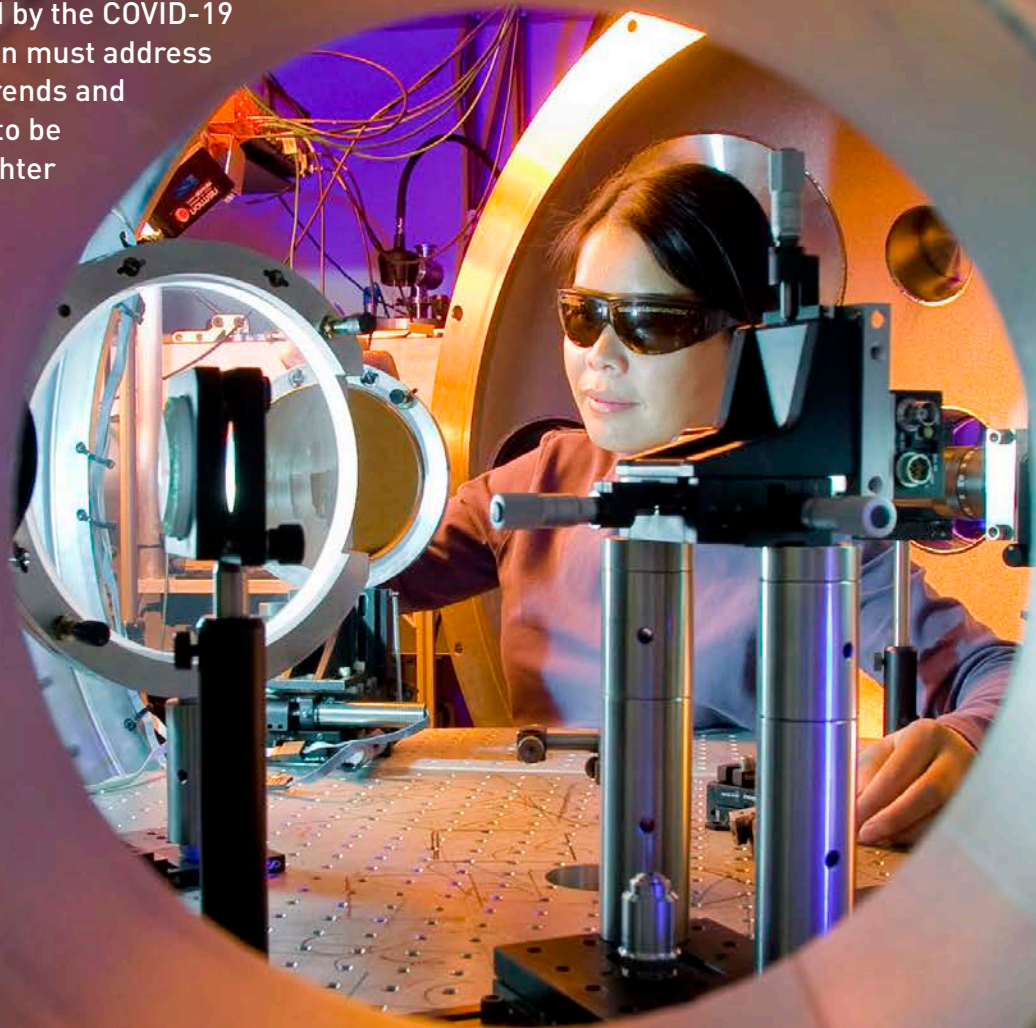


III.

## THE EVOLVING EAST BAY

With over 1.3 million jobs in the region pre-pandemic, the East Bay has a large and robust economy. However, like the rest of the global economy, the East Bay has been significantly disrupted by the COVID-19 pandemic. Ultimately, our region must address both accelerated pre-existing trends and new post-pandemic conditions to be able to realize a better and brighter economic future.



Public and private investment must focus on dismantling structural barriers and creating opportunities for long-term and systemic solutions; it is imperative that we do more than promote incremental change.

Anti-matter experiment at the Jupiter laser facility. Courtesy of Lawrence Livermore National Laboratory.

This section captures the trajectory the economy was on before the pandemic and then identifies the areas in which the pandemic had the greatest impacts. To some extent, these impacts merely accelerated trends that were already in motion. In other cases, the pandemic created changes in the economic climate that must be acknowledged. Ultimately, the East Bay Forward initiative must address both accelerated pre-existing trends and new post-pandemic conditions.

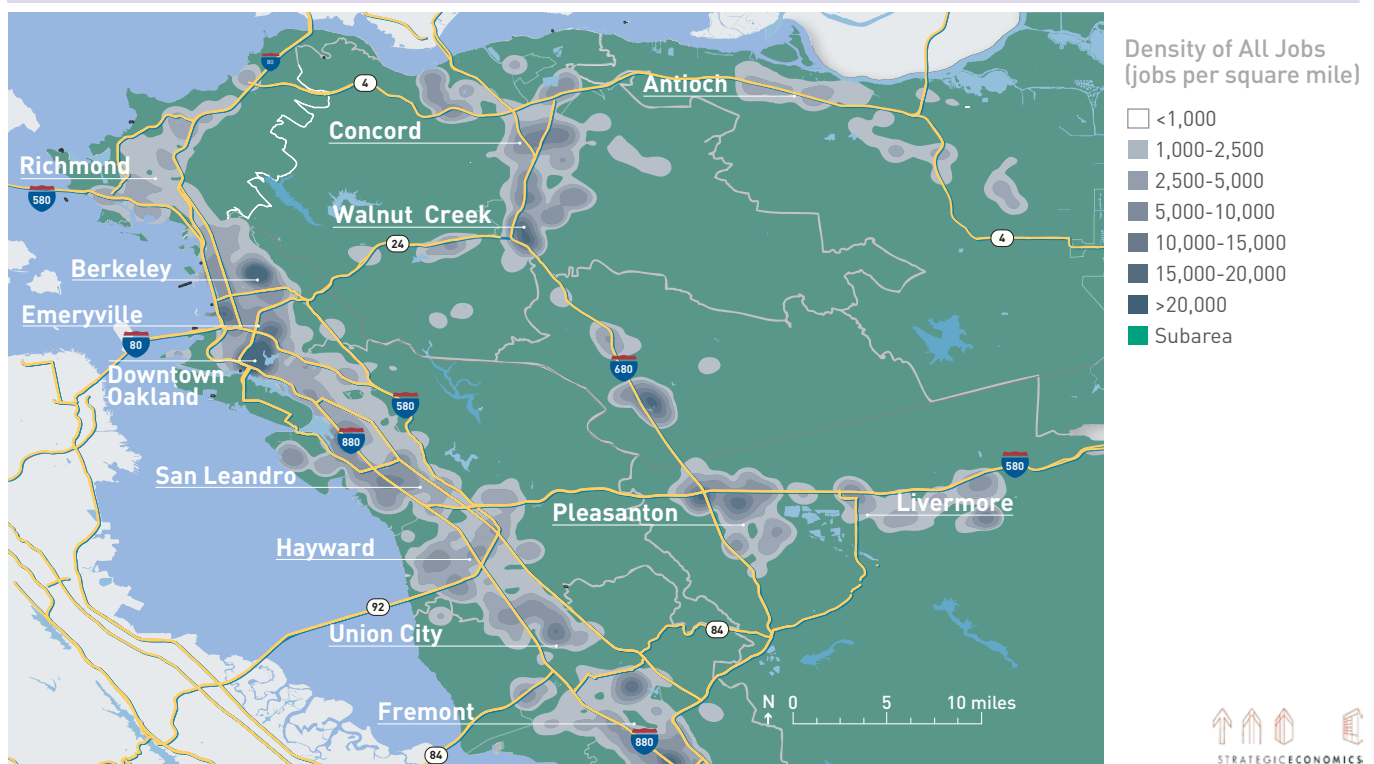
This section combines inputs from three key sources: 1) an extensive review of the many background reports regarding the East Bay's economy; 2) input from the East Bay Forward Strategic Advisory Committee, four focus group meetings, and follow-up interviews with local topic area experts; and 3) original data analyses undertaken so that the quantitative data presented in this report specifically reflects the topics, issues, and concerns raised by the Strategic Advisory Committee and other East Bay stakeholders.

Based on the data analyses and extensive stakeholder input, the information below is divided into three topic areas.

- The first topic characterizes the region's pre-pandemic economy, concentrating on trends from the five years leading up to the pandemic (2014 to 2019). The analysis is quantitative and relies on standard measures to describe the region's economy including total employment growth, sectoral mix and changes in sectoral composition, industry specialization, and growth rate by industry.
- The second topic is an analysis of the East Bay's pre-pandemic workforce. This section focuses on specific workforce challenges that existed prior to the pandemic in terms of education and skills gaps and access to livable jobs.
- The third topic then discusses the specific impacts COVID-19 had on the East Bay economy.

**FIGURE 3**

### East Bay Jobs per Square Mile, 2018



- The final section ends with findings on the ways in which the pandemic has both accelerated trends already underway, as well as the transformational changes brought up by the pandemic.

The East Bay is more than just an economy. It is also place composed of many communities. Figure 3 provides a spatial backdrop for understanding how jobs are distributed across the region. Jobs are not distributed equally across the two East Bay counties. Northern Alameda has the strongest concentration of jobs, as Downtown Oakland, Berkeley, and Emeryville constitute a large share of regional employment. The Interstate 880 corridor, which connects Downtown Oakland to San Jose through Alameda County, also has sizeable job concentrations throughout. Communities with strong job concentrations along this corridor include Fremont, Union City, Hayward, and San Leandro. Within the Tri-Valley, most jobs are concentrated either at the intersection of Interstates 580 and 680 in Dublin and Pleasanton (both of which are in Alameda County). There are also job concentrations along Interstate 580 in Livermore (Alameda County) and along Interstate 680 in San Ramon (Contra Costa County), which is where Bishop Ranch is located. Walnut Creek and Concord, which are in Central Contra Costa, also have strong job concentrations. The Western and Eastern Contra Costa subar-

reas have the lowest number of jobs in the East Bay. Richmond (Western Contra Costa) as well as Antioch and Pittsburg (in Eastern Contra Costa) have the strongest job concentrations in these subareas, though they are not particularly large compared to concentrations in the other subareas.

The spatial employment pattern is critical for understanding the East Bay region for two reasons: 1) It shows that the East Bay is also part of the larger Bay Area. Communities that are closer to and better connected with the rest of the Bay Area have historically represented the greatest economic opportunity. 2) It sets the stage for understanding how each subarea within the East Bay has been impacted by the pandemic, and what opportunities exist to strengthen each subarea's employment base in the future. Profiles of the region's seven subareas can be found in [Section VII](#).

## PRE-PANDEMIC ECONOMIC TRENDS

The following data captures the key elements of the East Bay economy as defined by jobs, sectoral mix, industry growth rates and economic specialization. In this analysis, the spatial differences within the East Bay were captured by comparing the two counties to each other. Specific implications for individual subareas can be further inferred based on the subarea profiles.

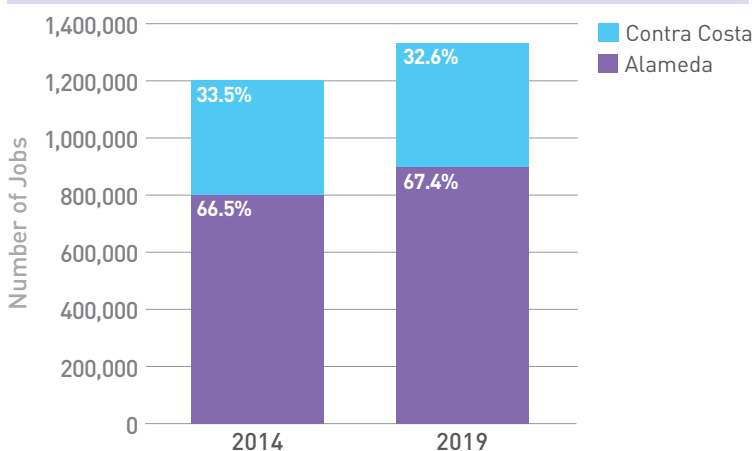
**The East Bay economy grew at a rate that was nearly on par with the Bay Area, although the growth was disproportionate by county.**

Total jobs in the East Bay grew (1.3 million) 11 percent from 2014 to 2019. However, Alameda County grew by 12 percent, which is on par with the Bay Area's growth over this same period, while Contra Costa County only grew by eight percent. This illustrates an increasing divergence in economic activity across the two counties (See Figure 4).

**Overall, the East Bay economy is diverse.** Figure 5 shows the East Bay's 2019 employment by industry using 2-digit NAICS codes. Four of

**FIGURE 4**

### East Bay Jobs by County, 2014 and 2019



Source: EMSI, 2021; Strategic Economics, 2021.



the largest individual sectors all fall into the household-serving industry group (“Health Care and Social Assistance,” 14 percent; Public Administration, 13 percent; Retail Trade, 9 percent; “Accommodation and Food Service,” 8 percent). These four sectors accounted for 44 percent of total East Bay employment. The largest basic or “traded” sectors include Professional and Technical Services (9 percent) and Manufacturing (8 percent). In total, the region’s traded sectors comprised about 30 percent of total jobs in 2019. The proportional share between household serving and traded industries is about on par with the way most diversified economies are structured. However, these numbers are not necessarily the best description of the East Bay’s overall economic strengths partly because some industries,

including Information (2 percent), account for a relatively small share of total employment, but have been growing and/or represent a strong East Bay concentration. Other sectors, such as those typically associated with the life sciences and biotech industries, are distributed across multiple NAICS classifications, and will therefore not stand out in a high-level sectoral analysis such as this. Other analytical methods have been used to highlight these East Bay economic strengths and will be discussed below.

### **The East Bay’s recent employment growth varied considerably by industry sector.**

Figure 6 shows percent changes in employment growth over the 2014-2019 period by industry for the East Bay and for the Bay Area. The Manufacturing industry had the greatest employment growth relative to the Bay Area, growing by 20 percent in five years compared to 13 percent in the region. Although the Tesla plant in Fremont accounted for a significant share of the East Bay’s overall increase, other industry sub-sectors including food processing and biomedical devices also grew quickly. This overall trend suggests that the East Bay’s legacy as a manufacturing hub for the Bay Area persists, while many of the processes and products involved represent the latest in advanced manufacturing techniques.

**Alameda and Contra Costa counties are distinct from each other based on both their industry mix in 2019 and their five-year employment growth by industry.** Figure 6 shows industry employment as a share of total employment in each county. Alameda County has a higher share of jobs in traded sectors, with concentrations of jobs in Manufacturing and Logistics (which includes many subsectors in Wholesale Trade and “Transportation and Warehousing”). Alameda County has a higher share of jobs in Professional Services and Information, both of which include many subsectors that fall in the “Creative Technology and Design” category. Alameda County also has a higher share of jobs in the Biomedical cluster, which is difficult to track with NAICS codes but tends to fall into Manufacturing and Professional Services.

**FIGURE 5**

#### **East Bay Jobs by Industry Sector, 2019**

Industry	Number of Jobs	Share of Jobs
Health Care and Social Assistance	185,148	14%
Public Administration	170,825	13%
Professional and Technical Services	121,258	9%
Retail Trade	118,780	9%
Accommodation and Food Services	105,011	8%
Manufacturing	102,590	8%
Construction	91,502	7%
Other Services	78,123	6%
Administrative and Waste Services	76,604	6%
Wholesale Trade	46,400	3%
Transportation and Warehousing	45,591	3%
Finance and Insurance	42,896	3%
Educational Services	33,397	3%
Information	29,950	2%
Arts, Entertainment, and Recreation	26,702	2%
Management of Companies and Enterprises	25,596	2%
Real Estate and Rental and Leasing	24,092	2%
Utilities	5,635	0.4%
Agriculture, Forestry, Fishing & Hunting (a)	1,750	0.1%
Mining (a)	221	0.02%
<b>TOTAL</b>	<b>1,332,072</b>	<b>100%</b>

Notes: (a) These two sectors account for a very small share of employment in the East Bay, and are not analyzed further in this report.

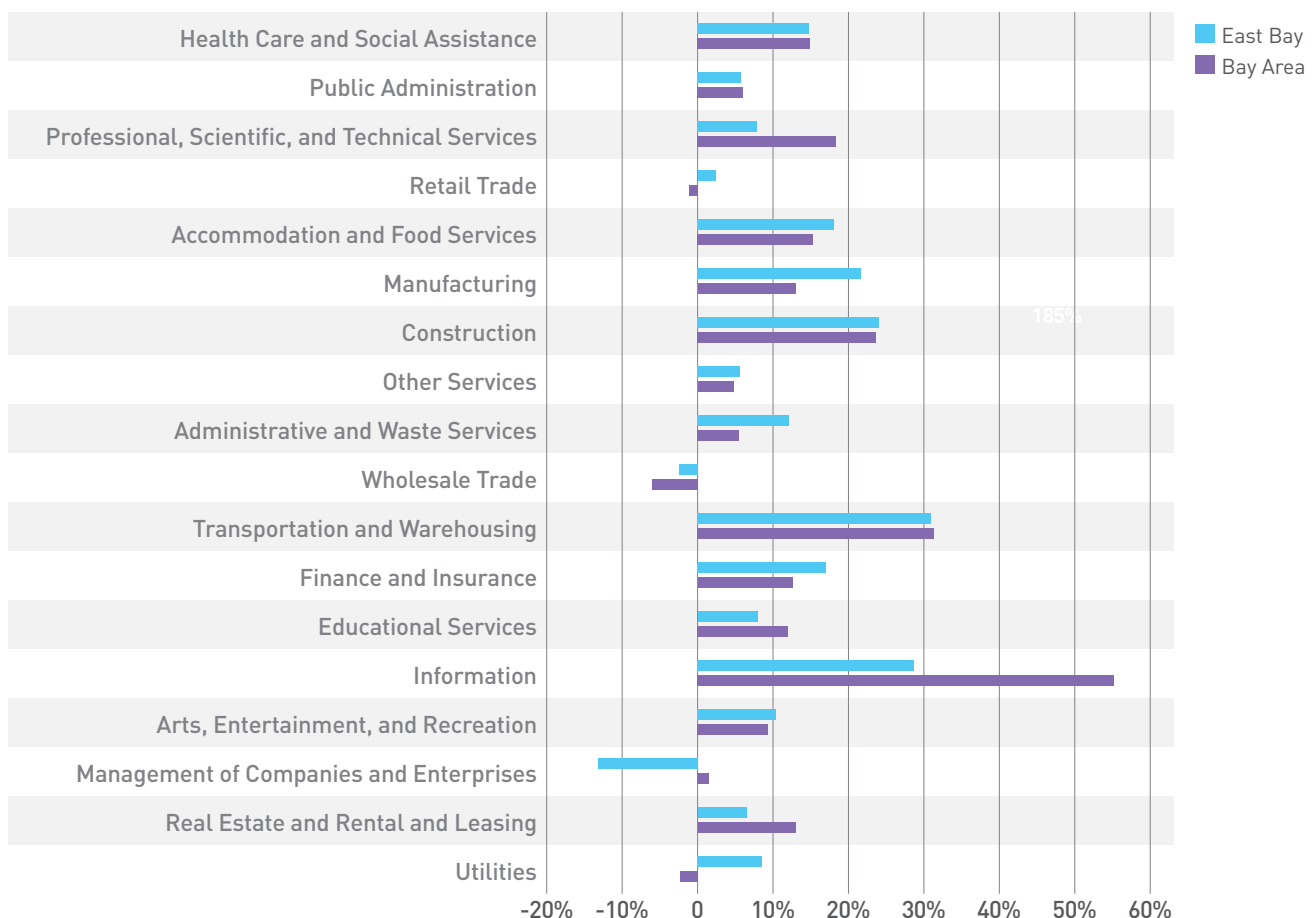
Source: EMSI, 2021; Strategic Economics, 2021.

In contrast, household-serving sectors such as “Accommodation and Food Services,” Health Care, “Other Services,” and Retail Trade, account for a greater share of jobs in Contra Costa County. These sectors tend to constitute larger shares of employment in places that are predominantly residential. Contra Costa County also has a higher share of jobs in office-based sectors that are household-serving in the East Bay context. The Central Contra Costa subarea has a large proportion of the East Bay’s “Finance and Insurance” jobs, while the county generally has a higher share of jobs in the real estate sector. Additionally, a large number of the region’s Utilities jobs are attributed to the Eastern Contra Costa subarea because of the presence of Pacific Gas & Electric.

Figure 7 shows the employment growth by industry sector in each county from 2014 to 2019. In Alameda County, most of the sectors that are driving economic growth also expanded their workforce from 2014 to 2019. Professional Services, Manufacturing, and Information all grew by at least 10 percent in terms of employees over the period.

The “Transportation and Warehousing” sector also had strong employment growth in both counties, as the rise in Ecommerce has driven employment demand in distribution centers and other logistics facilities.

Household-serving sectors, including Healthcare, “Accommodation and Food Services,” and Construction also had strong employment growth in both counties. Growth in these sectors is closely intertwined with household growth.

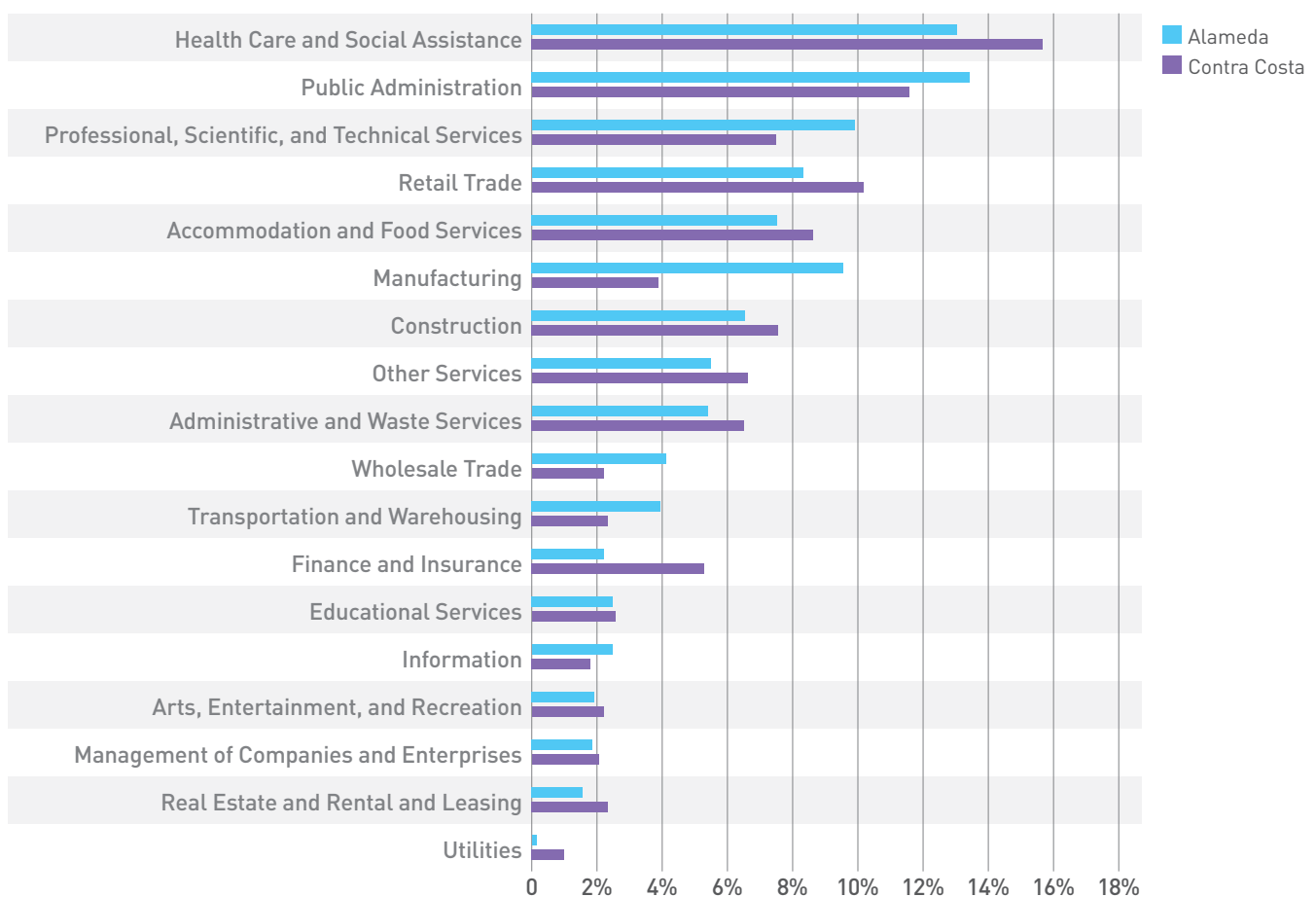
**FIGURE 6**
**Rate of Job Growth by Industry Sector in the East Bay and Bay Area, 2014 to 2019**


Source: EMSI, 2021; Strategic Economics, 2021.

**The East Bay economy has many unique industry specializations when compared to the Bay Area economy.** “Economic specialization” is another way to evaluate the East Bay’s economic strengths. The “location quotient” measure is a ratio used to indicate when an industry in the East Bay has a higher share of jobs than would be expected when compared against the Bay Area as a whole.<sup>2</sup> As shown in Figure 9, East Bay industries with a location quotient greater than “one” represent greater economic specialization in the East Bay than in the Bay Area overall.

The East Bay has multiple sectors with a location quotient of greater than “one.” Many of these sectors are in household-serving indus-

tries, including “Health Care and Social Assistance,” Public Administration, Retail Trade, and “Arts, Entertainment, and Recreation.” Household-serving industries are typically tied to population growth and have a low “multiplier effect” in terms of driving additional spending and generating increases in overall income within the region. However, because household-serving industries are more concentrated in the East Bay than in the Bay Area, this indicates that these industries are likely not just serving the East Bay’s resident population but are also drawing activity from a larger area beyond the two-county region. This likely reflects how well the East Bay is physically connected both to other Bay Area counties and to the 21-county megaregion that extends both east and north

**FIGURE 7**
**Industry Employment as Share of Total Employment in Alameda and Contra Costa counties, 2019**


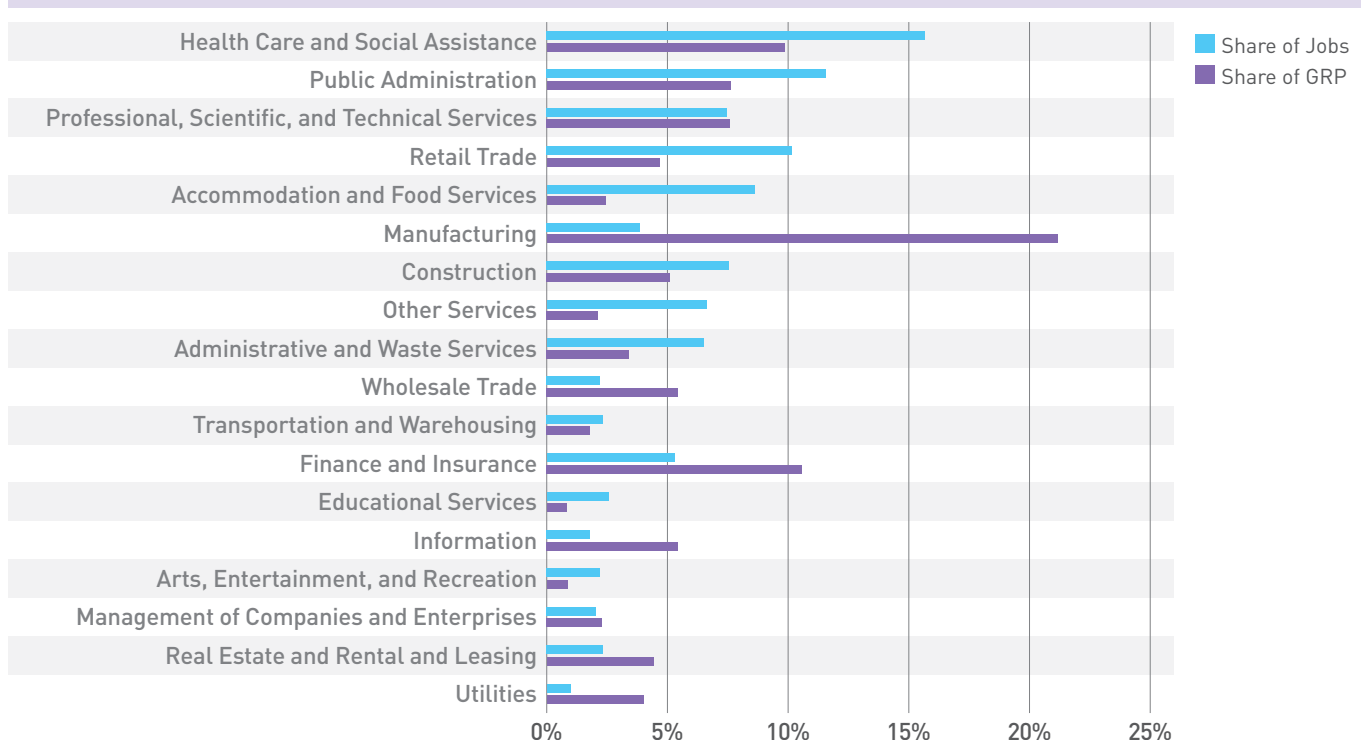
Source: EMSI, 2021; Strategic Economics, 2021.

2 The location quotient is calculated by dividing the share of an industry’s employment in the East Bay by the share of that industry’s employment in the Bay Area.

via Interstate 880, BART, and the four bridges connecting the East Bay to the West, North, and South Bay households and workforce.

The East Bay also has specializations in certain traded sectors that differentiate the East Bay's strengths from those of the Bay Area's overall economy. Such sectors include Wholesale Trade and "Transportation and Warehousing," which are both tied to the Port of Oakland (including the major container terminals in Oakland, and Oakland International Airport), as well as the Port of Richmond, a bulk cargo port. Other sectors concentrated in the East Bay are Construction, "Administrative and Waste Services," and Utilities; these sectors represent a combination of traded and non-traded activities. However, small emerging industries that are becoming increasingly important in the East Bay are likely to have relatively low location quotients, illustrating the importance of using multiple measures to understand the East Bay's economic strengths.

**Gross Regional Product (GRP) is another measure of which industries are contributing to the East Bay Economy.** The East Bay's total GRP amounts to \$209.3 billion, with Alameda County accounting for 64% of this activity and Contra Costa County making up 36% of this total. Certain traded sectors play an outsized role in generating economic growth (i.e., dollars moving through the economy, as compared to their share of employment). This comparison between GRP and employment by industry is especially illuminating for industries like Manufacturing, where automation and other industry changes generate faster growth in economic output relative to jobs. As Figures 10 and 11 show, Manufacturing plays an important role as an economic driver for the East Bay. Additionally, Professional Services, Information, and "Finance and Insurance" sectors are contributing substantial economic output, particularly in Alameda County.

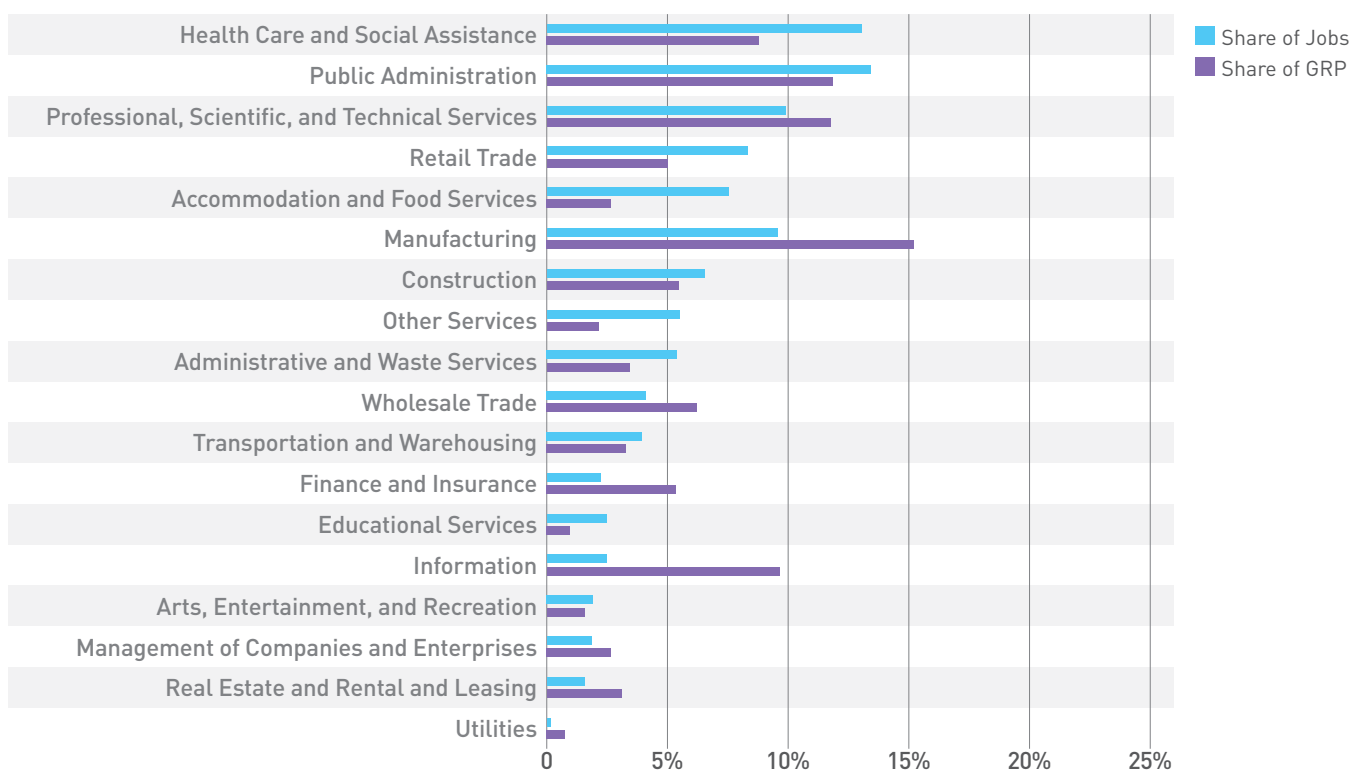
**FIGURE 8****Employment Growth by County and Industry Sector, 2014 to 2019**

Source: EMSI, 2021; Strategic Economics, 2021. See Appendix for full GRP detail.

**FIGURE 9****Concentration of East Bay Industry Sector Employment in East Bay, Compared to Bay Area, 2019  
(Displayed as Location Quotients)**

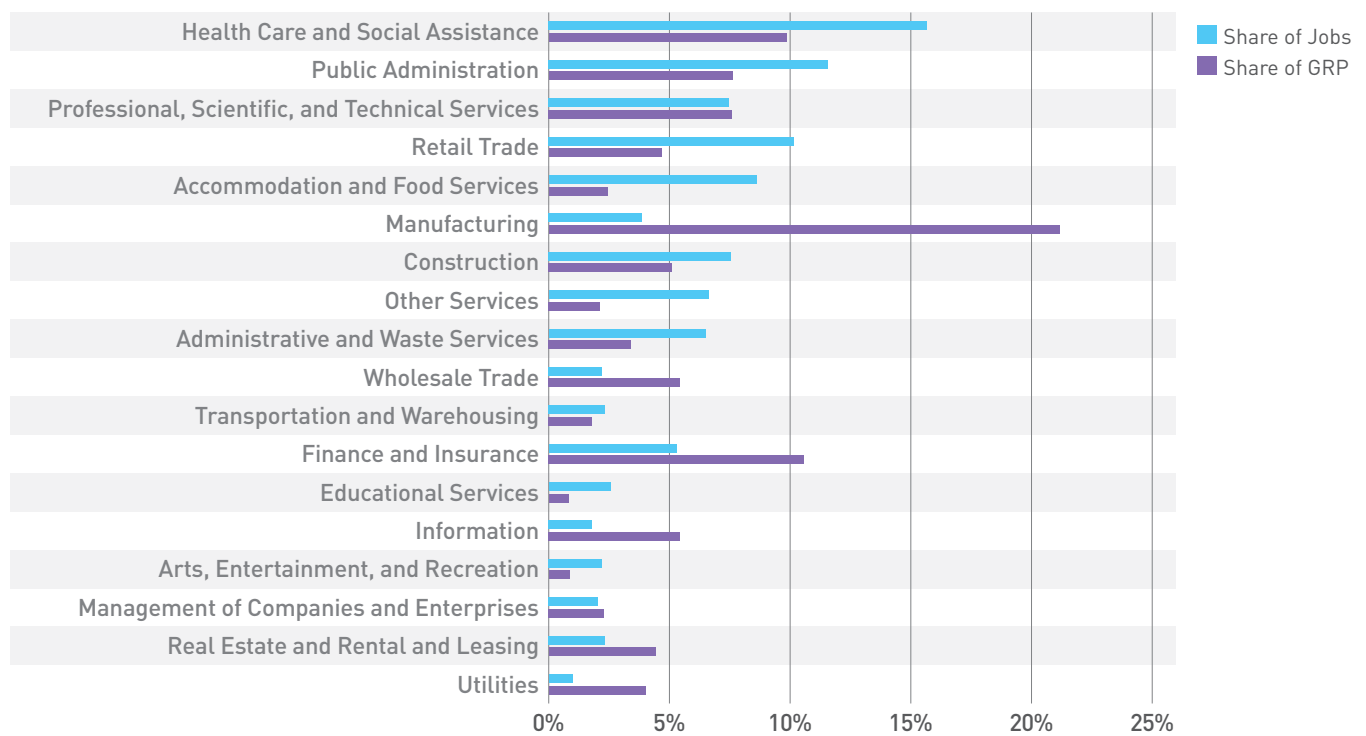
Industry	Number of Jobs	Location Quotient
Health Care and Social Assistance	185,148	1.23
Public Administration	170,825	1.19
Professional and Technical Services	121,258	0.70
Retail Trade	118,780	1.19
Accommodation and Food Services	105,011	0.94
Manufacturing	102,590	0.97
Construction	91,502	1.28
Other Services	78,123	0.93
Administrative and Waste Services	76,604	1.07
Wholesale Trade	46,400	1.32
Transportation and Warehousing	45,591	1.20
Finance and Insurance	42,896	0.94
Educational Services	33,397	0.77
Information	29,950	0.39
Arts, Entertainment, and Recreation	26,702	1.08
Management of Companies and Enterprises	25,596	1.10
Real Estate and Rental and Leasing	24,092	0.96
Utilities	5,635	1.37
<b>Total</b>	<b>1,332,072</b>	

Source: EMSI, 2021; Strategic Economics, 2021.

**FIGURE 10****Alameda County: Share of Jobs and Gross Regional Product by Sector, 2019**

Source: EMSI, 2021; Strategic Economics, 2021. See Appendix for full GRP detail.



**FIGURE 11****Contra Costa County: Share of Jobs and Gross Regional Product by Sector, 2019**

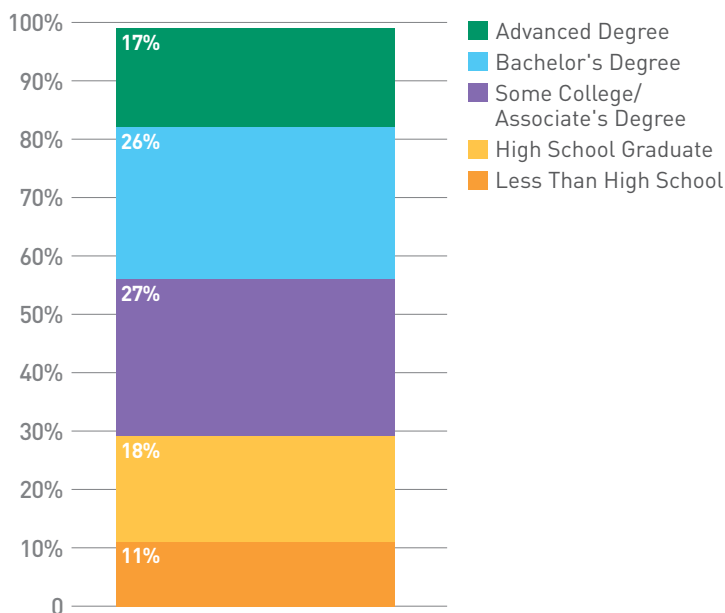
Source: EMSI, 2021; Strategic Economics, 2021. See Appendix for full GRP detail.

## THE EAST BAY'S PRE-PANDEMIC WORKFORCE

The East Bay economy can only thrive if its residents are well-prepared for and able to access high-quality jobs—especially since 60 percent of the East Bay's workers also live within Alameda and Contra Costa Counties. East Bay Forward analyzed specific pre-pandemic workforce issues in response to stakeholder input gathered through focus groups and Strategic Advisory Committee meetings. This section describes the results of those analyses, with a focus on: 1) levels of educational attainment and how this workforce characteristic varies by race and ethnicity, by wages, and by subarea; 2) availability of middle-wage jobs that provide a livable wage with relatively low barriers to entry; and 3) discussion of housing cost and commute challenges faced by some East Bay workers.

**FIGURE 12**

### East Bay Educational Attainment for People age 25 and Over, 2015-2019 Estimate



Source: American Community Survey 5-year Estimates, 2015-2019; Strategic Economics, 2021.

## Education and Wages

**Significant educational attainment disparities exist in the East Bay.** Figure 12 shows the educational attainment distribution for all people ages 25 and older in the East Bay. Approximately 42 percent of people have at least a bachelor's degree, while 27 percent have some college<sup>3</sup> and 29 percent have a high school diploma or less. However, educational attainment varies significantly by race and ethnicity, as shown in Figure 13. While only 17 percent of white workers have a high school diploma or less, 23 percent of Asian or Pacific Islanders, 32 percent of Black, and 57 percent of Latino workers have a high school diploma or less. Conversely, a significant proportion of whites and Asians or Pacific Islanders have a bachelor's degree or higher, compared to relatively low shares of other groups.

**These education disparities create significant obstacles for many of the East Bay's residents to access stable, high-quality jobs—an issue that will continue to worsen as automation increases the skills required to access better-paid jobs.** High educational attainment is increasingly a prerequisite for stable, high-quality employment in both the Bay Area and the East Bay. Stable jobs are those that are resilient to automation, provide living wages, and have growing employment. Only 12 percent of jobs in the Bay Area requiring a high school diploma are considered stable in the long-term compared to 83 percent that require bachelor's degrees.<sup>4</sup> Workers of color, who account for 60 percent of the workforce in the Bay Area, are overrepresented in lower-paying and lower-opportunity occupational groups, while white workers are overrepresented in higher-paying jobs. For example, while Latino workers comprise 22 percent of the Bay Area workforce, they account for 55 percent of employees in construction, but just seven percent in archi-

3 Includes people who have received two-year Associate's degrees and people who attended college but did not complete a degree program.

4 Abby Langston, et al. "Advancing Workforce Equity in the Bay Area: A Blueprint for Action," Bay Area Equity Network, 2021.

texture and engineering. Black workers, who represent six percent of the workforce, account for less than two percent of workers in architecture and engineering, but 11 percent in transportation and material moving.<sup>5</sup>

**Racial income disparities are also a long-standing challenge, with white workers in the Bay Area earning higher incomes compared to workers of color at the same educational attainment levels.** Asian and Pacific Islander workers with a bachelor's degree or higher earn comparable wages as white workers. However, the difference in median wages is particularly stark for Black and Latino workers compared to white workers with the same educational attainment. Figure 14 shows a snapshot of median hourly wages for workers by race/ethnicity with high school degrees and with bachelor's degrees or higher.

**Geographic disparities in educational attainment within the East Bay indicate communities with greater vulnerability to economic instability—and opportunities to target resources.** Figure 15 shows East Bay ZIP codes by their share of people 25 and older with “some college or less.” This map indicates places with a large share of economically vulnerable households due to low levels of educational attainment. These ZIP codes are concentrated in the Eastern Contra Costa, Western Contra Costa, and Central Alameda subareas, as well as certain neighborhoods in East and West Oakland. These areas represent opportunities to geographically prioritize place-based workforce development strategies.

## Middle-Wage Job Opportunities and Access

Improving both the access to and the supply of middle-wage jobs has been identified as high priority by the East Bay workforce development community. These jobs tend to have lower barriers to entry than high-wage jobs while

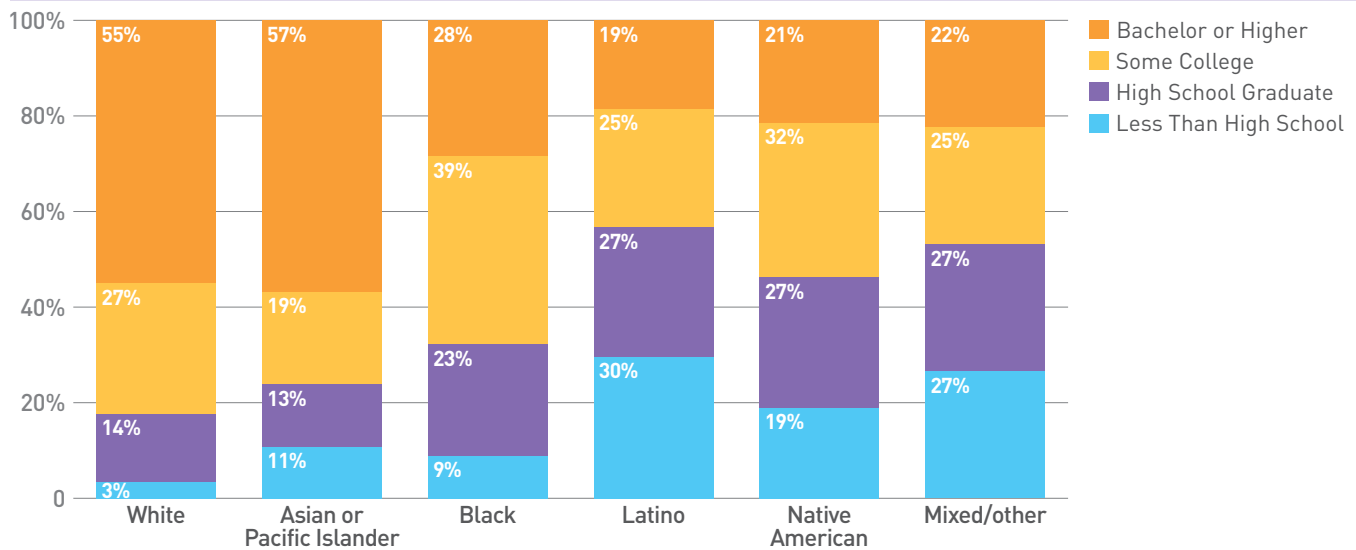
providing security and stable wages. Middle-wage jobs, for the purpose of this discussion, are defined as jobs with annual wages between \$50,000 and \$75,000.<sup>6</sup>

**The share of middle-wage, middle-skill jobs continues to decline as the composition of the U.S. and Bay Area economies shift toward service jobs requiring either high or low educational attainment.** Jobs in the Bay Area today are increasingly bifurcated, as the shares of both high-wage and low-wage jobs have risen. As the number of high-wage jobs in most traded sectors has grown, demand for jobs in household-serving sectors has grown as well. Household-serving sectors, such as Food Service, Accommodations, Retail, and Personal Services are dominated by low-wage jobs, while also representing a significant proportion of East Bay jobs. Low-wage jobs tend to be lower-quality because salaries are too low to adequately support workers and their families, and many of these jobs do not offer benefits. Figure 16 shows projected job openings in the East Bay from 2018 to 2028 by wage level and educational requirements. While middle-wage jobs are generally accessible to workers with lower levels of educational attainment, there are three-times more low-wage openings than middle-wage openings.

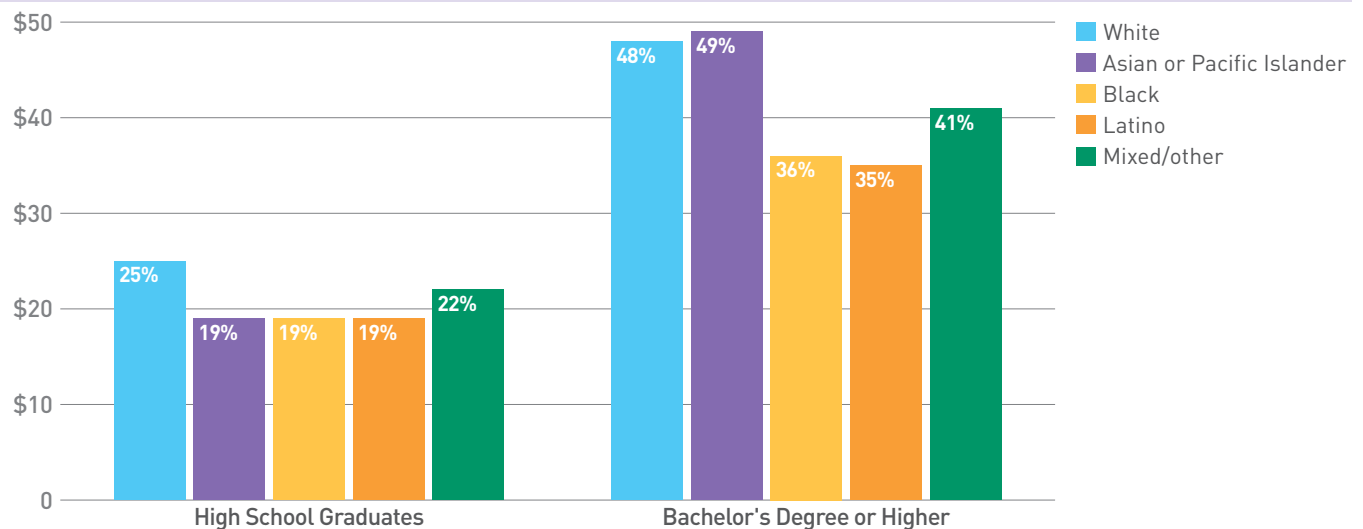
**The East Bay's middle-wage and middle-skill occupations are relatively limited, but create opportunities for workers with lower educational attainment to access high-quality jobs; these occupations are more heavily concentrated within specific industries.** Within the East Bay, the fastest-growing middle-wage occupations are projected to be concentrated in the Health Care and Construction sectors, including connections to the clean energy workforce. The specific middle-wage, middle-skill occupations with the most openings are projected to include Construction Laborers, Carpenters, “Book-keeping, Accounting, and Auditing Clerks,” and “First-Line Supervisors of Office and

5 Abby Langston, et al. “Advancing Workforce Equity in the Bay Area: A Blueprint for Action,” Bay Area Equity Network, 2021.

6 This range is based on housing costs in the East Bay, and roughly relates to the income amount needed to be considered above “Low-Income” in Alameda County, which is above 80 percent of Area Median Income.

**FIGURE 13****Educational Attainment by Race/Ethnicity in East Bay for People Age 25 and Older, 2014-2015 Estimate**

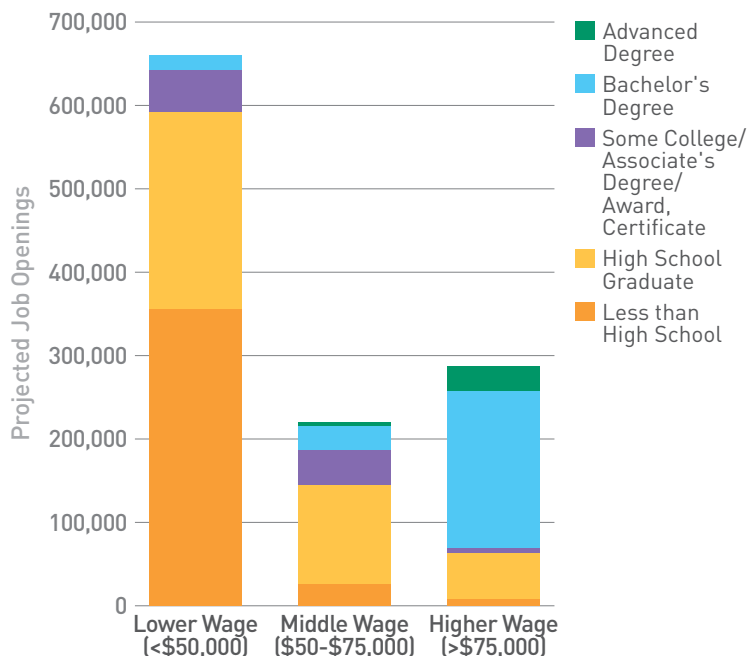
Source: National Equity Atlas, 2021; Strategic Economics, 2021.

**FIGURE 14****Snapshot of Median Hourly Wages by Race/Ethnicity and Education in the Bay Area, 2014-2018 Estimate**

Source: National Equity Atlas, 2021; Strategic Economics, 2021.

Note: This chart is adapted directly from National Equity Atlas' 2021 report entitled "Advancing Workforce Equity in the Bay Area: A Blueprint for Action." See page 30 of this report for more information.

[https://reworkthebay.org/wp-content/uploads/2021/02/Advancing-Workforce-Equity-in-the-Bay-Area\\_FINAL\\_0.pdf](https://reworkthebay.org/wp-content/uploads/2021/02/Advancing-Workforce-Equity-in-the-Bay-Area_FINAL_0.pdf)

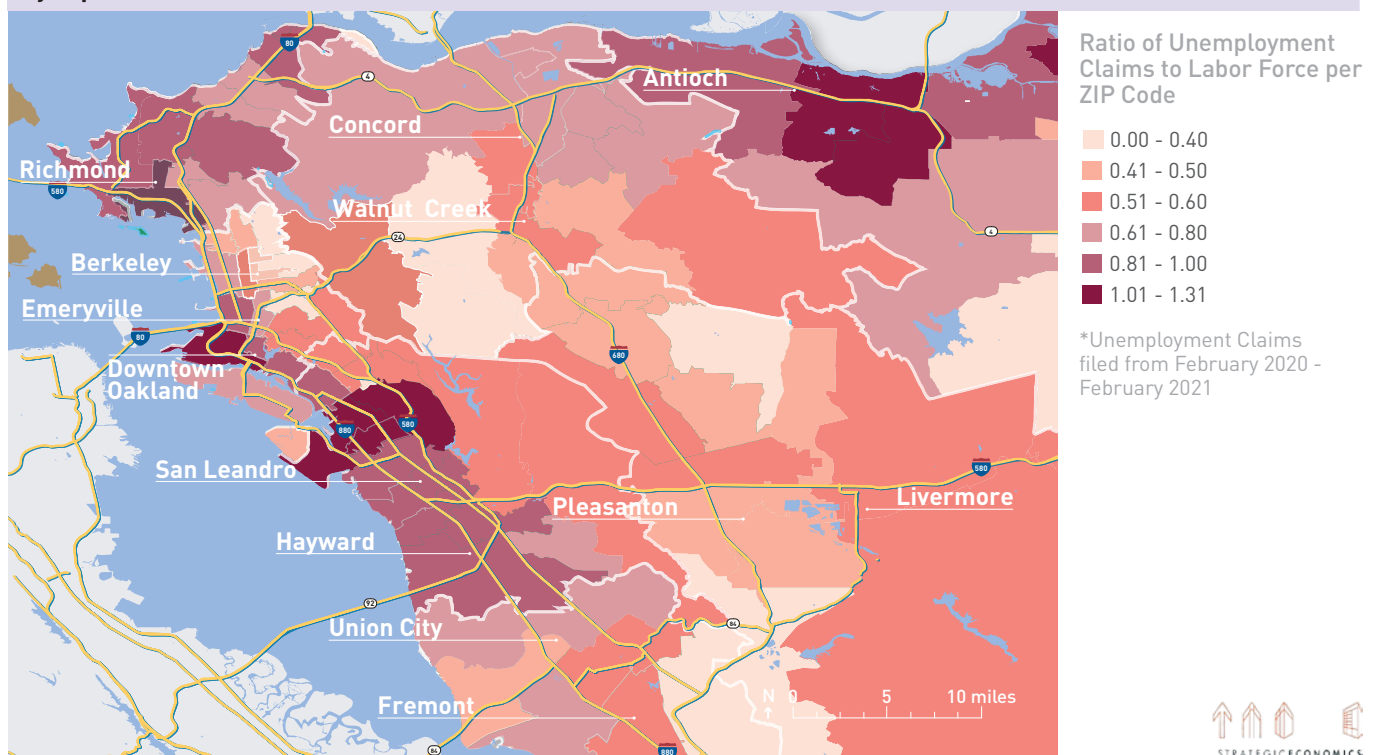
**FIGURE 16****East Bay Projected Job Openings by Wage Level and Educational Requirement, 2018 to 2028**

Note: There are also 365,000 additional projected job openings that do not have wage information. Sixty-five percent of these jobs require a high school diploma or less.

Source: CA EDD, 2021; Strategic Economics, 2021.

Administrative Support Workers.” The middle-wage occupations that are growing the fastest in the East Bay, as well as the middle-wage occupations with the most projected job openings, are shown in [Appendix C](#). Appendix C also shows information about demand for occupations requiring a bachelor’s degree.

**Since lower-wage jobs are likely to continue to constitute a high share of openings for workers with lower educational attainment, a need also exists to improve the pay, benefits, stability, and opportunities for advancement among lower-wage jobs.** Based on existing conditions and long-term trends, there are not likely to be enough middle-wage, middle-skill jobs available for all East Bay workers without college degrees. Low-wage jobs are a major component of the East Bay economy, and East Bay leaders need to balance supporting individual economic mobility opportunities with structural changes that improve working conditions for low-wage positions more broadly.

**FIGURE 15****Educational Attainment of Population 25 Years and Older: Some College or Less, 2015-2019 Estimate by Zip Code**



## Impacts of High Housing Costs

**High housing costs are consistently cited by employers as one of the greatest challenges in attracting and retaining workers.**

Housing costs in the East Bay, like the Bay Area, are among the most expensive in the nation. Housing demand consistently outstrips housing supply across all price points. Lower-income renter households in particular have become very vulnerable to displacement pressures.<sup>7</sup> High housing costs can also deter talented workers in professional fields from moving to or staying in the East Bay and the Bay Area. Workers in lower-paying professional sectors, such as Education or Social Welfare, often relocate to other regions due to high living costs. Housing prices are also often cited as a reason for businesses to relocate out of the East Bay and the Bay Area.

**High housing costs also impact worker mental health and access to opportunity, with disproportionate impacts on lower-income workers.** High housing costs also contribute to long commute times for lower-wage workers. Lower-wage workers who remain in the East Bay are often forced to seek housing in low-cost neighborhoods or cities, which also tend to be far from the East Bay's major employment centers. Therefore, these workers have much longer commutes than high wage workers, contributing to a complex set of quality-of-life issues that become compounding stressors for workers and their families.

## COVID-19'S IMPACTS ON THE EAST BAY

As the East Bay emerges from the COVID-19 pandemic, it is important to understand which businesses and workers were most harmed by the pandemic, which longstanding issues and trends were accelerated and amplified by the pandemic, and how the pandemic has created transformational long-term changes in how we live and work. This section explores these issues from the perspectives of businesses and

industries, workers, and real estate and land use, with emphases on specific topics raised by East Bay stakeholders throughout the East Bay Forward process.

## The Pandemic's Impacts on Businesses and Industries

**From January 2020 to January 2021, the East Bay lost approximately 112,000 jobs, or nine percent of total jobs.**

Figure 17 shows the change in the number of jobs over this period by two-digit NAICS sector. The Transportation and Warehousing sector (+5%), as well as Grocery Stores (+3%), were the only two categories that gained jobs. The gains associated with both categories reflect changes in retail spending during the pandemic: 1) big box chains and online retailers captured larger shares of retail spending, which increased demand for distribution centers, and 2) grocery stores, which were a key essential business during the pandemic, stayed open.

## "In-Person" Sectors

**While there were disruptions across all industry sectors, the most severe disruptions were in sectors that depend on in-person interaction, which are referred to as "in-person" sectors in this report.** The tourism and hospitality, food service and nightlife, entertainment, and personal services industries, which heavily employ women, people of color, and immigrants, suffered the greatest losses during the pandemic due to mandated business closures, limited operations, and restrictions on travel. Smaller-scale, independently-owned retail businesses that rely on in-person shoppers also struggled.

**Among the East Bay sectors that lost jobs over the January 2020 to January 2021 period, 60 percent of job losses were associated with "in-person" sectors.** These "in-person" businesses fall into the categories of "Arts, Entertainment and Recreation," "Food Service

7 Urban Displacement Project, 2020.

and Accommodation,” Other Services, and Retail (excluding grocery). As travel and capacity restrictions reduced demand and allowable activities for these types of businesses, they were forced to reduce operations and lay off workers, and many closed. Job loss was the most severe for the “Arts, Entertainment, and Recreation” sector, which lost approximately 11,000 jobs, or 58 percent of its pre-pandemic workforce. The “Food Services and Accommodations” sector lost the largest number of jobs overall, declining by approximately 37,000 workers, or 36 percent of its pre-pandemic workforce.

**These “in-person” sectors constitute a significant share of jobs throughout the East Bay, and the disruption to these sectors generated**

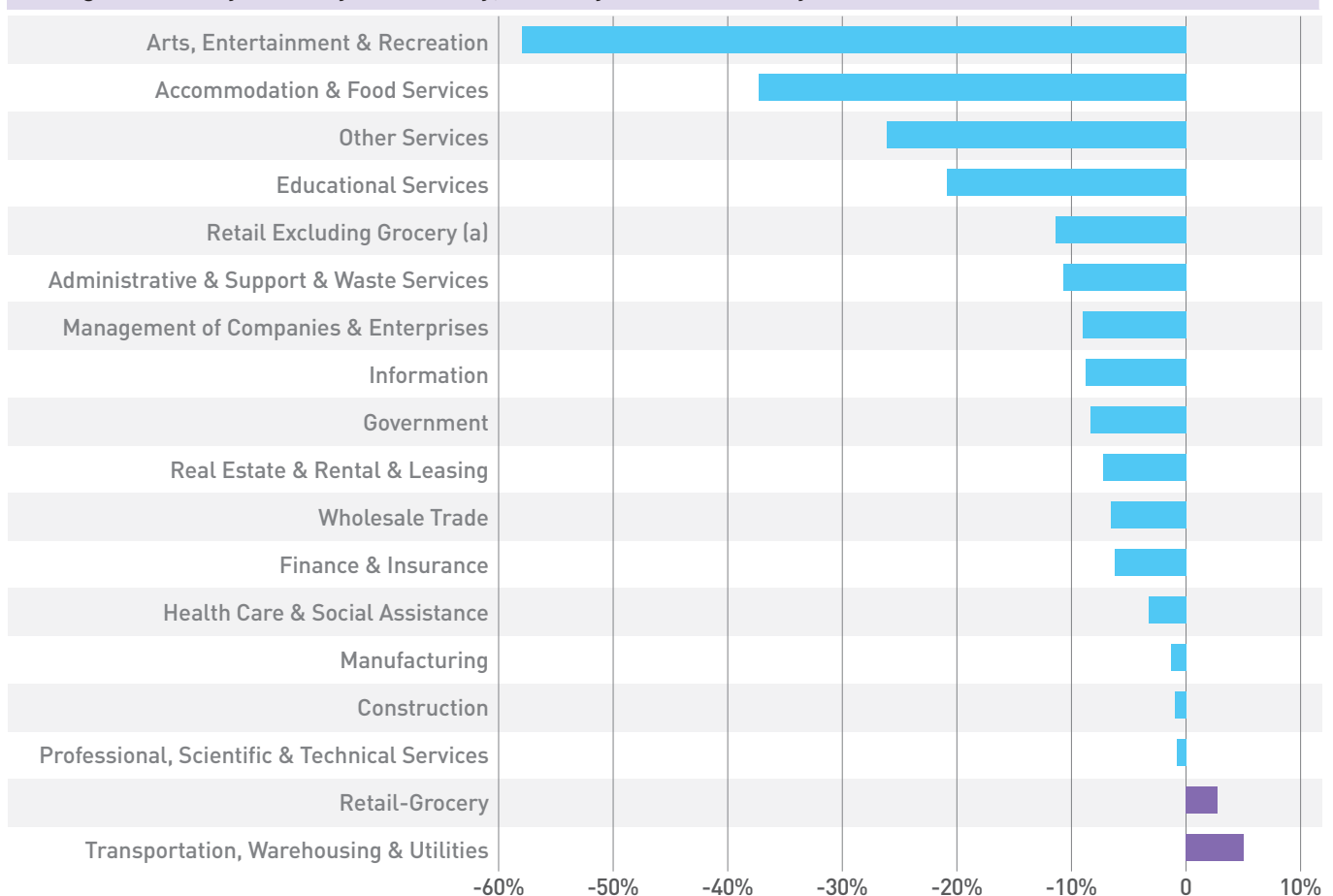
### **negative effects in every East Bay subarea.**

Figure 17 shows the concentration of vulnerable “in-person” jobs spatially, which includes jobs in the “Arts, Entertainment and Recreation,” “Accommodation and Food Services,” Other Services, and Retail sectors. These jobs depend on access to customers and clients, and are therefore especially concentrated in major commercial areas and along transportation corridors.

**Businesses underwent a variety of “pivots” and changes in how they operate in response to the COVID-19 pandemic, creating a variety of innovations and changes that may stay with us in the years to come.** Many “non-essential” establishments requiring close contact, such as indoor dining, bars, personal service, enter-

**FIGURE 17**

### **Change in Jobs by Industry in East Bay, January 2020 to January 2021**



Note: (a) Includes: Motor vehicle and parts dealers; Health and personal care stores; Clothing and clothing accessory stores; Sporting goods, hobby, book and music stores; General merchandise stores

Source: CA EDD, 2021; Strategic Economics, 2021.

tainment venues, and arts-related organizations closed their doors during the early period of the pandemic. Those that stayed open dedicated substantial time and money to be in-line with public health guidance, which changed throughout the pandemic. They had to follow specific cleaning protocols, implement social distancing policies, and enforce face coverings. As of September 2021, many businesses are now implementing vaccine verification systems to keep employees and customers safe. Although improving operations and adapting new service models can help some industries to recover, many small businesses face mounting pressure to stretch already slim margins and scant working capital to invest in technologies needed to survive.

## Small Businesses

**Small businesses were more severely impacted by the pandemic, especially businesses in**

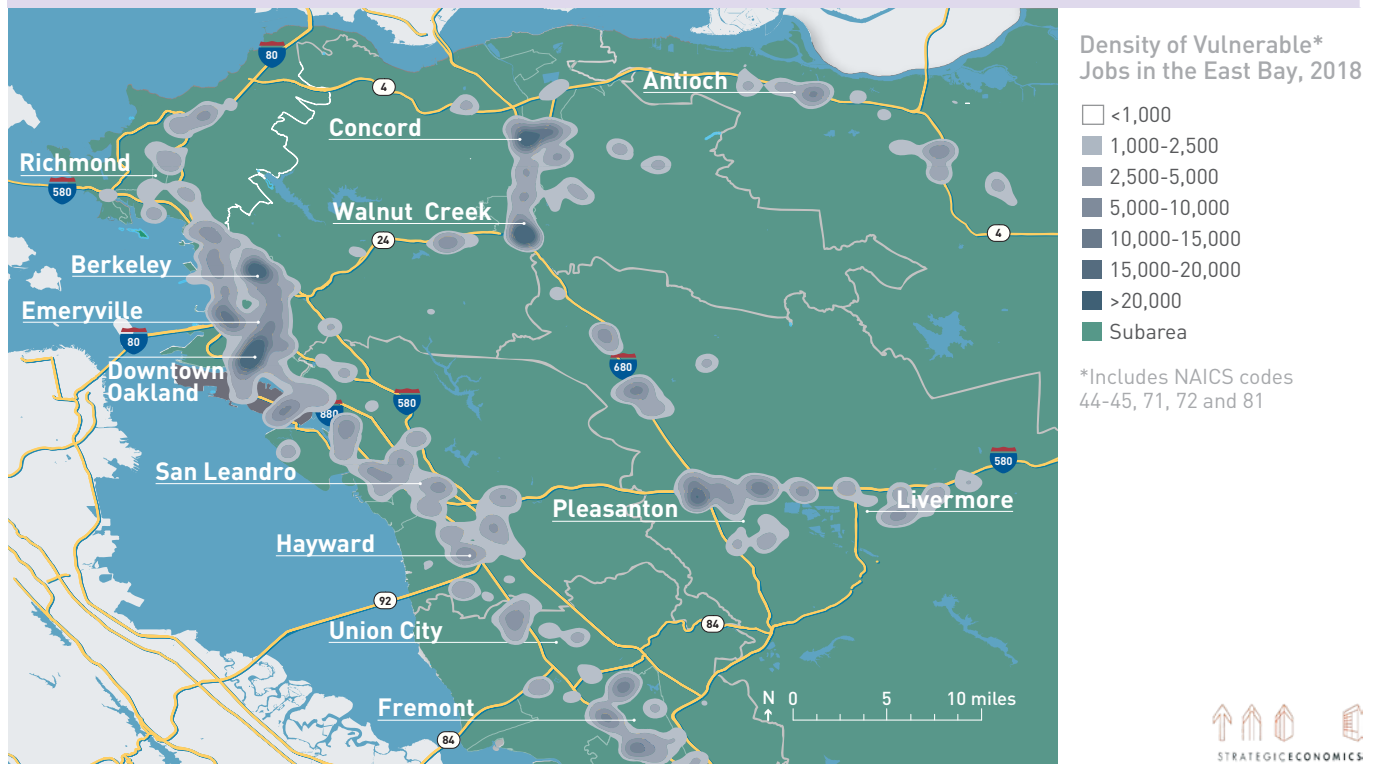
**“in-person” sectors.** Small businesses tend to have lower reserves and access to capital compared to larger businesses. Small businesses in “in-person” industries were required to reduce their operations to comply with public health orders. Many of these businesses are in older, storefront retail spaces that depend on pedestrian traffic, which was also dampened from the public health orders. Businesses in lower-income neighborhoods were also at a disadvantage, as households had less income to spend.

**Many businesses owned by women, minorities, and immigrants faced challenges related to accessing working capital; smaller start-ups and entrepreneurs also faced similar challenges.**

For example, many were unable to access federal Paycheck Protection Program (PPP) loans.<sup>8</sup> These businesses were also frequently denied conventional financial resources because they often do not have existing relationships with traditional banking institutions or established

**FIGURE 18**

### Vulnerable Jobs in the East Bay, 2018



<sup>8</sup> Sole proprietors were initially ineligible to apply for PPP loans. Some businesses also were nervous about taking on additional debt and did not apply.

credit history required to access commercial loans. Community Development Finance Institutions (CDFIs) and other mission-driven community banking institutions served as a critical lifeline for these businesses during the pandemic by offering emergency grant assistance and/or low-cost loans.<sup>9</sup>

**As with all businesses, small businesses are now struggling to recruit workers as they increase staffing.** Since Spring 2021, vaccinations became available to the public and many small business establishments were permitted to expand their capacity. However, many of these businesses—especially those in the food service, accommodations, and entertainment industries—struggle to find workers. These industries are at a crossroads, as many former workers are leaving permanently for other positions or leaving the labor force to care for children and other family members.

## Other Industry Impacts

**The retail industry experienced an acceleration of existing trends favoring Ecommerce and home delivery, driving the success of larger retail chains with an Ecommerce presence and accelerating demand for distribution centers:**

- Existing trends in Ecommerce growth accelerated. Online-only retailers like Amazon and big box stores with strong online platforms (e.g., Target) captured a greater share of retail spending. This trend also expanded demand for distribution centers and other logistics activities related to the movement of goods purchased online.
- Grocery stores were considered an essential business throughout the pandemic. Grocery stores of all sizes expanded their operations during the pandemic and increased their workforce. Grocery stores also increasingly offered online pick-up and delivery options to attract customers

reluctant to enter stores.

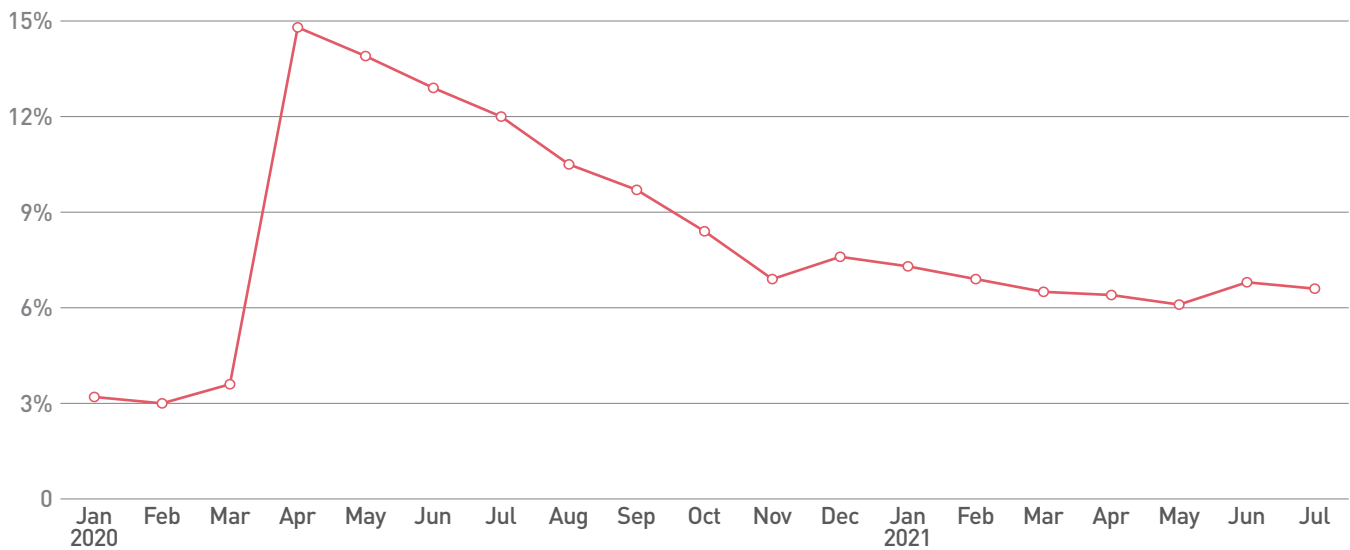
- Independent stores fared worse than chain stores. Small-scale independent stores, many of which depend on pedestrian traffic, struggled with similar issues that other “in-person” businesses faced.

**Office-based businesses have largely adopted temporary and permanent expansions of remote work, altering the dynamics of demand for office space.** Private and public employers that had occupied traditional office space have largely adopted remote work and hybrid work policies since the pandemic began. This trend has generated large impacts on the economic ecosystem that depends on office workers, with transit agencies experiencing declines in farebox revenue, office tenants subleasing space or backing out of leases, and restaurants and service businesses in central business districts suffering extreme declines in sales.

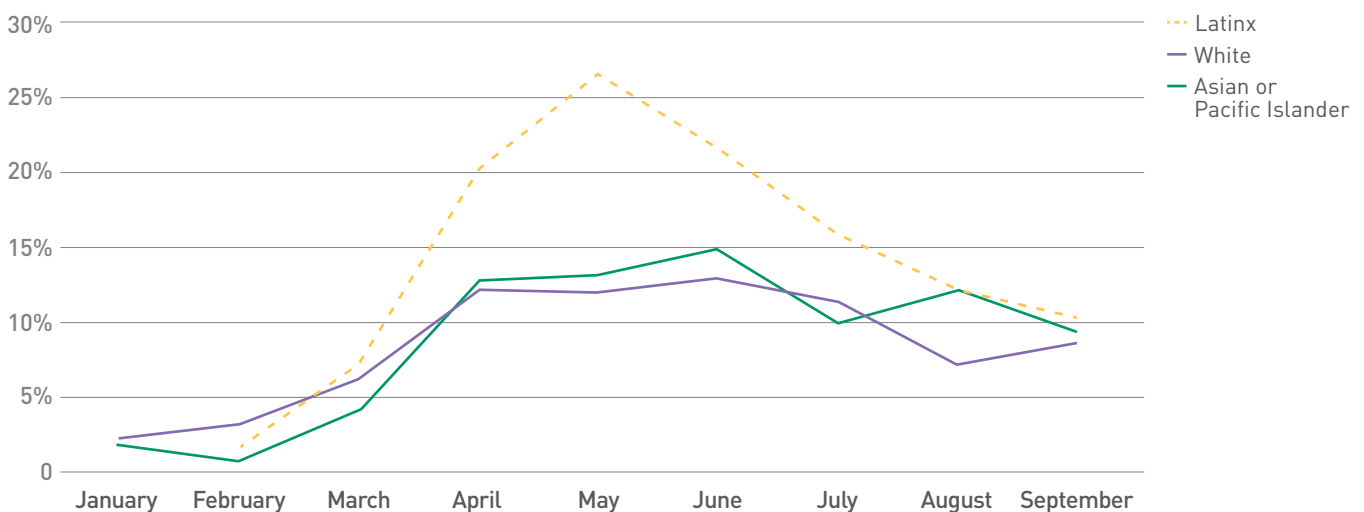
**Frontline healthcare workers are burned out, and patients deferred routine healthcare needs.** Healthcare workers, many of whom are on the front lines of the pandemic, have faced high coronavirus exposure risks. Healthcare industry leaders say many healthcare workers are struggling with burnout. These industry leaders anticipate that there will be a glut of openings as people retire or leave the field. While there has been demand for frontline healthcare workers across wage levels, the number of healthcare jobs declined, because elective procedures were not permitted early in the pandemic and the public delayed routine visits.

**Teachers are burned out, and many quit; the pipeline of new teachers is limited.** Workers in education are also experiencing high rates of burnout, after over a year of remote teaching. The total employment in education contracted primarily from workers choosing to leave the

9 Connecting Communities webinar, “A Year of Crisis, and Now What? Where Our Main Streets Go From Here,” 2021.

**FIGURE 19****Unemployment Rate in East Bay, January 2020 through July 2021**

Source: California EDD, 2021; Strategic Economics, 2021.

**FIGURE 20****East Bay Unemployment by Race/Ethnicity, 2020**

Source: PolicyLink and USC Equity Research Institute, "Advancing Workforce Equity in the Bay Area: A Blueprint for Action," 2021. Unemployment estimates from the Current Population Survey (CPS) microdata from IPUMS USA.

Note: Dotted line denotes two-month rolling average of unemployment rate because of small sample sizes. Black workers could not be included in this analysis because of small sample size.



field voluntarily, rather than from layoffs.<sup>10</sup>

The sector faces structural challenges with its worker pipeline generally, as salaries for most public teaching positions have remained low.

**Manufacturing businesses performed well overall, though smaller manufacturing businesses need support.** While many manufacturing firms were not required to cease operations during the pandemic, they needed to meet strict and evolving occupational safety and

health standards. They also faced workforce shortages, global supply chain disruptions, and volatile costs. East Bay industry stakeholders noted that a divide exists between well-capitalized, efficient, and larger advanced manufacturing businesses versus older and smaller manufacturing businesses that have been unable or uninterested in making investments to enhance their efficiency.

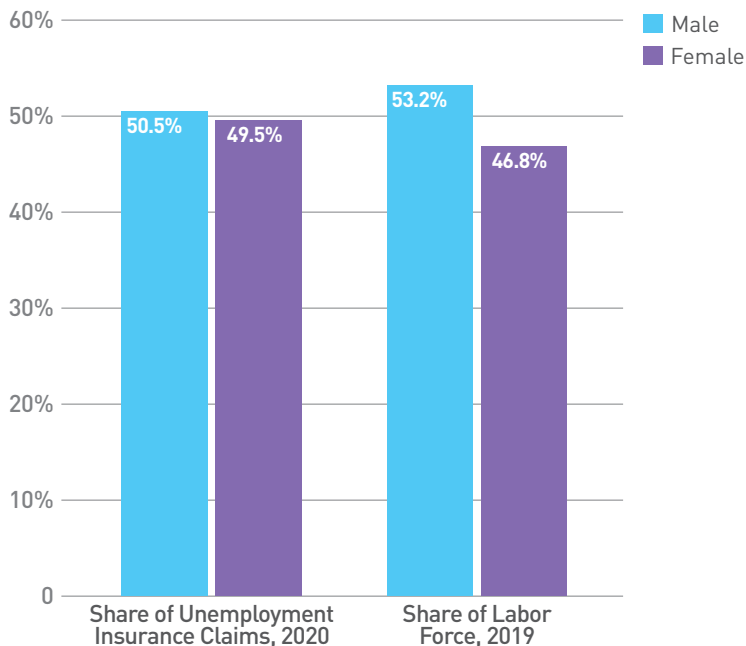
## The Pandemic's Impacts on Workforce Inequities and Unemployment

**Unemployment rates are now declining in the East Bay, though many of these job gains are attributable to growth of low-wage jobs.** The unemployment rate in the East Bay peaked at the beginning of the pandemic, and has since declined. Still, the unemployment rate as of July 2021 is approximately twice as high as it was before the pandemic began. Figure 19 shows the unemployment rate in the East Bay from January 2020 through July 2021. The unemployment rate declined from 14.8 percent in April 2020 to 6.6 percent in July 2021. The job gains since April 2020 were largely associated with an increase in low-wage jobs, while the number of middle- and high-wage jobs has remained steady.

**Growth of low-wage jobs during the pandemic has been driven by shifts toward Ecommerce and “gig work.”** Grocery stores and online retailers such as Amazon increased their workforce in distribution centers and delivery services. Some workers experiencing unemployment also supplemented their incomes by turning to informal gig work delivery positions, such as through Doordash or Instacart, as the general public became wary of traveling to grocery stores and restaurants to pick up food in person. These gig work positions offer very limited employee benefits and protections.

**FIGURE 21**

### East Bay Unemployment Claims vs Labor Force by Gender, 2020



Note: The ACS, as of 2019, did not offer respondents the ability to select gender identity options besides “male” or “female.” EDD also only offers the option of “male” or “female” for tracking unemployment insurance claims, though the selection is optional. While the Census and EDD data is limited, it is well-documented that trans people and other people in the LGBTQ community are overrepresented among people that experienced unemployment during the pandemic. For example, the Human Rights Campaign conducted a survey of 4,000 people on job loss nationwide, and found that 17% of LGBTQ people experienced unemployment compared to 13% of the overall population at that time (<https://www.nbcnews.com/feature/nbc-out/lgbtq-people-face-higher-unemployment-amid-coronavirus-pandemic-survey-finds-n1205296>).

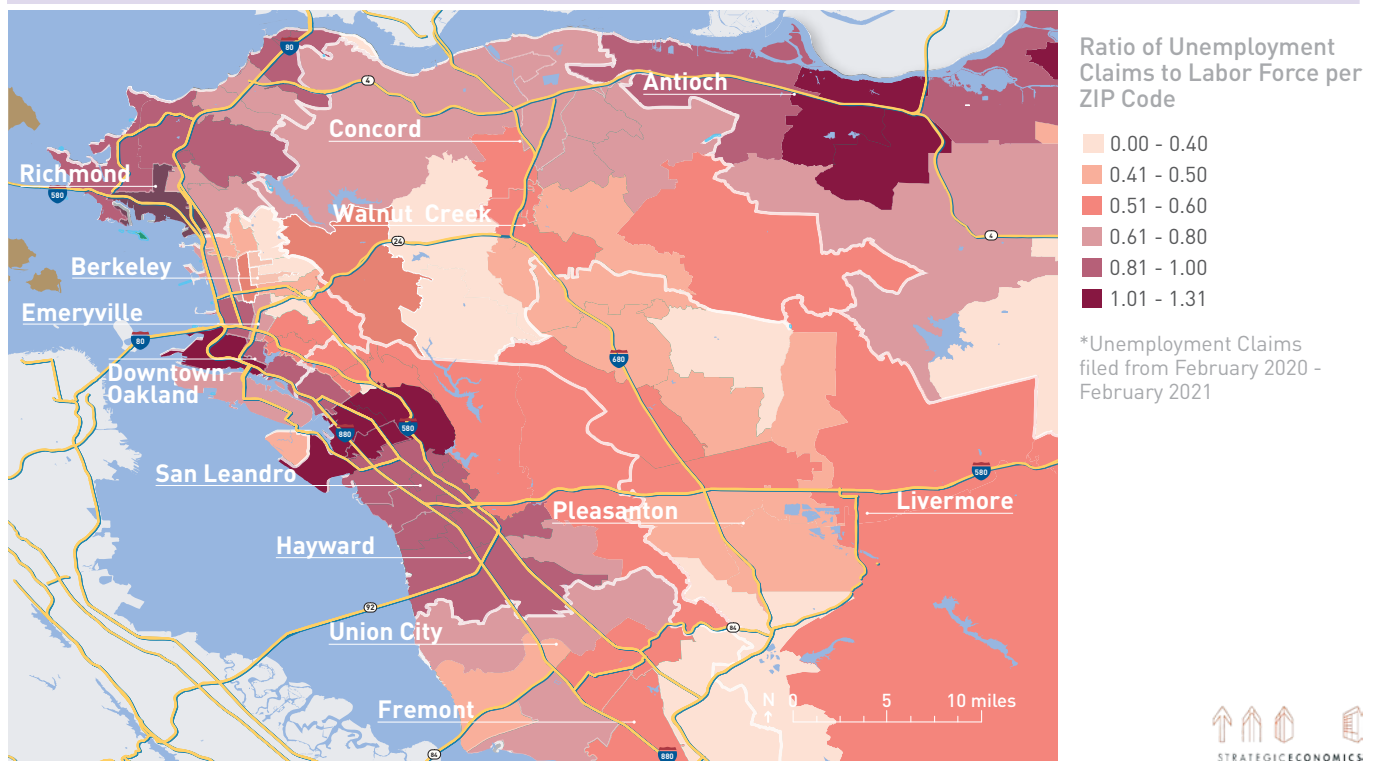
Source: American Community Survey 1-year Estimates, 2019; CA EDD, 2021; Strategic Economics, 2021.

10 Chad Aldeman, “During the pandemic, “lost” education jobs aren’t what they seem,” Brookings Institute, 2021. <https://www.brookings.edu/blog/brown-center-chalkboard/2021/03/02/during-the-pandemic-lost-education-jobs-arent-what-they-seem/>

**The COVID-19 pandemic exacerbated existing racial and income inequalities.** Higher-wage workers, who were more likely to be able to work remotely throughout the pandemic, have been substantially better-positioned to navigate the burdens of the pandemic than lower-wage workers. While high-wage workers, who are more likely to be white and male, have been able to save more income during the pandemic, low-wage workers often had to deplete their savings due to job losses and reduced work hours.

**Low-wage workers were most vulnerable during the pandemic to both income loss and coronavirus exposure.** Workers in lower-wage yet “essential” positions which continued operations throughout the pandemic—such as at grocery stores and transit agencies—were at a high risk of coronavirus exposure. Lower-wage workers at “non-essential” activities, including indoor dining, bars, personal services and entertainment venues, were also most likely to be unemployed as these business reduced operations.

**East Bay unemployment rates were higher for people of color and women during the pandemic.** Figure 20, which is from Bay Area Equity Network’s 2021 report entitled “Advancing Workforce Equity in the Bay Area: A Roadmap for Action,” shows unemployment rates by race/ethnicity in the nine-county Bay area from January to September 2020. As shown in the figure, Latinx workers experienced unemployment at a higher rate than white and Asian/Pacific Islander workers during the beginning of the pandemic. The sample size for Black workers was too small to be included in this chart. However, comparison of East Bay unemployment claims and labor force by race in 2020 shows that Black workers in the East Bay were overrepresented in experiencing unemployment. While Black workers accounted for eight percent of the labor force in the East Bay in 2019, they accounted for 13 percent of unemployment claims during 2020.<sup>11</sup> Figure 21 compares the share of unemployment claims and labor force by gender. Women are more likely to work low-wage jobs,

**FIGURE 22****Unemployment Claims to Labor Force Ratio, 2020**

11 American Community Survey 1-year Estimates, 2019; CA EDD, 2021.

which were more volatile during the pandemic. Additionally, many mothers, especially those whose jobs required in-person work, had to leave the workforce due to childcare needs.

**The East Bay's communities with lower levels of educational attainment also experienced high unemployment rates during the pandemic.**

The map in Figure 22 shows the ratio of unemployment claims to the labor force by zip code. Darker areas have a higher ratio of unemployment claims, compared to their workforce. The areas with workers experiencing the highest levels of unemployment include Richmond, West Oakland, Antioch, parts of East Oakland, and San Leandro. Pittsburg, Bay Point, Hayward, and Union City also had high ratios. See Figure 15 for the map showing the share of residents aged 25 and over with lower levels of educational attainment.

**The Pandemic's Impact on Commercial Real Estate and Land Use**

The pandemic's impacts on the East Bay's commercial and industrial real estate market varied significantly by product type and location. This section describes the impacts of the pandemic on real estate performance in the East Bay for office, retail, R&D, and industrial

(manufacturing and warehouse) space in order to identify short- and long-term trends for these uses. Figure 23 shows vacancy rates for these uses from 2010 through 2021 Quarter 1.

**Office**



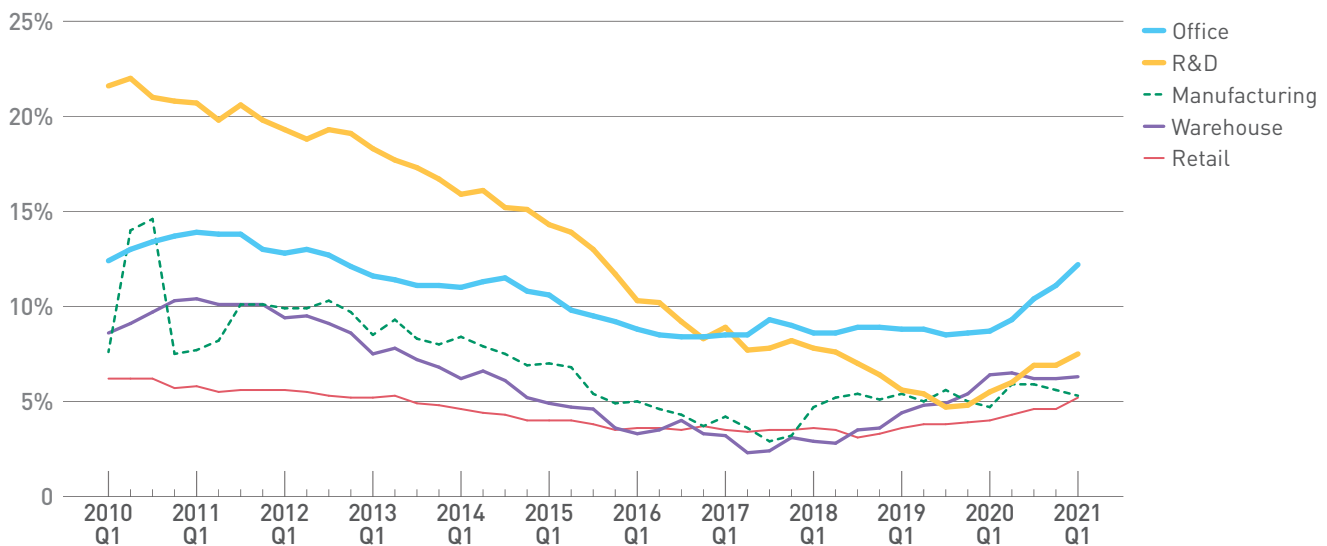
**25 percent** of office space in the Bay Area is in the East Bay

Office space in the East Bay is highly concentrated in a few primary locations. The largest concentration is in Downtown Oakland, with smaller office clusters located in Berkeley and Emeryville. These areas are very accessible to regional commuters via BART and Capitol Corridor. There are also significant suburban office concentrations in San Ramon—where Bishop Ranch is located—and Walnut Creek, Dublin, and Pleasanton. These locations benefit from strong freeway access, and some of these office areas are also accessible from BART.

**The East Bay office market has suffered significantly since the COVID-19 pandemic began.** Remote work policies have contributed to rapid declines in the demand for office space. As Figure 23 shows, the overall vacancy rate for office space in the East Bay increased from eight percent before the pandemic to 12 percent as of Spring 2021. However, it should be noted that the Q1 2021 vacancy rate

**FIGURE 23**

**Vacancy Rate by Commercial and Industrial Use in the East Bay, 2010 to 2021**



Source: Costar, 2021; Strategic Economics, 2021.

is still slightly lower than vacancies were at the height of the Great Recession, especially in 2010 and early 2011. Vacancy rates remain relatively high, subleasing attempts are increasing, and employers with existing lease commitments appear to be holding on to their spaces and taking a “wait and see” attitude regarding their longer-term space needs.

**The longer-term expansion of remote work will likely lead to changes in how employers use office space, where office space is required, and how much office space is required per worker.** Anecdotal and survey evidence suggests many employers will allow a permanent expansion of full or partial remote work for their workers. The exact magnitude of this change and its impacts on the office real estate market are difficult to predict, but several possible outcomes are likely: 1) office space requirements per employee will decline as some workers switch to full-time remote work and as other workers only come to the office a few days a week, thus allowing for shared workstations rather than individual desks for each employee; 2) a “hub and spoke” model could emerge in which employers open smaller “field” offices closer to suburban residential areas in which employees live, while also maintaining a larger (but diminished) central office in a traditional central business district such as Downtown Oakland; 3) declines in demand for office space could be partially offset by a desire to give employees more room within the office to allay fears of virus transmission.

**As office demand has dropped off, demand for life science space has increased.** During the pandemic, there have been multiple instances in the Bay Area in which developers have pivoted to build life sciences projects, rather than standard offices. Life Science buildings tend to have a similar building envelope as office buildings, with the main differences in HVAC infrastructure, the interstitial space between floors to accommodate more wiring, ventilation, and pipes, as well as further tenant improvements such as laboratory space. While the cities of Alameda, Emeryville, and Berkeley have historically been the nexus for life science activity in

the East Bay, demand has begun expanding down the I-880 Corridor, specifically from San Leandro to Fremont according to insights from brokerage Cushman and Wakefield.

## Manufacturing and R&D



**50 percent** of manufacturing space in the Bay Area is in the East Bay  
**28 percent** of R&D space in the Bay Area is in the East Bay

Manufacturing and Research and Development (R&D) buildings are both critical ingredients for supporting the East Bay’s growing and concentrated industries. For example, many sectors that comprise the East Bay’s Advanced Manufacturing cluster, such as Biomedical, CleanTech, Food Innovation, and other Life Sciences sectors, all occupy both building types. The distinction between the two building types is primarily the amount of space within each building that is dedicated to office functions, rather than actual production activities.

**Demand for Manufacturing and R&D space remained high throughout the pandemic, and the Manufacturing and R&D workforce largely continued to work on-site.** The vacancy rate for manufacturing space has stayed steady at five percent from before the pandemic to 2021 Q1, while the R&D vacancy rate has increased slightly, from five to seven percent. Businesses have adopted public health protocols around social distancing, masking, and vaccinations that have reduced the risk of infection. In addition, employee densities for these activities tend to be low, and there is little or no interface with the public.

## Warehouse



**48 percent** of warehouse space in the Bay Area is in the East Bay

A large share of warehouse space in the East Bay is located along Interstate 880 in Oakland, San Leandro, Hayward, Fremont, and Union City. These warehouses support the movement of goods between the Port of Oakland and key highway and rail routes that connect the Bay Area to the rest of the

Northern California megaregion and beyond.<sup>12</sup> Livermore and Richmond also have large shares of warehouse space. Livermore warehouses are strategically positioned on the Interstate 580 corridor, which connects to the Central Valley.<sup>13</sup> New warehouse development in the East Bay has been concentrated in Fremont, Hayward, and Livermore, which benefit from slightly lower land costs and are strategically located in proximity to major freeways.<sup>14</sup> This includes space leased by Amazon, shipping service DHL, and direct-to-consumer retailers.

**Warehouse demand has been resilient during the COVID-19 pandemic due to the accelerated rise in Ecommerce and cold storage needs.** The vacancy rate for warehouses has remained steady at six percent from before the pandemic to 2021 Quarter 1. As Ecommerce continues to capture a growing share of retail sales, the demand for warehouses for will continue to be strong. Cold storage facilities that maintain the shelf life of perishable products from food to vaccines are also likely to experience an increase in demand.

## Retail



**35 percent of retail space in the Bay Area is in the East Bay**

**The retail industry has been restructuring as online retailers capture an increasing share of retail purchases; the pandemic has accelerated this trend.**<sup>15</sup> In order to be successful in today's retail environment, traditional retailers have had to expand their online presences to stay competitive with online-only retailers such as Amazon. The online share of retail sales increased from around

12 percent of total retail sales in mid-2019 to around 17 percent by the end of 2020.<sup>16</sup>

**Increased Ecommerce sales and the suffering of "in-person" businesses are negatively impacting demand for space in the East Bay's smaller and already underperforming regional shopping centers, creating new opportunities for redevelopment and reinvestment.**

As Figure 23 shows, the overall retail vacancy rate in the East Bay has remained relatively low over the past decade, hitting a low point in 2018. However, these vacancy rates have steadily increased since then, with this trend continuing unabated during the pandemic. Some of this increasing vacancy rate is attributable to underlying changes in the retail industry, most notably Ecommerce, with virtually all growth in U.S. retail sales over the past two years being captured by online shopping. This shift away from some brick-and-mortar shopping was already making some retail space vulnerable to long-term vacancy. That trend has only been accelerated by the pandemic, especially in older retail districts and shopping centers located in communities with higher numbers of low- and moderate-income households. The pandemic's negative impacts on "in-person" retail and personal services businesses may also be contributing to vacancies. However, some underperforming malls have preliminary proposals to redevelop into mixed-use districts that potentially include housing, retail, office space, and even distribution uses (e.g., San Leandro's Bay Fair Mall and Richmond's Hilltop Mall).

<sup>12</sup> Costar, 2021.

<sup>13</sup> Costar, 2021.

<sup>14</sup> Costar, 2021.

<sup>15</sup> Young, Jessica, "US ecommerce sales grow 14.9% in 2019," 2020, <https://www.digitalcommerce360.com/article/us-ecommerce-sales/>

<sup>16</sup> "Troise, Damien, Retail's online future grows bigger after pandemic bump," AP, January 2021. <https://apnews.com/article/technology-shopping-coronavirus-pandemic-online-shopping-e-commerce-40008ad7099cad4d737c3ee7d156d56a#:~:text=E%2Dcommerce%20sales%20are%20forecast,the%20end%20of%20this%20year.&text=The%20clear%20winner%20in%20this%20shift%20has%20been%20Amazon.>



## SUMMARY OF COVID-19'S IMPACTS ON THE EAST BAY ECONOMY

The detailed findings of “The Evolving East Bay” can be summarized into two categories of longer-term and broad impacts from the COVID-19 pandemic: 1) existing trends and conditions that were accelerated and amplified by the pandemic, and 2) transformational changes that will forever shift our old ways of living and working.

The COVID-19 pandemic accelerated and amplified the following conditions and trends in the East Bay:

- Systemic inequities:** The pandemic exacerbated longstanding systemic economic and health disparities in the East Bay, particularly along racial, ethnic, and gender lines. These disparities played out in workforce job stability and access to opportunity, on-the-job coronavirus exposure, physical health outcomes, mental health outcomes, and numerous other ways.
- Business Impacts of Ecommerce:** Existing trends related to Ecommerce accelerated, as people purchased a greater share of goods on the internet. This trend primarily favored larger retailers with established Ecommerce platforms, but also pushed smaller businesses to pivot toward expanding their Ecommerce and online marketing presences. The acceleration of Ecommerce will also continue to accelerate growth of “experiential” businesses in bricks-and-mortar retail locations as the pandemic recedes, including businesses such as restaurants, gyms, and entertainment.
- Land Use Impacts of Ecommerce:** Ecommerce growth will continue to drive reductions in total retail space required per resident, increased demand for distribution facilities located near population centers, and new opportunities to redevelop and reuse shopping center sites.
- Housing affordability challenges:** While federal, state, and local policies and assistance prevented mass eviction and foreclosure activity during the pandemic, the pandemic’s effects on workers and incomes demonstrated again how vulnerable many East Bay residents are to economic shocks in our extremely high-cost region.
- Small business funding and financing challenges:** A relatively high share of small businesses struggled during the pandemic due to thin operating margins, lack of capital reserves, and lack of existing relationships with traditional financial institutions—which posed a further obstacle to accessing new federal assistance such as the Paycheck Protection Program. These challenges were especially notable for businesses owned by women, people of color, and immigrants.

At the same time, the COVID-19 pandemic brought about several transformational changes:

- Widespread adoption of remote work:** This sudden transformation will have wide-ranging impacts on location and overall demand for office space, design of offices, locations of demand for daytime retail and services, locations of demand for housing, and transportation needs.

- **Rapid adoption of telehealth, distance learning, and other digital strategies:**

As with remote work generally, rapid and widespread adoption of telehealth and distance learning will likely lead to a permanent expansion of these services. Businesses also undertook and learned from implementation of a variety of digital strategies to replace entertainment, conferences, and other activities that once occurred in person.

- **Enhanced regulatory flexibility:** The pandemic provided a moment for governments to prove their ability to rapidly remake laws, policies, and regulations. Some of this additional regulatory flexibility and speed is likely to continue beyond the pandemic.

- **Creation of new funding resources and programs:**

Federal, state, and local governments deployed enormous new resources to support communities during the pandemic and to reinvest in the economy as the pandemic recedes. These resources will have a lasting effect, providing new one-time or ongoing resources for affordable housing, workforce development, infrastructure investment, business support, and numerous other needs.