

Bay Area Employment Changes

Trouble in the Tech World?

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Bay Area Employment Changes

Trouble in the Tech World?

Key Observations for the Bay Area & Silicon Valley

- Annual employment growth nationwide has been declining for more than two years. Although it started several months later, declines in growth rates have also occurred in California and the Bay Area; declines that are significantly more pronounced than they are nationwide.
- Within the Bay Area, year over year employment growth has dropped precipitously in the last several months.
- Employment declines in the technology sector appear to be an important factor in the recent slowing of overall growth rates. This is particularly true in broader Silicon Valley (including San Francisco).
- Within Silicon Valley, the technology declines are most prominent in the San Francisco MD where information sector employment has been declining at an annual rate of 7.2%.
- Silicon Valley has had growth rates among the fastest in the nation in the technology sector throughout the recovery. In recent months, both the San Jose MSA and the San Francisco MD have fallen out of the top 20 when ranked among the largest 100 MSAs nationwide.

Overall Summary

- Changes in technology employment are happening faster in broader Silicon Valley than elsewhere. This is a sign that perhaps something unique is once again happening in the Bay Area.
- Other parts of the local economy are also in decline. The extent to which this is a result of other forces or caused by the slowdown in the technology sector remains to be seen.
- Arrows are starting to point in the direction of an economic downturn in the Bay Area. This is deeply troubling.
- A particular area of discomfort comes from apparent weakness in the overall stock market in recent weeks.
- Should a stock market correction occur in earnest, this could significantly accelerate the employment declines in Silicon Valley and the Bay Area, bringing with it a full fledged recession.
- This document is not projecting a recession, but merely pointing out that it is not at all out of the question.

1. Overall Trends in Employment Growth

Recent data releases by the Bureau of Labor Statistics (BLS) and California’s Employment Development Division (EDD) have pointed to significantly slowing growth in employment in both California and the Bay Area. Figure 1-1 illustrates this slowdown. The figure plots year over year percentage growth in employment in the United States, California, the Bay Area, and in California outside of the Bay Area.

For all regions, there appears to be a slowing of employment growth that goes back to late 2014 or early 2015. Nationwide, the slowdown appears to have begun in late 2014, while California’s slowdown appears to begin in Spring of 2015. In recent months, the slowdown in the state appears to be heavily concentrated in the Bay Area. The last couple of months have witnessed significant declines in Bay Area employment, while the rest of the state has experienced increases.

Growth in Total Nonfarm Payrolls: Nation, State, and Bay Area

Figure 1 - 1: Growth During the Recent Recovery

Figure 1 - 2: Historical Growth

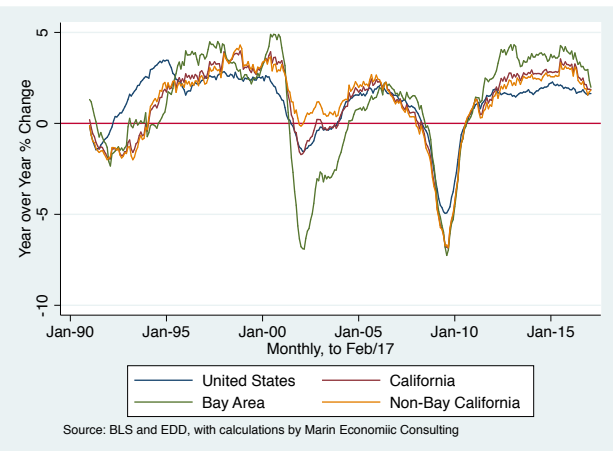
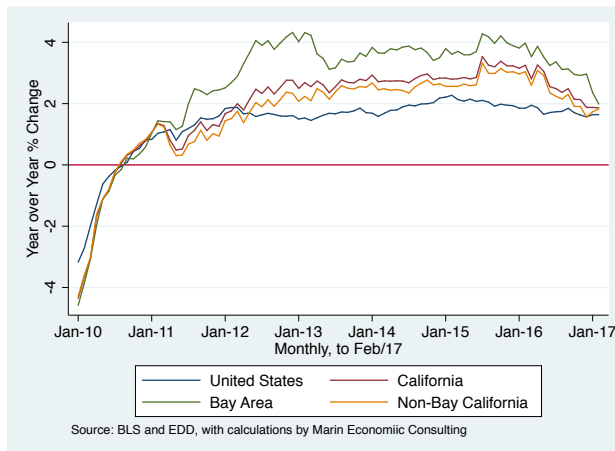


Figure 1-3 focuses on the Bay Area and the two regions that were major sources of job creation in the Bay Area during the recovery: the San Francisco Metropolitan District (MD) and the San Jose Metropolitan Statistical Area (MSA).¹ The figure includes the Bay Area as a whole, the two regions just mentioned, and an indication of employment growth in the rest of the Bay Area.² It is clear both that the San Francisco MD has experienced the fastest job growth throughout the recovery and that employment growth is declining faster there than elsewhere.

These trends are deeply troubling. Looking back through history (Figure 1-4), employment growth ebbs and flows. Although there are instances where the ebb was relatively short-lived, the only example in the last 25 years occurred during a very unique time in the Bay Area: the dot.com bubble. Accordingly, it appears very much as though employment growth is waning and may well continue to do so.

¹The San Francisco MD includes Marin, San Francisco, and San Mateo Counties. The San Jose MSA includes Santa Clara and San Benito Counties.

²The rest of the Bay Area includes Alameda, Contra Costa, Napa, Solano, and Sonoma counties.

Growth in Total Nonfarm Payrolls: Bay Area

Figure 1 - 3: Growth During the Recent Recovery

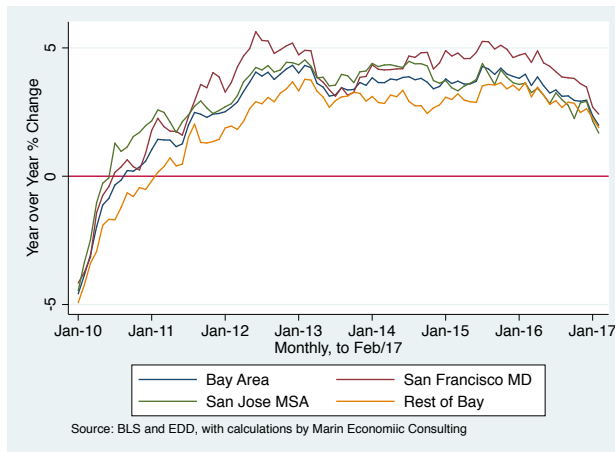
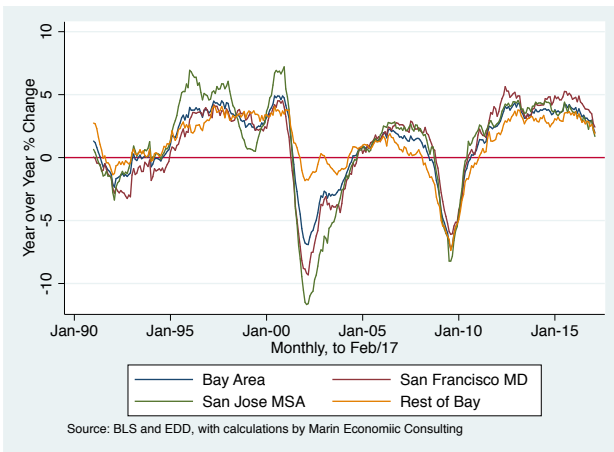


Figure 1 - 4: Historical Growth



2. What's Tech Got to Do With It?

An important driver of employment growth in the Bay Area and Silicon Valley, in particular, has been the technology sector.³ Over the course of the recovery, employment growth in the nation as a whole has been right around 2% per year, whereas it has been around 3% in California, and frequently near or above 4% in the Bay area (Figure 1-1). At the same time, the technology sector in the Bay Area has generally grown at a rate in excess 5% on an annual basis (Figure 2-1).

Growth in Tech Sector Employment: Nation, State, and Bay Area

Figure 2 - 1: Growth During the Recent Recovery

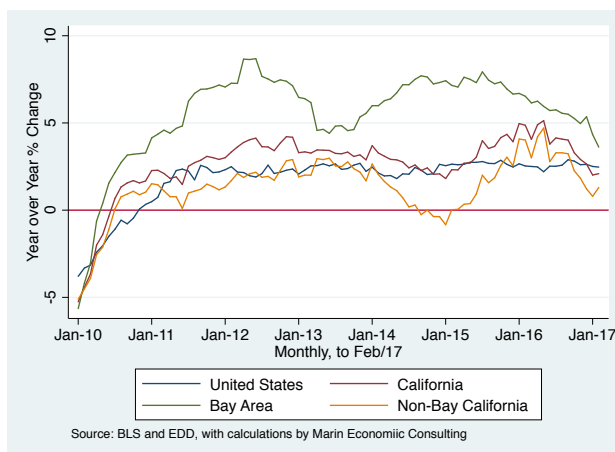
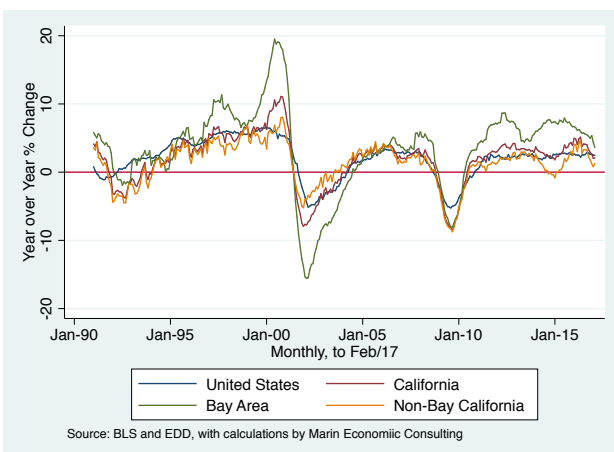


Figure 2 - 2: Historical Growth



Within the Bay Area, most of this growth has come from Silicon Valley and San Francisco. The San Francisco MD has seen growth rates frequently in excess of 10% year over year and at one point flirted with an annual growth rate

³The technology sector here includes Information Services (NAICS 51) and Professional, Scientific, and Technical Services (NAICS 54), and Computer and Electronic Manufacturing (NAICS 334).

of 15%. The San Jose MSA has grown more steadily, but at or near the 5% mark until mid-2015. Employment growth throughout the region (Silicon Valley and San Francisco) began to slow in early 2015. So far in early 2017, technology employment in San Francisco has declined very significantly. Over the last quarter, technology employment in the San Francisco MD has been declining at more than a 4% annual rate. The San Jose MSA has experienced declines – limited to the information services sector – but has not seen the dramatic reductions happening in the San Francisco MD.

Growth in Tech Sector Employment: Bay Area

Figure 2 - 3: Growth During the Recent Recovery

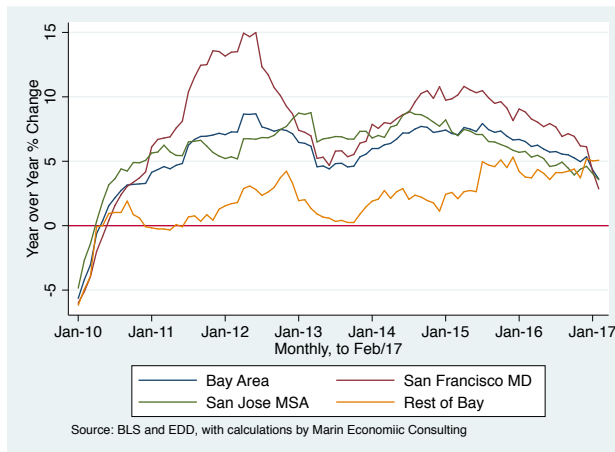


Figure 2 - 4: Historical Growth

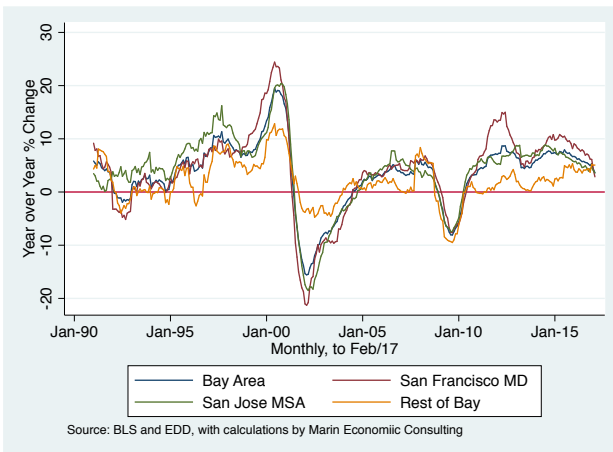


Figure 2-5 highlights the differential rate of growth in the Bay Area’s technology and non-technology sectors. Other than for a brief period in early 2013, growth in the technology sector has far outpaced growth in the rest of the economy. By the same token, the rate of decline in employment growth in the technology sector is much more dramatic than in the rest of the Bay Area. This has been a common trend throughout the last 25 years in the Bay Area: the technology sector is an important source of employment growth, and conversely, a significant source of employment declines (Figure 2-6).⁴

The role that technology has played in employment growth in broader Silicon Valley differs significantly in the San Francisco MD and in the San Jose MSA. From Figure 2-7, the truly outsized contribution of technology to growth in the San Francisco MD is abundantly clear. Whereas in the San Jose MSA, although employment growth in the technology sector has historically outpaced growth in the rest of the economy, the difference has not been as significant (Figures 2-9 and 2-10).

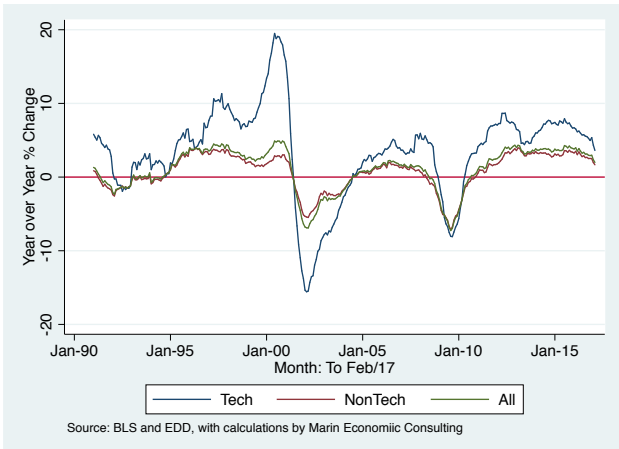
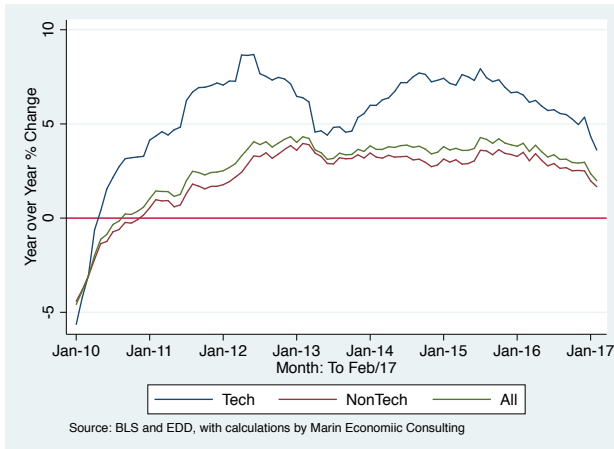
It is also clear from these graphs that technology is playing a much bigger role in the employment slowdown in the San Francisco MD than in the San Jose MSA. In particular, employment growth outside of technology in the San Francisco MD has been relatively steady in the last couple of months, while tech employment has dropped quickly. The reverse relationship is almost true in the San Jose MSA. Although tech sector employment is falling, employment is falling faster in the rest of the economy.

⁴Although it makes up approximately 15% of total employment in the Bay Area, this high revenue high wage nature of the industry makes it a significant driver of growth, and decline, in many other parts of the economy.

Growth in Tech Sector Employment vs Other Employment: Bay Area

Figure 2 - 5: Growth During the Recent Recovery

Figure 2 - 6: Historical Growth



Growth in Tech Sector Employment vs Other Employment

Figure 2 - 7: San Francisco MD - Recovery

Figure 2 - 8: San Francisco MD - Historical

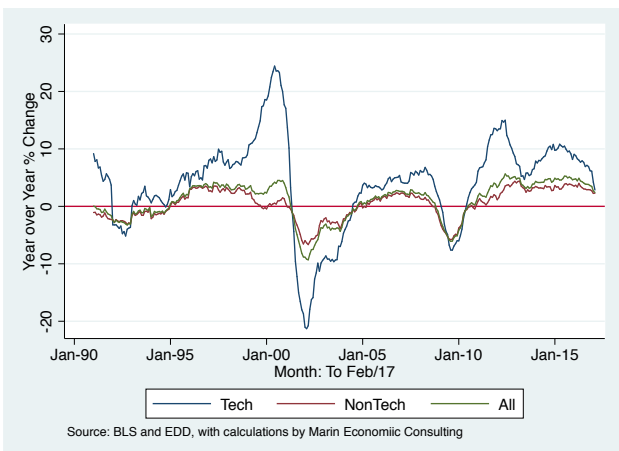
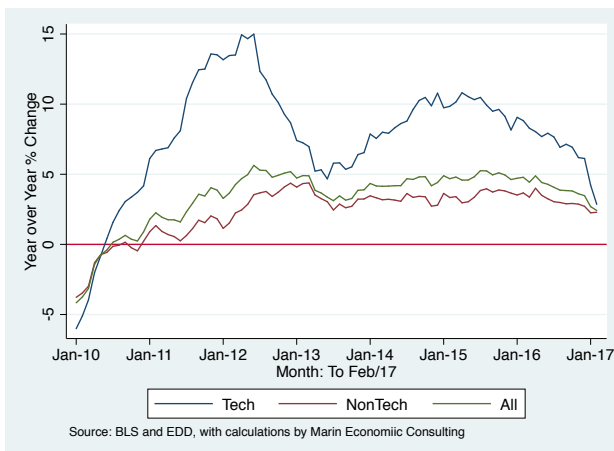
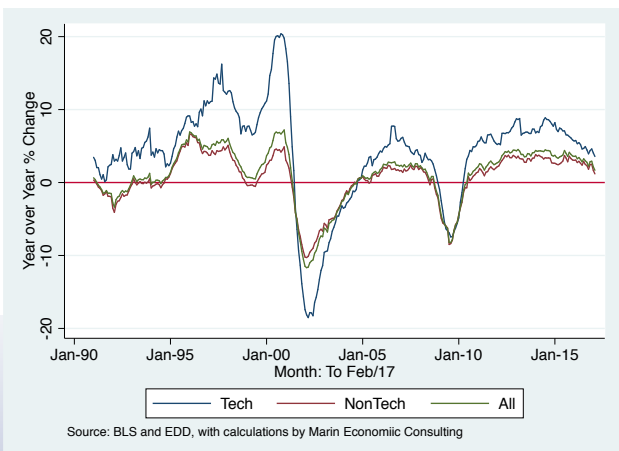
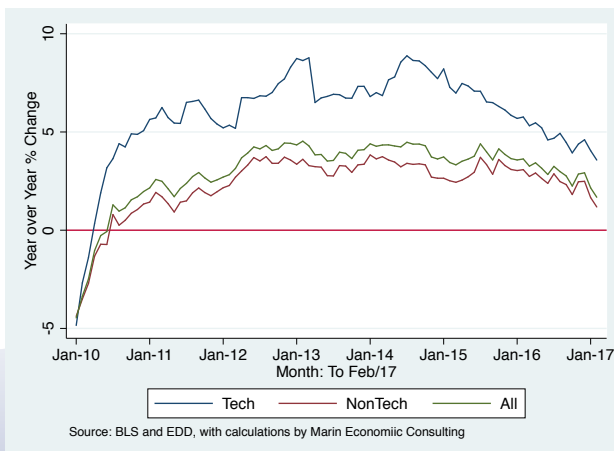


Figure 2 - 9: San Jose MSA - Recovery

Figure 2 - 10: San Jose MSA - Historical



Growth in Information Services Employment: Bay Area

Figure 3 - 3: Growth During the Recent Recovery

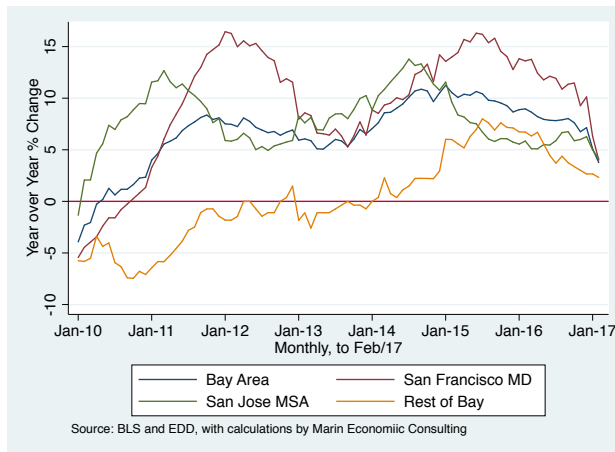
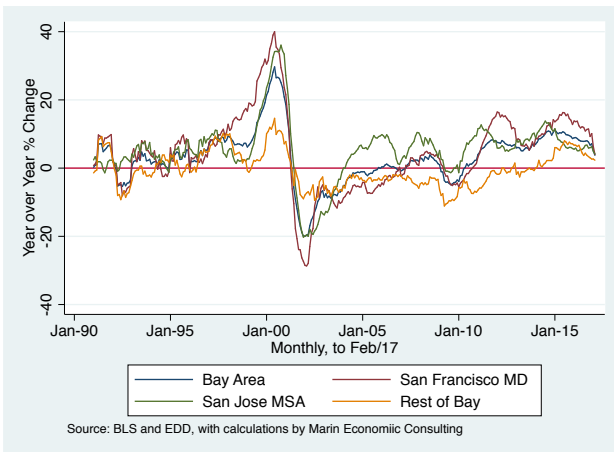


Figure 3 - 4: Historical Growth



4. Professional, Scientific, and Technical Services Sector

The professional, scientific, and technical services (PSTS) sector has also experienced rapid growth nationwide, with comparable growth in California at roughly 3.0% per year during the recovery (Figure 4-1). At the same time, growth in the Bay Area in PSTS employment has been closer to 5% throughout the recovery. Historically, growth in PSTS in the Bay Area has been significantly more cyclical than elsewhere, growing more in good times and shrinking more in recessions (Figure 4-2).

Growth in PSTS Employment: United States, California, and Bay Area

Figure 4 - 1: Growth During the Recent Recovery

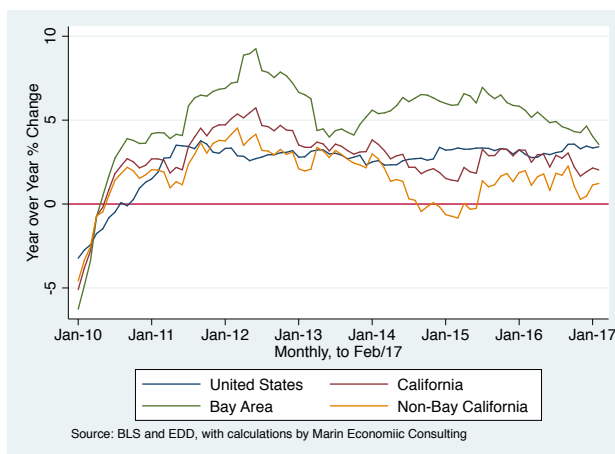
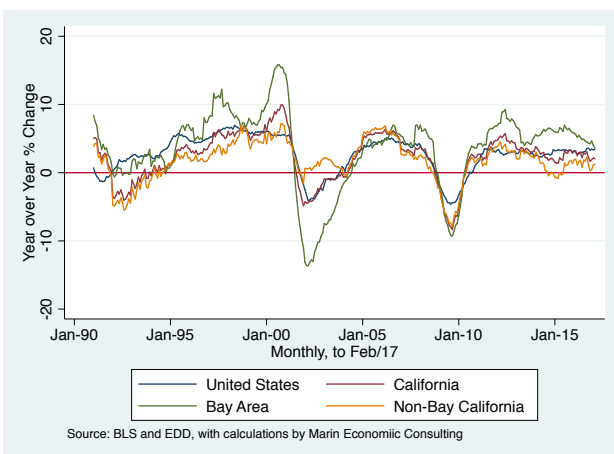


Figure 4 - 2: Historical Growth



Within the Bay Area, it is broader Silicon Valley that has driven growth in the sector. Although expanding throughout the region in recent years, employment growth in PSTS has been dominated by the San Francisco MD and the San Jose MSA. In an interesting reversal, employment growth in the rest of the Bay Area has driven sectoral growth in the Bay Area in recent months (Figure 4-3). This is a remarkable turn of events. It is rare that PSTS employment grows faster

in the East and North Bay regions than in broader Silicon Valley (Figure 4-4). Over the last three months, annualized growth in PSTS employment in the Oakland MD has been in excess of 10%.

Growth in PSTS Employment: Bay Area

Figure 4 - 3: Growth During the Recent Recovery

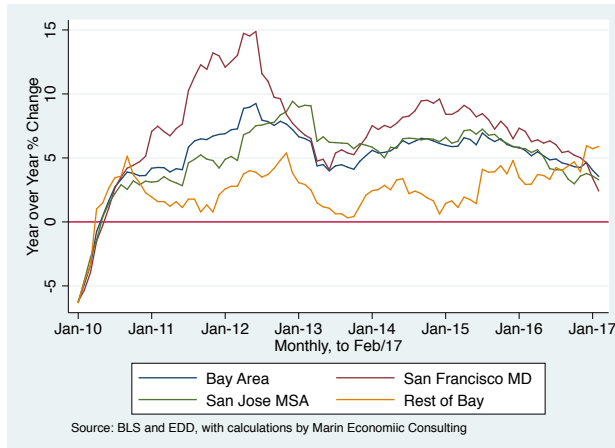
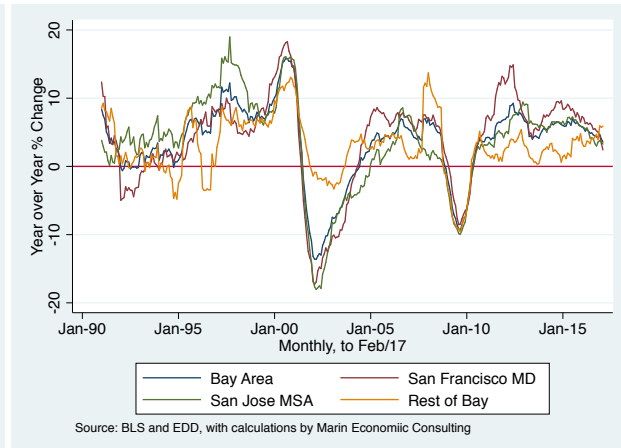


Figure 4 - 4: Historical Growth



As with information, growth in employment in PSTS has been faster in the San Francisco MSA and the decline has been driven primarily by the San Francisco MSA (Figure 4-5).

5. Are These Tech Trends Local or National?

A key issue in understanding the recent trends in technology employment in broader Silicon Valley is whether or not these trends are unique to the region or if they are being experienced on a nationwide basis. The answer appears to be that they are relatively unique. If the trends were national, the rank of employment growth in the technology sector in Silicon Valley would remain relatively unchanged. If the declines are more extreme here, then the rank of the region would decline along with the growth rate.

Figure 5-1 presents the ranking of both the technology employment level in the San Francisco MD and the ranking of year over year growth in employment in the MD relative to the 100 largest MSAs nationwide.⁵ The San Francisco MD has consistently ranked among the top 10 MSAs with regard to tech sector growth throughout the recovery. In recent months, however, that region has fallen out of the top 20. The last time this happened was during the Great Recession (Figure 5-2).

Figure 5-3 provides the same rankings for the San Jose MSA. Although not the high flyer in the tech sector that the San Francisco MD is, San Jose has generally been ranked in the top 10 throughout most of the recovery. By the end of 2016, however, that ranking had fallen out of the top 25 for a couple of months and is currently near 20. Certainly not the growth position that is expected of the MSA when times are good.

⁵The largest MSAs are determined by overall employment in the final year of data.

These figures present clear evidence of declining technology employment growth in broader Silicon Valley relative to MSAs throughout the country. Whether this is due to be a prolonged slowdown in growth in the sector overall remains to be seen. The slowdown is clearly more pronounced in the region than elsewhere, but this is to be expected as it has similarly been growing faster than nearly all other regions for the last 5 years.

San Francisco MD Tech Sector in National Perspective

Figure 5 - 1: Ranking During the Recent Recovery

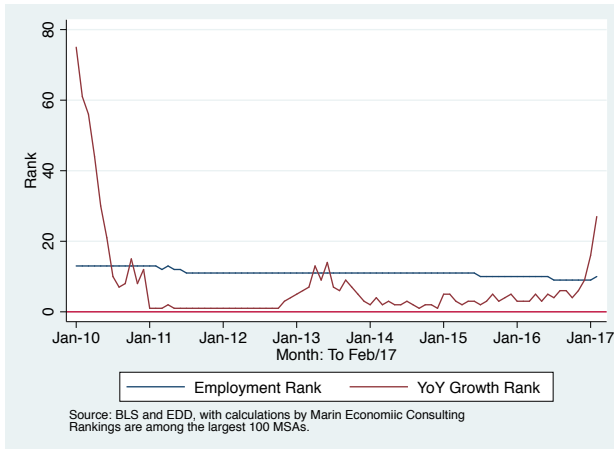
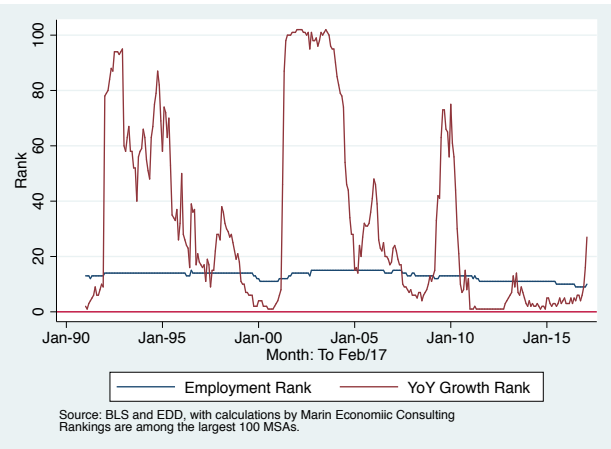


Figure 5 - 2: Historical Ranking



San Jose MSA Tech Sector in National Perspective

Figure 5 - 3: Ranking During the Recent Recovery

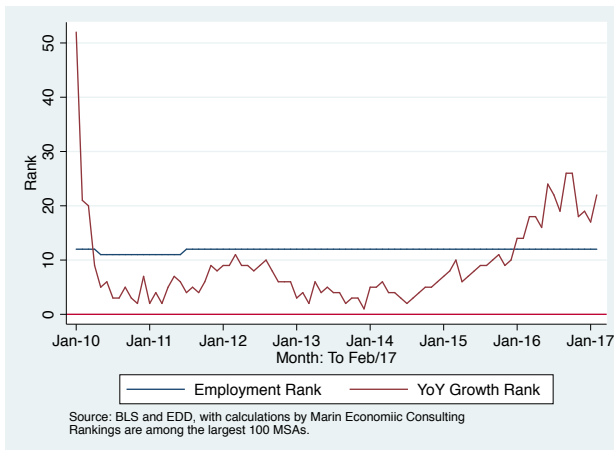


Figure 5 - 4: Historical Ranking

