Measuring Diversity in Baltimore's Startup Ecosystem – A Baseline Report

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Introduction

In 2022, UpSurge Baltimore partnered with the 21st Century Cities Initiative at Johns Hopkins University to field a survey measuring diversity at the employee, leadership, and board level in Baltimore's startup ecosystem. The goal was to create baseline data on diversity to benchmark future progress toward UpSurge's mission of making Baltimore the first Equitech city. This report builds on and complements existing work to quantify and explore diversity in Baltimore's startup ecosystem, most notably by Baltimore Tracks. In this report, we will begin by highlighting Baltimore City's comparative advantages for becoming an Equitech city, address the business case for diversity in tech, and conclude by sharing the results of our survey, including comparisons of diversity in Baltimore startups to Baltimore City as a whole, and comparisons of diversity in Baltimore startups to national estimates of diversity.

Local Advantages in Equitech

Baltimore is uniquely positioned to be a leader in the movement toward more diverse tech economies. Baltimore is a majority Black city with a growing Hispanic/Latinx population, several high profile research institutions and Historically Black Colleges and Universities (HBCUs), a growing venture capital and finance ecosystem, and close proximity to the federal government and associated funding opportunities. Among cities with more than 300,000 residents, Baltimore City has the third highest share of Black residents in the U.S., behind only Detroit and Memphis. Among the

50 largest cities in the U.S., Baltimore is one of seven where Black residents make up the largest racial or ethnic group. While Baltimore does not historically have a large Hispanic/Latinx population, the ethnic group grew by almost 20,000 in the city between 2010 and 2020 and was the largest growing ethnic or racial group in the city. The city's diversity sets it apart from more established startup cities such as the San Francisco Bay Area and Boston.

As startups launch and scale, they require a wide array of talent, and it can be particularly challenging to find workers with technical expertise. Baltimore has growing potential to increase diversity in startup talent pools. Baltimore City and its neighboring county are home to two R1 research universities in Johns Hopkins University (JHU) and University of Maryland, Baltimore County (UMBC) that have increased commitments to diversity in STEM in recent years. The Johns Hopkins Carey Business School is one of only ten American business schools to claim a full STEM designation for its entire full time MBA program. The city is also home to two HBCUs, Morgan State University and Coppin State, with growing STEM programs. Morgan recently ranked third in the nation for the number of Bachelor's degrees in engineering awarded to Black or African American students (Roy 2018) and has recently expanded its STEM program offerings to include aerospace and mechatronics to help build on its goal of achieving R1 status by 2030. Companies are investing in entrepreneurship programs at Morgan, such as Blackstone's recent investment in their Launchpad program and Goldman Sachs' significant investment in their 10K Small Businesses program at Morgan. In 2018, JHU partnered with Morgan and Coppin through a National Institutes of Health (NIH) grant program to establish an Academic Success via Postdoctoral Independence in Research and Education (ASPIRE) program with the goal of creating a diverse biomedical research workforce. Similarly, UMBC's NIH funded STEM BUILD initiative focuses on increasing diversity in the biomedical and behavioral sciences workforce. UMBC also has the Meyerhoff Scholars Program, which aims to increase diversity in the university's STEM PhD programs. Following UMBC's example, JHU recently created the Vivien Thomas Scholars Initiative program with $150 million in funding aimed at addressing underrepresentation in STEM fields by supporting 100 new PhD positions in the university's 30 STEM programs. Private firms and non-profits in the city such as Catalyte, Byte Back, and NPower are also addressing the talent pipeline issue by reducing talent acquisition costs and diversifying hiring pools. Growing entrepreneurship programs at local universities, including Towson University and Loyola University Maryland, are broadening the local innovation ecosystem. These are just some of the local institutions with new and continued efforts at increasing diversity in startup-related workforce fields and demonstrate the strong position and commitment of the city.

Baltimore is also advantaged by its proximity to the nation's capital just 40 miles south of the city, providing easy access to federal agencies providing funding opportunities for startups such as Small Business Innovation Research grants and access to federal policy makers. New federal funding programs are recognizing the crucial importance of leveraging the country's diversity to grow the economy and emphasize the need to build a diverse tech talent pool. One such initiative is the recent $160 million National Science Foundation's Regional Innovation Engines program that explicitly highlights inclusive growth and diversity in the program design with the need to engage HCBUs and other institutions engaging under-served communities in STEM education. Federal policy making is also reflecting the supply side need for investment in diverse talent with the recent Build Back Better legislation increasing Pell Grants with the goal of reducing racial disparities in education. A diverse talent pool and a commitment to HBCUs were also a key feature of President Biden's CHIPS and Science Act.

While Baltimore does not have a strong traditional small business financing ecosystem (Miller et al 2017), it has a robust and growing venture capital ecosystem and several large financial institutions that are increasingly supporting diversity in startups. The city is home to Harbor Bank, the only Black-owned bank in Maryland and one of only 19 Black-owned banks in the U.S. Charm City is also home to T. Rowe Price, a financial giant that has demonstrated a growing commitment to equity and supporting small businesses in Baltimore. JP Morgan Chase has been growing its market presence in the city and has worked with the city on racial equity in economic development. Capital One was an early supporter of UpSurge and its Equitech vision. While these are nascent efforts, the potential for Baltimore's financial ecosystem to support Equitech is strong.

Baltimore City has a variety of success stories in Equitech that demonstrate the potential of the city's entrepreneurs and its growing ecosystem. Growing up in Baltimore's Walbrook Junction, Clarence Wooten did not see a promising future for himself, however the now serial entrepreneur ended up attending Johns Hopkins and went on to have his first successful startup exit in his mid- 20s. He is now the first black Entrepreneur in Residence at Alphabet, the 'moonshot factory' of Google. The aforementioned Meyerhoff Scholars Program at UMBC attracted undergraduate Isaac Kinde from California to Baltimore and ultimately led him on the path to help launch a $2 billion cancer detection startup, Thrive Earlier Detection. These are just two examples of successful Black entrepreneurs who found paths to success in Baltimore.

The Importance of Diversity in Startups

While Baltimore is a diverse city, it is also one of stark inequality. Baltimore City is a New Majority city, where 62 percent of residents are Black and 5.5 percent are Hispanic/Latinx, with 27.3 percent of the city being non-Hispanic white. The city is also majority women, comprising 53 percent of the population (2020 American Community Survey). Yet inequities in wealth and entrepreneurship are high in the city. The median net worth of Black households in Baltimore has been estimated at $0 compared to $59,430 for white households (Colston et al, 2021). Despite comprising a majority of the city's population, just 18 percent of employer firms in Baltimore are women-owned and just 26 percent are minority-owned (2017 Annual Business Survey). As such, ensuring equitable opportunities for entrepreneurship and employment are crucially important.

Beyond the ethical case that wealth-building opportunities should be equitable, a large body of research demonstrates the business case for the importance of diversity. Past studies have found a positive correlation between racial and ethnic diversity at the senior executive level and better financial performance (McKinsey, 2015), higher returns and average growth for companies with at least one woman on their board (Credit Suisse Research Institute, 2012), increased innovation for startups that are more diverse (Brixy et al 2020), increased innovation in research and development teams that were more gender diverse (Diaz-Garcia et al 2014), more fact-based decisions (Sommers, 2006), and improved communication and risk assessment within diverse groups (Gomez & Bernet, 2019). Simply put diversity matters for performance.

Survey Results and Findings

Responses

To conduct our survey of diversity in Baltimore City startups, we received a contact list with emails for 195 startups out of 261 funded startups in Baltimore City identified by UpSurge using Pitchbook. We fielded the survey in late spring and summer 2022. We emailed two versions of the survey: the original survey and a shorter version with core questions focusing only on diversity at the employee, c-suite, and board level. The longer, original survey included questions about talent recruitment and management and investors. We received a total of 38 complete responses which included 21 responses to the original survey and 17 responses to the shortened survey.

Response Bias

We used two main measures to estimate response bias – the number of employees at startups and the startups' industry. We used these measures because they were two of the more reliable variables that could be gathered through online research for non-responding startups.[1] As seen below in Table 1, the survey responses were not significantly biased by startup employee size, with the majority of respondents (76 percent) being smaller startups with 20 or fewer employees and only 11 percent having more than 50.

Table 1 – Employee size among startups and response bias

	All startups	Survey respondents	% of all startups	% of responses
# of responses	195	38		
<=20 employees	151	29	77%	76%
>20 & <=50 employees	18	5	9%	13%
>50 employees	24	4	12%	11%
Unknown	2			
Total #	7,472	901		

The survey responses also do not appear to be significantly biased by the major industry of startups in Baltimore. As shown, the majority were in healthcare (37 percent) and information technology (24

[1] We used a variety of sources including Pitchbook, LinkedIn, and Crunchbase to gather data on employee size and major industry for non-respondents.

percent), with around 13 percent of respondents in the consumer products and services industry and 16 percent in the business products and services industry.

Table 2 – Major industry among survey respondents

	Total population	Survey respondents	% of all startups	% of responses
Healthcare	68	14	35%	37%
Information technology	54	9	28%	24%
Consumer products and services	33	5	17%	13%
Business products and services	27	6	14%	16%
Financial services	8	2	4%	5%
Energy	3	1	2%	3%
Materials and resources	2	0	1%	0%
Unknown	0	1		3%

While there could be other measures by which survey respondents were biased (such as geographic location, sub-industry, years in business, revenue, demographics), we were not able to estimate those and as such, these data should not be interpreted as representative beyond industry and company size as they could be biased in other, unknown ways. The remainder of the report will focus on the findings of the survey and compare the results to national estimates of diversity.

Findings

The majority of the survey focused on measuring diversity at Baltimore startups at the employee, C-suite, and board level. The long-form survey also asked questions about talent recruitment and sourcing, and approaches to recruiting diverse talent. It also included several open response questions about diversity, equity, and inclusion (DEI). In this section, we will compare these findings and our Baltimore startup diversity estimates to Baltimore City's demographics and national estimates of startup diversity. We will begin by providing some descriptive statistics of the respondents, beyond the measures used in estimating response bias.

Respondent Characteristics

As highlighted above, the majority of respondents were in the industries of healthcare (38 percent) and information technology (24 percent) and were small, with 20 or fewer employees (76 percent). We also asked startups how many years they had been in business. Among the 38 respondents, the median startup had been in business for five years and 87 percent of startups had been in business for eight years or less. Over half of respondents stated that their primary customer was other

businesses, with less than 35 percent stating their primary customer was either government or consumers. Over 85 percent of respondents identified themselves as the “Founder/ Cofounder/ President/ CEO” of the startup, with the remainder identifying as managers or vice-presidents. Around 60 percent of respondents stated their ideal geographic market was international, with the remainder focusing on the national market.

Employee Diversity

We asked Baltimore startups how many employees they had, and among those employees, how many identified as women, gender non-binary, Black, Hispanic/Latinx, part of the LGBTQ+ community, and having a disability. As shown in Table 3, among 901 employees at surveyed startups, 42 percent identified as women, 18 percent identified as Black, 10 percent identified as part of the LGBTQ+ community, seven percent identified as gender non-binary, seven percent identified as having a disability, and six percent identified as Hispanic/Latinx. There was a wide range among survey respondents with the minimum share in all reported categories being zero percent, and the maximum being 100 percent for identifying as women, gender non-binary, Black, and LGBTQ+; 26 percent for identifying as having a disability; and 16 percent as identifying as Hispanic/Latinx. The mode, or most common response across all categories was zero percent, while the median was zero percent for identifying as gender non-binary, Hispanic/Latinx, and having a disability. The median for identifying as women was 28 percent, Black was 11 percent, and part of the LGBTQ+ community was six percent.

Table 3 – Employee diversity

	# of employees	Women	Gender non-binary	Black	Hispanic/ Latinx	LGBTQ+	Disabled
# of responses	38	35	29	34	34	32	32
Total #	901	375	49	160	52	84	46
Total %		42%	7%	18%	6%	10%	7%

Tables 4.1-4.3 show the percent of startups that had shares of employees in various demographic groups (Tables for all groups can be found in Appendix A). As seen in the first table for women, 14 percent of startups had zero women employees while six percent had all women employees. The next table shows that 44 percent of startups did not have a single Black employee, while six percent had all Black employees. A large share of startups, 88 percent, had an employee base that was less than a third Black. As seen in the final table, no surveyed startup had an employee base that was more than a third Hispanic/Latinx and 68 percent of startups did not have a single Hispanic/Latinx employee.

Table 4.1 – Share of women employees

% women employees	% of startups
0%	14%
1-33%	40%
34-50%	20%
51-99%	20%
100%	6%

Table 4.2 – Share of Black employees

% Black employees	% of startups
0%	44%
1-33%	44%
34-50%	6%
51-99%	0%
100%	6%

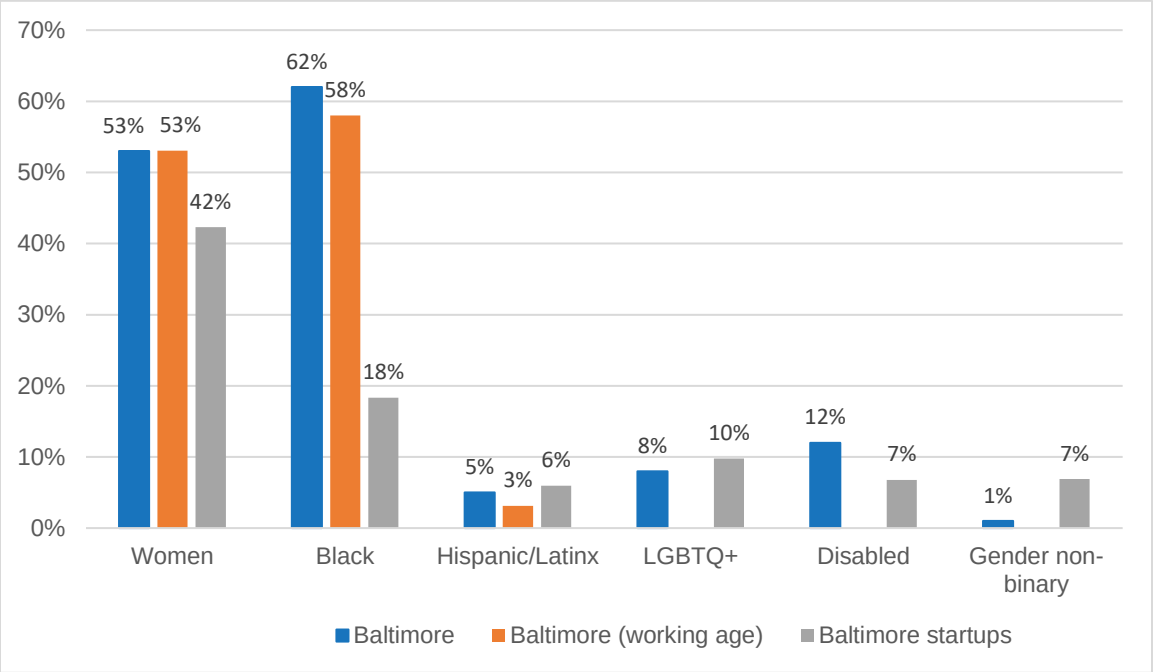
Table 4.1 – Share of Hispanic/Latinx

% of women employees	% of startups
0%	68%
1-33%	32%
34-50%	0%
51-99%	0%
100%	0%

Baltimore City Comparison – Employees

How does diversity among surveyed startups compare to the diversity of Baltimore as a whole? Figure I compares startup employee diversity in Baltimore to demographic estimates for the city and highlights the gap between the city's actual diversity and diversity among employees at all surveyed startups. The largest percentage point gap is between the city's Black population and our estimate for the number of Black employees at startups. While the city is over 60 percent Black, fewer than 20 percent of all employees at startups identified as Black. This suggests that the number of Black employees at startups in Baltimore is less than one-third of what it would be if employee diversity at startups matched the city's diversity. Looking at it another way, as shown in Table IV, only six percent of surveyed startups had a share of Black employees that was as high as or higher than the share of Black residents in Baltimore. For women, our survey findings suggest a smaller, but still notable gap of over 10 percentage points, with women employees making up 42 percent of startup employees compared to 53 percent of all city residents. Further, only 26 percent of surveyed startups had a workforce that was more than 50 percent women. While gender non-binary, Hispanic/Latinx, and LGBTQ+ employees are overrepresented in our survey data compared to estimates for the city, the small numbers and margin of error make this finding inconclusive.

Chart 1 – Diversity among employees in startups and Baltimore City demographics



Note: Demographics for Gender non-binary and LGBTQ+ community are national estimates. Working age is defined as 20 to 64.

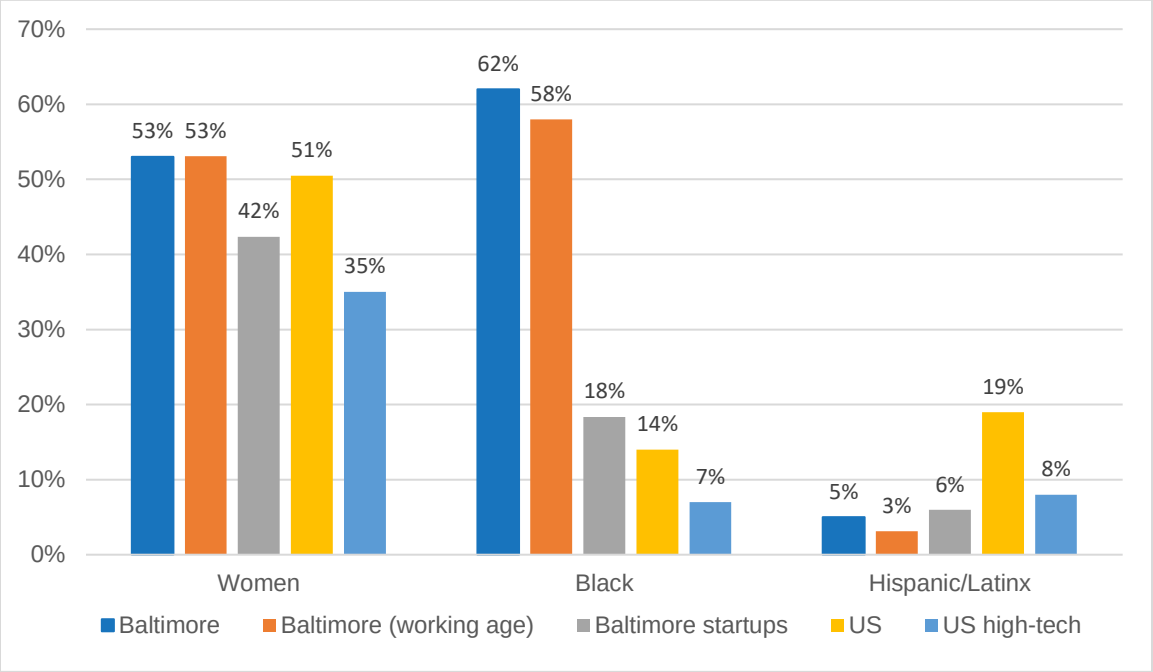
National Comparison – Employees

How does diversity among surveyed startups in Baltimore compare to national diversity estimates? A special report by the U.S. Equal Employment Opportunity Commission (EEOC) analyzed Equal Employment Opportunity (EEO-1) private sector survey data from 2014 and found that in high-tech industries 35 percent of employees identified as women, seven percent identified as Black, and eight percent identified as Hispanic/Latinx. More recent survey data on hiring at startups from Carta suggests that in 2022, eight percent of hires were Black and nine percent were Hispanic/Latinx. Carta's metro area data on women hires from 2021-2022 suggest a range of 29 percent to 41 percent, and as such track close to EEOC estimates.

Comparing these estimates to our survey results suggests that Baltimore startups may be more diverse as measured by shares of women employees (42 percent compared to 35 percent) and Black employees (18 percent compared to 7.5 percent), but not Hispanic/Latinx employees (six percent compared to eight percent). However, after accounting for the fact that Baltimore City has a significantly higher share of Black residents than the national average (62 percent compared to 14 percent), the city's startups actually have a larger disparity than the national average. The reverse is true for Hispanic/Latinx residents, where Baltimore has a much smaller share than the national average (five percent compared to 19 percent), and after accounting for this fact, Baltimore City startups are more diverse than the national estimate. Comparing Baltimore City to 17 different metro

areas using data gathered by Carta suggest that Baltimore ranks among the top metro areas for women employees at startups, comparable to Boston, New York, Miami, and Denver.[2]

Chart 2 – Employee diversity in Baltimore and the US



We were unable to find reliable data or estimates on the share of high-tech or startup employees who identify as gender non-binary, LGBTQ+, or having a disability. While some survey data does exist, it is either focused on particular occupations or on employers more broadly. For example, a 2020 survey of 65,000 software developers around the world by Stack Overflow found that one percent identified as gender non-binary, eight percent identified as a member of the LGBTQ+ community, and two percent identified as having a physical disability. Only this year (2022) did the EEOC start allowing employers to report data on non-binary employees.

C-Suite/Executive Diversity

Similarly to employees, we asked Baltimore startups about the size of their C-Suite/executive team (subsequently "executives"), and among that team, how many identified as women, gender non-binary, Black, Hispanic/Latinx, part of the LGBTQ+ community, and having a disability. As shown in Table V, among 145 executives at surveyed startups 40 percent identified as women, two percent identified as non-binary, 17 percent identified as Black, one percent identified as Hispanic, six percent identified as a member of the LGBTQ+ community, and eight percent identified as having a disability. The range for all executive teams had a low of zero percent across all groups and a high

[2] Note: Carta data report hiring data, not data on all employees. However, if diversity is increasing among startups, which Carta data suggest, then this would bias Carta data as higher than data on all employees at startups, making Baltimore even more diverse relative to its peers.

of 100 percent of the team for people who identify as women and Black; 50 percent for gender non-binary, LGBTQ+, and disabled; and 25 percent for Hispanic/Latinx.

Table 5 – C-Suite/Executive team diversity

	# of executives	Women	Gender non-binary	Black	Hispanic/ Latinx	LGBTQ+	Disabled
# of responses	38	36	37	38	37	35	34
Total #	145	38	3	24	2	7	9
Total %		40%	2%	17%	1%	6%	8%

Tables 6.1 and 6.2 show the percent of startups that had shares of executives in various demographic groups (Tables for all groups can be found in Appendix A). Table 6.1 shows that 36 percent of startups had no women among their executive teams while eight percent were all women. Almost two thirds of startups did not have a single Black executive, while eight percent had all Black executives. Almost no startups (95 percent) had a single Hispanic/Latinx executive. The majority of executive teams had no executives in at least one of the following groups: identifying as gender non-binary, Black, Hispanic/Latinx, part of the LGBTQ+ community, or having a disability.

Table 6.1 – Share of women executives

% of women executives	% of startups
0%	36%
1-33%	17%
34-50%	31%
51-99%	8%
100%	8%

Table 6.2 – Share of Black executives

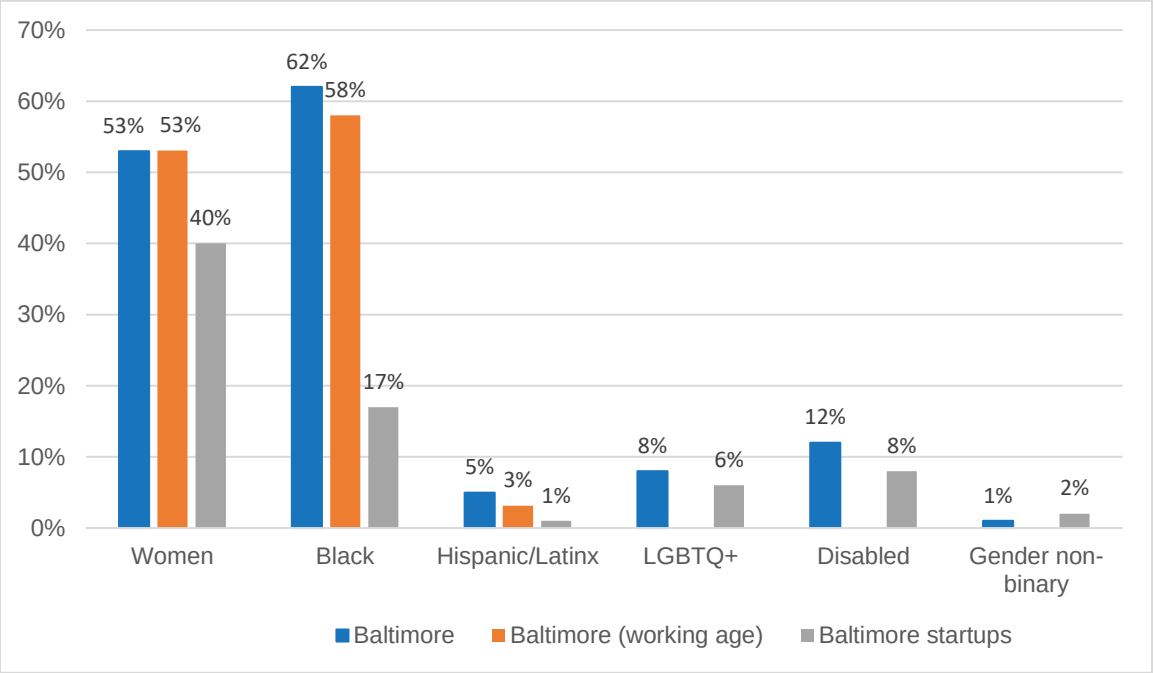
% of Black executives	% of startups
0%	63%
1-33%	13%
34-50%	16%
51-99%	0%
100%	8%

An important finding is that startups with more diverse executives also tended to have more diverse employees. Startups with higher shares of Black executives also had higher shares of Black employees. The same was true for women, where startups with more women among their executives also had more women employees.

Baltimore City Comparison – Executives

Chart 3 compares startup executive team diversity in Baltimore to demographic estimates for the city and highlights the gap between the city's actual diversity and diversity among executive teams at all surveyed startups. The disparities are similar to those among employees shown in Chart 1, although slightly greater. While Hispanic/Latinx and LGBTQ+ employees were overrepresented, they are underrepresented among executive teams. However, similar to employees, the small percentages make it difficult to draw statistically significant conclusions among gender non-binary, Hispanic/Latinx, LGBTQ+ community members, and those identifying as having a disability.

Chart 3 – Diversity among executives in startups and Baltimore City demographics



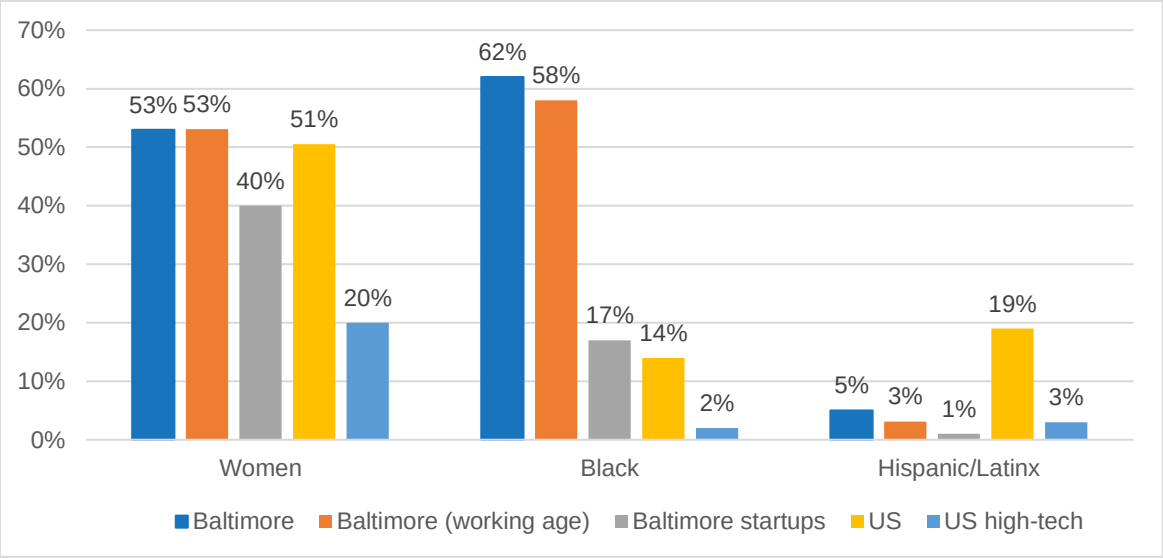
Note: Demographics for Gender non-binary and LGBTQ+ community are national estimates. Working age is defined as 20 to 64.

National Comparison – Executives

How does diversity among leadership in Baltimore City startups compare to national estimates? A special report by the U.S. Equal Employment Opportunity Commission (EEOC) analyzed Equal Employment Opportunity (EEO-1) private sector survey data from 2014 and found that in high-tech industries 20 percent of executives identified as women, two percent identified as Black, and three percent identified as Hispanic/Latinx. This report is nearly a decade old, pointing to the need for more consistent data in this area. However, comparing these estimates to our survey results suggests that Baltimore startups may be more diverse as measured by shares of women executives (40 percent compared to 20 percent) and Black executives (17 percent compared to two percent), but not as measured by Hispanic/Latinx executives (one percent compared to three percent). However, after accounting for the fact that Baltimore City has a lower share of Hispanic/Latinx residents, there does not appear to be a significant difference in representation for this group among

executives. Even after accounting for the fact that Baltimore City has a much higher share of Black residents than the U.S. as a whole, our surveyed startups in Baltimore still seem to be more diverse by this measure than the U.S. high-tech sector.

Chart 4 – Executive diversity in Baltimore and the US



Board Diversity

We asked Baltimore startups if they had a board, the size of their board, and how many board members identified as women, gender non-binary, Black, Hispanic/Latinx, part of the LGBTQ+ community, and having a disability. Overall, 28 startups had boards, eight did not have boards, and two did not respond to the question. As shown in Table VII, among 113 board members at surveyed startups, 14 percent identified as women, 13 percent identified as Black, four percent identified as having a disability, three percent identified as members of the LGBTQ+ community, one percent identified as gender non-binary, and one percent identified as Hispanic/Latinx. The minimum, median, and mode for startups among all demographics was zero percent.

Table 7 – Board diversity

	# of members	Women	Gender non-binary	Black	Hispanic/ Latinx	LGBTQ+	Disabled
# of responses	28	28	27	28	27	23	24
Total #	113	16	1	15	1	3	4
Total %		14%	1%	13%	1%	3%	4%

Tables 8.1 and 8.2 show the percent of startups that had shares of executives in various demographic groups (Tables for all groups can be found in Appendix A). Just 11 percent of startups had boards that were half women or more, while the majority (61 percent) did not have a single woman on their board. As shown in Table 8.2, similarly, a majority of startups (79 percent) did not have a single Black board member. Only 11 percent of startups had boards that were more than half Black and all of those startups had all Black boards.

Table 8.1 – Share of women board members

% of women board members	% of startups
0%	61%
1-33%	18%
34-50%	11%
51-99%	4%
100%	7%

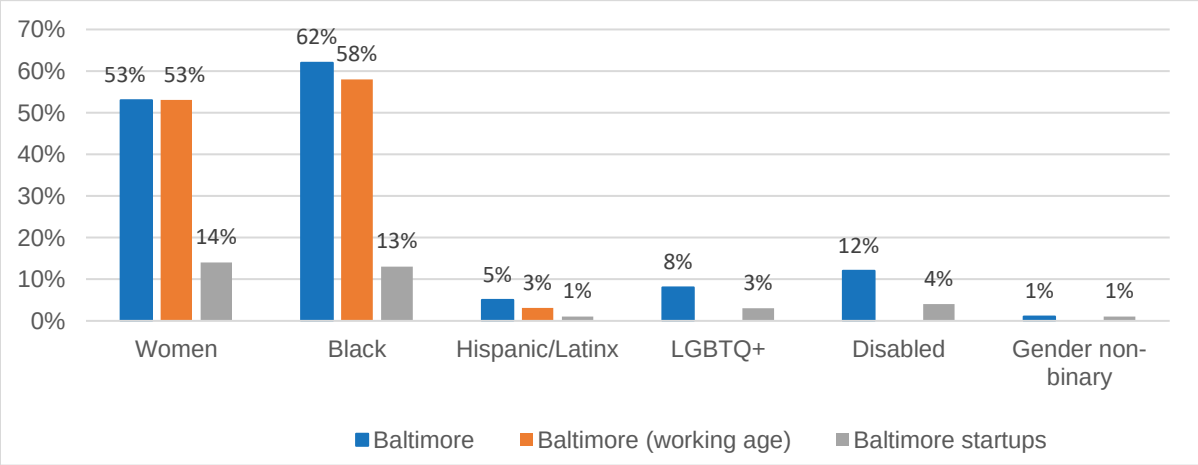
Table 8.2 – Share of Black board members

% of Black board members	% of startups
0%	79%
1-33%	7%
34-50%	4%
51-99%	0%
100%	11%

Baltimore City Comparison – Board Members

Figure V compares diversity among the board members at all surveyed startups and the demographics of Baltimore City. Board members at startups are significantly less diverse than Baltimore City. The share of Black Baltimoreans is almost five times higher than the share of board members who identify as Black in startups, which is also true for board members who identify as Hispanic/Latinx. For women, the share of Baltimoreans is almost four times higher.

Chart 5 – Diversity among board members in startups and Baltimore City demographics



Note: Demographics for Gender non-binary and LGBTQ+ community are national estimates. Working age is defined as 20 to 64.

Recruitment Strategies and Talent Management

The original, long form of the survey asked additional questions about how startups recruit talent. Out of 21 startups that responded to this survey, 19 responded to the question "When recruiting new employees, how do you find them?" Among those respondents, a majority used referrals (74 percent) and job sourcing websites (68 percent), while almost half used search firms (42 percent). Few startups used campus recruiters (16 percent) or job fairs (11 percent).

Table 9 – Talent recruitment methods

Method	% of startups
Referrals	74%
Job sourcing websites	68%
Search firms	42%
Campus recruiters	16%
Job fairs	11%

Note: Percentages are out of 19 respondents.

We also asked startups if they have strategies in place for attracting diverse talent, and, if so, what those strategies were. Among the 19 respondents, 15 (79 percent) had strategies for attracting diverse talent and four said they did not. Among those 15 startups, 68 percent said they networked with diverse organizations, groups, or events. About half said they advertised positions in diverse websites/organizations/forums/networks, utilized networks of their own diverse talent pool, recruited from colleges with diverse student populations, or had paid internships/scholarships or training programs. About a third said they recruited from HBCUs or highlighted diversity as a goal in their job descriptions or website careers page. No startups said they used local chambers of commerce or government agencies.

We asked startups to approximate the share of their employees who were college graduates, HBCU graduates, and Baltimore City residents. Among the 19 respondents, more than half responded that all of their employees were college graduates, with the lowest in the range of 51-60 percent. Over three-quarters of respondents said that at least 91 percent of their employees were college graduates. While many companies have started moving away from degree requirements, it may take some time to see this shift reflected throughout the tech industry. More than two-thirds of the 15 respondents who knew the percent of their employees who graduated from HBCUs said that zero percent had graduated from such an institution. The highest share was in the 11-20 percent range. The median startup had 31-40 percent of their employees residing in the City of Baltimore, but the range was from zero percent to 100 percent with startups in most decile ranges.

Finally, we asked startups if they had a human resources (HR) manager, if they had a formal HR manual with policies, if they had affinity groups, and if they had any initiatives to retain diverse employees. More than two-thirds of the 19 respondents did not have a full time HR manager or equivalent position at their startup. However, slightly less than two-thirds of companies did have a

formal HR manual with policies. Finally, among the 16 startups that knew whether they had any affinity or employee resource groups, only two had such groups.

Open Comments

The original, long form of the survey concluded by allowing space for startups to provide thoughts about DEI. Both forms of the survey asked about challenges startups had in regards to DEI. Seven respondents provided a response to general challenges about DEI focusing on issues around talent, commitment, and ecosystem.

Respondents suggested that startup teams need to be diverse from the beginning, not after the core team is established, to better attract and retain leadership. They also stated that it was difficult to find applicants from Baltimore City, regardless of stating a city residence preference and asking people to relocate. Several responses suggested that industry leaders need to work with the community to create a stronger talent pipeline. Others suggested that DEI as a goal was seen as a competitive disadvantage by some of their startup competitors. There were questions about how, with limited resources, to best prioritize DEI, product development, sales, and cash flow. Respondents identified a segmented economic development ecosystem in the city that was divided between university-based startups, non-university-based startups, non-profits, and traditional small businesses, suggesting that the city would benefit from more overlap and interaction across these segments. Finally, some respondents stated that they were committed to DEI but did not have results to show yet due to either small size or a need for goal accountability.

Discussion and Conclusion

Given Baltimore's robust assets, commitment to leveraging diversity as a strength across sectors, growing innovation ecosystem, and the emerging Equitech vision, the city appears ready to carve a new kind of tech economy, one that elevates and leverages a wide array of diverse talent. The decision to survey the ecosystem and publicly report findings indicates a commitment to transparency and an interest in being held accountable to an ambitious vision. Overall, the survey findings suggest that startups in Baltimore City are more diverse than the national average, but are not yet close to the long-term goal of achieving a level of diversity that reflects that of Baltimore City.

Within Baltimore City startups, the largest gaps existed for Black employees, executives, and board members; companies would need to more than triple the representation of each group to match the diversity of the city. Among employees, representation among those with disabilities would need to almost double to match city-level representation, while there is an 11-percentage point gap for women. Among executives, this gap grows to 13 percentage points for women and there is a large disparity in the number of Hispanic/Latinx executives relative to the city population. Among board members, the largest gap (after Black board members) was for women with 39 percentage points, while the number of Hispanic/Latinx, LGBTQ+ community, and disability community would all need to triple to match their representation in the city. Across all surveyed startups, employees were more diverse than executives, and executives were more diverse than boards. This suggests that positions of higher power among startups are less diverse and have more work to do to increase diversity than at the employee level. This is crucial because startups that have more diversity in their leadership also tend to have more diversity among their employees.

However, when diversity among Baltimore City startups is compared to estimates of diversity among U.S. startups, startups in Baltimore are more diverse than the national average. Surveyed startups in Baltimore had more than twice the share of Black employees than the national average at startups and had a share of women employees that was seven percentage points higher. Baltimore had slightly fewer Hispanic/Latinx employees than the national average, but Baltimore's Hispanic/Latinx population is around a quarter of the share of the national average (5 percent in Baltimore compared to 19 percent nationally). Among executives, Baltimore startups had twice the share of women than the national average, and a significantly higher share of Black startups than the national average (17 percent compared to two percent nationally). As such, Baltimore City has a much more diverse startup ecosystem than the national average.

We found that startups with more diverse executives also tended to have more diverse employees. Startups with higher shares of Black executives and women executives tended to have more employees that are Black and women. This finding suggests that if Baltimore is able to increase the diversity of startup founders and executives, this will lead to a more diverse employee base.

Implications for Policy and Practice

The time is right for Baltimore to achieve its vision of being the first Equitech City, but to dismantle structural inequity requires intentional systematic action for deep change. The Baltimore tech sector is not an island; it is located in a multi-sector context of public, private, and social systems that together have long determined the legal, financial, and social norms of business. By demonstrating that diversity fuels sustainable value creation and scalable wealth, the Baltimore tech sector can be a catalyst for equity in Baltimore's entire business and economic ecosystem.

Baltimore has been making progress towards its Equitech aspirations, but findings of the survey document the need for more aggressive action, especially in public sector commitments to removing barriers for the current generation of Baltimore's Black entrepreneurs and investing in the material and social infrastructure needed to grow Baltimore's next generation of Black startup talent. It should be acknowledged Baltimore has dealt with a confluence of challenges that have placed heavy burdens on city leaders and local communities over the past several years: Freddie Gray's death and the aftermath of ineffectual policing and rising crime; corrupt city government officials; COVID and the aftermath of disruption for business, work, and family life; and the state's failure to invest in Baltimore. Each of these individual crises required the city's full attention and response; collectively they slowed or thwarted progress on countless initiatives or ideas, including the Equitech ideals, that were not considered as urgent.

The diversity of Baltimore's tech startup sector, while not yet at parity, reflects its resilience in learning and rebounding from challenges. Baltimore business leadership is visibly more diverse in every sector of Baltimore's economy. Each year, for example, more of the Baltimore Business Journal's "Forty Under Forty" and "People on the Move" are Black, Brown, and female. Ready to accelerate the trajectory of equity with a vision to "leave no one behind," Maryland's first Black governor and first woman comptroller have already taken steps to reinvest in Baltimore education, transit, neighborhood revitalization, and business development initiatives.

Knowledge and transparency. The private sector's formation and support of UpSurge Baltimore, and the study findings demonstrate a proactive will among business and tech sector leaders to map

the local ecosystem, examine their own constituents, identify equity issues and barriers, and work to increase diversity in the sector. *Tech sector leaders should continue to expand data collection efforts and communicate findings widely among tech sector stakeholders. Leaders should build on data collection and communication and convene stakeholders to collaborate in developing an Equitech Plan for Baltimore to cultivate a shared understanding of equity concerns and failures, equity standards, norms, and tools for business development and practice with goals, timelines, and benchmarks for achieving equity in the tech sector.*

The tech sector talent pool*.* The study raises troubling questions about the tech sector talent pool. It is unclear whether the parity failure is due to lack of available local New Majority talent or failure to recruit or recognize the quality of local talent. *Tech and public sector leaders should focus on human talent and include a high proportion of diverse tech workers and entrepreneurs in developing the Equitech Plan for Baltimore. There should also be a strong focus on addressing the low awareness of opportunities in the tech sector that do not require advanced degrees or highly technical skills and on improving social networks that connect to the industry.*

Through history, legal declarations of equality do not automatically create conditions of race, gender, and economic equity. Civil rights legislation has not guaranteed civil rights in practice. While Baltimore's progressive business community applauds diversity, equity, and inclusion, the work of recognizing and eliminating the legacy of structural barriers that impede equity in Baltimore and across this country is systematic, ongoing, and disruptive. Many business leaders are not equipped with the knowledge or tools to do this work, however much they may express a desire to do so effectively. Nationally, corporate and tech leaders are struggling with this challenge and its implications for "business as usual." Building ladders to equity for Baltimore's tech ecosystem is a multi-sector undertaking that hinges on several variables beyond the purview of the Baltimore tech sector.

Baltimore City poverty. The history and continuing effects of white flight and redlining are evident across Baltimore City and tech can be part of the solution if Baltimore can develop a truly inclusive tech economy. It is ethically unacceptable and economically unnecessary for racialized poverty to dominate the economic geography of Baltimore City when it is situated in a wealthy metropolitan economy – with thriving entrepreneurial business, tech, and finance sectors – and part of a state that is home to more millionaires than any other state in the country. Having abandoned Baltimore economically at critical junctures in its history, Maryland shares responsibility for regenerating its entrepreneurial and small business ecosystem. *Through the Equitech Plan for Baltimore, the local tech sector should align with and elevate the stated goals of Baltimore City's Comprehensive Economic Development Strategy, Baltimore Together, to urge Maryland, Greater Baltimore, and Baltimore City public sector, business, and civic leaders to eliminate racialized and gendered poverty. This alignment should include goals, benchmarks, and timelines to promote and achieve economic equity.*

Strategies for a culture of equity*.* Maryland's wealth is anchored in a foundation of abundant academic, technical, and institutional resources and human ingenuity that were, for much of its history, inequitably appropriated and capitalized. There is a significant gap between the economy of many of the city's segregated neighborhoods and the 21st century economy that holds back the city and its residents. A culture of economic equity is determined by many interconnected factors that enable people to develop their capabilities for productive lives. *Through the Equitech Plan for Baltimore, Baltimore Together, and concerted support from state and federal partners and other private and nonprofit stakeholders, Baltimore must focus strategies to achieve equity in:*

- *Healthy habitat: Stewardship and integration of the built environment in harmony with human wellbeing and natural ecosystems*
- *Healthy people: Adequate material, emotional, and social sources of nurture, care, and repair*

- *Resilient communities: Supportive infrastructure of welcoming places and groups that foster interpersonal connections and prosocial behavior*
- *Empowered citizenship: Social infrastructure for exercising civic responsibility and shared power for constructive action*
- *Inclusive prosperity: Education for economic competence, robust investment in public/social goods, and innovative business and capitalization models to enhance undervalued assets*

Suggestions for Further Inquiry and Research

This survey is intended to serve as a baseline report on diversity among Baltimore's startup ecosystem and build on previous work by organizations such as Baltimore Tracks. Our survey was only able to provide an estimate of diversity and there was likely some level of response bias in who responded to the survey. Ideally, the universe of businesses would report data on employee diversity to the federal government and make de-identified data available to researchers to analyze, similar to Census Bureau restricted-use data that can be accessed by qualified researchers. To achieve this, the federal government could expand reporting requirements of Equal Employment Opportunity Compliance data to smaller companies (currently only required of companies with 100 employees or more) and create a process where this data could be shared or reported at the county level on an annual basis to track change over time. In addition, given the vital role of tech ecosystems in the country's economic growth, the EEOC could produce more frequent reports on sector-specific data, by region, to include diversity at startups. Such count data would provide a more accurate picture of diversity at startups. More work needs to be done to identify policy barriers that may be holding new majority entrepreneurs back, such as the recent evaluation of the state's Minority Business Enterprise program.

In addition to enhanced data collection, more research is needed on identifying barriers to increasing diversity among startups and exploring opportunities and promising models for diverse ecosystem supports. Qualitative research through targeted focus groups and interviews with startup leaders, employees, and entrepreneurs could help uncover some of this information and identify support structures and incentives needed to increase diversity, and foster a local culture of transparency to advance progress. Creating a culture measuring progress, reporting data, and holding each other accountable could lead to increased participation by startups in this work.

Appendix A

Table 1 – Percent of startups by share of employees by demographic group

Share of all employees	Women	Gender non-binary	Black	Hispanic/ Latinx	LGBTQ+	Disabled
0%	14%	72%	44%	68%	44%	59%
1-33%	40%	24%	44%	32%	53%	41%
34-50%	20%	0%	6%	0%	0%	0%
51-99%	20%	0%	0%	0%	0%	0%
100%	6%	3%	6%	0%	3%	0%

Table 2 – Percent of startups by share of executives by demographic group

Share of all executives	Women	Gender non-binary	Black	Hispanic/ Latinx	LGBTQ+	Disabled
0%	36%	92%	63%	95%	80%	76%
1-33%	17%	5%	13%	5%	17%	15%
34-50%	31%	3%	16%	0%	3%	9%
51-99%	8%	0%	0%	0%	0%	0%
100%	8%	0%	8%	0%	0%	0%

Table 3 – Percent of startups by share of board members by demographic group

Share of all board members	Women	Gender non-binary	Black	Hispanic/ Latinx	LGBTQ+	Disabled
0%	61%	96%	79%	96%	87%	83%
1-33%	18%	4%	7%	4%	9%	13%
34-50%	11%	0%	4%	0%	4%	4%
51-99%	4%	0%	0%	0%	0%	0%
100%	7%	0%	11%	0%	0%	0%