I left my $12 billion
in San Francisco

unacast.

Abstract

The Bay Area **is hurting. Population flow in 2020 was negative, as was total net income to the tune of** -$12 billion. **About** 46,000 **people left the area in 2020. Some jumped to more southern areas of the state, or the western US. Others shifted among the 10 regional counties.**

The exodus of people and money from city centers is very real. **San Francisco** and **Alameda County** recorded the highest 2020 population loss by total number of people. Each also recorded an identical 2020 area income flow of -**$1.9 billion.**

Wine country generally enjoyed light migration effects in 2020. **Marin County lost $1 million per day,** while **Contra Costa County** gained people yet lost more than **$825 million** in net income. **Sonoma** was the **only net gainer** of both population and income in the entire Bay Area.

Silicon Valley, regional capital of People with Money, has taken a tremendous gut punch with 2020 net total income loss estimated at a whopping **$6.4 billion**. Person for person and dollar for dollar, this makes San Mateo and Santa Clara among the hardest-hit US counties of the COVID age.

This research report analyzes the Bay Area's eye-opening human **migration patterns** using Unacast' **Emerging Areas** dataset and Neighborhood Insights tool, as well as US census data.

unacast.

Introduction

In this document, we examine the migration patterns over the course of 2020 for 10 counties in California's Bay Area — **Marin, Sonoma, Napa, Solano, San Francisco, Alameda, Contra Costa, Santa Cruz, Santa Clara and San Mateo.** Our objectives are threefold:

- Determine the total +/- population flow for each of the Bay Area's 10 counties
- Measure the total +/- income flow change based on each county's net population flow
- Identify statistical trends and outliers to highlight key data points

To conduct our analysis, we examined **inflow** and **outflow** movements in the Bay Area area using our **Migration Patterns** platform, combined with our **Emerging Areas** data set. Average income data is pulled from the **American Census Service** and rolled-up to the county level. All data is **privacy compliant** and used for good. To conduct our foot traffic analysis we used our **Neighborhood Insights** tool to build custom collections and **benchmark foot traffic** patterns over 2020 vs. 2019.

MIGRATION PATTERNS

Migration Patterns is a set of products for analyzing shifts in population. Currently, the package consists of three datasets: Home-based Origin-Desti-nation Flux (OD Flux), Population Distribution Trends (PDT), and Emerging Areas (EA).

Home-based Origin-Destination Flux (OD Flux) derives moves from changes in home location of a device and therefore is able to capture the origin and destination of each move. In order to assess that a move happened with certain confidence, an observation window of several weeks (currently 8) is required, which means that our insights are more certain, however, come with a delay of approximately half of the observation window (4 weeks).

Population Distribution Trends (PDT) is a metric that measures the proportion of devices in each state or county at a weekly snapshot. When a mass of people moves from one area to another, the proportion shifts accordingly. This metric is useful for analysing the momentary situation, as it has no delay. Compared to OD Flux it doesn't provide information about direction-ality of the moves or their permanency.

Emerging Areas calculates the inflow,outflow, and netflow of people as well as the accompanying change inincome for a given area. To calculate the total_net_flow of an area, we sum up all inflows into and outflows from an area and calculate the difference. Weekly data from Migration Patterns is aggregated monthly for this purpose.

The Bay Area

In general, the **Bay Area** is hurting. Population flow in 2020 was negative to the tune of ~**46,000.** Total net income in the area fell by nearly **$12 billion.** The exodus from both city centers and Silicon Valley is very real. People are moving elsewhere in the area, state and country. Wine country enjoyed comparatively light migration and economic effects related to COVID in 2020, while Contra Costa finds itself in the curious position of gaining people while losing more than $825 million in net income.

Foot traffic scores are down 40% to 80% or more across the Bay Area, with massive, well-documented consequences for retailers, restaurants and small businesses. Brands are shutting down stores or looking for new neighborhoods that their migrating customer base has moved to. If migration patterns hold — and it looks like they will through 2021 at least — CRE investors, city and county officials will be hard pressed not to revisit previous plans for developing and operating infrastructure in the area.

People with Money call the Bay Area home. In 2020, 46,000 of them chose to abandon it, leaving a $12 billion hole in the economy.

-46,000

-$12 billion

Growing Population & Growing Average Income

Growing Population & Shrinking Average Income

Shrinking Population & Growing Average Income

Shrinking Population & Shrinking Average Income

NET POPULATION & INCOME FLOW

County	Net Population Flow	Net Population Flow %	Net Per Capita Income Flow $	Total Net Income Flow $
Alameda County	**-16,400**	**-1.00%**	**-$5,205**	**-$1.9 billion**
Contra Costa County	**+2,600**	**+0.23%**	**-$19,635**	**-$826 million**
Marin County	**-170**	**-0.07%**	**-$25,301**	**-$365 million**
Napa County	**-375**	**-0.27%**	**-$971**	**-$39 million**
San Francisco County	**-13,400**	**-1.55%**	**-$12,524**	**-$1.9 billion**
San Mateo County	**-5,400**	**-0.71%**	**-$31,566**	**-$1.9 billion**
Santa Clara County	**-8,300**	**-0.43%**	**-$40,899**	**-$4.5 billion**
Santa Cruz County	**-4,000**	**-1.48%**	**+$9,863**	**-$171 million**
Solano County	**-850**	**-0.20%**	**-$5,559**	**-$184 million**
Sonoma County	**+50**	**+0.01%**	**+$7,912**	**+$175 million**

Santa Clara and San Mateo

San Mateo and **Santa Clara** combined to lose ~**13,700** people and a whopping **$6.4 billion** in income, making Silicon Valley the big loser in the Bay Area. San Mateo leaked ~5,400 people and $1.9 billion, which is a huge hit, but not half as bad as the one Santa Clara has taken. Net population flow in Santa Clara in 2020 was -8,300, or less than half of 1% of the county population. What is the big deal? Those people took ~$4.5 billion with them. Much of it is unlikely to come back.

While the combined population loss across San Mateo and Santa Clara of ~13,700 people is about the same as San Francisco at -13,400, the economic consequence of Silicon Valley's exodus is more than 3x as impactful. This is because the average net per capita income flow in San Mateo and Santa Clara is 2x to 3x higher than in San Francisco.

-13,700

$ **-$6.4 billion**

Silicon Valley accounts for just 30% of the loss of people in the Bay Area, but a disproportionately high 55% of the loss of income.

NET POPULATION & INCOME FLOW

County	San Mateo County	Santa Clara County
Net Population Flow	**-5,400**	**-8,300**
Net Population Flow %	**-0.71%**	**-0.43%**
Net Per Capita Income Flow $	**-$31,566**	**-$40,899**
Total Net Income Flow $	**-$1.9 billion**	**-$4.5 billion**

Marin

Marin is the lightly populated, well to-do county that greets you as you head north over the Golden Gate Bridge. Net population flow over 2020 was negative but losses were light at **-170**, or less than one-tenth of one percent of the population. Like the counties of Silicon Valley though, income flow to the negative is significant: a loss of some **$365 million**, or about a million dollars per day in 2020.

Marin County lost about $1 million of income per day in 2020.

-170

-$365 million

NET POPULATION & INCOME FLOW

County	Marin County
Net Population Flow	**-170**
Net Population Flow %	**-0.07%**
Net Per Capita Income Flow $	**-$25,301**
Total Net Income Flow $	**-$365 million**

San Francisco and Alameda

In 2019, the population of **San Francisco**, officially San Francisco County, was ~881,500. In 2020, that shrank by ~1.5%, or **13,400** people, the highest population loss by net flow in the Bay Area and the third highest by total number of people lost. Coupled with a five-figure drop in average median income among new community residents, this equates to **~$1.9 billion** leaving the city on the bay, an average of ~$145,000 per person income lost. This has left streets empty in the civic center.

The population of **Alameda County**, at ~1,700,00 in 2019, is anchored by the City of Oakland, which accounts for ~430,000, or ~25%, of total population. Alameda and Oakland suffered the highest total population loss by number at **16,000** but just the 3rd highest by percentage (1%). While the exodus from Alameda is 20% greater than in San Francisco, the loss of average median income is only ~41% as bad, so the net loss of total income is about the same as San Francisco at **$1.9 billion**. Top exit destinations for those leaving Alameda County in California were Los Angeles, San Diego and Sacramento. Top out of state destinations were Washingtom, Arizona and Nevada.

-29,400

-$3.8 billion

In 2021, the area's two largest cities are sitting on the dock of the bay down almost 30,000 people, at an average of nearly $127,000 per.

NET POPULATION & INCOME FLOW

County	San Francisco County	Alameda County
Net Population Flow	-13,000	-16,000
Net Population Flow %	-1.55%	-1.00%
Net Per Capita Income Flow $	-$12,524	-$5,205
Total Net Income Flow $	-$1.9 billion	-$1.9 billion

Contra Costa

Contra Costa is one of only two counties in the Bay Area to experience population growth in 2020, recording a gain of about **2,600** people, or .25% in area population. While the gain seems promising, this is a false indicator, as the new people to arrive and backfill negative population flow have decidedly less income than those they have replaced, about $20,000 less per year. The total loss adds up to an eye-opening **$825 million** — a huge loss in a county of less than 1.2 million. Top inbound sources of population were all from other area counties, specifically San Francisco, Santa Clara and Alameda. Top out of state sources were Arizona, Orgeon and Nevada.

+2,600

-$825 million

Contra Costa finds itself in a circumstance becoming more and more common in the US — Its population is growing but people's ability to contribute to the county economy is shrinking.

NET POPULATION & INCOME FLOW

County	Contra Costa County
Net Population Flow	**+2,600**
Net Population Flow %	**+0.25%**
Net Per Capita Income Flow $	**-$19,635**
Total Net Income Flow $	**-$825 million**

Sonoma, Napa and Santa Cruz

Each and every area analysis we conduct reveals data points that appear to be outliers and the Bay Area is no exception to this rule. However, examined in their broader context, these outliers appear to be well within the scope of patterns we have seen playing out at a US federal level, as well as internationally. We begin with Sonoma, the only county in the Bay Area to experience positive net growth and positive net income flow in 2020. In general, things are pretty fair in wine country.

+50

$ +$175 million

Sonoma is in the north of the Bay Area, in the heart of wine country. At ~500,000, Sonoma is sparsely populated. Foot traffic in 2020 was down about 40% versus 2019 but that is still twice as active as levels in more urban areas of the bay. Another **50** people, or .01% population will not shake up Sonoma too greatly but the extra money they have brought to the local economy, an estimated **$175 million**, will go a long way to help local business and lessors to survive during the coronavirus pandemic.

-375

$ -$39 million

Napa County is small and wealthy. Only about 140,000 people as of 2019 and with a stable median income influenced by a mix of working class laborers, small business owners, and **People with Money**. It is precisely because of this stability that the county has remained largely unscathed migration-wise by the economic effects of COVID-19. Truly, Napa stands out because of just how modest area impacts have been — a loss of just **375** people at about $1,000 per head, or **$39 million** total.

-4,000

$ -$170 million

Santa Cruz is a smallish county of about 275,000 bordering San Mateo to the north and Santa Clara to the east. While the county has lost the second highest percentage of people (1.5%) in the Bay Area, the total population loss is only about **4,000** people. More interestingly for analysis of this county, the people moving to Santa Cruz are raising per capita area income, with each bringing nearly $10,000 more net income to the county than residents averaged in 2019. The net result is a loss of total net income flow to the tune of ~**$170 million** but that's a drop in the bucket compared to the $6.4 billion that has abandoned Santa Cruz' Silicon Valley neighbors.

NET POPULATION & INCOME FLOW

County	Sonoma County	Napa County	Santa Cruz County
Net Population Flow	+50	-375	-4,041
Net Population Flow %	+0.01%	-0.27%	-1.48%
Net Per Capita Income Flow $	+$7,912	-$971	+$9,863
Total Net Income Flow $	+$175 million	-$39 million	-$170 million

Outliers at the county level look odd until you examine them with a broader lens. Combinations of indicators around migration, income and activity levels become obvious when the scope is broad enough and the zoom clear.

Highlights

HIGHEST % POPULATION LOSS

SAN FRANCISCO

-1.55%

GREATEST # POPULATION LOSS

ALAMEDA

-16,400

GREATEST LOSS OF INCOME

SANTA CLARA

-$4.5 billion

TOP AND ONLY NET GAINER

SONOMA

+50 people, +$175 million income

GAINING PEOPLE / LOSING $

CONTRA COSTA

+2,600 people, -$825 million income

UNACAST.COM 12

Takeaways

So what to do with all this data? How can it be applied to help people and businesses in the Bay Area rebound and build again? The answer lay in combining what location intelligence can tell us with more data from your given field of endeavour.

CRE INVESTORS AND DEVELOPERS

Let's use **Contra Costa** as an example. We know people are moving there but they have about $20,000 less in income per capita than residents of 2019. This indicates a need for more affordable housing on both a lease and sales bases. A strong bet in this category would be a multifamily residence (MFR) in an emerging area of the county. Where the population growth and income shirkinage trend exists, affordable MFRs may make sense. To drill-down to specific areas of opportunity, use our Emerging Areas dataset and cross reference against actual and forecasted projections in different locations.

PUBLIC SECTOR

Santa Clara used to be orange groves. Then it was a digital mecca. Now it is suddenly down $4.5 billion in area income and the associated tax base. That money will not return in 2021, nor perhaps for a very long time. Infrastructure planned for growth is now in doubt of even being needed. The tax dollars to support it aren't there either. A shift in population also means new requirements for everything from transit to public clinics, and the gravity to revisit current and proposed public private partnerships. Visualizations and our Location Data Toolkit is a low-barrier way to get started.

RETAILERS AND RESTAURATEURS

Santa Cruz is an evolving market. Though shrinking in population, the average income of new residents to the county in 2020 was about $10,000 higher than 2019 residents. This indicates the probability of more up-market tastes in food, clothing, personal services, and experiences of all kinds. Retailers and restaurateurs that previously eschewed Santa Cruz as an off-brand market may want to revisit wealth-to-population models in the county as well as have a look at our range of Neighborhood Activity indicators.

JOURNALISTS

Create **timely, data-driven** stories for your audience by using location intelligence to zoom-in on how foot traffic and human mobility affects the people, business and neighborhoods in your area. Craft content to help audiences understand the social and economic impacts of COVID-19. Tap the minds of data scientists on the global frontier of location analytics to inject an authentic, authoritative voice to local coverage. Ask us to receive an automated regular update on foot traffic, population flow and income trends in your area.

unacast.

TALKTOUS@UNACAST.COM