the table when they skip over female entrepreneurs who promise higher returns.¹ And there are macroeconomic implications as well: given the key role of high-growth industries in the future economy of the African continent, flawed investment decisions today are likely to contribute to greater inequality down the road. These concerns are particularly salient during the COVID-19 pandemic, with start-up finance peaking at a time when female-led businesses appear to be suffering disproportionately (Hyland et al. 2021).

In Search of Equity presents a first diagnostic of Africa's gender gap in financing early-stage ventures in the digital economy (start-ups). The report's findings indicate that since 2013, only 3 percent of total funding for Africa's tech start-ups went to all-female founding teams, compared with 76 percent of funding for all-male teams.

The report's analysis shows that female founders are underrepresented in the sectors that attract the most financing; however, even those all-female teams that are working in sectors with high investor interest remain less likely to receive financing than all-male teams, and they receive smaller amounts if they do. Male and female entrepreneurs in the report's sample also followed different financing paths: female founders were less likely to pitch for equity investments; conversely, they were more likely to apply for bank loans, or to prefer growth from retained earnings.

The report leverages Briter's leading industry platform and also draws on an online survey of 172 randomly selected founders of African firms—female and male, and at various points in their financing journeys. Additional context on the data and what it can (and cannot) say can be found at the beginning of sections 3 and 4. The analysis is restricted to the demand side of start-up finance and does not discuss the ways in which finance providers—from angel investors to development finance institutions—are already tackling the gender divide. *In Search of Equity* expands on Briter's 2020 Gender and Demographics report and builds on the World Bank's Africa Gender Innovation Lab's (GIL) work under the Innovations in Financing Women Entrepreneurs initiative. While further research awaits, these initial results represent a useful resource for investors, policy makers, and researchers—many of whom care about gender equity in start-up financing but have had little evidence to guide them so far. Just as importantly, the report's insights hopefully will be of interest to the founders themselves.

The report is divided into five parts. Section 2 provides the necessary context to interpret the results, summarizing what is known (and what is not known) when it comes to financing female founders in Africa. Section 3 looks at Briter's industry data to establish how start-up financing differs between male and female founders across industries and over time. Section 4 then presents the results of the founder survey, comparing the financing journey of female and male founders and highlighting similarities and differences regarding professional backgrounds, financing choices, and personal ambitions. Section 5 offers concluding thoughts on how to tackle this gender gap—and the additional data and analysis required in the process.

2

What We Know About Financing Female Founders

Whether they are developing products, hiring talent, or expanding to new markets, most entrepreneurs require outside capital to grow and succeed. Founders who cannot—or do not want to—rely on retained earnings can turn to a variety of external financing sources including bank loans, equity investments, and quasi-equity instruments. However, studies show that globally, both debt and equity financing disproportionately flow to male-led firms, limiting the potential of female founders to grow their firms. The literature also highlights a number of likely causes for the uneven distribution of start-up capital.

This section briefly reviews the evidence on this topic. Because little has been written about financing female start-up founders in Africa specifically, we draw instead on two other bodies of research: the literature on financing African small and medium enterprises (SMEs), and the debate on gender and venture finance in other regions.

There exists a gender gap in financing entrepreneurs, both in Africa and beyond.

Considerable research exists on the gender gap in accessing conventional, debt-based finance in Africa. Data from the World Bank's 2018 Global Financial Inclusion database (Findex) on Sub-Saharan Africa shows that the share of women receiving a loan from any source was five percentage points lower than that of men (43 percent of women versus 48 percent of men). Moreover, women tend to have fewer assets and savings than men, which limits the value of collateral against which they can borrow. Gender Innova-

tion Lab (GIL) research has documented large gender differences in the size of outstanding loans for female entrepreneurs across Sub-Saharan Africa, impacting women's ability to use financing productively to grow their businesses (World Bank 2019).

By contrast, less is known about the gender dynamics at play when African entrepreneurs try to access equity and other forms of early-stage venture capital. However, global data suggests a highly unequal distribution of venture capital flows to male and female founders. A recent study by the IFC (2019) concludes that about 7 percent of private equity and venture capital in emerging markets (and about 6 percent in Sub-Saharan Africa) goes to female-led firms. Furthermore, only 2 percent of female-led SMEs polled in a recent global survey were found to use venture capital to fund their businesses, compared with 5 percent of male-led SMEs (Facebook et al. 2018).

This gender gap in equity financing is observed across all stages of investment financing and appears to increase with subsequent funding rounds. Pitchbook (2019), an aggregator for venture capital data, estimates that in 2019, the share of financing going to companies with at least one woman on the founding team dropped from 11 percent at the seed capital stage to just 5 percent in later funding rounds. This drop is to be expected because later-stage financing deals are predicated on early-stage deals. However, it also represents a concerning dynamic for female founders because investment amounts typically increase over subsequent rounds.

This gender gap appears to be driven by a combination of firm characteristics, founder attributes, and investor bias.

The literature suggests that the gender gap in entrepreneurial finance is not driven by a single cause but rather by a combination of factors. An obvious starting point is the underrepresentation of women among founders of early-stage firms. According to a study by the Silicon Valley Bank (2019), only 28 percent of start-ups surveyed across four major economies had one or more female cofounders. African economies are known for relatively high numbers of female entrepreneurs, yet many of these are microentrepreneurs or own service businesses with limited potential for scale and appeal for venture capital. The share of female cofounders of early-stage firms in high-growth, technology-driven industries remains low: Briter Bridges (2020) found that women made up 16 percent of founders across the firms for which demographic information was available.

The limited participation of women in Africa's growing tech scene is a major constraint on the "pipeline" of investable female-led start-ups, and the reasons for this imbalance warrant their own investigation (for an introduction, see Powell and Chang 2016). However, there are indications that the lower number of female founders is not the only factor at play. IFC (2019) data shows that female founders who receive financing tend to obtain smaller amounts than their male counterparts. A separate IFC study, with support from GIL, finds that female founders whose firms go through accelerator programs receive less equity financing than male founders in the same cohorts, and are more likely to fall back on debt-based financing (IFC 2020).

Research points to a number of factors as potential drivers of the gender gap in business financing. With outright legal discrimination — such as restrictions on women's ability to run a firm or open a bank account without a husband's approval—on the decline, these explanatory factors can be divided into three groups. It is important, however, to keep in mind that it is hard to disentangle which of these factors could be drivers, be interconnected, be consequences of being underfunded, or be a combination of all three of these.

A first set of factors encompasses **firm characteristics**. Evidence from several countries highlights that male and female founders tend to lead different types of firms, and that these differences influence the extent to which the firms require—or are able to attract—outside financing. This evidence includes the following different firm characteristics:

■ Female-owned firms are smaller and more likely to be informal.

Research shows that firms with majority-female ownership account, on average, for 20 percent of firms in the formal economy with 10 or fewer employees, but that they account for only 17 percent of firms with 100 employees. They are also more likely to operate informally: only one-third of formal firms with five or more employees have any female ownership, even though women own about half of firms in Sub-Saharan Africa (World Bank 2019).

■ Female-owned firms are more likely to finance their business with internal funds.

In the United States, female founders tend to be more reliant on owner's equity and retained earnings than male founders. Female entrepreneurs are more likely to "bootstrap" their firms to avoid

raising debt, whereas male founders are more likely to use their own funds in addition to external financing (Neely and van Auken 2010).

■ **Female-owned firms tend to cluster in sectors that are generally less profitable.**

Evidence shows that female entrepreneurs in Africa are more involved in the retail and services sectors, which are less capital-intensive and have fewer barriers to entry. On the other hand, female entrepreneurs are less involved in the transport, manufacturing, and construction sectors than male entrepreneurs—sectors in which firm profits tend to be higher (Goldstein, Martinez, and Papineni 2019).

A second set of factors relate to **characteristics of the founder**. Research suggests that especially in early-stage firms, the personal attributes and endowments of the entrepreneur can influence the firm's level of effort to raise financing and its chances to be successful. In this regard, studies show the following:

■ **Women tend to have lower levels of secondary and tertiary education than men.**

Evidence points to gaps between male and female entrepreneurs in formal education, management skills, and socioemotional skills (World Bank 2019).

■ **Women tend to have smaller networks than men, and their networks are mostly composed of other women.**

Research on firms in Sub-Saharan Africa shows that business networks are mostly segregated by gender and that men's networks control more resources (World Bank 2019). Furthermore, evidence shows that a close connection to a venture capital firm is more important for female entrepreneurs than for male entrepreneurs (Tinkler et al. 2015).

■ **Women are less likely to be serial entrepreneurs, who are often favored by investors.**

Research in the United Kingdom found that only about 19 percent of serial entrepreneurs are women. Studies in other regions have determined that firms started by experienced entrepreneurs raise more funding rounds compared with their earlier ventures. Investors are likely to invest in founders with previous exits because they feel those founders' track records are an indicator of the potential for future success (Centre for Entrepreneurs 2016).

■ **Female business owners often show less confidence than male business owners.**

Research has shown that female entrepreneurs demonstrate less confidence in their abilities, which may make them less willing to compete (Niederle and Vesterlund 2007). A study with entrepreneurs in Ghana, for example, showed that women are 14 percent less likely than men to think they would make a good leader (Zhang 2011).

In addition to these characteristics, the literature on gender and entrepreneurship also emphasizes societal and household constraints that disproportionately affect female founders. Such constraints include social norms that discourage women from setting up a business, home and childcare responsibilities that limit the time they can spend on their companies, or competing claims over their financial assets and autonomy (for an overview of this research, see World Bank 2019). The report's analysis does not dive into these contextual factors, although the authors acknowledge that they may influence both how men and women approach entrepreneurship and what types of firms they found and lead.

Although the first two sets of factors consider the firms and their founders, a third explanation focuses on the extent to which **investor bias** against women — whether conscious or unconscious — affects financing decisions. Unconscious bias against female loan applicants has been shown to result in higher rejection rates for female borrowers (Montoya et al. 2020), lower amounts of credit granted (Alibhai et al. 2019), and higher levels of collateral required (Brock and de Haas 2021). Although some authors find that the bias against female loan applicants is driven primarily by male employees, others find that bias is rooted in institutional norms and it is common among both female and male staff.

Gender bias also seems to be at play for equity investors—unsurprisingly perhaps, considering the more subjective, less standardized decision-making process involved. In particular, early-stage financing is an industry built on subjective perceptions of the potential of founders, at a time when their firms rarely have a long track record. This process creates a risk that investors will follow perception patterns and continue to be attracted to the same kinds of companies that have been supported before, leaving female founders behind (Lefcourt 2021).

Research on U.S. venture capital highlights ways in which investors tend to favor male founders. A study by Brooks et al. (2014), drawing on data from pitch competitions as well as two controlled experiments, finds that investors prefer pitches by male entrepreneurs to pitches by female entrepreneurs, even when the content is identical. Kanze et al. (2018) observe that investors use different framing for male-led and female-led start-ups, asking male founders about the perceived potential of their firm but posing questions about risk

when talking to female founders. In addition, research suggests that demonstrating stereotypical feminine behavior during a pitch affects the outcome because it negatively affects the entrepreneur's perceived business competence, preparedness, and leadership (Balachandra et al. 2019).

Investors have been shown to value educational backgrounds differently for female and male founders; for example, male entrepreneurs with nontechnical backgrounds were seen as having higher leadership abilities than men with technical backgrounds, but concurrently, women with nontechnical backgrounds were seen as less competent than women with technical backgrounds (Huang 2020). Likewise, investors seem to doubt the ability of female founders to succeed in male-dominated industries, but not, conversely, the ability of male founders to serve female-dominated sectors—resulting in smaller investments and lower valuations (Kanze et al. 2018). As in the case of bank staff, there is evidence that the gender of investors matters as well: IFC (2019) data suggests that female partners at investment firms are twice as likely to invest in female founders as their male counterparts.

With early-stage financing for African start-ups having increased dramatically over the past decade, it is worth investigating whether similar gender dynamics are at play in this context. The insights outlined previously guide the exploration into the distribution of start-up finance between male and female founders. Therefore, the following section uses comprehensive deal flow and demographic data to quantify the gender gap and highlights a couple of aggregate-level factors, such as sector and geography, that may be contributing to the gap.

Section 4 then presents findings from a survey completed by 172 cofounders that provides important insights on firm and founder characteristics. Because the report's focus is on the entrepreneurs rather than their funders, the report does not say much about the prevalence of gender bias among investors; however, short profiles of female founders interspersed across the two sections highlight that gender-based prejudice is a common experience.

3 | Quantifying Africa's Gender Gap in Start-up Financing

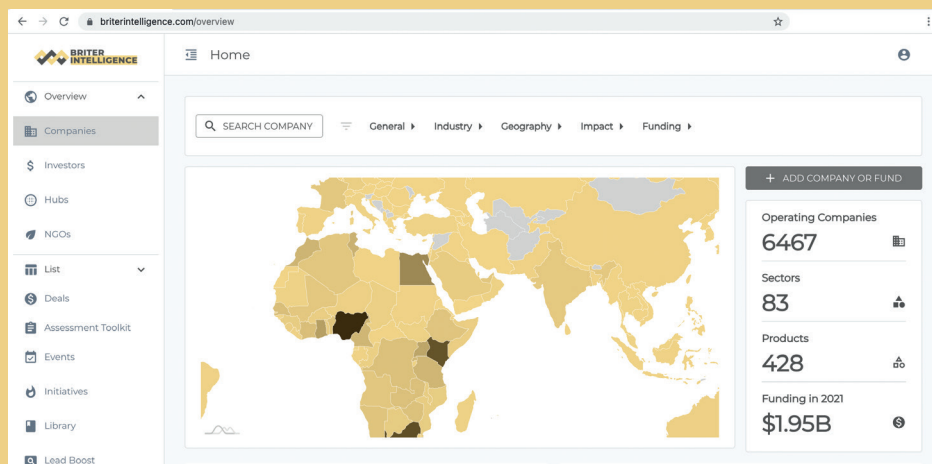
Do Africa's technology (tech) start-ups experience a gender financing gap similar to the ones observed in other regions? In the first empirical section of this report, we answer this question by quantifying the differential between the fund-

ing provided to male and female founders across the continent based on a comprehensive set of deal flow data collected by Briter Bridges (box 3.1).

Box 3.1. Briter Intelligence

Briter Intelligence provides access to data on start-ups in the technology, digital, and green space, as well as on hubs, investors, and ecosystem supporters. As of September 2021, the database includes more than 6,500 companies with an operational focus on Africa, more than 1,100 investors, 900 hubs, and counts 85 sectors and 430 subsectors. Briter Intelligence is the result of Briter's data collection efforts to map the start-up and support ecosystem in Africa. Data points include the sectors that companies operate in, their geographic focus, funding details from angel and pre-seed to initial public offering (IPO) stage deals, as well as (for a subset of 2,397 firms) the gender and educational backgrounds of all active cofounding members of the start-up teams. It is worth bearing in mind that demographic information is available for a substantial subset of founders but not for all, and financing deals are included only if they have been publicly disclosed.

Figure 3.1.1. Briter Intelligence Landing Page



Funding for African tech firms mostly goes to all-male founding teams — by a wide margin

Briter Bridges’ deal flow data shows that, between January 2013 and May 2021, a total of 1,112 start-ups operating across Africa raised the combined amount of US\$1.7 billion in early-stage financing (angel investment to Series A).² Among these firms, 75 percent had all-male teams, 9 percent had all-female teams, and 14 percent had mixed founding teams.^{3;4} Investments into all-female teams made up only 3 percent of the US\$1.7 billion, compared with 76 percent of investments going to all-male founding teams (figure 3.1). In other words, for each US\$1 going to all-female founding teams, all-male teams received US\$25. This discrepancy is mirrored in the number of deals that involved female founders—all-female teams accounted for 6 percent and mixed teams accounted for 12 percent of the number of deals (figure 3.2).

These numbers must be seen in light of the lower number of female teams operating in this space. However, all-female founding teams still seem to be under-funded once the general underrepresentation of female founders is factored into the analysis. Among all founding teams for which Briter Bridges has collected demographic information, 77 percent are all-male, 11 percent are all-female, and 12 percent are mixed (figure 3.3).⁵ This implies that all-female founding teams receive less investment than would be expected from their share of the overall population, while mixed teams receive more (see section 4 for a discussion of mixed teams).

Figure 3.1. Sum of Funding by Team

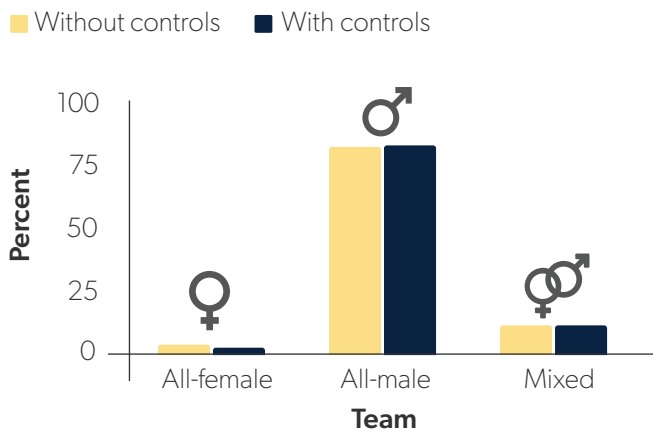


Figure 3.2. Number of Deals by Team

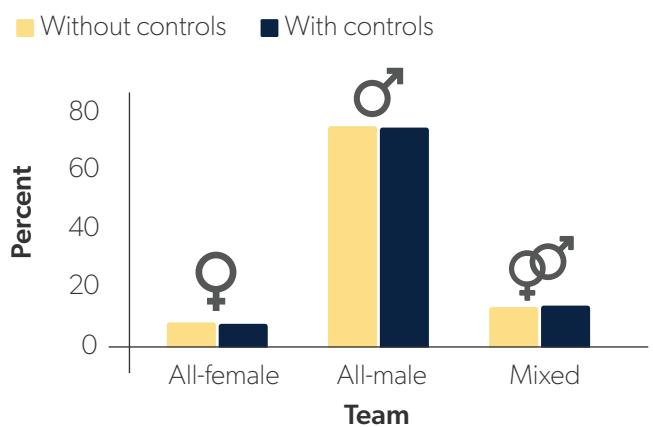
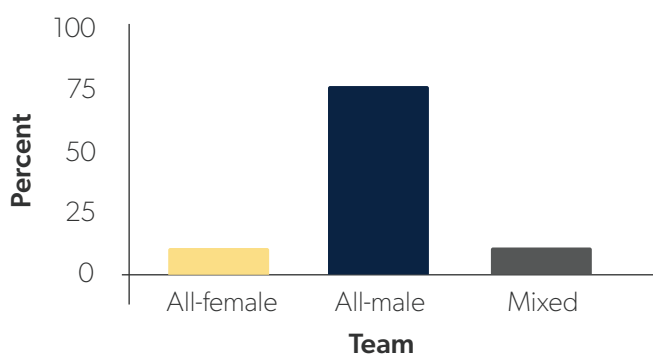


Figure 3.3. Demographic Information for Teams



* Figure depicts sampling frame data

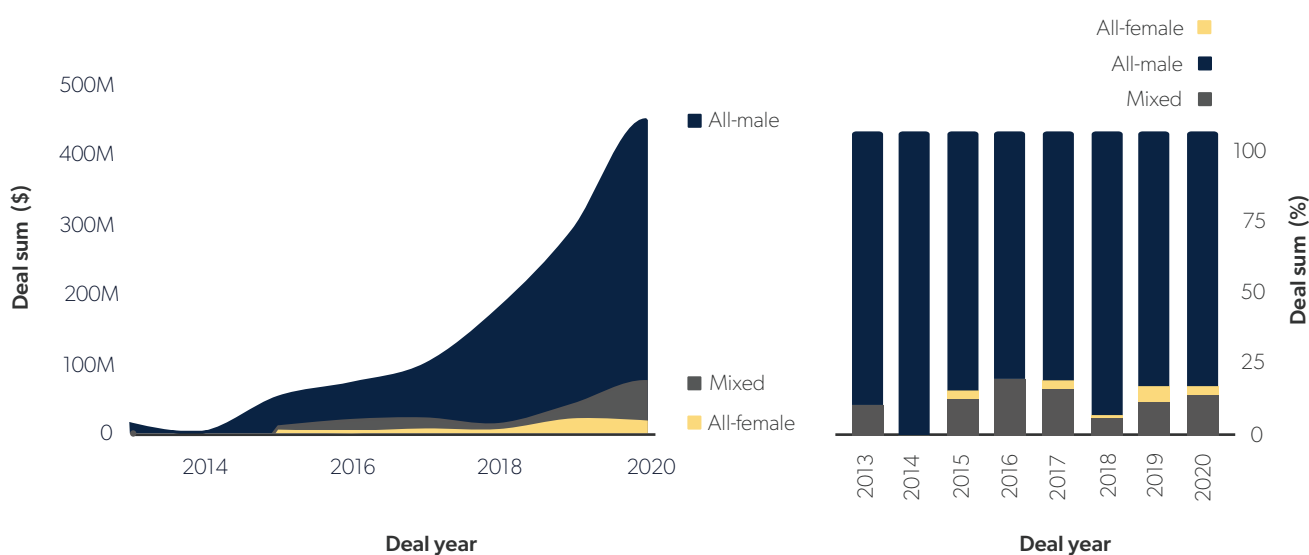
There is little indication that this financing gap will go away over time, despite the fact that funding for African tech firms has increased steadily since 2013. While the financing received by all-female founding teams has grown in absolute terms during this period, their share of total financing has remained marginal throughout (figure 3.4). All-female founding teams never received more than 5 percent of total funds in any given year, and all-female and mixed founding teams together never obtained more than 20 percent. In 2020, all-male founding teams captured 84 percent of the funding, mixed teams captured 13 percent, and all-female teams captured 3 percent. As of May 2021, funding has already surpassed the previous year's levels, with allocation of funding standing at 88 percent to all-male teams, 10 percent to mixed teams, and less than 1.5 percent to all-female teams.

Female founders are underrepresented in the sectors that attract the most financing

A look at the sector distribution of the 1,112 firms that received early-stage financing since 2013 shows that a few sectors (or verticals) account for the lion's share of total funding (see box 3.2 for a description of these subsectors). These subsectors seem to be more male-dominated than the industry as a whole. All-female founding teams make up just 3 percent of the investment into fintech companies, and not even 1 percent of the investment into cleantech (figure 3.6).⁶ Jihan Abass, founder of the Kenyan insurance platform Lami, suggests that female founders in fintech seem well aware of their pioneering role (see box 3.3.).

On the other hand, verticals with an above-average share of female founding teams—such as education and health—received much less investor interest. In addition, even in subsectors with a larger share of female founders, the gender financing gap remains: all-female founding teams do not receive more funding compared with the industry average, even in sectors that see substantial engagement from female founders.

 **Figure 3.4. Distribution of Deals across the Years**



Box 3.2. Sector Distribution: Funding



Agriculture

Companies using technology to improve efficiency, output and profitability of agricultural processes, for instance farm management apps, weather and forecasting software, or online marketplaces.



Cleantech

Designers, developers and distributors of green, sustainable and clean energy solutions, such as solar home systems or biofuel.



E-commerce

Online platforms that facilitate the purchase and sale of products for individuals and companies, for instance for general retail or classifieds.



Education

Digital platforms, software and hardware that facilitate access and quality of learning, such as e-learning tools or school management solutions.



Entertainment

Platforms and online websites that offer streaming of TV, movies, videos, and music, or digital access to books and video games, as well as social media solutions.



Fintech

Digital products and services that digitize financial processes, including payment aggregators or personal finance and budgeting tools.



Health

Platforms, software and hardware that connect healthcare providers to patients, such as telemedicine solutions, appointment booking websites, or wearables providers.



Jobs

Online marketplaces and job boards that match jobseekers to employers and recruiters, such as formal employment, blue collar gigs or freelance work.



Logistics

Companies offering the management, storage, and movement of goods, such as delivery providers, supply chain management software or addressing systems.



Mobility

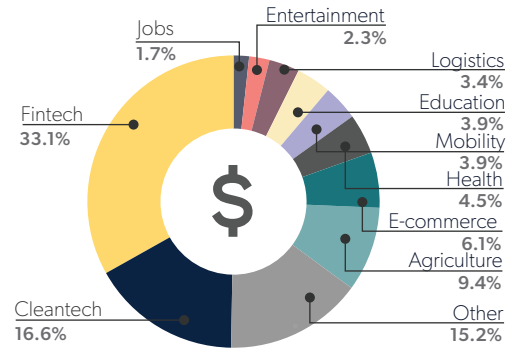
Platforms that connect individuals to transport services, such as ride-hailing services, carpooling, or public transport ticketing solutions.



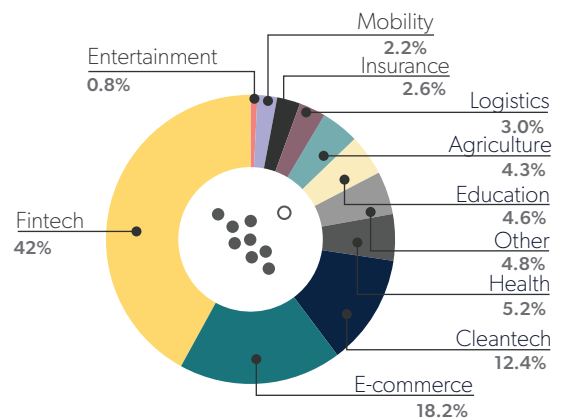
Other

Includes all sectors not included in the top funded sectors, such as big data and analytics, internet of things, legaltech, manufacturing, media, or waste management companies.

Funded sectors: sum with outliers



Funded sectors: sum w/o controls



Funded sectors: number of deals

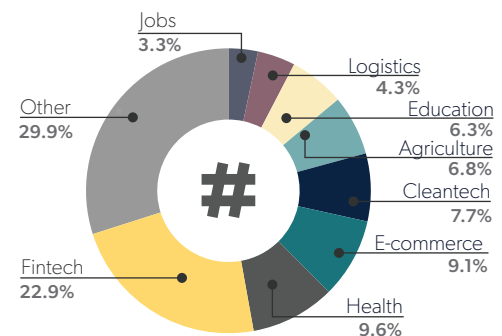




Figure 3.5:
Distribution of teams by sector

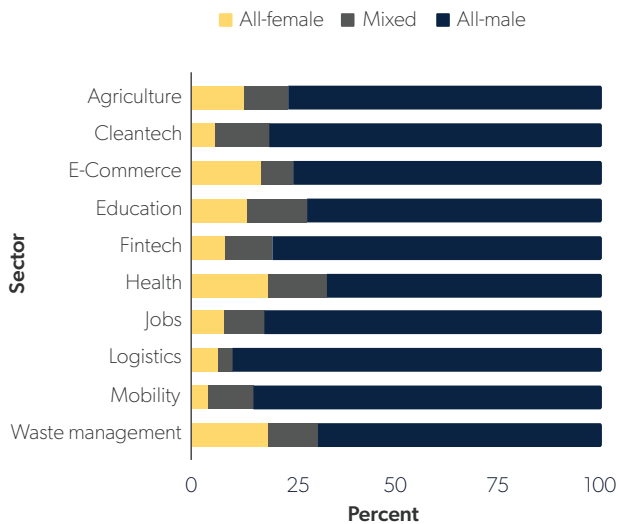
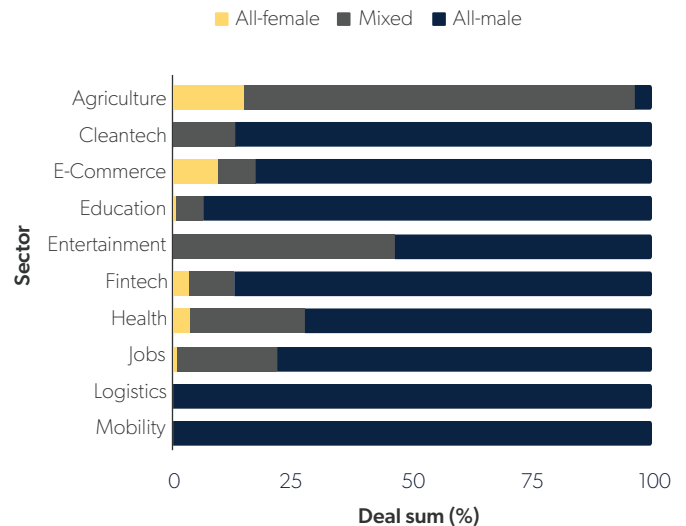


Figure 3.6:
Funding by sector and team



* Figure depicts sector data from the sampling frame, irrespective of funding data.

Box 3.3. Founder Profile: Jihan Abass

Jihan Abass is a female founder and the CEO of Lami, an insurance-as-a-service start-up based in Kenya with an application programming interface platform that uses technology to deliver insurance products to anyone, anywhere. Currently, less than 3 percent of the population in Africa benefits from insurance. Lami is attempting to close this gap by addressing the high cost involved in the distribution of insurance products for risk carriers, the lack of variety of relevant and well-priced insurance products for end customers, and the difficulty that digital platforms and banks face in embedding insurance products in their offering.

Lami launched its insurance product in January 2020. The product had only been on the market a few months before the COVID-19 pandemic struck, plunging the company into a remote working culture from the get-go. Although company culture has needed some additional care in 2021, its product has grown significantly.

In May 2021, Lami made headlines when it raised its first institutional round of US\$1.8 million. Prior to the fundraiser, Lami had received a grant from the Catalyst Fund and was otherwise funded by savings and contributions from Jihan Abass's family. As the company grows, the next step in Lami's funding journey will be a larger round of equity financing.

The fundraiser was a huge milestone for Abass and her team. Abass is making strides in a sector primarily founded by men, due in part, suggests Abass, because there are less women in the space.



She explains: "I think although not many fintechs are founded by women, there are some businesses (although still a small number) that have women in the leadership team, which I think is positive. I think the lack of female founders is partially driven by the fact there aren't that many women in the finance and technology space in general." Abass continues: "I think encouraging girls from a young age to enter the STEM field could be helpful in addressing this gap. . . . Abass continues: "I think encouraging girls from a young age to enter the STEM field could be helpful in addressing this gap. . . . Having relevant work experience and industry knowledge in the sector your start-up is tackling could play a key role in understanding the problem you're trying to solve. . . . Furthermore, I think entrepreneurship isn't really presented as an option to girls at an early age and doing so could help improve the number of women in the space. . . . Having female entrepreneurs mentor students and younger entrepreneurs could help them see that entrepreneurship is a viable option and not as risky or scary as it may seem."

Where the company is headquartered matters, for both male and female founders

The analysis looks at funding to companies whose operational focus is in Africa, and many of these firms are headquartered outside the continent.⁷ Excluding outliers, the United States (23 percent), South Africa (12 percent), Nigeria (11 percent), the United Kingdom (11 percent), the Arab Republic of Egypt (9 percent), and Kenya (6 percent) are the top-funded headquarters across the sample, receiving the highest values of deals and number of deals over the period (figure 3.7). Companies headquartered in the United States and the United Kingdom thus make up about one-third of all investments.

About two-thirds of all-female funded teams are based in the United States and the United Kingdom, compared with 32 percent and 48 percent of all-male and mixed teams, respectively, showing that the number of all-female teams shrinks considerably if companies headquartered in Africa are considered. All-female teams make up less than 1 percent of the total investment once all internationally headquartered companies are excluded.

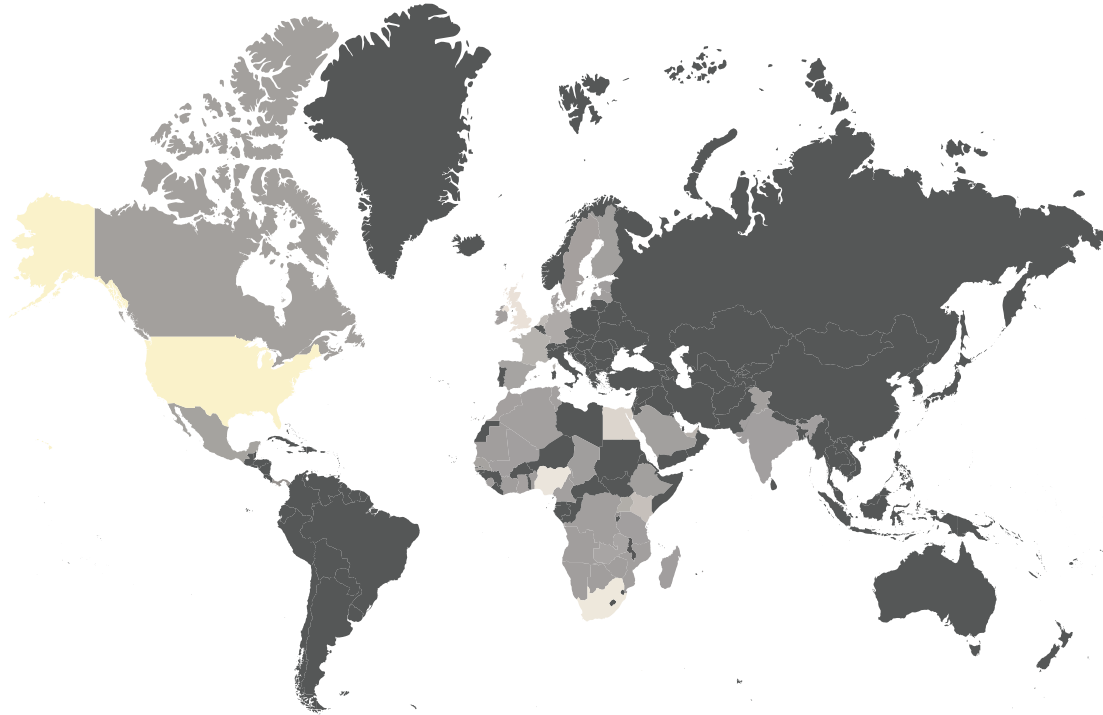
With regard to the African headquarters, Egypt, Kenya, Nigeria, and South Africa are leading the funding race, with similar trends apparent for the operational geographies of the companies that have raised funding, suggesting that key areas of expansion are selected nodes throughout the region where digital and technological innovations and funding go hand in hand. Beyond the usual suspects, countries such as Côte d'Ivoire, Ghana, Morocco, Senegal, and Uganda are on the rise with regard to the expansion of global

players, start-up ecosystem growth, and support from local and global investors.



Figure 3.7. Headquarters: Sum of Funding

0 \$390M



Chapter Takeaways

- 1 | All-male teams in Africa make up the vast majority of deals and overall volume invested.
- 2 | Even though there are far fewer all-female teams in Africa, they are disproportionately underfunded compared with mixed or all-male teams.
- 3 | The financing gap between all-male and all-female teams appears to be unchanged in recent years.
- 4 | The largest amount of financing goes to firms in fintech, an industry vertical that has a greater share of all-male founding teams than the industry average.
- 5 | The financing gap widens when internationally headquartered companies are excluded because very few female-founded companies that received financing are headquartered in Africa.

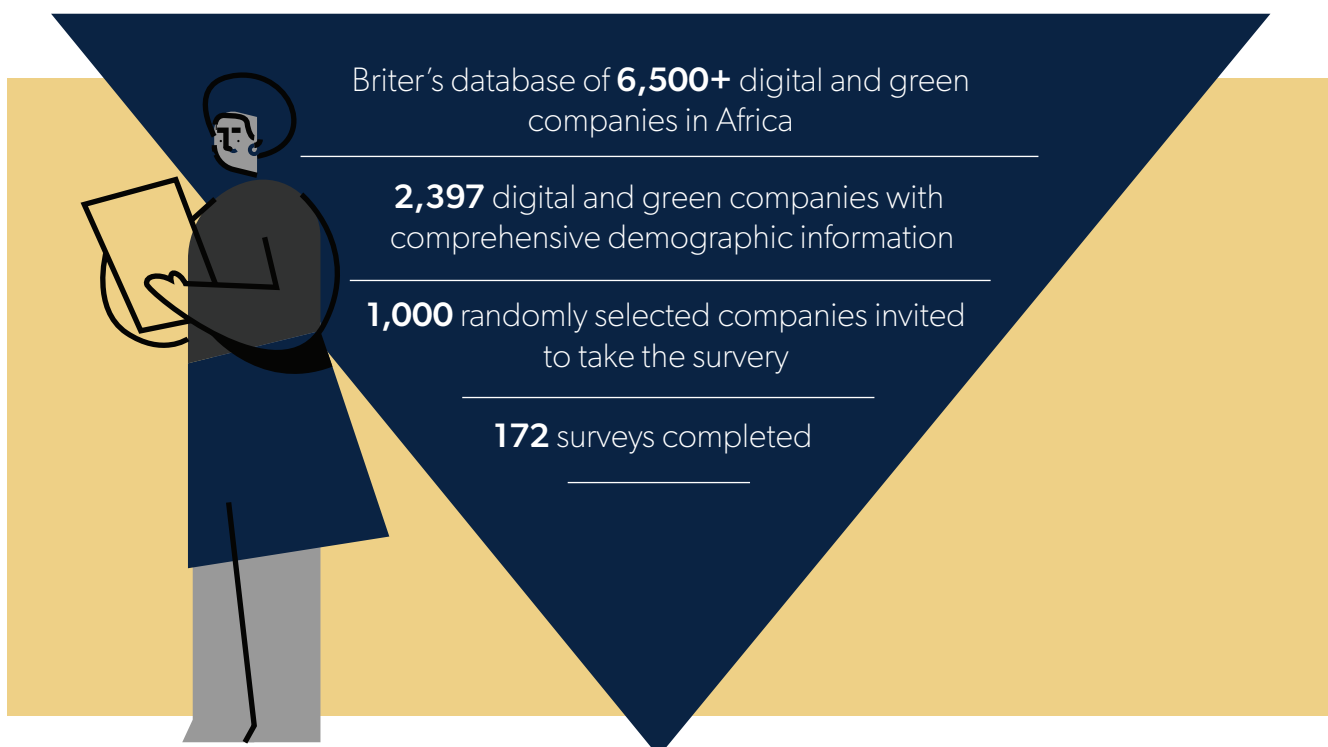
4 | Key Differences between Male and Female Founders

Section 3 provided an overview of where funding flows in Africa. Over the past nine years, investment has gone disproportionately toward male-founded companies, companies working in financial technology (fintech), and those companies headquartered abroad. However, important questions remain. Do female founders apply for financing at similar rates compared with male founders? Are female founders less qualified or experienced, and do they have different ambitions for their businesses? This section aims to provide answers to these more nuanced questions by highlighting responses from a survey of male and female founders.

For a better picture of Africa’s tech start-ups, 172 randomly selected founders were surveyed

Who are the founders in Africa’s technology (tech) industry? To get a more detailed picture, the founders of companies listed on Briter Intelligence were invited to participate in this study. To find the right respondents, researchers considered companies in the database that had an operational focus on Africa and that had provided contact information, as well as demographic information, for the founding team. These criteria narrowed down the sample frame to 2,397 companies (figure 4.1). Of those firms, 1,112 had disclosed funding information—the rest had not.⁸ From the disclosed and undisclosed lists, 500 companies were randomly sampled from each, for a total of 1,000 companies. From this list, a total of 172 respondents (each representing a unique company) completed the survey.⁹

Figure 4.1. Sampling Data



Women and female-founded companies are disproportionately represented in the survey findings, but respondent companies represent companies from the larger database to a reasonable extent in terms of age, size, sector, and geography

From the 172 respondents that completed the survey, 108 are men (63 percent) and 64 are women (37 percent). The respondents come from 63 all-male-founded companies (37 percent); 24 all-female-founded companies (14 percent); and 85 female/male cofounded companies (mixed teams, 49 percent) (figure 4.2). Therefore, female founders and their cofounding teams are overrepresented in the sample: out of the 2,397 companies in the sampling frame, only 11 percent have all-female teams and another 11 percent have mixed cofounding teams, and only 16 percent of the founders from the companies in the sampling frame are females.¹⁰

The respondents’ companies are primarily small to medium-size start-ups that are on average 5 years old with an average of 25 employees, and they work in a variety of subsectors (figure 4.3) and headquarter countries (figure 4.4). They represent companies from the larger database of 2,400 well because most of the companies in that database are early-stage, small to medium-size companies, and they have similar distributions of sectors and headquarters.

The following sections present differences between male-founded companies, mixed-team companies, and female-founded companies followed by differences between male and female founders. An important caveat is that any differences in the sample show a correlation and are not necessarily drivers of the gender gap in equity investment.

 **Figure 4.2. Sample Demographics of Survey Respondents**

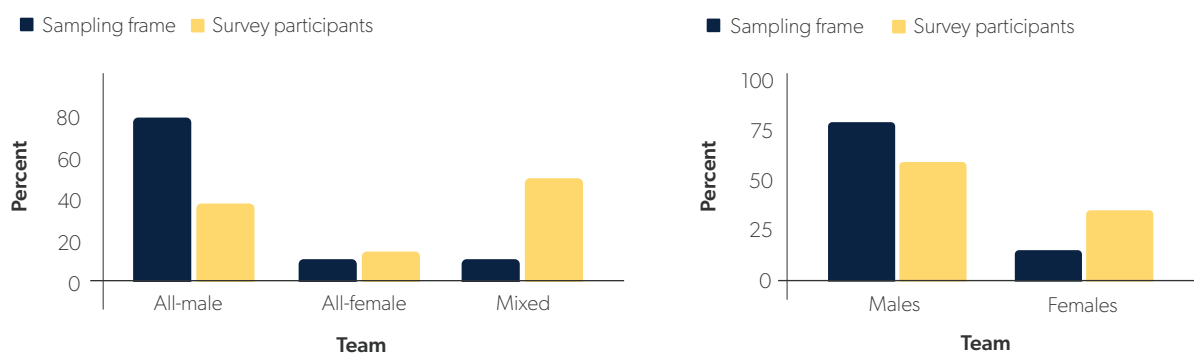


Figure 4.3. Sectors: Sample Comparison

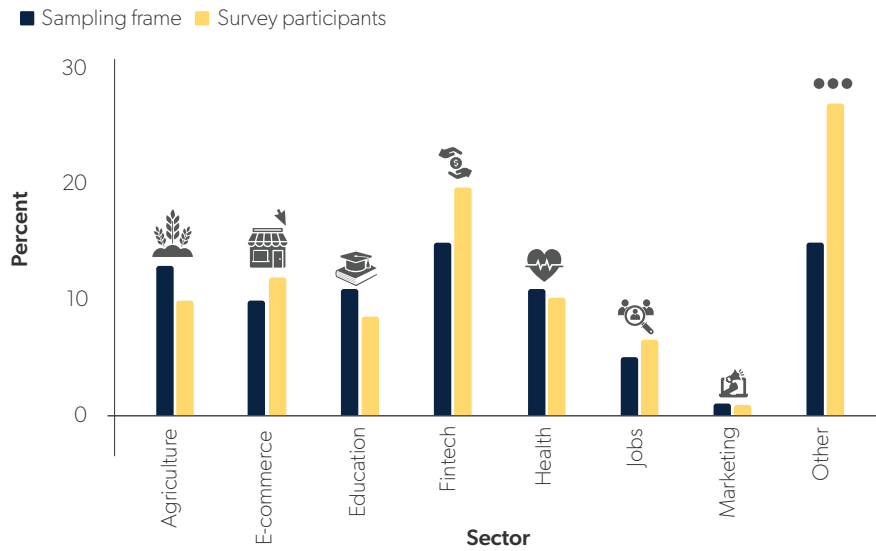
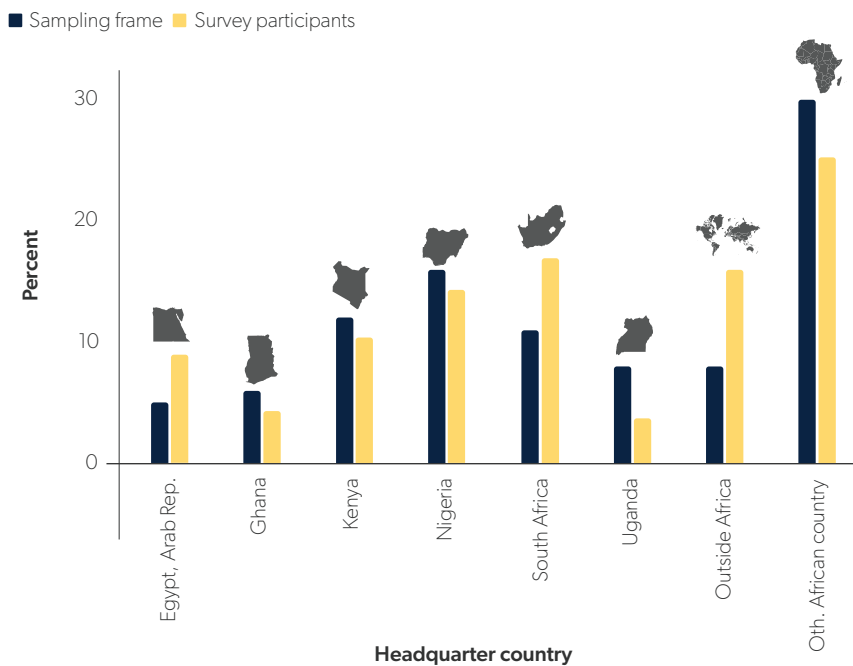


Figure 4.4. Headquarters: Sample Comparison



Survey sample: Female-founded companies have fewer employees but tend to employ more women overall and in management roles

Male-founded companies in the survey sample are the largest in terms of employee count, with an average size of 30 employees, which is twice the size of female-founded companies (figure 4.5).¹¹

In addition, all-female teams are composed of two founders on average, compared with three members on an all-male team. Female-founded companies in the survey sample also seem to have more female employees overall and in management roles compared with mixed or male-founded teams (figure 4.6).¹²

Survey sample: Female-founded companies did not seek equity investment as much as male-founded companies and they relied on debt or revenues for their financing needs.

About 50 percent of all-female-founded companies in the survey sample tried to raise equity for their companies, compared with 82 percent of all-male-founded companies (figure 4.7). Responses from female-founded companies indicate that they either did not try to raise equity because they preferred to reinvest earnings, they did not have

the need for it, or they had other reasons. Lillian Madeje, founder of the Tanzanian talent management platform Niajiri (see box 4.1), suggests that female entrepreneurs that prefer gradual growth at present may still consider raising equity as a long-term objective. For those female-founded companies that did raise equity finance, friends, family, and other individuals made up about 60 percent of the investors, compared with 50 percent for male-founded companies and 44 percent for mixed-team founded companies, who had a more diverse portfolio of investors (figure 4.8).

Figure 4.5: Co-founders and Employees

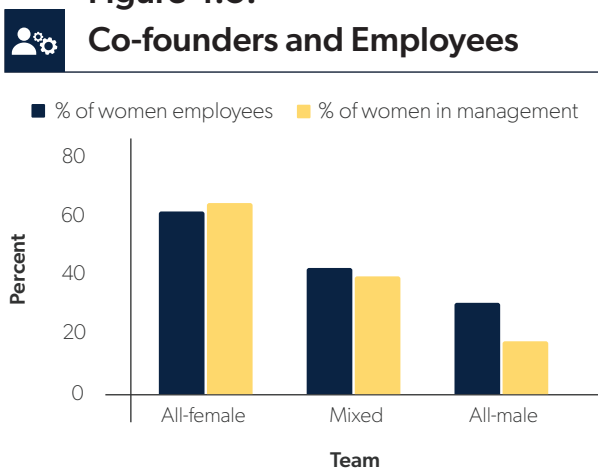


Figure 4.6: Women Employees and Management

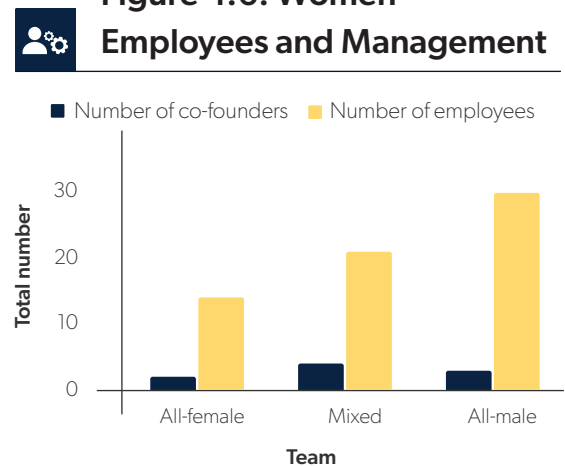


Figure 4.7. Sought equity finance

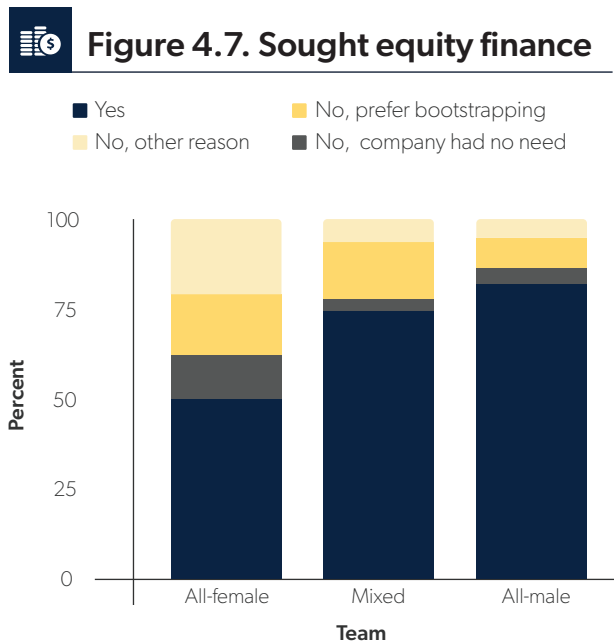
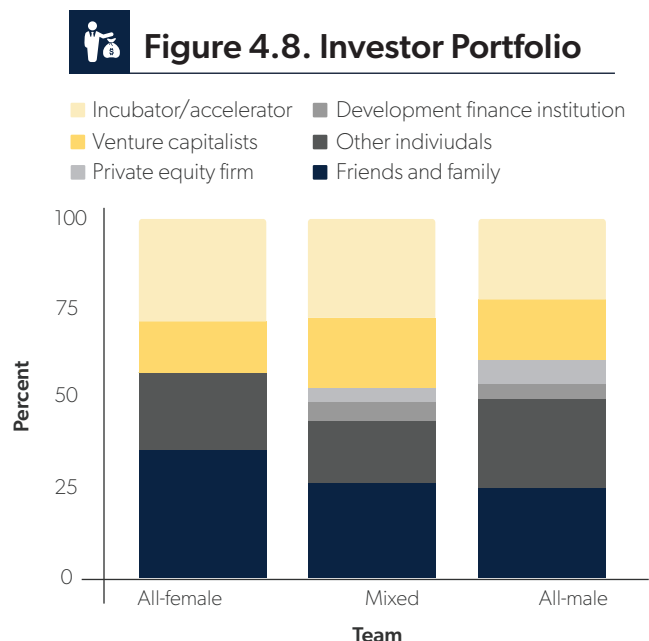


Figure 4.8. Investor Portfolio



Box 4.1. Founder Profile: Lillian Madeje

Lillian Secelela Madeje is the founder of and business development lead at Niajiri Platform, an online talent management company based in Tanzania. Niajiri creates a streamlined and impactful process for employers and recruiters to find talent, and for jobseekers to gain soft skills and enhance employability. The company started as a passion project and was part of Madeje's master of business administration program.



The platform is primarily funded through bootstrapping, angel investment from family and friends, and resources from Madeje's previous company; however, in 2018, the company was beneficiary of a grant that enabled the company to take the platform to the next level. Madeje explains that while the influx of cash was vital to ensuring the development and growth of the company, it was equally important to figure out how to build a sustainable business. When the COVID-19 pandemic hit, the target market changed because fewer companies were hiring. Although revenues took a hit, the crisis also presented an opportunity for Madeje and the company's team to look at their business model from a new perspective. This opportunity spurred the development of a subscription model that is being launched in the second half of 2021.

The team also recently joined an accelerator program, seizing every opportunity to learn and to pivot its offering during an otherwise challenging time. "Being a female founder, you have to be a go-getter," explains Madeje. "It's a big boys club, but once you get there, it is also where I've found the most support. Put in the hard work, and let your work speak for itself."

The medium- to long-term plan for the Niajiri team will be to actively seek out venture capital (VC) funding, however, Madeje explains that for the moment, the company is growing organically. With the launch of the model, it might seek out a loan for the first time, and Madeje explains this is her preferred approach in the short term because it is a faster process than pitching and waiting for funds. This approach will also enable the Niajiri Platform to test assumptions of the new subscription model and to continue growing while repaying the loan. Madeje suggests that this strategy will help prove that the business model works, hence building a stronger business case before pitching to VCs for growth.

She also wants to be selective when possible. “With investment, I would prefer someone who offers funding and technical expertise as opposed to just funding. Money gives financial security, but if I am to be serious about growth, I want to surround myself with people who know more than I do in order to take it to the next level,” explains Madeje.

About 50 percent of female-founded companies applied for debt financing, compared with 27 percent of mixed-team founded companies and 39 percent of male-founded companies (figure 4.9). However, female-founded companies received a small fraction of debt on average compared with male-founded companies, with or without controls (such as age, company size, and

headquarter location) (figure 4.10)¹³. When asked about how financing needs will be met in the next two years, 17 percent of all-female teams were unwilling to disclose their plans (figure 4.11). However, very few reported wanting to take out loans, and many hope to give away more equity or rely on sales only.

 **Figure 4.9. Applied for Debt Financing**

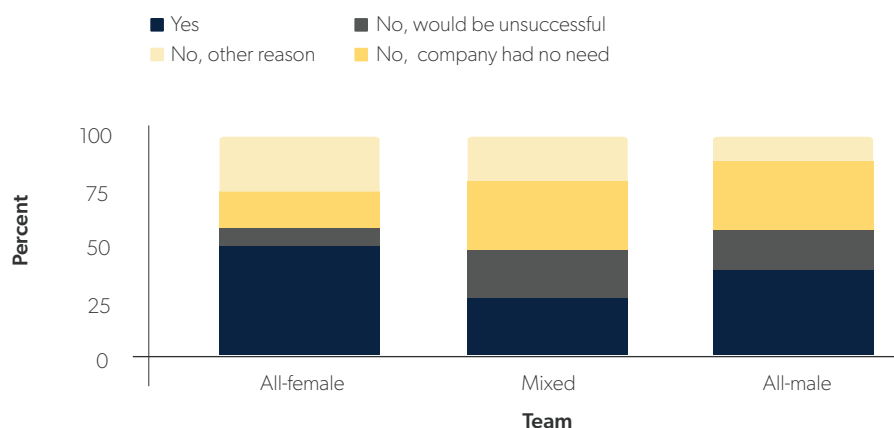


Figure 4.10. Total Debt

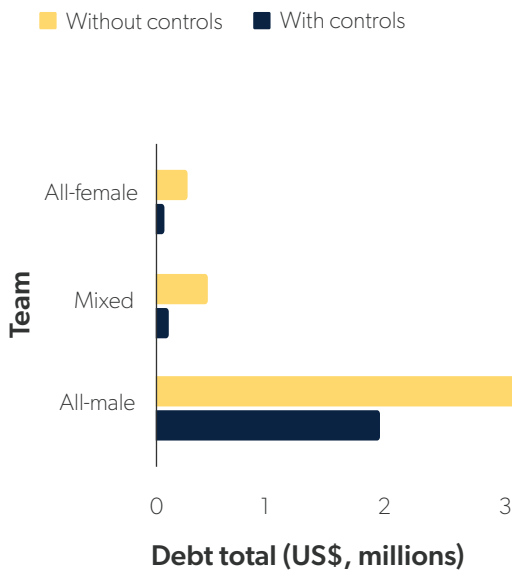


Figure 4.11. Financing Needs in Two Years

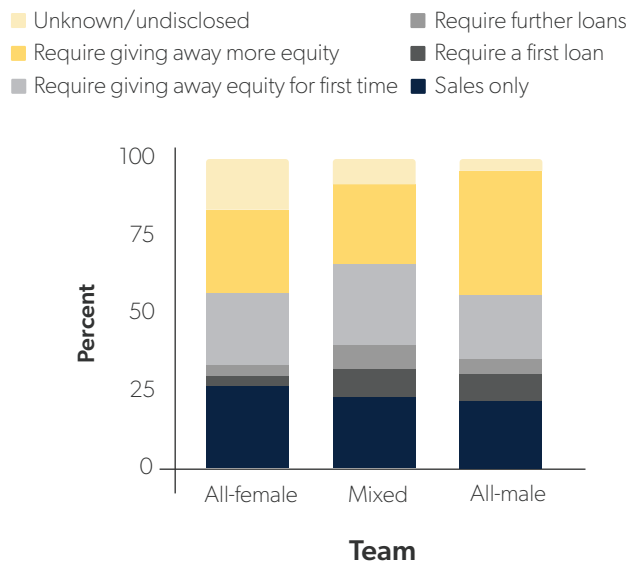
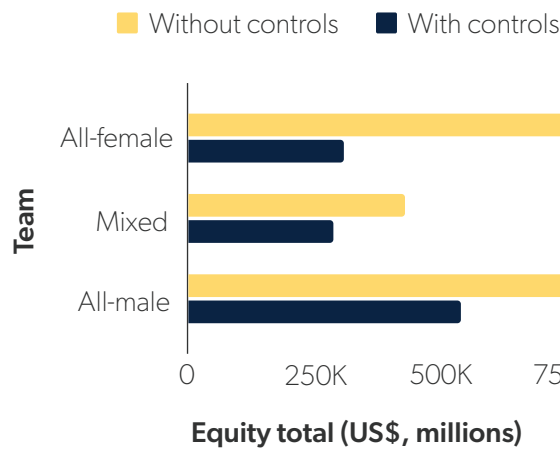


Figure 4.12. Equity Investments



Survey sample: Male-founded companies received about twice as much in equity investment compared with mixed or female-founded companies with similar characteristics

When considering all companies in the survey sample that tried to raise equity financing, companies with all-female founding teams have a similar average total investment compared with companies with all-male founding teams (figure 4.12).

But factors such as the age, size, subsector, and headquarter location of the company are important determinants of investment amounts. After controlling for these factors, results showed that a male-founded team would on average receive US\$250,000 more in equity investments compared with a female-founded or mixed-team company in the sample.¹⁴ Although this difference only applies to a small number of respondents, it echoes findings from the larger industry data in section 3.

Box 4.2. What about “Mixed” Founding Teams?

Research from the In Search of Equity survey shows that only 1 out of 10 founding teams in Africa has both male and female cofounders (mixed). About 11 percent of Briter’s industry data of 2,400 companies with complete demographic information are companies with male and female cofounders, and women make up 60 percent of these mixed founding teams on average. Among the survey sample, 40 percent of both employees and management teams are composed of women in the average mixed-team company. This data suggests that mixed founding teams are more likely to hire women than all-male teams, but they are less likely to do so than all-female teams.

Mixed teams do appear to get funded, and other studies show that they yield a higher return on investment. Findings from Briter’s industry data show that mixed teams only make up 11 percent of the teams in Africa, but that they do make up 14 percent of the funded teams, and almost 20 percent of the total value of investment over the past eight years, with funding toward them increasing over time. They appear to be clustered in fintech, they are mostly headquartered outside of Africa, and they sought equity investment more often than debt—which may all be factors that contribute toward their overrepresentation in deal flow data. However, it is likely that gender diversity in founding teams could be a driving force, too. Studies outside of Africa show that gender-inclusive founding teams have greater success in fundraising and innovation and have higher profits than teams with lower percentages of women (Abouzahr et al. 2018; Hoogendoorn, Oosterbeek, and Van Praag 2013).

Survey sample: Female founders have better educational qualifications compared with male founders, but fewer female founders have prior entrepreneurial experience

About 50 percent of male founders have a bachelor's degree as their highest educational degree, and 25 percent of them have a master's degree.¹⁵ On the other hand, about 34 percent of female cofounders in the survey sample have a bachelor's degree and 40 percent of them have a master's degree. This data is consistent with the larger data set of 2,397 companies and their founders, in which more female founders have a master's degree compared with male founders (41 percent versus 31 percent) (figure 4.13).¹⁶ Women and men have similar degrees or specializations to some extent, however, slightly more women have less degrees whereas many more men have engineering or computer science degrees (figure 4.14).

Although there is not much rigorous research on the matter, the conventional wisdom in the tech industry seems to be that computer science or software engineering is a more relevant degree for entrepreneurs in the field rather than business studies. This thought may give male founders, who are overrepresented in these fields, an edge over female founders.

Although both men and women in the survey sample had an average of seven years of professional experience, more men (69 percent) had been a founder previously compared with women (56 percent). In addition, 60 percent of women who have previous founding experience are still involved in those companies, compared with 53 percent of men (figure 4.15).¹⁷ In addition, 15 percent of women reported that their previous company closed, compared with 26 percent of men. So, fewer women in the sample have previous founding experience, and if they do have previous experience, they are less likely to have had failed ventures.

Figure 4.13.

Founders' Level of Education

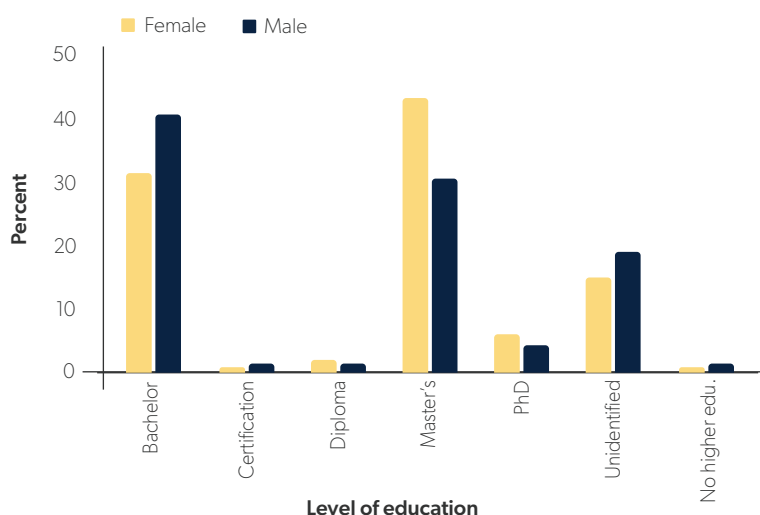


Figure 4.14.
Founders' Academic Area of Study

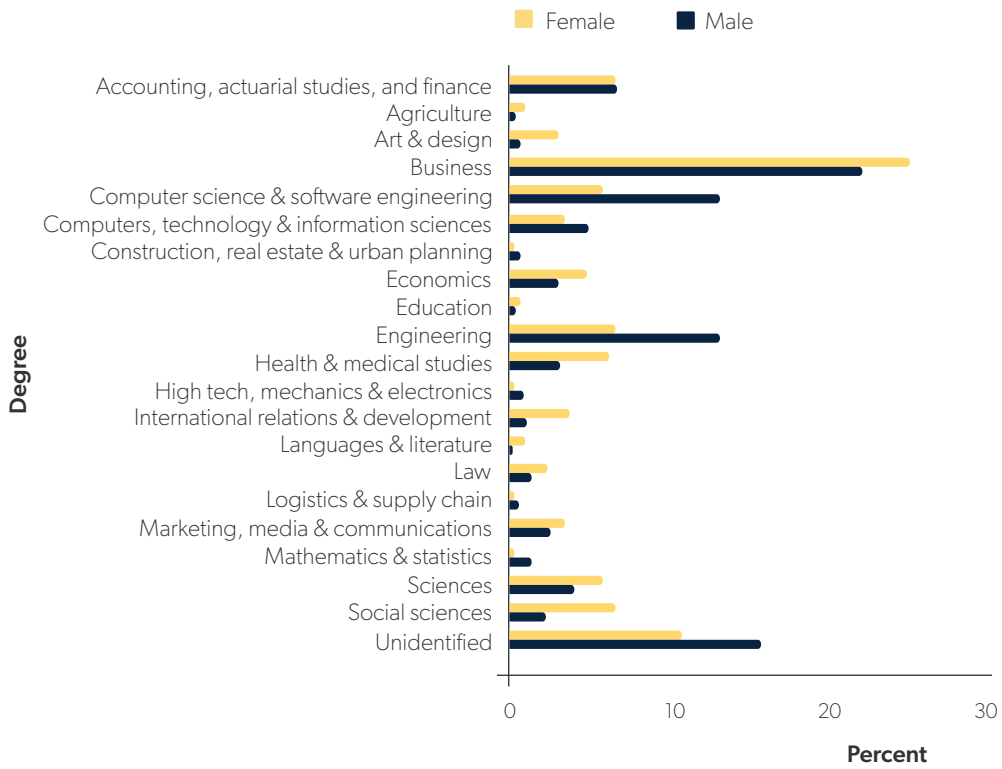


Figure 4.15.
Founders' Previous Start-Up Experience



Survey sample: A confidence gap exists between female and male founders regarding their pitching skills and their companies' profitability, despite similar performance over the past year

Survey respondents were asked to rate their level of confidence in pitching to investors and in the long-term profitability of their ventures—a clear confidence gap emerged. Only 5 percent of women reported high confidence in their pitching skills, compared with 30 percent of men (figure 4.16). Similarly, men were about twice as likely as women to report very high confidence in the long-term profitability of their companies (figure 4.17). Also, respondents were asked about their expectations for their companies' revenue growth over the next two years. Although most founders have optimistic expectations, about 66 percent of women surveyed expect substantial growth compared with 88 percent of men (figure 4.18).¹⁸

This finding suggests that men in the sample are more optimistic about the future of their companies in both the short- and long-term. To see if this reflects their companies' performance, this gap was compared with the revenue change from the previous year. Findings show that similar proportions of both men and women reported a decrease or an increase in the previous year's revenue indicating that their companies did not differ in performance the previous year as widely as the founders did with their expectations (figure 4.19). Although it is uncertain what drives the lower levels of optimism among female entrepreneurs, a profile of Gugulethu Siso, founder of Zimbabwean logistics platform Thumeza, illustrates the additional degree of doubt female entrepreneurs have to face from male peers in sectors traditionally dominated by men (box 4.3).

Figure 4.16. Founders' Confidence with Pitching to Investors

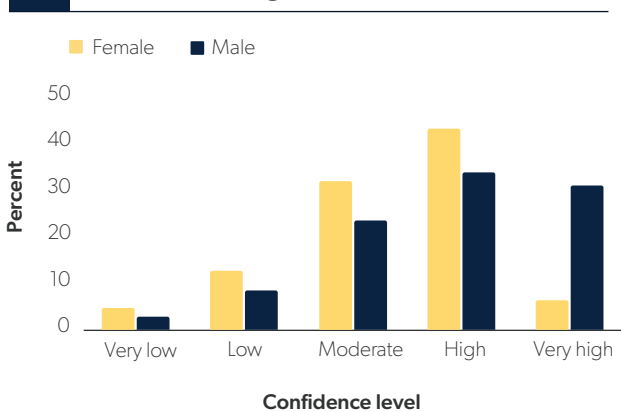


Figure 4.17. Founders' Confidence in Profitability of Ventures

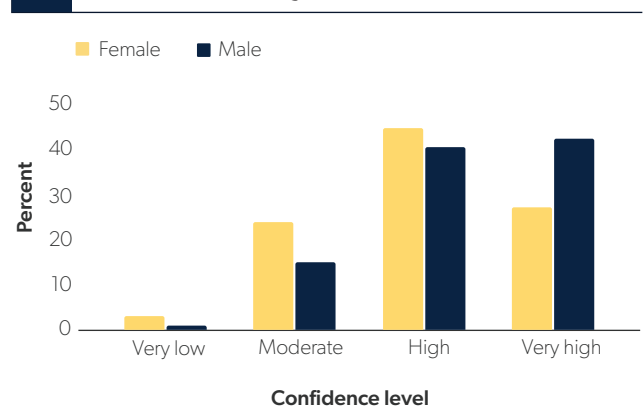




Figure 4.18. Founders' Revenue Growth Expectations

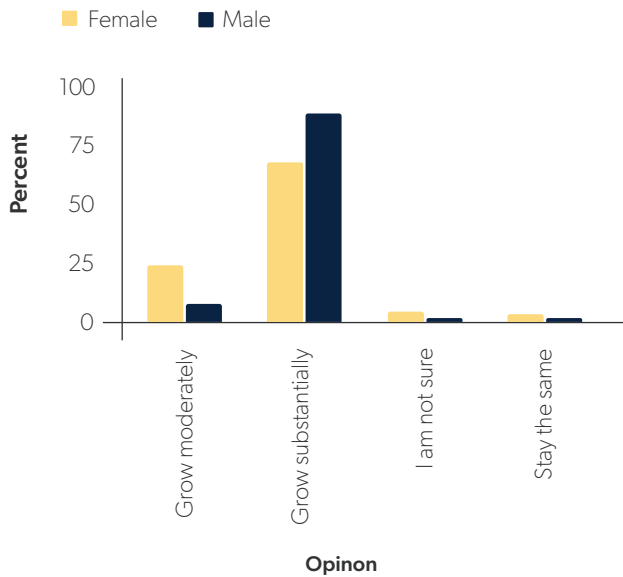
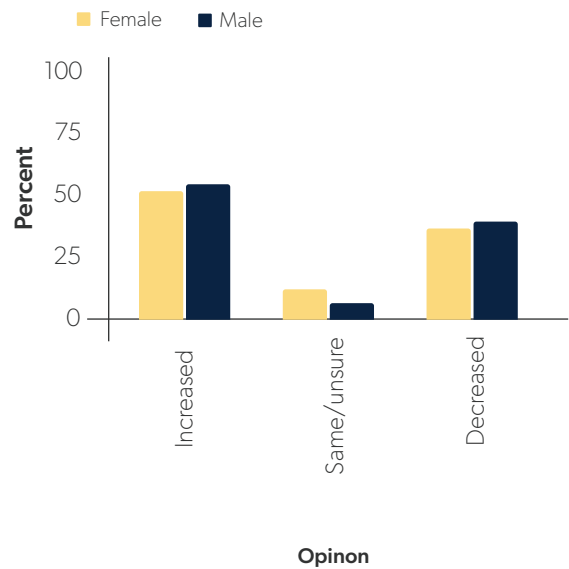


Figure 4.19. Revenue Change



Note: Figure depicts last year's revenue change for those that expect substantial growth in the next two years

Box 4.3. Founder Profile: Gugulethu Siso

Gugulethu Siso is the founder and CEO of Thumeza, a logistics platform that connects large-scale enterprises to small-scale transporters and provides short-term operational loans. Currently operational in Zimbabwe, the company is solving the issues many small-scale truckers face—such as access to working capital, payment delays, and cashflow—with a web app that collects and vets operational data, provides compliance coverage, and manages transporter relationships. This app enables lenders to assist transporters without risking their capital too much. Siso — and Thumeza— are familiar with this challenge because it has been difficult to gain access to capital as a small start-up. Thumeza is primarily revenue funded, and while this has been a great way of proving its business model, raising funding for growth has been challenging. Siso and her team have not been able to access traditional financing, be it banks or other financial institutions, in large part because of the strict requirements.



Siso explains that most banks or financial institutions require some form of collateral or operational data in exchange for loans and capital, making them inaccessible without first having experienced growth. And, operating in an industry dominated by men has not made things easier for Thumeza. In Siso's words: "As a young team predominantly operated by women, we've faced doubt on what we can pull off. I personally have been asked if the business is owned by my husband or father as it's so hard [for some people] to wrap their heads around a woman thriving in logistics. I've learned to laugh it off but early on I'd want to fight. We're learning to use our perceived weaknesses to our advantage but sometimes it rankles as it's assumed we're where we are because we've used the gender card."

Access to working capital is crucial for growth, and Siso explains that "it's a balancing act because avenues for growth and exploration are determined by how much money you have in the bank." Therefore, internal cash reserves are essential, and the team has adjusted its strategy by managing the ratio of larger enterprises that operate on longer payment timelines to smaller entities that have shorter payment periods. Family and friends who believe in the solution can also help bridge this gap, though Siso explains that they are a finite resource and there comes a point when you must find longer-term solutions to protect close relations.

The team at Thumeza has approached other types of investors in recent months, and although initially it was difficult to find someone willing to take a chance, the team found support with the team at SBC with the Telecom Source Group, receiving access to resources, capital, and clients to roll out its solution. "It's tricky to get it completely right, and so what we have done is try to learn from the feedback. We ended up going back to the drawing board, and it has helped us evolve our business model into what it is today. Thumeza now has a model that is backed by data, is scalable, and encompasses the entire logistics chain."

Survey sample: Founders who received equity financing typically are male, work in a medium size fintech company, and are confident about their companies' prospects

When comparing those who received any equity investment with those who did not (regardless of gender or type of team) in the sample, statistically significant differences between the two groups can be seen in terms of company subsector, size, gender of founder, and founder perceptions and expectations (table 4.1). The previous sections show the same differences between male-founded teams or male founders and their female counterparts. Those differences imply that men mimic

those who received equity investment and women mimic those who did not receive equity.

It is beyond the scope of this analysis to categorize any of these factors as causes, effects, or just correlations. For instance, higher confidence scores might be the result of successfully pitching for equity investment; at the same time, they might also contribute to greater success in pitching to investors. The analysis does have supporting evidence from literature that shows that these factors matter; and most importantly, the survey findings and the gaps highlighted need to be addressed, regardless of whether they are drivers or not.

Table 4.1. Comparing Founders that Did – and Did Not – Raise Equity

VARIABLE	DID NOT RECEIVE EQUITY	RECEIVED EQUITY
Company characteristics		
Age of company	5	5
If a company is in fintech	4%	25%
Number of employees	15	30
Founder characteristics		
If founder is male	55%	69%
Age of founder	35	35
Years of experience	7.2	7.5
Took a business training	67%	75%
Founded a company before	58%	68%
Founder confidence and expectations		
Pitching confidence score	3.5	3.8
Profitability confidence score	3	3.3
Revenue change score (higher is positive change)	1.2	1.4
Future revenue score (higher is more optimistic)	1.86	2

Note: Results in bold are statistically significant.

Chapter Takeaways

- 1 | The average female-founded company in the survey sample is about one-half the size of a male-founded company in terms of employee count.
- 2 | Only one-half of the female-founded teams in the sample sought equity investment, a much lower rate than among male-founded teams.
- 3 | An all-male founding team received a much higher average equity investment when controlling for age, size, subsector, and headquarter location of the company.
- 4 | Female founders in the sample seemed to rely on debt and to draw on family and friends for financing more than their male counterparts.
- 5 | Although female founders in the sample have similar to or better educational qualifications than male founders, they have less previous entrepreneurial experience than male founders.
- 6 | Despite being more qualified and having similar revenue changes in the past year compared with male founders, female founders in the sample have less confidence in their ability to pitch and less confidence in their companies' growth prospects.

5 | Conclusion

It is not particularly surprising that there is a gender gap in African start-up financing, considering what prior studies had previously confirmed for other types of companies and for other parts of the world. Nevertheless, the scale of the imbalance is sobering. In this final section we briefly revisit the study's results in the light of existing research, outline areas for further study, and discuss concrete takeaways for those working to promote investment in Africa's female entrepreneurs.

Results mostly support prior research—and raise new questions

The results presented in this report are largely aligned with the findings of the literature on gender and business financing highlighted in section 2. Similar to other regions and economic sectors, there is a considerable gap between the financing received by male- and female-founded start-ups in Africa, both on aggregate and on average. The research also points to similar drivers: female founders are generally underrepresented in the tech industry, lead smaller firms, are concentrated in lower-growth sectors, and have (or show) less confidence in their abilities. The fact that female founders in the report's sample have higher educational credentials on average than male founders goes somewhat against received wisdom; however, because founders of tech start-ups are part of the educational elite, this group is hardly representative of entrepreneurs at large.

This report was intended as an initial assessment of the gender gap in African start-up finance. As such, it raises several new questions to which the report's data does not provide answers. Because of sample-size limitations, researchers were not able to do a more comprehensive econometric analysis with the survey data, and therefore determine any causality. Future studies should investigate if any of these differences are drivers or effects of the gender gap. For instance, are female founders less likely to seek equity investments because their financing preferences are different from those of male entrepreneurs (for example, because they prefer organic growth and greater control)? Or is this primarily a reflection of the fact that they are not adequately served by equity investors?

Similarly, the report only looked at the demand side for start-up capital without investigating the finance providers' perspective. This limited look means that the report has little to say about the (potential) problem of investor bias: the data certainly suggests that structural factors such as industry composition or sector choice only provide a partial explanation of the gender gap, and the founder interviews describe personal experiences with gender-based prejudice. However, additional research is needed to confirm whether investor bias does play a role, and the extent to which it drives the gender gap. Conversely, the report does not look at the ongoing efforts to address the gap by investors, incubators/accelerators, or policy makers, and more research is needed to understand their impact.

Last, the report provides a birds-eye view of the continent that warrants further analysis, especially in the main centers of gravity of the African tech industry. It would be valuable to further unpack the founder and investor experience by sub-region, and for Francophone and Anglophone Africa to understand appropriate approaches that can be taken by funders and policy makers to further promote individual tech ecosystems and local founders. In addition, as touched on in this report, it would be beneficial to further explore the differences in opportunities for start-ups that operate in Sub-Saharan Africa that are incorporated or managed outside of the continent to understand if a different set of support actions are needed for founders on the basis of geography and proximity to key support to scale their businesses.

Table 5.1. Literature, Results, and Future Questions

INSIGHTS FROM LITERATURE	RESULTS OF THE REPORT	FUTURE QUESTIONS
Startup financing overwhelmingly goes to male founders / male-dominated firms	Industry data: Only 3% of startup financing since 2013 went to all-female founding teams, compared to 76% for all-male founding teams.	Would we find gender gap if we control for size, age, and other characteristics of a company?
Women are underrepresented among founders of tech start-ups.	Industry data: 16% of co-founders operating in tech startups across Africa are women.	What factors prevent women from entering the tech industry?
Firms led by women tend to be clustered in less profitable industries.	Industry data: Female-founded companies are especially underrepresented in sectors that receive the most investment, such as fintech.	Does a higher share of male founders increase investment in a particular sector?
The average female-owned firm is smaller than the average male-owned firm.	Survey results: Female-founded companies have half as many employees as male-founded companies.	Do women chose to keep their businesses small, or are there obstacles (such as lack of investment) that prevent their businesses from growing?
Female founders are more likely to prefer growing their firms gradually and through retained earnings.	Survey results: Female founders were less likely to try to raise equity financing, and more likely to try to take out loans than male founders.	Are female founders less likely to seek equity investments because their financing preferences are different from those of male entrepreneurs (for example, because they prefer organic growth and greater control)?
Female business owners tend to have less educational experience.	Industry Data: Female founders in the sample have more experience with academic education and business training, but fewer of them have degrees in computer science or engineering.	Do women with technical degrees follow different entrepreneurial paths than women with MBAs when operating a tech start-up?
Women are less likely to be serial entrepreneurs.	Survey results: Male founders were more likely to have founded a start-up before, and they are more likely to have experienced failure.	Are women more willing to continue working on underperforming start-ups and less inclined to 'embrace failure'?
Women tend to be more risk-averse and show less confidence in their abilities.	Survey results: Female founders are less confident to pitch to investors and have lower expectations of future growth.	Do women have lower confidence because of their higher rejection rates when pitching for equity financing?

Ongoing Gender Innovation Lab (GIL) research in Ethiopia—such as a longitudinal study of female entrepreneurs, experimental research on bias in the financial sector, and a digital economy diagnostic—will hopefully contribute to the understanding of all three of those areas. In-depth qualitative research will further examine the funding journeys of female entrepreneurs and contribute to the knowledge base of how female entrepreneurs make sense of their opportunities and constraints. In addition, GIL studies examining gender bias in the financial sector will unpack attitudes and bias in entrepreneurship, investment decisions, and management of the finance industry. Finally, a digital economy diagnostic will dive deeper into the development of the tech sector and explore how this development is impacting women and their businesses. The insights from these studies are intended to provide additional information on the drivers of the gender gap in business financing and to suggest concrete approaches to address this gap. Follow-on GIL work will test these solutions to ultimately share new knowledge on what works to support female founders to grow their businesses.

There are no easy solutions, but there are practical takeaways

In Search of Equity sets out to explore the gender gap in African start-up financing, and the challenge that emerges is a daunting one. The research does not offer easy solutions, and it does not provide evidence on which strategies are the most effective to redress the imbalance in the start-up ecosystem. However, the report's findings have practical implications. These insights should be of interest to anyone working

for a more equitable start-up ecosystem on the continent: institutional and angel investors, development finance institutions, policy makers and ecosystem builders, those running incubators and accelerators, and—most importantly—founders of any gender.

Five concrete takeaways

First, **there are too few female founders in high-growth verticals**. Although the research suggests that female-led teams raise less financing regardless of industry focus, the relatively small number of female founders limits their share from the outset. This finding is true for the tech sector overall (in which the ratio of female founders is estimated to be about 16 percent) but accentuated for subsectors (such as fintech) that receive the most investor interest. One approach is to share information on the potential of entering high-growth sectors that are receiving the bulk of investment funds and encourage women to start and grow businesses in those sectors—through targeted incubators, networks, or mentorship programs, for example. However, growing the pipeline of female-led tech start-ups overall—including through technical education and fostering a more inclusive entrepreneurial culture (see the following section)—may be just as important.

Second, **traditional business training is unlikely to increase the funding prospects of female founders**. Programs that provide fundamental entrepreneurship skills to women abound, and they may be beneficial to individual business owners. However, the data indicates that female founders are already more likely to have received such training than their male peers. Organizations

that provide training to female entrepreneurs should instead consider focusing on areas in which gender gaps persist, including areas in which investors see skills and experience differences. The report's findings suggest that these differences include familiarity with pitching to investors as well as entrepreneurial self-esteem (two areas in which GIL is currently piloting new approaches), and the in-demand technical skills acquired through engineering and computer science programs.

Third, **a more inclusive entrepreneurial culture would help accommodate the diverse backgrounds and aspirations of founders.** The popular perception of start-up life can be rather exclusionary, associated with a high-stakes/high-gains ethos, brash male CEOs, and stereotypical "tech bros." Although there is much left to explicate, some of the results indicate that such (perceived) norms may hold back female entrepreneurs in Africa as well: the female founders profiled describe their industry as a "boys club" or recount learning to "laugh off" gender prejudice, while male founders reported higher confidence scores in the survey despite comparable levels of firm performance. Promoting a more inclusive vision of the industry—by showcasing female role models, highlighting nontraditional paths to success, or normalizing failure as part of the entrepreneurial process—could lower the barriers to entry for women. It might also encourage investors to reflect on their beliefs about "what success looks like" when evaluating potential investees.

Fourth, **more flexible financial products might help reach more female founders.** The survey results suggest that a sizeable segment of

entrepreneurs prefer gradual, revenue-driven growth to dilutive equity financing, and that women make up a disproportionate part of this group. (As stated previously, it cannot be determined whether this difference would persist in the presence of a more equitable market for equity financing.) Because female founders and the companies they lead also tend to have more limited access to collateralized lending, there is scope for innovative financing instruments that offer an alternative to traditional debt and equity funding. One such option is revenue-based financing, a form of uncollateralized, nondilutive funding that is increasingly popular among software start-ups but has potential for other types of businesses with recurring revenues as well (Alibhai, Coleman, and Weis 2020).

Last but not least, **access to equitable finance for female and male founders should be on everyone's minds.** The width of the gender gap in African start-up finance is considerable, with all-male founding teams receiving US\$25 for every US\$1 received by an all-female founding team. And this gender gap has tangible consequences: the ability to fundraise is not a vanity metric but determines a firm's potential to acquire new resources, survive critical moments, and chart a path for growth. Individuals or firms with a mission to build the African entrepreneurial ecosystem should have a perspective on how their investments, policies, or training programs can increase the chances of women-led firms accessing funds. This effort could take the form of gender quotas or targets in training programs, pitch competitions, or financing flows.

Notes

1 | One study by the Boston Consulting Group found that U.S. start-ups founded or cofounded by women, when compared with male-founded firms, generated more than twice the revenue per dollar invested (Abouzahr et al. 2018).

2 | The analysis excludes 64 firms that each raised US\$20 million or more in later-stage (post-Series B) funding. These larger deals and “unicorn” rounds made up a total of US\$7.3 billion; remarkably, the ratio of financing to all-male and all-female barely changes once these firms are included. All figures are based on data collected by Briter Bridges, whose database on start-up financing in Africa is one of the most comprehensive.

3 | In 2 percent of cases, the gender of all founders could not be ascertained.

4 | A mixed-founding team is one in which both men and women are represented, not necessarily in equal numbers.

5 | The 2,397 companies with complete demographic information include the 1,112 companies that secured funding. The remaining firms did not disclose funding information and could therefore include companies that either did not raise any financing, or that raised financing but did not disclose it. It could not be determined to what extent this sample represents the true population and distribution of teams across all start-ups operating in Africa.

6 | The allocation of funding to fintech increases significantly when including the outliers, that is companies that have raised Series B and US\$20 million rounds and more, and the allocation of funding toward e-commerce also rises in the size of deals.

7 | Headquarter reflects the company's place of incorporation, but all companies included have an operational focus on Africa. Where a company is headquartered is not necessarily the same as where the founders are based.

8 | Companies with undisclosed funding information can be a combination of those that raised funding without disclosing and those that had not raised any funding at all.

9 | From the 1,000 companies selected, a random unique cofounder or a C-level executive from the founding teams of each of these companies was invited. Once 1,000 unique cofounders were selected, the authors filtered for gender and contacted women cofounders in the first wave of outreach to give them ample time to respond and ultimately to increase their participation. The 1,000 sampled cofounders represented

companies that consisted of 593 all-male-founded companies (59 percent), 200 all-female-founded companies (20 percent), and 207 mixed-team companies (21 percent). About 585 connected with the team, and out of those, 172 completed the survey. Founders were sent an initial email and two follow-up emails over a timeframe of one to two months. The survey was taken online, it was about 15 to 20 minutes long, and it was restricted to only those who were invited. The questionnaire is available from the authors on request.

10 | The characteristics of the 828 nonresponders were also investigated, but they do not differ from the overall respondents in any striking way.

11 | The difference between all-male-founded company employee count and all-female-founded company employee count is statistically significant.

12 | Differences between sectors were not observed here, but this is without statistical significance due to sample size limitations.

13 | Averages between all-female and all-male teams are statistically significant.

14 | Amounts are contingent on trying to raise equity (so those companies that did not try to raise are excluded), but do include zeroes for those companies that tried to raise equity and failed. Averages are statistically significant at the 5 percent level.

15 | The rest are unreported or other educational qualifications such as licenses or certificates.

16 | This is information Briter has collected for cofounders on its platform and was therefore not part of the survey. The graphs include more than 3,000 founders, instead of just the 172 survey participants, and differences are statistically significant.

17 | This difference is statistically significant.

18 | All differences reported in this paragraph are statistically significant.

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