



Wages and Ethnic Mix: Differences and Similarities

May 2018

Executive Summary

This study examined recent data on wage levels across the greater Bay Area. The focus was on potential wage differentials among ethnic groups. The hypothesis is that Caucasian wages have been higher than under-represented groups otherwise in Marin County, California. Comparisons are made to the North Bay counties of Napa, Solano and Sonoma and also to the core Bay Area counties of Alameda, Contra Costa, San Francisco, San Mateo, and Santa Clara. Employment data and some demographic and housing data are shown also for comparison and context.

Some simple patterns emerge that support the hypothesis above.

Key Findings:

- Caucasian wages have been higher than under-represented groups since 1992 (the oldest data for a full calendar year in the Bureau of Labor Statistics tracking for these counties) to 2016 (the latest, full calendar year data);
- Asian-American wages have approached the Caucasian wage data and have exceeded for some specific industries as asked for by the client;
- Hispanic, African-American and Pacific Islander wages have consistently lagged behind the other two ethnic groups compared here;
- Employment levels have grown along with population diversity, where rising employment is a reflection of rising ethnic diversity in the greater Bay Area counties;
- Employment is regional, as are wage determinations, driven generally by supply and demand;
- Homeownership rates follow differences in wages, not in employment growth; and
- For the industry groups specifically identified (restaurant workers, construction, nurses, teacher aides and home health aides), wages are higher for Caucasian employees except for the core Bay Area counties where Asian-American wages are on par or slightly higher than Caucasian wages.
- County of Marin has 1,748 union workers and approximately 352 in non-union jobs. Wage distributions in the union ranks show relatively similar dispersions.

Wages and Ethnic Mix: Differences and Similarities

This project's goal is to examine household income, wages, commuting, and industry mix among employees and residents in Marin County. Demographic data would also be a part of this analysis, including the racial and ethnicity mix of the Marin County population and also its workforce.

Data are available at the county level for all 58 counties in California in terms of the ethnic/racial composition of workforce and wages. This can be compared to data on what industries have the most workers of each ethnicity/race also; the data start in 1992 quarter 1 and go to 2017 quarter 1 by quarter. These data come from the Census Bureau and Bureau of Labor Statistics in a joint project called Quarterly Workforce Indicators (QWI, see qwexplorer.ces.census.gov for more).

The Census Bureau, through its American Community Survey or ACS, provides data on median household income from work earnings (basically wages and salaries) by ethnicity or race, and also median household income (MHI) for residents of Marin County. As a way of comparison, we use the years 2010 and 2016. 2010 represents the bottom of the recent recession in the Bay Area and 2016 is the latest, annual data. Employer data are not available at the Census tract by ethnicity or race but high-level industry data, so-called NAICS 2-digit industry level data are available.

This report's structure is simple. We start by looking at aggregate jobs growth and wages across the Bay Area, including Marin County, since 1992. We then transition to look at wage comparisons by ethnicity for the Bay Area counties split into the North Bay (Napa, Solano and Sonoma), the Bay Area (Alameda, Contra Costa, San Francisco, San Mateo, Santa Clara), and Marin County alone. Employment is shown by ethnicity next, indexed to 1992 given the different size of each comparison area's labor market. Demographic changes provide as context as to the overall availability of workers by ethnicity, as does the commuting data across these nine counties. Data for the County of Marin are also summarized. Conclusions provide insight as to what these data show and may not show concerning long-term ethnicity differences in wages.

Overview of the Data

The wage data across the Bay Area and specific to Marin County are available quarterly from the Census Bureau through its Quarterly Workforce Indicators. The dates are Quarter 2 for 1992 to Quarter 2 2017. Figure 1 below shows the progression of wages and employment overall for Marin County versus the Bay Area since 1992, in real terms (purchasing power) as of 2009.

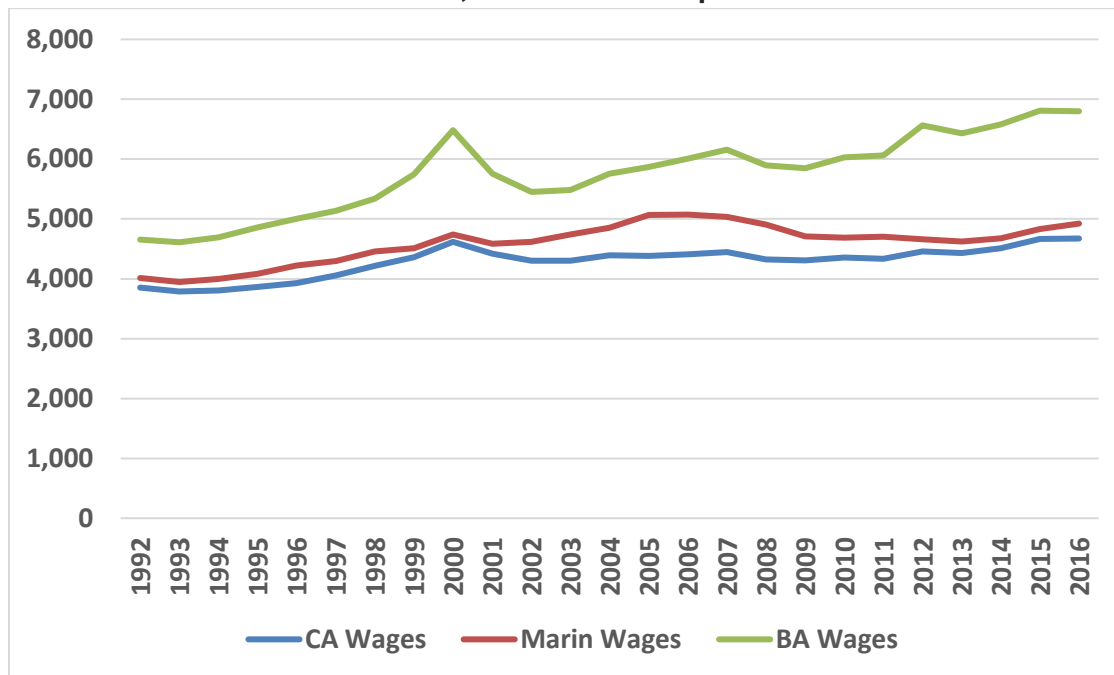
Figure 1 shows that the Bay has consistently had higher, aggregate wages than Marin County or the North Bay counties. A simple conclusion is that working in the five Bay Area counties (Alameda, Contra Costa, San Francisco, San Mateo, and Santa Clara) comes with higher pay.

Figure 2 shows that while the Bay Area employment levels have been rising faster since the recent recession (since 2009-10), historically the Bay Area counties, Marin County, and the North Bay counties all move together in a regional fashion through recession, recovery and growth periods.

We should expect that ethnic differences in wages are regional (no one place is more ethnically unequal versus another) and that over time wage growth happens across the region and across all ethnicities in some fashion. Two key issues are:

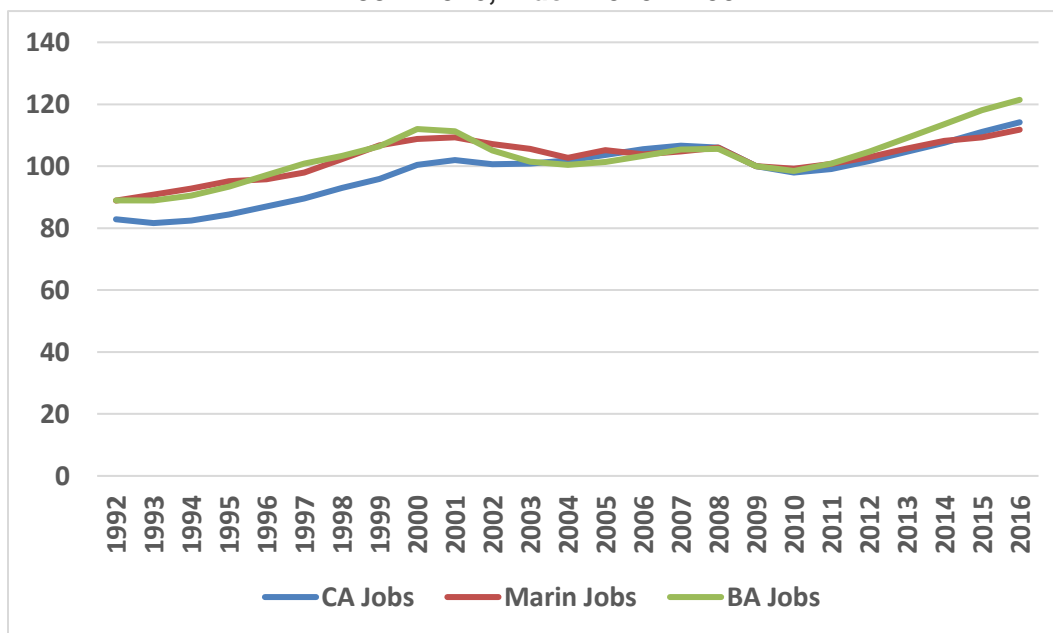
- Are there ethnic differences at all?; and
- Do these differences show up at both the aggregate and industry level?

Figure 1: Wages across Bay Area, Marin County and California on Average, 1992 – 2016, Current Dollars per month



Source: QWI Explorer (qwiexplorer.ces.census.gov) and Author's Calculations

Figure 2: Employment across Bay Area, Marin County and California on Average, 1992 -2016, Index 2010 = 100



Source: QWI Explorer (qwiexplorer.ces.census.gov) and Author's Calculations

As shown below, this study looks at specific, focal industries and aggregate differences by ethnicity. Notice in both Figures 1 and 2 that there is a strong correlation between both wages and employment levels for these comparison areas.

Wages and Ethnicity: Marin County and Bay Area

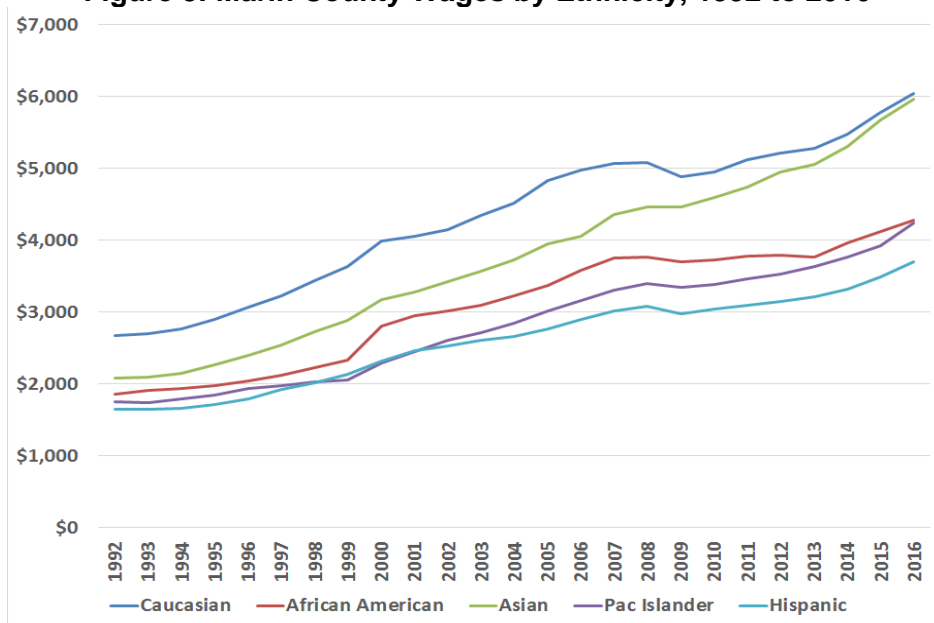
Figures 1 and 2 show the evolution of real wages and employment levels are similar across the Bay Area and California. The reason for these connections is simple: labor markets are regional, and the California economy is a macrocosm of its regional areas. As jobs have grown and recessed and recovered along with the California business cycle, the Bay Area has been a driving force in creating employment.

What we look at in this section is the evolution of wages by ethnicity. The specific data for employment in the following industries by ethnicity is also shown in this section. We start with a regional look at each of the comparison areas in the aggregate sense. Figure 3 shows wages by ethnicity for Marin County since 1992, the median wage by major ethnic group.

Ethnic Groups	Industry Focus
<ul style="list-style-type: none"> • Hispanic • White • African-American • Asian-American • Pacific Islander 	<ul style="list-style-type: none"> • Restaurants • Construction • Nursing • Teacher Aides • County workers (non-management) • Home Health Aides

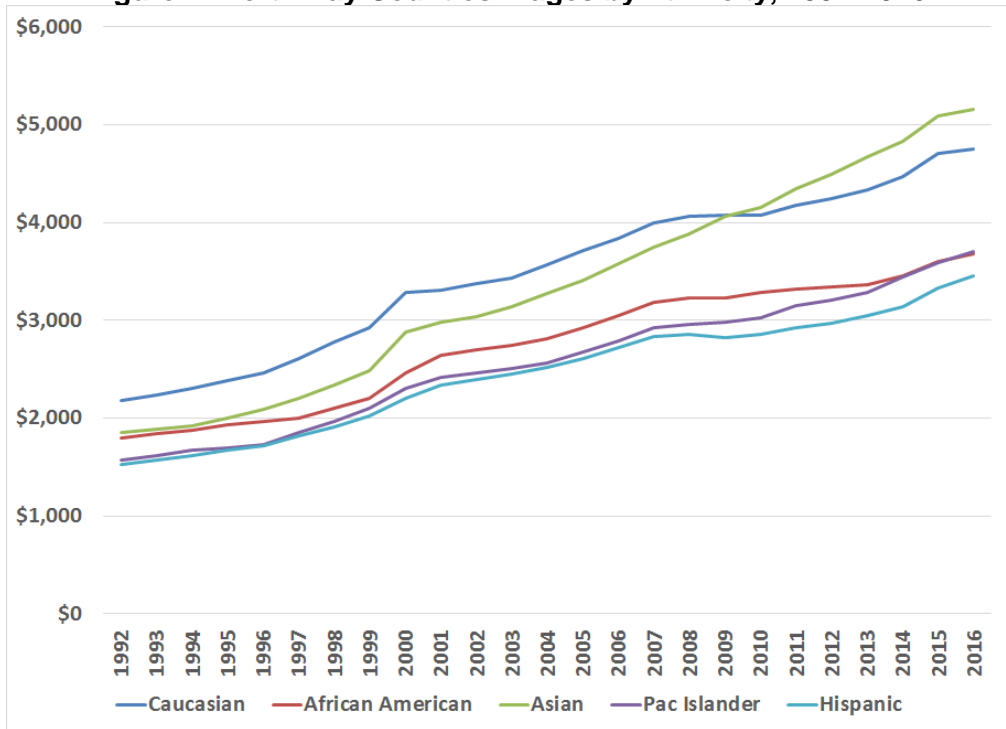
Aggregate Data

Figure 3: Marin County Wages by Ethnicity, 1992 to 2016



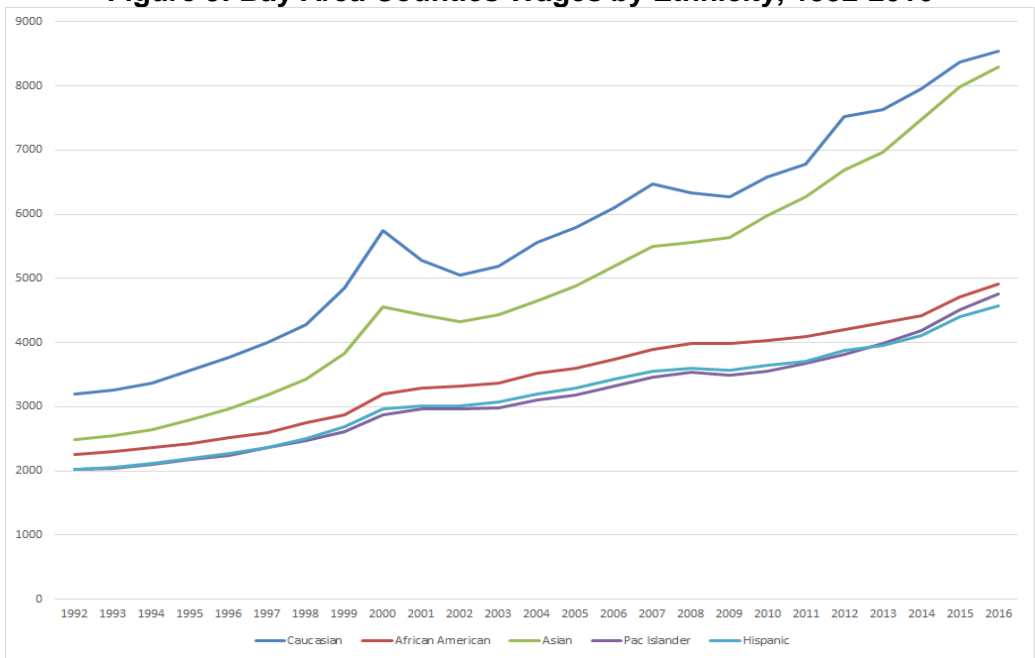
Source: QWI Explorer (qwiexplorer.ces.census.gov) and Author's Calculations

Figure 4: North Bay Counties Wages by Ethnicity, 1992-2016



Source: QWI Explorer (qwiexplorer.ces.census.gov) and Author's Calculations

Figure 5: Bay Area Counties Wages by Ethnicity, 1992-2016



Source: QWI Explorer (qwiexplorer.ces.census.gov) and Author's Calculations

Figure 3, 4 and 5 show there are differences in wages for Caucasian and Asian workers, where African-American, Pacific Islander and Hispanic workers are all moving together and at lower wages across all comparison areas. In the North Bay, Asian wages have increased beyond Caucasian at the median. Figures 6 through 9 show similar patterns for specific industries.

**Figure 6: Focal Industries and Wages by Ethnicity, Caucasian
Monthly Averages, 2010 and 2016**

Industry	Marin County		North Bay		Bay Area	
	2010	2016	2010	2016	2010	2016
Restaurant Servers And Staff	\$1,862	\$2,322	\$1,588	\$2,033	\$1,813	\$2,187
Construction Workers (Not Foremen Or Owner)	\$4,839	\$5,811	\$4,839	\$5,811	\$4,839	\$5,811
Nurses	\$3,313	\$3,838	\$2,972	\$3,493	\$3,221	\$3,915
Teachers' Aides	\$3,347	\$3,125	\$2,688	\$1,624	\$2,232	\$2,376
Home Health Aides	\$1,546	\$2,444	\$1,717	\$1,976	\$1,361	\$2,756

**Figure 7: Focal Industries and Wages by Ethnicity, Hispanic
% of Caucasian in Figure 6, 2010 and 2016**

Industry	Marin County		North Bay		Bay Area	
	2010	2016	2010	2016	2010	2016
Restaurant Servers And Staff	86.3%	88.0%	88.5%	89.0%	77.6%	82.7%
Construction Workers (Not Foremen Or Owner)	76.9%	77.3%	75.5%	81.7%	75.5%	81.7%
Nurses	73.7%	74.2%	74.1%	75.5%	68.3%	67.4%
Teachers' Aides	79.4%	78.8%	79.5%	75.4%	95.7%	51.5%
Home Health Aides	96.3%	89.3%	70.4%	123.3%	88.8%	88.4%

**Figure 8: Focal Industries and Wages by Ethnicity, African American
% of Caucasian in Figure 6, 2010 and 2016**

Industry	Marin County		North Bay		Bay Area	
	2010	2016	2010	2016	2010	2016
Restaurant Servers And Staff	82.2%	83.5%	82.6%	80.7%	83.4%	90.7%
Construction Workers (Not Foremen Or Owner)	69.0%	69.6%	69.0%	69.6%	69.0%	69.6%
Nurses	82.1%	84.2%	82.0%	83.0%	85.8%	77.5%
Teachers' Aides	71.7%	68.9%	76.3%	60.0%	99.3%	90.0%
Home Health Aides	75.1%	98.9%	102.9%	103.8%	84.5%	87.5%

**Figure 9: Focal Industries and Wages by Ethnicity, Asian American
% of Caucasian in Figure 6, 2010 and 2016**

Industry	Marin County		North Bay		Bay Area	
	2010	2016	2010	2016	2010	2016
Restaurant Servers And Staff	92.7%	96.4%	92.4%	96.8%	92.8%	105.3%
Construction Workers (Not Foremen Or Owner)	76.8%	83.0%	76.8%	83.0%	76.8%	83.0%
Nurses	101.5%	91.3%	92.3%	94.2%	96.6%	91.3%
Teachers' Aides	85.2%	98.4%	49.3%	68.0%	70.6%	76.1%
Home Health Aides	102.1%	130.6%	71.9%	72.5%	69.5%	86.5%

Source: QWI Explorer (qwiexplorer.ces.census.gov)

Note:

North Bay = Napa, Solano and Sonoma counties;

Bay Area = San Mateo, San Francisco, Santa Clara, Alameda, and Contra Costa counties.

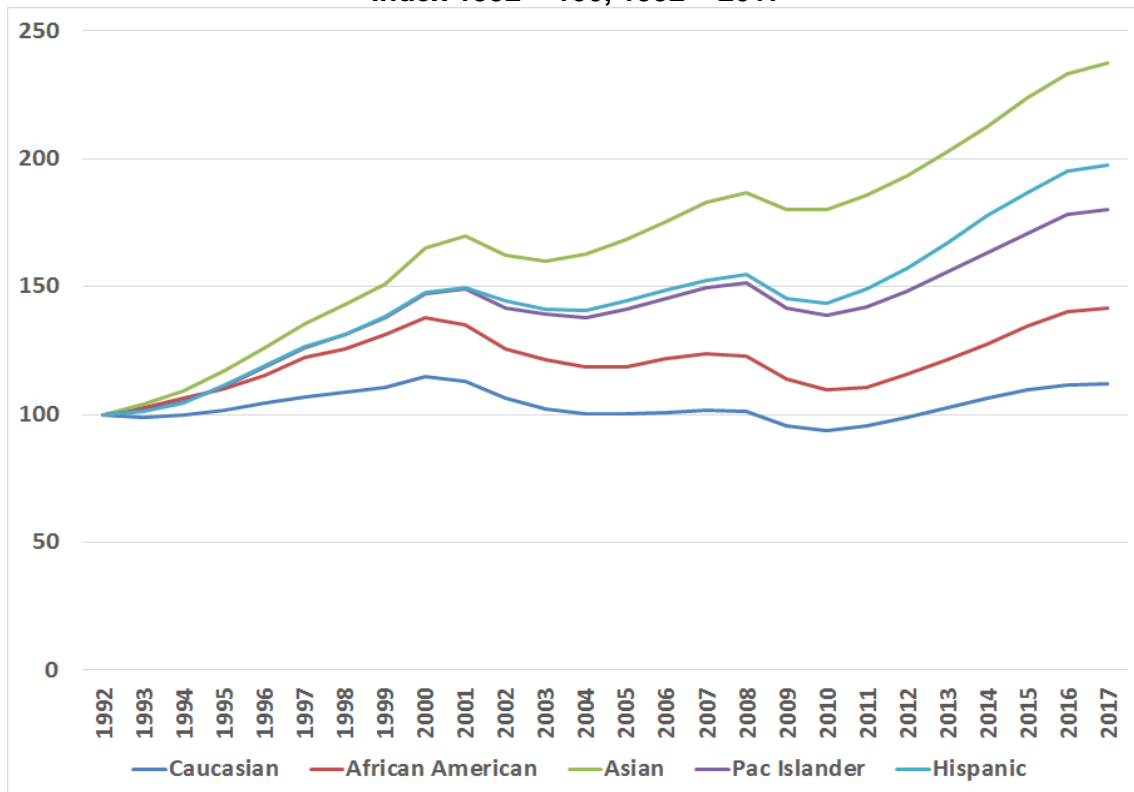
Employment by Ethnicity: Marin County and the Bay Area

In a similar way to wages, employment levels are also a concern. Has job growth been skewed toward Caucasian residents? With population growth becoming more diverse, job growth has actually been more diverse as well.

Labor markets work on supply and demand, like other markets, and the regional population mix determines in many cases the employment mix by ethnicity. However, there are multiple factors that help determine the ethnic mix of regional employment. We are showing here just simple data on the proportional mix of the major ethnic groups investigated here. The aggregate employment for Marin County, the Bay Area and California are shown first, then a breakdown by the industries of focus. Notice the growth Asian workers has outpaced the growth of other ethnicities in the workforce.

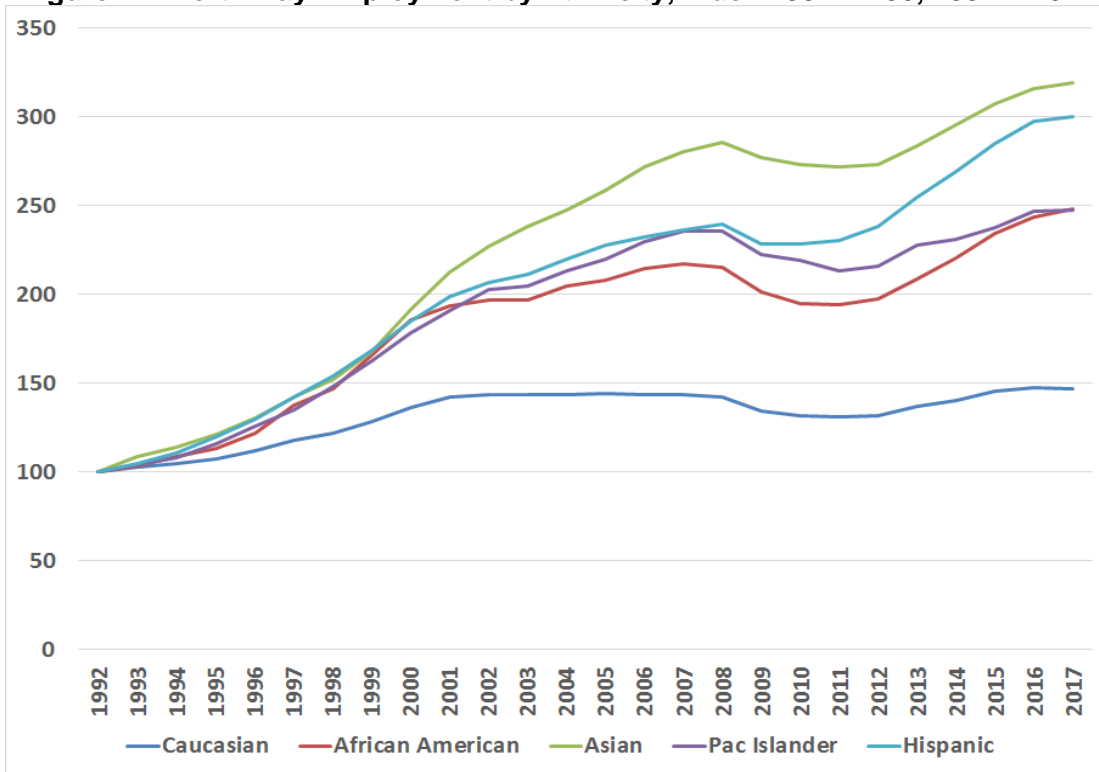
Aggregate Data

Figure 10: Bay Area Counties Employment by Ethnicity
Index 1992 = 100, 1992 – 2017



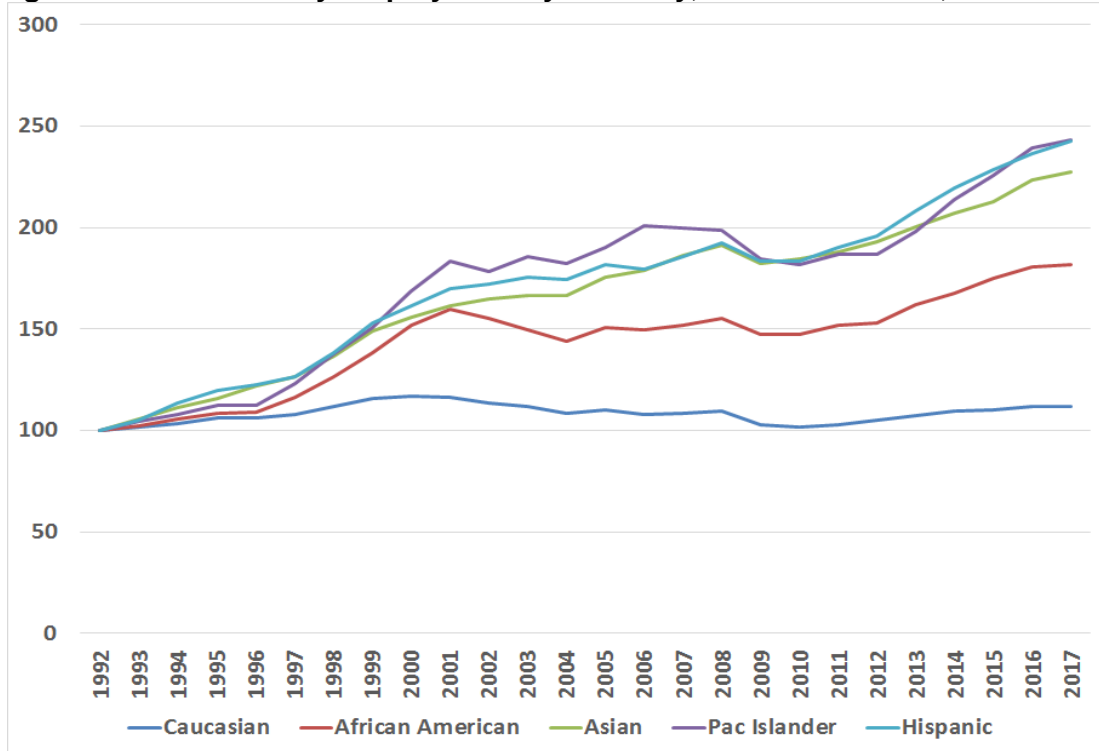
Source: QWI Explorer (qwiexplorer.ces.census.gov) and Author's Calculations

Figure 11: North Bay Employment by Ethnicity, Index 1992 = 100, 1992 – 2017



Source: QWI Explorer (qwiexplorer.ces.census.gov) and Author's Calculations

Figure 12: Marin County Employment by Ethnicity, Index 1992 = 100, 1992 – 2017



Source: QWI Explorer (qwiexplorer.ces.census.gov) and Author's Calculations

Housing and Demography: Quick Overview and Context

This section provides context on homeownership versus rental and also costs of housing by ethnicity. Further, there is data here on the counties in question and the proportions of their populations by ethnicity to provide context as to the available, regional labor force.

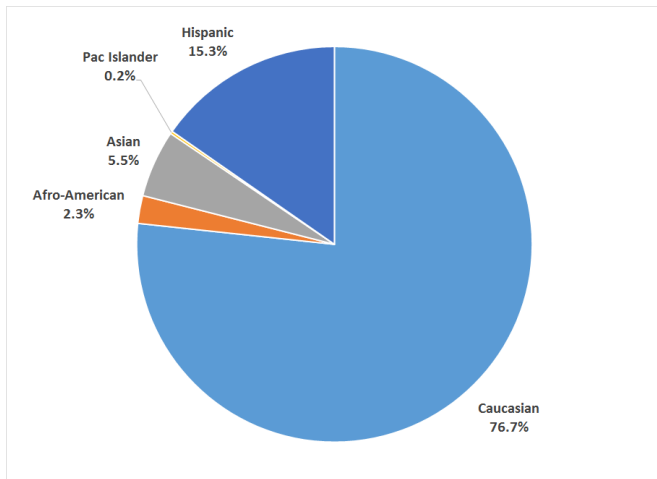
Figure 13: Households (HH) by Ethnicity, Marin County and Bay Area, 2016

Area	Caucasian	Afro-American	Asian	Pac Islander	Hispanic
Marin	89,767	1,867	5,324	127	10,106
North Bay	285,366	24,601	28,236	1,386	69,825
Bay Area	1,231,079	152,475	571,802	10,797	373,518
Homeowners	As a % of HH				
Marin	67.5%	25.4%	62.1%	32.3%	29.3%
North Bay	63.8%	42.6%	64.1%	47.8%	43.1%
Bay Area	57.9%	32.2%	58.8%	36.7%	39.1%

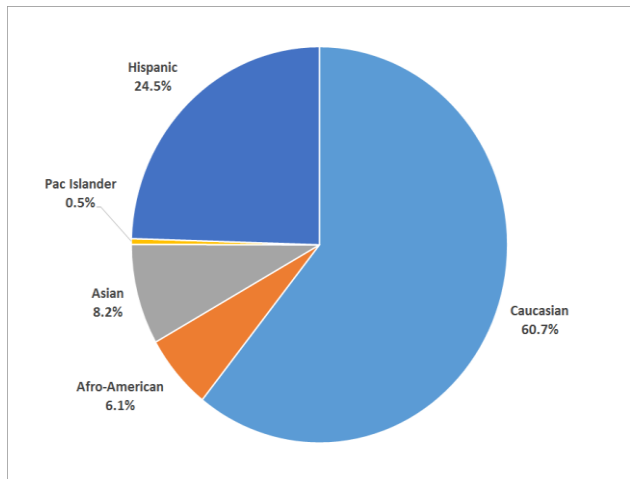
Source: American Community Survey, 2016 5yr Sample, Renters are 100% less the stated homeowner rate

Figure 15: Population Mix, 2016, Selected Areas

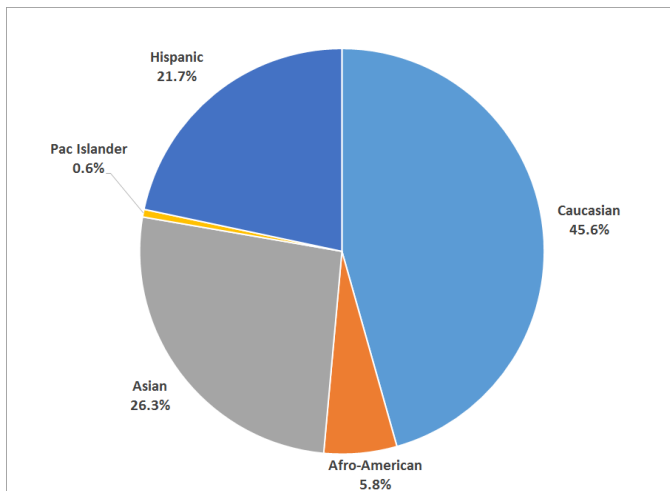
Marin County Population, Ethnic Mix, 2016



North Bay Counties, Ethnic Mix, 2016



Bay Area Population, Ethnic Mix, 2016

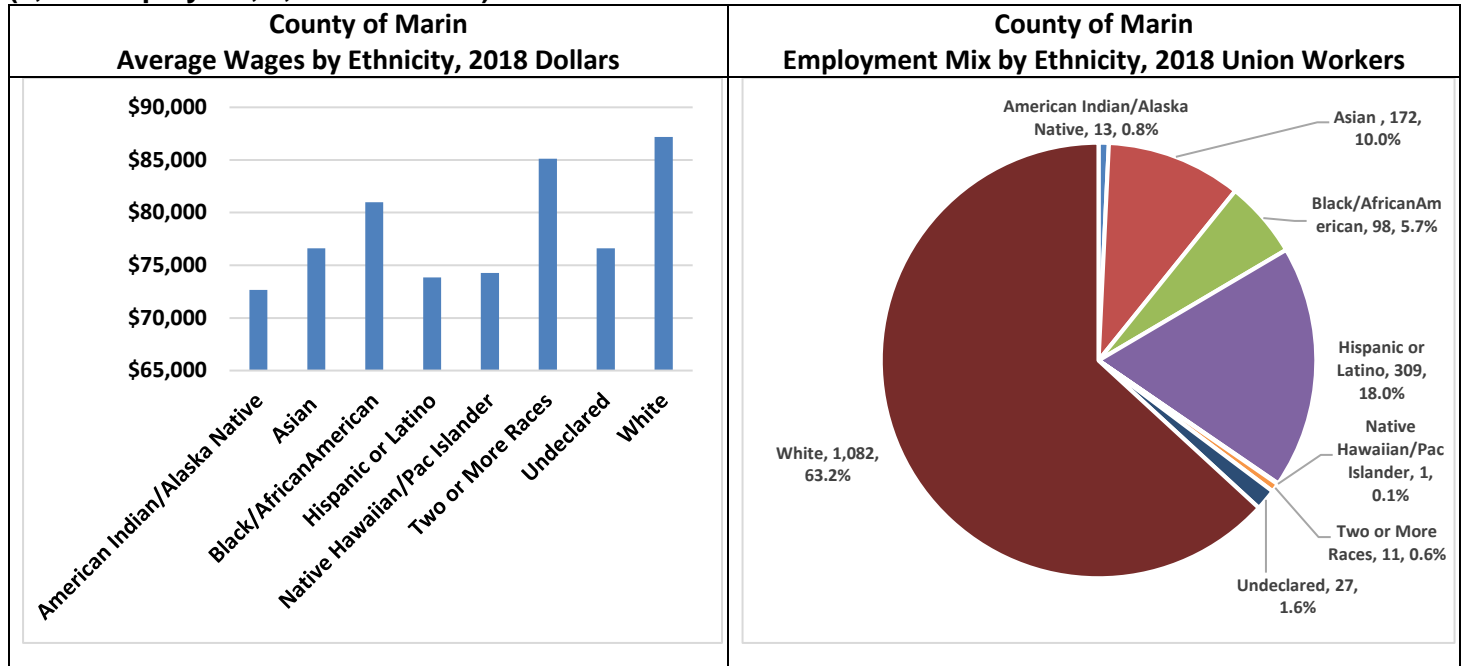


Source: American Community Survey, 2016 5yr Sample

County of Marin Wages and Ethnicities

The data in this section is for the County of Marin as an employer. These data provide more insight as to the represented (union) workers and also the ethnicities of these workers, including their wage distributions.

Wage and Workers by Ethnicity, County of Marin Unionized Staff (2,090 employees, 1,713 are union)



Conclusions

The wage data show that across the Bay Area there are wage differentials among ethnic groups. Asian American workers have made the most gains in terms of reducing an ethnicity gap that has historically favored Caucasian workers. This simple, comparative analysis shows these changes in both the aggregate and for specific job categories (restaurant workers, construction, teacher aides, home health aid workers, and nurses).

The employment data shows that the mix of workers basically follows the population mix and that there has been more growth of under-represented group employment versus Caucasian since 1992. This is true across the Bay Area. Marin County still remains a place where the population is relatively Caucasian and lacks the same population diversity as both the North Bay counties (Napa, Sonoma, and Solano) and Bay Area counties (Alameda, Contra Costa, San Francisco, San Mateo, Santa Clara).

Housing data suggests that homeownership may follow wage differentials. Caucasian and Asian-American home ownership rates are relatively high versus other ethnic groups, and wages follow this differential.

A deeper analysis and comparisons to broader areas may show more about how these trends are specific to the population/labor force mix or are in fact specific to the greater Bay Area, including Marin County and the North Bay.

Appendix: Focal Industries and Employment by Ethnicity

In each of the following figures, a “matrix” is provided to show specific labor-market characteristics for the industries of focus. Each of the matrices has the following data points summarized:

- wage distribution
- year over year growth number
- percent of total work-force
- number who live in Marin
- Distribution of total incomes in Marin - with Median and mean
- Distribution of total wages in Marin - with Median and mean

Figure 1-A: Marin County Focal Industry Data by Ethnicity

Hispanic

2010	Median Wage	year over year growth number	percent of total work-force	number who live in Marin	Wage as % of	Wage as % of
					countywide median HH Income	Countywide median wage
Total Hispanic Workers in Marin				11,750		
Restaurant Servers And Staff	\$1,607	1.6%	2.1%	2,015	23.4%	41.6%
Construction Workers (Not Foremen Or Owner)	\$3,723	5.3%	0.9%	844	54.2%	96.3%
Nurses	\$2,441	0.1%	0.6%	599	35.6%	63.2%
Teachers’ Aides	\$2,656	0.9%	0.1%	82	38.7%	68.7%
Home Health Aides	\$1,489	1.5%	0.6%	611	21.7%	38.5%
Marin County Totals (annual)				97,407	\$82,383	\$46,370
				Workers	MHI	Annual Median Wage

2016	Median Wage	year over year growth number	percent of total work-force	number who live in Marin	Wage as % of	Wage as % of
					countywide median HH Income	Countywide median wage
Total Hispanic Workers in Marin				13,001		
Restaurant Servers And Staff	\$2,043	9.0%	2.8%	3,012	24.4%	50.6%
Construction Workers (Not Foremen Or Owner)	\$4,489	9.5%	1.1%	1,115	53.7%	111.3%
Nurses	\$2,849	6.4%	0.8%	824	34.1%	70.6%
Teachers’ Aides	\$2,462	-12.9%	0.1%	117	29.5%	61.0%
Home Health Aides	\$2,183	2.5%	0.3%	295	26.1%	54.1%
Marin County Totals (annual)				105,779	\$100,310	\$48,410
				Workers	MHI	Annual Median Wage

Caucasian

	Median Wage	year over year growth number	percent of total work-force	number who live in Marin	Wage as % of countywide median HH Income	Wage as % of Countywide median wage
2010						
Total Caucasian Workers in Marin				82,859		
Restaurant Servers And Staff	\$1,862	2.20%	5.6%	5,496	27.1%	48.2%
Construction Workers (Not Foremen Or Owner)	\$4,839	5.90%	5.1%	4,976	70.5%	125.2%
Nurses	\$3,313	0.30%	0.4%	373	48.3%	85.7%
Teachers' Aides	\$3,347	1.98%	0.9%	836	48.8%	86.6%
Home Health Aides	\$1,546	0.60%	1.4%	1,325	22.5%	40.0%
Marin County Totals (annual)				97,407	\$82,383	\$46,370
				Workers	MHI	Annual Median Wage

	Median Wage	year over year growth number	percent of total work-force	number who live in Marin	Wage as % of countywide median HH Income	Wage as % of Countywide median wage
2016						
Total Caucasian Workers in Marin				89,661		
Restaurant Servers And Staff	\$2,322	4.50%	7.1%	7,507	27.8%	57.6%
Construction Workers (Not Foremen Or Owner)	\$5,811	16.40%	5.6%	5,964	69.5%	144.0%
Nurses	\$3,838	5.60%	0.3%	293	45.9%	95.1%
Teachers' Aides	\$3,125	-8.60%	1.0%	1,057	37.4%	77.5%
Home Health Aides	\$2,444	-1.61%	0.5%	540	29.2%	60.6%
Marin County Totals (annual)				105,779	\$100,310	\$48,410
				Workers	MHI	Annual Median Wage

African American

2010

	Median Wage	year over year growth number	percent of total work-force	number who live in Marin	Wage as % of countywide median HH Income	Wage as % of Countywide median wage
Total African-American Workers in Marin				3,365		
Restaurant Servers And Staff	\$1,530	3.50%	0.33%	319	22.3%	39.6%
Construction Workers (Not Foremen Or Owner)	\$3,338	4.30%	0.19%	183	48.6%	86.4%
Nurses	\$2,720	-3.68%	0.11%	107	39.6%	70.4%
Teachers' Aides	\$2,400	0.00%	0.02%	18	35.0%	62.1%
Home Health Aides	\$1,161	-2.68%	0.20%	193	16.9%	30.0%
Marin County Totals (annual)				97,407	\$82,383	\$46,370
				Workers	MHI	Annual Median Wage

2016

	Median Wage	year over year growth number	percent of total work-force	number who live in Marin	Wage as % of countywide median HH Income	Wage as % of Countywide median wage
Total African-American Workers in Marin				4,017		
Restaurant Servers And Staff	\$1,940	7.77%	0.53%	556	23.2%	48.1%
Construction Workers (Not Foremen Or Owner)	\$4,047	3.70%	0.27%	290	48.4%	100.3%
Nurses	\$3,230	5.67%	0.10%	108	38.6%	80.1%
Teachers' Aides	\$2,153	-11.10%	0.05%	50	25.8%	53.4%
Home Health Aides	\$2,418	-9.13%	0.04%	46	28.9%	59.9%
Marin County Totals (annual)				105,779	\$100,310	\$48,410
				Workers	MHI	Annual Median Wage

2010

	Median Wage	year over year growth number	percent of total work-force	number who live in Marin	Wage as % of countywide median HH Income	Wage as % of Countywide median wage
Total Asian-American Workers in Marin				8,042		
Restaurant Servers And Staff	\$1,726	3.50%	1.2%	1,186	25.1%	44.7%
Construction Workers (Not Foremen Or Owner)	\$3,715	-0.30%	0.3%	266	54.1%	96.1%
Nurses	\$3,364	0.20%	0.4%	393	49.0%	87.1%
Teachers' Aides	\$2,853	8.20%	0.1%	49	41.6%	73.8%
Home Health Aides	\$1,578	-3.78%	0.3%	283	23.0%	40.8%
Marin County Totals (annual)				97,407	\$82,383	\$46,370
				Workers	MHI	Annual Median Wage

2016

	Median Wage	year over year growth number	percent of total work-force	number who live in Marin	Wage as % of countywide median HH Income	Wage as % of Countywide median wage
Total Asian-American Workers in Marin				8,564		
Restaurant Servers And Staff	\$2,239	6.10%	1.4%	1,477	26.8%	55.5%
Construction Workers (Not Foremen Or Owner)	\$4,823	16.50%	0.4%	387	57.7%	119.6%
Nurses	\$3,506	4.81%	0.4%	391	41.9%	86.9%
Teachers' Aides	\$3,074	2.90%	0.0%	52	36.8%	76.2%
Home Health Aides	\$3,193	8.49%	0.1%	115	38.2%	79.1%
Marin County Totals (annual)				105,779	\$100,310	\$48,410
				Workers	MHI	Annual Median Wage

Workers at Jobs in Marin County Overall

Industry	2010 Employment	2016 Employment
Restaurant Servers And Staff	8,809	11,303
Construction Workers (Not Foremen Or Owner)	5,662	6,698
Nurses	2,631	3,079
Teachers' Aides	914	664
Home Health Aides	1,564	731

Figure 2-A

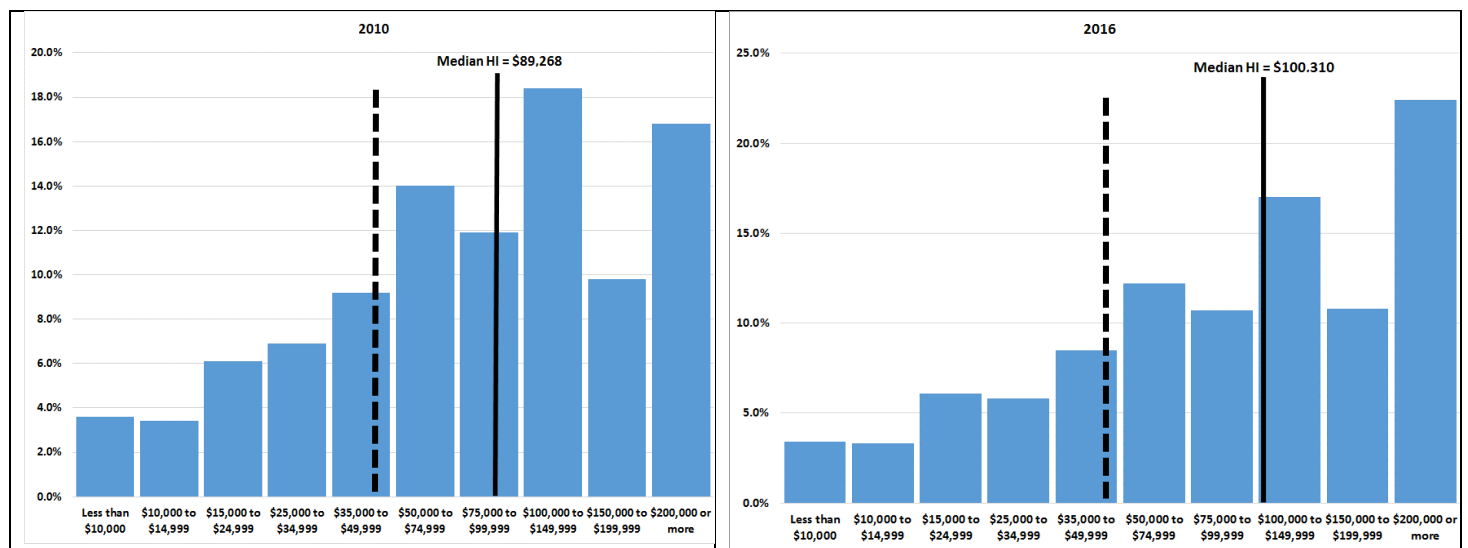
2016 Quarter 1 Ethnic Mix in Marin County: Working in Marin

Ethnicity	Jobs	% of Total
White/Caucasian	88,487	64.8%
Black or African American	6,862	5.0%
American Indian or Alaska Native	933	0.7%
Asian	12,868	9.4%
Native Hawaiian or Other Pacific Islander	422	0.3%
Two or More Race Groups	2,899	2.1%
Hispanic or Latino	19,897	17.7%
Totals	132,368	100.0%

2016 Quarter 1 Ethnic Mix in Marin County: Residents that are Working (could be anywhere, but live in Marin)

Ethnicity	Jobs	% of Total
White/Caucasian	89,661	74.3%
Black or African American	4,017	3.3%
American Indian or Alaska Native	714	0.6%
Asian	8,564	7.1%
Native Hawaiian or Other Pacific Islander	283	0.2%
Two or More Race Groups	2,540	2.1%
Hispanic or Latino	13,001	17.7%
Totals	118,780	100.0%

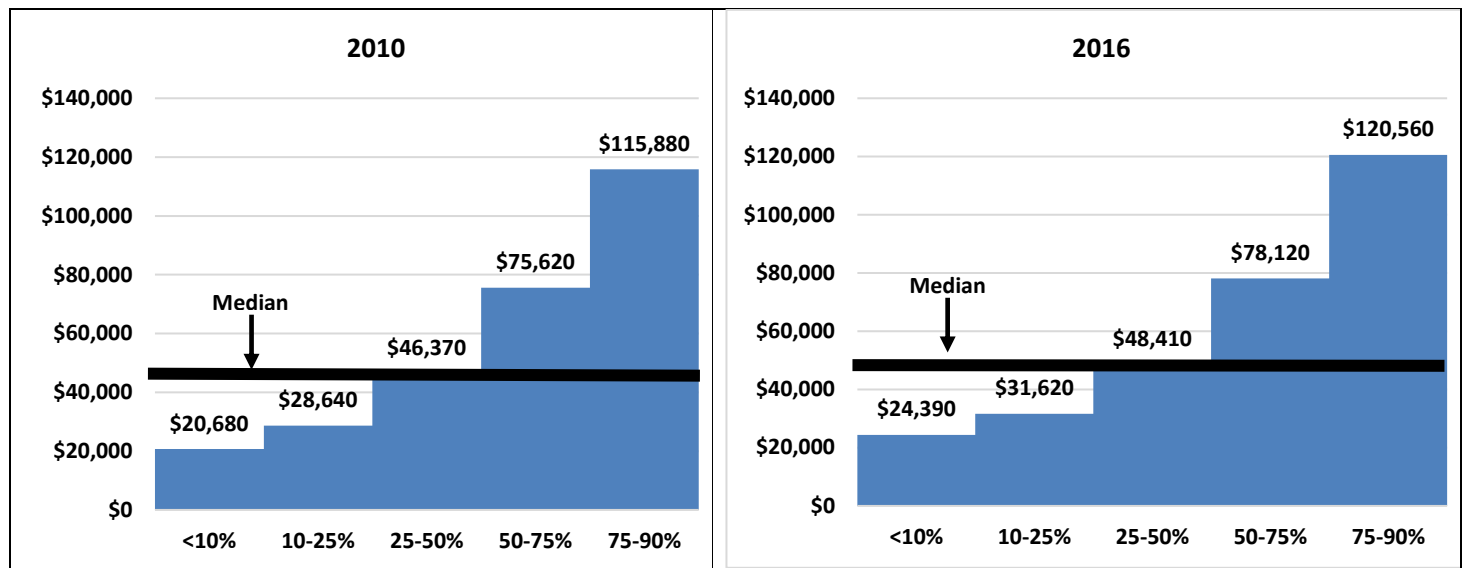
Figure 3-A: Median Household Income and Income Brackets, 2010 and 2016
Dotted Lines are Median Annual Wage Levels by Year for 2010 and 2016



Source: Bureau of Labor Statistics

Figure 3-A shows the distribution of household incomes. In 2016, approximately 10.5 percent of households made between \$75,000 and \$99,999, for example.

Figure 4-A: Median Wage and Distribution Based on Wages



Source: Bureau of Labor Statistics

Figure 4-A has the following interpretation:

- In 2016, 15 percent of workers made between \$24,390 and \$31,620 annually at jobs in Marin County;
- The median wage was \$48,310 according to the Bureau of Labor Statistics in 2016; and
- In 2010, 15 percent of workers made between \$75,620 and \$115,880, and 10 percent of workers made more than \$115,880.

Data Sources

American Community Survey, Census Bureau, 2016 5yr Survey
<http://factfinder.census.gov>

Bureau of Labor Statistics, Occupational Employment Statistics (OES),
<https://www.bls.gov/oes/home.htm>

Quarterly Workforce Indicators, Census Bureau and Bureau of Labor Statistics, 1992 - 2017
<http://qwiexplorer.ces.census.gov>