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ABOUT THE 2012 SILICON VALLEY INDEX

Dear Friends:

Silicon Valley is making an impressive recovery—impressive because our region was the last to succumb when an historic recession gripped our nation, and now it appears to be the first to emerge. The growth is led by a few key sectors which fueled the overall creation of more than 42,000 jobs over the past year, and this report chronicles those developments in careful detail. It also shows how our innovation engine—measured by venture capital, patent registrations, new firm formation, and even IPOs—is clearly revving up again.

Though encouraging, we don't see the report as cause for celebration. The gains are sector specific and not widespread; small businesses are clearly not out of the rough; the public sector is still in the throes of a fiscal crisis; and median household income continues to fall as the gap between those succeeding and those struggling grows wider and wider. It's as if we're becoming two valleys.

When we're at the top of our game the region will be creating jobs across the board, our workforce will be able to move up the mobility ladder, and there will be robust growth in the mid-range professions. This requires both a strong economy and a strong community, with thriving public institutions and a first-class infrastructure.

Unfortunately, even a stunning economic recovery won't address our fiscal woes. That is because our tax system, geared to a 19th century economy, doesn't track with the 21st century economy that is being invented (and reinvented) in Silicon Valley. We highlighted the fiscal crisis facing our local governments in last year's Index. This year's Special Analysis builds on that report and analyzes a key component of our revenue model, property taxes and the long-term impact of Proposition 13. The findings are sobering: we can't count on property taxes to drive a public sector comeback any time soon.

Our hope is that 2012 is the year when a real conversation about reform takes hold, and that Silicon Valley's is an outspoken voice in that conversation. The creativity that we rightly celebrate in our private sector needs to take hold in our public sector as well. When it does, we will truly have cause to celebrate.

We're pleased that the Index and Special Analysis can provide the analytical foundations for these important conversations.

Sincerely,

und Hannak

Russell Hancock, Ph.D. President & Chief Executive Officer Joint Venture Silicon Valley

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Emmett D. Carson, Ph.D. CEO & President Silicon Valley Community Foundation







The geographical boundaries of Silicon Valley vary. Earlier, the region's core was identified as Santa Clara County plus adjacent parts of San Mateo, Alameda and Santa Cruz counties. However, since 2009, the Silicon Valley Index has included all of San Mateo County in order to reflect the geographic expansion of the region's driving industries and employment. Silicon Valley is thus defined as the following cities:

Santa Clara County (all)

Campbell, Cupertino, Gilroy, Los Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Morgan Hill, Mountain View, Palo Alto, San Jose, Santa Clara, Saratoga, Sunnyvale

Alameda County

Fremont, Newark, Union City

San Mateo County (all)

Atherton, Belmont, Brisbane, Broadmoor, Burlingame, Colma, Daly City, East Palo Alto, Foster City, Half Moon Bay, Hillsborough, Menlo Park, Millbrae, Pacifica, Portola Valley, Redwood City, San Bruno, San Carlos, San Mateo, South San Francisco, Woodside

Santa Cruz County Scotts Valley

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2012 INDEX HIGHLIGHTS

The Silicon Valley economy is mounting a solid recovery from the recession, one that is being fueled by a few high-performing sectors, but the gains are not yet widely distributed.

The region added more than 42,000 jobs in 2011. Monthly employment increased 3.8 percent in the region from December 2010 to December 2011, while the U.S. posted gains of 1.1 percent.

- Quarterly employment in the region improved for the first time in three years, growing two percent from Q2 2010 to 2011.
- Unemployment in Silicon Valley fell 1.4 percent over the previous year to 8.3 percent in December 2011. This is lower than California at 10.9 percent, and on par with the U.S. at 8.3 percent.
- All major areas of economic activity experienced growth from 2010-2011, except for Other Manufacturing (excluding IT), which has fallen every year since 2007, driven largely by Space & Defense Manufacturing.
- Demand is up for most types of commercial space as vacancy rates dropped and asking rents held steady from 2010 to 2011.

Silicon Valley's innovation engine has heated up again.

- Accounting for the largest observable year-to-year gain, Silicon Valley patent registrations leapt by 30 percent over 2009 with 13,311 new patents registered in 2010 and largely in Computers, Data Processing & Information Storage. The region accounted for 49 percent of total registrations statewide and 12 percent nationally, a one percent drop over the prior year.
- Total venture capital investment rose 17 percent in 2010. Investment continues to grow in Industry/Energy, Biotechnology and Medical Devices.
- Venture capital investment in clean technology increased 48 percent over the prior year and was strongest in Energy Generation, Efficiency and Storage. The region represents 49 percent of total California investment in clean technology.
- Silicon Valley's IPOs increased from 11 to 12 in 2011 while global activity slowed. The region represents 46 percent of IPOs statewide and twelve percent nationally.
- Small Business Innovation and Technology (SBIR/STTR) funding per million dollars of GDP expanded by one percent from 2009 to 2010, the first year of growth since 2004. Total grants and funding values remained similar to 2009 levels. The region by far outpaces other innovation hubs in the country.

The region continues to grow a rich talent base.

- Science & Engineering talent expanded by four percent in Silicon Valley and by eight percent in the U.S.
- The region is one of the nation's most culturally diverse. Half of the population speaks a language other than English in the home. Asian speakers make up large shares, however speakers of European languages are on the rise.
- Educational attainment has been increasing across all racial/ethnic groups since 2006.
- Although 'arts-centric' businesses have declined by 16 percent from 2009 to 2010, Silicon Valley ranks above the national average in 'arts-centric' businesses per one thousand residents.

Though the recovery is underway, income growth is mostly limited to high earners, and is not spread across other segments of the population.

- Silicon Valley's per capita income in 2011 expanded by four percent to reach \$66,000. While per capita income in the region is consistently higher than statewide or national values, it is also more volatile as high incomes track tech stock values. Per capita income in California and the nation increased just two percent over 2010.
- In contrast, most residents continued to suffer earnings losses in 2010 as the region's median income continued to slide for the second year in a row. Incomes dropped three percent in the region, seven percent statewide and two percent nationally.
- From 2008 to 2010, real per capita income dropped for every racial/ethnic group in the region except for Blacks, whose income rose by 16 percent.
- Since 2004, the share of households in the low and middle income ranges has declined by four percent each while higher-income households increased to 43 percent of the region's total households.
- The percentage of students receiving school meals increased to 31 percent in the region and 49 percent in the state.

The region's youth are showing educational gains.

- School expulsions due to violence or drugs and gang related homicides both fell in the most recent period in Silicon Valley after fluctuating in previous years.
- Graduation rates, the percentage of students meeting UC/CSU requirements, and Algebra I scores are improving, and the region's overall dropout rate has declined.

The housing picture is mixed.

- Residential foreclosures fell 16 percent from the first half of 2008 to the first half of 2011 in the region and declined by 24 percent statewide.
- Only five percent of new housing development was classified as affordable, reaching a 14-year low. Total new residential development expanded by 165 percent in the last year.
- The housing cost burden for renters increased statewide in 2010 and held steady in the region. For Valley homeowners, the cost burden slipped marginally.

The region's public sector fiscal crisis persists, making it difficult to finance essential public services.

- In the fiscal year 2009/2010, city revenues fell by eleven percent from the year prior, marking the second straight year of declining revenue since 2003/2004.
- Property tax was the fastest growing revenue source for Silicon Valley cities, increasing from ten to 25 percent of total city revenue since 2000/2001.
- From 2009 to 2010, total debt funding increased by 43 percent with \$2.5 billion in 2010. This growth was mostly due to increased debt funding in Education, Transportation Infrastructure and Housing.

THE 2012 INDEX

AT A GLANCE

WHAT IS THE INDEX?

The Silicon Valley Index has been telling the Silicon Valley story since 1995. Released early every year, the Index is based on indicators that measure the strength of our economy and the health of our community—highlighting challenges and providing an analytical foundation for leadership and decision-making.

WHAT IS AN INDICATOR?

Indicators are measurements that tell us how we are doing: whether we are going up or down, going forward or backward, getting better or worse, or staying the same.

Good indicators:

- are bellwethers that reflect fundamentals of long-term regional health;
- reflect the interests and concerns of the community;
- are statistically measurable on a frequent basis; and
- measure outcomes, rather than inputs.

Appendix A provides detail on data sources for each indicator

PEOPLE

Silicon Valley's population is growing, and our diversity increases; educational attainment is improving across all ethnic groups.

Net Population Change



Percent Change between



Net Migration Flows



Population Change between 2010 and 2011

Net Foreign Immigration +8% Net Domestic Migration -45%

Second Language Spoken at Home Population 5 years and older



ECONOMY

Employment, investment and patents are posting solid gains, yet business loans and median family income continue to lag.

Change in Jobs Relative to December 2010



Venture Capital Investment in Clean Technology





Silicon Valley's Percentage of U.S. and California Patents Registration



SOCIETY

Student achievement is improving, while health outcomes vary.

Percent of Population with Health Insurance

by Ethnicity



High School Graduation



Child Abuse



PLACE

The region's residents are adopting habits that promote environmental sustainability. The housing market has made strides towards recovery but land use density and housing affordability are slipping.

Electricity Productivity and Consumption per Capita







Number of Silicon Valley Foreclosures

	2008	2010	% Change
Silicon Valley	8,831	6,933	-21%
California	238,396	169,657	-29 %

GOVERNANCE

Local governments are still faced with grave fiscal challenges.

California Share of Public Safety Tax Revenue

Santa Clara & San Mateo Counties



Silicon Valley - 2011

Percentage of CA	
Population	6.7%
Percentage of CA Public	
Safety Tax Revenue	8.1%

-6%

-1%

Change in City Revenue

Fiscal Year 08/09–09/10	
Property Taxes	
Sales Taxes	

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Proposition 13 Implications for Local Government Finance and the Silicon Valley Economy

Prepared by Stephen Levy

roposition 13—the landmark initiative passed by California voters in 1978 to *limit property taxes—has reemerged* in the public discussion about possible fiscal reforms. This Special Analysis section of the 2012 Index is intended to aid in that discussion, by describing the history and implications of Proposition 13 in the context of changing economic and fiscal circumstances.

Special Analysis Proposition 13

It builds on the Special Analysis published in the 2011 Index, as well as two recent other Silicon Valley local workforce and economic competitiveness studies that confronted the fiscal crisis facing local government and identified the critical link between the region's infrastructure, education and other public services and our ability to stay competitive. 1.2.3

BACKGROUND

As voters went to the polls in June 1978 California was in the midst of a steady and large increase in the price of single-family homes. In 1978 the median home price was \$70,890, up 164 percent from the \$26,880 median in 1971. Residents were experiencing large property tax increases and feared that more increases were on the way.







- Source: California Association of Realtors, California Department of Finance Analysis: Center for Continuing Study of the California Econom
- ¹ Index of Silicon Valley 2011, Joint Venture Silicon Valley Network and Silicon Valley Community Foundation, 2011.
 ² Silicon Valley in Transition: Economic and Workforce Implications in the Age of iPads, Android Apps and the Social Web, Silicon Valley Workforce Boards: NOVA, work2future, Santa Cruz Co., San Mateo Co., July 2011 http://www.work/future.biz/images/documents/TechStudyFullReport_03.pdf.
- ³ Silicon Valley CEO Business C limate Survey 2011, Silicon Valley Leadership Group, http://svlg.org/docs/2011BusinessClimate_digital.pdf

- In the years from 1971 through 1978 median prices had risen by between 7 percent and 28 percent each year (Figure 1), far outpacing the rate of overall inflation and income gains. Even though income gains were historically large and outpaced the growth in consumer prices, both measures were overshadowed by the 164 percent increase in median home prices (Figure 2). And for households living on fixed incomes, the effects of rising home prices, assessed values, and property taxes were even more of a problem for them financially.
- Though assessed values were surging, local governments did not respond by lowering local tax rates.
- Primarily as a result of these trends, voters approved Proposition 13 by a 65-35 percent margin.
- The proposition included two components that were well known to voters:

Lowering the maximum property tax rate

to 1 percent—a nearly 60 percent decrease. The purpose of this provision was to lower the property taxes that had recently soared for residents. An additional property tax rate for locally approved bonds was allowed through a later amendment. Though there was less public discussion of the implications, Proposition 13 also lowered property taxes for businesses.

• Limiting increases in assessed value to a maximum of 2 percent per year as long as the property did not change ownership. The purpose of this provision was to limit future property tax increases and bring a large measure of certainty to taxpayers about their future property tax liability. The certainty about future property tax increases was perceived as a major benefit of Proposition 13.

These two provisions were easily understood by voters and were very popular.

The proposition also included three other major provisions whose impacts were not as well analyzed in the public debate about Proposition 13:

- Prohibiting increases in the property tax rate. After the passage of Proposition 13, local governments and school districts could no longer go to the voters to approve property tax increases to maintain or increase public services.
- Requiring a 2/3 vote of the electorate for future state taxes, local special-purpose taxes, and local bonds.
- Transferring the authority to allocate property taxes among jurisdictions to the state.

Now more than 30 years later, thousands of pages of analysis⁴ have delineated the major consequences of Proposition 13:

- Assessed value increases limited to a maximum of 2 percent per year have turned out to be approximately half as large as inflation increases over the first 30 years of Proposition 13.
- The majority of local school revenues are now provided through the state budget instead of by local taxpayers, severing the connection between local taxes and the quality of services provided.
- Cities (and to a lesser extent, counties) responding to such sharp declines in property tax revenues have introduced a wide variety of new local taxes and fees. This trend reemerged in recent years as the recession deepened and as property tax revenues stopped growing.
- Tax measures that would have passed under a simple majority vote requirement have been defeated by failing to get a supermajority (two-thirds) approval.
- Property owners pay substantially different amounts on similarly valued properties, depending on the date of acquisition.
- The share of property taxes paid by homeowners has increased, while the share paid by owners of non-residential properties has decreased.
- But analyzing the implications of Proposition 13 is complicated for several reasons. For one thing, since the measure's passing the state has made a large number of budget decisions that affect local government and education funding apart from Proposition 13. Additionally, there have been several other changes passed by voters that have transferred local revenue to the state and extended the 2/3 vote requirement for local taxes. Also, the recent recession has had major implications for local revenues and education funding that, while not caused by Proposition 13, are affected by the way Proposition 13 is implemented.

PROPOSITION 13 IN THE FIRST 30 YEARS

- Three trends lessened the impact of Proposition 13 on local government revenues in the first 30 years after its passage: 1) surging home prices and assessed value growth, 2) the related increase in assessed value as properties were sold and reassessed, and 3) a wide range of new taxes and fees imposed or expanded by local governments.
- **1. After the Initial Rate Cut, Assessed Values and Property Tax Revenue Surged.** Proposition 13 reduced property tax revenues by approximately 60 percent in the year after it was adopted, as the base rate fell from 2.4 percent to 1 percent.
- However, in the years after the initial rate cut housing prices surged, and high construction levels combined with the turnover of properties led to large increases in assessed valuation and property tax revenues in Silicon Valley (and across California).
- For nearly all years from 1980 through 2008, assessed values in San Mateo and Santa Clara counties increased faster than consumer prices, and often at rates more than double the rate of consumer price increases.
- Assessed value in Santa Clara County increased at an average rate of 8.4 percent between 1980 and 2008, while the growth rate in San Mateo County averaged 7.7 percent and both growth rates were more than double the Bay Area consumer price increase of 3.7 percent per year. There were three factors driving the growth in assessed value: the increase in housing and commercial property prices, new construction, and the increase in assessed value that comes when properties change ownership.
- A similar result was experienced statewide. The average annual increase in assessed value for all counties combined was 7.8 percent between 1980 and 2008, while the average increase in consumer prices was 3.6 percent (as shown on **Figure 3**).

⁴ After the Tax Revolt: California's Proposition 13, edited by Jack Citrin and Isaac William Martin, Institute of Governmental Studies, University of California Berkeley, 2009; Has Proposition 13 Delivered? The Changing Tax Burden in California, Michael A. Shires, John Elwood and Mary Sprague, Public Policy Institute of California, 1998;The Demographics of Proposition 13, Dowell Myers, U.S.C. Population Dynamics Research Group, September 2009; Proposition 13: Some Unintended Consequences, Jeffrey



Analysis: Center for Continuing Study of the California Economy

2. Large Increases in Home Prices Kept Assessed Value Growing. Median home prices in California and Silicon Valley increased far faster than consumer prices until 2008. This did not affect the tax liability of existing property owners but did affect the taxes paid on newly built or recently sold properties. In California, median prices increased by 7.4 percent per year from 1978 through 2007, compared to an average increase in consumer prices of 4.3 percent (as shown on Figure 4). Available data on home prices in San Mateo and Santa Clara counties for 1991-2007 show an annual increase in median home prices of 8.1 percent in Santa Clara County and 6.8 percent in San Mateo County, compared to the Bay Area consumer price gain of 2.8 percent per year.



Santa Clara and San Mateo County Assessor's Offices Analysis: Center for Continuing Study of the California Economy

House Prices Surge Through 2007



California Association of Realtors, California Department of Finance Analysis: Center for Continuing Study of the California Economy

- So even though there was a limit of 2 percent annual increases in assessed value on properties that did not change ownership, these large gains in home prices not only boosted the assessed value for newly built homes and commercial space, but also made a substantial contribution to increases in assessed values when properties changed ownership.
- There was also the impact of changes in ownership to consider. Increases in assessed valuation from changes in property ownership contributed between \$17 and \$21 billion, or close to 60 percent of the growth in assessed value in Santa Clara and San Mateo counties in the years leading up to the housing crash (**Figure 5**). Without these gains, which came largely as a result of surging home prices, the growth in assessed value would have been much smaller in these years.
- The contrast between this period and the years following the housing downturn is shown on **Figure 12**, which illustrates the changing composition and level of growth in assessed value after 2007.

Figure 4

Talent Flows and Diversity

Silicon Valley's population is growing, becoming more highly educated and increasingly diverse.

WHY IS THIS IMPORTANT?

- Silicon Valley's most important asset is its people, who drive the economy and shape our region's quality of life. And because the Valley is a knowledge economy, our success depends on the talent of our population. The number of science and engineering degrees awarded regionally helps to gauge how well Silicon Valley is preparing talent for our driving, export-oriented industries. A local workforce equipped with strong skills is a valuable resource for generating new ideas and innovative products and services.
- The region has benefited significantly from the entrepreneurial spirit of people drawn to Silicon Valley from around the country and around the world. In particular, immigrant entrepreneurs have contributed considerably to innovation and job creation in the region.¹ Traditionally, the region's universities have served as the primary port of entry of foreign talent. Examining the continued flows of foreign graduates from our universities indicates to what degree our region remains a global magnet for talent. Maintaining and increasing these flows vastly improves the region's potential for closer integration with other innovative regions and thereby bolsters its global competitiveness.
- We report population growth as a function of migration (immigration and emigration) and natural population change (the difference between the number of births and number of deaths).

HOW ARE WE DOING?

- The population in Silicon Valley continues to grow, picking up speed in 2011. For the first time since 2008, growth rates increased. Over the past three years both natural population change (births minus deaths) and migration have been slowing down. While natural population continued its slowing, gains in foreign migration led to a 196 percent increase in total migration, which pushed the growth rate positive. Migration trends continue to mirror those of the previous decade and are characterized by domestic out-flows and foreign in-flows.
- The 25 to 44 age group is the largest in Silicon Valley, California and United States as a whole with 755,000, 10,515,000 and 82,164,000 people respectively. Age distribution across the three different geographies is similar, with Silicon Valley having a slightly lower percent of those 18 to 24 years of age when compared to California.

¹ AnnaLee Saxenian. 2002. Local and Global Networks of Immigrant Professionals in Silicon Valley. San Francisco: Public Policy Institute of California. See also, S. Anderson & M. Platzer. 2006. "American Made. The Impact of Immigrant Entrepreneur and Professionals on U.S. Competitiveness." National Venture Capital Association.

> The Silicon Valley population grew for the first time in three years

Silicon Valley residents are much more likely than U.S. residents overall to speak a language other than English. The share of residents speaking another language increased more in Silicon Valley from 2006 to 2010 than in the state and nation. The region's language diversity has stronger growth rates in Chinese, Other Asian & Pacific Islander, and Korean than is the case in California or the U.S. Spanish speakers make up the largest group with 39 percent. Chinese follows with 15 percent and Vietnamese and Other European languages account for ten percent in the region.

- Educational attainment is higher across all racial and ethnic groups in Silicon Valley than California as a whole. The percentage of adults with Bachelor's degrees or higher has increased seven percent from 2006 to 2010 which is similar to the state as a whole. These educational gains are shared; from 2006 to 2010 the percent of adults with a four-year degree increased across all ethnic groups. As an ethnic group, Asians have the highest per capita educational achievement; 58 percent of Asian adults in Silicon Valley and 38 percent in California hold a four-year degree or higher.
- The number of science and engineering (S&E) degrees conferred in 2010 increased one percent in Silicon Valley and seven percent nationally, achieving a new high in both geographies. Trends in S&E degrees conferred by universities in the broader region to foreign students varies significantly between undergraduate and graduate degrees. Undergraduates have continued to decline, with foreign students representing 4.8 percent of S&E degrees. Graduate degrees conferred to foreign students in S&E disciplines grew between 2007 and 2009, but fell by 1.2 percent in 2010 to 34.5 percent.









Thirty percent

of Silicon Valley's population is 25 to 44, the core working age group

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Data Source: U.S. Census Bureau, 2010 American Community Survey Analysis: Collaborative Economics

Talent Flows and Diversity

PEOPLE





Note: Data are based on first major and include bachelors, masters and doctorate degrees Data Source: National Center for Educational Statistics, IPEDS Analysis: Collaborative Economics

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Employment

Unemployment is waning as job growth is taking place across most industries.

WHY IS THIS IMPORTANT?

Tracking employment gains and losses is a basic measure of economic health. Shifts in employment across industries suggest structural changes in Silicon Valley's economic composition. Over the course of the business cycle, employment change across industries can be cyclical, but the permanent changes reflect how the region's industrial mix evolves. While employment by industry provides the broader picture of the region's economy, observing the employment and unemployment rates of the population residing in the Valley reveals the status of the immediate Silicon Valleybased workforce. A large number of science and engineering jobs regionally indicates a local workforce equipped with strong skills that are valuable for generating new ideas and innovative products and services. Occupational needs of the region change over time as technology changes, the region's mix of industries shifts, and markets become more specialized. The way in which the region's occupational patterns change shows how well our economy is maintaining its position in the global economy.

HOW ARE WE DOING?

- Silicon Valley is rebounding at a faster rate than the nation. From December 2010 to December 2011, regional employment expanded by 3.8 percent, while national employment inched up by 1.1 percent. Over the 12-month period, the region added more than 42,000 jobs, bringing employment levels to 1.2 million overall. However, employment has still not recovered to 2007 levels.
- The Valley's employment growth was shared across all major areas of economic activity, except manufacturing. The strongest employment gains over the previous year occurred in Information Products & Services, which expanded by six percent from Q2 2010 to Q2 2010.
- The combined unemployment rate for the region fell 1.4 percent over the past year, bringing it down to 8.3 percent in December 2011. California and the U.S. fell to 10.9 and 8.3 percent unemployment, respectively. However, the employment increases have not been uniform across ethnic groups. From 2009 to 2010 the unemployment rate slowed for Whites and Other, but increased for Hispanics (+1.4%), African Americans (+1.3%) and Asians (+0.6%).
- Science and Engineering (S&E) talent represents 17 percent of all occupations in Silicon Valley, up one percent from 2000. Nationally, S&E talent accounts for six percent, holding steady at 2000 levels. Physical Engineers drove much of the growth in S&E talent in the Valley over the decade, increasing by 19 percent.

Change in Residential Employment



*Data for December 2011 is preliminary

Note: Data is not seasonally adjusted. Data Source: U.S. Bureau of Labor Statistics, Current Population Survey (CPS) and Local Area Unemployment Statistics (LAUS) Analysis: Collaborative Econon

Santa Clara & San Mateo Counties **outpace** the nation in job growth





Silicon Valley Employment in Public Sector Major Areas of Economic Activity

Analysis: Collaborative Economics

	2007	2011	% Change
Local Government Administration	11,870	11,059	-7%
State Government Administration	79	42	-47%
TOTAL EMPLOYMENT	11,949	11,101	-7%

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Quarterly job growth sees first improvement in three years

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Data Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages Analysis: Collaborative Economics

Employment

$\Box \cap \Box$

Average annual employment seeing gains in most sectors

Silicon Valley Employment Growth by Major Areas of Economic Activity

F	Percent Change in Q2			
Major Areas of Econ Activity	2009-10	2010-11		
Innovation & Specialized Services	+2%	+2%		
Information Products & Services	0%	+6%		
Community Infrastructure	-1%	+1%		
Other Manufacturing	-6%	-13%		
Business Infrastructure	-6%	+1%		
Life Sciences*	-36%	+1%		
TOTAL EMPLOYMENT	-1%	+1%		



Silicon Valley Major Areas of Economic Activity

*In 2010, employment in Pharmaceuticals was suppresed for confidentiality reasons, causing the significant drop in total Life Sciences employment.

Data Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages Analysis: Collaborative Economics



San Mateo & Santa Clara Counties Regional unemployment rate declined 1.4 percent from December 2010 to December 2011

Rate

ment



White

In 2010, the unemployment	12%
rate continued to rise	10%
for most but	8%
at a slower rate	6%
Percent Change in	<u>4%</u> ····
Unemployed by Ethnicity	2%····

-0.4%

Santa Clara County 2009-2010				
Other	-0.9%			
African American	+1.3%			
Hispanic	+1.4%			
Asian	+0.6%			



Note: Other includes the category Two or More Races in 2008–2010 *Date for Two or More Races is not available for 2007 Data Source: U.S. Census Bureau Analysis: Collaborative Economics

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Engineers

are driving growth in region's S&E talent

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Innovation

Venture capital investment is on the rise and patent registrations are increasing in key technology areas.

WHY IS THIS IMPORTANT?

Innovation drives the economic success of Silicon Valley. More than just in technology products, innovation includes advances in business processes and business models. The ability to generate new ideas, products and processes is an important source of regional competitive advantage. To measure innovation, we examine the investment in innovation, the generation of new ideas, the value-added across the economy and small business innovation funding. Additionally, tracking the areas of venture capital investment over time provides valuable insight into the region's longer-term direction of development.

HOW ARE WE DOING?

- Productivity is one measure for overall economic health in a region. Peaking in 2010, value added per employee remained flat in the region, state and nation as a whole in 2011. However, in the past decade value added grew in Silicon Valley at a faster rate (+25%) than California (+20%), and the U.S. overall (+18%).
- Silicon Valley accounted for 49 percent of total California patents and 12 percent of total U.S. patents in 2010, with registrations in Silicon Valley growing 30 percent in the last year. One category (Computers, Data Processing & Information Storage) claimed 40 percent of the region's total patents in 2010. Chemical Processing Technologies was the fastest growing category from 2009 to 2010, logging a 50 percent increase in patents. Registrations in Communications increased 24 percent during the same period.
- Venture capital (VC) investment in the Silicon Valley increased 17 percent in 2011. With a total of \$7.6 billion, regional investment has recovered to 2004 levels following the drop in 2009. The region accounted for 27 percent of the nationís total VC investment and 52 percent of the stateís in 2011. By industry, Software attracts the largest share of total investment but funding flows are increasing in other areas. Following robust growth over the last few years, investment in Industry/Energy remains strong. Funding continues steadily in Biotechnology and Medical Devices
- Increasing 48 percent, cleantech venture capital investment in Silicon Valley rose to \$1.76 billion in 2011.The region currently accounts for 49 percent of total California cleantech investment and 28 percent of total cleantech investment in the nation. Reflecting growing activity in the region, Silicon Valleyís overall share of cleantech investment, increased from 41 percent in California and 24 percent nationally over the prior year.
- Energy Efficiency accounted for 24 percent of 2011 total cleantech investment, up from seven percent in 2008. Energy Generation continues to attract the most investment, though its share of total venture capital is diminishing.

Small businesses in the region were awarded 254 grants in 2010 through the U.S. Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs. Garnering **\$89** million from these highly competitive grants, funding in the region increased by three percent over 2009 and 22 percent from 1990. Since 1990, Silicon Valley has reported the highest SBIR/STTR funding per million dollars of GDP. Tracking SBIR funding relative to the size of the economy (i.e., the region's GDP) allows comparisons with other places. At **\$510** per million dollars of GDP, Silicon Valley's figure was two and a half times that of the Boston region (**\$203**), which ranked second. Silicon Valley's funding per GDP is more than four times greater than the remaining top regions, San Diego, Research Triangle, and the Greater Washington D.C. region.

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Percent Change in Value Added per Employee 2010-2011 Silicon Valley -0.3% California +0.1%

United States

+0.9%

Value added per employee flat in 2011



Analysis: Collaborative Economics

Innovation



Venture capital investment in software **expanded** in 2011

* Note: Other includes Business Products & Services, Financial Services, Consumer Products & Services, Retailing/Distribution, Healthcare Services and Other Data Source: PricewaterhouseCoopers/National Venture Capital Association MoneyTree[™] Report, Data: Thomson Reuters Analysis: Collaborative Economics



Analysis: Collaborative Economics



VC Investment in Clean Technology by Segment

Storage and Energy Efficiency is growing proportionally

Investment in Energy





Note: Small Business Innovation Research (SBIR) Awards and Small Business Technology Transfer (STTR) are included data Data Source: U.S. Small Business Administration, Office of Technology Analysis: Collaborative Economics



Data Source: U.S. Small Business Administration, Office of Technology; Moody's Economy.com Analysis: Collaborative Economics

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Entrepreneurship

IPOs increased, but diminishing access to business loans contributed to severe business losses in 2009.

WHY IS THIS IMPORTANT?

- Entrepreneurship is an important element of Silicon Valley's innovation system. Entrepreneurs are the creative risk takers who create new value and new markets through the commercialization of novel and existing technology, products and services. A region with a thriving innovation habitat supports a vibrant ecosystem for businesses to start and to grow.
- The activity of mergers and acquisitions and initial public offerings indicate that a region is cultivating innovative and potentially highvalue companies. Small business financing is vital for startups as well as established businesses wanting to grow. When hiring slows, some people go into business for themselves, and structural change is evident as the growth of companies without employees (nonemployers) outpaces the growth in payroll employment. The movement of businesses to and from Silicon Valley provides some insight into the continued attractiveness of the region.

HOW ARE WE DOING?

- Global initial public offerings (IPOs) have dropped 49 percent since 2010, while Silicon Valley's IPOs increased modestly in 2011 to 12 pricings, representing 46 percent of IPOs statewide and 12 percent nationally. U.S. IPO pricings fell to 98 in 2011, a three percent decrease from 2010 levels. In the cleantech sector, Silicon Valley accounted for four of the 13 California cleantech IPOs in 2011.
- Mergers and acquisitions (M&As) decreased 19 percent from 1,044 deals in the third quarter 2010 to 841 in the third quarter 2011. In 2011, Silicon Valley accounted for 54 percent of all M&A deals in California, up from 51 percent in 2010. In clean technology, 15 M&As were announced in 2011, up from 13 in 2010. The region accounted for 39 percent of state deals and seven percent of U.S. deals in 2011. In clean technology, 15 M&As were announced in 2011, up from 13 in 2010. The region accounted for 39 percent of state deals and seven percent of U.S. deals in 2011.
- Access to small business loans continues to be tight. Between 1996 and 2010, small business loans in the region increased 41 percent in total value (from \$1.3 billion to \$1.8 billion) and by 189 percent in total number of loans. Silicon Valley outpaced the nation, which reported growth of 18 percent in total value and 77 percent in total number of loans over the same time period. Since the peak in 2007, small business loan activity in the region dropped 52 percent in value (\$3.8 billion to \$1.8 billion) and by 66 percent in total number of loans. However, the dropoff in the most recent year was slower, decreasing by ten percent in value and by seven percent in total number of loans.

Relative to 2004, Silicon Valley's non-employer firms increased in number by five percent between 2004 and 2009. Over the same period, non-employer firms increased seven percent statewide and eight percent nationally.

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- In January 2010, net business establishment growth plummeted for the first time since 2000 in Silicon Valley. Recent national research reflects similar declines in business creation, citing a 23 percent decline since 2007 in new business creation across the nation.² In the last observable period (January 2009-2010), 17,200 new establishments were created and 46,800 closed in Silicon Valley. Over 88 percent of the closed establishments had less than five employees. On average, between 1995 and 2010, every year Silicon Valley has gained approximately 17,300 establishments due to businesses opening or moving in and lost an average of 12,800 establishments due to businesses closing or moving out. The average net change in Silicon Valley establishments, a gain of 6,700, is the equivalent of 2.6 percent of total Silicon Valley establishments in 2010.
- The number of businesses leaving Silicon Valley has exceeded the number moving to the region every year from 1995 to 2010, with a majority of the movement staying within the state. The share of businesses moving out of Silicon Valley but remaining in California increased from 54 percent in 2009 to 77 percent in 2010.

² Manyika James, S. Lund, B. Auguste, L. Mendonca, T. Welsh, S. Ramaswamy: An economy that works: Job creation and Americais future. McKinsey Global Institute. Jun. 2011. pp. ii. Further findings reported by the Kauffman Foundation reveal that the number of new businesses with employees has dropped for the strainfing reported by the Kauffman Foundation reveal that the number of new businesses with employees has dropped

Further findings reported by the Kauffman Foundation reveal that the number of new businesses with employees has dropped 27 percent since 2006. E.J. Reedy and R. Litan. Starting Smaller; Staying Smaller: Americais Slow Leak in Job Creation. Ewing Marion Kauffman Foundation. Jul. 2011. pp. 4.



IPO pricings fell nationwide and globally, while increasing in Silicon Valley

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IPO Pricings in Clean Technology								
	2005	2006	2007	2008	2009	2010	2011	
Silicon Valley	2	0	0	0	0	2	4	Cle
Rest of CA	1	3	3	1	0	4	9	rei
Rest of U.S.	2	14	15	5	5	6	23	in S

Data Source: Cleantech Group™, LLC (www.cleantech.com) Analysis: Collaborative Economics Cleantech IPOs **remained stable** in Silicon Valley in 2011

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Entrepreneurship

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M&As in Clean Technology – Number of Deals, by Date Announced							
	2005	2006	2007	2008	2009	2010	2011
Silicon Valley	0	3	5	2	7	13	15
Rest of CA	9	15	10	18	43	24	23
Rest of U.S.	30	99	86	105	130	176	170

Data Source: Cleantech Group™, LLC (www.cleantech.com)

Analysis: Collaborative Economics



The number and value of small business loans continued to decline

Data Source: Federal Financial Institutions Examination Council (FFIEC) Analysis: Collaborative Economics

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		Establis	hments	Jobs		
		1995-1996	2009-2010	1995-1996	2009-2010	
Entering Silicon	From Rest of CA	87%	75%	72%	80%	
Valley	From Rest of U.S.	13%	25%	28%	20%	
Leaving To Res Silicon Valley To Res	To Rest of CA	81%	77%	55%	80%	
	To Rest of U.S.	19%	23%	45%	20%	

Data Source: Cleantech Group™, LLC Analysis: Collaborative Economics Special Analysis continued 62 | 71 Appendices 72 | 76

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Commercial Space

As vacancy rates fall and rents stabilize, recovery in commercial real estate markets reflect increasing economic activity in 2011.

WHY IS THIS IMPORTANT?

Tracking the supply of commercial space, vacancy rates and asking rents (i.e., the rent listed for new space) provides leading indicators of regional economic activity. In addition to office space, commercial space includes R&D, industrial, and warehouse space. The change in the supply of commercial space, expressed as the absorption rate, reflects the amount of space rented, becoming available, and added through new construction. Gross absorption is a measure for total activity over a period while net absorption is the outcome. A negative change in the supply of commercial space shows a tightening in the commercial real estate market. The vacancy rate measures the amount of space that is not occupied. Increases in vacancy, as well as declines in rents, reflect slowing demand relative to supply.

HOW ARE WE DOING?

- Demand is rising for commercial space and as new construction has been slow over the past several years, gross absorption was up 143 percent and new construction down 100 percent in the past year. The net change in available commercial space decreased by 139 percent from 2010 to October 2011. Gross absorption is a measure of demand in the rental property market. As of October 2011, no new commercial space construction had been added in Santa Clara County. Since 2009 the only new developments have been in the office sector.
- In 2011, the vacancy rate decreased by 1.5 percent across all commercial space sectors in Santa Clara County. Warehouse space was the only sector that experienced a small increase (2.1 percent). In San Mateo County, vacancy rates decreased by 2.2 percent across all commercial space sectors, with a decrease seen in every category. Overall, the average annual asking rents stabilized from 2010 to 2011 in both counties.



*As of October 2011 Data Source: Colliers International

Analysis: Collaborative Economics

Available commercial space in Santa Clara County fell below 2007 levels



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Income

Per capita income continues to rise, while other income indicators still bear the effects of the recession.

WHY IS THIS IMPORTANT?

Earnings growth is as important a measure of Silicon Valley's economic vitality as job growth. A variety of income measures presented together provides an indication of regional prosperity and the distribution of prosperity. Real per capita income rises when a region generates wealth faster than its population increases. The median household income is the income value at the middle of all income values. Tracking trends in the percentage of student receiving free meals provides an additional indication of economic stress in the region.

HOW ARE WE DOING?

- Silicon Valley's real per capita income increased for the second consecutive year in 2011 to roughly \$66,000, a four percent gain over the previous year. Following a similar pattern, real per capita income inched higher in the state and the nation in 2011, both reporting a two percent increase since 2010. Silicon Valley's real per capita income is 59 percent higher than that of the nation and 48 percent higher than that of the state.
- From 2008 to 2010, per capita income dropped across all other groups but increased 16 percent for Blacks. Statewide and nationally, Blacks witnessed the smallest drops in income. Falling 15 percent, Hispanics saw the largest losses in income from 2008 to 2010 in Silicon Valley. Hispanics were also hardest hit both state and nationwide. Although Whites saw a decrease of six percent, their incomes remained the highest of all groups at \$56,900.
- Median household income for Silicon Valley fell three percent from 2009 to 2010. The region trailed the statewide drop of seven percent while it exceeded the two percent drop nationwide.
- Since 2004, the proportion of middle income households (earning \$35,000-\$99,999) has shrunk by four percent and now accounts for 37 percent of Silicon Valley households. The percentage of households earning more than \$100,000 per year continued to grow and now accounts for 43 percent of all households in Silicon Valley, up from 35 percent in 2004. Meanwhile, the share of households earning less than \$35,000 has decreased from 24 percent in 2004 to 20 percent in 2010.
- The percentage of students receiving free meals has risen consistently since 2003, in both the region and the state as a whole. Participation of students ages 5 to 17 in the free meals program increased from 30 to 31 percent in Silicon Valley and from 47 to 49 percent in California from 2009 to 2010.



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Note: Personal income is defined as the sum of wage and salary disbursements (including stock options), supplements to wages and salaries, proprietors' income, dividends, interest, and rent, and personal current transfer receipts, less contributions for government social insurance Data Source: Moody's Economy.com

Analysis: Collaborative Economics

Per capita income is increasingly volatile in the region



Note: Multiple & Other includes Native Hawaiian & Other Pacific Islander Alone, American Indian & Alaska Native alone, Some other race alone and Two or more races Personal income is defined as the sum of wage or salary income, net self-employment income, interest, dividends, or net rental

or royalty income from estates and trusts; Social Security or railroad retirement Income, Supplemental Security income, welfare payments, retirement, survivor or disability pensions; and all other income Data Source: US Census Bureau, American Community Survey Analysis: Collaborative Economics

Per capita income dropped across all groups except blacks

Percent Change in Per Capita Income - 2008-2010

Ū	Silicon Valley	California	United States
White	-6%	-6%	-6%
Asian	-8%	-7%	-7%
Black	+16%	-4%	-5%
Multiple & Other	-7%	-5%	-8%
Hispanic	-15%	-9 %	-9 %

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Income

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Since 2004, the share of households in the low and middle income ranges has declined

Change in Percent of Households by Income Ranges

Silcon Valley 2004-2010

\$100,000 or More	High Income	+7.5%
\$35,000-\$99,999	Middle Income	-3.8%
Under \$35,000	Low Income	-3.7%

Distribution of Households by Income Ranges

Santa Clara & San Mateo Counties, California and the U.S.



Note: Income ranges reflect nominal values. Hosehold income includes wage and salary income, net self-employment income, interest dividends, net rental or royalty income from estates and trusts; Social Security or railroad retirement income; Supplemental Sescurity Inoome; public assistance or welfare payments; retirement, survivor, or disability pensions; and all other income; excluding stock options.

Data Source: U.S. Census Bureau, American Community Survey Analysis: Collaborative Economics

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Preparing for Economic Success

Student achievement is improving.

WHY IS THIS IMPORTANT?

- The future success of the region's young people in a knowledge-based economy will be determined in part by how well elementary and secondary education in Silicon Valley prepares its students for higher levels of education.
- How well the region is preparing its youth for postsecondary education can be observed in graduation rates and the percentage of graduates completing courses required for entrance to the University of California (UC) or California State University (CSU). Likewise, high school dropouts are significantly more likely to be unemployed and earn less when they are employed than high school graduates. Indicators in gateway skills such as algebra proficiency are highly correlated with later academic success.

HOW ARE WE DOING?

- The region again experienced a steady increase in the graduation rate from the previous academic year, a marginal increase in the share of graduates who met the UC/CSU requirements, and a decline in the dropout rate. For all three measures, Silicon Valley has an edge over the state as a whole. Dropout rates in Silicon Valley and California have trended together over the past three school years while at a persistently lower rate.
- The region's overall graduation rate for the 2009-2010 school year was 88 percent - up from 86.5 percent in the previous year, but disparities by race and ethnicity persist. Hispanic students trail other groups with a graduation rate of 78 percent. Drop-out rates for American Indians (20%), Hispanics (19%) and African Americans (14%) students exceed the regional average.
- The percentage of Silicon Valley students scoring at the Advanced or Proficient level on the CST Algebra I test in 2011 edged up one percentage point each while scores at the lower levels remained flat. This brings the percentage of Silicon Valley students scoring at or above the proficiency level to a recent high of 57 percent.

High School Graduation and Dropout Rate Rate of Graduation, Share of Graduates Who Meet UC/CSU Requirements



Notes: 2006-07 marks the first year in which the CDE derived graduate and dropout counts based upon student level data Data Source: California Department of Education Analysis: Collaborative Economics

Graduation rates and the percentage of graduates with UC/CSU requirements **continues to rise as dropout rates fall**



Asian, White, Filipino and Pacific Islander students **fall above the state average** for graduation rates


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Early Education

English-Language Arts proficiency has improved overall, however general disparities by ethnicity persist.

WHY IS THIS IMPORTANT?

When children are subject to positive early childhood experiences, including attendance in high-quality preschool programs, those opportunities enhance their physical, social, and emotional wellbeing and their academic skills. Children's academic success is in part a function of increasing literacy skills. Research shows that children who read well in the early grades are far more successful in later years; and those who fall behind often stay behind.³ Success and confidence in reading are critical to long-term success in school.

HOW ARE WE DOING?

- Silicon Valley has a higher preschool enrollment rate for children between the ages of three and five than the state and country as a whole. Holding steady since 2009, 43 percent of this age group were enrolled in preschool in the region. Enrollment was 40 percent nationally and 37 percent statewide.
- Disparities in proficiency exist in English-Language Arts by race and ethnicity. For the Chinese, Asian Indian, and Korean populations, more than 83 percent of students tested at the proficient level or higher, and over 56 percent of Chinese and Asian Indian students scored at the advanced level. Japanese students had the largest increase; those scoring at proficient and advanced jumped from 69 percent in 2010 to 75 percent in 2011. Samoan and Hispanic or Latino groups had the highest percentage of students with basic proficiency and below scoring 66 and 65 percent respectively.
- Thirty-eight percent of families in Silicon Valley receive childcare from multiple providers and provider types. 'Other' sources of care-including non-family members, nursery schools, and statesponsored programs-have decreased in share by two percent from 2007 to 2009. The share of families choosing childcare provided by a grandparent or other family member in Silicon Valley (15%) has decreased since 2007 and is much lower than in California (24%).

SOCIETY

Preschool Enrollment

Percentage of Population 3 to 5 Years of Age Enrolled in Preschool Santa Clara & San Mateo Counties, California, and the United States



Note: Data includes enrollment in preschool and nursery school, and population for children three to five years of age Data Source: U.S. Census Bureau, 2002-2010 American Community Survey and 2000-2001 Supplementary Survey Analysis: Collaborative Economics

40%

Percentage of Population Enrolled in Preschool (Ages 3 to 5) 2010 Silicon Valley California 37%

United States

The Preschool enrollment rate held in Silicon Valley but **dropped** in the state and the U.S.



Third grade English-Language Arts proficiency **varies by race**



More Silicon Valley families are choosing childcare centers

> *Other includes Head Start/State Program, Preschool or Nursery School, Non-Family member, and Other Source Note: Childcare for children receiving 10 or more hours of childcare per week Data Source: UCLA California Health Interview Survey

Analysis: Collaborative Economics

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Arts and Culture

Creativity is fundamental to Silicon Valley's competitive edge. Creative business enterprises and arts organizations together help build an innovative talent base for the future.

WHY IS THIS IMPORTANT?

- Art and culture are integral to Silicon Valley's economic and civic future. Participation in arts and cultural activities spurs creativity and increases exposure to diverse people, ideas and perspectives. Increasingly, broad-based creativity is understood as fundamental to our region's innovative milieu. Arts related businesses and the creative people they employ stimulate innovation in today's global marketplace.
- A vital arts community is also a factor in a region's attraction and retention of talent. A robust ecosystem of arts education opportunities for young people is understood as a competitive advantage in attracting young talent and families that put a high premium on education offerings

HOW ARE WE DOING?

- Nationally, 'arts-centric' businesses, as defined by Americans for the Arts, made up four percent of all business establishments in 2010. In Santa Clara County the concentration is slightly higher (4.7 percent). These businesses range from non-profit organizations such as museums and theaters to for-profit architecture, advertising, film, entertainment, publishing and a multitude of specialized design services.
- In 2010, there were 7,800 'arts-centric' businesses in the region. Over a third of those businesses were in Design and Publishing and 30 percent were in Visual Arts/Photography. However, these numbers represent an overall decline in Silicon Valley, and a slightly higher rate of decline in 2010 (16 percent) than the economy overall (14 percent). However, since 1995 businesses of this type have grown 33 percent. Design and Publishing has been the largest contributor to the long-term growth, adding over 1,000 establishments from 1995 to 2010 (a growth of 56 percent).
- Arts education opportunities are a well-established priority for Silicon Valley families. Repeated surveys over the past ten years have found more than 90 percent of the Valley's parents wanting arts education as mandatory subject matter in our schools. Nevertheless, Silicon Valley trails many other regions in the presence of arts education talent.

SOCIETY

Arts-centric Businesses per One Hundred Thousand Residents



*Silicon Valley includes Santa Clara County Data Source:Americans for the Arts, Dun & Bradstreet, 2010 Analysis: 1st ACT

The region **has a higher concentration** of artscentric businesses than the nation as a whole



Data Source: National Establishment Time-Series (NETS) Database; Americans for the Arts Analysis: Collaborative Economics

Two thirds of arts-centric businesses are in **design** and publishing and visual arts/photography



Silicon Valley **has a lower concentration** of arts educators than the nation as a whole

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Quality of Health

While health insurance coverage is improving, immunization rates are holding, and infant mortality rates are increasing.

WHY IS THIS IMPORTANT?

Poor health outcomes generally correlate with poverty, poor access to preventative health care, lifestyle choices and education. Early and continued access to quality, affordable health care is important to ensure that Silicon Valley's residents are healthy and prosperous. For example, timely childhood immunizations promote long-term health, save lives, prevent significant disability and reduce medical costs. Health care is expensive, and individuals with health insurance are more likely to seek routine medical care and to take advantage of preventative health-screening services.

HOW ARE WE DOING?

- The percentage of kindergarten students who have received all required immunizations in Silicon Valley has exceeded the state as a whole in every year reported. However, rates have fallen since 2006 in both geographies. Low levels of immunization affect the susceptibility of the region to outbreaks of childhood illnesses like pertussis (whooping cough) or chicken pox.
- In 2010, 88 percent of people in Silicon Valley had health insurance, holding steady from 2009. Health insurance coverage includes both private coverage including employer or union-based as well as public coverage including Medicare and Medicaid. Improvement in coverage was reported across four of six groups. African Americans with coverage jumped from 85 to 88 percent in 2010. While the rate of coverage held steady for Asians and the category Two or More Races over the most recent year, these groups, along with Whites reflect the highest coverage rates.
- From 2008 to 2009, the infant mortality rate increased from 3.4 to 3.7 per 1,000 live births in Silicon Valley and decreased from 5.1 to 4.9 in California. Infant mortality has steadily declined in California and declined with some volatility in Silicon Valley. Since 1994, the infant mortality rate has dropped by 1.4 deaths in Silicon Valley and by 0.3 deaths statewide.

SOCIETY

Kindergarten Immunizations Percent of Kindergarten Students with All Required Immunizations



Data Source: California Department of Public Health, Kindergarten Immunization Assessment Analysis: Collaborative Economics

Kindergarten immunization rates **slow very slightly**



Health insurance increased for nearly all ethnicities

Silicon Valley Percentage of Individuals with Health Insurance

	2009	2010
White	93%	94%
Two or More Races	92%	91%
Asian	91%	91%
African American	85%	88%
Hispanic	77%	77%
Some Other Bace	73%	75%

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Infant Mortality Rate



up slightly in Silicon Valley

Infant mortality rate

Safety

Child welfare services are faced with shrinking budgets.

WHY IS THIS IMPORTANT?

The level of crime is a significant factor affecting the quality of life in a community. Incidence of crime and gang activities not only poses an economic burden, but also erodes our sense of community by creating fear, frustration and instability. Occurrence of child abuse and or neglect is extremely damaging to the child and increases the likelihood of drug abuse, poor education performance and criminality later in life. Research has also linked adverse childhood experiences, such as child abuse and or neglect, to poor health outcomes including heart disease, depression, and liver and sexually transmitted diseases. Safety for the community starts with safety for children in our homes.

HOW ARE WE DOING?

- The rate of substantiated child abuse in Silicon Valley began declining at a faster rate in 2008. By 2010, the rate dropped 14 percent, bringing the number of child abuse cases per thousand to a low of 3.1. This drop can be explained in part by the concurrent decline in social service employees in the region, which has fallen six percent since 2007, and four percent in the last year. In California, child abuse cases fell four percent in 2010, bringing the number of child abuse cases per thousand to a low of 8.9. As public revenues fall (see Governance section), public services also diminish.
- After increasing the previous year, school expulsions due to violence or drugs fell during the 2010-11 academic year in both the state and the region. Expulsions dropped by 0.4 per 1,000 students in Silicon Valley and by 0.1 statewide. After peaking the previous academic year, expulsions fell to two per 1,000 students in the region.
- Gang related homicide in both Silicon Valley and the state has fluctuated since 1997. Since peaking in 2007, gang related homicides in the region have fallen 31 percent while increasing 19 percent in the state over the same time period. From 1997 to 2009, gang related homicides increased by 22 percent in the region and one percent in the rest of the state.



Note: The recent decline in cases from 2007 to 2010 can be explained in part by large funding cuts in social services programs for children.

Data Source: California Department of Social Services, UC Berkeley Center for Social Services Research Analysis: Collaborative Economics

Both substantiated cases of child abuse and the number of social services employees **continue to drop**



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Environment

Silicon Valley reduced resource consumption and made progress toward improved efficiency in electricity generation and use.

WHY IS THIS IMPORTANT?

- Environmental quality directly affects the health of all residents as well as the Silicon Valley ecosystem, which is in turn affected by the choices that residents make about how to live-how we chose to access work, other people, goods and services; where we build our homes; how we use our natural resources; and how we enforce environmental guidelines.
- Water is one of the region's most precious resources, serving a multitude of needs, including drinking, recreation, supporting aquatic life and habitat and agricultural and industrial uses. Water is also a limited resource because water supply is subject to changes in climate and state and federal regulations. Sustainability in the long run requires that households, workplaces and agricultural operations efficiently use and reuse water.
- Energy consumption impacts the environment with the emissions of greenhouse gases and atmospheric pollutants through the combustion of fossil fuels. Sustainable energy policies include increasing energy efficiency and the use of clean renewable energy sources. For example, more widespread use of solar generated power diversifies the region's electricity portfolio, increases the share of reliable and renewable electricity, and reduces greenhouse gasses and other harmful emissions. Electricity productivity illustrates the degree to which the region's production of economic value is linked with its electricity consumption.
- In recent years, residents and businesses are investing in renewable energy installations. The length of a municipality's required permitting process can pose significant barriers to the widespread adoption of renewable energy installations and add significantly to the costs. Streamlining the region's permitting requirements will yield environmental and economic gains.

HOW ARE WE DOING?

- Silicon Valley residents are making progress toward reducing water consumption. In the past year alone, water consumption per capita in the region fell by nine percent. Since 2000, gross per capita consumption dropped 18 percent. In 2010, 3.6 percent of the total water consumed in Silicon Valley was from recycled sources, the highest recycled consumption level since measurement began in 1999.
- Electricity consumption per capita is a measure of efficiency. Since 1998, per capita consumption has fallen seven percent in Silicon Valley, compared with two percent in the rest of California. Most recently, per capita consumption fell in both geographies in the last year, declining by one percent in the region and by two percent in the rest of California.

- The economic value produced per mega watt hour consumed is a measure of the region's electricity productivity. In 2010, Silicon Valley's electricity productivity was 19 percent higher than that of California. In the last year, electricity productivity increased by three percent in the region and by two percent in the rest of the state. In the long run, electricity productivity is up ten percent since 1998 in Silicon Valley and up by 13 percent in the rest of California.
- The region's new solar capacity increased by 41 percent from 2010 to 2011, but only rose by 21 percent statewide. The residential sector accounted for 60 percent of the solar capacity added in Silicon Valley in 2011, but added capacity in this sector declined 20 percent from 2010. The large commercial sector increase of 2,127 percent in 2011 accounted for the overall gain in capacity in 2011.
- Permitting times decreased for all technologies from 2009 to 2011, with the exception of solar installations. In 2011, electric vehicle charging station installations had the shortest median permitting time with 50 percent of Silicon Valley cities reporting permits could be obtained in one day or less. In that same year, 75 percent of cities reported that electric vehicle charging station installations could be permitted in 10.5 days or less, and the maximum permitting time was 49 days. In that same year, Solar installations had the second shortest median permitting time of 5 days, followed by wind installations (6 days) and geothermal installations (12.25 days).



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Environment



Large gains in commercial capacity **drive new solar** capacity in 2011

> Silicon Valley Rest of California +21%



Solar Installations by Sector



*Beginning in 2008; the Land Use survey expanded its geographic definition of silicon Valley to include cities northward along the U.S. 101 corridor (Brisbane, Burlingame, Millbrae, San Bruno and South San Francisco) Data Source: City Planning and Housing Departments of Silicon Valley Analysis: Collaborative Economics

The permitting time required for the installation of renewable energy systems is dropping in the region. In the charts above, the blue box represents the range for which the middle 50 percent of the responses fall. The vertical black line in the blue box represents the median (middle) value of the data set. The left-hand line represents the range for the lower 25 percent of the responses, and the right-hand line represents the range for the upper 25 percent.

Permitting times for renewable energy systems are **decreasing**

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Transportation

alternative means of commute, including public transit.

WHY IS THIS IMPORTANT?

- The modes of transportation we use, including the type of cars we drive, affect the quality of our air and the region's transportation infrastructure. By utilizing alternative modes of transportation, such as public transit and walking, as well as choosing vehicles that are more fuel-efficient or use alternative sources of fuel, residents can reduce their ecological footprint.
- Shifting from carbon-based fuels to renewable energy sources and reducing consumption together have the potential for widereaching impact on our environmental quality in terms of local air quality and global climate change.

HOW ARE WE DOING?

- For five consecutive years Silicon Valley residents have continued to drive less, steadily reducing travel (VMT) per capita in the region. The year 2010 marks the lowest VMT the region has seen since 1995. Meanwhile, gas prices reached an all time high in 2008 and fell dramatically the following year. However, from 2009 to 2010, prices began to recover and are now close to 2006 price-levels.
- The percentage of Silicon Valley commuters driving alone to work dropped three percent from 2003 to 2010 (78% to 75%), as residents are finding alternative means of commute or working from home. In 2011, transit ridership in Silicon Valley increased 4.9 percent, to roughly 27 rides per capita in 2011. This marks the first positive growth in transit use since 2008.



Analysis: Collaborative Economics

Vehicle Miles Traveled continues to decline as gas prices are on the rise

Percent Change 200	9-2010
VMT Per Capita	-3%

Gas Prices	+13%



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Land Use

Development near transit increases while residential density continues to slip.

WHY IS THIS IMPORTANT?

By directing growth to already developed areas, local jurisdictions can reinvest in existing neighborhoods, increase access to transportation systems, and preserve the character of adjacent rural communities. Focusing new commercial and residential developments near rail stations and major bus corridors reinforces the creation of compact, walkable, mixed-use communities linked by transit. This helps to reduce traffic congestion on freeways, preserve open space near urbanized areas and improve energy efficiency. By creating mixed-use communities, Silicon Valley provides workers with alternatives to driving and increases access to workplaces.

HOW ARE WE DOING?

- Increased residential density is a sign of reduced urban sprawl. In each year from 2004 to 2009, newly approved units were developed with 20 units per acre or more. In the last two years residential density has fallen and reached 14.6 units/acre in 2011. Net residential development approved in the region increased by 165 percent from approximately 2,100 units in 2010 to more than 5,600 units in 2011. However, net residential development has dropped 78 percent since peaking in 2008.
- Residential and commercial development near public transit reduces need for personal vehicles for transportation, decreasing road congestion and harmful emissions. The share of housing units approved to be built near mass transit increased from 53 percent in 2010, to 54 percent in 2011. In each of the past five years, over 50 percent of approved housing was developed within walking distance of mass transit.
- In 2011, 50 percent of net square feet of non-residential development was near transit. Total non-residential development increased by 186 percent over 2010.



along the U.S. 101 corridor (Brisbane, Burlingame, Millbrae, San Bruno and South San Francisco) Data Source: City Planning and Housing Departments of Silicon Valley Analysis: Collaborative Economics

Residential density **continues to slip**



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Housing

While housing costs eased in 2010, they began rising again in 2011.

WHY IS THIS IMPORTANT?

The affordability of housing affects a region's ability to maintain a viable economy and high quality of life. Lack of affordable housing in a region encourages longer commutes, which diminish productivity, curtail family time and increase traffic congestion. Lack of affordable housing also restricts the ability of crucial service providers-such as teachers, registered nurses and police officers-to live in the communities in which they work. The current financial crisis has greatly added to housing pressures in the region.

HOW ARE WE DOING?

- Falling from the recent high in 2010, five percent of new residential development in 2011 was classified as affordable. This is the lowest percent over the last 14 years. While the number of net residential units approved for development increased 165 percent from 2010 to 2011, the number of net affordable units approved decreased by 47 percent. A total of 260 net units were approved for construction in 2011.
- In 2011, average monthly rent rose to \$1,750 in Silicon Valley. This change represents an eight percent jump from 2010 and the first increase since 2008. Meanwhile, median household income fell for the second year in a row, declining by three percent in 2010.

- The percentage of first-time homebuyers that can afford to purchase a median-priced home increased six percent in 2011 in Silicon Valley. This reflects trends across the state. Home affordability for firsttime buyers increased five percent statewide. Of other California metro areas, Silicon Valley continues to be the least affordable.
- The housing cost burden for renters and owners in Silicon Valley decreased in the last year. The percentage of renters spending 35 percent or more of their income on housing dropped in Silicon Valley by one percent and increased statewide by one percent to a peak of 45 percent in 2010. The housing cost burden for homeowners dropped in the region and statewide by one percent over the same time frame. Over the long term, mortgage payments have continued to represent a growing percentage of household incomes both in the region and the state, increasing seven percent and eleven percent respectively.
- Since the peak in 2008, residential foreclosures in Silicon Valley have subsided. The number of foreclosures fell five percent in 2010 to 6,626 foreclosures. Foreclosures in the state fell eleven percent during that time frame with 169,657 foreclosures in 2010. The first half of 2011 represents a 16 percent drop over the first half of the prior year.



Building Affordable Housing

New affordable housing development at **14-year low**

the U.S. 101 corridor (Brisbane, Burlingame, Millbrae, San Bruno and South San Francisco) Data Source: City Planning and Housing Departments of Silicon Valley Analysis: Collaborative Economics



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Housing

PLACE

Housing Costs



Data Source: U.S. Census Bureau, American Community Survey Analysis: Collaborative Economics





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Civic Engagement

The voter participation rate increased in 2010.

WHY IS THIS IMPORTANT?

An engaged citizenry shares in the responsibility to advance the common good, is committed to place, and holds a level of trust in community institutions. Voter participation is an indicator of civic engagement and reflects community members' commitment to a democratic system, confidence in political institutions and optimism about the ability of individuals to affect public decision-making.

HOW ARE WE DOING?

- Voter turnout in the November 2010 general election continued the increasing trend from the 2002 and 2006 midterm-elections. In 2010, 46 percent of Silicon Valley eligible voters and 44 percent of California's eligible voters participated. Rates of absentee voting declined from 2009 election-highs for both Silicon Valley and California. However, the percentage of absentee voters has increased dramatically in both Silicon Valley (39%) and California (24%) since 1998.
- Although no bonds were proposed in 2011, Silicon Valley voters approved all 11 measures proposed in 2010. Each of these 11 bond measures sought financing for school districts. Since 2000, Silicon Valley voters have approved 90 percent of all local bond measures, including county, city and school district measures. During the period from 2000 through 2011 in Silicon Valley, schools accounted for 80 percent, and cities accounted for 17 percent of all bond measures proposed. This follows statewide trends in which school districts are responsible for a majority of bonds on ballots.

Voter Participation Eligible Voter Participation Rate and Absentee Voting Rate Santa Clara & San Mateo Counties and California 80% 70% Percentage of Total Voters 60% 50% 40% 30% 20% 10% 0% 2008 2010 idterm ection 2006 2009 2004 California Eligible Voter Participation Rate: Silicon Valley Absentee Voting Rate: Silicon Valley O- California

 $(\ \mathbb{A}) / \mathbb{E}$

Note: All yearly figures are based upon general election date, excluding 2009 special election Data Source: California Secretary of State, Elections Division Analysis: Collaborative Economics

Voter participation in midterm elections **continues to increase**

Absentee Voting Rate

	1998	2010	Change from 1998-2010
Silicon Valley	24%	64%	+39%
California	25%	48%	+24%



Local bond measures **absent in 2011**

*No bond measures were on the ballot in 2009 and 2011 Data Source: California Secretary of State Elections Division, Santa Clara County Registrar of Voters, and San Mateo County Board of Elections

Analysis: Collaborative Economics



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Revenue

Local governments are still faced with grave fiscal challenges.

WHY IS THIS IMPORTANT?

- Governance is defined as the process of decision-making and the process by which decisions are implemented. Many factors influence the ability of local government to govern effectively, including the availability and management of resources. To maintain service levels and respond to a changing environment, local government revenue must be reliable. Local revenues are affected by economic fluctuations and by state takings of locally generated revenue.
- Property tax revenue is the most stable source of city government revenue, fluctuating much less over time than do other sources of revenue, such as sales, and other taxes. Since property tax revenue represents less than a quarter of all revenue, other revenue streams are critical in determining the overall volatility of local government funding.
- Public safety tax revenue is generated by a half-cent sales tax and is allocated by the State Board of Equalization based on the county's share of statewide taxable sales. Revenues can be used for public services like police and fire. The share of public safety tax revenue a county receives from the state is reflective of local economic performance.
- Municipalities can issue bonds to finance capital projects. Amassing excessive amounts of municipal debt obligations can lead to potential funding shortfalls in the future and also raise the cost associated with future debt.

HOW ARE WE DOING?

- In fiscal year 2009-2010, city revenues fell by eleven percent from the year before, marking the second straight year of declining revenue. Sales tax and other revenue sources have not recovered to the levels of 2000/01, and while property tax revenue has climbed since 2004, it dropped off by six percent from fiscal year 2008/09 to 2009/10.
- Property tax was the largest and fastest growing revenue source for Silicon Valley cities, increasing from ten to 24 percent of total city revenue since 2000/01. However, because property tax collections lag the real estate market, the full effects of the downturn in the real estate market will become increasingly evident in lower city property tax revenues. Revenue from sales taxes as a percentage of total city revenue declined from 18 to ten percent over the past decade. Intergovernmental transfers from the State have also decreased for Silicon Valley cities since fiscal year 2003-04.

The amount of revenue from the public safety tax received by a county is an indicator of local economic performance. In fiscal year 2001-02 the actual amount of public safety tax revenue received far exceeded the amount budgeted due to the high concentration of dot-com activity in the region. In subsequent years, both the budgeted and actual revenues fell as a result of the dot-com burst and the recent recession. However, in fiscal year 2010-11 the revenue received by Santa Clara and San Mateo Counties increased for the first time since fiscal year 2006-07, also marking the first year since 2004-05 that the actual revenue received exceeded the amount budgeted. The projected revenue received in fiscal year 2011-12 is expected to increase by 11 percent over the prior year. Additionally, the region's percent of total revenue from the public safety tax in California increased in the fiscal year 2010-11 by 0.4 percent.

- Total city expenditures have increased 15 percent since fiscal year 2000-01, and to keep up with rising costs related to personnel and pension services, other categories of spending are being cut back. Personnel services, which consist of salaries and wages, health care costs for employees and retired workers, and compensation insurance charges are the largest category (76%) in total city expenditures.
- Total municipal debt including short term, long term and notes, has fluctuated over the past 11 years, with peaks in both 2002 (\$3.7 billion) and 2006 (\$4.1 billion). Lows were observed in 2000 (\$1.9 billion) and 2009 (\$1.8 billion). Public entities in the region have issued on average a combined annual municipal debt of \$2.9 billion from 1999 to 2010. As of July 2011, public entities in Silicon Valley have issued one billion dollars in debt. Between 1999 and 2010, education has accounted for the largest sums, nearly \$880 million every year on average. From 2009 to 2010, total debt funding increased by 43 percent reaching \$2.5 billion in 2010. This growth was mostly due to increase debt funding in Education, Transportation Infrastructure and Housing.
- Silicon Valley's contribution to California tax revenue through personal income tax held steady at 15 percent in 2009 and 2010.



Property tax is a **growing contributor** to city revenue



*Other Taxes include revenue sources such as transportation taxes, transient lodging taxes, and business license fees. **Other Revenue include revenue of use of money and property, sale of real and personal property, and intergovernmental transfers. Data Source: California's State Controller's Office Analysis: Collaborative Economics

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Revenue

GOVERN



Personnel services represented a growing percentage of expenditures

*Fiscal year 2009/10 is projected.

Note: Only Silicon Valley cities that provided financial data for all years are included in expenditures. Data Source: joint Venture Survey of Silicon Valley Financial Officers Analysis: Collaborative Economics



Public safety tax revenue **is recovering** from the effects of the recession

*The amount received for FY 2011-12 is projected.

Data Source: Santa Clara County Office of Budget and Analysis and San Mateo County Manager's Office Analysis: Collaborative Economics

> Silicon Valley's share of the public safety tax revenue **increased** over the previous year



Analysis: Collaborative Economics



Analysis: Collaborative Economics

Municipal Debt Obligations Issues in First Half of 2011

Education	\$664,714,770
Financing	65,435,000
Other Public Infrastructure	92,013,000
Water & Wastewater	31,990,000
Parks & Recreation	20,500,000
Miscellaneous	138,410,000
Redevelopment	31,411,295

Note: As of July 2011

Transportation Infrastructure, Housing and Health Care Infrastructure did not have any debt obligations issued in the first half of 2011



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- 3. New Taxes and Fees. Since the passage of Proposition 13 in 1978, local governments have added or expanded a wide variety of taxes and fees. These include development fees on new residential and commercial construction, transient occupancy (hotel) taxes, utility taxes, and taxes on the transfer of property.
- Prior to 1986 local governments could increase certain taxes without a vote approval by residents. It is in this period that many new utility, hotel and business license taxes were introduced or increased.
- In more recent years leading up to 2008 some cities passed increases in their sales tax rates and adopted parcel taxes for local government services—a trend that accelerated with the onset of the recession.
- However, increases in property tax rates are prohibited in California under Proposition 13. While communities across the country are implementing or considering property tax hikes it is not legally permissible in California even if two-thirds of the voting population are in support.
- One question for consideration is whether the taxes and fees that are adopted or increased make for better public policy today than if the same amount of money could be raised from property taxes.
- In summary, after the initial decline in property tax revenues caused by Proposition 13, local governments saw a steady growth in property tax revenue while at the same time adopting additional taxes and fees to offset the impact of the decline in the property tax rate. But this came to a halt in 2008.

PROPOSITION 13 IN THE NEW NORMAL

- Dramatically (and unexpectedly), the prior 30 years' experience with Proposition 13 and property tax revenues was turned upside down in 2008, when California's economy plunged into recession.
- The downturn took California and Silicon Valley from a world where new construction and large increases in assessed value generated ongoing tax gains (despite Prop 13), to a world where all the positive trends turned negative. Recent events have produced five major impacts on property tax revenue, all of them negative:
 - 1. Median home prices have fallen.
 - 2. The gain in assessed value and property taxes from new construction has plummeted. Some construction gains are expected in the coming years, but construction levels are unlikely to return to peak levels any time soon.
 - 3. The gain in assessed value and property taxes from changes in ownership has plummeted.
 - 4. A large share of the assessed value in most California counties is in properties with a recent base year valuation, including many bought at peak prices. As a result, we will see lower gains from change in ownership, for many years to come.
 - 5. The number of properties reassessed downward has surged.



Source: California Board of Equalization, Santa Clara County Assessor's Office; Analysis: Center for Continuing Study of the California Economy

We discuss each in turn below, but the cumulative result of these changes has been a dramatic slowdown in the rate of growth for assessed valuation and property taxes. The changes in Silicon Valley and California are shown on **Figure 6**. Assessed values increased by more than 8 percent per year between 2005 and 2008 in Silicon Valley (more than 10 percent per year in California) but the 2011-12 values are **below** the assessed value for 2008-09 because the increases that had been so steady for most of the preceding three decades suddenly stopped.

Other counties suffered even larger drops in assessed value, with losses of 15.5 percent in Riverside County, 12.2 percent in Sacramento County, 10.5 percent in San Bernardino County and 16.8 percent in San Joaquin County, all locales hard hit by the housing slump.⁵



- 1. Median Home Prices Decline. The period of large increases in home prices—and large contributions to property taxes from changes in ownership and new construction—came to a crashing halt with the arrival of the housing market crash, the recession, and new financial conditions for lenders and potential homebuyers. There is no doubt about what happened after 2007 but the real question is whether or not the post-2007 world is the "new normal" or whether a return to the pre-crash days for property tax increases is close at hand.
- Housing prices fell substantially in Silicon Valley with even larger losses in the statewide data. Median resale home prices fell 37 percent in Santa Clara and 28 percent in San Mateo County between 2007 and 2009 while they declined by 51 percent statewide as shown on **Figure 7**. After a brief rebound, median prices were declining again toward the end of 2011.

Special Analysis



- 2. Value of New Construction Plummets. At the same time, the volume of new construction fell throughout California as the state went from 213,000 building permits in 2004 to 36,000 in 2009 (see Figure 8). As a result the value of new residential and non-residential construction dropped from \$100 billion in 2004 to \$40 billion in 2009. And construction values have remained near the lowest levels throughout 2010 and 2011, with no substantial upturn expected in 2012.
- **3. Assessed Value Growth from Change in Ownership Plummets.** Often, the largest component of assessed valuation growth is the gain from revaluation when properties change ownership. Until very recently these changes often brought large increases in the assessed valuation for properties where the prior acquisition date was many years ago. In Silicon Valley changes in ownership provided an average of \$18.5 billion per year in increased assessed value for the four years starting in 2005-06--over half of the overall increase in assessed value. For the most recent three years, changes in ownership averaged just under \$6 billion per year (**Figure 9**).



Source: Santa Clara and San Mateo County Assessor's Offices

- In Los Angeles County the annual increase in assessed value from changes in ownership went from an average of \$56 billion per year between 2005 and 2009 to an average of \$12 billion between 2009 and the 2011-12 tax year.⁴
- **4. A Large Share of Assessed Value is in Properties Bought Near the Peak.** A large number of properties in California and Silicon Valley are now valued on the market at less than or close to their original acquisition price. This trend has two implications:
- First, some properties are being reassessed at reduced valuations. In the 2010-11 tax year there was a decrease in assessed valuation of \$8.5 billion, equal to 2.0 percent of total assessed value in Santa Clara and San Mateo counties. In the 2009-10 tax year the decline was even larger, with a loss of \$11.5 billion or 3.5 percent of total assessed valuation resulting from successful appeals and adjustments to property assessed values.

Large reductions were noted in other counties as well.

- Second, as a result of the slump in housing prices, the number of properties held for a long time and with a low assessed value is steadily declining as properties turn over. In Santa Clara County only 5.5 percent of the total assessed value is in properties purchased prior to Proposition 13 (**Figure 10**). Another 40.7 percent are properties purchased when prices were still rising rapidly.
- Data for Sacramento County, which may be more typical of counties that experienced the sharpest increase in home prices during the boom, shows a similar result but with an even higher share of assessed value (43.1 percent) for properties purchased in the 2003-2007 period.⁷
- Moreover, forecasts of home price trends by the California Association of Realtors and other organizations anticipate a very slow increase, if any, in home prices from current levels for the coming years.



Source: Santa Clara County Assessor's Office

- **5. There has been a Surge in Properties Receiving Reduced Assessments.** Many properties bought before the recession now have market values below their purchase price. Under Proposition 8 county assessors have the responsibility to adjust assessed valuations, and thus lower property taxes, when market value has fallen below the base year purchase price.
- While these reductions can be recovered as prices rise, there has been a surge in assessment reductions since the recession and it will take many years in some cases before prices rise to pre-recession levels.
- Figure 11 shows the number of properties with an assessment reduction in Santa Clara County, and the total value of all reductions. For the 2011-12 tax year, there were 124,148 properties with reduced assessments for a total value of reductions of \$25.9 billion as shown on Figure 11.



Source: Santa Clara County Assessor's Office

⁷ 2010 Annual Report, Sacramento County Assessoris Office



In summary, the level and composition of assessed value growth has changed substantially since 2007. The trends for Santa Clara County, typical of the changes throughout California, are shown on **Figure 12**. In recent years the gains from ownership changes, new construction and the annual inflation increase have ceased, and assessed value remains below peak levels.

The result has been a sharp drop in the annual change in assessed value and related property taxes.

While some of these changes may be temporary, growth in assessed value and property taxes is likely to remain low since large increases in home prices and new construction are not expected soon, and because gains from reassessment of properties upon sale are likely to remain at low levels for many years.

DIRECT AND INDIRECT CONSEQUENCES OF PROPOSITION 13 THAT INCREASED OVER TIME

- Unlike trends in the growth of property taxes, many consequences of Proposition 13 did not change with the recession and have been increasing with the passage of time.
- 1. The Residential Share of Assessed Value Has Increased. One goal of Proposition 13 was to protect homeowners from large increases in property taxes, and that has been largely achieved. But one unanticipated consequence of Proposition 13 is that the residential single family and condo share of assessed value has increased since 1978. Figure 13 shows this for Santa Clara and San Mateo County but the trends are similar for other jurisdictions.
- In the 1977-78 tax year, the residential share of assessed value was 50 percent in Santa Clara County and 59 percent in San Mateo County. By the 2007-2008 tax year, those shares had increased to 67 percent in Santa Clara County and 71 percent in San Mateo County (**Figure 13**). The residential shares continued to increase after 2007 despite a sharp drop in home prices. As a result, homeowners as a group pay a much higher share of total property taxes currently than at any time since Proposition 13 was adopted.



Source: Santa Clara and San Mateo County Assessor's Offices

- There are two primary reasons for the increasing share of property taxes paid by single family homeowners. One is that these properties turn over (are sold) more frequently than commercial properties, and until very recently most sales resulted in large increases in single family property assessed values as home prices continued to rise significantly until 2007.
- The second reason is because there was a larger increase in new residential construction versus non residential uses, particularly in the early years after 1978 when some agricultural land was converted to homes and other uses.
- 2. Property Owners Can Pay Substantially Different Property Taxes on Similar Valued Property. This possibility exists for both residential and non-residential property and depends on the length of ownership. The discussion here uses data on home prices to illustrate this consequence of Proposition 13.
- The savings to homeowners from the 2 percent maximum annual increase in assessed value depends on when they bought their home, the length of time it has been owned and also on where they live. A new buyer of a median priced home in 2007 would pay more than four times the property tax of an owner from 1978, but only double the property taxes of owners who bought median priced homes during much of the 1990s.
- The sharp decline in housing prices since the 2007 peak has reduced the difference between property taxes paid by long-time homeowners and recent buyers. For example, a median priced home in California bought in 1985 would have a maximum AV increase of 64 percent if the 2 percent increase was applied each year. The median price of a home in California increased by 153 percent between 1985 and 2010 so a median price buyer in 2010 would pay roughly 2 1/2 times the property tax of a 1985 median home price buyer—less of a differential than the 4x differential that existed in 2007.
- But recent buyers in the higher-priced markets are still paying 4 times as much as 1985 buyers of a median priced home. For example, median prices in the Bay Area increased by 291 percent between 1985 and 2010 compared to the maximum 64 percent increase in assessed value, with similar increases in Orange and San Diego counties.
- Dowell Myers authored a paper exploring the implications of Proposition 13 in the new world of housing price declines after the peak in 2007. His paper highlights some of the generational impacts of Proposition 13. Owners who have lived in the same home since 1978 or even since 1990 are older, on average, than owners who bought more recently since many of them are younger, first-time buyers. Younger owners who are starting their careers and family, as a result of Proposition 13, pay higher taxes on similarly valued properties than do older owners. Myers argues that these young, new buyers not only struggle with the affordability of purchasing homes, but also implicitly subsidize the lower property tax payments of long-time owners.⁸
- There is a distinct generational aspect about those who receive the most benefit from the 2 percent limit on assessed value imposed by Proposition 13. This generational benefit for older homeowners is increased by the provision (added after Proposition 13's passage) that owners aged 55 and above can retain the assessed value base on their old home in most cases even if they sell and buy another home.
- Rather than providing an incentive for new economic activity, Proposition 13 places a higher tax burden on new investments. The result of the 2 percent limitation on assessed value increases as long as property does not change hands results in a situation where new home owners or new business owners are paying much higher property taxes than those who bought homes or business property years or decades earlier.



- 3. Per Pupil Spending on K-12 Education Falls Relative to the Nation. Ed Source reports that state spending per pupil ranked 43rd among states in 2007-08 before the recession hit.⁹ The California Budget Project estimates that state spending per pupil fell to 46th in the 2010-11 school year and that per pupil spending in California lags the nation by the largest amount ever as shown on Figure 14.¹⁰ Both Ed Source and the California Budget Project report that California ranks in the bottom two states in teachers per student, last in librarians per student and next to last in school counselors per student.
- This decline in K-12 per pupil spending relative to the nation is the result of multiple factors, and the link to Proposition 13 is indirect. It is also true that a major culprit in the recent decline in K-12 funding is the state's continuing budget and fiscal woes, which are explained by larger dynamics as well as the effect of Proposition 13.
- However, there is a link between Proposition 13 and K-12 funding challenges. It has to do with the way Prop 13 shifted primary responsibility for K-12 funding to Sacramento and away from the localities. Under California's current system of K-12 funding, the state provides funds that are needed to meet the K-12 revenue limit in each year after subtracting the amount contributed by local property taxes.
- As a result, if property tax revenues grow faster than the revenue limit as happened in many years before the housing crash, the required state contribution to K-12 education is lowered. However, when property tax growth slows as occurred in recent years, the state contribution would normally increase. But that has not been possible to maintain in recent years since the recession led to a decline in state revenues. The upshot is that in the 2010-11 budget year (and before the recent K-12 spending cuts), California students received nearly \$3,000 less than the national average.
- **4. The Impact of the 2/3 vote majority.** Proposition 13 imposed a two-thirds majority vote requirement for state tax increases and for local bond or special tax elections. The two-thirds majority was reduced to 55 percent for school bond elections by Proposition 39 (passed in 2000).
- A study of recent elections shows the extent to which a lower majority of 50 or 55 percent would have led to the passage of local taxes and bonds that did not receive a 2/3 majority vote."

⁹ EdSource, adjusted to use comparable wage index, http://www.edsource.org/data-ca-per-pupil-exp-compare-states.html. September 2010 ¹⁰ A Decade of Disinvestment; California Education Spending Nears the Bottom, California Budget Project, October 2011 ¹¹ Data from http://www.californiacityfinance.com/. Scroll down to Local Tax Votes

- In the November 2011 election five school parcel tax increases or extensions received more than two-thirds of the votes, while two taxes failed but both received more than 55 percent of the total vote. Six of eight school bonds passed, but only three would have been approved if the required majority was two-thirds rather than 55 percent. Nine city, county and special district parcel taxes received more than two-thirds of the vote but three more failed while receiving more than 55 percent. One other tax got less than 50 percent of the votes.
- In the November 2010 election 10 city, county and special district parcel tax elections received more than two-thirds of the vote while nine others failed, even though receiving more than 55 percent of votes cast. Six received less than 55 percent. Two school parcel taxes passed while 11 failed thought receiving more than 55 percent of votes cast. Five received less than 55 percent. Sixteen school bond elections received more than two-thirds of votes cast while 30 elections received more than 55 percent but less than two-thirds. 17 elections did not receive 55 percent of votes cast.
- While local tax and bond elections continue to be adopted by voters even with a two-thirds majority, it is also true that a substantial number of elections have failed that would have passed with a 55 or 50 percent requirement.
- **5.** Control of the allocation of the I percent local property tax among jurisdictions. One of the issues that underlies the shift in power between local government and the state is the provision in Proposition 13 that requires the state to allocate the property tax among local governments within each county. This provision was a significant break in the long-standing tradition that the property tax was to be used as a source for local, as opposed to state services. The authority for local government to control the property tax was put in the constitution in 1910, when the Progressive movement pushed for greater local control. Proposition 13 reversed that trend by granting the power to allocate the tax to the state and ended a 68 year tradition connecting the local property tax payer and local services.
- Not only do local governments no longer have power to raise property taxes, they do not have the power to adapt to changing circumstances and develop local agreements to reallocate the 1 percent among local jurisdictions.

THE BOTTOM LINE

Proposition 13 substantially reduced the ability of local governments to control their property tax revenues. This was achieved by reducing the maximum tax rate to 1 percent (which was 60 percent below previous levels), by mandating that annual increases in assessed value on each property be limited to 2 percent and by prohibiting local governments from increasing property tax rates.

All of these changes gave property owners a high measure of certainty about their future property tax liability.

- However, from a governance standpoint Proposition 13 reduced the ability of local governments and the state to raise many other tax rates and transferred the allocation of property taxes among local jurisdictions to the state. In addition, Proposition 13 effectively made state government the primary source of local education revenues.
- After the passage of Proposition 13 there were many legislative and ballot measures that mitigated the impact of Proposition 13 and also many that made raising local revenues more difficult. Cities responded to Proposition 13 by adopting or increasing other local revenues. In December 2011 the courts upheld the right of the legislature to end redevelopment agencies as presently structured and this decision will have implications for the allocation of property tax revenues depending on legislative decisions in 2012.
- For some thirty years, many of the adverse impacts were softened by rapidly rising property tax revenues, which increased faster than consumer prices, faster than the growth of the economy, and faster than most other local government revenue sources. This happened because home prices surged over this three-decade period; because population growth and new construction levels increased; and because as properties were sold and reassessed to market value, there were usually large gains in assessed value for the local jurisdiction.
- The era of rapidly rising property tax revenues came to a halt around 2008. All three components of rapid property tax gains ended with the housing slump that brought a large decline in new construction, a fall in home prices and a sharp drop in the growth of assessed value as properties were sold and reassessed. These changes were amplified by the recession that followed, which lowered all state and local government revenues.
CONCLUSION

- If property tax revenues were soon going to return to pre-recession growth rates, it is possible that talk of reforming Proposition 13 would fade away. But such a favorable outcome is unlikely. For the next few years and possibly longer, property tax revenues are likely to grow more slowly than the economy, and more slowly than local government expenditures. It is most likely that the years since 2008 and the recession are more like the "new normal" than the preceding thirty. This is because of three primary factors:
 - 1) Home prices are expected to recover slowly and take several years to reach pre-recession levels.
 - 2) Population growth in California has slowed and it is very unlikely that the demand for additional housing will ever reach the levels experienced between 1978 and 2008. Between 1978 and 2008, annual population growth in California was 467,000 or 1.6 percent per year. During the past three years annual growth has averaged 240,000 or a 0.6 percent annual gain.
 - 3) The gains in assessed value from changes in ownership are likely to continue at low levels for many years as many properties now are worth less than when they were purchased. Moreover, the number of residential properties bought more than 20 years ago now makes up a small proportion of total properties in most jurisdictions.
- While these changes are not the result of Proposition 13, the impact on property tax revenues in the future is a direct result of how property taxes are structured under Proposition 13.
- In addition, sales taxes, the other major general revenue source for local governments, have grown more slowly than the economy over the past three decades as consumers are spending a larger proportion of their income on services instead of goods and these services are not subject to sales tax.
- As the economy recovers there will be a temporary surge in local government revenues compared to recent recession levels, but the longterm outlook under the existing tax system is for local government revenues to grow relatively slowly. This trend, combined with continuing population growth and the challenges of funding retirement benefits, will make it more difficult for local government to fund high quality public services.
- Moreover, the slow future growth in property taxes will put pressure on the state budget. While rapid property tax growth during the period from 1978 through 2008 reduced the state budget allocation for local school funding, the slower growth expected in the future will translate into larger state budget funding responsibilities given the way that the state budget helps fund local education.
- In light of all this, it is clear we face considerable challenges in financing our future. If we don't raise new revenues, then Silicon Valley and California must (continue to) make significant cuts. If we're not willing to cut into education and services any further, then a serious conversation has to take place about new revenue streams.

That conversation is critical for Silicon Valley's economic competitiveness.

The 2011 CEO Business Climate Survey conducted by the Silicon Valley Leadership Group reported:

- "Increasingly it is difficult for Silicon Valley companies to compete against other centers of innovation and entrepreneurship—both domestic and abroad. Among the unique challenges are globalization and the international competition for talent. A deteriorating state infrastructure in areas ranging from public education to public transportation has added to the difficulties of recruiting the best workforce, finding them available housing, and educating their children to be tomorrow's world-class workforce." ³
- Raising taxes versus cutting services is normally viewed as a stalemate: the political climate doesn't allow for one and political dysfunction prevents the other. But there might be a way out of the stalemate—a third way—and that would be to reform our tax system so that it addresses the abnormalities we've described here and tracks more closely with the 21st century economy.
- That discussion should proceed with Proposition 13 squarely on the table along with other options. The year 2012 is the time to begin that discussion in earnest.

Stephen Levy is Director and Senior Economist of the Center for Continuing Study of the California Economy

FRONT PAGE STATISTICS

Data are for Santa Clara and San Mateo Counties, Fremont, Newark, Union City, and Scotts Valley. Land Area data (except for Scotts Valley) is from the U.S. Census Bureau: State and County QuickFacts. Data is derived from Population Estimates, 2000 Census of Population and Housing, 1990 Census of Population and Housing. Small Area Income and Poverty Estimate, County Business Patterns, 1997 Economic Census, Minority-and Women-Owned Business, Building Permits, Consolidated Federal Funds Report, Census of Governments. Scotts Valley data is from the Scotts Valley Chamber of Commerce.

Population

n Valley population come from the E-l: City/County Population Estimates with Annual Percent Change report by the California Department of Finance and are for Silicon Valley cities. Population estimates are for 2011.

lobs

Silicon Valley employment data are provided by the California Employment Development Department and are from Joint Venture: Silicon Valley Network's unique data set. The data set counts jobs in the region and uses data from the Quarterly Census of Wages and Employment program that produces a comprehensive tabulation of employment and wage information for workers covered by state unemployment insurance (UI) laws and Federal workers covered by the Unemployment Compensation of Federal Employees; (UCFE) program. Employment data exclude members of the armed forces, the self-employed, proprietors, domestic workers, unpaid family workers, and railroad workers covered by the railroad unemployment insurance system. Covered workers may live outside of the Silicon Valley region. Multiple jobholders (i.e., individuals who hold more than one; the art one used more than once. Data for Quarter 2 2011 are preliminary-revised. Data is for Santa Clara and San Mateo Counties, Scotts Valley, Fremont, Newark, and Union City.

Average Annual Earnings Figures were derived from the EDD/Joint Venture Silicon Valley Network data set and are reported for Fiscal Year 2011 (Q3 & Q4 2010, Q1 & Q2 2011). Wages were adjusted for inflation and are reported in first half of 2011 dollars using the U.S. city average Consumer Price Index (CPI) of all urban consumers, published by the Bureau of Labor Statistics. Data for Quarter 2 2011 are preliminary-revised. Data is for Santa Clara and San Mateo Counties, Scotts Valley, Fremont, Newark, and Union City.

Foreign Immigration and Domestic Migration Data are from the E-6: Population Estimates and Components of Change by County - July 1, 2010-2011 reported by the California Department of Finance and are for San Mateo and Santa Clara Counties. Estimates for 2011 are provisional. Net migration includes all legal and unauthorized foreign immigrants, residents who left the state to live abroad, and the balance of hundreds of thousands of people moving to and from California from within the United States.

Age Distribution, Adult Educational Attainment, Foreign Born, and Ethnic Composition

Community Survey ta Clara and San Mateo Counties and are de

Adult Educational Attainment, Foreign Born, and Ethnic Composition

ara and San Mateo Counties and are derived from the United States Census Bureau, 2010 American Community Survey, For educational attainment, Some College Data for age distribution, adult educational attainment, and foreign born (front page statistics) are for Santa Clari includes Some college, less than I year of college; Some college, I or more years, no degree; Associate's degree.

PEOPLE

Talent Flows and Diversity

Data are from the E-6: Population Estimates and Components of Change by County - July 1, 2010-2011, July 1, 2000-2010 and July 1, 1990-2000 reported by the California Department of Finance and are for San Mateo and Santa Clara Counties. Estimates for 2011 are provisional. Data for the years 2000-2010 are based on revised estimates released in December 2011. Net migration includes all legal and unauthorized foreign immigrants, residents who left the state to live abroad, and the balance of hundreds of thourspack of population to and from California Theorem within the United States.

Age Distribution

Santa Clara and San Mateo Counties and are derived from the United States Census Bureau, 2010 American Community Survey

Language Spoken at Home for Population 5 years and older

m the United States Census Bureau, 2010 American Community Survey

Educational Attainment by Ethnicity

Data for adult educational attainment are for Santa Clara and San Mateo Counties and are derived from the United States Census Bureau, 2010 American Community Survey. Data reflects the educational attainment of the population 25 years and over whose highest degree received was either a bachelor's degree or a graduate degree. Multiple and Other includes American Indian and Alaska Native Alone, Native Hawaiian and Other Pacific Islander Alone, Some Other Race Alone, and Two or More Races.

Total Science & Engineering Degrees Conferred to Temporary Nonpermanent Residents

Insta and regional data for 1995-2010 are from the National Center for Education Statistics. Regional data for 1995-2010 are from the National Center for Education Statistics. Regional data for 1995-2010 are from the National Center for Education Statistics. Regional data for the Silicon Valley includes the following post secondary institutions: Menlo College, Cogswell Polytechnic College, University of an Francisco, University of California (Berkeley, Davis, Santa Cruz, San Francisco), Santa Clara University, San Jose State University, San Francisco State University, San francisco State University, San francisco, University of California (Berkeley, Davis, Santa Cruz, San Francisco), Santa Clara University, San Jose State University, San francisco State University, San francisco, University of California (Berkeley, Davis, Santa Cruz, San Francisco), Santa Clara University, San Jose State University, San francisco State University, San francisco, University of California (Berkeley, Davis, Santa Cruz, San Francisco), Santa Clara University, San Jose State University, San Gravita Sciences, engineering, engin

ECONOMY

Employment

Total Employed Residents by Month

n the Bureau of Labor Statistics, Local Area Unemployment Statistics and is for San Mateo and Santa Clara Counties. Data is not seasonally x National Employment data is from Bureau of Labor Statistics, Current Population Survey, Data is not seasonally adjusted.

Quarterly Job Growth; and Major Areas of Economic Activity

Sciloan Valley employment data are provided by the California Reads of Development Department and are from Joint Venture: Silicon Valley Network's unique data set. The data set counts jobs in the region and uses data are provided by the California Ripolyment Development Department and are from Joint Venture: Silicon Valley Network's unique data set. The data set counts jobs in the region and uses data from the Quarterly Census of Wages and Employment program that produces a comprehensive tabulation of employment and wage information for workers covered by State unemployment insurance (U) laws and Federal workers covered by the Unemployment Compensation for Federal Employees (UCEF) program. Employment data exclude members of the armed forces, the self-employed, proprietors, domestic workers, unpid family workers, covered by the railroad workers covered by the railroad unemployment insurance system. Covered workers may like outside of the Silicon Valley region. Multiple jobholders (i.e., individuals who hold more than one job) may be counted more than one. All industries are included in the major areas of economic activity. Quarter 2 for 2010 and 2011 are preliminary-revised. Data is for Santa Clara and San Mateo Counties, Scotts Valley. Fremont, Newark, and Union City,

Unemployment Rate; and by Ethnicity

Unemployment Nate, and by Lemintry is from the U.S. Census Bureau, American Community Survey. This data counts the number of unemployed persons in each race, by gender, for age groups ranging from 16 years of age to 75 years of age and older. Ethnicity breakdowns include Black or African American, Asian, Some Other Race, Two or More Race, White (Not Hispanic of Latino), and Hispanic or Latino. Data are limited to the household population and exclude the population living in institutions, college dormitories, and other group quarter Data is for Santa Clara County in the years 2007 through 2010. Monthly unemployment rate data are from the Bureau of Labor Statistics, Current Population Statistics (LAUS). Data is not seasonally adjusted. Data is for the San Mateo and Santa Clara Counties.

Science & Engineering Talent by Categories Data for Science & Engineering Talent by Categories Samples (PUMS). A list of S& occupations were divided by the United States Census Bureau, 2000 Decennial Census and 2010 American Community Survey Public Use Microdata Samples (PUMS). A list of S& occupations were divided into six categories: Computer, Physical Engineers, Design, Biological, Mathematics, and Aerospace Engineers & Scientists. Design includes Designers and Artists & Related Workers. Both were added to the S&E occupations to try to capture the employment in Graphic Designers and Multi-Media Artists & Animators. According to the U.S. Bureau of Labor Statistics Occupation Employment Statistics (May 2009), both occupations represent almost 60 percent of employment in both Designers and Artists & Related Workers.

Innovation

Science & Engineering Talent by Categories Data for Science & Engineering (S&E) Talent provided by the United States Census Bureau, 2000 Decennial Census and 2010 American Community Survey Public Use Microdata Samples (PUMS). A list of S&E occupations were divided into six categories: Computer, Physical Engineers, Design, Biological, Mathematics, and Aerospace Engineers & Scientists. Design includes Designers and Artists & Related Workers. Both were added to the S&E occupations to try to capture the employment in Carphic Designers and Multi-Media Artists & Animata According to the US. Bureau of Labor Statistics Occupation Employment Statistics (May 2009), both occupations represent almost 60 percent of employment in both Designers and Artists & Related Worker

Value Added per Employee

Value added per employee is calculated as regional gross domestic product (GDP) divided by the total employment. GDP estimates the market value of all final goods and services. GDP and employment data are from Moody's Economy.com. Employment data does not include farming. All GDP values are inflation-adjusted and reported in first half 2011 dollars, using CPI for the U.S. City Average from the Bureau of Labor Statistics. Silicon Valley data is for Santa Clara and San Mateo Counties.

Patent Registrations; Patents Registrations by Technology Area

Patent Data is provided by the U.S. Patent and Trademark Office and consists of Utility patents granted by inventor. Geographic designation is given by the location of the first inventor named on the patent application. Silicon Valley patents include only those patents filed by residents of Silicon Valley cities. Data are based on Joint Venture's city defined region of Silicon Valley.

named on the patent appreciation sancer patents and the patents of the patent appreciation sancer patents and the patent appreciation sancer pa Data provided by Cleantech Group¹¹⁴, LLC, Fortia analysis, venture capital is defined as disclosed clean tech investment deal totals. Data are based on Joint Venture's City-defined regic of Silcon Valley. The Cleantech Group describes cleantech as new technology and process, spanning a range of industries that enhance efficiency, reduce or eliminate negative ecological impact, and improve the productive and responsible use of natural resources. Cleantech Group has changed its industry groupings in 2011 so analysis was performed to re-organize new classifications into past industry groupings. Due to this change, current segment groups will not perfectly correlate past reports. All values are inflation-adjusted and reported in first half 2011 dollars, using the CPI for the U.S. City Average from the Bureau of Labor Statistics.

Cleantech Venture Capital: Total & by Segment Data provided by Cleantech Group ^{IM}, LLC. For this analysis, venture capital is defined as disclosed clean tech investment deal totals. Data are based on Joint Venture's City-defined region of Silcon Valley. The Cleantech Group Gescribes cleantech as new technology and process, spanning a range of industries that enhance efficiency, reduce or eliminate negative ecological impact, and improve the productive and responsible use of natural resources. Cleantech Group has changed its industry groupings in 2011 so analysis was performed to reorganize new classifications into past industry groupings. Due to this change, current segment groups will not perfectly correlate past reports. All values are inflation-adjusted and reported in first half 2011 dollars, using the CPI for the US. City Average from the Bureau of Labor Statistics.

Cleantech **Industry Segments**

Energy Generation

Wind Solar Hydro/Marine Biofuels Geothermal Other

Energy Storage

Fuel Cell Advanced Batteries

Hybrid Systems

Energy Infrastructure Managem

Transmission **Energy Efficiency**

Lighting Buildings Glass

Transportation

Vehicles Logistics Structures Fuels

Other

Water & Wastewater

Water Treatment Water Conservation Wastewater Treatment

Air & Environment

Cleanup/Safety Emissions Control Monitoring/Compliance Trading & Offsets

Materials Nano Bio

Chemical Othe

Manufacturing/Industrial Advanced Packaging

Monitoring & Control Smart Production

Agriculture Natural Pesticide Land Management Aquaculture

Recycling & Waste Waste Treatment

Source: Cleantech Group™, LLC

Small Business Innovation & Technology Research

Data for Small Business Innovation Research (SBIR) and Small Suiness Technology Transfer awards come from the U.S. Small Business Administration. Data include Phase 1 and Phase 2 awards for all agencies and branches for the years 1990-2010. Data for GDP are from Moody's economycom and are inflation adjusted to first half 2011 dollars. Regional comparison GDP data are for the following regions: Greater Washington DC (Washington-Arlington-Alexandria, DC-VA-MD-WV MSA), Research Triangle (Hartnett County, Raleigh-Cary, NC MSA) and Durham-Chapel Hill, NC MSA), Boston (Boston-Cambridge-Quincy, MA-NH MSA), san Diego (San Diego-Carlsbad-San Marcos, CA MSA) and Silicon Valley. SBIR & STTR data for the regional comparisons were determined by the zip codes associated with counties under each of the region's MSA or county definition.

Entrepreneurship

Initial Public Offerings

me.com and the location based on corporate address provided by IPOhome.com. The data was pulled from the website on November 30, 2011.

The Serve Computations Data provided by FactSet Mergerstat LLC. Data are based on Joint Venture's ZIP-code-defined region of Silicon Valley. All merger and acquisition deals do not disclose value. Total values are based on all the deals with values disclosed. All forms of mergers and acquisitions are included in count except for joint ventures.

Initial Public Offerings and Mergers & Acquisitions in Clean Technology

Data provided by Cleantech GroupTM. LLC. For this analysis, venture capital is defined as disclosed clean tech investment deal totals. Data are based on Joint Venture's ZIP-code-defined region of Silicon Valley. The Cleantech Group describes cleantech as new technology and processes, spanning a range of industries that enhance efficiency, reduce or eliminate negative ecological impact, and improve the productive and responsible use of natural resources. See box for cleantech industry segments. IPO Count is based on IPO pricing each year. M&A count is based on number of announced merger and acquisition deals each year, by year of deal announced

Small Business Loans

an Origination comes from Federal Financial Institutions Examination Council (FFIEC), specifically from the Community Reinvestment Act (CRA) data products. Small business loans are defined as those whose original amounts are \$1 million or The data for Small Business I less and were reported as either loans secured by nonfarm or nonresidential real estate or Commercial and Industrial loans in Part I of the Consolidated Reports of Condition and Income (Schedule RC-C, Part II) or the Thrift Financial Report (Schedule SB).

Nonemployer Firm Growth Relative to 2004

ers are from the U.S. Census Bureau. Nonemployer statistics summarizes the number of establishments and sales or receipts of businesses without paid employees that are subject to federal income tax. Most nonemployers are self-employed individuals operating very small unincorporated businesses, which may or may not be the owner's principal source of income. Silicon Valley represents Santa Clara and San Mateo counties

Establishment Churn

ries Database (NETS), prepared by Walls & Associates using Dun & Bradstreet establishment data, was sourced for jobs data and establishment counts. Silicon Valley is defined as Santa Clara and San Mateo Counties in this analysis

Commercial Space

Commercial Space; Vacancy; Rents; and New Commercial Development

vacancy rate does not include occupied space that is presently being offered on the market for sale or lease. Net absorption is the change in occupied space during a given time period. Average asking rents are inflation-adjusted and reported in first-half 2011 dollars, using the CPI for the U.S. City Average from the Bureau of Labor Statistics.

Income

Real per Capita Income

com. Income values are inflation-adjusted and reported in first half 2011 dollars, using the CPI for the U.S. City Average from the Bureau of Labor Statistics

Per Capita Income by Race and Ethnicity Data for Distribution of Per capita Income are from the 2000-2010 American Community Survey from the U.S. Census Bureau All income values are inflation-adjusted and reported in first half 2011 dollars, using CPI for the U.S. City Average from the Bureau of Labor Statistics. Silicon Valley data includes Santa Clara and San Mateo Counties. Per capita income is the mean money income received in 1999 computed for every man, woman, and child in a geographic area. It is derived by dividing the total income of all people 15 years old and over in a geographic area by the total population in that area. Note -- income is not collected for people under 15 years old even though those people are included in the denominator of per capita income. This measure is rounded to the nearest whole dollar. Money income includes amounts: reported separately for wage or salary income; net self-employment income; interest, dividends, or net rental or royalty income or income from estates and trusts; Social Security or Railroad Retirement income; Supplemental Security Income (SSI); public assistance or welfare payments; retirement, survivor; or disability pensions; and all other income.

Median Household Income

Data for Distribution of Income and Median Household Income are from the American Community Survey from the U.S. Census Bureau. All income values are adjusted into 2011 U.S. dollars for the first half of the year, using CPI for the U.S. City Average from the Bureau of Labor Statistics. Silicon Valley data includes Santa Clara and San Mateo Counties

Income Distribution

Data for Distribution of Income are from the American Community Survey from the U.S. Census Bureau. Income ranges are in nominal values. Silicon Valley data includes Santa Clara and San Mateo Counties. Income is the sum of the amounts reported separately for the following eight types of income: wage or salary income; supplemental Security Income; interest, dividends, or net rental or royalty income from estates and trusts; Social Security or railroad retirement income; Supplemental Security Income; public assistance or welfare payments; retirement, survivor, or disability pensions; and all other income.

Percent of Students Receiving Free Meals

itted by schools to the Department of Education in January; however, the data is current as of October 2010. Data files include public school enrollment and the number of students eligible for free or reduced price Free and Reduced Meal Program (FRMP) information is submitted by schools to the meal programs. Data for Silicon Valley is from Santa Clara and San Mateo Counties.

SOCIETY

Preparing for Economic Success

High School Graduation Rate & Share Who Meet UC/CSU Entrance Requirements; High School Graduation Rates by Ethnicity; High School Dropout Rate

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Algebra I Scores

Augebra 1 Scores Data are from the California Department of Education, California Standards Tests (CST) Research Files for San Mateo and Santa Clara Counties. In 2003, the California Standards Tests (CST) replaced the Stanford Achievement Test, ninth edition (SAT/9). The CSTs in English-language arts, mathematics, science, and history-social science are administered only to students in California public schools. Except for a writing component that is administered as part of the grade four and grade seven English-language arts tests, all questions are multiple-choice. These tests were developed specifically to assess students' knowledge of the California content standards. The State Board of Education adopted these standards, which specify what all children in California are expected to know and be able to do in each grade or course. The 2011 Algebra I CSTs were required for students who were enrolled in the grade/course at the time of testing or who had completed a course during the 2010-2011 school yea; including 2010 summer school. The following types of scores are reported by grade level and content trans for each school, district, county, and the state: % Advanced, % Proficient, % Basic, % Below Basic and % Far Below Basic is the percentage of students in the group whose scores were at this performance standard. The state target is for every student to score at the Proficient or Advanced Performance Standard.

Early Education

Preschool Enrollment

Data for preschool enrollment are for San Mateo and Santa Clara Counties, California, and the United States. The data is from the United States Census Bureau, 2002-2010 American Community Surveys and the 2000-2001 Supplementary Surveys. The population of children is for children age three to five years old. The age of the population in preschool and nursery schools is from three years and older.

Third Grade English-Language Arts Proficiency by Race/Ethnicity Data is from the California Department of Education, California Standards Tests (CST) Research Files for San Mateo and Santa Counties. The CSTs in English-Language Arts for third graders was administered only to students in California public schools and all questions were multiple-choice. These tests were developed specifically to assess students' knowledge of the California counters standards, set by the State Board of Education. The 2011 English Language Arts CSTs were required for students who were enrolled in the grade/course at the time of testing or who had completed a course during the 2010-11 school year, including 2010 summer school. The following types of scores are reported by grade level by grade level during the association, and the state: % Advanced, % Proficient, % Basic, % Below Basic and % Far Below Basic is the percentage of students in the group whose scores were at this performance standard. The state target is for every student to score at the Proficient or Advanced Performance Standard.

Childcare Arrangements

Data provided by the UCLA California Health Interview Survey are for San Mateo and Santa Clara counties. The type of childcare reflects childcare arrangements for 10 or more hours per week. The childcare Topic is asked of all children – with "Type of Childcare" asked of didren with regular childcare for 10 or more hours per week. The childcare Topic is asked of all children – with "Type of Childcare" asked of the day, this question is designed to account for before-school and after-school childcare arrangements. By childcare, it is meant any arrangement where someone other than the parents, legal guardan, or stepparents take care of (CHILD). [This includes preschool and nursery school, but not kindergarten.] Children are aged birth to 12 years of age. Other includes Head Start/State Program, Preschool or Nursery School, Non-Family member and Other Source.

Arts & Culture

Arts-centric businesses per 100K Residents

derived from the Dun+Bradstreet business establishments database for 2010. For this measure Silicon Valley is defined as Santa Clara County. All comparison city regions for this indicator are also defined by their primary county. "Arts-centric businesses" are defined by ans for the Arts using 643 Standard Industrial Classification Codes.

Art-Centric Businesses

National Establishment Time-Series (NETS) database, prepared by Walls & Associates using Dun & Bradstreet establishment data was sourced for the Art-Centric industry analysis. The definition used for the industries is based on the Creative Industries 8-digit SIC code definition used by Americans for the Arts organization. Silicon Valley is defined as Santa Clara and San Mateo Counties.

Arts Educators per One Hundred Thousand Residents

Educators per One Francisco in the indicator is provided by Americans for the Arts as part of their Local Arts Index project to be published in 2012. Data for the calculation of this measure is from the membership roles of Music Educators National Conference, Dance Educators Organization, Educational Theatre Organization, and the National Arts Educators Association. For this measure Silicon Valley is defined as Santa Clara County and each comparison city region are also defined by their primary county.

Quality of Health

Percent of Kindergarten Students with All Required Immunizations

Data for kindergarten immunization rates come from the kindergarten assessment, which measures compliance with the school immunization law, conducted in all schools with kindergartens. Immunizations required by law include: All required immunizations include 5 doses of DTP/D12P/D vacine (4 doses meets the requirement if at least one was given on or after the fourth birthday); 2 doses of PMR vaccine (may be given or orbited, but both doses must be given on or after the first birthday); 3 doses of hepatitis B vaccine; and I dose of varicella vaccine (or physician documented varicella disease history or immunity). In the fall, every school with a kindergarten cass in California must provide information on the total enrollment, the number of students who have or have not received the immunizations required, and the number of exemptions. In the spring, local and state public health personnel visit a sample of licensed schools with kindergarten class in California classes, to collect the same information on the comparison.

APPENDIX A

Percentage of Population with Health Insurance Coverage by Ethnicity

les private coverage and public coverage, including Medicare. Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2000 data. Boundaries for urban areas have not been updated since Census 2000. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization. Silicon Valley data includes Santa Clara and San Mateo Counties

Infant Mortality Rate

fornia Department of Health, Center for Health Statistics, 1994-2009, Silicon Valley estimates are for San Mateo and Santa Clara Counties

Safety

Substantiated Cases of Child Abuse per 1,000 Children and Number of Layoffs in Social Services

er for Social Services Research at the University of California at Berkeley. Population Data Source: California Department of Child maltreatm nt data are from the Califo ve, CWS/CMS 2011 Ou r I Extract. Data a wnloaded from the Cen Cinic manual population projections (1998-1999 data based on the 1990 U.S. Census, 2000-2010 data based on the 2010 data based on the 201 orts located on the Santa Clara County Public Portal

Public School Expulsions due to Violence/Drugs
Date is obtained from the California Department of Education, DataQuest site. Numbers reflect violence and drug related expulsions across all grades (K-12) and are presented as a percentage of enrollment. Data was collected for Santa Clara County, San Mateo County and

Gang Related Homicide

the Governor's Office of Gang and Youth Violence Policy provided by the California Department of Justice.

PLACE

Environment

Water Resources

ovided by the Bay Area Water Supply and Conservation Agency (BAWSCA). Data is compiled annually among BAWSCA agencies to update key information and assist in projecting suburban demand and population. Gross per capita consumption ntial, recycled and unaccounted for water use among the Santa Clara and San Mateo County BAWSCA agencies. idential non-re . idential re

Electricity Productivity and Electricity Consumption per Capita

Product (GDP) data is from Moody's Economy.com. GDP values are inflation-adjusted and reported in first half 2011 dollars, using the CPI for the U.S. City Average from the Bureau of Electricity Consumption data is from the California Energy Commission. Gross Domestic Product (GDP) data is from Moody's Economycom. GDP values are initiation-adjusted and reported in first nam 2011 during use GL nor use GL City in GL abor Statistics. Silicon Valuey data indudes Santa Clara and San Mateo Counties. To compute per-capita values, Revised County Population Estimates, 1990-2010 with 1990, 2000, and 2010 census counts from the California Department of Finance we

Solar Installations by Sector

certor is from The California Solar Initiative (CSI) as part of the Go Solar California campaign. The data shows calculated CEC PTC Rating, a measure of alternating current output of photovoltaic system under PVUSA Test Conditions as urrent output of photovoltaic system under PVUSA Test Conditions as urrent output of photovoltaic system under PVUSA Test Conditions as calculated by PowerClerk. calculated by PowerClerk.nating current output of photovoltaic sys

Time Required for Permitting of Renewable Energy Installations

ts and cities have begun investing substantially in renewable energy technology to provide electricity for their property and homes. In order to track achievements in this area, this Data are from year's survey included questions related to the renewable energy portfolios of the surveyed cities and its residents.

Transportation

Vehicle Miles of Travel per Capita & Gas Prices

Vehice Hise Traveled (VHT) is defined as total distance traveled by all vehicles during selected time period in geographic segment. VMT estimates for 1995 – 2007 are from the California Department of Transportation's "2009 California Motor/Vehicle Stock, Travel, and Fuel Forecast."VMT data for 2008-2010 is from the California Department of Transportation's Highways. In order to calculate VMT. Caltrans multiplies the road section length (length in miles along the centerline of the roadway) by Average Annual Daily Traffic (AADT). AADT are actual traffic counts that the city, county, or state have taken and reported to the California Department of Transportation. To compute per-capita values, Revised County Population Estimates, 1990-2010 with 1990. 2000, and 2010 cenus counts from the California Department of Finance were used. Gas prices are average annual retail gas prices for California, and come from the Weekky Retail Gasoline and Diesel Prices (Cents per Gallon, Including Taxes) data series reported by the U.S. Department of Energy, Energy Information Administration. Gas prices are All Grades All Formulations Retail Gasoline Prices (including taxes) and have been adjusted into first half of 2011 dollars using the U.S. city average Consumer Price Index (CPI) of all urban consumers, published by the Bureau of Labor Statistics

Means of Commute

The means of commute Data on the means of commute to work are from the United States Census Bureau, 2003 and 2010 American Community Survey. Data are for workers 16 years old and over residing in Santa Clara and San Mateo Counties commuting to the geographic location at which workers carried out their occupational activities during the reference week whether or not the location was inside or outside the county limits. The data on employment status and journey to work relate to the reference week (that is, the calendar week preceding the date on which the respondents completed their questionnaires or were interviewed. This week is not the same for all respondents since the interviewing was conducted over a 12-month period. The occurrence of holidays during the relative reference week could affect the data on actual hours worked during the reference week, but probably had no effect on overall measurement of employment status. People who used different means of transportation on different days of the week were asked to specify the one they used most often, that is, the greatest number of days. Reople who used more than one means of transportation to get to work each day were asked to report the one used for the longest distance during the work trip. The category."Cart truck or van," includes workers using a car (including company cars but excluding taxicabs), a truck of one-ton capacity or less, or a van. The category."Bublic transportation, includes workers who used a bus or trolley bus, streetcar or trolley car, subway or elevated, railroad, or ferryboat, even if each mode is not shown separately in the the bubble. The category." week preceding the date on k could affect the data on tabulation. The category "Other Means" includes taxicab, motorcycle, bicycle and other means that are not identified separately within the data distribution

Transit Use

the sum of annual ridership on the light rail and bus systems in Santa Clara and San Mateo Counties, and rides on Caltrain. Data are provided by Sam Trans, Valley Transportation Authority, Altamont Commuter Express, and Caltrain. Revised County Population Estimates are the sum of annual indership on the light rail and bus systems in Santa Clara and San Mateo Counties, and rides on Catr Estimates for January 2001 through January 2010 from the California Department of Finance were used to compute per-capita value:

Land Use

Residential Density

Joint Venture: Silicon Valley Network conducted a land-use survey of all cities within Silicon Valley. Collaborative Economics completed the survey compilation and analysis. Participating cities included: Atherton, Belmont, Burlingame, Campbell, Cupertino, East Palo Alto, Foster City, Fremont, Hillsborough, Los Altos, Hills, Los Altos, Hills, Los Catos, Milpitas, Monte Sereno, Morgan Hill, Montaina View, Palo Alto, Portola Valley, Redwood City, San Bruno, San Carlos, San Jose, Santa Clara, South San Francisco, Sunnyvale, and Union City. Santa Clara and San Mateo Counties are also included: In 2008, the survey was expanded to include more cities and gong the 101 corridor: Belmont, Britanee, Burlingame, Millbrae, San Bruno, and South San Francisco. Most recent data are for fiscal year 2010 (July '10-June'11). The average units per acre of newly approved residential development are reported directly for each of the cities and counties participating in the survey.

Housing and Development Near Transit

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Housing

Building Affordable Housing

work of Survey Cities. Affordable units are those units that are affordable for a four-person family earning up to 80 percent of the median income for a county. Cities use the U.S. Department of Housing and Urban Development's Data are from Joint Venture: Silicon Valley Network of Survey Cities. Affordable units are those units that are affordable for a fo (HUD) estimates of median income to calculate the number of units affordable to low-income households in their jurisdiction.

Rental Affordability

Data on average rental rates are from RealFacts survey of all apartment complexes in Santa Clara and San Mateo Counties of 50 or more units. Rates are the prices charged to new residents when apartments turn over and have been adjusted into 2011 dollars using the U.S. city average Consumer Price Index (CPI) of all urban consumers, published by the Bureau of Labor Statistics. Median household income data is from the United States Census Bureau, American Community Survey.

Home Affordability

Data are from the California Association of Realtors' (CAR) Housing Affordability Index. The data for Silicon Valley includes Santa Clara and San Mateo County and is based on the median price of existing single family homes sold from CAR's monthly existing home sales survey, the national average effective mortgage interest rate as reported by the Federal Housing Finance Board, and the median household income as reported by Claritas/NPDC. Beginning in the first quarter of 2009, the Housing Affordability Index incorporates an effect interest rate that is based on the one-year, adjustable-rate mortgage from Freddie Mac's Primary Mortgage Market Survey, Quarterly Sales Volume for Existing Single Family Detached Home Sales data were provided by RAND California Statistics sourced by DataQuick News. tes an effective

Percent of Households with Housing Costs Greater than 35% of Income

Data for owners and renters housing costs are from the United States Census Bureau, American Community Survey. This indicator measures the share of owners and renters spending 35% or more of their monthly household income on housing costs. Renter data are calculated percentages of gross rent to household income in the past 12 months. Owner data are calculated percentages of selected monthly owner costs to household income in the past 12 months. Owners data are solely based on housing units with a mortgage. According to the US. Department of Housing and Urban Development, housing costs greater than 30% of household income pose moderate to severe financial burdens.

Residential Foreclosure Activity

m RAND California. RAND compiled originating data from the California Realtors Association and DataQuick News. Data reflects total foreclosures and number of home sales for townhomes, condominiums and single family homes. Foreclosure data for 2010 is through September. Data are based on Joint-Venture's Zip-code-defined region of Silicon Valley

GOVERNANCE

Civic Engagement

Voter Participation

Data is from the California Secretary of State, Elections and Voter Information Division and the California State Archives Division. The eligible population is determined by the Secretary of State using Census population data provided by the California Department of Finance.

Local Bond Measures

Data for the most current ballot bond initiatives are obtained from the Santa Clara County Registrar of Voters and San Mateo County Board of Elections. Past local bond voting results are obtained from the California Elections Data Archive (CEDA) - a joint project of the Center for California Studies and Institute for Social Research of California State University, Sarramento, and the Secretary of State. Following each local election, CEDA collects and compiles results from city, county, school district, and local ballot measure elections. The reports are completed in July of each year and include local election results from the previous calendar year. Data is presented for years 2000 to 2011

Revenue

City Revenue by Source

Data is from the Joint Venture Survey of Silicon Valley Financial Officers. Only cities that provided general fund data for all years are included. Data for fiscal year 2009/10 is projected. Revenue and expenditures were adjusted for inflation and are reported in first half 2011 dollars using the U.S. city average Consumer Price Index (CPI) of all urban consumers, published by the Bureau of Labor Statistics. Cities included in the chart: Atherton, Belmont, Daly City, East Palo Alto, Half Moon Bay, Menio Park, Millbrae, Pacifica, Redwood City, San Mateo, Woodside, Campbell, Cupertino, Milipitas, Morgan Hill, Mountain View, Palo Alto, San Jose, Santa Clara, and Sunnyvale.

City Revenue Trends

City Revenue in rends Data provided by the California State Controller's Office, Cities Annual Report. Fiscal year 2008/09 is preliminary. Revenue is adjusted for inflation, and reported in first half of 2011 dollars using the US. city average Consumer Price Index (CPI) of all urban consumers, published by the Bureau of Labor Statistics. Data is for cities in San Mateo and Santa Clara Counties, Fremont, Newark, and Union City, Other Taxes include revenue sources such as transportation taxes, transient lodging taxes, and business license fees. Other Revenue includes revenue sources such as revenue of use of money and property, sale of real and personal property, and intergovernmental transfers.

City Expenditures by Category

Data from the joint Venture Survey of Silicon Valley Financial Officers. Only cities that provided general fund data for all years are included. Data for fiscal year 2009/10 is projected. Expenditures are adjusted for inflation, and are reported in first half of 2010 dollars using the U.S. city average Consumer Fine Index (CPI) of all urban consumers, published by the Bureau of Labor Statistics. Cities included in the chart Atherton, Belmont, East Palo Alto, Half Moon Bay, Mehol Park, Millbrane, Pacifica, San Mateo, Woodside, Campbell , Cupertino, Milpitas, Morgan Hill, Mountain View, San Jose, Santa Clara, and Sunnyvale. Pension Cost is the Annual required contribution of cities that responded. Data

Each dot of any name of the instant cost of the other tendences of close of an experiment. Public Safety California data for the monthly half-percent sales tax for public safety are from the Division of Accounting and Reporting at the California State Controller's Office Santa Clara County data is from the County Office of Budget and Analysis and San Mateo County data is from the County Manager's Office. All values are reported in first half of 2011 dollars using the U.S. city average Consumer Price Index (CPI) of all urban consumers published by the Bureau of Labor Statistics. Cities within each county collectively receive approximately six percent of the public safety revenue awarded to each county. This is not included in the Silicon Valley figures.

I HUILLIPAL DEDI UDDIGATIONS The California Debt and Investment Advisory Commission Database (CDIAC), as maintained by the California Department of Treasurer, was used to compile the municipal bond data for both Santa Clara and San Mateo Counties. State law that took effect in 1982 requires all governmental agencies which issue debt to report information on each issuance to CDIAC [Government Code Sections 8855(k) and 8855(k)]. Agencies must provide data to CDIAC 30 days prior to each issuance, and within 45 days after the signing of the bond purchase contract in a negotiated or private financing, or after the acceptance of a bid in a competitive offering. Data includes both short and long term bonds as well as notes. Debt was grouped chronologically according to the sale date of type of debt (see table).

Regional-State Interface

The State of California Franchise Tax Board, Economic and Statistical Research Bureau provided tax liability data by county for years 1995-2006. Data for 2007 through 2010 are provided by zip code. Silicon Valley data includes Santa Clara and San Mateo Counties. All tax liability values are inflation-adjusted and reported in first half 2010 dollars, using CPI for the U.S. City Average from the Bureau of Labor Statistics.

T la li la	Category Groupings				
	College, University Facility				
Education	K-12 School Facility				
	Other; Multiple Educational Uses				
	Cash Flow, Interim Financing				
Financing	Insurance and Pension Funds				
	Project, Interim Financing				
Health Care	Health Care Facilities				
Infrastructure	Hospital				
	Multifamily Housing				
Housing	Single-family Housing				
	Convention Center				
	Equipment				
Miscellaneous	Parking				
	Prisons, Jails, Correctional Facilities				
	Other Purpose				
	Theatre/Arts/Museums				
	Flood Control, Storm Drainage				
	Multiple Capital Improvements, Public Works				
Other Public	Other Capital Improvements, Public Works				
Infrastructure	Power Generation/Transmission				
	Public Building				
	Solid Waste Recovery Facilities				
Parks &	Parks, Open Space				
Recreation	Recreation and Sports Facilities				
edevelopment	Redevelopment, Multiple Purposes				
	Airport				
	Bridges and Highways				
Fransportation	Ports, Marinas				
Infrastructure	Public Transit				
	Street Construction and Improvements				
Water &	Wastewater Collection, Treatment				
Wastewater	Water Supply, Storage, Distribution				

R

Silicon Valley Major Areas of Economic Activity

	Employment	Percent of Total Silicon Valley	Percent Change		
	2011 Q2	Employment	2007 - 2011	2010 - 2011	
 Total Employment	1,312,095	100.0%	-5.8%	0.5%	
 Community Infrastructure	753,374	57.4%	-5.2%	0.5%	
 Health & Social Services	131,544	10.0%	7.8%	0.8%	
 Retail	125,070	9.5%	-8.8%	1.6%	
 Accomodation & Food Services	107,326	8.2%	0.8%	4.0%	
 Education	101,399	7.7%	-0.2%	1.0%	
 Construction	51,938	4.0%	-31.9%	-2.5%	
 Consumer Services	39,985	3.0%	-8.6%	3.1%	
 Wholesale Trade	33,207	2.5%	-12.7%	-1.4%	
 Transportation	26,305	2.0%	-5.0%	0.8%	
 Federal Government Administration	24,540	1.9%	-5.4%	-11.7%	
 Arts, Entertainment, & Recreation	24,097	1.8%	-8.3%	-6.5%	
Consumer Financial Services	20,314	1.5%	-17.8%	5.9%	
 Other	20,150	1.5%	93.2%	7.3%	
 Goods Movement	19,035	1.5%	-19.1%	-0.8%	
 Local Government Administration	.059	0.8%	-6.8%	-5.1%	
 Nonprofits	10.740	0.8%	-10.0%	2.1%	
 Utilities	4.579	0.3%	-11.3%	-9.5%	
 Warehousing & Storage	2 044	0.2%	-7 4%	-4 0%	
 State Government Administration	47	0.0%	-46.8%	-34.4%	
Information Products & Services	289 567	22.1%	2.0%	5.9%	
 Software	92.360	7.0%	6.8%	7.9%	
 Computer Hardware	/2,500	7.0%	10.0%	1.770	
 Somiconductor & Somiconductor Equipment Manufacturing		3.2/0 2.Q0/	10.0% 2 7%	5. 29/	
 Internet & Information Convince	207.02	2.776	-2.770	10.7%	
 Internet & mormation services	20,702	1.00/	31.0%	10.7%	
 Communications Services & Environment Manufacturing	23,701	1.0%	-10.2/0 E E0/	0.5%	
 Communications services & Equipment Manufacturing	20,167	1.5%	5.5%	4.5%	
 I. I. vvnolesale Trade	17,287	1.5%	-12.3%	-1.0%	
	17,075	1.3%	-21.8%	2.9%	
 Other Media & Broadcasting	4,916	0.4%	27.0%	-2.9%	
I. I. Repair Services	2,403	0.2%	26.1%	-5.6%	
 Innovation & Specialized Services	144,070	11.0%	-4.9%	L.L %	
 lechnical & R&D	47,305	3.6%	-4.7%	-2.7%	
 Personnel	28,265	2.2%	-12.4%	9.7%	
 Management Offices	25,811	2.0%	4.1%	-1./%	
 Specialized Financial Services	21,434	1.6%	-2.8%	3.1%	
 Legal	9,895	0.8%	-13.0%	-1.3%	
 Marketing/Ad/PR	7,942	0.6%	22.4%	26.6%	
 Design	3,418	0.3%	-30.8%	3.3%	
 Business Infrastructure	56,532	4.3%	-11.8%	1.2%	
 Facilities	37,573	2.9%	-5.7%	5.4%	
 Administrative Services	18,959	1.4%	-21.8%	-6.1%	
 Other Manufacturing	47,519	3.6%	-28.1%	-13.1%	
 Other Primary & Fabricated Metal Manufacturing	15,056	1.1%	-11.1%	7.4%	
 Div. Ag & Food Manufacturing	3,79	1.1%	-8.1%	-0.4%	
 Other Machinery & Equipment Manufacturing	8,507	0.6%	-22.7%	20.0%	
 Other Petrochemical Manufacturing	4,582	0.3%	-11.8%	6.3%	
 Textile, Wood, & Furniture Manufacturing	2,725	0.2%	-32.5%	-4.3%	
 Other Misc. Manf. & Space & Defense Manufacturing	1,361	0.1%	-88.3%	-87.3%	
 Paper & Packaging Manufacturing	1,286	0.1%	-33.3%	-22.3%	
 Mining	211	0.0%	-37.6%	7.1%	
 Life Sciences*	21,033	1.6%	-36.2%	1.1%	
 Medical Devices	11,159	0.9%	-14.7%	0.5%	
 Biotechnology	9,874	0.8%	5.0%	1.8%	
Pharmaceuticals	***	-	-	-	

⁴In 2010, employment in Pharmaceuticals was suppresed for confidentiality reasons, causing the significant drop in total Life Sciences employment. Note: Data is for San Mateo and Santa Clara Counties, Scotts Valley, Fremont, Newark, and Union City. Data Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages Analysis: Collaborative Economics

ACKNOWLEDGMENTS

Special thanks to the following organizations that contributed data and expertise:

Alcohol & Drug Services Research Institute Altamont Commuter Express Americans for the Arts Bay Area Water Supply & Conservation Agency Annual Survey California Association of Realtors California Department of Education California Department of Finance California Department of Justice California Department of Public Health California Department of Realtors California Department of Social Services California Department of Transportation California Employment Development Department California Energy Commission California Franchise Tax Board California Governor's Office California Health Interview Survey California Public Utilities Commission California Secretary of State California State Controller's Office California State Treasurer's Office Caltrain Cities of Silicon Valley City Planning and Housing Departments of Silicon Valley Cleantech Group, LLC **Colliers** International Educational Theater Organization

Energy Information Administration Factset Mergerstat, LLC Federal Financial Institutions Examination Council (FFIEC) Integrated Postsecondary Education Study Data System Joint Venture Survey of Silicon Valley Financial Officers Moody's Economy.com Music Educators National Conference National Arts Educators Association National Center for Educational Statistics National Dance Educators Organization National Establishment Time Series Database (NETS) National Science Foundation Planning and Evaluation PricewaterhouseCoopers Money Tree ™ **RAND** California Statistics Real Facts Renaissance Capital's IPOhome.com SamTrans San Mateo County Board of Elections San Mateo County Human Services Agency Santa Clara County Department of Alcohol & Drug Services Santa Clara County Registrar of Voters U.S. Bureau of Labor Statistics U.S. Census Bureau U.S. Patent and Trade Office U.S. Small Business Administration UCLA Center for Health Policy Research Valley Transportation Authority

JOINT VENTURE SILICON VALLEY

Established in 1993, Joint Venture Silicon Valley provides analysis and action on issues affecting our region's economy and quality of life. The organization brings together established and emerging leaders—from business, government, academia, labor and the broader community—to spotlight issues, launch projects, and work toward innovative solutions.

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As a comprehensive center for philanthropy serving all of San Mateo and Santa Clara Counties, our mission is to strengthen the common good, improve the quality of life and address the most challenging problems.

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Volterra Weil Gotshal & Manges Wells Fargo Bank Wilmer Hale, LLP Wilson Sonsini Goodrich & Rosati, LLP VMware Volkswagen Group of America

PUBLIC SECTOR

City of Belmont City of Brisbane City of Burlingame City of Campbell City of Colma City of Cupertino City of Daly City City of East Palo Alto City of Foster City City of Fremont City of Gilroy City of Half Moon Bay City of Los Altos City of Menlo Park City of Milpitas City of Monte Sereno City of Morgan Hill City of Mountain View City of Newark City of Pacifica City of Palo Alto City of Redwood City City of San Bruno City of San Carlos City of San Jose City of San Mateo City of Santa Clara City of Santa Cruz City of Saratoga City of South San Francisco City of Sunnyvale City of Union City City of Watsonville County of Alameda County of San Mateo County of Santa Clara County of Santa Cruz Town of Atherton Town of Portola Valley Town of Los Altos Hills Town of Los Gatos Town of Woodside



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